

# AGENDA City Planning Committee Meeting Open Portion

Monday, 19 September 2022

at 5:00 pm Council Chamber, Town Hall

#### THE MISSION

### Working together to make Hobart a better place for the community.

### THE VALUES

The Council is:

**People** We care about people – our community, our customers

and colleagues.

**Teamwork** We collaborate both within the organisation and with

external stakeholders drawing on skills and expertise for

the benefit of our community.

**Focus and Direction** We have clear goals and plans to achieve sustainable

social, environmental and economic outcomes for the

Hobart community.

**Creativity and** 

Innovation

We embrace new approaches and continuously improve to

achieve better outcomes for our community.

**Accountability** We are transparent, work to high ethical and professional

standards and are accountable for delivering outcomes for

our community.

### **ORDER OF BUSINESS**

Business listed on the agenda is to be conducted in the order in which it is set out, unless the committee by simple majority determines otherwise.

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City Planning Committee Meeting (Open Portion) held Monday, 19 September 2022 at 5:00 pm in the Council Chamber, Town Hall.

This meeting of the City Planning Committee is held in accordance with a Notice issued by the Premier on 31 March 2022 under section 18 of the COVID-19 Disease Emergency (Miscellaneous Provisions) Act 2020.

The title Chief Executive Officer is a term of reference for the General Manager as appointed by Council pursuant s.61 of the *Local Government Act 1993* (Tas).

#### **COMMITTEE MEMBERS**

**Apologies:** 

Leave of Absence: Nil.

Deputy Lord Mayor Councillor H Burnet

(Chairman)

Alderman J R Briscoe

Councillor W F Harvey Alderman S Behrakis

Councillor M Dutta

Councillor W Coats

### **NON-MEMBERS**

Lord Mayor Councillor A M Reynolds Alderman M Zucco Alderman Dr P T Sexton Alderman D C Thomas Councillor J Fox Councillor Dr Z Sherlock

## 1. CO-OPTION OF A COMMITTEE MEMBER IN THE EVENT OF A VACANCY

### 2. CONFIRMATION OF MINUTES

The minutes of the Open Portion of the City Planning Committee meeting held on Monday, 5 September 2022, are submitted for confirming as an accurate record.

### 3. CONSIDERATION OF SUPPLEMENTARY ITEMS

Ref: Part 2, Regulation 8(6) of the Local Government (Meeting Procedures) Regulations 2015.

#### Recommendation

That the Committee resolve to deal with any supplementary items not appearing on the agenda, as reported by the Chief Executive Officer.

### 4. INDICATIONS OF PECUNIARY AND CONFLICTS OF INTEREST

Ref: Part 2, Regulation 8(7) of the Local Government (Meeting Procedures) Regulations 2015.

Members of the Committee are requested to indicate where they may have any pecuniary or conflict of interest in respect to any matter appearing on the agenda, or any supplementary item to the agenda, which the Committee has resolved to deal with.

### 5. TRANSFER OF AGENDA ITEMS

Regulation 15 of the Local Government (Meeting Procedures) Regulations 2015.

A Committee may close a part of a meeting to the public where a matter to be discussed falls within 15(2) of the above regulations.

In the event that the Committee transfer an item to the closed portion, the reasons for doing so should be stated.

Are there any items which should be transferred from this agenda to the closed portion of the agenda, or from the closed to the open portion of the agenda?

### 6. PLANNING AUTHORITY ITEMS - CONSIDERATION OF ITEMS WITH DEPUTATIONS

In accordance with the requirements of Part 2 Regulation 8(3) of the *Local Government (Meeting Procedures) Regulations 2015*, the Chief Executive Officer is to arrange the agenda so that the planning authority items are sequential.

In accordance with Part 2 Regulation 8(4) of the *Local Government (Meeting Procedures) Regulations 2015*, the Committee by simple majority may change the order of any of the items listed on the agenda, but in the case of planning items they must still be considered sequentially – in other words they still have to be dealt with as a single group on the agenda.

Where deputations are to be received in respect to planning items, past practice has been to move consideration of these items to the beginning of the meeting.

#### RECOMMENDATION

That in accordance with Regulation 8(4) of the *Local Government (Meeting Procedures) Regulations 2015*, the Committee resolve to deal with any items which have deputations by members of the public regarding any planning matter listed on the agenda, to be taken out of sequence in order to deal with deputations at the beginning of the meeting.

### 7. COMMITTEE ACTING AS PLANNING AUTHORITY

In accordance with the provisions of Part 2 Regulation 25 of the *Local Government (Meeting Procedures) Regulations 2015*, the intention of the Committee to act as a planning authority pursuant to the *Land Use Planning and Approvals Act 1993* is to be noted.

In accordance with Regulation 25, the Committee will act as a planning authority in respect to those matters appearing under this heading on the agenda, inclusive of any supplementary items.

The Committee is reminded that in order to comply with Regulation 25(2), the Chief Executive Officer is to ensure that the reasons for a decision by a Council or Council Committee acting as a planning authority are recorded in the minutes.

### 7.1 APPLICATIONS UNDER THE HOBART INTERIM PLANNING SCHEME 2015

7.1.1 90 MELVILLE STREET, HOBART AND ADJACENT ROAD RESERVE
- DEMOLITION AND NEW BUILDING FOR 22 MULTIPLE
DWELLINGS AND BUSINESS AND PROFESSIONAL SERVICES
AND ASSOCIATED WORKS

PLN-22-321 - FILE REF: F22/94403

Address: 90 Melville Street, Hobart and Adjacent Road

Reserve

Proposal: Demolition and New Building for 22 Multiple

**Dwellings and Business and Professional** 

Services, and Associated Works

Expiry Date: 26 September 2022

Extension of Time:

Author: Ben Ikin

#### RECOMMENDATION

That pursuant to the *Hobart Interim Planning Scheme 2015*, the Council approve the application for Demolition and New Building for 22 Multiple Dwellings and Business and Professional Services, and Associated Works, at 90 Melville Street and Adjacent Road Reserve, Hobart for the reasons outlined in the officer's report and a permit containing the following conditions be issued:

#### **GEN**

The use and/or development must be substantially in accordance with the documents and drawings that comprise PLN-22-321 - 90 MELVILLE STREET HOBART TAS 7000 - Final Planning Documents except where modified below.

Reason for condition

To clarify the scope of the permit.

TW

The use and/or development must comply with the requirements of TasWater as detailed in the form Submission to Planning Authority Notice, Reference No. TWDA 2022/01350-HCC dated 8/9/22 as attached to the permit.

Reason for condition

To clarify the scope of the permit.

#### **PLN 15a**

A demolition waste management plan must be implemented throughout demolition. The demolition waste management plan must include provisions for the handling, transport and disposal of demolition material, including any contaminated waste and recycling opportunities, to satisfy the above requirement.

#### Advice:

It is recommended that the developer liaise with the Council's City Resilience unit regarding reducing, reusing and recycling materials associated with demolition on the site to minimise solid waste being directed to landfill. Further information can also be found on the Council's website.

#### Reason for condition

To ensure that solid waste management from the site meets the Council's requirements and standards

### PLN<sub>7</sub>

The minimum approved number of bicycle parking spaces on site is 25. Of these at least 17 must be either a class 1 or class 2 security level facility (as per Table E6.2 of the *Hobart Interim Planning Scheme 2015*). The design of the bicycle parking spaces must accord with AS2890.3-1993 Parking facilities Part 3: Bicycle parking facilities, in particular section 2 "Design of Parking Facilities" and clauses 3.1 "Security" and 3.3 "Ease of Use".

Bicycle end of trip facilities must be provided as follows:

- At least two showers; and
- At least one change room facility.

Prior to the issue of any consent for approval under the *Building Act 2016* (excluding for demolition), a bicycle parking plan must be submitted and approved as a Condition Endorsement to the satisfaction of the Director City Life, in accordance with the above requirements.

The bicycle parking spaces and facilities must be in accordance with the approved bicycle parking plan and must be installed prior to first use.

#### Advice:

The applicant is strongly encouraged to provide more bicycle parking and facilities than required by this condition, and to provide additional facilities for bicycle parking like power points for ebikes, and space to clean and repair bikes.

This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit

Reason for condition

To ensure there is adequate and appropriate bicycle parking provided for the development

#### PLN s5

Public artwork must be implemented in the forecourt and laneway area within three months of completion of the development.

Prior to the issue of any approval under the *Building Act 2016* (excluding for demolition, excavation and works up to the ground floor slab), details of the public artwork must be submitted and approved as a Condition Endorsement, to the satisfaction of the Council's Director City Life.

The details be substantially in accordance with the Final Planning Documents, and must include, but are not limited to, the following:

- Plans and other associated and relevant documentation demonstrating what the artwork will be, and where it will be located, which are substantially in accordance with the Final Planning Documents.
- Identifying the procurement process, and specifying the artist/artists selected.
- Setting out how the project will be managed, including details of installation oversight.

All work required by this condition must be in accordance with the approved details.

#### Advice:

For further advice in relation to the acceptable provision of public art you are encouraged to contact Council's Public Art team on 6238 2494.

This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit

Reason for condition

In the interest of the amenity and activation of the space.

### PLN s6

A landscape plan must be prepared for all the soft and hard landscaping for the development including for the forecourt and laneway area, the two roof terraces on the fifth floor, and the communal open space area on the fifth floor, by a suitably qualified landscape architect.

Prior to the issue of any approval under the *Building Act 2016* (excluding for demolition, excavation and works up to the ground floor slab), revised plans must be submitted and

approved as a Condition Endorsement to the satisfaction of the Director City Life in accordance with the above requirement.

All work required by this condition must be undertaken in accordance with the approved revised plans. Prior to occupancy, confirmation from the landscape architect who prepared the approved landscaping plan that the all landscaping works required by this condition have been implemented, must be submitted to the satisfaction of the Directory City Life.

The vegetation which is planted on the site pursuant to the landscaping plan must be maintained and must not be disturbed. If any vegetation dies or is destroyed, replacement vegetation of a similar size must be planted within 30 days of the death or destruction.

#### Advice:

This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

Reason for condition

In the interest of the amenity of the space.

#### PLN s1

Prior to commencement of use, the laneway must be gated after hours to prevent public access, until a through site link is provided.

Prior to the issue of any approval under the *Building Act 2016* (excluding for demolition, excavation and works up to the ground floor slab), further details of how the laneway will be effectively gated in accordance with the above requirement must be submitted and approved as a Condition Endorsement, to the satisfaction of the Council's Director City Life.

All work required by this condition must be undertaken in accordance with the approved details.

Advice:

This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

Reason for condition

To prevent the creation of an entrapment space before a through site link is established.

PLN<sub>s2</sub>

No air conditioning units are to be located within the private open space decks of any of the apartments.

Reason for condition

To ensure occupants have adequate private open space.

PLN s3

Each apartment must be provided with a dedicated and secure storage space of no less than 6m3, located externally to the dwelling.

Advice:

It is anticipated that the storage would be provided on levels Basement 1 and 2 as per the architectural plans.

Reason for condition

To ensure each dwelling has adequate storage.

PLN s4

The palette of exterior colours and materials must be provided.

Prior to the issue of any approval under the Building Act 2016 (excluding for demolition, excavation and works up to the ground floor slab), revised plans, and montages and samples where appropriate, must be submitted and approved as a Condition Endorsement to the satisfaction of the Director City Life showing exterior colours and materials in accordance with the above requirement.

Particular attention should be paid to the predominate use of concrete façade on the upper apartment levels, and the use of a visible vertical inlay pattern, and more variety in the size, location, colour, texture, and contrast of the panels, should be pursued.

All work required by this condition must be undertaken in accordance with the approved revised plans, montages and samples.

#### Advice:

This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

#### Reason for condition

In the interest of the streetscape and townscape values of the surrounding area.

### **ENG 12**

Prior to commencement of any work on site (including demolition and/or site disturbance), a Construction Waste Management Plan must be submitted and approved as a Condition Endorsement.

The Construction Waste Management Plan must include;

1. Provisions for the handling, transport, and disposal, of demolition material, including any contaminated waste and recycling opportunities, and

 Provisions for commercial waste services (e.g., service areas) for the handling, storage, transport and disposal of post-construction solid waste and recycle bins from the development.

The approved Construction Waste Management Plan must be implemented throughout construction, and all work required by the approved plan must be undertaken in accordance with the approved plan.

#### Advice:

This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

It is recommended that the developer liaise with the Council's City Resilience Unit regarding reducing, reusing and recycling materials associated with demolition on the site to minimise solid waste being directed to landfill. Further information can also be found on the Council's website.

#### Reason for condition

To ensure that solid waste management from the site meets the Council's requirements and standards.

#### ENG sw1

All stormwater from the proposed development (including but not limited to: roofed areas, ag drains, and impervious surfaces such as driveways and paved areas) must be drained to the Council's stormwater infrastructure prior to first occupation or commencement of use (whichever occurs first).

All stormwater practicable to be drained via gravity must do so.

The driveway crossover must be designed such that the floodway capacity within Melville St is maintained (ie back of footpath level is maintained).

Advice:

Under section 23 of the Urban Drainage Act 2013 it is an offence for a property owner to direct stormwater onto a neighbouring property.

Reason for condition

To ensure that stormwater from the site will be discharged to a suitable Council approved outlet.

**SW 1** 

Prior to the issue of any approval under the *Building Act 2016* or the commencement of work on the site (whichever occurs first), a pre- construction structural condition assessment and visual record (eg video and photos) of the Hobart City Council's stormwater infrastructure adjacent to the proposed development must be submitted to the City of Hobart as a Condition Endorsement.

The condition assessment must include at least:

- a site plan clearly showing the location of the investigation, with access points and all segments and nodes shown and labelled, with assets found to have a different alignment from that shown on the City of Hobart's plans to be marked on the ground and on the plan;
- a digital recording of a CCTV inspection and written condition assessment report in accordance with WSA 05-2013 Conduit Inspection Reporting Code of Australia, in a 'Wincan' compatible format; and
- 3. photos of any existing drainage structures connected to or modified as part of the development.

The pre-construction condition assessment will be relied upon to establish the extent of any damage caused to Hobart City Council's stormwater infrastructure during construction. If the owner/developer fails to provide the City of Hobart with an adequate pre-construction condition assessment then any

damage to the City of Hobart's infrastructure identified in the post- construction condition assessment will be the responsibility of the owner/developer.

#### Advice:

This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

#### **SW 2**

rior to occupancy or the commencement of the approved use (whichever occurs first), a post-construction structural condition assessment and visual record (eg video and photos) of the Hobart City Council's stormwater infrastructure adjacent to the proposed development must be submitted to the City of Hobart.

The condition assessment must include at least:

- a site plan clearly showing the location of the investigation, with access points and all segments and nodes shown and labelled, with assets found to have a different alignment from that shown on the City of Hobart's plans shall be marked on the ground and on the plan;
- a digital recording of a CCTV inspection and written condition assessment report in accordance with WSA 05-2013 Conduit Inspection Reporting Code of Australia, in a 'Wincan' compatible format; and
- 3. photos of any existing drainage structures connected to or modified as part of the development.

The post-construction condition assessment will be relied upon to establish the extent of any damage caused to the Hobart City Council's stormwater infrastructure during construction. If the owner/developer fails to provide the City of Hobart with an adequate pre-construction condition assessment then any damage to the Hobart City Council's infrastructure identified in the post-construction CCTV will be deemed to be the responsibility of the owner/developer.

**SW 3** 

The proposed works, including ground anchors, must be designed and constructed to ensure the protection and access to the Hobart City Council's stormwater infrastructure.

Prior to the issuing of any approval under the *Building Act* 2016 or commencement of works (whichever occurs first), a detailed design must be submitted and approved as a Condition Endorsement. The detailed design must be prepared by a suitably qualified engineer and must clearly state the minimum clearance of the soil nails to the public infrastructure, including the Lot stormwater connection and manhole, and side entry pit along the road frontage.

All work required by this condition must be undertaken in accordance with the approved detailed design.

#### Advice:

This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit. Previous plans submitted have assumed depth of the connection and manhole, with no ability to lower the system. Plans have been inconsistent re the extent of proposed works to the manhole.

#### **SW 6**

All altered and new stormwater infrastructure must be designed and constructed prior to occupancy or the commencement of the approved use (whichever occurs first).

Prior to the issuing of any approval under the *Building Act* 2016 or commencement of works (whichever occurs first), detailed engineering drawings must be submitted and approved as a Condition Endorsement. The detailed engineering drawings must be certified by a suitably qualified and experienced civil engineer and must:

- 1. be substantially in accordance with the Local Government Association of Tasmania: Tasmanian Municipal Standard Drawings (May 2020), as varied by the City of Hobart's published departures from those Drawings; and the Local Government Association of Tasmania, Tasmanian Subdivision Guidelines (October 2013);
- 2. clearly distinguish between public and private infrastructure;
- 3. show in both plan and long-section the proposed stormwater alterations, including but not limited to the new connection, manhole reconstruction, and side entry pit reconstruction. The plans must detail lid/ grating type, surveyed levels, flows, hydraulic grade lines, clearances (including from soil nails, and other services), cover, gradient, sizing, material, and pipe class, and a private access point immediately within the Lot boundary;

All work required by this condition must be undertaken in accordance with the approved detailed engineering drawings.

#### Advice:

This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit. The approved stormwater connection documents must be included in your plumbing permit application document set and listed in accompanying forms.

A single connection for the property is required under the Urban Drainage Act 2013.

A separate Permit to Construct Public Infrastructure will be required once the detailed engineering plans have been approved.

#### **SW 9**

Prior to occupancy or the commencement of the approved use (whichever occurs first), pre-treatment for stormwater discharges from the development must be installed.

A stormwater management report and design must be submitted and approved as a Condition Endorsement, prior to the issue of any approval under the *Building Act 2016* or the commencement of work on the site (whichever occurs first). The stormwater management report and design must be prepared by a suitably qualified engineer and must:

- include detailed design of the proposed treatment train, including final estimations of contaminant removal and long-section demonstrating adequate head for treatment and gravity discharge;
- include a supporting maintenance plan, which specifies
  the required maintenance measures to check and ensure
  the ongoing effective operation of all systems, such as:
  inspection frequency; cleanout procedures; descriptions
  and diagrams of how the installed systems operate;
  details of the life of assets and replacement
  requirements.

All work required by this condition must be undertaken and maintained in accordance with the approved stormwater management report and design.

#### Advice:

This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

#### ENG tr1

Prior to first occupation or commencement of the use (whichever occurs first) Traffic Management within the parking area (including access driveway, circulation roadways, ramped sections, and parking aisles and spaces) must be installed.

Traffic Management design drawings (including signage and line marking), must be submitted and approved as a Condition Endorsement. The design drawings submitted must;

- 1. Be prepared by a suitably qualified person,
- 2. Include indicative signage as required by this permit for the private car parking facility and designated parking bays,
- 3. Pedestrian safety bollards for egress to/from lifts and doorways (where applicable), and
- 4. Signage within the car park advising that vehicles travelling up the ramps should give way to vehicles travelling down.

All work required by this condition must be undertaken in accordance with the approved traffic management design drawings.

#### Advice:

This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

#### Reason for condition

In the interests of user safety and the amenity of the occupiers of the development.

#### ENG tr2

A Construction Traffic and Parking Management Plan must be submitted and approved as a Condition Endorsement prior to the issue of any approval under the *Building Act 2016* (including demolition) or commencement works (e.g., site disturbance) (whichever occurs first).

The Construction Traffic and Parking Management Plan must;

- 1. Be prepared by a suitably qualified person,
- Develop a communications plan to advise the wider community (including but not limited to; users, permit holders, businesses, neighbors etc.) of the traffic and parking impacts during construction,
- 3. Include start dates and finish dates of various stages of

works,

- 4. Include times that rigid vehicles (e.g., MRV) and other traffic associated with the works will be allowed to operate, and
- 5. Nominate a superintendent (or the like) responsible for the implementation of the approved plan, who must also be available as a direct contact to the City of Hobart and/or community/public members regarding all relevant operations, any immediate traffic issues, and hazards that may arise.

The approved Construction Traffic and Parking Management Plan must be implemented throughout construction, and all work required by the approved plan must be undertaken in accordance with the approved plan.

#### Advice:

This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

#### Reason for condition

To ensure the safety of vehicles entering and leaving the development and the safety and access around the development site for the general public and adjacent businesses.

### ENG 2a

Prior to first occupation or commencement of use (whichever occurs first), Physical Controls must be installed as required by the Australian Standard AS/NZS 2890.1:2004 where and how applicable. This includes (vehicular) barriers compliant with the Australian Standard AS/NZS 1170.1:2002, to prevent vehicles running off the edge of a parking (trafficable) area. Physical controls installed must;

- 1. Not limit the parking area approved by this permit, and
- 2. Be in accordance with the Australian Standard AS/NZS 2890.1:2004.

#### Reason for condition

To ensure the safety of users of the access driveway and parking module and compliance with the standard.

#### ENG 3a

Prior to first occupation or commencement of use (whichever occurs first), the parking area (including access driveway, circulation roadways, ramped sections, parking aisles and spaces) must be constructed in accordance with the approved documentation which forms part of this permit, with particular reference to the following plans prepared by;

- 1. JAWSARCHITECTS titled Lower Ground Floor Plan DWG 22103\_DA04 REV 03 dated 07/07/2022,
- 2. JAWSARCHITECTS titled Basement 1 Floor Plan DWG 22013 DA03 REV 02 dated 17/06/2022,
- 3. JAWSARCHITECTS titled Basement 2 Floor Plan DWG\_22013\_DA02 REV 02 dated 17/06/2022,
- ADG titled Roadwork Sight Distance Layout Plan DWG C32 REV B dated 12/08/2022, and
- 5. ADG titled Roadwork and Drainage Layout Plan DWG C30 REV E dated 12/08/2022.

Any departure from the approved documentation, must be:

- 1. Approved by the Director City Life, via a Condition Endorsement application, and/or
- 2. Be designed and constructed in accordance with the Australian Standard AS/NZ 2890.1:2004.

#### Reason for condition

To ensure the safety of users of the access and parking module, and compliance with the relevant Australian Standard.

#### ENG 3c

Prior to first occupation or commencement of use (whichever occurs first), a suitably qualified engineer must certify that the

parking area (including access driveway, circulation roadways, ramped sections, parking aisles and spaces) has been constructed in accordance with the design documentation approved by Condition ENG 3a.

Reason for condition

To ensure the safety of users of the access and parking module, and compliance with the relevant Australian Standard.

#### ENG 4

Prior to first occupation or commencement of use (whichever occurs first), the parking area (including access driveway, circulation roadways, ramped sections, parking aisles and spaces) approved by this permit must be constructed to a sealed standard (spray seal, asphalt, concrete, pavers, or equivalent Council approved) and surface(s) drained to the Council's stormwater infrastructure.

Reason for condition

To ensure the safety of users of the access driveway and parking module, and that it does not detract from the amenity of users, adjoining occupiers or the environment by preventing dust, mud and sediment transport.

#### ENG 5

The number of car parking spaces approved for use on site by this permit is One Hundred and Eight (108). Of these;

- One (1) Office car parking space, on the Lower Ground level, must be allocated for people with disabilities, (including shared areas),
- 2. The remaining One (1) *Office* car parking space, on the *Lower Ground* level, must be allocated for office use,
- 3. Eight (8) Res car parking spaces, on the Lower Ground level, shall be in tandem (i.e., jockey) configurations, therefore One (1) of each of the Four (4) pairs of tandem car parking spaces must be allocated to a dwelling as its

- sole dedicated parking provision,
- 4. One (1) of each of the Eighteen (18) remaining Res car parking spaces, on the Lower Ground level, must be allocated to a dwelling as its sole dedicated parking provision,
- 5. Twenty Two (22) Office car parking spaces, on the Basement 1 level, must be allocated for office use,
- 6. Four (4) Office (SC) small car parking spaces, on the Basement 1 level, must be allocated for office use,
- 7. One (1) *PVP (SC)* small car parking space, on the *Basement 1* level, must be allocated for vehicle parking,
- 8. Thirteen (13) *PVP* car parking spaces, on the *Basement 1* level, must be allocated for vehicle parking,
- 9. Thirty-Five (35) *PVP* car parking spaces, on the *Basement* 2 level, must be allocated for vehicle parking, and
- 10. Five (5) *PVP* (*SC*) small car parking spaces, on the *Basement 1* level, must be allocated for vehicle parking.

Prior to first occupation or commencement of use (whichever occurs first);

- All car parking spaces must be delineated (by means of white or yellow lines 80mm to 100mm wide, or white or yellow pavement markers) in accordance with Australian Standards AS/NZS 2890.1 2004, and
- 2. Signage in accordance with Australian Standards AS/NZS 1742.11:2016 must be erected at the entrance to private car parking facility to indicate access to the area is for authorized users only.

#### Advice:

User Classes shall be as per Australian Standards AS/NZS 2890.1:2004.

#### Reason for condition

To ensure the provision of parking for the use is safe and efficient for all users.

#### ENG 5b

The number of motorcycle parking spaces approved for use

on site by this permit is Two (2).

Prior to first occupation or commencement of use (whichever occurs first);

- 1. All motorcycle parking spaces must be constructed and delineated (by means of white or yellow lines 80mm to 100mm wide, or white or yellow pavement markers) in accordance with Australian Standards AS/NZS 2890.1:2004, and
- Signage in accordance with Australian Standards AS/NZS 1742.11:2016 must be erected at each motorcycle parking space to indicate the parking space is designated for motorcycle use only.

Reason for condition

To ensure the provision of parking for the use is safe and efficient.

#### ENG 8

The number of small car parking spaces (i.e., bays less than 5.4m but no less than 5.0m in length) approved for use on site by this permit is Ten (10).

Prior to first occupation or commencement of use (whichever occurs first);

- All small car parking spaces must be delineated by means of white or yellow lines 80mm to 100mm wide, or white or yellow pavement markers in accordance with Australian Standards AS/NZS 2890.1 2004, and
- Signage in accordance with Australian Standards AS/NZS 1742.11:2016 must be erected at each small car parking space to indicate the bay is designated for small car use only.

Reason for condition

In the interests of vehicle user safety and the amenity of the development.

#### ENG 9

The number of car parking spaces for people with disabilities approved for use on site by this permit is One (1).

Prior to first occupation or commencement of use (whichever occurs first), all car parking spaces for people with disabilities must be constructed and delineated in accordance with AS/NZS 2890.6:2009.

Reason for condition

In the interests of vehicle user safety and the amenity of the development.

#### **ENG 11**

Prior to first occupation or commencement of use (whichever occurs first), the redundant crossover(s) along the Melville Street highway reservation, fronting the subject site, must be reinstated in general accordance with;

 LGAT Standard Drawing - Urban - TSD R11-v3 and TSD R14-v3 Type KC.

Advice:

Local Government Association (LGAT) Tasmanian Standard Drawings (TSD) can be viewed electronically via the LGAT Website.

You are likely to require a Permit to Open Up and Temporarily Occupy a Highway (for work within the highway reservation). Click here for more information.

Reason for condition

In the interests of vehicle user safety and the amenity of the development.

ENG<sub>1</sub>

Any damage to council infrastructure resulting from the

implementation of this permit, must, at the discretion of the Council:

- 1. Be met by the owner by way of reimbursement (cost of repair and reinstatement to be paid by the owner to the Council); or
- 2. Be repaired and reinstated by the owner to the satisfaction of the
- 1. Council.

A photographic record of the Council's infrastructure adjacent to the subject site must be provided to the Council prior to any commencement of works.

A photographic record of the Council's infrastructure (e.g. existing property service connection points, roads, buildings, stormwater, footpaths, driveway crossovers and nature strips, including if any, pre-existing damage) will be relied upon to establish the extent of damage caused to the Council's infrastructure during construction. In the event that the owner/developer fails to provide to the Council a photographic record of the Council's infrastructure, then any damage to the Council's infrastructure found on completion of works will be deemed to be the responsibility of the owner.

#### Reason for condition

To ensure that any of the Council's infrastructure and/or site-related service connections affected by the proposal will be altered and/or reinstated at the owner's full cost.

#### ENG<sub>r1</sub>

The underground car park and associated walls supporting the highway reservation must not undermine the stability and integrity of the highway reservation and its infrastructure.

Detailed design drawings, structural certificates, and associated geotechnical assessments, of the retaining structures adjacent the highway reservation must be submitted and approved, prior to the commencement of work and must;

- 1. Be prepared and certified by a suitably qualified and experienced engineer,
- 2. Not undermine the stability of the highway reservation,
- 3. Be designed in accordance with AS4678, with a design life in accordance with Table 3.1 Typical Application Major Public Infrastructure Works,
- 4. Take into account any additional surcharge loadings as required by relevant Australian Standards,
- 5. Take into account and reference accordingly any Geotechnical findings, and
- 6. Detail any protection measures/works required during construction.

All work required by this condition must be undertaken in accordance with the approved detailed design drawings and structural certificates.

#### Advice:

The applicant is required submit detailed design documentation to satisfy this condition via Council's planning condition endorsement process (noting there is a fee associated with condition endorsement approval of engineering drawings [see general advice on how to obtain condition endorsement and for fees and charges]). This is a separate process to any building approval under the *Building Act 2016*.

Failure to address condition endorsement requirements prior to submitting for building approval may result in unexpected delays.

Where the Council Infrastructure By-Law applies, an Infrastructure Protection Bond is payable for construction works, refundable upon completion and reinstatement of any damage to the highway.

### Reason for condition

To ensure that the stability and integrity of the Council's highway reservation is not compromised by the development.

#### ENG r3

Prior to the commencement of use, the proposed driveway crossover on the Melville Street highway reservation must be designed and constructed in accordance with:

- Urban TSD-R09-v3 Urban Roads Driveways and TSD R14-v3 Type KC vehicular crossing;
- Urban TSD-R14-v3 Redundant vehicle crossover to be reinstated to KC kerb and channel; and
- Footpath Urban Roads Footpaths TSD-R11-v3.

Design drawings must be submitted and approved as a Condition Endorsement prior to any approval under the *Building Act 2016*. The design drawings must:

- 1. Show the cross and long section of the driveway crossover within the highway reservation and onto the property.
- 2. Show the cross and long section of the footpath within the highway reservation.
- 3. Detail any services or infrastructure (i.e. light poles, pits, awnings) at or near the proposed driveway crossover.
- 4. Show on the plan the blue banner pole to be removed.
- 5. Show swept path templates in accordance with AS/NZS 2890.1 2004(B85 or B99 depending on use, design template).
- 6. If the design deviates from the requirements of the TSD, then demonstrate that a B85 vehicle or a B99 depending on use (AS/NZS 2890.1 2004, section 2.6.2), can access the driveway from the road pavement into the property without scraping the vehicle's underside.
- 7. Show that vehicular and pedestrian sight lines are met as per AS/NZS 2890.1 2004.
- 8. Be prepared and certified by a suitable qualified person, to satisfy the above requirements.

All work required by this condition must be undertaken in accordance with the approved drawings.

Advice:

This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

Please note that your proposal does not include adjustment of footpath levels. Any adjustment to footpath levels necessary to suit the design of proposed floor, parking module or driveway levels will require separate agreement from Council's Program Leader Road Services and may require further planning approvals. It is advised to place a note to this affect on construction drawings for the site and/or other relevant engineering drawings to ensure that contractors are made aware of this requirement.

Reason for condition

To ensure that works will comply with the Council's standard requirements.

### ENG<sub>s1</sub>

All waste storage and collection associated with the development must occur wholly within the subject site's parking area approved by this permit (i.e., access driveway and circulation roadways).

Reason for condition

To ensure the safety of vehicles entering and leaving the development and the safety and access around the development site for the general public and adjacent businesses.

#### ENG<sub>s2</sub>

The use of Inclined Ground Anchors (i.e., Soil Nails) shown on plans, in any capacity (e.g., for protection or construction works, as temporary/permanent shoring), does not form part of this planning application, and are not approved as part of this planning permit.

Reason for condition

To clarify the scope of the permit.

#### **ENVHE 1**

Recommendations in the report Environmental Site Assessment, 90 Melville Street, dated December 2019 must be implemented, for the duration of the development.

### Specifically:

- Excavated soils for disposal must be in stockpiled and sampled by a suitably qualified person in accordance with the EPA's IB105 guidelines, and,
- A soil and water management plan should be documented and actioned for general sediment control to reduce loadings into the storm water infrastructure and waterways.

Reason for condition

To ensure that the risk to the environment remains low and acceptable.

#### **ENVHE 4**

A Demolition and Construction Environmental Management Plan, prepared by suitably qualified persons, must be implemented.

A Demolition and Construction Environmental Management Plan must be submitted and approved prior to the commencement of works and prior to the issue of any approval under the *Building Act 2016*.

The plan must include, but is not limited to, the following:

1. Details of the proposed demolition and construction methodologies and expected likely timeframes.

- 2. The proposed days and hours of work and proposed hours of activities likely to generate significant noise emissions (including volume and timing of heavy vehicles entering and leaving the site, rock breaking and concrete pouring).
- Details of potential environmental impacts associated with the demolition and construction works including noise, vibration, erosion and pollution (air, land and water).
- 4. Details of proposed measures to avoid or mitigate all identified potential environmental impacts during demolition and construction works including, but not limited to:
  - a. A noise and vibration management plan certified by a suitably qualified person as being generally consistent with AS 2436-2010 Guide to Noise and Vibration Control on Construction, Demolition and Maintenance Sites and the Interim Construction Noise Guidelines (New South Wales Department of Environment and Climate Change, July 2009), and with any relevant guidelines or standards referenced by those documents.
  - b. A soil and water management plan including:
    - i. measures to minimise erosion and the discharge of contaminated stormwater off-site;
    - ii. measures to minimise dust emissions from the site;
    - iii. measures to manage the disposal of surface and groundwater from excavations (if relevant); and
    - iv. measures to prevent soil and debris being carried onto the street.
- 5. Details of proposed responsible persons, public communication protocols, compliance, recording and auditing procedures and complaint handling and response procedures.

A copy of the approved Demolition and Construction Environmental Management Plan must be kept on site for the duration of the works and be available for inspection.

Advice:

This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

Reason for condition

To minimise the impact of construction works.

#### **ADVICE**

The following advice is provided to you to assist in the implementation of the planning permit that has been issued subject to the conditions above. The advice is not exhaustive and you must inform yourself of any other legislation, by-laws, regulations, codes or standards that will apply to your development under which you may need to obtain an approval. Visit the Council's website for further information.

Prior to any commencement of work on the site or commencement of use the following additional permits/approval may be required from the Hobart City Council.

#### CONDITION ENDORSEMENT

If any condition requires that further documents are submitted and approved, you will need to submit the relevant documentation to satisfy the condition via the Condition Endorsement Submission on Council's online services e-planning portal. Detailed instructions can be found here.

A fee of 2% of the value of the works for new public assets (stormwater infrastructure, roads and related assets) will apply for the condition endorsement application.

Once approved, the Council will respond to you via email that the condition has been endorsed (satisfied).

Where building approval is also required, it is recommended that documentation for condition endorsement be submitted well before submitting documentation for building approval. Failure to address condition endorsement requirements prior to submitting for building approval may result in unexpected delays.

#### **BUILDING PERMIT**

You may need building approval in accordance with the *Building Act 2016.* Click here for more information.

This is a Discretionary Planning Permit issued in accordance with section 57 of the *Land Use Planning and Approvals Act 1993*.

#### **PLUMBING PERMIT**

You may need plumbing approval in accordance with the *Building Act 2016*, *Building Regulations 2016* and the National Construction Code. Click here for more information.

#### **SPECIAL CONNECTION PERMIT**

You may need a Special Connection Permit (Trade Waste) in accordance with the *Plumbing Regulations 2014* and the Tasmanian Plumbing Code. Click here for more information.

#### **PUBLIC HEALTH**

You may be required to provide approved/endorsed plans for a food business fit out, in accordance with the National Construction Code - Building Code of Australia including Tas Part H102 for food premises which must have regard to the FSANZ Food Safety Standards. Click here for more information.

#### FOOD BUSINESS REGISTRATION

Food business registration in accordance with the *Food Act 2003*. Click here for more information.

### SINGLE USE PLASTICS

The City of Hobart has a 'Single-Use Plastics By-Law' in force, which applies to retailers who provide or sell food to be taken from the retailer's premises in food packaging. Retailers must not provide to a person any food packaging which is wholly or partly comprised of plastic and a single use product. Please click here for more information.

### OCCUPATION OF THE PUBLIC HIGHWAY

You may require a permit for the occupation of the public highway for construction or special event (e.g. placement of skip bin, crane, scissor lift etc). Click here for more information.

You may require an occcupational license for structures in the Hobart City Council highway reservation, in accordance with conditions to be established by the Council. Click here for more information.

You may require a road closure permit for construction or special event. Click here for more information.

You may require a Permit to Open Up and Temporarily Occupy a Highway (for work in the road reserve). Click here for more information.

# **GENERAL EXEMPTION (TEMPORARY) PARKING PERMITS**

You may qualify for a General Exemption permit for construction vehicles i.e. residential or meter parking/loading zones. Click here for more information.

### **PLANNING**

The applicant is strongly encouraged to liaise with Tasnetworks to find an alternative substation location, to help improve the amenity, usability, safety, and long term viability of the proposed through site link.

### **STORMWATER**

Please note that in addition to a building and/or plumbing permit, development must be in accordance with the Hobart City Council's Infrastructure By law. Click here for more information.

### STRUCTURES CLOSE TO COUNCILS' STORMWATER MAIN

The design of structures (including footings) must provide protection for the Council's infrastructure. For information regarding appropriate designs please contact the Council's City Life Division. You may need the General Manager's consent under section 13 of the *Urban Drainage Ace 2013* and consent under section 73 or 74 of the *Building Act 2016*.

### WORK WITHIN THE HIGHWAY RESERVATION

Please note development must be in accordance with the Hobart City Council's Infrastructure by law. Click here for more information.

### CBD AND HIGH VOLUME FOOTPATH CLOSURES

Please note that the City of Hobart does not support the extended closure of public footpaths or roads to facilitate construction on adjacent land.

It is the developer's responsibility to ensure that the proposal as designed can be constructed without reliance on such extended closures.

In special cases, where it can be demonstrated that closure of footpaths in the CBD and/or other high volume footpaths can occur for extended periods without unreasonable impact on other businesses or the general public, such closures may only be approved by the full Council.

For more information about this requirement please contact the Council's Mobility Unit on 62382711.

#### DRIVEWAY SURFACING OVER HIGHWAY RESERVATION

If a coloured or textured surface is used for the driveway access within the Highway Reservation, the Council or other service provider will not match this on any reinstatement of the driveway access within the Highway Reservation required in the future.

#### REDUNDANT CROSSOVERS

Redundant crossovers are required to be reinstated under the Hobart City Council's Infrastructure By law. Click here for more information.

### **ACCESS**

Designed in accordance with LGAT- IPWEA – Tasmanian standard drawings. Click here for more information.

### CROSS OVER CONSTRUCTION

The construction of the crossover can be undertaken subject to Council approval of the design. Click here for more information.

### **WORK PLACE HEALTH AND SAFETY**

Appropriate occupational health and safety measures must be employed during the works to minimise direct human exposure to potentially-contaminated soil, water, dust and vapours. Click here for more information.

### PROTECTING THE ENVIRONMENT

In accordance with the *Environmental Management and Pollution Control Act 1994*, local government has an obligation to "use its best endeavours to prevent or control acts or omissions which cause or are capable of causing pollution." Click here for more information.

# **LEVEL 1 ACTIVITIES**

The activity conducted at the property is an environmentally relevant activity and a Level 1 Activity as defined under s.3 of the

Environmental Management and Pollution Control Act 1994. For further information on what your responsibilities are, click here.

### **NOISE REGULATIONS**

Click here for information with respect to noise nuisances in residential areas.

### **WASTE DISPOSAL**

It is recommended that the developer liaise with the Council's Cleansing and Solid Waste Unit regarding reducing, reusing and recycling materials associated with demolition on the site to minimise solid waste being directed to landfill.

Further information regarding waste disposal can also be found on the Council's website.

# **FEES AND CHARGES**

Click here for information on the Council's fees and charges.

# **DIAL BEFORE YOU DIG**

Click here for dial before you dig information.

Attachment A: PLN-22-321 - 90 MELVILLE STREET HOBART

7000 - Planning Committee or Delegated Report J

**205** 

Attachment B: PLN-22-321 - 90 MELVILLE STREET HOBART

TAS 7000 ~ CPC Agenda Documents J

Attachment C: PLN-22-321 - 90 MELVILLE STREET HOBART

TAS 7000 - Attachment C - Urban Design Advisory

Panel Report J



### **APPLICATION UNDER HOBART INTERIM PLANNING SCHEME 2015**

City of HOBART

Type of Report: Committee

Council: 26 September 2022 Expiry Date: 26 September 2022

Application No: PLN-22-321

Address: 90 MELVILLE STREET, HOBART

ADJACENT ROAD RESERVE

Applicant: (Neil Shephard and Associates on behalf of Giameos Constructions and

Developments Pty Ltd)

PO Box 273

Proposal: Demolition and New Building for 22 Multiple Dwellings and Business and

Professional Services, and Associated Works

Representations: Three

Performance criteria: Central Business Zone Development Standards, Potentially Contaminated

Land Code, Road and Railway Assets Code, Parking and Access Code,

Stormwater Management Code, and Historic Heritage Code

# 1. Executive Summary

1.1 Planning approval is sought for Demolition and New Building for 22 Multiple Dwellings and Business and Professional Services, and Associated Works, at 90 Melville Street and Adjacent Road Reserve, Hobart.

- 1.2 More specifically the proposal is for:
  - The demolition of the existing building and structures on the site, and construction of a new building comprising three below-ground levels of 108 car parking spaces and residential storage; and nine above-ground levels of commercial/office space and 22 residential apartments.
  - The overall maximum building height to the top of the screening around the rooftop lift overrun is 33.1m. The height of the substantive portion of the building (i.e. the top of the 9th floor) is 30.3m. The height of the podium level is 16.5m at its south western end, and 18.64m at its north eastern end.
  - External surfaces of the building frame are to be pre-cast concrete panels in
    a selected variety of light, textured finishes. Window elements will provide
    additional light and cross ventilation and visually mitigate the bulk and
    massing of the building. Glazed balconies will predominate on all elevations,
    with cement sheet and aluminium privacy screens providing additional detail
    and texture within the balcony recess.
  - A communal roof garden space facing northeast is to be provided at Level 5.
  - At street level, the main entrance, terrace and steps are proposed to be a
    brick finish, referencing the historic use of the site. The area setback from
    the footpath and potential future laneway linkage to Bathurst Street has been
    designed to provide the potential for public artwork to include colour and
    visual interest to integrate with the design of public seating and planting
    within this area.
- 1.3 The proposal relies on performance criteria to satisfy the following standards and codes:
  - 1.3.1 Central Business Zone Development Standards Building Height, Setback, and Residential Amenity
  - 1.3.2 Potentially Contaminated Land Code Sensitive Use and Excavation
  - 1.3.3 Parking and Access Code On-site Carparking Provision, Bicycle Parking Provision and Design, Bicycle End of Trip Facilities, Layout of Parking Areas, Facilities for Commercial Vehicles
  - 1.3.4 Stormwater Management Code Stormwater Drainage and Disposal
  - 1.3.5 Historic Heritage Code Archaeology
- 1.4 Three representations objecting to the proposal was received during the statutory advertising period between 24 August and 7 September 2022.
- 1.5 The application was considered by the Urban Design Advisory Panel at its meeting of 14 June 2022. In the context of the provisions on which they were asked to comment, the Panel was broadly supportive of the proposal.
- 1.6 The proposal is recommended for approval subject to conditions.

1.7 The final decision is delegated to the Council, because the proposal is a major application.

### 2. Site Detail

2.1 The subject 1680m2 site (CT245477/1) is on the south eastern side of Melville Street and is the former Kemp and Denning timber yard site. The site slopes gently down to the north-western facing frontage of Melville Street. The predominantly vacant site is currently used for private car parking with the only building being the existing timber storage warehouse which is located to the rear and contained within a notch protrusion of the lot.

The site is located within the fringe area of the Central Business Zone under the *Hobart Interim Planning Scheme 2015*.

To the north, directly opposite 90 Melville Street, is the former Kemp and Denning site, now owned by the University of Tasmania. An existing mechanic's workshop adjoins the site to the east (80-88 Melville Street) with the rear of the Murray Street retail buildings beyond.

To the south a small corner of a retail warehouse building adjoins the site (133 Bathurst Street).

The western boundary of the site adjoins the multi-storey office building which has an approximate height of 20m and extends to the corner of Harrington Street.



Figure 1: The subject site is bordered in blue. Source: Council GIS.

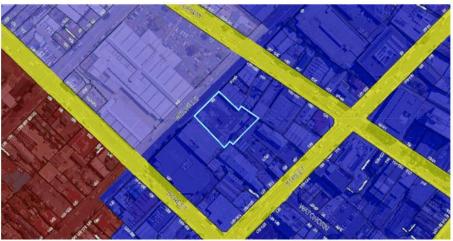


Figure 2: The zoning of the site, bordered in blue. Dark blue shading denotes the Central Business zone. Purple denotes the Commercial zone. Maroon denotes the Inner Residential zone. Yellow denotes the Utilities zone.



Figure 3: Showing the Central Business zone heights overlay. Yellow denotes the Fringe Height area, the blue denotes the Core Height area. The streets shown as pink are solar penetration priority streets.



Figure 4: Looking at the front of the site on Melville St.



Figure 5: Looking at the front of the site on Melville St.



Figure 6: Looking at the front of the site on Melville St.

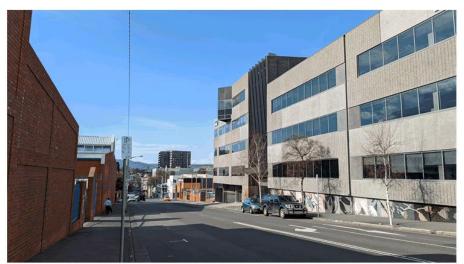


Figure 7: Looking down Melville St from close to its intersection with Harrington St. The site is on the right hand side of the image next the KPMG (grey) building.



Figure 8: Looking down Melville St toward the site, close to its intersection with Barrack St.



Figure 9: Looking down Melville St from its intersection with Barrack St.



Figure 10: Looking down Melville St toward the site, close to its intersection with Barrack St.



Figure 11: Looking towards the city, from the intersection of Brisbane and Barrack Streets. The site is located broadly above the 'school zone' sign.



Figure 12: Looking towards the city, from the intersection of Brisbane and Barrack Streets. The site is located broadly above the 'school zone' sign.



Figure 13: Looking toward the site from Murray St, close to its intersection with Brisbane St.



Figure 14: Looking toward the site from Murray St, close to its intersection with Brisbane St.



Figure 15: Looking toward the site from the corner of Murray and Melville Streets.

# 3. Proposal

3.1 Planning approval is sought for Demolition and New Building for 22 Multiple Dwellings and Business and Professional Services, and Associated Works, at 90 Melville Street and Adjacent Road Reserve, Hobart.

### 3.2 More specifically the proposal is for:

- The demolition of the existing building and structures on the site, and construction of a new building comprising three below-ground levels of 108 car parking spaces and residential storage; and nine above-ground levels of commercial/office space and 22 residential apartments.
- The overall maximum building height to the top of the screening around the rooftop lift overrun is 33.1m. The height of the substantive portion of the building (i.e. the top of the 9th floor) is 30.3m. The height of the podium level is 16.5m at its south western end, and 18.64m at its north eastern end.
- External surfaces of the building frame are to be pre-cast concrete panels in
  a selected variety of light, textured finishes. Window elements will provide
  additional light and cross ventilation and visually mitigate the bulk and
  massing of the building. Glazed balconies will predominate on all elevations,
  with cement sheet and aluminium privacy screens providing additional detail
  and texture within the balcony recess.
- A communal roof garden space facing northeast is to be provided at Level 5.
- At street level, the main entrance, terrace and steps are proposed to be a
  brick finish, referencing the historic use of the site. The area setback from
  the footpath and potential future laneway linkage to Bathurst Street has been
  designed to provide the potential for public artwork to include colour and
  visual interest to integrate with the design of public seating and planting
  within this area.

### 3.3 A 'fly through' of the proposal is available here.

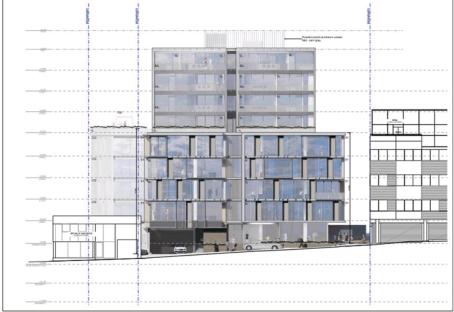


Figure 16: Proposed front elevation. Source: JAWS.



Figure 17: Proposed north east side elevation. Source: JAWS.



Figure 18: Proposed rear elevation. Source: JAWS.

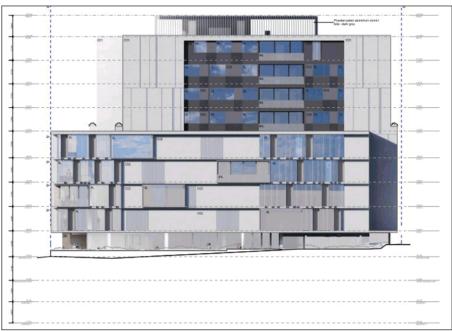


Figure 19: Proposed south west side elevation. Source: JAWS.

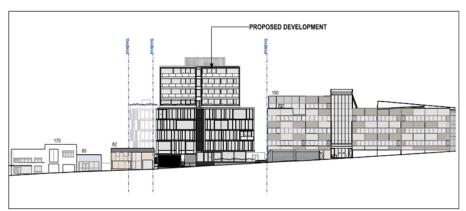


Figure 20: Street elevation showing the proposed development. Source: JAWS.





Figure 21: Artist montages of the proposed development. Source: JAWS.

# 4. Background

4.1 There is an existing approval for the development of the site under PLN-19-948. The built form and scale was largely the same however it had an alternative design approach. It was predominately residential with 55 dwellings and commercial use on the ground floor. The permit has not substantially commenced, and an extension of time within which to substantially commence has been sought by the applicant, and is under consideration by Council officers.



The previously approved development under PLN-19-948. Source: JAWS.

4.2 The application was considered by the Urban Design Advisory Panel at its meeting of 14 June 2022. In the context of the provisions on which they were asked to comment, the Panel was broadly supportive of the proposal. The Panel's comments are included where relevant in section 6 of this report, and are discussed in section 7. The Panel's comments are provided in full as an attachment to this report.

The applicant advised that in response to the UDAP meeting and suggestions made by the Panel, the following changes have been incorporated into the advertised proposal:

- 1. Stepping the podium façade down Melville Street at ground level.
- 2. Widening the laneway next to the sub-station, by reducing the footprint of the adjacent commercial façade) to improve view through to rear boundary/future Bathurst street connection.
- 3. Improve street activation/visibility of ground floor from Melville (lower or remove garden bed and wall).
- 4. Reduce roller door height to improve streetscape amenity and bulk of building at street level.
- 5. Decorate blade walls/side elevations above the podium to provide relief and interest (particularly the western elevation).
- 4.3 The proposal includes works within the Council's road reserve, and as such, General Manager Consent to lodge the application was sought, and granted on 22 June 2022, under GMC-22-39.

- 4.4 There are two other live applications for this site:
  - PLN-22-111: For the reconfiguration of the approved basement under PLN-19-948 to allow for commercial car parking; and
  - PLN-22-314: For the use of soil nails into adjoining properties for the purposes of construction.

At the time of writing, PLN-22-111 was on hold pending the submission of additional information, and PLN-22-314 is going to the City Planning Committee for determination at its 19 September 2022 meeting.

### 5. Concerns raised by representors

- 5.1 Three representations objecting to the proposal was received during the statutory advertising period between 24 August and 7 September 2022.
- 5.2 The following table outlines the concerns raised in the representations received. Those concerns which relate to a discretion invoked by the proposal are addressed in Section 6 of this report.

I wish to lodge an objection against the proposed development. I have not given permission for ground anchors to either of my properties.

Additionally I have other concerns that I would like to discuss with the Planner on this project, as I was receiving calls from tenants due to the development notice on 164 Murray Street – Tasmanian Walking Company expressing concerns.

I was un aware that notices would be placed on my property without being advised.

In saying that George Giameos asked me to meet with him, Stephan Giameos and Tim Lucas back in June where they showed me some plans of their development of 90 Melville Street that had anchors going under 82 Melville Street and 164 Murray Street. At the meeting Tim Lucas stated that they were revising these plans and would inform me in due course. My understanding was that I would receive a final draft prior to submission to council.

I phoned George Giameos last week to enquire as to progress of plans. Unaware that the proposed plans had been submitted. The fact that in June I was advised may well be deemed that I have been advised.

I have had preliminary discussions with a consultant on my position in relation to the request to anchor under my property. I was waiting on final plans to take the next step. Deed of agreement, compensation and so on should I wish to agree.

I would like to add this supplementary email detailing my objections.

- 1. Business disruption to Specialist Car Centre.
- a. Traffic movement
- b. Noise and vibration from excavation for example rock breaking and works associated with a project of this scale.
- Due to the depth of excavation there is likelihood of damage to
   82-88 Melville Street as the Myer / Cat and Fiddle Arcade example.
- 3. I am of the opinion 82-88 Melville Street property should have some guarantee that the stability of the building will not be disturbed during construction if planning approval is granted.

This development proposal is disappointing from a sustainable transport perspective:

This is a highly walkable location, with close access to places of employment, education, shops, offices and public transport. In addition, UTAS are planning to sponsor installation of on-street

bikeways on Melville Street to enable safe bike riding connections to their other campuses on Argyle, Campbell Streets and the Domain. Given that this office space is likely to be used by UTAS staff, and these apartments are likely to be accommodating UTAS staff and students, we can reasonably expect a high level of bike and scooter riding by the users of this building.

In this context Council should be looking to minimise the amount of private carparking provided within the development. Every car parked here will increase the amount of traffic, noise and congestion in the city, reducing both its liveability and the safety of our streets for pedestrians, bike and scooter riders and users of mobility scooters. This will discourage use of more active transport modes. It should also not be forgotten that UTAS plans a generous green park on the campus just across the road from this development, and there is a restaurant with outdoor dining nearby on the corner of Melville and Murray Streets.

The provision for car parking is excessive.

There are too many carparking spaces (26x) provided for the 22 apartments – at more than one per apartment, this exceeds the requirement expressed in the planning scheme for the Central Business Zone (which states either none or a maximum of one per dwelling, Clause E.6.6.5).

For 5 floors of office space, 5632 sq m, the car parking provided (28) spaces) matches the planning scheme requirement under E6.6.5).

Modern urban planning practice is to eliminate Minimum Parking Requirements for cars, and to leave this decision to the market. For example, in New Zealand, another highly car-dependent society, 90 percent of the population now live in areas where parking mandates have been abolished.

The provision for bike parking is insufficient and poor quality.

Bicycle Network has previously advised that the State Planning Scheme and individual Councils should mandate at least one secure bicycle parking space per dwelling. For 22 residential apartments there should be quality bike parking provided for at least 22 bikes. It appears that this DA proposes unsecure resident bike parking for about 4 bikes (on two rails?), located on the Lower Ground Floor.

Bicycle Network recommends one bike park per five full-time equivalent employees in commercial spaces.

For 5 floors of office space (5632 sq m), this DA seems to propose a bike store for commuters on the Ground Level containing only substandard (wall-mounted and too closely spaced) rails for 15 bikes. Modern bike parking infrastructure requires generous provision for on ground parking for the larger and heavier e-bikes and mountain bikes that people are now riding for everyday transport. Power points should be installed as well to enable daytime charging for e-bike riders who have come some distance.

The room designated for End of Trip facilities sounds good, but it is just an empty room. It will be up to the Body Corporate to later on make the decisions and install in this room the additional bike parking and the actual end of trip facilities that will be required for the office workers (such as a bike repair stand, showers, and lockers). It would be more efficient, timely and appropriate to install these items at the build stage.

Other important general considerations for bike parking include: that it be located close to the entrance of the building for maximum convenience of riders; the vehicular access ramps should not have lips that will catch bike wheels; and the bike parking options should not require lifting of bikes. The increasing popularity of heavier ebikes and cargo bikes means that ground-mounted hoops or lockers are a better option than wall-mounted rails. A number of standard electrical outlets should be provided for convenient charging of e-bikes.

Resident bike parking should be secure – it could be offered via a bike locker, a security cage, via keycard access to a bicycle parking room, or within a keycard access car park. There should also be a communal space set aside for residents to clean and repair their bikes, as regular transport riders need to clean their bikes frequently.

As an inner city resident myself, I know the value of having safe and liveable streets, and the importance of having accessible and secure bike parking in my own apartment building. I would hope that the City of Hobart would be optimising the conditions that support liveable streets and sustainable transport in order to facilitate our community's important and inevitable shift towards more active, enjoyable, congestion-busting and healthy transport options.

We are the owners of a property which has a common boundary with the property on which the development is proposed. We refer to page 20 of the Architectural Plans, NE Elevation (Trim Download 2893529.PDF) which shows our current building as a dashed line. This part of the proposed development is very close to the boundary of our property. Levels Ground to 4 have a window on each level facing our boundary. We object to windows on this wall where it will affect the potential for us to future develop our own property to the boundary as is our right, and we will not be providing a light well on our property. We wish for all of those windows to be removed as they are inside the 3 metre rule to our boundary wall.

#### 6. Assessment

- The Hobart Interim Planning Scheme 2015 is a performance based planning scheme. To meet an applicable standard, a proposal must demonstrate compliance with either an acceptable solution or a performance criterion. Where a proposal complies with a standard by relying on one or more performance criteria, the Council may approve or refuse the proposal on that basis. The ability to approve or refuse the proposal relates only to the performance criteria relied on.
- The site is located within the Central Business Zone of the *Hobart Interim Planning Scheme 2015*.
- 6.3 The proposed uses are Multiple Dwellings, and Business and Professional Services. The uses are permitted in the zone, noting that residential is permitted because it is not located at ground floor level except for access.
- 6.4 The proposal has been assessed against:
  - 6.4.1 Part D 22 Central Business Zone
  - 6.4.2 E2.0 Potentially Contaminated Land Code
  - 6.4.3 E5.0 Road and Railway Assets Code
  - 6.4.4 E6.0 Parking and Access Code
  - 6.4.5 E7.0 Stormwater Management Code
  - 6.4.6 E9.0 Attenuation Code
  - 6.4.7 E13.0 Historic Heritage Code

- The proposal relies on the following performance criteria to comply with the applicable standards:
  - 6.5.1 Central Business Zone:-

Building Height - Part D 22.4.1 P3.1 Setback - Part D 22.4.2 P1 Residential Amenity Part D 22.4.9 P2, P3, P5 and P7

6.5.2 Potentially Contaminated Land Code -

Sensitive Use Part E2.5 P1 Excavation 2.6.2 P1

6.5.3 Parking and Access Code:-

On-site Carparking Provision - E6.6.5 P1

Number of Bicycle Parking Spaces - E6.6.4 P1

Layout of Parking Areas - E6.7.5 P1

Design of Bicycle Parking Spaces - E6.7.10 P1

Bicycle End of Trip Facilities - E6.7.11 P1

Facilities for commercial vehicles - Part E 6.7.13 P1

6.5.4 Stormwater Code:-

Stormwater Drainage and Disposal - Part E7.7.1 P1, P2

6.5.5 Historic Heritage Code -

Archaeology Part E13.10.1 P1

- 6.6 Each performance criterion is assessed below.
- 6.7 Building Height Part D 22.4.1 P3.1
  - 6.7.1 The acceptable solution at clause 22.4.1 A3 requires building height to not exceed 15m/4 storeys if 50% of the floor space above ground floor level is for residential use.
  - 6.7.2 The proposal includes four floors of commercial and four floors of residential use above ground floor level, and has a maximum overall building height of 33.1m.
  - 6.7.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.

6.7.4 The performance criterion at clause 22.4.1 P3.1 provides as follows:

The siting, bulk and design of development must respect the transition between the core area of the Central Business Zone and adjacent zones and must make a positive contribution to the streetscape and townscape.

6.7.5 It is noted that the proposed building is fully contained within the Amenity Building Envelope. As noted in the footnotes to Figure 22.3 of the planning scheme, the Amenity Building Envelope has been developed with regard to heritage, streetscape and sense of scale, wind tunneling effects and solar penetration. It's height and envelope angle maintain sufficient solar penetration to the opposite side of the street and help to control air and wind turbulence. It also ensures that the building will not have unreasonable impacts on the view lines and view cones in Figure 22.6 and on the landform horizons to kunanyi/Mt Wellington and the Wellington Range from public spaces within the Central Business Zone and the Cove Floor.

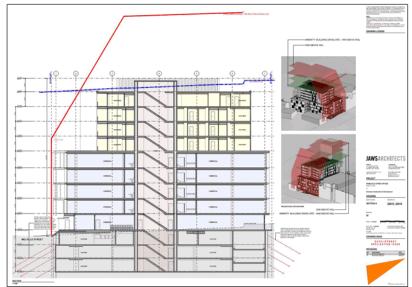


Figure 22: Showing that the proposal is contained within the Amenity Building Envelope, which is shown in red. The blue dashed line depicts 30m above ground level (which is not part of the Amenity Building Envelope). Source: JAWS.

6.7.6 The Figure above illustrates the level of compliance with the Amenity Building Envelope. The design of the development demonstrates restraint within the capacity of development potential afforded by the envelope, not only in the 45m height allowable, but also the development potential within close proximity to the street frontage. That

is, the proposal does not seek to develop to the full extent of the Amenity Building Envelope.

The development's compliance with the Amenity Building Envelope means that the consideration of the proposed development is limited to first, whether the siting, bulk and design of the development respects the transition between the Core Height Area of the Central Business Zone and adjacent zones, and second, whether the development makes a positive contribution to the streetscape and townscape.

6.7.7 The scheme requires that the siting, bulk and design of the development respects the transition between the core area of the Central Business zone and adjacent zones.

The siting, bulk and design of the development

The application documentation describes the proposal as an office podium with residential apartments above. The office podium sits below the 20m street wall height preferred by the Amenity Building Envelope, is built to the boundaries on all but the south western side, and is generally well articulated and detailed with a variety of glazing and materials.

Above the podium sits four floors of residential apartments, to a maximum height of approximately 30m. This component is set back from all side boundaries, and is articulated to create two offset separate forms. The materiality for this component of the development is light coloured concrete paneling with inset sections of glazing and balconies. Within these sections a mid-grey aggregate concrete paneling is also utilised on the north-east and south-west elevations.

Sitting on top of the building is the rooftop plant and lift overrun, to a maximum height of 31.8m. This area is set in the middle of the building, and is screened with an aluminium fin clad structure.

The application documentation provides the following additional information about the siting, bulk, and design of the development:

- The service core is located centrally to assist in dividing the forms.
- The façade treatments try to create a unifying element tying all components together.
- · Where height increases, bulk reduces.
- The building has been designed to be viewed 'in the round'.
- The proposal uses the traditional 'podium' design, but also involves
  the creation of individual forms to further break down the scale and
  bulk of the building. This ensures that the proposal appears
  both horizontally and vertically as a properly articulated, layered,
  multidimensional building with varying setbacks and heights.

Consequently the form of the building does not contribute to any impression of a 'contiguous wall of towers', but rather provides a transition between the higher, more monolithic forms of development in the CBD Core Area, and the lower, more lateral forms of development (present and future) adjoining the subject site (within the CBD Fringe Area), and to the northwest of Melville Street (beyond the Central Business Zone).

 The building's height and bulk has been stepped down to Melville Street to ensure the development is consistent with existing and potential future adjoining buildings in Melville Street in terms streetscape pattern, and equally provides a transition to existing and potential future development of the Commercial zoned area on the opposite side of Melville Street

Refer to the Figures below, and to Figure 16 to 21 above for elevations and montages of the proposed development, to further demonstrate its siting, bulk, and design.

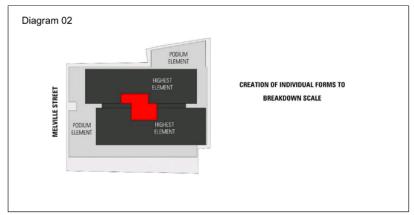


Figure 23: Demonstrating how the proposal's form has been broken down. Source: JAWS.



Figure 24: Montage of the proposal showing articulation and detailing of the design. Source: JAWS.

### 6.7.8 Characteristics of the adjacent zones

As can be seen in Figures 2 and 3 above, the site is located on the edge of the Central Business zone, and on the edge of the fringe height area. The scheme requirement is in effect that the development provide a transition from the core height area of the Central Business zone to adjacent zones. The primary adjacent zone is the Commercial zone, which commences on the other side of Melville St. The Commercial zone has a permitted height of 15m, and a permitted 0m setback to all boundaries. The site across the road on Melville Street from the subject site, 103 Melville St, is the former Kemp and Denning hardware store, that is now owned by the University of Tasmania. It has significant redevelopment potential, given its size, lack of adjoining neighbours, and that there is no heritage listing or heritage precinct applicable to it. It is considered reasonable to assume that this site may well be developed to at least a height of 15m in the near to mid-future. At the very least it is considered unrealistic to assume that this site will remain undeveloped for an extended period of time.

It is noted that the Inner Residential zone is also adjacent to the site to the west. In respect of this zone, however, it is considered that there is already an existing transition of development established by the KPMG Building at 100 Melville Street. From its Harrington Street frontage this building extends from a lower section to the higher element of approximately 20m in height where it adjoins the subject site. The podium element of the proposal is consistent with this height, sitting below the 20m preferred street wall height of the Amenity Building Envelope, which is considered to respect the existing pattern of transition of development.

#### The core height area

It is important to understand the nature of the development within the core height area of the Central Business zone, to be able to ascertain if the proposal provides a transition from it to the adjacent zones discussed above. It is noted that the site is at a higher elevation than much of the core height area of the Central Business zone, and as a consequence, the height of the proposed development appears amplified in that context. It is therefore important to consider not only the height of the proposal above natural ground level, but also its relative height in comparison to the relative heights of development in the core height area. The height of the proposal development is RL54.9 to the top of the 9th floor roof (RL57.7 to the top of the roof plant). By comparison, the maximum height of the recently completed student accommodation at 40 Melville St is RL60.3, the Myer building is

RL63.32, the Commons on the corner of Bathurst and Watchorn St is RL49.7, and the approved but as yet unconstructed hotel at 125 Bathurst St (PLN-20-532) is RL54.6 to the top of its 9th floor, and RL58.9 to the top of the roof plant. In terms of relative levels, it can be seen that the proposal's height is comparable with those in the core height area of the Central Business zone.

The applicant has provided a number of images to help demonstrate how the proposal relates to the development in the Central Business zone:



Figure 25: Artist's impression from the northern corner of the intersection of Brisbane and Murray Streets. Source: JAWS.



Figure 26: Artist's impression from the western corner of the intersection of Melville St and Barrack Streets. Source: JAWS.



Figure 27: Artist's impression from Murray Street near its intersection with Devonshire Square. Source: JAWS.

6.7.9 These images show that the proposed building will sit comfortably with respect to the development in the Central Business zone, particularly in relation to those buildings identified above. However, given the site is located on the edge of the fringe height area, it is considered that the height of the proposal is at the limit of providing a transition from the core height area. It is noted that the height of the proposed building is essentially the same as the previously approved development under

PLN-19-948, which also had a main building height of 30m, but a 0.5m lower height to the top of the roof top plant of 31.3m.

#### 6.7.10 UDAP Comments

In relation to transition, UDAP commented as follows:

"The Panel also felt that the overall sense of 'transition' within the street and townscape was of resulting 'bulkiness'. In comparison with the previous scheme, the residential apartments are not only more uniform, but also lack the same material diversity. The result is diminished differentiation and character at the townscape scale."

In relation to height, UDAP commented as follows:

"The Panel noted that the property sits on the fringe of the Central Business Zone and the proposed development will significantly stand out compared to the scale of existing buildings. The sense of layering offered by the topography of the site, and the existing streetscape, will mean the north-east edge will be most prominent. The Panel also felt that the further away from the building it was viewed, the heavier it gets; it is the lower levels that have lightness in their design. The Panel felt that while there was strong articulation to the apartment upper levels in the middle of the building, the further away the building was viewed, the blank walls will dominate. The Panel would prefer to see a more considered resolution of the concrete façade edges, which would be particularly prominent when viewed from the higher ground of West Hobart."

6.7.11 Does siting, bulk and design of the development respects the transition between the core area of the Central Business zone and adjacent zones?

It's clear that the siting, bulk, and design of the proposed building has attempted to respect the transition from the core height area to the adjacent zones: the building has been broken down into a podium form, and an articulated offset form above which is set in from the boundaries; as the building gets higher, its bulk is reduced; the building steps down towards Melville Street; the overall height of the building is, in the main, 30m; and there is a diversity of materials and finishes used on the various components of the building. The only area of concern with respect to the design of the building, are the expanses of concrete paneling on the north east and south western side elevations of the residential component. The only relief provided is through express joints. As UDAP identified, as a consequence of this design, blank walls will dominate particularly when viewed from further afield. This in turn hinders the building's ability to provide an effective transition between the core height area and the fringe height area, because it will make the

building more prominent. However, it is considered that this can be successfully resolved via a condition relating to materials and finishes, noting that concrete paneling proposed for other areas of the building already provides more visual interest through a vertical inlay pattern, and that variety in the size, location, colour, texture, and contrast of the panels would also address this issue.

It is considered that the proposed building provides an adequate transition to adjacent Commercial zone, particularly noting the realistic development potential of the site at 103 Melville Street. It's also considered that while at the upper limit of acceptability, the height of the proposal does respect the transition from the heights of buildings in the core height area. It's further noted that sites adjoining the subject site on Melville and Murray Street, which are within the Central Business zone and fringe height area, are also likely to be redeveloped in the future, which would likely further assist in the proposed building appearing to fit in with its context.

6.7.12 The planning scheme also requires that the development makes a positive contribution to the streetscape and townscape. The planning scheme defines streetscape as:

The visual quality of a street depicted by road width, street planting, characteristics and features, public utilities constructed within the road reserve, the setbacks of buildings and structures from the lot boundaries, the quality, scale, bulk and design of buildings and structures fronting the road reserve.

For the purposes of determining streetscape with respect to a particular site, the above factors are relevant if within 100m of the site.

The applicant has identified the following as demonstrating how the proposal makes a positive contribution to the streetscape:

- The building is intended to connect with and activate the streetscape.
- Opportunity for future connection through the site is provided.
- The proposal includes potential for street level commercial uses as
  office space and potential key intra block access, as well as public
  art opportunity. The proposed glazing, architectural detail, and
  complementary landscaping will create visual interest and activate a
  long-underutilised semi-industrial site. The introduction of an
  additional 22 residential units and office space will intensify
  pedestrian activity in the immediate locality as well as contributing
  to the wider area of the CBD.

- The reliance on the fundamental podium concept (consistent with the Amenity Building Envelope) has ensured that development in terms of streetscape pattern is consistent with existing and potential future adjoining buildings in Melville Street. It can be seen that the streetscape steps down the slope of Melville Street toward Murray Street, and the proportions of the podium elements reinforce that pattern.
- The ground plane is intended to be an activated space with commercial and residential Lobbies creating a vibrant public space along Melville Street. Floor-to-ceiling glazed windows are designed to maximise visibility and surveillance of the public environment.
- The potential also exists for a future linkage to Bathurst Street via a laneway connection. Brick is used predominantly for this area to relate to the existing Kemp and Denning Warehouse, showing a relationship to the previous history of the site and to add tactility and a human scale to the areas where people are likely to gather or congregate.
- A public art initiative is also proposed by the Developer in this location. It is intended with this design that the public art component be encompassed within the publicly accessible areas of the development, including the forecourt and potential laneway along the west boundary of the site. The potential exists for this artwork to include colour and visual interest in defining a canopy to this transition space, lighting installations to activate the space at night, interactive artwork or artwork that integrates with the design of the urban seating and planting within this area. Any of these options will provide colour and movement visible and accessible from Melville Street.

The UDAP made the following comments with respect to streetscape and street activation:

"The Panel felt that the activation of the ground plane was somewhat lacking. The Panel noted that the entrance of the building was behind a solid and reasonably high wall to the street and questioned whether people will have an opportunity to see in beyond the planting, creating a sense of it being blocked off from the street. The Panel queried whether the accessibility to the building will be inviting and easy enough for people of all abilities, particularly when pedestrians have to go past the stairs to get to the access ramp on an incline.

The Panel noted that there was enormous potential for the street edge given it is in a sunny northwest facing position and questioned if there was an opportunity for the rising ground line of Melville Street to create connections between the building's ground floor and the street. The Panel were concerned with the height of the roller door and the scale it

gives to the street. The Panel wanted to see more work done relating the development to the specifics of the street, instead of taking its street relationship from the scale and height of the building next door, which is on the upper side of the rising street. The building has been designed as level, off this adjacent building, but there is almost a two storey height difference to the street at the lower end of the development.

The Panel noted that with the proposed building aligned with the building next door, such as the ground floor level, it creates a somewhat clumsy streetscape, without regard to the natural rise. A better opportunity would be to set the proposed building's ground floor level down.

In terms of the through site link, the Panel noted that until agreement was reached with the neighbour for creating the walkway, a condition should be recommended to gate the area after hours to prevent the space becoming an entrapment area. Notwithstanding the Panel's support of considering future through-block links, the Panel felt that the design doesn't necessarily set up a desirable future through-site link with the location and form of the substation impacting on the arrangement. The Panel was concerned that this walkway has the potential to be a "dead end" for a long time, being dependant on the neighbouring site behind to finalise it."

In response to the above concerns, the applicant made the following amendments:

- A step introduced to the podium façade, to assist the building integrate with and step down Melville St.
- The laneway has been widened next to the substation, by reducing the footprint of the adjacent commercial tenancy.
- The front boundary wall has been reduced in height.
- · The roller door height has been reduced.

These changes are reflected in the advertised plans.



Figure 28: The areas highlighted with the red clouds show the reduced height roller door, the reduced height front wall, and the stepping down of the ground floor ceiling level. Source: JAWS.

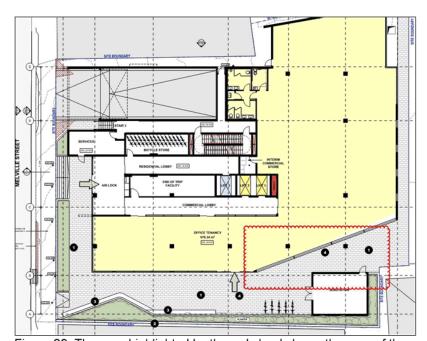


Figure 29: The area highlighted by the red cloud shows the area of the laneway increased in size adjacent to the substation. Source: JAWS.

6.7.13 The development is certainly trying hard at a streetscape level to make a positive contribution. Notably, the proposal seeks to activate the frontage, it provides a public laneway with art installation that has the potential to be a future through site link, and the design, siting and

height of the podium element seeks to ensure that the building integrates in a complementary way with the Melville Street streetscape.

Some of these elements are considered to need further refinement, most of which have been identified by UDAP. For example, until the laneway does in fact become a through site link, it has the potential to be a dead end and an entrapment space. Similarly, although some of the commercial tenancy floor area has been reduced around the substation, it is not considered that the location of the substation is ideal in terms of the functionality and usability of the laneway. And both the public art component and the landscaping lack a fullness of detail. However, these matters are considered able to be dealt with via conditions and advice on the planning permit, and are recommended as such.

On balance, and subject to those conditions and advice, the proposal is considered to make a positive contribution to the streetscape.

## 6.7.14 The planning scheme defines townscape as:

means the urban form of the city and the visual quality of its appearance, it includes the urban landscape and visual environment of the city. As a concept it strives to give order to the form of the city, the pattern of landscape and development of the urban landscape.

The applicant has identified the following as demonstrating how the proposal makes a positive contribution to the townscape:

- · Building has been designed to be 'viewed in the round'.
- The building has been designed to add character to the townscape.
- The proposed design facilitates the development of the Central Business Zone in a way that acknowledges the landform and reinforces the 'urban amphitheatre'.
- The proposal adopts the principles of the Amenity Building Envelope, but provides a more measured, nuanced, and less intense approach, reflecting the distinctions between its Fringe location and the more intense focus in the 'basin' of the Zone Core. In particular the building steps down the slope of the site to Melville Street, as well to toward Murray Street, reflecting the subtle undulations of the topography in the locality.

The comments made the Panel in relation to transition, above, are again considered relevant here when considering the impact of the proposal on the townscape. There is a similarity in assessment between these two elements, because both are essentially seeking to make sure that proposed development fits in with the urban form of the

city, relevant to its location. As noted above in the assessment of transition, it is considered that the proposed building while being at the limits of acceptability in terms of height for this site, is appropriate. When looking at the specific definition of townscape, this conclusion is also considered appropriate largely for the same reasons. That is, the relative height of the proposed building is compatible with the heights of the building in the core height area, the bulk of the building reduces as the building gets higher, the building has been designed to be viewed in the round, and the building attempts to use a diverse palette of materials and finishes.

Generally speaking it is considered that the building does make a positive contribution to the townscape for these reasons. However, as detailed above in the transition assessment and as identified by UDAP, the blank concrete facades to the residential apartments on the upper levels are a concern in as much as they will make the building more individually prominent. Given the location of the building on the fringe of the zone, such prominence has the potential to detract from the townscape. However, subject to a condition as discussed above, which requires that these panels provide more variety and visual interest, it is considered that issue can be adequately mitigated.

On balance, the proposal is considered to make a positive contribution to the townscape.

- 6.7.15 The proposal complies with the performance criterion.
- 6.8 Setback Part D 22.4.2 P1
  - 6.8.1 The acceptable solution at clause 22.4.2 A1 requires development to have a 0m setback.
  - The proposal includes a building which, in part at least, is setback more than 0m from the frontage.
  - 6.8.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
  - 6.8.4 The performance criterion at clause 22.4.2 P1 provides as follows:

Building setback from frontage must satisfy all of the following:

- (a) be consistent with any Desired Future Character Statements provided for the area;
- (b) be compatible with the setback of adjoining buildings, generally

maintaining a continuous building line if evident in the streetscape;

- (c) enhance the characteristics of the site, adjoining lots and the streetscape;
- (d) provide for small variations in building alignment only where appropriate to break up long building facades, provided that no potential concealment or entrapment opportunity is created;
- (e) provide for large variations in building alignment only where appropriate to provide for a forecourt for space for public use, such as outdoor dining or landscaping, provided the that no potential concealment or entrapment opportunity is created and the forecourt is afforded very good passive surveillance.
- 6.8.5 The objective for the setback standard is to ensure that building setback contributes positively to the streetscape and does not result in unreasonable impact on residential amenity of land in a residential zone.
- 6.8.6 The desired future character statements are as follows:

### 22.1.3.1 Objectives:

- (a) That the Central Business Zone provides a compact built focus to the region, reflecting an appropriate intensity in its role as the heart of settlement.
- (b) That the Central Business Zone develops in a way that reinforces the layered landform rise back from the waterfront, having regard to the distinct layers of the landform, respecting the urban amphitheatre, including the amphitheatre to the Cove, while providing a reduction in scale to the Queens Domain, the Domain and Battery Point headlands and the natural rise to Barracks Hill (see Figures 22.7 and 22.8).
- (c) That the Central Business Zone consolidates within, and provides a transition in scale from, its intense focus in the basin, acknowledging also the change in contour along the Macquarie Ridge, including both its rising and diminishing grades, including to the low point of the amphitheatre to the Cove (see Figures 22.7, 22.8 and 22.9).
- (d) That the historic cultural heritage values of places and precincts in the Central Business Zone be protected and enhanced in recognition of the significant benefits they bring to the economic, social and cultural value of the City as a whole.

### 22.1.3.2 Building Siting, Bulk and Design

The siting, bulk and design of a building above the street wall and beyond the Amenity Building Envelope (see Figure 22.3) must be consistent with the objectives in clause 22.1.3.1, having regard to:

- (a) the consolidation of the Central Business Zone in a manner which provides separate building forms and a layered visual effect rather than the appearance of a contiguous wall of towers;
- (b) maintaining a level of permeability through city blocks by reductions in bulk as height increases allowing for sunlight into streets and public spaces;
- (c) the building proportion and detail reflecting and reinforcing the streetscape pattern;
- (d) the building not being an individually prominent building by virtue of its height or bulk, thus reinforcing a cohesive built form and the containment provided by the urban amphitheatre;
- (e) reinforcing consistent building edges and height at the street wall allowing for solar penetration where possible;
- (f) the provision of weather protection for footpaths to enhance pedestrian amenity and encourage, where appropriate, interior activity beyond the building entrance; and
- (g) the provision of permeability in support of the open space network.
- 6.8.7 At street level, there is a front boundary wall and planter proposed on the front boundary across effectively 20m of the 33m frontage. The building proper at this level is setback in the order of 5m from the front boundary, and there is also the laneway on the south western side of the building leading all the way through the site. Above ground floor, the four commercial floors are all built to the front boundary, but the residential apartments are set back from the front boundary.
- 6.8.9 The development's setback in general is considered to be consistent with the desired future character statements. It is considered to be compatible with the setback of adjoining buildings, particularly the KPMG building at 100 Melville St. As discussed above, subject to a number of conditions, the proposal is considered to contribute positively to the streetscape. Conditions and advice are also proposed to ensure there are no entrapment spaces created, and so that the laneway link and public art offering are successfully resolved.

- 6.8.10 The proposal complies with the performance criterion.
- 6.9 Residential Amenity Part D 22.4.9 P2, P3, P5 and P7
  - 6.9.1 The acceptable solutions at clauses 22.4.9 P2, P3 and P5 require as follows:
    - That single aspect dwellings be setback at least 5m from side and rear boundaries
    - That dwellings which have an open plan living/dining/kitchen area, have a room depth that is no more than 8m or 2.5m times the ceiling height.
    - That dwellings have an area of private open space that is at least 10sqm in area, has a minimum dimension of 2m, and is not within 5m of another dwelling's private open space.
    - That dwellings have a dedicated secure storage space.
  - 6.9.2 The proposal includes the following:
    - Apartments 502, 602 and 702 are all single aspect dwellings, and are not located 5m off the side boundary.
    - Apartments 504, 505, 506, 604, 605, 606, 704, 705, 706 801, 802, 803, 804 all have a open plan living/dining/kitchen room depth in excess of 8m and 2.5 times the ceiling height.
    - Apartments 501, 502, 503, 505, 506, 601, 602, 603, 605, 606, 701, 702, 703, 705, 706, and 801, do not meet one or more of the private open space requirements.
    - Storage is provided for dwellings in general, but not dedicated to each individual dwelling.
  - 6.9.3 The proposal does not comply with the acceptable solutions; therefore assessment against the performance criterion is relied on.
  - 6.9.4 The performance criterion at clauses 22.4.9 P2, P3, P5 and P7 provides as follows:

## P2

Residential or serviced apartment components of a new building must be designed to allow for reasonable access to daylight into habitable rooms and private open space, and reasonable opportunity for air circulation and natural ventilation, having regard to:

- (a) proximity to side and rear boundaries;
- (b) proximity to other buildings on the same site;
- (c) the height and bulk of other buildings on the same site;

- (d) the size of any internal courtyard or void;
- (e) the use of light wells or air shafts;
- (f) development potential on adjacent sites, considering the zones and codes that apply to those sites; and
- (g) any assessment by a suitably qualified person.

### P3

Every habitable room in a dwelling must have reasonable access to natural daylight and ventilation from an external window, having regard to:

- (a) the orientation of the room;
- (b) the size and location of windows;
- (c) the size of the room;
- (d) the ceiling height;
- (e) the opportunity for cross-ventilation;
- (f) the proposed use of the room;
- (g) overshadowing of the site from existing development;
- (h) existing site constraints; and
- (i) any assessment by a suitably qualified person.

### **P**5

A dwelling or serviced apartment must provide reasonable amenity and be capable of meeting the projected outdoor recreation requirements of occupants, having regard to:

- (a) the size and minimum dimensions of the space, excluding space occupied by plant and equipment such as outdoor components of an air conditioning unit;
- (b) the amount of space available for furniture or plantings;
- (c) the potential for significant noise intrusion;

- (d) proximity and overlooking to the private open space of existing adjacent residential and serviced apartment developments;
- (e) screening where necessary for privacy that does not unreasonably restrict access to daylight;
- (f) screening where necessary for noise and wind protection that does not unreasonably restrict access to daylight;
- (g) screening from public view for clothes drying areas; and
- (h) any advice from a suitably qualified person.

#### **P**7

Each multiple dwelling must be provided with adequate storage space.

- 6.9.5 In relation to P2 it is considered that the affected apartments, 502, 602 and 702, are all designed to allow for reasonable access to daylight and sunlight into habitable rooms and private open space, and to provide reasonable opportunities for air circulation and natural ventilation. This is because:
  - Part of each apartment is setback more than 5m from the side boundary.
  - That setback would allow for light and air to enter the apartments even if there is development in the future built to the shared boundary. It is considered that the adjoining sites do have reasonable development potential.
  - There are no other buildings existing or proposed on the same site.
  - The submitted planning report with the application provides the following information in support of the proposal's compliance with this performance criterion:

"The central core element assists in the break-down of the building form, with a recessed junction between apartments to allow for light penetration into the shared circulation spaces. This splitting of the building components here adds to the variation of light and contrast on the elevations.

Balconies and terraces for the apartments are orientated to maximise northern aspect where possible and take advantage of the view corridor east to the Queens Domain, west to kunanyi/ Mt Wellington and to the south to city scape views through to Sandy Bay Point and the River Derwent.

In conjunction with windows, these private open areas allow for maximised cross ventilation opportunities.

Patterned blade walls to the east and west boundaries of the buildings provide for light and shadow along the elevations and break down the

scale of the facade along these edges. These blade walls also allow for privacy to the apartments from future and existing development."

The proposal is considered to meet P2.

6.9.6 In relation to P3, apartments 504, 506, 604, 606, 704, 706 801, 802, 803, and 804, are all considered to have good access to daylight and ventilation to external windows because they are all dual aspect, with one aspect either being easterly or westerly, and all have good amounts of glazing proportionate to the room sizes.

Only apartments 505, 605, and 705, are single aspect, and that aspect is south westerly, and as such their ability to achieve cross ventilation and sunlight is restricted. Notwithstanding that, these apartments are also considered to have acceptable access to daylight and ventilation to external windows because they have high ceilings (3.1m), full width glazing, are of a smaller size (~110sqm), and will potentially capture the prevailing westerly winds. In addition, it is noted that these apartments are only in the order of 15cm short of complying with the acceptable solution, and the developer's planning expert has indicated that the proposal meets the provision.

The proposal is considered to meet P3.

- 6.9.7 In relation to P5, while 16 out of the 22 apartments don't meet the acceptable solution for private open space, it's clear from the architectural plans that the provision of private open space to all apartments will be sufficient to meet the outdoor recreation needs of future occupants. Specifically it is noted that:
  - No air conditioning units are currently shown on plan as being located in the areas of private open space. A condition ensuring this is the case is recommended.
  - All areas of private open space are considered to be of a sufficient size to afford the opportunity for plantings and/or furniture.
  - There isn't considered to be a significant potential for unreasonable noise intrusion into any of the areas of private open space. Those areas of open space fronting Melville Street are setback from the street, and the remaining areas of private open space face onto neighbouring properties. These will be inner city apartments so some noise intrusion as a consequence of the location is considered to be reasonable.
  - There are no adjacent residential uses that will impact on the privacy of the proposed private open spaces.
  - Where proposed apartments have close or adjacent areas of private open space, screening is provided to ensure privacy.

- Screening for wind is not considered warranted at this point in time.
   If any of the apartments are affected by wind to such a degree that intervention is required, this can be addressed post completion.
- All apartments have clothes dryers in the laundries, so there will be no clothes drying areas within public view.
- The developer's planning expert has indicated that the proposal meets the provision.

The proposal is considered to meet P5.

- 6.9.8 In relation to P7 the applicant has indicated that storage space will be dedicated to individual dwellings in accordance with the acceptable solution, even though this is not shown on plan. The applicant is content for this to form a condition on the planning permit. A condition to this effect is therefore recommended. The proposal is considered to meet P7.
- 6.9.9 The proposal complies with the performance criteria.
- 6.10 Potentially Contaminated Land Code Sensitive Use Part E2.5 P1, Excavation E2.6.2 P1
  - 6.10.1 There is no acceptable solution for excavation of a potentially contaminated site. The acceptable solution for a sensitive use of a potentially contaminated site requires the Director of the EPA to certify that the land is suitable for the intended use.
  - 6.10.2 The proposal includes excavation and a sensitive use (residential). No certification from the Director of the EPA has been provided.
  - 6.10.3 The proposal does not comply with the acceptable solutions; therefore assessment against the performance criterion is relied on.
  - 6.10.4 The performance criterion at clauses E2.5 P1 and E2.6.2 P1 provides as follows:

## E2.5 P1

Land is suitable for the intended use, having regard to:

- (a) an environmental site assessment that demonstrates there is no evidence the land is contaminated; or
- (b) an environmental site assessment that demonstrates that the level of contamination does not present a risk to human health or the environment; or

- (c) a plan to manage contamination and associated risk to human health or the environment that includes:
- (i) an environmental site assessment:
- (ii) any specific remediation and protection measures required to be implemented before any use commences; and
- (iii) a statement that the land is suitable for the intended use.

## E2.6.2 P1

Excavation does not adversely impact on health and the environment, having regard to:

- (a) an environmental site assessment that demonstrates there is no evidence the land is contaminated; or
- (b) a plan to manage contamination and associated risk to human health and the environment that includes:
- (i) an environmental site assessment;
- (ii) any specific remediation and protection measures required to be implemented before excavation commences; and
- (iii) a statement that the excavation does not adversely impact on human health or the environment.
- 6.10.5 An Environmental Site Assessment was provided with the proposal. The Council's Environmental Health Officer has assessed the proposal, and concluded that, subject to a condition requiring compliance with the submitted ESA, the proposal complies with the above performance criteria.
- 6.10.6 The proposal complies with the performance criterion.
- 6.11 Historic Heritage Code Archaeology E13.10.1 P1
  - 6.11.1 There is no acceptable solution at clause E13.10.1 A1
  - 6.11.2 The proposal includes excavation of a site within an area of archaeological potential.
  - 6.11.3 The proposal has been assessed by the Council's Senior Cultural Heritage Officer who has provided the following comment:

The subject site is within a Place of Archaeological Potential.

This current application is a modified proposal that has previously been assessed as PLN-19-948, with a PAM-21-5 and CEP-21-242. All conditions have been discharged through archaeological investigations.

There is another current DA PLN-22-314 for the installation of ground nails/soil anchors.

This current proposal is supported by a series of reports by Praxis Environment including a document dated 7 July 2022 in the form of an addendum to previous reports by Praxis Environment. (see documents in TRIM DA-22-33968 and in the advertised documents set DA-22-40056). The 7 July 2022 report specifically deals with the soil nails and what impacts it might have on features of archaeological potential.

That report concludes: "it is considered highly unlikely that disturbance deeper than 1.5 metres would encounter any archaeological remains." on the eastern side of the site, given their proposed depth and the small size of the drilling of anchors.

That report makes the final conclusion that:

"the ground anchors are unlikely to have any archaeological impact.
Further I recommend that no further archaeological input is required for their installation."

Therefore, within the subject site and outside the site in the area for the installations of soil nails, no further archaeological assessment under clause E13.10 or new conditions are warranted.

On this basis the proposal can be considered to satisfy E13.10.1 P1 (a) to (e).

- 6.11.4 The proposal complies with the performance criterion.
- 6.12 Parking and Access Code On-site Carparking Provision E6.6.5 P1
  - 6.12.1 The acceptable solution at clause E6.6.5 A1 requires that either no on site car parking is provided, or that a maximum number of spaces are provided at a rate of 1 space per 200sqm of commercial floor area, and 1 space per dwelling. For the proposed development that equates to a maximum on-site parking provision of 50 spaces.
  - 6.12.2 The proposal includes 108 on-site parking spaces.
  - 6.12.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
  - 6.12.4 The performance criterion at clause E6.6.5 P1 provides as follows:

Car parking provision:

- (a) is in the form of a public car parking station provided as part of a development which utilises a major existing access; or
- (b) must not compromise any of the following:
- (i) pedestrian safety, amenity or convenience;
- (ii) the enjoyment of 'al fresco' dining or other outdoor activity;
- (iii) air quality and environmental health;
- (iv) traffic safety.
- 6.12.5 The objective of this standard is: To ensure that pedestrian activity generated by retailing, entertainment and multi -storey office uses in the central business district is not compromised through the provision of on-site car parking.
- 6.12.6 Subclause (a) is not applicable.
- 6.12.7 Subclause (b) has been assessed in the submitted Traffic Impact assessment as follows:

Pedestrian safety, amenity, convenience. The car park will reduce the number of driveways on Melville Street from two to one, thus reducing pedestrian conflict on the Melville Street footpath. The car park will be located on three levels that will not be visible from the street. The layout of the car park will be generally in accordance with the requirements of AS2890.1.

Al fresco dining. Not applicable

Air quality and environmental health. The car park will be located on three levels that will be undercover. Adequate ventilation will be provided within the car park.

Traffic safety. The car park will reduce the number of driveways on Melville Street from two to one, thus reducing pedestrian conflict on the Melville Street footpath. The car park design will be in accordance with the requirements of AS2890.1.

- 6.12.8 The Council's Development Engineer has also provided the following assessment:
  - (i) pedestrian safety, amenity or convenience;
  - "The car park will reduce the number of driveways on Melville Street from two to one, thus reducing pedestrian conflict on the Melville Street footpath. The car park will be located on three levels that will not be visible from the street. The layout of the car park will be generally in accordance with the requirements of AS2890.1." Page 26, MIDSON

Traffic titled Giameos Construction & Development dated May 2022

(ii) the enjoyment of 'al fresco' dining or other outdoor activity;

- N/A

## (iii) air quality and environmental health;

- "The car park will be located on three levels that will be undercover. Adequate ventilation will be provided within the car park." - Page 27, MIDSON Traffic titled Giameos Construction & Development dated May 2022

## (iv) traffic safety.

- "The car park will reduce the number of driveways on Melville Street from two to one, thus reducing pedestrian conflict on the Melville Street footpath. The car park design will be in accordance with the requirements of AS2890.1." - Page 27, MIDSON Traffic titled Giameos Construction & Development dated May 2022

Based on the above assessment and given the submitted documentation, the parking provision may be accepted under Performance Criteria P1:E6.6.5 of the Planning Scheme. This is particularly due to the parking demands substantiated by the claims stated in the referenced T.I.A.

Development Engineering has also noted the following;

A deficiency of Eighteen (18) Residential (Use Class as defined by HIPS 2105 E6.6.1) car parking spaces is proposed, and A surplus of Fifty-Four (54) 'Private' Vehicle Parking (Use Class as defined by HIPS 2105 E6.6.1) car parking spaces is proposed.

The Traffic Impact Assessment (T.I.A) prepared by MIDSON Traffic titled Giameos Construction & Development dated May 2022 provided an empirical assessment of the 'Unconstrained Parking Demand', and determined it to be exactly Forty-Four (44), based on the 'RMS Guide'. Therefore, according to the applicant's traffic engineer's statement, the number of on-site car parking spaces proposed will sufficiently meet the likely demands associated with the development, with the exception of on-site visitor parking.

There is also a relatively large supply of on-street parking in the surrounding road network, which is available in the form of time-restricted metered parking. Observations indicate that the large pool of parking that would be available to meet the potential demands of visitor parking, particularly after normal working hours.

Metro Tasmania operate regular bus services along Harrington Street (736, X22), Liverpool Street (540), Elizabeth Street (500, 501, 502, 503, 504, 510, 511, 512, 513, 520, 522, 541, 550, 551, 552, 553, 605, 722, X50), which is around 400m of the subject site.

The subject site is located a convenient walking distance from retail & commercial shops/services, educational institutes (i.e., schools, university, TAFE), spots/recreational outlets (e.g., Gym), and the City's Central Business Zone.

No alternative parking provision appears to be available, nor has been proposed, but the proposed basement car parking facility's Private Vehicle Parking presents an opportunity to reduce residential parking rate demands (as defined by HIPS 2015).

No apparent impact or loss to/of significant trees has been identified/highlighted.

- 6.12.9 The proposal's provision of on-site car parking is not considered to compromise pedestrian activity, in accordance with the objective of this standard.
- 6.12.10 The proposal complies with the performance criterion.
- 6.13 Parking and Access Code Bicycle Parking Provision and Facilities E6.6.4 P1, E6.7.10 P1 and E6.7.11 P1
  - 6.13.1 The acceptable solutions at clause E6.6.4 A1, E6.7.10 A1, and E6.7.11 A1 require as follows:
    - That 17 class 1 or 2 security level bicycle parking spaces are provided.
    - That 4 class 3 security level bicycle parking spaces are provided.
    - That bicycle end of trip facilities are provided, specifically two showers and one change room.
  - 6.13.2 The proposal includes:
    - 15 class 2 security level bicycle spaces;
    - · 10 class 3 security level bicycle spaces; and
    - · A space for end of trip facilities but no specific facilities.
  - 6.13.3 The proposal does not comply with the acceptable solutions; therefore assessment against the performance criterion is relied on.
  - 6.13.4 The performance criterion at clause E6.6.4 P1, E6.7.10 P1, and E6.7.11 P1 provides as follows:

### E6.6.4 P1:

The number of on-site bicycle parking spaces provided must have regard to all of the following:

- (a) the nature of the use and its operations;
- (b) the location of the use and its accessibility by cyclists;
- (c) the balance of the potential need of both those working on a site and clients or other visitors coming to the site.

#### E6.7.10 P1:

The design of bicycle parking facilities must provide safe, obvious and easy access for cyclists, having regard to all of the following:

- (a) minimising the distance from the street to the bicycle parking area:
- (c) providing clear sightlines from the building or the public road to provide adequate passive surveillance of the parking facility and the route from the parking facility to the building;
- (d) avoiding creation of concealment points to minimise the risk.

#### E6.7.11 P1:

End of trip facilities must be provided at an adequate level to cater for the reasonable needs of employees having regard to all of the following:

- (a) the location of the proposed use and the distance a cyclist would need to travel to reach the site;
- (b) the users of the site and their likely desire to travel by bicycle;
- (c) whether there are other facilities on the site that could be used by cyclists;
- (d) opportunity for sharing bicycle facilities by multiple users.
- 6.13.5 Generally speaking the bike provision and end of trip facilities space allocation is considered to be in accordance with the above performance criteria. It is noted that four more bike parking spaces than the scheme requires are being provided, but that two less than required are being provided at the specified security level. The end of trip facilities space shown on the ground floor plan, is considered to be of an adequate size to be able to accommodate the scheme requirements.
- 6.13.6 Generally the provision of more rather than less bike parking and end of trip facilities is considered desirable. It is noted that the planning scheme doesn't require any bike parking facilities to be provided for the

proposed residential use. With this in mind, and noting that there was a representation specifically in relation to this issue, a condition and advice is recommended specifying that a minimum of 17 bike parking spaces be provided at a level 1 or 2 security level, that the bike parking spaces meet the relevant Australian Standard, and that end of trip facilities are also provided. Advice is recommended encouraging the developer to provide more bike parking than the condition requires, as well as more facilities, like power points and repair/maintenance/cleaning spaces. The condition requires the spaces and facilities to be installed prior to first use of the development.

- 6.13.7 The Council's Development Engineer has also assessed the proposal against 6.7.10 P1 and concluded that the proposal complies.
- 6.13.8 The proposal complies with the performance criteria.
- 6.14 Stormwater Management Code Stormwater Drainage and Disposal Part E7.7.1 P1, P2
  - 6.14.1 The acceptable solution at E7.7.1 A1 requires stormwater to be disposed of via gravity to Council infrastructure.

The acceptable solution at clause E7.7.1 A2 requires water sensitive urban design principles to be incorporated into a proposal if more than six new car parking spaces are provided or more than 600sqm of new impervious surfaces are proposed.

- 6.14.2 The proposal will require some stormwater to be pumped to Council infrastructure, and it includes more than 600sqm of new impervious surfaces, and more than 6 new car parking spaces.
- 6.14.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
- 6.14.4 The performance criteria at clause E7.7.1 P1 and P2 provides as follows:

P1

Stormwater from new impervious surfaces must be managed by any of the following:

- (a) disposed of on-site with soakage devices having regard to the suitability of the site, the system design and water sensitive urban design principles
- (b) collected for re-use on the site;
- (c) disposed of to public stormwater infrastructure via a pump system

which is designed, maintained and managed to minimise the risk of failure to the satisfaction of the Council.

## P2

A stormwater system for a new development must incorporate a stormwater drainage system of a size and design sufficient to achieve the stormwater quality and quantity targets in accordance with the State Stormwater Strategy 2010, as detailed in Table E7.1 unless it is not feasible to do so.

- 6.14.5 Council's Technical Officer Stormwater has assessed the proposal as being compliant with the above performance criteria subject to conditions, noting that pumping is acceptable in this instance as it relates to the basement area only, and that an OceanProtect StormFilter will be installed directly up stream of the stormwater connection.
- 6.14.6 The proposal complies with the performance criterion.
- 6.15 Parking and Access Code Layout of Parking Areas E6.7.5 P1
  - 6.15.1 The acceptable solution at clause E6.7.5 A1 requires the layout of car parking areas to comply with the relevant Australian Standard.
  - 6.15.2 The layout of the proposal's parking areas does not meet the relevant Australian Standard.
  - 6.15.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
  - 6.15.4 The performance criterion at clause E6.7.5 P1 provides as follows:

The layout of car parking spaces, access aisles, circulation roadways and ramps must be safe and must ensure ease of access, egress and manoeuvring on-site.

6.15.5 The Council's Development Engineer has assessed the proposal as follows:

The design documentation submitted for assessment appears to satisfy the relevant parameters of a performance based solution, and therefore may be accepted by the City.

- 6.15.6 The proposal complies with the performance criterion.
- 6.16 Parking and Access Code Facilities for commercial vehicles Part E6.7.13 P1

- 6.16.1 The acceptable solution at clause E6.7.13 P1 requires commercial vehicle facilities for loading, unloading or manoeuvring must be provided on-site in accordance with the relevant Australian Standard.
- 6.16.2 The proposal includes on site facilities but not in accordance with the Australian Standard.
- 6.16.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
- 6.16.4 The performance criterion at clause E6.7.13 P1 provides as follows:

Commercial vehicle arrangements for loading, unloading or manoeuvring must not compromise the safety and convenience of vehicular traffic, cyclists, pedestrians and other road users.

6.16.5 The Council's Development Engineer has assessed the proposal as follows:

Based on the Commercial Bin Storage and Residential Bin Storage shown on plans (see JAWSARCHITECTS DWG 22013\_DA04 REV 02 dated 17/06/2022) bin sizes and quantities, it is reasonable to expect Regular Service (as per AS2890.2 - 2002), and the largest likely commercial vehicle to use the proposed facilities appears to be shown to be a Small Rigid Vehicle (as defined by AS2890.2 - 2002).

Submitted Engineer's detailed design documentation effectively demonstrates compliance with the relevant design standards, see ADG, DWG C32 REV B dated 12/08/2022, DWG C30 REV E dated 12/08/2022. A dedicated service bay being wholly contained within the subject site is clearly detailed, and the access driveway and circulation roadway detailed designs;

- Demonstrate standard commercial vehicle clearances as available.
- Show bay occupation can be achieved by an SRV (rigid vehicle body detailed),
- Detail roadway and ramp grades (including appropriate rates of change), and
- Sight distance requirements being achieved.

Therefore, based on the above assessment, the on-site facilities for commercial vehicles (i.e., for waste collection) appear to have been provided to the satisfaction of Development Engineering by being wholly contained on site, thus not compromising the safety and

convenience of vehicular traffic, cyclists, pedestrians and other road users.

6.16.6 The proposal complies with the performance criterion.

## 7. Discussion

7.1 Planning approval is sought for Demolition and New Building for 22 Multiple Dwellings and Business and Professional Services, and Associated Works, at 90 Melville Street and Adjacent Road Reserve, Hobart.

- 7.2 The application was advertised and received three representations.
  - One representation raised concerns including that permission had not been granted for works on adjoining properties, disruption to business during construction from traffic and noise and vibration, impact of depth of excavation on adjoining properties including possible damage to existing buildings. These matters are generally speaking not planning considerations. There is not requirement at the planning stage for written permission to be obtained from other owners of land on which development is proposed. Matters relating to construction, including potential damage to neighbouring properties, are covered by other regulations. Conditions are recommended, however, for a construction environmental management plan, and a construction traffic management plan. This will deal with managing issues like construction traffic, and noisy phases of the development.
  - Another representation raised concerns about the over provision of car parking, and the lack and appropriateness of the provision of bike parking and end of trip facilities. In response, it is noted that for the Central Business zone the planning scheme does not set minimum parking requirements, and instead sets maximum parking requirements. In this instance a maximum of 50 spaces is required, and 108 spaces are provided. Assessment of the surplus has been provided above and is supported by a Traffic Impact Assessment. In terms of bike parking, it is interesting to note that the planning scheme does not require any bike parking be provided for the residential use, and that 17 medium or high security level spaces and 4 low security level spaces be provided (21 total). The proposal includes 10 low level security spaces, and 15 medium security level spaces (25 total). This is compliant with the planning scheme requirement in terms of space numbers, and in fact exceeds it by 4 spaces. However only 15 instead of 17 spaces are of a medium security level (i.e. locked compound with communal access). Generally the provision of more bike parking is considered to be a desirable outcome. As such, a condition and advice is recommended requiring at least 17 spaces are provided of a medium (or high) security level, and encouraging the provision of significantly more bike parking wherever possible. The plans show sufficient space for end of trip facilities to be provided, but do not detail what those facilities will be. A requirement in relation to this issue is also recommended to be included in the bike parking condition and advice.
  - The final representation was concerned about the proximity of windows on the north eastern elevation to the commercial space, and that these windows should not prohibit future development of the representor's land in the future. in response it is noted that there is currently no protection afforded to the amenity of occupants of commercial tenancies, and as such, the presence of the windows of concern will not curtail the development potential of adjoining land.

- 7.3 The proposal has been assessed against the relevant provisions of the planning scheme and is considered to perform well, subject to conditions.
- 7.4 The proposal has been assessed by other Council officers, including the Council's Development Engineer, Senior Cultural Heritage Officer, Cleansing and Solid Waste Officer, City Place Making, Technical Officer Stormwater, Environmental Development Planner, Environmental Health Officer, Roads Engineer, and Traffic Engineer. The officers have raised no objection to the proposal, subject to conditions.
- 7.5 The application was considered by the Urban Design Advisory Panel at its meeting of 14 June 2022. The Panel's report is provided in full as an attachment to this report. In the context of the provisions on which they were asked to comment, the Panel was broadly supportive of the proposal. A number of the Panel's comments have been included above in section 6 of the report. In addition, it is confirmed that the conditions and advice as recommended by the Panel have been included. Specifically, conditions for materials and finishes, public art, and landscaping.
- 7.6 The proposal is recommended for approval.

### 8. Conclusion

8.1 The proposed Demolition and New Building for 22 Multiple Dwellings and Business and Professional Services, and Associated Works, at 90 Melville Street and Adjacent Road Reserve, Hobart satisfies the relevant provisions of the *Hobart Interim Planning Scheme 2015*, and as such is recommended for approval.

### 9. Recommendations

That:

Pursuant to the *Hobart Interim Planning Scheme 2015*, the Council approve the application for Demolition and New Building for 22 Multiple Dwellings and Business and Professional Services, and Associated Works, at 90 Melville Street and Adjacent Road Reserve, Hobart for the reasons outlined in the officer's report and a permit containing the following conditions be issued:

### **GEN**

The use and/or development must be substantially in accordance with the documents and drawings that comprise PLN-22-321 - 90 MELVILLE STREET HOBART TAS 7000 - Final Planning Documents except where modified below.

Reason for condition

To clarify the scope of the permit.

### TW

The use and/or development must comply with the requirements of TasWater as detailed in the form Submission to Planning Authority Notice, Reference No. TWDA 2022/01350-HCC dated 8/9/22 as attached to the permit.

Reason for condition

To clarify the scope of the permit.

### PLN 15a

A demolition waste management plan must be implemented throughout demolition. The demolition waste management plan must include provisions for the handling, transport and disposal of demolition material, including any contaminated waste and recycling opportunities, to satisfy the above requirement.

Advice:

It is recommended that the developer liaise with the Council's City Resilience unit regarding reducing, reusing and recycling materials associated with demolition on the site to minimise solid waste being directed to landfill. Further information can also be found on the Council's website.

Reason for condition

To ensure that solid waste management from the site meets the Council's requirements and standards

### PLN 7

The minimum approved number of bicycle parking spaces on site is 25. Of these at least 17 must be either a class 1 or class 2 security level facility (as per Table E6.2 of the Hobart Interim Planning Scheme 2015). The design of the bicycle parking spaces must accord with AS2890.3-1993 Parking facilities Part 3: Bicycle parking facilities, in particular section 2 "Design of Parking Facilities" and clauses 3.1 "Security" and 3.3 "Ease of Use".

Bicycle end of trip facilities must be provided as follows:

- At least two showers; and
- At least one change room facility.

Prior to the issue of any consent for approval under the Building Act 2016 (excluding for demolition), a bicycle parking plan must be submitted and approved as a Condition Endorsement to the satisfaction of the Director City Life, in accordance with the above requirements.

The bicycle parking spaces and facilities must be in accordance with the approved bicycle parking plan and must be installed prior to first use.

Advice:

The applicant is strongly encouraged to provide more bicycle parking and facilities than required by this condition, and to provide additional facilities for bicycle parking like power points for ebikes, and space to clean and repair bikes.

This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit

Reason for condition

To ensure there is adequate and appropriate bicycle parking provided for the development

PLN<sub>s5</sub>

Public artwork must be implemented in the forecourt and laneway area within three months of completion of the development.

Prior to the issue of any approval under the *Building Act 2016* (excluding for demolition, excavation and works up to the ground floor slab), details of the public artwork must be submitted and approved as a Condition Endorsement,

to the satisfaction of the Council's Director City Life.

The details be substantially in accordance with the Final Planning Documents, and must include, but are not limited to, the following:

- Plans and other associated and relevant documentation demonstrating what the artwork will be, and where it will be located, which are substantially in accordance with the Final Planning Documents.
- Identifying the procurement process, and specifying the artist/artists selected.
- Setting out how the project will be managed, including details of installation oversight.

All work required by this condition must be in accordance with the approved details.

### Advice:

For further advice in relation to the acceptable provision of public art you are encouraged to contact Council's Public Art team on 6238 2494.

This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit

Reason for condition

In the interest of the amenity and activation of the space.

### PLN s6

A landscape plan must be prepared for all the soft and hard landscaping for the development including for the forecourt and laneway area, the two roof terraces on the fifth floor, and the communal open space area on the fifth floor, by a suitably qualified landscape architect.

Prior to the issue of any approval under the Building Act 2016 (excluding for demolition, excavation and works up to the ground floor slab), revised plans must be submitted and approved as a Condition Endorsement to the satisfaction of the Director City Life in accordance with the above requirement.

All work required by this condition must be undertaken in accordance with the approved revised plans. Prior to occupancy, confirmation from the landscape architect who prepared the approved landscaping plan that the all landscaping works required by this condition have been implemented, must be submitted to the satisfaction of the Directory City Life.

The vegetation which is planted on the site pursuant to the landscaping plan must be maintained and must not be disturbed. If any vegetation dies or is destroyed, replacement vegetation of a similar size must be planted within 30 days of the death or destruction.

Advice: This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

Reason for condition

In the interest of the amenity of the space.

### PLN s1

Prior to commencement of use, the laneway must be gated after hours to prevent public access, until a through site link is provided.

Prior to to the issue of any approval under the Building Act 2016 (excluding for demolition, excavation and works up to the ground floor slab), further details of how the laneway will be effectively gated in accordance with the above requirement must be submitted and approved as a Condition Endorsement, to the satisfaction of the Council's Director City Life.

All work required by this condition must be undertaken in accordance with the approved details.

Advice: This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

Reason for condition

To prevent the creation of an entrapment space before a through site link is established.

### PLN s2

No air conditioning units are to be located within the private open space decks of any of the apartments.

Reason for condition

To ensure occupants have adequate private open space.

### PLN s3

Each apartment must be provided with a dedicated and secure storage space

of no less than 6m3, located externally to the dwelling.

Advice: It is anticipated that the storage would be provided on levels Basement 1 and 2 as per the architectural plans.

Reason for condition

To ensure each dwelling has adequate storage.

### PLN s4

The palette of exterior colours and materials must be provided.

Prior to the issue of any approval under the Building Act 2016 (excluding for demolition, excavation and works up to the ground floor slab), revised plans, and montages and samples where appropriate, must be submitted and approved as a Condition Endorsement to the satisfaction of the Director City Life showing exterior colours and materials in accordance with the above requirement.

Particular attention should be paid to the predominate use of concrete façade on the upper apartment levels, and the use of a visible vertical inlay pattern, and more variety in the size, location, colour, texture, and contrast of the panels, should be pursued.

All work required by this condition must be undertaken in accordance with the approved revised plans, montages and samples.

Advice: This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

Reason for condition

In the interest of the streetscape and townscape values of the surrounding area.

## **ENG 12**

Prior to commencement of any work on site (including demolition and/or site disturbance), a Construction Waste Management Plan must be submitted and approved as a Condition Endorsement.

The Construction Waste Management Plan must include;

 Provisions for the handling, transport, and disposal, of demolition material, including any contaminated waste and recycling opportunities, and  Provisions for commercial waste services (e.g., service areas) for the handling, storage, transport and disposal of post-construction solid waste and recycle bins from the development.

The approved Construction Waste Management Plan must be implemented throughout construction, and all work required by the approved plan must be undertaken in accordance with the approved plan.

Advice:

This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

It is recommended that the developer liaise with the Council's City Resilience Unit regarding reducing, reusing and recycling materials associated with demolition on the site to minimise solid waste being directed to landfill. Further information can also be found on the Council's website.

Reason for condition

To ensure that solid waste management from the site meets the Council's requirements and standards.

### ENG sw1

All stormwater from the proposed development (including but not limited to: roofed areas, ag drains, and impervious surfaces such as driveways and paved areas) must be drained to the Council's stormwater infrastructure prior to first occupation or commencement of use (whichever occurs first). All stormwater practicable to be drained via gravity must do so. The driveway crossover must be designed such that the floodway capacity within Melville St is maintained (ie back of footpath level is maintained).

### Advice:

Under section 23 of the Urban Drainage Act 2013 it is an offence for a property owner to direct stormwater onto a neighbouring property.

Reason for condition

To ensure that stormwater from the site will be discharged to a suitable Council approved outlet.

### **SW 1**

Prior to the issue of any approval under the *Building Act 2016* or the commencement of work on the site (whichever occurs first), a pre-

construction structural condition assessment and visual record (eg video and photos) of the Hobart City Council's stormwater infrastructure adjacent to the proposed development must be submitted to the City of Hobart as a Condition Endorsement.

#### The condition assessment must include at least:

- a site plan clearly showing the location of the investigation, with access points and all segments and nodes shown and labelled, with assets found to have a different alignment from that shown on the City of Hobart's plans to be marked on the ground and on the plan;
- a digital recording of a CCTV inspection and written condition assessment report in accordance with WSA 05-2013 Conduit Inspection Reporting Code of Australia, in a 'Wincan' compatible format; and
- photos of any existing drainage structures connected to or modified as part of the development.

The pre-construction condition assessment will be relied upon to establish the extent of any damage caused to Hobart City Council's stormwater infrastructure during construction. If the owner/developer fails to provide the City of Hobart with an adequate pre-construction condition assessment then any damage to the City of Hobart's infrastructure identified in the post-construction condition assessment will be the responsibility of the owner/developer.

#### Advice:

This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

### **SW 2**

Prior to occupancy or the commencement of the approved use (whichever occurs first), a post-construction structural condition assessment and visual record (eg video and photos) of the Hobart City Council's stormwater infrastructure adjacent to the proposed development must be submitted to the City of Hobart.

### The condition assessment must include at least:

- a site plan clearly showing the location of the investigation, with access points and all segments and nodes shown and labelled, with assets found to have a different alignment from that shown on the City of Hobart's plans shall be marked on the ground and on the plan;
- 2. a digital recording of a CCTV inspection and written condition assessment report in accordance with WSA 05-2013 Conduit Inspection

Reporting Code of Australia, in a 'Wincan' compatible format; and
3. photos of any existing drainage structures connected to or modified as part of the development.

The post-construction condition assessment will be relied upon to establish the extent of any damage caused to the Hobart City Council's stormwater infrastructure during construction. If the owner/developer fails to provide the City of Hobart with an adequate pre-construction condition assessment then any damage to the Hobart City Council's infrastructure identified in the post-construction CCTV will be deemed to be the responsibility of the owner/developer.

## **SW** 3

The proposed works, including ground anchors, must be designed and constructed to ensure the protection and access to the Hobart City Council's stormwater infrastructure.

Prior to the issuing of any approval under the *Building Act 2016* or commencement of works (whichever occurs first), a detailed design must be submitted and approved as a Condition Endorsement. The detailed design must be prepared by a suitably qualified engineer and must clearly state the minimum clearance of the soil nails to the public infrastructure, including the Lot stormwater connection and manhole, and side entry pit along the road frontage.

All work required by this condition must be undertaken in accordance with the approved detailed design.

### Advice:

This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit. Previous plans submitted have assumed depth of the connection and manhole, with no ability to lower the system. Plans have been inconsistent re the extent of proposed works to the manhole.

### **SW** 6

All altered and new stormwater infrastructure must be designed and constructed prior to occupancy or the commencement of the approved use (whichever occurs first).

Prior to the issuing of any approval under the *Building Act 201*6 or commencement of works (whichever occurs first), detailed engineering drawings must be submitted and approved as a Condition Endorsement. The

detailed engineering drawings must be certified by a suitably qualified and experienced civil engineer and must:

- be substantially in accordance with the Local Government Association of Tasmania: Tasmanian Municipal Standard Drawings (May 2020), as varied by the City of Hobart's published departures from those Drawings; and the Local Government Association of Tasmania, Tasmanian Subdivision Guidelines (October 2013);
- 2. clearly distinguish between public and private infrastructure;
- 3. show in both plan and long-section the proposed stormwater alterations, including but not limited to the new connection, manhole reconstruction, and side entry pit reconstruction. The plans must detail lid/ grating type, surveyed levels, flows, hydraulic grade lines, clearances (including from soil nails, and other services), cover, gradient, sizing, material, and pipe class, and a private access point immediately within the Lot boundary;

All work required by this condition must be undertaken in accordance with the approved detailed engineering drawings.

## Advice:

This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit. The approved stormwater connection documents must be included in your plumbing permit application document set and listed in accompanying forms.

A single connection for the property is required under the Urban Drainage Act 2013. A separate Permit to Construct Public Infrastructure will be required once the detailed engineering plans have been approved.

### **SW** 9

Prior to occupancy or the commencement of the approved use (whichever occurs first), pre-treatment for stormwater discharges from the development must be installed.

A stormwater management report and design must be submitted and approved as a Condition Endorsement, prior to the issue of any approval under the *Building Act 2016* or the commencement of work on the site (whichever occurs first). The stormwater management report and design must be prepared by a suitably qualified engineer and must:

 include detailed design of the proposed treatment train, including final estimations of contaminant removal and long-section demonstrating adequate head for treatment and gravity discharge;  include a supporting maintenance plan, which specifies the required maintenance measures to check and ensure the ongoing effective operation of all systems, such as: inspection frequency; cleanout procedures; descriptions and diagrams of how the installed systems operate; details of the life of assets and replacement requirements.

All work required by this condition must be undertaken and maintained in accordance with the approved stormwater management report and design.

Advice:

This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

### ENG tr1

Prior to first occupation or commencement of the use (whichever occurs first) Traffic Management within the parking area (including access driveway, circulation roadways, ramped sections, and parking aisles and spaces) must be installed.

Traffic Management design drawings (including signage and line marking), must be submitted and approved as a Condition Endorsement. The design drawings submitted must;

- 1. Be prepared by a suitably qualified person,
- Include indicative signage as required by this permit for the private car parking facility and designated parking bays,
- Pedestrian safety bollards for egress to/from lifts and doorways (where applicable), and
- Signage within the car park advising that vehicles travelling up the ramps should give way to vehicles travelling down.

All work required by this condition must be undertaken in accordance with the approved traffic management design drawings.

Advice:

This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

Reason for condition

In the interests of user safety and the amenity of the occupiers of the development.

ENG tr2

A Construction Traffic and Parking Management Plan must be submitted and approved as a Condition Endorsement prior to the issue of any approval under the *Building Act 2016* (including demolition) or commencement works (e.g., site disturbance) (whichever occurs first).

The Construction Traffic and Parking Management Plan must;

- 1. Be prepared by a suitably qualified person,
- Develop a communications plan to advise the wider community (including but not limited to; users, permit holders, businesses, neighbors etc.) of the traffic and parking impacts during construction,
- 3. Include start dates and finish dates of various stages of works,
- 4. Include times that rigid vehicles (e.g., MRV) and other traffic associated with the works will be allowed to operate, and
- 5. Nominate a superintendent (or the like) responsible for the implementation of the approved plan, who must also be available as a direct contact to the City of Hobart and/or community/public members regarding all relevant operations, any immediate traffic issues, and hazards that may arise.

The approved Construction Traffic and Parking Management Plan must be implemented throughout construction, and all work required by the approved plan must be undertaken in accordance with the approved plan.

### Advice:

This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

### Reason for condition

To ensure the safety of vehicles entering and leaving the development and the safety and access around the development site for the general public and adjacent businesses.

### ENG 2a

Prior to first occupation or commencement of use (whichever occurs first), Physical Controls must be installed as required by the Australian Standard AS/NZS 2890.1:2004 where and how applicable. This includes (vehicular) barriers compliant with the Australian Standard AS/NZS 1170.1:2002, to prevent vehicles running off the edge of a parking (trafficable) area. Physical controls installed must;

1. Not limit the parking area approved by this permit, and

2. Be in accordance with the Australian Standard AS/NZS 2890.1:2004.

### Reason for condition

To ensure the safety of users of the access driveway and parking module and compliance with the standard.

## ENG 3a

Prior to first occupation or commencement of use (whichever occurs first), the parking area (including access driveway, circulation roadways, ramped sections, parking aisles and spaces) must be constructed in accordance with the approved documentation which forms part of this permit, with particular reference to the following plans prepared by;

- JAWSARCHITECTS titled Lower Ground Floor Plan DWG 22103\_DA04 REV 03 dated 07/07/2022,
- JAWSARCHITECTS titled Basement 1 Floor Plan DWG\_22013\_DA03 REV 02 dated 17/06/2022,
- JAWSARCHITECTS titled Basement 2 Floor Plan DWG\_22013\_DA02 REV 02 dated 17/06/2022,
- ADG titled Roadwork Sight Distance Layout Plan DWG C32 REV B dated 12/08/2022, and
- 5. ADG titled Roadwork and Drainage Layout Plan DWG C30 REV E dated 12/08/2022.

Any departure from the approved documentation, must be:

- Approved by the Director City Life, via a Condition Endorsement application, and/or
- Be designed and constructed in accordance with the Australian Standard AS/NZ 2890.1:2004.

### Reason for condition

To ensure the safety of users of the access and parking module, and compliance with the relevant Australian Standard.

### ENG<sub>3c</sub>

Prior to first occupation or commencement of use (whichever occurs first), a suitably qualified engineer must certify that the parking area (including access driveway, circulation roadways, ramped sections, parking aisles and spaces) has been constructed in accordance with the design documentation approved by Condition ENG 3a.

#### Reason for condition

To ensure the safety of users of the access and parking module, and compliance with the relevant Australian Standard.

### ENG 4

Prior to first occupation or commencement of use (whichever occurs first), the parking area (including access driveway, circulation roadways, ramped sections, parking aisles and spaces) approved by this permit must be constructed to a sealed standard (spray seal, asphalt, concrete, pavers, or equivalent Council approved) and surface(s) drained to the Council's stormwater infrastructure.

#### Reason for condition

To ensure the safety of users of the access driveway and parking module, and that it does not detract from the amenity of users, adjoining occupiers or the environment by preventing dust, mud and sediment transport.

### ENG 5

The number of car parking spaces approved for use on site by this permit is One Hundred and Eight (108). Of these;

- One (1) Office car parking space, on the Lower Ground level, must be allocated for people with disabilities, (including shared areas),
- 2. The remaining One (1) Office car parking space, on the Lower Ground level, must be allocated for office use,
- Eight (8) Res car parking spaces, on the Lower Ground level, shall be in tandem (i.e., jockey) configurations, therefore One (1) of each of the Four (4) pairs of tandem car parking spaces must be allocated to a dwelling as it's sole dedicated parking provision,
- One (1) of each of the Eighteen (18) remaining Res car parking spaces, on the Lower Ground level, must be allocated to a dwelling as it's sole dedicated parking provision,
- 5. Twenty Two (22) Office car parking spaces, on the Basement 1 level, must be allocated for office use,
- 6. Four (4) Office (SC) small car parking spaces, on the Basement 1 level, must be allocated for office use,
- 7. One (1) PVP (SC) small car parking space, on the Basement 1 level, must be allocated for vehicle parking,
- 8. Thirteen (13) *PVP* car parking spaces, on the *Basement 1* level, must be allocated for vehicle parking,
- 9. Thirty-Five (35) *PVP* car parking spaces, on the *Basement 2* level, must be allocated for vehicle parking, and

Five (5) PVP (SC) small car parking spaces, on the Basement
 level, must be allocated for vehicle parking.

Prior to first occupation or commencement of use (whichever occurs first);

- All car parking spaces must be delineated (by means of white or yellow lines 80mm to 100mm wide, or white or yellow pavement markers) in accordance with Australian Standards AS/NZS 2890.1 2004, and
- Signage in accordance with Australian Standards AS/NZS1742.11:2016
  must be erected at the entrance to private car parking facility to
  indicate access to the area is for authorized users only.

Advice: User Classes shall be as per Australian Standards AS/NZS 2890.1:2004.

Reason for condition

To ensure the provision of parking for the use is safe and efficient for all users.

#### ENG 5b

The number of motorcycle parking spaces approved for use on site by this permit is Two (2).

Prior to first occupation or commencement of use (whichever occurs first);

- All motorcycle parking spaces must be constructed and delineated (by means of white or yellow lines 80mm to 100mm wide, or white or yellow pavement markers) in accordance with Australian Standards AS/NZS 2890.1:2004, and
- Signage in accordance with Australian Standards AS/NZS1742.11:2016
  must be erected at each motorcycle parking space to indicate the
  parking space is designated for motorcycle use only.

Reason for condition

To ensure the provision of parking for the use is safe and efficient.

### ENG 8

The number of small car parking spaces (i.e., bays less than 5.4m but no less than 5.0m in length) approved for use on site by this permit is Ten (10).

Prior to first occupation or commencement of use (whichever occurs first);

 All small car parking spaces must be delineated by means of white or yellow lines 80mm to 100mm wide, or white or yellow pavement

- markers in accordance with Australian Standards AS/NZS 2890.1 2004, and
- Signage in accordance with Australian Standards AS/NZS1742.11:2016 must be erected at each small car parking space to indicate the bay is designated for small car use only.

Reason for condition

In the interests of vehicle user safety and the amenity of the development.

# ENG 9

The number of car parking spaces for people with disabilities approved for use on site by this permit is One (1).

Prior to first occupation or commencement of use (whichever occurs first), all car parking spaces for people with disabilities must be constructed and delineated in accordance with AS/NZS 2890.6:2009.

Reason for condition

In the interests of vehicle user safety and the amenity of the development.

## **ENG 11**

Prior to first occupation or commencement of use (whichever occurs first), the redundant crossover(s) along the Melville Street highway reservation, fronting the subject site, must be reinstated in general accordance with;

LGAT Standard Drawing - Urban - TSD R11-v3 and TSD R14-v3 Type KC.

Advice:

Local Government Association (LGAT) Tasmanian Standard Drawings (TSD) can be viewed electronically via the LGAT Website.

You are likely to require a Permit to Open Up and Temporarily Occupy a Highway (for work within the highway reservation). Click here for more information.

Reason for condition

In the interests of vehicle user safety and the amenity of the development.

# ENG<sub>1</sub>

Any damage to council infrastructure resulting from the implementation of

this permit, must, at the discretion of the Council:

- Be met by the owner by way of reimbursement (cost of repair and reinstatement to be paid by the owner to the Council); or
- 2. Be repaired and reinstated by the owner to the satisfaction of the Council.

A photographic record of the Council's infrastructure adjacent to the subject site must be provided to the Council prior to any commencement of works.

A photographic record of the Council's infrastructure (e.g. existing property service connection points, roads, buildings, stormwater, footpaths, driveway crossovers and nature strips, including if any, pre-existing damage) will be relied upon to establish the extent of damage caused to the Council's infrastructure during construction. In the event that the owner/developer fails to provide to the Council a photographic record of the Council's infrastructure, then any damage to the Council's infrastructure found on completion of works will be deemed to be the responsibility of the owner.

#### Reason for condition

To ensure that any of the Council's infrastructure and/or site-related service connections affected by the proposal will be altered and/or reinstated at the owner's full cost.

## ENG<sub>r1</sub>

The underground car park and associated walls supporting the highway reservation must not undermine the stability and integrity of the highway reservation and its infrastructure.

Detailed design drawings, structural certificates, and associated geotechnical assessments, of the retaining structures adjacent the highway reservation must be submitted and approved, prior to the commencement of work and must;

- 1. Be prepared and certified by a suitably qualified and experienced engineer,
- 2. Not undermine the stability of the highway reservation,
- Be designed in accordance with AS4678, with a design life in accordance with Table 3.1 Typical Application Major Public Infrastructure Works,
- 4. Take into account any additional surcharge loadings as required by relevant Australian Standards.
- Take into account and reference accordingly any Geotechnical findings, and

Detail any protection measures/works required during construction.

All work required by this condition must be undertaken in accordance with the approved detailed design drawings and structural certificates.

## Advice:

- The applicant is required submit detailed design documentation to satisfy this condition via Council's planning condition endorsement process (noting there is a fee associated with condition endorsement approval of engineering drawings [see general advice on how to obtain condition endorsement and for fees and charges]). This is a separate process to any building approval under the Building Act 2016.
- Failure to address condition endorsement requirements prior to submitting for building approval may result in unexpected delays.
- Where the Council Infrastructure By-Law applies, an Infrastructure Protection Bond is payable for construction works, refundable upon completion and reinstatement of any damage to the highway.

#### Reason for condition

To ensure that the stability and integrity of the Council's highway reservation is not compromised by the development.

## ENG r3

Prior to the commencement of use, the proposed driveway crossover on the Melville Street highway reservation must be designed and constructed in accordance with:

- Urban TSD-R09-v3 Urban Roads Driveways and TSD R14-v3 Type KC vehicular crossing;
- Urban TSD-R14-v3 Redundant vehicle crossover to be reinstated to KC kerb and channel; and
- Footpath Urban Roads Footpaths TSD-R11-v3.

Design drawings must be submitted and approved as a Condition Endorsement prior to any approval under the Building Act 2016. The design drawings must:

- Show the cross and long section of the driveway crossover within the highway reservation and onto the property.
- Show the cross and long section of the footpath within the highway reservation.
- Detail any services or infrastructure (i.e. light poles, pits, awnings) at or near the proposed driveway crossover.
- 4. Show on the plan the blue banner pole to be removed.

- Show swept path templates in accordance with AS/NZS 2890.1 2004(B85 or B99 depending on use, design template).
- If the design deviates from the requirements of the TSD, then
  demonstrate that a B85 vehicle or a B99 depending on use (AS/NZS
  2890.1 2004, section 2.6.2), can access the driveway from the road
  pavement into the property without scraping the vehicle's underside.
- 7. Show that vehicular and pedestrian sight lines are met as per AS/NZS 2890.1 2004.
- Be prepared and certified by a suitable qualified person, to satisfy the above requirements.

All work required by this condition must be undertaken in accordance with the approved drawings.

Advice:

This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

Please note that your proposal does not include adjustment of footpath levels. Any adjustment to footpath levels necessary to suit the design of proposed floor, parking module or driveway levels will require separate agreement from Council's Program Leader Road Services and may require further planning approvals. It is advised to place a note to this affect on construction drawings for the site and/or other relevant engineering drawings to ensure that contractors are made aware of this requirement.

Reason for condition

To ensure that works will comply with the Council's standard requirements.

## ENG<sub>s1</sub>

All waste storage & collection associated with the development must occur wholly within the subject site's parking area approved by this permit (i.e., access driveway and circulation roadways).

Reason for condition

To ensure the safety of vehicles entering and leaving the development and the safety and access around the development site for the general public and adjacent businesses.

# ENG s2

The use of Inclined Ground Anchors (i.e., Soil Nails) shown on plans, in any capacity (e.g., for protection or construction works, as temporary/permanent

shoring), does not form part of this planning application, and are not approved as part of this planning permit.

Reason for condition

To clarify the scope of the permit.

# **ENVHE 1**

Recommendations in the report Environmental Site Assessment, 90 Melville Street, dated December 2019 must be implemented, for the duration of the development.

# Specifically:

- Excavated soils for disposal must be in stockpiled and sampled by a suitably qualified person in accordance with the EPA's IB105 guidelines and.
- A soil and water management plan should be documented and actioned for general sediment control to reduce loadings into the storm water infrastructure and waterways.

Reason for condition

To ensure that the risk to the environment remains low and acceptable.

# **ENVHE 4**

A Demolition and Construction Environmental Management Plan, prepared by suitably qualified persons, must be implemented.

A Demolition and Construction Environmental Management Plan must be submitted and approved prior to the commencement of works and prior to the issue of any approval under the *Building Act 2016*.

The plan must include, but is not limited to, the following:

- 1. Details of the proposed demolition and construction methodologies and expected likely timeframes.
- 2. The proposed days and hours of work and proposed hours of activities likely to generate significant noise emissions (including volume and timing of heavy vehicles entering and leaving the site, rock breaking and concrete pouring).
- 3. Details of potential environmental impacts associated with the demolition and construction works including noise, vibration, erosion and pollution (air,

land and water).

- 4. Details of proposed measures to avoid or mitigate all identified potential environmental impacts during demolition and construction works including, but not limited to:
- a. A noise and vibration management plan certified by a suitably qualified person as being generally consistent with AS 2436-2010 Guide to Noise and Vibration Control on Construction, Demolition and Maintenance Sites and the Interim Construction Noise Guidelines (New South Wales Department of Environment and Climate Change, July 2009), and with any relevant guidelines or standards referenced by those documents.
- b. A soil and water management plan including:
- i. measures to minimise erosion and the discharge of contaminated stormwater off-site;
- ii. measures to minimise dust emissions from the site;
- iii. measures to manage the disposal of surface and groundwater from excavations (if relevant); and
- iv. measures to prevent soil and debris being carried onto the street.
- 5. Details of proposed responsible persons, public communication protocols, compliance, recording and auditing procedures and complaint handling and response procedures.

A copy of the approved Demolition and Construction Environmental Management Plan must be kept on site for the duration of the works and be available for inspection.

Advice: This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

Reason for Condition

To minimise the impact of construction works

# **ADVICE**

The following advice is provided to you to assist in the implementation of the planning permit that has been issued subject to the conditions above. The advice is not exhaustive and you must inform yourself of any other legislation, by-laws, regulations, codes or standards that will apply to your development under which you may need to obtain an approval. Visit the Council's website for further information.

Prior to any commencement of work on the site or commencement of use the

following additional permits/approval may be required from the Hobart City Council.

## **CONDITION ENDORSEMENT**

If any condition requires that further documents are submitted and approved, you will need to submit the relevant documentation to satisfy the condition via the Condition Endorsement Submission on Council's online services e-planning portal. Detailed instructions can be found here.

A fee of 2% of the value of the works for new public assets (stormwater infrastructure, roads and related assets) will apply for the condition endorsement application.

Once approved, the Council will respond to you via email that the condition has been endorsed (satisfied).

Where building approval is also required, it is recommended that documentation for condition endorsement be submitted well before submitting documentation for building approval. Failure to address condition endorsement requirements prior to submitting for building approval may result in unexpected delays.

## **BUILDING PERMIT**

You may need building approval in accordance with the *Building Act 2016*. Click here for more information.

This is a Discretionary Planning Permit issued in accordance with section 57 of the Land Use Planning and Approvals Act 1993.

# **PLUMBING PERMIT**

You may need plumbing approval in accordance with the *Building Act 2016*, *Building Regulations 2016* and the National Construction Code. Click here for more information.

# SPECIAL CONNECTION PERMIT

You may need a Special Connection Permit (Trade Waste) in accordance with the *Plumbing Regulations 2014* and the Tasmanian Plumbing Code. Click here for more information.

# **PUBLIC HEALTH**

You may be required to provide approved/endorsed plans for a food business fit out, in accordance with the National Construction Code - Building Code of Australia including Tas Part H102 for food premises which must have regard to the FSANZ

Food Safety Standards. Click here for more information.

## **FOOD BUSINESS REGISTRATION**

Food business registration in accordance with the *Food Act 2003*. Click here for more information.

# SINGLE USE PLASTICS

The City of Hobart has a 'Single-Use Plastics By-Law' in force, which applies to retailers who provide or sell food to be taken from the retailer's premises in food packaging. Retailers must not provide to a person any food packaging which is wholly or partly comprised of plastic and a single use product. Please click here for more information.

## OCCUPATION OF THE PUBLIC HIGHWAY

You may require a permit for the occupation of the public highway for construction or special event (e.g. placement of skip bin, crane, scissor lift etc). Click here for more information.

You may require an occcupational license for structures in the Hobart City Council highway reservation, in accordance with conditions to be established by the Council. Click here for more information.

You may require a road closure permit for construction or special event. Click here for more information.

You may require a Permit to Open Up and Temporarily Occupy a Highway (for work in the road reserve). Click here for more information.

# **GENERAL EXEMPTION (TEMPORARY) PARKING PERMITS**

You may qualify for a General Exemption permit for construction vehicles i.e. residential or meter parking/loading zones. Click here for more information.

# **PLANNING**

The applicant is strongly encouraged to liaise with Tasnetworks to find an alternative substation location, to help improve the amenity, usability, safety, and long term viability of the proposed through site link.

## **STORMWATER**

Please note that in addition to a building and/or plumbing permit, development must be in accordance with the Hobart City Council's Infrastructure By law. Click here for

more information.

## STRUCTURES CLOSE TO COUNCILS' STORMWATER MAIN

The design of structures (including footings) must provide protection for the Council's infrastructure. For information regarding appropriate designs please contact the Council's City Life Division. You may need the General Manager's consent under section 13 of the *Urban Drainage Ace 2013* and consent under section 73 or 74 of the *Building Act 2016*.

## WORK WITHIN THE HIGHWAY RESERVATION

Please note development must be in accordance with the Hobart City Council's Infrastructure by law. Click here for more information.

## **CBD AND HIGH VOLUME FOOTPATH CLOSURES**

Please note that the City of Hobart does not support the extended closure of public footpaths or roads to facilitate construction on adjacent land.

It is the developer's responsibility to ensure that the proposal as designed can be constructed without reliance on such extended closures.

In special cases, where it can be demonstrated that closure of footpaths in the CBD and/or other high volume footpaths can occur for extended periods without unreasonable impact on other businesses or the general public, such closures may only be approved by the full Council.

For more information about this requirement please contact the Council's Mobility Unit on 62382711.

# DRIVEWAY SURFACING OVER HIGHWAY RESERVATION

If a coloured or textured surface is used for the driveway access within the Highway Reservation, the Council or other service provider will not match this on any reinstatement of the driveway access within the Highway Reservation required in the future.

# **REDUNDANT CROSSOVERS**

Redundant crossovers are required to be reinstated under the Hobart City Council's Infrastructure By law. Click here for more information.

## **ACCESS**

Designed in accordance with LGAT- IPWEA - Tasmanian standard drawings. Click

here for more information.

# **CROSS OVER CONSTRUCTION**

The construction of the crossover can be undertaken subject to Council approval of the design. Click here for more information.

# **WORK PLACE HEALTH AND SAFETY**

Appropriate occupational health and safety measures must be employed during the works to minimise direct human exposure to potentially-contaminated soil, water, dust and vapours. Click here for more information.

## PROTECTING THE ENVIRONMENT

In accordance with the *Environmental Management and Pollution Control Act 1994*, local government has an obligation to "use its best endeavours to prevent or control acts or omissions which cause or are capable of causing pollution." Click here for more information.

## **LEVEL 1 ACTIVITIES**

The activity conducted at the property is an environmentally relevant activity and a Level 1 Activity as defined under s.3 of the *Environmental Management and Pollution Control Act 1994*. For further information on what your responsibilities are, click here.

## **NOISE REGULATIONS**

Click here for information with respect to noise nuisances in residential areas.

# **WASTE DISPOSAL**

It is recommended that the developer liaise with the Council's Cleansing and Solid Waste Unit regarding reducing, reusing and recycling materials associated with demolition on the site to minimise solid waste being directed to landfill.

Further information regarding waste disposal can also be found on the Council's website.

# **FEES AND CHARGES**

Click here for information on the Council's fees and charges.

## **DIAL BEFORE YOU DIG**

Click here for dial before you dig information.

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(Ben Ikin)

**Senior Statutory Planner** 

As signatory to this report, I certify that, pursuant to Section 55(1) of the Local Government Act 1993, I hold no interest, as referred to in Section 49 of the Local Government Act 1993, in matters contained in this report.

Cluy

(Karen Abey)

# **Manager Development Appraisal**

As signatory to this report, I certify that, pursuant to Section 55(1) of the Local Government Act 1993, I hold no interest, as referred to in Section 49 of the Local Government Act 1993, in matters contained in this report.

Date of Report: 13 September 2022

# Attachment(s):

Attachment B - CPC Agenda Documents

Attachment C - Urban Design Advisory Panel Minutes

8/18/22, 1:22 PM

Icon Software Administration

PLN-22-321 - 90 MELVILLE STREET PLN-22-321 - ADJACENT ROAD RESERVE

# **Application Information**

Application Details PLN-22-321 Demolition and New Building for 22 Multiple Dwellings and Business and

Professional Services, and Associated Works 🔊

Submitted on: 23/05/2022 Accepted as Valid on: 23/05/2022 Target Time Frame: 42 Days.

Elapsed Time: 87 Days (Stopped: 82 Days) = 5 Days Expiry date: 24/09/2022

Officer: Senior Statutory Planner



If YES please provide the pre application advice number eg PAE-17-xx

Are you applying for permitted visitor accommodation as defined by the State Government Visitor Accommodatio information button for definition. \*



Is the application for SIGNAGE ONLY? If yes, please enter \$0 in the cost of development, and you must enter the r Other Details below. \*



If this application is related to an enforcement action please enter Enforcement Number

## Details

What is the current approved use of the land / building(s)? \*

mixed commercial and residential

Please provide a full description of the proposed use or development (i.e. demolition and new dwelling, swimming and garage) \*

demolition and new mixed use office, multiple dwellings and on-site car parling

Estimated cost of development \*

11000000.00

Existing floor area (m2) Proposed floor area (m2) Site area (m2)

0.00 13319.00 1709

Total parking spaces  Existing parking spaces  N/A  Other (no selection chosen)  Other Details  Does the application include signage? *  How many signs, please enter 0 if there are none involved in this application? *  0  Tasmania Heritage Register  Is this property on the Tasmanian Heritage Register?	18/22, 1:22 PM	Icon Softwar	Icon Software Administration	
Other Details  Does the application include signage? *  How many signs, please enter 0 if there are none involved in this application? *  0  Tasmania Heritage Register	Carparking on Site			
Other Details  Does the application include signage? *  How many signs, please enter 0 if there are none involved in this application? *  0  Tasmania Heritage Register	Total parking spaces	Existing parking spaces	N/A	
Does the application include signage? *  How many signs, please enter 0 if there are none involved in this application? *  0  Tasmania Heritage Register	108	64		
How many signs, please enter 0 if there are none involved in this application? *  0  Tasmania Heritage Register	Other Details			
Tasmania Heritage Register	How many signs, please ent		⊚ No	
Is this property on the Tasmanian Heritage Register?	Tasmania Heritage Regi	ster		
	Is this property on the Tasm	anian Heritage Register?		

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# **RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



## SEARCH OF TORRENS TITLE

VOLUME	FOLIO
180200	1
EDITION	DATE OF ISSUE
1	19-May-2021

SEARCH DATE : 10-Feb-2022 SEARCH TIME : 01.16 PM

# DESCRIPTION OF LAND

City of HOBART Lot 1 on Sealed Plan 180200 Derivation: Part of 0A-0R-31P Gtd. to T. Johnston, Part of 0A-0R-37P Gtd. to R. Cloak and Part of 0A-1R-12P (Sec. FF) Gtd. to John Banks Prior CTs 245477/1 and 6504/1

# SCHEDULE 1

M683859 & M865273 TRANSFER to GIAMEOS HOLDINGS PTY LTD Registered 19-May-2021 at 12.01 PM

# SCHEDULE 2

Reservations and conditions in the Crown Grant if any SP180200 FENCING PROVISION in Schedule of Easements

# UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

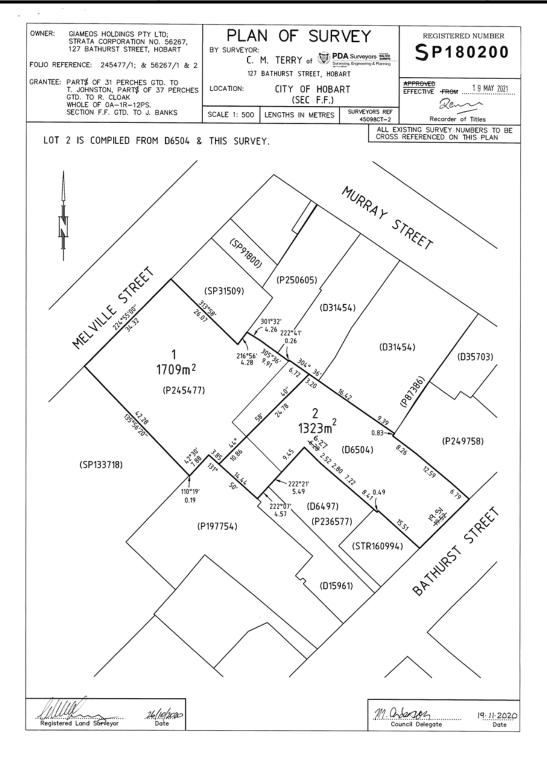


# **FOLIO PLAN**

RECORDER OF TITLES



Issued Pursuant to the Land Titles Act 1980



Search Date: 10 Feb 2022

Search Time: 01:18 PM

Volume Number: 180200

Revision Number: 01



Enquiries to: City Life

Phone: (03) 6238 2711

Email: coh@hobartcity.com.au

22 June 2022

Neil Shephard (Neil Shephard and Associates on behalf of Giameos Constructions and Developments Pty Ltd) PO Box 273 SANDY BAY TAS 7006 mailto: neilsh@bigpond.com

Dear Sir/Madam

90 MELVILLE STREET, HOBART & ADJACENT ROAD RESERVE
GMC - DEMOLITION AND NEW MIXED USE COMMERCIAL AND RESIDENTIAL
DEVELOPMENT NOTICE OF LAND OWNER CONSENT TO LODGE A PLANNING
APPLICATION - GMC-22-39

## Site Address:

90 Melville Street and adjacent road reserve

## **Description of Proposal:**

Demolition and New Building for 22 Multiple Dwellings and Business and Professional Services, and Associated Works

# Applicant Name:

Neil Shephard

Neil Shephard and Associates on behalf of Giameos Construction and Developments Pty Ltd

PLN (if applicable):

PLN-22-321

I write to advise that pursuant to Section 52 of the *Land Use Planning and Approvals Act* 1993, I grant my consent on behalf of the Hobart City Council as the owner/administrator of the above land for you to make application to the City for a planning permit for the development described above and as per the attached documents. I granted consent pursuant to delegation, a copy of which is enclosed.

Please note that the granting of the consent is only for the making of the application and in no way should such consent be seen as prejudicing any decision the Council is required to make as the statutory planning authority.

This consent does not constitute an approval to undertake any works and does not authorise the owner, developer or their agents any right to enter or conduct works on any Council managed land whether subject to this consent or not.

If planning approval is granted by the planning authority, you will be required to seek approvals and permits from the City as both landlord, land manager, or under other statutory powers (such as other legislation or City By-Laws) that are not granted with the issue of a planning permit under a planning scheme. This includes the requirement for you to reapply for a permit to occupy a public space under the City's Public Spaces By-law if the proposal relates to such an area.

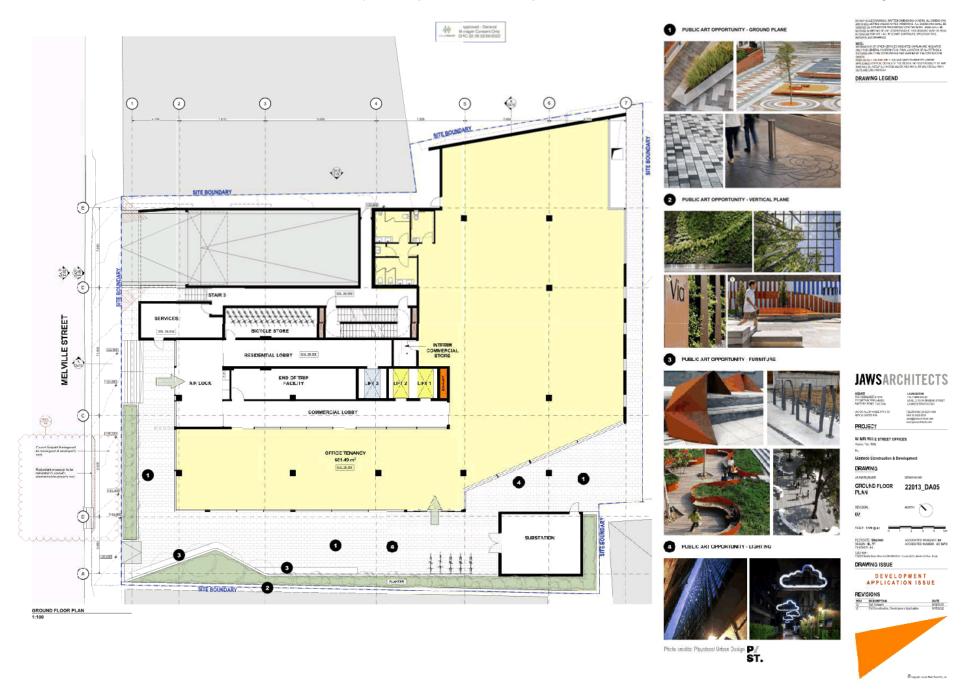
Accordingly, I encourage you to continue to engage with the City about these potential requirements.

Yours faithfully

(Glenn Doyle)
HEAD OF CITY PROJECTS

Relevant documents/plans:

Drawing 22013\_DA05 dated 9 June 2022





# APPLICATION FOR PLANNING PERMISSION UNDER THE

# **HOBART INTERIM PLANNING SCHEME 2015**

for

Demolition and mixed residential and commercial use and development at 90 Melville Street, Hobart



Prepared for Giameos Constructions & Developments Pty Ltd

18 May 2022

Item No. 7.1.1

# Agenda (Open Portion) City Planning Committee Meeting - 19/9/2022

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90 Melville Street, Hobart

Mixed residential and commercial use & development

Planning Submission

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2

Mixed residential and commercial use & development

Planning Submission

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# 1. Introduction

This Planning Report has been prepared to accompany an application for planning permission to redevelop the former K&D timber yard at 90 Melville Street, Hobart.

The report assesses the plans provided by JAWS Architects in response to the provisions of the *Hobart Interim Planning Scheme 2015*. The plans include 3D views of the proposal, montages of the proposal within the street and surrounding townscape context, street elevations, and shadow diagrams. A 'Flythrough' presentation also accompanies the application documentation, to assist further in visualisation of the overall proposal from a 3D perspective.

The documents overall that have been considered as part of this assessment include the following:

- Title documents;
- · Architectural drawings (JAWS Architects);
- Architectural Statement and site modelling diagrams (JAWS Architects);
- 'Flythrough' 3D presentation (JAWS Architects) <a href="https://youtu.be/3XXcBFr8egQ">https://youtu.be/3XXcBFr8egQ</a>;
- Detail Survey Plan (PDA Surveyors);
- Concept Services Assessment (ADG);
- Statement of Historical Archaeological Potential, and Archaeological Impact Assessment (Praxis Environment);
- Site contamination assessment (GES);
- Traffic and parking assessment (Midson Traffic);
- · Waste & Recycling Collection Assessment (Veolia);
- · Waste Management Plan (Low Impact development Consulting);
- Structural Performance Brief and Plans (ADG)

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# 2. Background

The subject land is most recently known as the Kemp & Denning timberyard and joinery, dating from 1910 (PRAXIS op cit. p23), although it had previously been divided into separate titles supporting residential cottages from as early as 1820 (ibid pp13-26).

With the recent removal of the timberyard operation, the site is currently being used for private car parking.

Council in May 2020 gave planning permission for a proposal involving demolition and a new building for 55 multiple dwellings, food services, business and professional services, general retail and hire and associated works within the adjacent road reserve (Council ref. PLN-19-948).

The approved development included on-site parking for 59 vehicles consistent with the minimum and maximum requirements for the multiple dwellings and the commercial components under the relevant E6.0 Parking and Access Code in the *Hobart Interim Planning Scheme 2015*.

# 3. Site Location & Context

# 3.1 The Site

The subject site is on the south-eastern side of Melville Street, between Murray and Harrington Streets, Hobart, PID 9901372, and comprising Certificate of Title 180200/1.

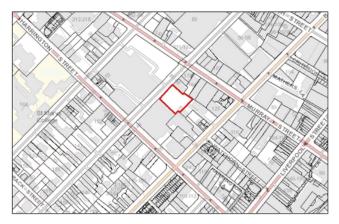


Figure 1: location of the subject land in a local context (base source: DPIPWE LISTmap 03/02/22)

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Figure 2: location of the subject land showing the existing vehicle parking (base source: DPIPWE LISTmap 03/02/22)

The site has a generally northerly aspect, grading from a level plateau in the vicinity of the southeastern boundary with 127 Bathurst Street, down to a low point at the northern corner adjacent to Melville Street.



**Photo 1:** subject site viewed from Melville Street: image taken from near the lowest northern corner, looking up toward the highest southern corner (source: GOOGLE EARTH Street View 10/18)

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# 3.2 The Surrounding Area

Figure 2 (above) shows the land use and development surrounding the subject site. It is most easily described as follows:

SOUTHWEST: the land is developed for multi-storey office accommodation (KPMG building). This building occupies the eastern corner of the Melville/Harrington Street intersection, and is the largest current single development in the respective street block in terms of footprint and height (6 levels/21.7m above NGL).

NORTHWEST: on the opposite side of Melville Street is the K&D hardware store and car park. This has recently been purchased by the University of Tasmania, and is planned to be developed for a mix of educational and student accommodation use. Although the University are yet to advise detailed plans, it is likely that development will optimise the use of the overall site, with building height potentially between 4 and 6 levels above NGL (ie 15 to 21m), noting as a reference, the recently approved 15m high mixed-use development at 209-215 Harrington Street.

NORTHEAST: from the adjoining property to the intersection of Melville and Murray Streets is a mixture of service industry and retail use within ageing building stock. This character continues along Murray Street to the intersection of Bathurst Street. The age and relatively inefficient configuration of many of these buildings provides scope for redevelopment.

SOUTHEAST: immediately adjacent to the rear of the subject site is a ground-level private car park and office building. Further removed are a number of heritage-listed properties used for a variety of service and retail uses. Importantly the property at 125 Bathurst Street has been approved for a mixed commercial and residential development of 10 levels (30m with an additional 2.7m lift overrun). On the opposite side of Bathurst Street at 126, a mixed commercial and residential development with a height of 30m is currently under construction.

Overall, from a land use and spatial perspective, the locality can be characterised as 'inner city mixed commercial', although it is clearly undergoing a substantial transition to 'inner city mixed commercial and residential'.

With the redevelopment of the subject and surrounding street blocks, the architectural character is therefore also moving toward a mix of styles ranging from heritage Georgian and Victorian to contemporary.

# 3.3 Infrastructure Services

The site is located in an area that is serviced by water and sewer services operated by TasWater and a stormwater system operated by Hobart City Council.

The subject site is also ideally located in terms of public transport and walkability. The site is in close proximity to bus stops along Liverpool and Elizabeth Streets.

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# 4. Consultation

# 4.1 Bulk and height

Prior to the 2020 application (PLN-19-948) preliminary consultation was undertaken with senior Council planning officers in respect of Council's interpretation of the certain aspects of the planning scheme provisions, particularly those relating to height controls.

From this engagement, the significance of street activation and connectivity through the site were discussed and acknowledged.

The importance of, and the need to demonstrate 'transition' in terms of building height and bulk were also identified as key issues. The Project Team also had the benefit of utilising Council's K2vi model to view the original design within the context of the built fabric of the CBD, including recently approved developments in the vicinity. This exercise allowed consideration of key view lines, including the 'view cones' in Figure 22.6 of the planning scheme, and the issue of 'transition' between the CBD Core and the adjoining zones.

Initial use of the 45m height 'Amenity Building Envelope' provisions under clause 22.4.1 of the planning scheme as a reference point was consequently disregarded, and the initial 45m designed height reconsidered.

The project team subsequently consulted architect Leigh Woolley in respect of his extensive experience and understanding of the impact of building height in the Hobart CBD. Arising from those discussions the project team identified the following principles to guide the revised design:

- Where height increases, bulk reduces (consistent with the principles of the Amenity Building Envelope);
- The building should be designed to be viewed 'in-the-round';
- · The building should add character to the townscape;
- · Roof treatment and profile should be given careful consideration;
- The building should have a maximum height around 30m above NGL;
- 'Street space' scale is appropriately considered (consistent with the principles of the Amenity Building Envelope);
- · The building should connect with and activate the streetscape;
- The development should provide opportunity for current or future connectivity (ie to Bathurst Street);
- Careful consideration of residential amenity for each level and each apartment will provide potential for external design improvement;
- Minor variations to the maximum height may or may not be appropriate depending on whether the foregoing principles can be considered to be achieved.

The current proposal continues those considerations.

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# 4.2 vehicle parking

More recently preliminary consultation was undertaken with senior Council planning officers in respect of Council's current interpretation of certain aspects of the planning scheme provisions, relating to the additional car parking component.

From this engagement, it was confirmed that additional car spaces beyond those associated with the proposed residential and commercial (office) uses would be treated as a new Use 'Vehicle Parking'. It is understood that this is a technical requirement on the basis that notwithstanding the existing Use of the site as Vehicle Parking, the Permit PLN-19-948 did not include a separate Vehicle Parking Use.

email: neilsh@bigpond.com

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# 5. The Proposed Development

# 5.1 The development

The application is for demolition, and construction of a mixed-use development with 3 levels of below-ground car parking, 5 levels of office space and 4 levels of residential apartments. Specifically, the proposal includes:

- Demolition of the existing building.
- Construction of a new building comprising 3 below-ground levels of 108 car parking spaces and residential storage; and 9 above-ground levels of commercial/office space and 22 residential apartments, including:

#### **Basement Level 2**

- 40 private car parking spaces
- Storage for residences
- Plant

## **Basement Level 1**

- 40 car parking spaces (26 office spaces; 14 private car parking spaces)
- Storage for residences
- Plant

#### **Lower Ground Floor Level**

- 28 car spaces (2 office spaces including 1 disability space; 26 residential spaces including
   4 jockey spaces to provide additional parking to for dwellings)
- 1 motorbike space
- Bicycle storage racks
- Residential and Bin storage
- Plant

## **Ground Floor Level**

- Office tenancy (681.49m²) + terrace patio off Melville Street
- Entry lobbies for residences and commercial tenancies
- Laneway connection and associated landscaping from Melville Street to 127 Bathurst
   Street
- Access ramp to below ground car parking and storage
- Bicycle storage
- End of trip facility (amenities)
- Plant and substation

## Level 1

- Office tenancy (1239.05m²)

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#### Level 2

Office tenancy (1239.90m²)

#### Level 3

Office tenancy (1240.56m²)

#### Level 4

Office tenancy (1236.24m²)

#### Level 5

- 6 X 2-bedroom apartments ranging between 99m2 and 108m2
- Communal space/roof garden (128m²)
- landscaping

#### Level 6

6 X 2-bedroom apartments ranging between 101m<sup>2</sup> and 111m<sup>2</sup>

#### Level 7

6 X 2-bedroom apartments ranging between 99m² and 111m²

#### Level 8

4 X 3-bedroom apartments ranging between 143m<sup>2</sup> and 160m<sup>2</sup>

External surfaces of the building frame are to be pre-cast concrete panels in a selected variety of light, textured finishes, intended to break up the visual massing of the building and reinforce the articulation of the form. An increased amount of fenestration will be included compared to the previously approved development. These window elements will provide additional light and cross ventilation and visually mitigate the bulk and massing of the building.

Glazed balconies will predominate on all elevations, with cement sheet and aluminium privacy screens providing additional detail and texture within the balcony recess.

A communal roof garden space facing northeast is to be provided at Level 5.

At street level, the main entrance, terrace and steps are proposed to be a brick finish, referencing the historic use of the site.

Signage is not proposed as part of this application. Any future requirements for signage will be the subject of separate application for planning permission in accordance with the requirements of the planning scheme in force at the time.

The area setback from the footpath and potential future laneway linkage to Bathurst Street has been designed to provide the potential for public artwork to include colour and visual interest to integrate with the design of public seating and planting within this area. Suggestions have included:

- · defining a canopy to this transition space;
- lighting installations;
- interactive artwork;
- or artwork that integrates with the design of the seating and planting.

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# 5.2 The design

A Design Statement by the project architects JAWS accompanies this application. The key elements that have contributed to the revised design can be summarised as follows:

The massing strategy works to maximise efficiency of office floor plates whilst balancing access to natural light and depth of floors to the central core. The residential floors are set further back to neighbouring properties to provide enhanced amenity for residential apartments. The form is broken down into an Office podium with Residential Apartments sitting above. The service core is located centrally to provide efficient access to all apartments and help divide the forms. The façade treatment of this design component assists to create a unifying element that ties all the components together. (op.cit.JAWS May 2022, p.1)

The height of the development has been a continuous process of analysis and contextual review. The previously approved (2020) scheme had a maximum Roof Height RL of 57,200. A similar maximum Roof Height of RL 57,700 has been maintained for this new application ensuring the development sits comfortably within the allowable amenity building envelop within the planning scheme. (ibid. p.2)

The greater mix of uses reflects approaches from the University of Tasmania seeking office space to support its master plan for relocation into the CBD. The expansion of the underground car park replaces the displaced on-grade commercial carparks that exist now on the site and delivers that same number plus additional car spaces to meet the needs of the mixed-use development proposed. (ibid.)

The previous scheme's analysis of the transition of the building and its height was the subject of extensive investigation both cross-sectionally through the Council's K2vi model and through independent consultation with urban designer and architect, Leigh Woolley. The development site sits on the edge of the Inner Core, in the Hill Face Zone, as referenced in the Building Height Standards Review Project June 2018.

This current proposal relies on the prior methodology and analysis, sitting comfortably within its context as a transitional element without being individually prominent (refer 3D visualisation 3 in Architectural DA set).

The Office podium building facing Melville Street sits below the building envelope of 20m from natural ground level (NGL), whilst the taller buildings beyond the podium building sit at approximately 30m above NGL. The podium design including large picture windows frame views into and out of the internal spaces, creating visual connections between activities within the building and its context. (ibid)

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# 6. Planning Assessment

# 6.1 Zoning

The subject site is within the Central Business Zone of the *Hobart Interim Planning Scheme 2015*, as identified in Figure 4 below.



Figure 4: zoning of the subject site and surrounding area (base source: DPIPWE TheLIST 10/12/19)

# **6.2 Zone Purpose Statements**

The following statements are provided under clause 22.1.1 of the planning scheme, and are assessed as follows:

22.1.1.1 To provide for business, civic and cultural, community, food, hotel, professional, retail and tourist functions within a major centre serving the region or sub-region.

Comment: The proposal provides 5 commercial levels, a street level terrace with potential laneway access through to Bathurst, the opportunity for a public art installation, and 22 residential apartments. The proposal therefore provides potential business, community, food and parking functions within the Hobart CBD.

22.1.1.2 To maintain and strengthen Hobart's Central Business District and immediate surrounds including, the waterfront, as the primary activity centre for Tasmania, the Southern Region and the Greater Hobart metropolitan area with a comprehensive range of and highest

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order of retail, commercial, administrative, community, cultural, employment areas and nodes, and entertainment activities provided.

Comment: The development will contribute to the ongoing strengthening and activation of the Hobart CBD by providing high quality architecture, inner-city residential accommodation, commercial uses, and potential additional intra block connectivity and public art.

22.1.1.3 To provide a safe, comfortable and pleasant environment for workers, residents and visitors through the provision of high-quality urban spaces and urban design.

Comment: The development has been purposefully designed to provide high quality spaces for the use and enjoyment of residents, employees, customers and the general public.

22.1.1.4 To facilitate high density residential development and visitor accommodation within the activity centre above ground floor level and surrounding the core commercial activity centre

Comment: The proposal provides high quality, high density residential development above the commercial office space at a scale and character appropriate to the CBD, within easy walking distance to other commercial and professional facilities.

22.1.1.5 To ensure development is accessible by public transport, walking and cycling.

Comment: The development is within close walking and cycling distance to employment, community and health facilities, and public transport nodes and routes.

22.1.1.6 To encourage intense activity at pedestrian levels with shop windows offering interest and activity to pedestrians.

Comment: The proposal includes potential for street level commercial uses as office space and potential key intra block access, as well as public art opportunity. The proposed glazing, architectural detail, and complementary landscaping will create visual interest and activate a long-underutilised semi-industrial site. The introduction of an additional 22 residential units and office space will intensify pedestrian activity in the immediate locality as well as contributing to the wider area of the CBD.

22.1.1.7 To encourage a network of arcades and through-site links characterised by bright shop windows, displays and activities and maintain and enhance Elizabeth Street Mall and links to it as the major pedestrian hub of the CBD.

Comment: N/A.

22.1.1.8 To respect the unique character of the Hobart CBD and maintain the streetscape and townscape contribution of places of historic cultural heritage significance.

Comment: The site is not, nor is it immediately adjacent to, a heritage listed place. The proposed building, however, has been designed having regard to the surrounding developments and the potential for redevelopment of those titles. The site has also been assessed for archaeological potential, and development will proceed subject to the recommendations provided by the respective report.

22.1.1.9 To provide a safe, comfortable and enjoyable environment for workers, residents and visitors through the provision of high quality spaces and urban design.

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Comment: As 22.1.1.3 above.

# **6.3 Desired Future Character Statements**

The following statements are provided under clause 22.1.3.2 of the planning scheme, and are assessed as follows:

The siting, bulk and design of a building above the street wall and beyond the Amenity Building Envelope (see Figure 22.3) must be consistent with the objectives in clause 22.1.3.1, having regard to:

(a) the consolidation of the Central Business Zone in a manner which provides separate building forms and a layered visual effect rather than the appearance of a contiguous wall of towers;

Comment: the 'Amenity Building Envelope' applies to sites within the defined 'Core Area' of the Central Business Zone, shown in Figure 22.2 of the planning scheme. Technically therefore, the Amenity Building Envelope does not apply to the subject site, which is in the 'Fringe Area' of the Zone, also defined in Figure 22.2.

Nonetheless, the principles established by the Amenity Building Envelope (Figure 22.3 of the planning scheme) remain apposite, particularly when attempting an objective assessment of the impacts of the proposed design on the character and amenity of the locality within the broader context of the CBD.

The proposed design therefore addresses the principles established by the Amenity Building Envelope, but with a more nuanced approach than other recent building designs in the Hobart CBD.

The proposal uses the traditional 'podium' design, but also involves the creation of individual forms to further break down the scale and bulk of the building. This ensures that the proposal appears both horizontally and vertically as a properly articulated, layered, multidimensional building with varying setbacks and heights (see Figure 5 below).

Consequently the form of the building does not contribute to any impression of a 'contiguous wall of towers', but rather provides a transition between the higher, more monolithic forms of development in the CBD Core Area, and the lower, more lateral forms of development (present and future) adjoining the subject site (within the CBD Fringe Area), and to the northwest of Melville Street (beyond the Central Business Zone).



Figure 5: excerpt from JAWS ARCHITECTS, Design Statement, May 2022

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(b) maintaining a level of permeability through city blocks by reductions in bulk as height increases allowing for sunlight into streets and public spaces;

Comment: the detailed articulation of the building not only includes the reduction of bulk as height increases, but the varying orientation of each element also ensures that as much light passes through the building as possible (see Figure 6 below).

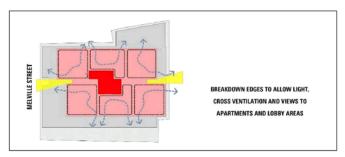


Figure 6: excerpt from JAWS ARCHITECTS, Design Statement, May 2022

The potential net impact of the proposed building on public spaces is limited to:

- overshadowing of a relatively small portion of Harrington Street between Melville and Bathurst Streets between 9am and 10am on 21 June;
- overshadowing of a relatively small portion of Bathurst Street between Harrington and Watchorn Streets between 1pm and 2pm on 21 June; and
- overshadowing of a relatively small portion of Watchorn Street, at the intersection with Bathurst Streets between 2pm and 3pm on 21 June.

The impacts are demonstrated in the Shadow Diagrams that form part of the JAWS Architects' set of plans accompanying the application.

(c) the building proportion and detail reflecting and reinforcing the streetscape pattern;

Comment: The reliance on the fundamental podium concept (consistent with the Amenity Building Envelope) has ensured that development in terms of streetscape pattern is consistent with existing and potential future adjoining buildings in Melville Street.

That is not to suggest that the above-podium elements will be invisible, but that the lower podium levels will maintain the pattern and amenity established by adjoining buildings (see Street Elevation and Montages below), with the upper-level elements receding from a street level perspective.

It can be seen that the streetscape steps down the slope of Melville Street toward Murray Street, and the proportions of the podium elements reinforce that pattern.

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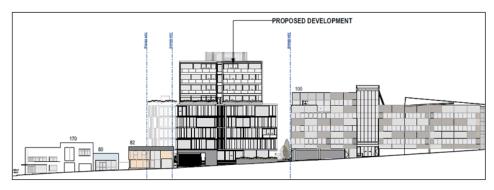


Figure 7: Melville Street elevation (source: JAWS ARCHITECTS, Street Elevation, Dwg 22013\_DA21 Rev 01, 9 May 2022)



Montage 1: Streetscape looking northeast down Melville Street. At close proximity the upper elements recede behind the lower podium elements (source: JAWS ARCHITECTS, 3D Visualisation 02 Rev 1, Dwg 22013\_DA23, 9 May 2022)

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**Montage 2**: Streetscape looking southwest up Melville Street from the corner of Murray Street, showing that the upper elements become more visible with distance, but still recede behind the lower podium elements (source: JAWS ARCHITECTS, 3D Visualisation 02 Rev 1, Dwg 22013\_DA23, 9 May 2022)

(d) the building not being an individually prominent building by virtue of its height or bulk, thus reinforcing a cohesive built form and the containment provided by the urban amphitheatre;

Comment: As indicated earlier in this report, efforts have been made to ensure that the proposed design is not individually prominent by virtue of its height or bulk, through the following mechanisms:

- reducing the maximum height to approximately 29m (approx 31.8m to the top of the lift overrun) - well below the allowable 45m height provided by the Amenity Building Envelope in the adjoining Core area of the CBD;
- Ensuring that the greatest proportion of bulk is below 30m, and that any extensions beyond this are minor, and finer grained. As such the 1.8m extension is limited to the lift overrun. The floor plans and cross section demonstrate that these elements are quantitatively minor (less than 20% of the building footprint) and do not contribute to the bulk of the building;
- Complementing but not replicating nearby recently approved developments at 125 and 126
  Bathurst Street which are similar in bulk and height, and so ensuring that the proposal will not
  be individually prominent, but will reinforce the sense of containment provided by the 'urban
  amphitheatre'. The more nuanced approach at 90 Melville Street will create the desired
  layered visual effect rather than the appearance of a contiguous wall of towers, as might result
  if every building met the Amenity Building Envelope parameters.
- Stepping down the height and bulk of the building to Melville Street to ensure the development is consistent with existing and potential future adjoining buildings in Melville

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Street in terms streetscape pattern, and equally provides a transition to existing and potential future development of the Commercial zoned area on the opposite side of Melville Street.

(e) reinforcing consistent building edges and height at the street wall allowing for solar penetration where possible;

Comment: the 'podium' design elements ensure that height at street-level is consistent with surrounding development, with the upper elements setback to increase visual amenity, minimise bulk and ensure ample solar penetration along Melville Street. Impacts to Harrington, Bathurst and Watchorn Streets are also shown to be insignificant.

(f) the provision of weather protection for footpaths to enhance pedestrian amenity and encourage, where appropriate, interior activity beyond the building entrance;

Comment: The proposed pedestrian access through the site will provide shielding from the elements for residents and visitors to the site.

(g) the provision of permeability in support of the open space network.

Comment: the proposal includes the provision of a pedestrian laneway along the southwestern side of the site, to allow for future connectivity from Melville Street to Bathurst Street, then onwards down Watchorn Street to Liverpool Street.

This connection does ultimately rely on the cooperation of the owner and future developer of the adjoining land in Bathurst Street. However, given the restrictions on development potential of those titles that arise from heritage consideration, together with the desired outcome of this Statement, it seems logical (and consistent) that the connection would continue to be encouraged by Council.

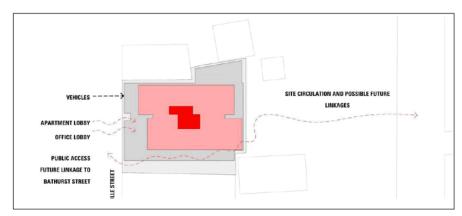


Figure 8: excerpt from JAWS ARCHITECTS, Design Statement, May 2022

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# 6.4 Consistency with the Objectives for the Desired Future Character Statements

Given the assessment in section 6.3 above the following conclusions can be drawn in respect of consistency with the Townscape and Streetscape Character Objectives of the Desired Future Character Statements under clause 22.1.3.1 of the planning scheme:

(a) That the Central Business Zone provides a compact built focus to the region, reflecting an appropriate intensity in its role as the heart of settlement.

Comment: The proposed design reinforces the compact built focus to the Central Business Zone by providing a scale of development that is consistent with nearby recently approved buildings, but is less intense than exists and is allowed for within the Core of the Zone. It also provides a transition in terms of height, bulk and intensity to the adjoining Commercial Zone on the opposite side of Melville Street.

(b) That the Central Business Zone develops in a way that reinforces the layered landform rise back from the waterfront, having regard to the distinct layers of the landform, respecting the urban amphitheatre, including the amphitheatre to the Cove, while providing a reduction in scale to the Queens Domain, the Domain and Battery Point headlands and the natural rise to Barracks Hill (see Figures 22.7 and 22.8).

Comment: Equally the proposed design facilitates the development of the Central Business Zone in a way that acknowledges the landform and reinforces the 'urban amphitheatre'.

(c) That the Central Business Zone consolidates within, and provides a transition in scale from, its intense focus in the basin, acknowledging also the change in contour along the Macquarie Ridge, including both its rising and diminishing grades, including to the low point of the amphitheatre to the Cove (see Figures 22.7, 22.8 and 22.9).

Comment: The proposal adopts the principles of the Amenity Building Envelope, but provides a more measured, nuanced, and less intense approach, reflecting the distinctions between its' Fringe location and the more intense focus in the 'basin' of the Zone Core. In particular the building steps down the slope of the site to Melville Street, as well to toward Murray Street, reflecting the subtle undulations of the topography in the locality.

(d) That the historic cultural heritage values of places and precincts in the Central Business Zone be protected and enhanced in recognition of the significant benefits they bring to the economic, social and cultural value of the City as a whole.

Comment: The proposal does not impact on or challenge any historic cultural heritage values on either the subject site or any adjoining properties. A precautionary approach has been initiated in respect of any the potential for any archaeological discovery.

#### 6.5 Use Status

The 'business and professional services', and any potential alternative 'general retail and hire' or 'food services' use classes are all permitted in the Central Business Zone. These are considered to be the most likely range of uses for the commercial tenancies on the Ground Floor Level, although the University of Tasmania has indicated an intention to use all 5 commercial floor levels for offices.

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The 'residential' use class is permitted in the zone if above ground floor level, which all of the proposed apartments are.

#### 6.6 Use Standards

#### 22.3.1 Hours of Operation

Not applicable – the site is not within 50m of a residential zone.

#### 22.3.2 Noise

Not applicable – the site is not adjacent or within close proximity to a residential zone.

#### 22.3.3 External Lighting

Not applicable – the site is not within 50m of a residential zone.

#### 22.3.4 Commercial Vehicle Movements

Not applicable – the site is not within 50m of a residential zone.

#### 22.3.5 Adult Entertainment Venues

Not applicable - none proposed.

#### 22.3.6 Take-away Food Premises

At this time, no café/restaurant is proposed. If in the future one does eventuate then the hours of operation can be considered at that time – as part of a new Development Application.

#### 22.3.7 Hotel Industries

Not applicable – none proposed.

#### 22.3.8 Manufacturing and Processing Uses

Not applicable - none proposed.

## 6.7 Development Standards for Buildings & Works

#### 22.4.1 Building Height

#### A1/P1

Not applicable - the site is not within the Central Business Core Area in Figure 22.2.

#### A2/P2

Not applicable - the site is not within 10m of a residential zone.

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#### A3/P3

#### **Acceptable Solution**

#### A3

Building height within the Central Business Fringe Area in Figure 22.2 must be no more than:

(a) 11.5m and a maximum of 3 storeys;

(b) 15m and a maximum of 4 storeys, if the development provides at least 50% of the floor space above the ground floor level for residential use;

unless an extension to an existing building that:

(i) is necessary solely to provide access, toilets, or other facilities for people with disabilities;
(ii) is necessary to provide facilities required by

(ii) is necessary to provide facilities required by other legislation or regulation.

#### Performance Criteria

#### P3.1

The siting, bulk and design of development must respect the transition between the core area of the Central Business Zone and adjacent zones and must make a positive contribution to the streetscape and townscape.

#### P3.2

Development outside the Amenity Building Envelope (Figure 22.3) must provide significant benefits in terms of civic amenities such as public space, pedestrian links, public art or public toilets, unless a minor extension to an existing building that already exceeds the Amenity Building Envelope, and must make a positive contribution to the streetscape and townscape, having regard to:

- (a) the height, bulk and design of existing and proposed buildings;
- (b) the need to minimise unreasonable impacts on the view lines and view cones in Figure 22.6 and on the landform horizons to kunanyi/ Mt Wellington and the Wellington Range from public spaces within the Central Business Zone and the Cove Floor;
- (c) the need to minimise unreasonable impacts on pedestrian amenity from overshadowing of the public footpath;
- (d) the need to minimise unreasonable impacts on the amenity of public open space from overshadowing;
- (e) the need to minimise unreasonable impacts on pedestrian amenity from adverse wind conditions; and
- (f) the degree of consistency with the Desired Future Character Statements in clause 22.1.3.

#### Assessment of compliance

The proposal does not meet either of the Acceptable Solution options and therefore relies upon the alternative Performance Criteria. The proposal is assessed as follows:

#### D2 1

Following site assessment, preliminary conceptual development, and then the consultation outlined in Section 4 of this report, development of the design was revised to meet the principles adopted to meet the client's brief, the constraints and opportunities presented by the site, and the parameters outlined in the planning scheme.

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Paramount amongst these principles has been the reduction of the primary bulk of the building above the podium level suggested by the Amenity Building Envelope, and reduction of the height of the main upper bulk of the building from 45m to approximately 30m. This follows from a consideration of Mr Woolley's comprehensive analysis of appropriate 'height control planes' (op.cit WOOLLEY, L. Building Height Standards: Review Project, June 2018).

Combined with a greater degree of vertical and horizontal articulation than recently approved nearby buildings, it was considered that the further detailing provided by the current design is an even more measured and responsible transition to both the CBD Core and the Commercial areas north of Melville Street than the approved 2020 proposal.

The additional detail also provides a greater contribution to the character of the townscape, notably when viewed 'in-the-round' including from the Bathurst Street side, and when looking down from the higher sloped areas of the city. This approach contrasts with some of the recent developments in the CBD that provide blank side or rear elevations.

More detailed assessment covering the same issues is provided earlier in this report in respect of the Desired Future Character Statements (see sections 6.3 and 6.4 above).

It is concluded that the siting, bulk and design of the proposal does respect the transition between the core area of the Central Business Zone and the adjacent zones, and makes a positive contribution to the streetscape and townscape.

#### P3.2

The Amenity Building Envelope does not technically apply to the Central Business Fringe Area. However, its principles have been adopted in the development of the proposed design, notably:

 The Building Envelope diagrams on Drawing 22013\_DA15 demonstrate that the proposal complies with the Amenity Building Envelope for a northwestern facing frontage (see Figures 9 and 10 below).

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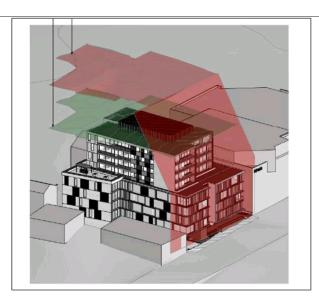


Figure 9: Building Envelope (source: JAWS ARCHITECTS, Dwg 22013\_DA15, 9 May 2022)

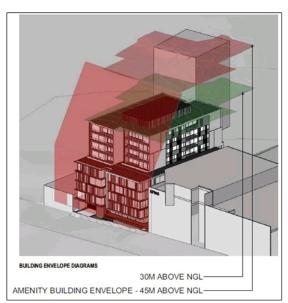


Figure 10: Building Envelope (source: JAWS ARCHITECTS, Dwg 22013\_DA15, 9 May 2022)

 The overall height of the main bulk of the upper elements of the building is below 30m, with only a relatively minor extension to 31.8m in the form of the lift overrun. Even so the maximum height is approximately 13m lower than the allowable height under the Amenity Building Envelope.

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Notwithstanding the above, the following assessment is provided in respect of the criteria under P3.2:

The proposal will provide a laneway pedestrian link to the boundary with 127 Bathurst Street. This space will be furnished with public seating, plantings and public artwork. It will facilitate the ultimate linkage to Bathurst Street and Watchorn Street. It will be adjacent to glass-fronted commercial spaces on the ground floor of the building and so will be well lit and well populated, creating a sense of activity.

- (a) The contribution of the height, bulk and design of the proposal to the streetscape and townscape is discussed at length above. There are no protrusions forward of the Amenity Building Envelope to detract from this contribution, detail changes to the facade will create further character and interest in the building.
- (b) Use of Council's K2vi model in assessing the approved 2020 development confirmed that the view lines and view cones in Figure 22.6 of the planning scheme would not be impacted in any way by the proposed design. In fact, even when using the taller preliminary design (45m), interceding buildings – notably the Myer/Icon building - blocked any view of the proposal.
- (c) The proposed revised building will contribute an insignificant amount of shadowing of the Melville Street footpath in the earliest hours of the morning. For the remainder of the day the footpath will be in full sunshine. The degree of impact is not considered to be unreasonable.
- (d) The proposed building will have no impact on any public open space.
- (e) The proposed revised building design meets the Amenity Building Envelope requirements. Given that the Amenity Building Envelope "has been developed with regard to heritage, streetscape and sense of scale, wind tunnelling effects and solar penetration" (footnote to Figure 22.3 of the planning scheme) it is concluded that proposed building is acceptable in those regards. The building is also much lower than the 45m height and less bulk than allowed by the Amenity Building Envelope.
- (f) The Desired Future Character Statements are discussed in sections 6.3 and 6.4 above. It is concluded that the proposal is consistent with both those statements and the related objectives in clause 22.1.3 of the planning scheme.

#### A4/P4

Not applicable - the site does not include a place listed in the Historic Heritage Code.

#### A5/P5

Not applicable – there are no adjacent places in Melville Street listed in the Historic Heritage Code.

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#### 22.4.2 Setback

A1

Building setback from frontage must be parallel to the frontage and must be no more than:

0 m

Comment: The revised proposal presents all the podium levels to the Melville Street (front) boundary. Even in the case of the terrace, the wall base/plinth and the overhanging level above meet the boundary with no setback. This is evident in the floor plans , sections, elevations and the photo montages, particularly DA23 (see below).



Figure 11: Excerpt from JAWS ARCHITECTS, 3D Visualisation 02 Rev 1, Dwg 22013\_DA23, 9 May 2022)

It is considered that the proposal meets the Acceptable Solution.

#### A2/P2

Not applicable – the site does not adjoin a residential zone

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#### 22.4.3 Design

## Acceptable Solution

#### A:

Building design must comply with all of the following:

(a) provide the main pedestrian entrance to the building so that it is clearly visible from the road or publicly accessible areas on the site;

(b) for new building or alterations to an existing façade provide windows and door openings at ground floor level in the front façade no less than 40% of the surface area of the ground floor level facade;

(c) for new building or alterations to an existing facade ensure any single expanse of blank wall in the ground level front façade and facades facing other public spaces is not greater than 30% of the length of the facade;

(d) screen mechanical plant and miscellaneous equipment such as heat pumps, air conditioning units, switchboards, hot water units or similar from view from the street and other public spaces;

(e) incorporate roof-top service infrastructure, including service plants and lift structures, within the design of the roof;

(f) not include security shutters over windows or doors with a frontage to a street or public place;

## Performance Criteria

#### Р1

Building design must enhance the streetscape by satisfying all of the following:

(a) provide the main access to the building in a way that addresses the street or other public space boundary;

(b) provide windows in the front façade in a way that enhances the streetscape and provides for passive surveillance of public spaces;

(c) treat large expanses of blank wall in the front façade and facades facing other public space boundaries with architectural detail or public art so as to contribute positively to the streetscape and public space;

(d) ensure the visual impact of mechanical plant and miscellaneous equipment, such as heat pumps, air conditioning units, switchboards, hot water units or similar, is insignificant when viewed from the street;

(e) ensure roof-top service infrastructure, including service plants and lift structures, is screened so as to have insignificant visual impact:

(f) not provide awnings over the public footpath only if there is no benefit to the streetscape or pedestrian amenity or if not possible due to physical constraints;

(g) only provide shutters where essential for the security of the premises and other alternatives for ensuring security are not feasible;

(h) be consistent with any Desired Future Character Statements provided for the area.

#### Assessment of compliance

The proposal is assessed to meet the Acceptable Solution options as follows:



Figure 11: excerpt of frontage elevation (source: JAWS ARCHITECTS, Dwg 22013\_DA17, 9 May 2022)

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- (a) The main pedestrian entrance to both the residential apartments and the commercial tenancies are clearly visible from the Melville Street frontage.
- (b) Including the garage door access to the lower parking levels, the proportion of window and door openings on the front façade at ground floor level exceed 70%. If the garage door is excluded from this calculation the proportion is reduced to approximately 50%.
- (c) Not including the terrace plinth, the maximum length of blank wall in the ground level front façade is less than 10% of the length of the façade.
- (d) No plant or miscellaneous equipment is visible from the street or other public places.
- (e) As can be seen from the plans, most service/plant equipment is to be located in the basement levels. Those that are by necessity required to be at rooftop levels (eg lift structures) have been designed to be enclosed within a modest screened rooftop enclosure.
- (f) No security shutters are proposed over windows and doors.

#### A2/P2

Not applicable – the site does not face a residential zone.

#### A3/P3

Not applicable – there are no adjacent places in Melville Street listed in the Historic Heritage Code.

#### A4/P4

Not applicable - the site is not within the Active Frontage Overlay in Figure 22.1.

#### A5/P5

Not applicable - the site is not within the Active Frontage Overlay in Figure 22.1

#### 22.4.4 Passive Surveillance

Acceptable Solution	Performance Criteria		
A1	P1		
Building design must comply with all of the	Building design must provide for passive		
following:	surveillance of public spaces by satisfying all of		
(a) provide the main pedestrian entrance to the	the following:		
building so that it is clearly visible from the road	(a) provide the main entrance or entrances to a		
or publicly accessible areas on the site;	building so that they are clearly visible from		
(b) for new building or alterations to an existing	nearby buildings and public spaces;		
façade provide windows and door openings at	(b) locate windows to adequately overlook the		
ground floor level in the front façade no less than	street and adjoining public spaces;		
40% of the surface area of the ground floor level	(c) incorporate shop front windows and doors for		
façade;	ground floor shops and offices, so that		

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(c) for new buildings or alterations to an existing facade provide windows and door openings at ground floor level in the façade of any wall which faces a public space or a car park which amount to no less than 30 % of the surface area of the ground floor level facade;

(d) avoid creating entrapment spaces around the building site, such as concealed alcoves near public spaces:

(e) provide external lighting to illuminate car parking areas and pathways;

(f) provide well-lit public access at the ground floor level from any external car park.

pedestrians can see into the building and vice versa;

(d) locate external lighting to illuminate any entrapment spaces around the building site;

(e) provide external lighting to illuminate car parking areas and pathways;

(f) design and locate public access to provide high visibility for users and provide clear sight lines between the entrance and adjacent properties and public spaces;

(g) provide for sight lines to other buildings and public spaces.

#### Assessment of compliance

The proposal is assessed to meet the Acceptable Solution options as follows:

- (a) The main pedestrian entrance to both the residential apartments and the commercial tenancies are clearly visible from the Melville Street frontage.
- (b) Including the garage door access to the lower parking levels, the proportion of window and door openings on the front façade at ground floor level exceed 70%. If the garage door is excluded from this calculation the proportion is reduced to approximately 50%.
- (c) The proposal laneway linking Melville and Bathurst Streets will be accessible to the public. It will be immediately adjacent to the commercial tenancies, which will be fully glazed.
- (d) The proposed laneway linking Melville and Bathurst Streets will in the immediate scenario be a dead-end, until such time as connectivity is provided by the landowners of the Bathurst Street properties. Up to that time it will service the commercial tenancies at 90 Melville Street, provide outdoor seating if the ground floor is used in the future for a café/restaurant, and also provide public seating potentially integrated with artwork. The area will be well lit, however after hours will be required to be made secure by appropriate gating. This will ensure that entrapment space is provided.
- (e) It is proposed to ensure that the surrounding pedestrian areas at ground level are well lit to serve the tenants of the commercial spaces and residents accessing the floors above.
- (f) No external car parks are proposed.

## 22.4.5 Landscaping

It is noted that landscaping is not required, however the upper elements of the building will include garden/planting elements to contribute to the amenity of residents and for persons viewing the development 'in-the-round'.

Landscaping will also be provided in the proposed laneway to improve its amenity for pedestrians and persons accessing the commercial tenancies.

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#### 22.4.6 Outdoor Storage Areas

#### A1/P1

Not applicable - no outdoor storage areas are proposed.

#### 22.4.7 Fencing

#### A1/P1

No fencing is proposed, however the terrace plinth adjacent to the ground floor tenancy will have a maximum height of 1.2m. This meets the Acceptable Solution.

#### 22.4.8 Pedestrian Links

#### A1/P1

Not applicable – there is no existing network of malls, arcades or through-site links.

However, the proposal provides for such potential to occur through the proposed laneway. This is consistent with the underlying intent of the standard, and with Council policy.

#### 22.4.9 Residential and Visitor Accommodation Amenity

Acceptable Solution	Performance Criteria	
A1	P1	
Residential or visitor accommodation	Residential or visitor accommodation	
development must demonstrate that design	development must demonstrate that design	
elements are able to achieve internal noise levels	elements are able to achieve internal noise levels	
in accordance with relevant Australian	in accordance with relevant Australian	
Standards for acoustics control (AS3671:1989 –	Standards for acoustics control (including	
Road Traffic Noise Intrusion (Building Siting and	AS3671:1989 – Road Traffic Noise Intrusion	
Construction) and AS2107:2016 – Acoustics	(Building Siting and Construction) and	
(Recommended Design Sound Levels and	AS2107:2016 – Acoustics (Recommended Design	
Reverberation Times for Building Interiors)).	Sound Levels and Reverberation Times for	
	Building Interiors)), unless:	
	(a) alterations required to meet these standards	
	would negatively impact on historic cultural	
	heritage values of an existing building listed as a	
	place, or within a precinct, in the Historic	
	Heritage Code; or	
	(b) external alterations of an existing building	
	that are required to meet these standards would	
	negatively impact on the streetscape	

#### Assessment of compliance

Advice has been sought from Acoustic Engineers NVC (J.Pitt) who indicates as follows:

All the windows and external doors to apartments across the building forms will be double glazed in commercial grade aluminium suite, which is now standard practice and legal requirement for any new development. Double glazing incorporates two layers of glass with a void filled with gas to regulate heat loss and absorptions. These design elements sustainably reduce noise emissions and are considered sufficient to achieve internal noise level in accordance with relevant Australian Standards for acoustics control (AS3671:1989) and Road Traffic Noise Intrusion (Building Siting and Construction) and AS2107:2016

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Acoustics (Recommended Design Sound Levels and Reverberation Times for Building Interiors), for a mix-used development in the CBD.

The masonry construction of the external façade will have adequate sound isolation properties and deemed to be satisfactory to achieve the internal noise level.

The proposal will therefore meet the Acceptable Solution.

#### A2

Residential or serviced apartment components of a new building (including external elements such as a balcony, roof garden, terrace or deck) must:

(a) if the building includes any single aspect dwellings or single aspect serviced apartments, be set back at least 5m from all side or rear boundaries and other buildings on the same site (refer Figure 22.4 iii); or

(b) if the building includes no single aspect dwellings and no single aspect serviced apartments, have at least two elevations of the building, and all habitable room windows, that are either:

(i) set back at least 5m from a side or rear boundary or other building on the same site; or (ii) facing a frontage (refer Figure 22.4 iv).

#### P2

Residential or serviced apartment components of a new building must be designed to allow for reasonable access to daylight into habitable rooms and private open space, and reasonable opportunity for air circulation and natural ventilation, having regard to:

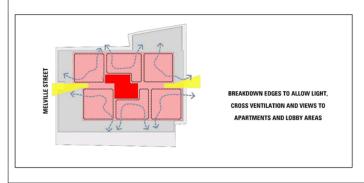
- (a) proximity to side and rear boundaries;
- (b) proximity to other buildings on the same site;(c) the height and bulk of other buildings on the same site;
- (d) the size of any internal courtyard or void;
- (e) the use of light wells or air shafts;
- (f) development potential on adjacent sites, considering the zones and codes that apply to those sites; and
- (g) any assessment by a suitably qualified person

#### Assessment of compliance

The proposed building has 2 single aspect dwellings on each of Levels 5, 6 and 7 (ie 6 single aspect dwellings) and is not set back a minimum 5m from the northeastern (side) boundary or the southeastern (rear) boundary. The proposal must therefore be assessed under the alternative performance criteria.

The project architects provide the following advice in respect of the relevant issues under P2:

The central core element assists in the break-down of the building form, with a recessed junction between apartments to allow for light penetration into the shared circulation spaces. This splitting of the building components here adds to the variation of light and contrast on the elevations. Refer diagram 06 (below).

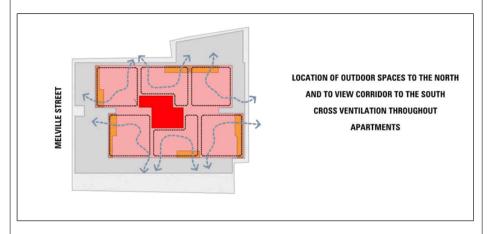


90 Melville Street, Hobart

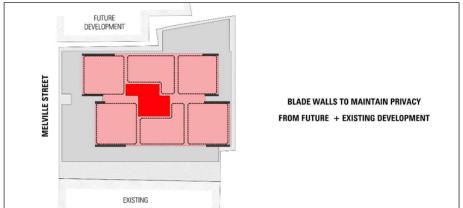
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Balconies and terraces for the apartments are orientated to maximise northern aspect where possible and take advantage of the view corridor east to the Queens Domain, west to kunanyi/ Mt Wellington and to the south to city scape views through to Sandy Bay Point and the River Derwent. In conjunction with windows, these private open areas allow for maximised cross ventilation opportunities. Refer diagram 07 (below).



Patterned blade walls to the east and west boundaries of the buildings provide for light and shadow along the elevations and break down the scale of the facade along these edges. These blade walls also allow for privacy to the apartments from future and existing development. Refer Diagram 8 (below)



The proposed development is therefore considered to adequately address the criteria under P2.

#### A3

Every habitable room in a dwelling:

- (a) must have at least one external window;(b) must have at least one external window
- visible from all points of the room if a living room;

#### РЗ

Every habitable room in a dwelling must have reasonable access to natural daylight and ventilation from an external window, having regard to:

(a) the orientation of the room;

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(c) where the only external window in the room is located within a recess, that recess must be:

- i) a minimum width of 1.2m; and
- (ii) (ii) a maximum depth of 1.5 times the width, measured from the external surface of the external window; and

(d) must have a room depth from an external window of:

- (i) not more than 2.5 times the ceiling height; or
- (ii) if an open plan layout (where the living, dining and kitchen are combined), not more than 8m.

- (b) the size and location of windows;
- (c) the size of the room;
- (d) the ceiling height;
- (e) the opportunity for cross-ventilation;
- (f) the proposed use of the room;
- (g) overshadowing of the site from existing development;
- (h) existing site constraints; and
- (i) any assessment by a suitably qualified person.

#### Assessment of compliance

The proposal is assessed to meet the Acceptable Solution for every habitable room.

#### Δ

Private open space must be provided for each dwelling or serviced apartment on a site.

#### P4

Fewer than all of the dwellings or serviced apartments on a site may be provided with private open space if:

(a) communal open space is provided on site that exceeds size requirements under 22.4.9 A6 by 10m2 for each dwelling unit or serviced apartment without private open space, and is of high quality in terms of location, access to sunlight, outlook, facilities, landscaping and accessibility;

(b) environmental conditions such as high winds or high levels of noise would significantly diminish the amenity of the private open space and this is unable to be mitigated by screening that does not unreasonably reduce access to daylight, as demonstrated by a suitably qualified person; or (c) the dwelling or serviced apartment is in an existing building that cannot reasonably

existing building that cannot reasonably accommodate private open space due to site constraints, or impacts on historic cultural heritage values of a place or precinct listed in the Historic Heritage Code.

#### Assessment of compliance

Each dwelling is provided with a private balcony. The proposal is assessed as meeting the Acceptable Solution.

#### A5

Each dwelling or serviced apartment on a site must have private open space that:

- (a) has an area not less than:
  - (i) 8m2 for 1 bedroom dwellings or serviced apartments;
  - (ii) 10m2 for 2 bedroom dwellings or serviced apartments;

#### P5

A dwelling or serviced apartment must provide reasonable amenity and be capable of meeting the projected outdoor recreation requirements of occupants, having regard to:

(a) the size and minimum dimensions of the space, excluding space occupied by plant and equipment such as outdoor components of an air conditioning unit;

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- (iii) 12m2 for 3 or more bedroom dwellings or serviced apartments;
- (b) does not include plant and equipment such as outdoor components of an air conditioning unit:
- (c) unless drying facilities are provided elsewhere on the site, include a clothes drying area of at least 2m2 in addition to the minimum area in (a) above, that may be in a separate location, and is screened from public view;
- (d) has a minimum horizontal dimension of 2m, or 1.5m for a 1 bedroom dwelling or serviced apartment;
- (e) where above ground floor level, not be located within 5m of private open space of any other dwelling or serviced apartment in another building (excluding between conjoined terracestyle dwellings or serviced apartments); and
- (f) is screened visually and acoustically from mechanical plant and equipment, service structures and lift motor rooms.

- (b) the amount of space available for furniture or plantings;
- (c) the potential for significant noise intrusion;
- (d) proximity and overlooking to the private open space of existing adjacent residential and serviced apartment developments;
- (e) screening where necessary for privacy that does not unreasonably restrict access to daylight; (f) screening where necessary for noise and wind protection that does not unreasonably restrict access to daylight;
- (g) screening from public view for clothes drying areas: and
- (h) any advice from a suitably qualified person.

#### Assessment of compliance

The proposal is assessed to meet the Acceptable Solution noting that every apartment will have clothes dryers located within the laundry.

#### A6

Sites with 10 or more dwellings or serviced apartments must provide communal open space on the site that:

- (a) is at least 70m2, with an additional 2m2 for every dwelling or serviced apartment over 10;(b) if provided in multiple locations, at least one
- single area must be a minimum of 40m2; (c) has a minimum horizontal dimension of 3m; (d) includes at least 20% of the total area for plantings (including food growing), being deep soil planting if at ground level;
- (e) is directly accessible from common entries and pathways;
- (f) screens any communal clothes drying facilities from public view;
- (g) may be above ground floor level, including rooftops:
- (h) is screened visually and acoustically from mechanical plant and equipment, service structures and lift motor rooms;
- (i) does not include vehicle driveways, manoeuvring or hardstand areas; and

#### Р6

Sites with 10 or more dwellings or serviced apartments must provide communal open space on the site that provides reasonable amenity and outdoor recreation opportunities for occupants, having regard to:

- (a) the area and dimensions of the space;
- (b) the total number of dwellings or serviced apartments on the site;
- (c) the accessibility of the space;
- (d) the flexibility of the space and opportunities for various forms of recreation;
- (e) the availability and location of common facilities within the space;
- (f) landscaping;
- (g) the provision of gardens, trees and plantings (including food gardens) appropriate in area to the size of the communal open space;
- (h) accessibility to daylight, taking into account the development potential of adjacent sites;
- (i) the outlook from the space;
- (j) the level of noise intrusion from external noise sources; and

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(j) includes no more than 20% of the total area located between 30 degrees East of South and 30 degrees West of South of:

(i) a building on the site with a height more than 3m; or

(ii) a side or rear boundary within 5m.

(k) any advice from a suitably qualified person; unless:

(i) the dwellings or serviced apartments are located in an existing building where communal open space cannot be reasonably achieved due to site constraints, or impacts on historic cultural heritage values of a place or precinct listed in the Historic Heritage Code; or (ii) open space, accessible by the public, that is of high quality in terms of location access to sunlight, outlook, facilities, landscaping and accessibility and that can adequately accommodate the needs of occupants is provided on the site; or

(iii) private open space is provided for all dwellings or serviced apartments on the site, provides a reasonable level of amenity in terms of access to sunlight and outlook, and sufficiently caters for flexible outdoor recreation needs including relaxation, entertainment, planting, outdoor dining and children's play.

#### Assessment of compliance

The proposal is assessed to meet the Acceptable Solution.

#### Α7

Each multiple dwelling must be provided with a dedicated and secure storage space of no less than 6m3, located externally to the dwelling.

Each multiple dwelling must be provided with adequate storage space.

#### Assessment of compliance

The Acceptable Solution requires 132m3 of storage. 173.85m3 is provided on Basement Levels 1 and 2, however it has not been dedicated to individual dwellings. Technically therefore, the proposal relies on the alternative Performance Criterion P7.

There is clearly ample storage space available, and it only requires allocation by the proponent to meet the 6m3/dwelling Acceptable Solution. This is a matter that could be addressed by an appropriate condition on the permit.

Both the Acceptable Solution and the alternative Performance Criterion are capable of being met.

### 22.4.10 Waste Storage and Collection

#### **Acceptable Solutions** Performance Criteria Bulk waste bins that are commercially serviced Bulk waste bins that are commercially serviced must be provided for sites: must be provided unless kerbside collection (a) with more than one commercial tenancy; would not unreasonably compromise the (b) with one commercial tenancy that is greater amenity of the surrounding area or the flow and than 100m2; safety of vehicles, cyclists and pedestrians, and: (c) with more than 4 dwellings or visitor (a) the frontage of the site has a width equivalent to 5m for each dwelling, accommodation units (or 3 if a mixed use site); and accommodation unit or tenancy with individual bins; or

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(d) with more than 2 dwellings or visitor accommodation units (or 1 if a mixed use site) if fronting a pedestrian priority street (Figure E6.7.12); unless:

(i) there are no more than 4 individual bins for kerbside collection at any one time per commercial site or any site fronting a pedestrian priority street (Figure E6.7.12);

(ii) There are no more than 8 individual bins for kerbside collection at any one time per residential or mixed use site not fronting a pedestrian priority street (Figure E6.7.12); or (iii) Individual bins are commercially serviced without being placed on the kerbside for collection.

(b) bulk waste bin storage and collection cannot reasonably be provided on site due to:

(i) impacts on historic cultural heritage values of a place or precinct listed in the Historic Heritage Code; or

(ii) site constraints, if for an existing building.

#### Assessment of compliance

The proposal does not meet the Acceptable Solution (b) for the commercial tenancy. It therefore relies on the alternative Performance Criteria under P1.

Council officers have advised that Council will not be able to service the proposed development owing to storage of bins on-site. Private collection is therefore proposed.

The preferred contractor (Veolia) has advised that the grade of the access ramp from Melville Street to the nearest available bin storage area on the premises will not allow a commercial waste truck to reverse safely on-site. Accordingly, a loading zone in front of the site is currently being applied for by the applicant. The commercial waste truck will then be able to prop on Melville St to collect waste.

All aspects of waste management are addressed in a Waste Management Plan (Low Impact Development Consulting, 1 May 2022) that accompanies the application for planning approval. Subject to approval of a loading zone, the proposed waste storage and collection is assessed as meeting the Performance Criteria P1.

#### A2

An on-site storage area, with an impervious surface (unless for compostables), must be provided for bins that:

(a) if for separate bins per dwelling, visitor accommodation or commercial tenancy:

 (i) provides an area for the exclusive use of each dwelling, accommodation unit or tenancy, and is not located between the building and a frontage;

(ii) is set back not less than 4.5m from a frontage unless within a fully enclosed building;

(iii) is not less than 5.5m horizontally from any dwelling or accommodation unit unless for bins associated with that dwelling, or within a fully enclosed building; and

(iv) is screened from the frontage and any dwelling or accommodation unit by a wall to a height not less than 1.2m above the finished surface level of the storage area.

#### P2

A storage area for waste and recycling bins must be provided that is:

(a) capable of storing the number of bins required for the site;

(b) of sufficient size to enable convenient and safe access and manoeuvrability for occupants, and waste collection vehicles where relevant:

(c) in a location on-site that is conveniently and safely accessible to occupants, without compromising the amenity and flow of public spaces:

(d) screened from view from public spaces and dwellings or accommodation units;

and if the storage area is for common use, separated from dwellings or units on the site to minimise impacts caused by odours and noise.

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#### (b) If for bulk waste bins:

- (i) is located on common property;
- (ii) includes dedicated areas for storage and management of recycling and compostables;
- (iii) is not less than 5.5m from any dwelling or accommodation unit unless within a fully enclosed building;
- (iv) is set back not less than 4.5m from a frontage if fronting a pedestrian priority street (Figure E6.7.12);
- (v) is screened from any public road, dwelling or accommodation unit by a wall to a height not less than 1.8m above the finished surface level of the storage area; (vi) is accessible to each dwelling, accommodation unit or tenancy without the requirement to travel off-site; and

where the development is mixed use, have separate storage spaces for commercial and residential bins with separate access to each.

#### Assessment of compliance

The proposed development is assessed as meeting the Acceptable Solution.

#### Δ:

Bulk waste bins must be collected on site by private commercial vehicles, and access to storage areas must:

- (a) in terms of the location, sight distance, geometry and gradient of an access, as well as off-street parking, manoeuvring and service area, be designed and constructed to comply with AS2890.2:2018: Parking Facilities Off-Street Commercial Vehicle Facilities;
- (b) ensure the vehicle is located entirely within the site when collecting bins; and
- (c) include a dedicated pedestrian walkway, alongside or independent of vehicle access ways.

#### ΡЗ

A waste collection plan demonstrates the arrangements for collecting waste do not compromise the safety, amenity and convenience of surrounding occupants, vehicular traffic, cyclists, pedestrians and other road and footpath users, having regard to:

- (a) the number of bins;
- (b) the method of collection;
- (c) the time of day of collection;
- (d) the frequency of collection;
- (e) access for vehicles to bin storage areas, including consideration of gradient, site lines, manoeuvring, direction of vehicle movement and pedestrian access;
- (f) distance from vehicle stopping point to bins if not collected on site:
- (g) the traffic volume, geometry and gradient of the street; and the volume of pedestrians using the street and whether it is a pedestrian priority street (Figure E6.7.12).

#### Assessment of compliance

The proposed development does not meet the Acceptable Solution and therefore relies upon the alternative Performance Criteria under P3.

The preferred contractor (Veolia) has advised that the grade of access ramp from Melville Street to the nearest available bin storage area on the premises will not allow a commercial waste truck to reverse safely on-site. Accordingly, a loading zone in front of the site is currently being applied for

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by the applicant. The commercial waste truck will then be able to prop on Melville St to collect waste.

All aspects of waste management are addressed in a Waste Management Plan (Low Impact Development Consulting, 1 May 2022) that accompanies the application for planning approval. Subject to approval of a loading zone, the proposed waste storage and collection is assessed as meeting the Performance Criteria P3.

## 7. Codes

The following Codes remain relevant to both the proposed development under the Interim Planning Scheme:

## 7.1 Potentially Contaminated Land Code

A site assessment has been undertaken by GEO Environmental Solutions, including an assessment under the Code. The respective report forms part of the documentation accompanying this application.

## 7.2 Road & Railway Asset Code

A detailed Traffic Impact Assessment has been prepared by Midson Traffic and forms part of the documentation supporting this application

The TIA has been prepared to meet the requirements of the E5.0 Road & Railway Asset Code.

## 7.3 Parking & Access Code

The Code applies to all use and development. The application is supported by a TIA prepared by Midson Traffic and provides an assessment of the proposed use and development against the provisions of the Code.

## 7.4 Stormwater Management Code

Under clause E7.7.1 Stormwater drainage and disposal the Acceptable Solution A1 requires:

Stormwater from new impervious surfaces must be disposed of by gravity to public stormwater infrastructure.

Comment: the proposal will comply with the Acceptable Solution. All stormwater will be disposed of by gravity to Council's stormwater infrastructure.

The proposed development will not increase the area of the site covered by impervious surfaces given that the site is already fully developed with paving and a building. The provision of landscaping, roof gardens, means that overall, stormwater retention will be increased.

Further detailed consideration is provided in the ADG Concept Services Assessment which accompanies this application.

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## 7.5 Historic Heritage Code

The Code does not apply because the subject site is not identified as being, or within, a Heritage Place, Heritage Precinct, Cultural Landscape Precinct or Place of Archaeological Potential. Notwithstanding this, a precautionary approach has been initiated in respect of any the potential for any archaeological discovery. Accordingly, an archaeological sensitivity assessment accompanies this application.

## 7.6 Signs Code

Signage is not proposed as part of this application. Any future requirements for signage will be the subject of separate application for planning permission in accordance with the requirements of the planning scheme in force at the time.

email: neilsh@bigpond.com

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## 8. Conclusion

The proposal is for demolition, and construction of a mixed use residential and commercial development at 90 Melville Street.

The proposal meets all the relevant provisions under the *Hobart Interim Planning Scheme 2015* and approval is therefore supported.

The proposed design has been informed not just by an analysis of the site and immediate surrounds, but also of its context within the Hobart CBD. To that end the proponent and the project team has based the current proposal on advice previously taken from Council officers and other eminent experts in their chosen fields, including Leigh Woolley in respect of the relationship of the proposed development with the landform of the city, and the importance of transition to and from the CBD Core.

The result is a development that meets the intent of the Amenity Building Envelope, but is lower in height, smaller in bulk and detailed in character. In terms of design and amenity and it will make a positive contribution to the streetscape and city while also contributing to the availability and choice of inner-city housing in Hobart.

The development achieves the following:

- · Will add to the number of residents living in the city;
- Will provide for a mixed-use development, specifically high quality office space nominally to be utilised by the University of Tasmania;
- By activating the ground floor level with full height glazing, public space, and potential public
  artwork and through-block linkage, the development will be visually interesting and a
  welcoming space for the public to enjoy, and will further activate that part of the CBD;
- The development provides private outdoor spaces for its residents in the form of balcony gardens, and a more substantial communal rooftop garden and terrace.
- Resident oversight and related resident activity, in combination with light spill from the
  ground floor commercial tenancy will assist in providing public security and safety, for
  residents and visitors and members of the general public using the adjoining streets and public
  spaces:
- The site has easy access to existing public spaces and activities, such as markets (Bathurst Street Farmers Market, Salamanca Market, Franklin Square Market), central retail opportunities, and social, cultural, educational and other services located in the vicinity.

The proposal is a significant redevelopment of an underutilised inner-city site.

Item No. 7.1.1

# Agenda (Open Portion) City Planning Committee Meeting - 19/9/2022

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ATTACHMENT B

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Its measured and nuanced approach sets it apart in terms of design quality from many other developments in the CBD, and it will provide an important and positive addition to the character of the townscape and streetscape of the Hobart CBD.

email: neilsh@bigpond.com



Planning and Development Consultants

General Manager City of Hobart GPO Box 503 HOBART TAS 7001 21 June 2022

email: neilsh@bigpond.com

Dear Sir/Madam,

## RE: PLN-22-321 - 90 MELVILLE STREET, HOBART – MIXED USE RESIDENTIAL AND COMMERCIAL DEVELOPMENT – REVISIONS FOLLOWING MEETING WITH UDAP

Thank you for allowing us to meet with Council's Urban Design Advisory Panel on 14 June.

Following the meeting the Panel's comments and suggestions were considered resulting in the following amendments:

- A step has been introduced to the podium façade resulting in a clearer impression of stepping of the podium down Melville Street.
- The laneway has been widened next to the sub-station (ie by shaving a bit off the adjacent commercial façade) to improve the view and amenity through to the rear boundary/future Bathurst street connection. This area will also be targeted for art works that are based on lighting to create a bright well-lit amenity.
- The front boundary garden bed /wall has been lowered to improve street activation/visibility of the ground floor from Melville.
- Roller door height has been reduced to improve streetscape amenity and bulk of the building at street level.
- Detail is provided of decoration of blade walls/side elevations above the podium to provide relief and interest (particularly the western elevation). Specifically, more detail is provided on the precast walls noted as CO1, on western and eastern façades.

On balance it was decided that no change to the area of ballast outside apartments 501 and 506 would be pursued in terms of private open space because of amenity/privacy considerations and concern for the potential adding of bulk to building above the podium.

The following link provides access to the revised plans:

#### https://jawsarchitects-

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The revised plans have been lodged via the Council Development Portal.

The revisions are minor and do not alter the overall concept or the proposed use and development. Notably they do not affect the reasons for the request for the General Manager's consent to lodge the application.

mobile: 0417 25 0232

PO Box 273, Sandy Bay TAS 7006

Please let me know at your earliest convenience whether any further details are required.

Yours faithfully,

NEIL SHEPHARD

Obo Giameos Developments Pty Ltd

Wil Shephard

mobile: 0417 25 0232

email: neilsh@bigpond.com

May 2022

#### **DESIGN STATEMENT - 90 MELVILLE STREET HOBART**

The proposal for 90 Melville Street Hobart is a mixed use development which sits within the CBD fringe. The proposal comprises of 3 levels of basement car-parking, ground level Entry Lobbies and a single Commercial Tenancy. Above this, levels 1-4 contain offices and levels 5-8 contain 22 private residential apartments. The mix of apartments is eighteen 2 Bedroom and four 3 Bedroom apartments.

The massing strategy works to maximise efficiency of office floor plates whilst balancing access to natural light and depth of floors to the central core. The residential floors are set further back to neighbouring properties to provide enhanced amenity for residential apartments. The form is broken down into an Office podium with Residential Apartments sitting above. The service core is located centrally to provide efficient access to all apartments and help divide the forms. The façade treatment of this design component assists to create a unifying element that ties all the components together. Refer Diagrams 1

# ARCHITECTSM

DIRECTORS

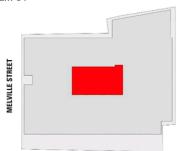
NEAL MACKINTOSH SCOTT VERDOUW

**ASSOCIATES** 

FIONA GRAHAM CATHERINE WILLIAMS HANZ LEE

> CONSULTANT DAVID BUTTON

#### Diagram 01



SITE COVERAGE AND CORE LOCATION

## JACOB ALLOM WADE P/L

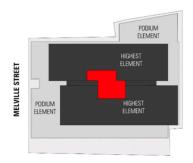
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36 Brisbane Street Launceston, Tasmania AUSTRALIA 7250

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## Diagram 02



CREATION OF INDIVIDUAL FORMS TO BREAKDOWN SCALE

#### Diagram 03

## EXPERIENCE CREATIVE QUALITY





The height of the development has been a continuous process of analysis and contextual review. The same owners prepared and received approval for a predominantly residential scheme containing 55 Apartments in 2019. The previous scheme had a maximum Roof Height RL of 57,200. A similar maximum Roof Height of RL 57,700 has been maintained for this new application ensuring the development sits comfortable within the allowable amenity building envelop within the planning scheme

This new Development Application is more community orientated than the previous application adopting a mix of uses. The delivery of new office space complements the University of Tasmania's master plan for its relocation into the CBD. The expansion of the underground car park replaces the displaced on grade commercial carparks that exist now and delivers that same number plus car spaces to meet the needs of the mixed use development proposed.

The previous scheme's analysis of the transition of the building and its heights was the subject of extensive investigation both cross sectionally through the Council's K2vi model and through independent consultation with urban designer and architect, Leigh Woolley. The development sits on the edge of the Inner Core, in the Hill Face Zone, as referenced in *Building Height Standards Review Project June 2018*.

This current proposal relies on the prior methodology and analysis, sitting comfortably within its context as a transitional element without being individually prominent (refer 3D visualisation 3 in Architectural DA set).

The Office podium building facing Melville Street sits below the building envelope of 20m from natural ground level (NGL), whilst the taller buildings beyond the podium building sit at approximately 30m above NGL. The podium design including Large picture windows frame views into and out of the internal spaces, creating visual connections between activities within the building and its context.



The service equipment and lift over-runs sit centrally and are deeply set in from the perimeter of the residential building mass to reduce any additional perceived height

The ground plane is intended to be an activated space with commercial and residential Lobbies creating a vibrant public space along Melville Street. Floor-to-ceiling glazed windows are designed to maximise visibility and surveillance of the public environment.

The potential also exists for a future linkage to Bathurst Street via a laneway connection. Refer to Diagram 09. Brick is used predominantly for this area to relate to the existing K+D Warehouse, showing a relationship to the previous history of the site and to add tactility and a human scale to the areas where people are likely to gather or congregate.

A public art initiative is also proposed by the Developer in this location.

It is intended with this design that the public art component be encompassed within the publicly accessible areas of the development, including the forecourt and potential laneway along the west boundary of the site. The potential exists for this artwork to include colour and visual interest in defining a canopy to this transition space, lighting installations to activate the space at night, interactive artwork or artwork that integrates with the design of the urban seating and planting within this area. Any of these options will provide colour and movement visible and accessible from Melville Street. Refer Diagram 04 + 05.

Diagram 04

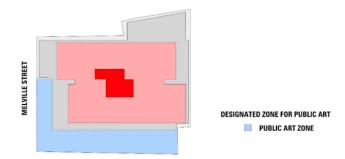
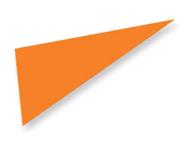


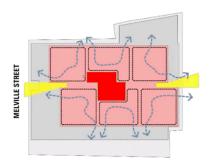
Diagram 05 - Examples of Public Art





The central core element assists in the break-down of the building form, with a recessed junction between apartments to allow for light penetration into the shared circulation spaces. This splitting of the building components here adds to the variation of light and contrast on the elevations. Refer diagram 06.

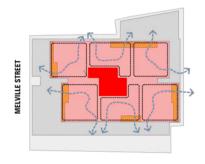
#### Diagram 06:



BREAKDOWN EDGES TO ALLOW LIGHT, CROSS VENTILATION AND VIEWS TO APARTMENTS AND LOBBY AREAS

Balconies and terraces for the apartments are orientated to maximise northern aspect where possible and take advantage of the view corridor east to the Queens Domain, west to kunanyi/ Mt Wellington and to the south to city scape views through to Sandy Bay Point and the River Derwent. In conjunction with windows, these private open areas allow for maximised cross ventilation opportunities. Refer diagram 07.

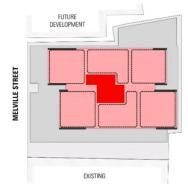
#### Diagram 07:



LOCATION OF OUTDOOR SPACES TO THE NORTH
AND TO VIEW CORRIDOR TO THE SOUTH
CROSS VENTILATION THROUGHOUT
APARTMENTS

Patterned blade walls to the east and west boundaries of the buildings provide for light and shadow along the elevations and break down the scale of the facade along these edges. These blade walls also allow for privacy to the apartments from future and existing development. Refer Diagram 8.

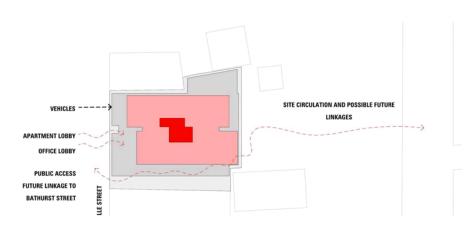
Diagram 08:



BLADE WALLS TO MAINTAIN PRIVACY FROM FUTURE + EXISTING DEVELOPMENT

A vehicle entry point for residents and commercial vehicles to the north east corner of the site allows access to the basement parking areas. Pedestrian access to both the offices and the apartments is located centrally on the block through an entry atrium and access to a commercial tenancy is through the forecourt at ground level. Ample bike storage has been located off the residents lobby for apartment owners whilst additional bike parking has been provided in the laneway and secure areas within the underground car park for the office. In addition end of trip facilities will be provided for off the main entry into the office on Ground level. Refer Diagram 09.

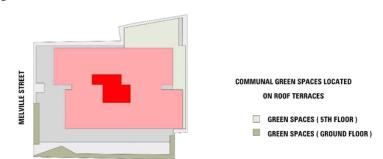
#### Diagram 09:

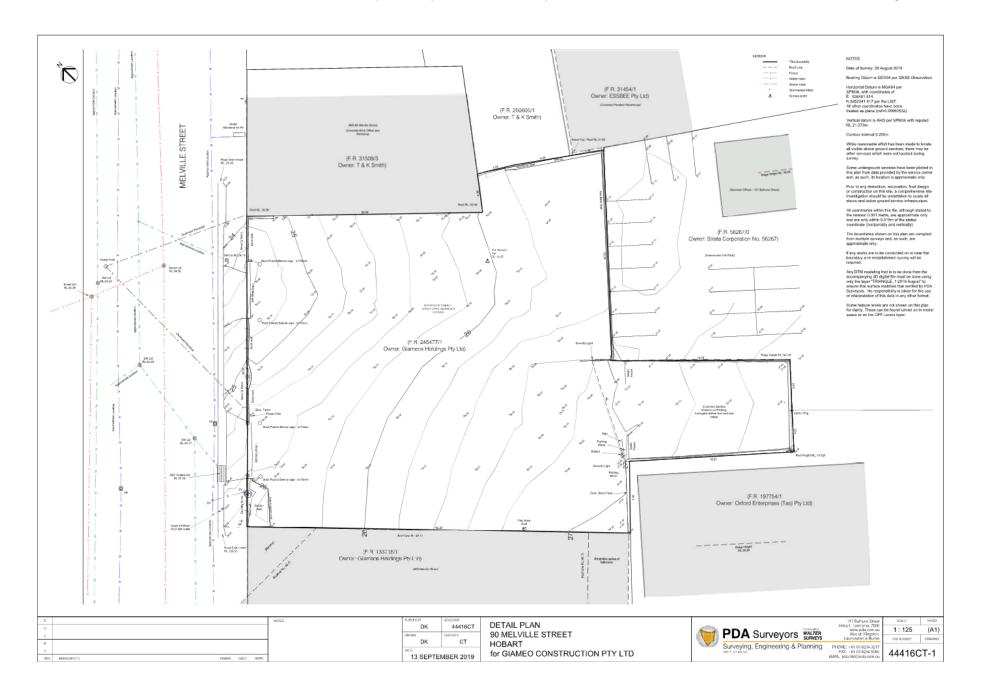


A shared roof terrace has been provided at Level 5. The location has a northern aspect and

expansive outlook back over the city to encourage and promote a sense of communal amenity for the residential apartments. Refer Diagram 10.

Diagram 10:





FLY-THROUGH LINK

https://youtu.be/3XXcBFr8egQ



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DA00	COVER PAGE		
DA01	SITE PLAN		
DA02	BASEMENT 2 FLOOR PLAN		
DA03	BASEMENT 1 FLCOR PLAN		
DA04	LOWER GROUND FLOOR PLAN		
DA05	GROUND FLOOR PLAN		
DA03	LEVEL 1 FLOOR FLAN		
DA07	LEVEL 2 FLOOR PLAN		
DA03	LEVEL 3 FLOOR PLAN		
DA09	LEVEL 4 FLOOR PLAN		
DA10	LEVEL 5 FLOOR FLAN		
DA11	LEVEL 6 FLOOR PLAN		
DA12	LEVEL 7 FLOOR PLAN		
DA13	LEVEL 8 FLOOR FLAN		
DA14	ROOF FLAN		
DA15	SECTION A		
DA16	SECTION B		
DA17	NORTH-WEST ELEVATION 3D		
DA13	NORTH EAST ELEVATION 3D		
DA19	SOUTH-WEST ELEVATION 3D		
DA20	SOUTH EAST ELEVATION 3D		
DA21	MELVILLE STREET ELEVATION		
DA22	3D VISUALISATIONS 01		
DA23	3D VISUALISATIONS 02		
DA24	3D VISUALISATIONS 03		
DA25	3D VISUALISATIONS 04		
DA26	SHAEOW DIAGRAM 01		
DA27	SHADOW DIAGRAM 02		
DA23	SHADOW DIAGRAM 03		
DA29	SHADOW DIAGRAM 04		
A30	MATERIAL & FINISHES FALETTE		

#### EXECUTIVE SUMMARY

FLOOR LEVEL	CAR PARKS	APARTMENTS	COMMERCIAL/RETAIL
BASEMENT 2	40		(2)
BASEMENT 1	40		
LOWER GROUND	28	24	2
GROUND	127	1-	4
LEVE_1		2	1
LEVE 2	52	©	1
LEVE_S			1
LEVEL 4	- L	92	1
LEVEL 5	2	6	7
LEVE_6	2.5	6	
LEVE_7		6	2
LEVE_8		4	*
TOTAL	108	22	5





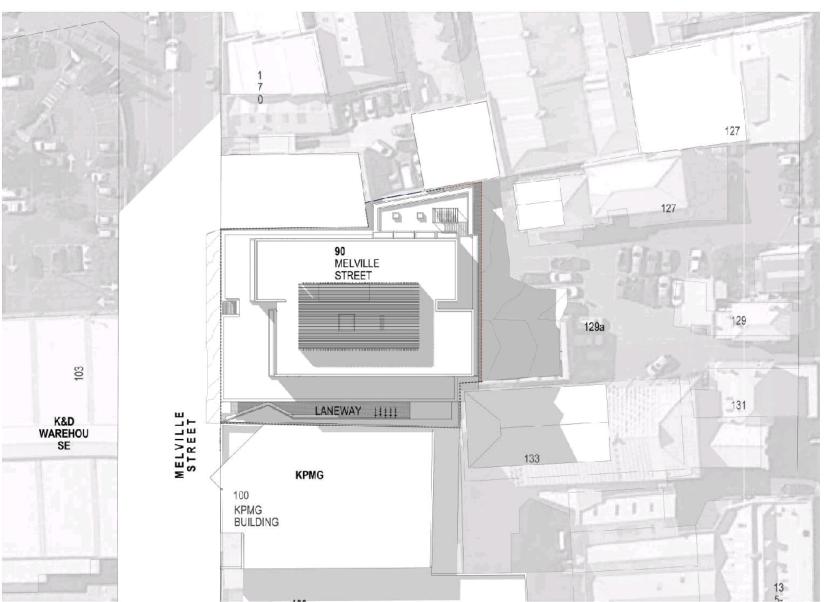
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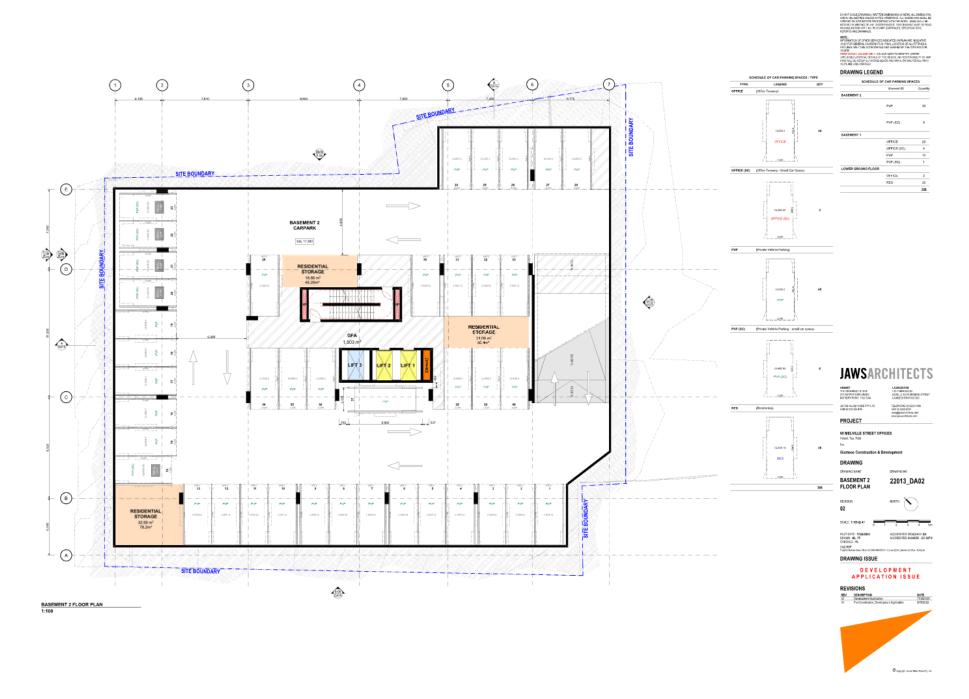


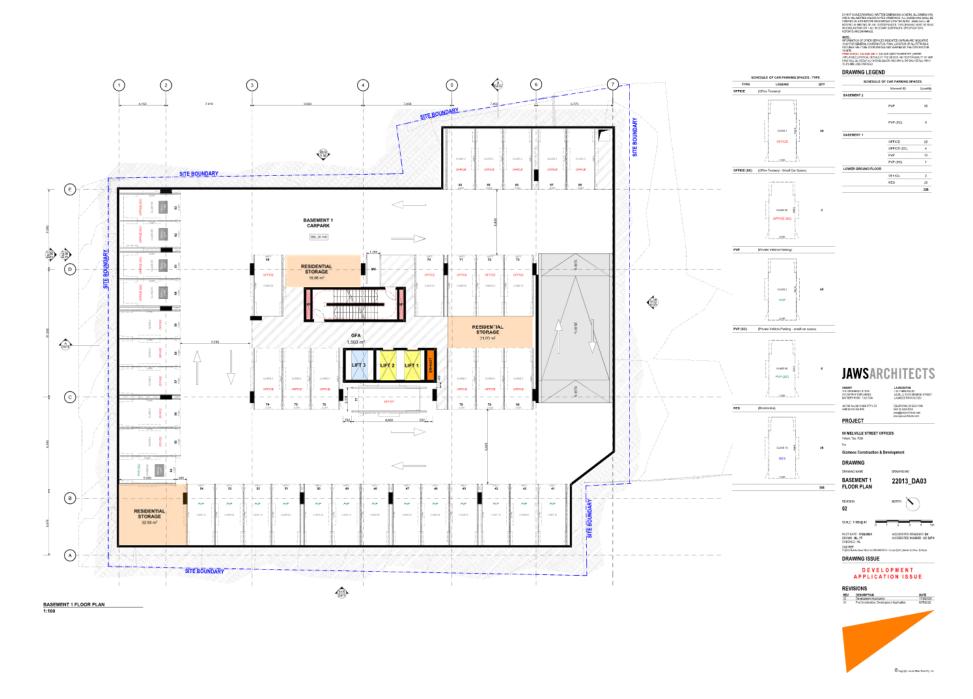
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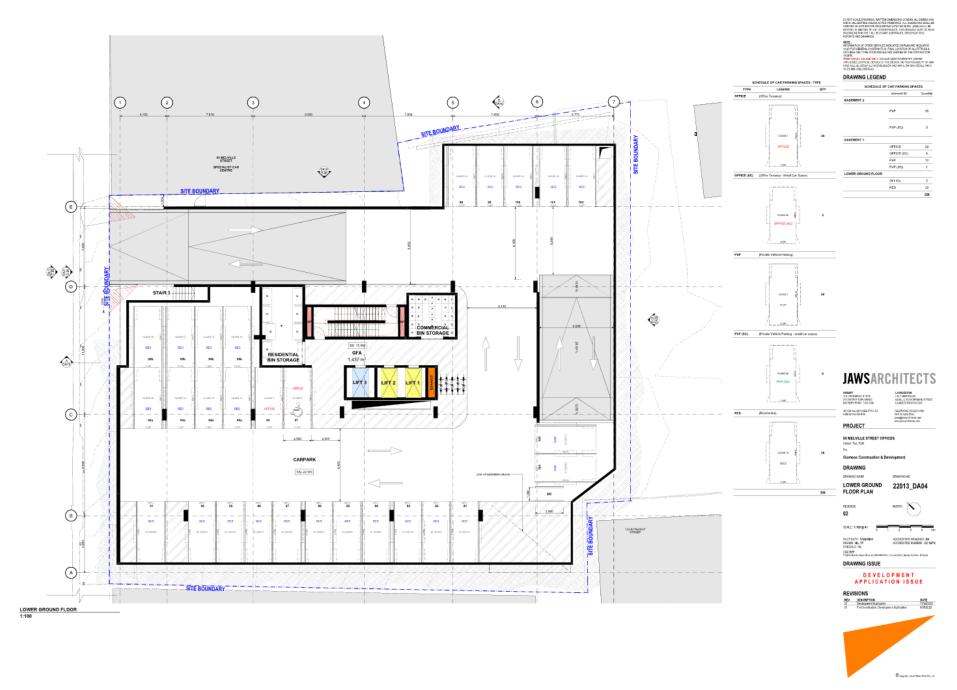
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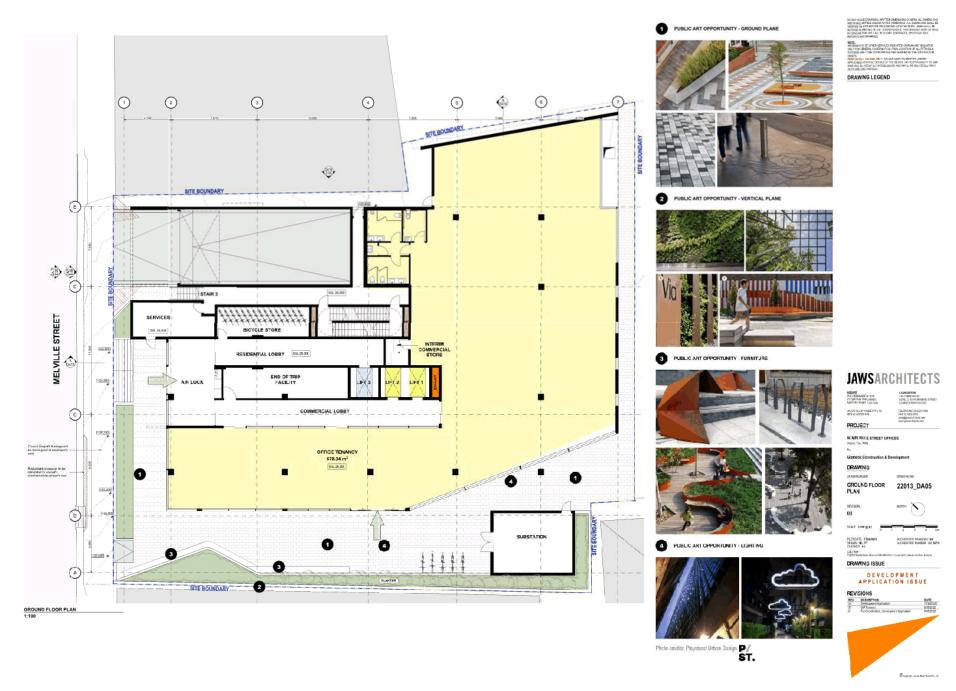
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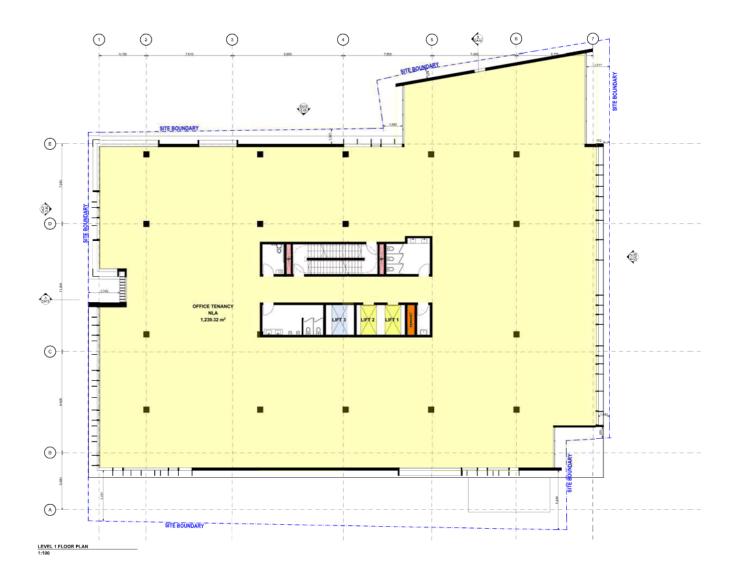


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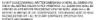
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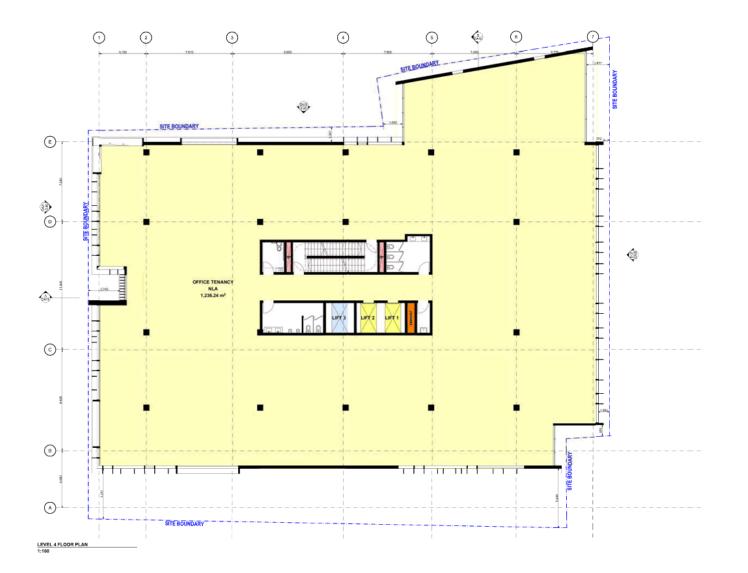
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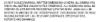


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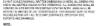


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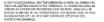


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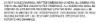


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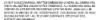
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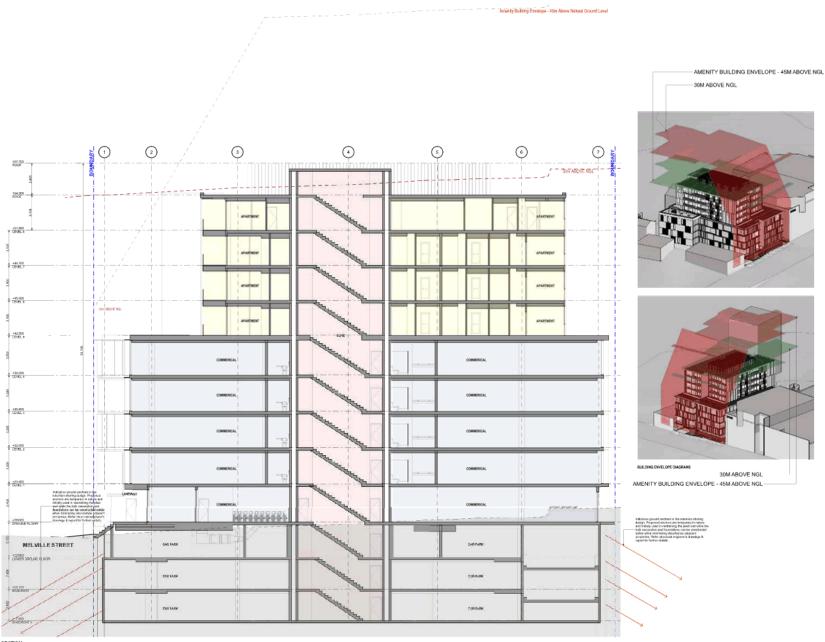
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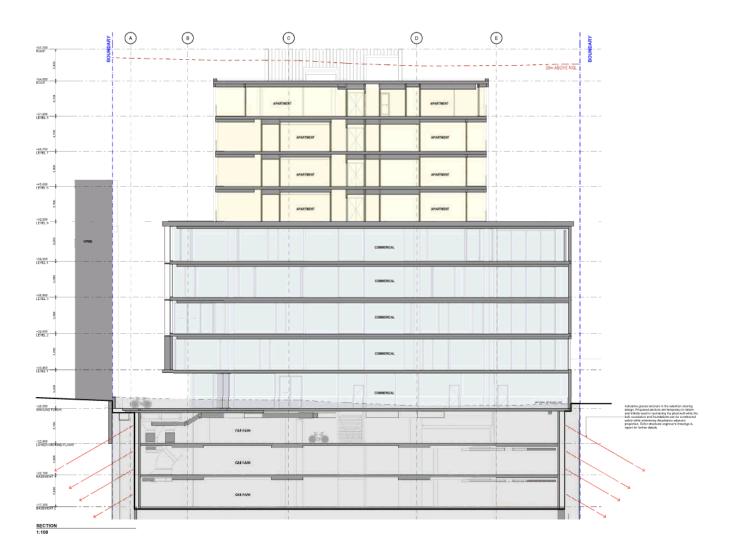
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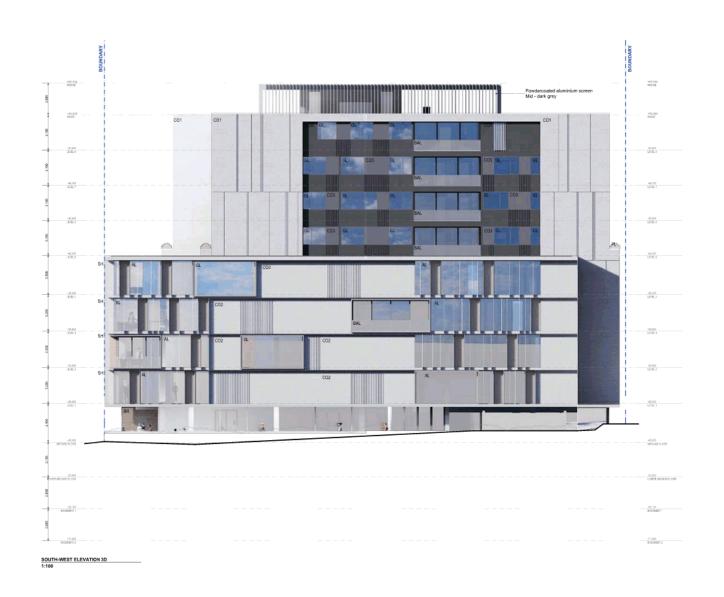




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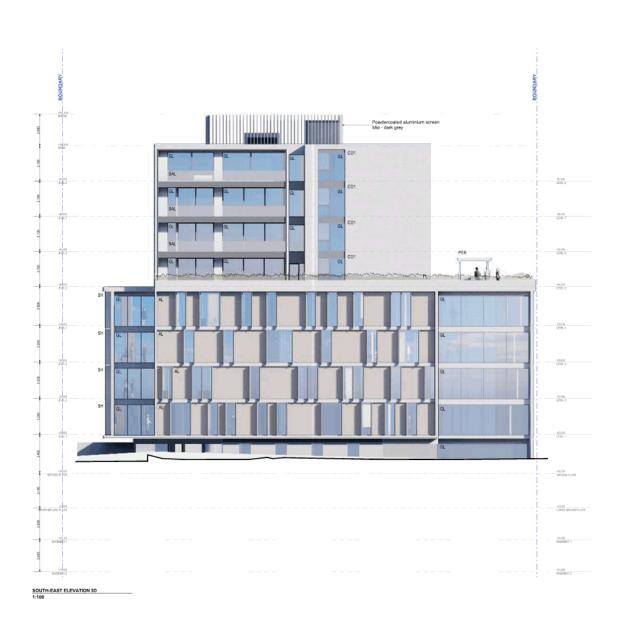




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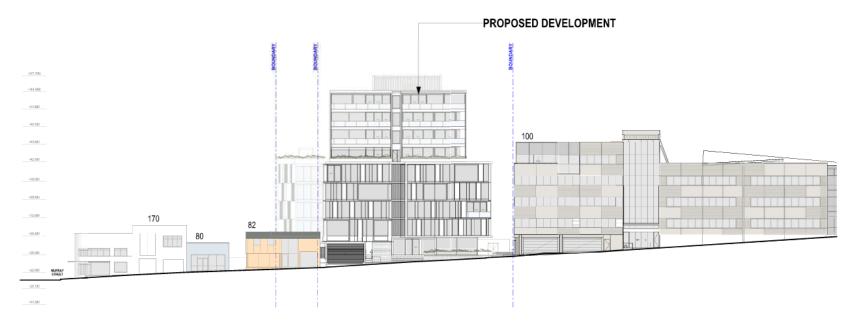


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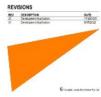
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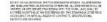
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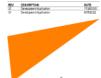
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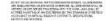
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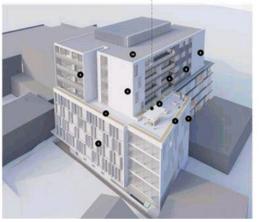


























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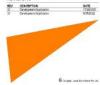
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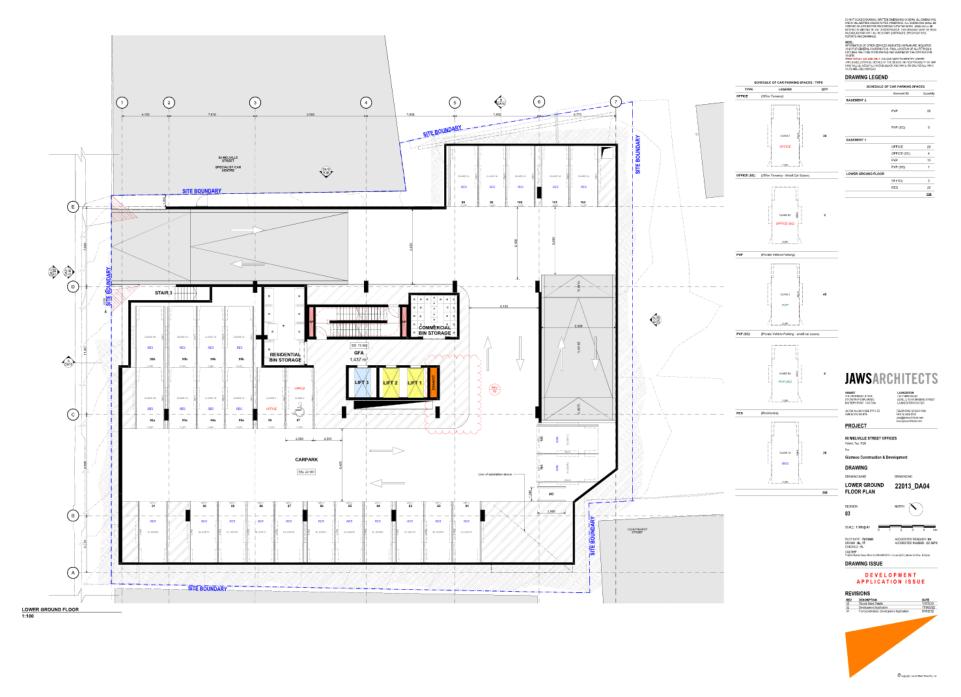
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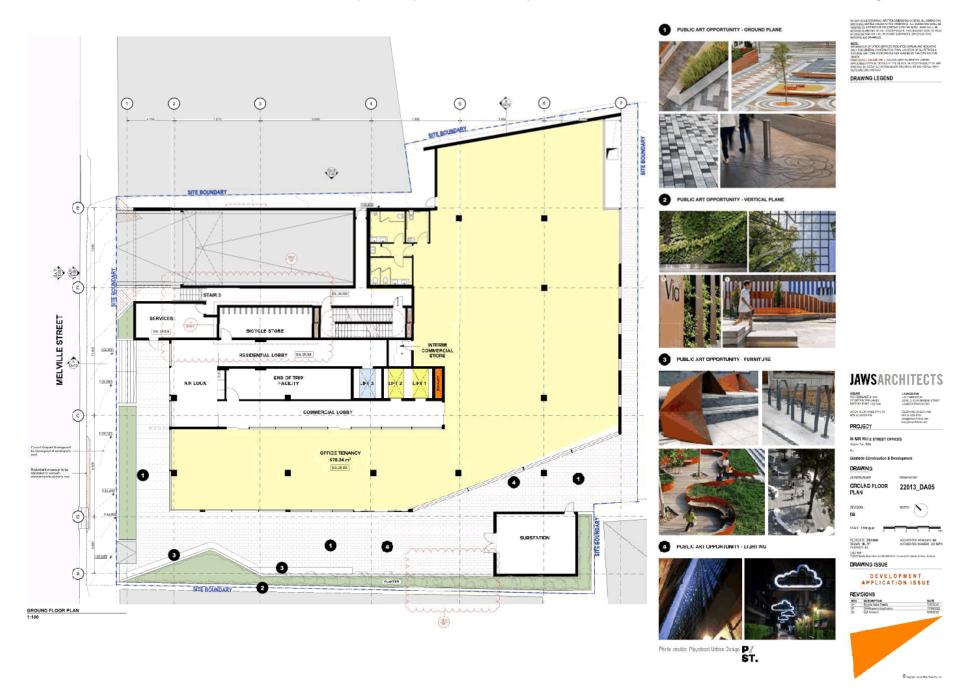
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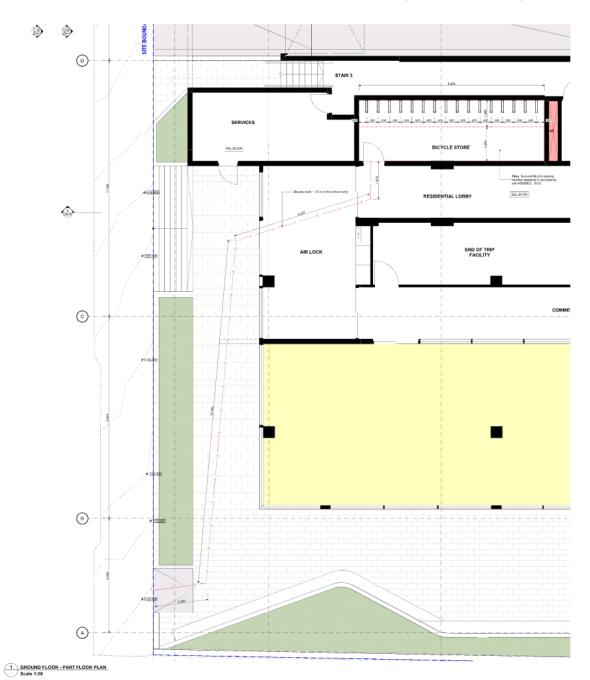
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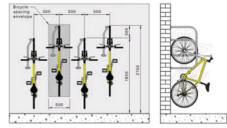
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### B7 OPEN PLAN VERTICAL PARKING LAYOUTS

Figure B7 shows a typical arrangement for vertical wall mounted bicycle parking.



- Rails need to be spaced at 500 mm centers to allow cyclists the ability to lift their bicycle verticall
  without clashing with the handle bars of the adjacent bicycles.
- This spacing also allows users the ability to lock their bicycles to the rack without interference from adjoining bicycles.
- When rails are staggered in height as shown the incidence of clashing between adjacent bicycles is reduced, but if the rails are not staggered then the specing of rails about be 700 mm, to minimise

DIMENSIONS IN MILLIMETRES

FIGURE B7 WALL MOUNTED VERTICAL BICYCLE PARKING

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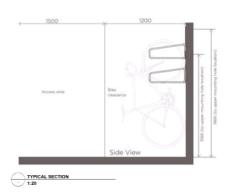
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Aisle widths between opposite rows of bicycles parked side by side, or between row and a wall or fence, shall be not less than those given in Table 2.1.

TABLE 2.1
AISLE WIDTHS FOR BICYCLE PARKING

Type of parking	Minimum aisle width, mm		
Horizontal parking-side by side	1500		
Vertical parking—side by side	1500		
Multi-tier parking	2000		
Bicycle lockers	2000		

NOTE: The parking angle is illustrated in Figure B5



## **JAWS**ARCHITECTS



90 MELVILLE STREET OFFICES Hobel, Tax, 7000

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Giamass Construction & Development

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# PROPOSED APARTMENT DEVELOPMENT

# 90 MELVILLE STREET, HOBART, TASMANIA 7000

il pavement prior to sealing (preseal) ji steel reinforcement of concrete structures

REPRACTICAL COMPLETION

U ON MAINTENANCE

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## **CIVIL WORKS**

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- b) EARTHWORKS FINAL STRIPPING OF TOPSOL, INSTALLATION OF SEDIMENT AND FROSION CONTROL MEASURES.
- c) UNSUITABLE GROUND
- & STORMWATER PIPE LAID ON BEDDING PRIOR TO BACKFILL
- STORMWATER TRENCH BACKFILLED PRIOR TO PAVEMENT PLACEMENT
   STORMWATER STRUCTURE BASE SLABS
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- 67. ON COMPLETION OF SERVICES INSTALLATION, ALL DISTURBED AREAS SHALL BE RESTORED TO ORIGINAL LEVEL, INCLUDING METRIS, FOOTPATHS, CONCRETE AREAS, GRAVEL AREAS, GRASSED AREAS AND ROAD PAVEMENTS.
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STRUCTURAL - ADD ENIMERS
ELECTRICAL - COVA
COMMUNICATIONS - COVA
PERHANEAL - COVA

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- 624. THE CONTRACTOR SHALL HAVE AN APPROVED SET OF CONSTRUCTION DRAWINGS AND APPROVALS ON SITE AT ALL TIMES.
- 625. ALL WATER AND SEWER RETICULATION WORKS TO BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT TASMATER DESIGN AND CONSTRUCTION CODE
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- 627. CONTRACTOR TO PREPARE CONSTRUCTION MANAGEMENT PLAN IN ACCORDANCE WITH LOCAL AUTHORITY REQUIREMENTS AND HAVE APPROVED BY LOCAL AUTHORITY WHERE REQUIRED.

# LOCALITY PLAN



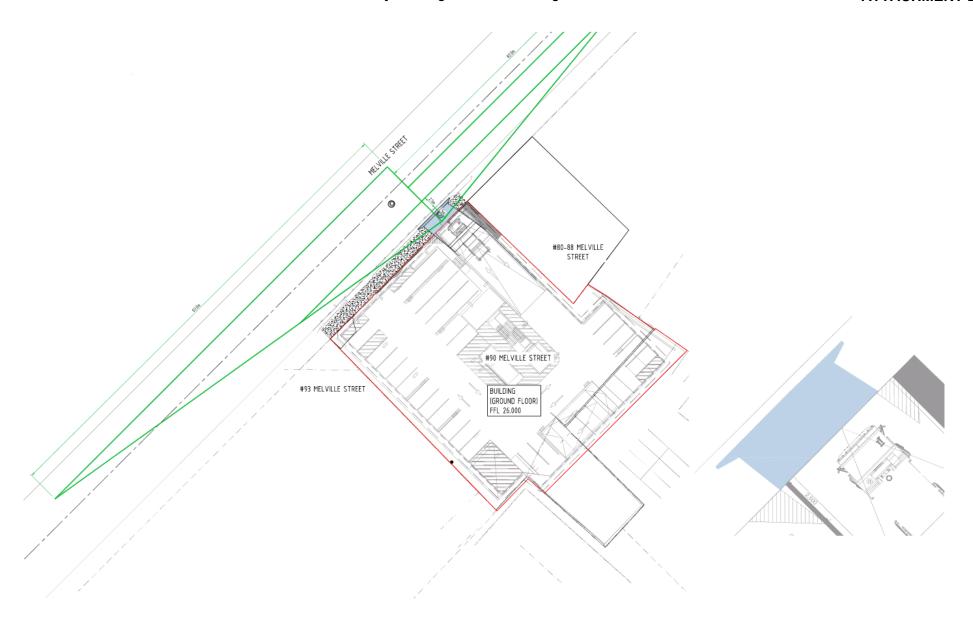
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C02	EXISTING FEATURES LAYOUT PLAN
C1D	FROSION AND SEDIMENT CONTROL LAYOUT PLAN
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C20	BULK EARTHWORKS LAYOUT PLAN
C21	EARTHWORKS SITE SECTIONS SHEET 1 OF 2
C22	EARTHWORKS SITE SECTIONS SHEET 2 OF 2
C30	ROADWORK AND DRAINAGE LAYOUT PLAN
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(70)	VEHICLE SWEPT PATH 899 MOVEMENTS LOWER GROUND SHEET 1 OF 3
C71	VEHICLE SWEPT PATH B99 MOVEMENTS BASEMENT 1 SHEET 2 OF 3
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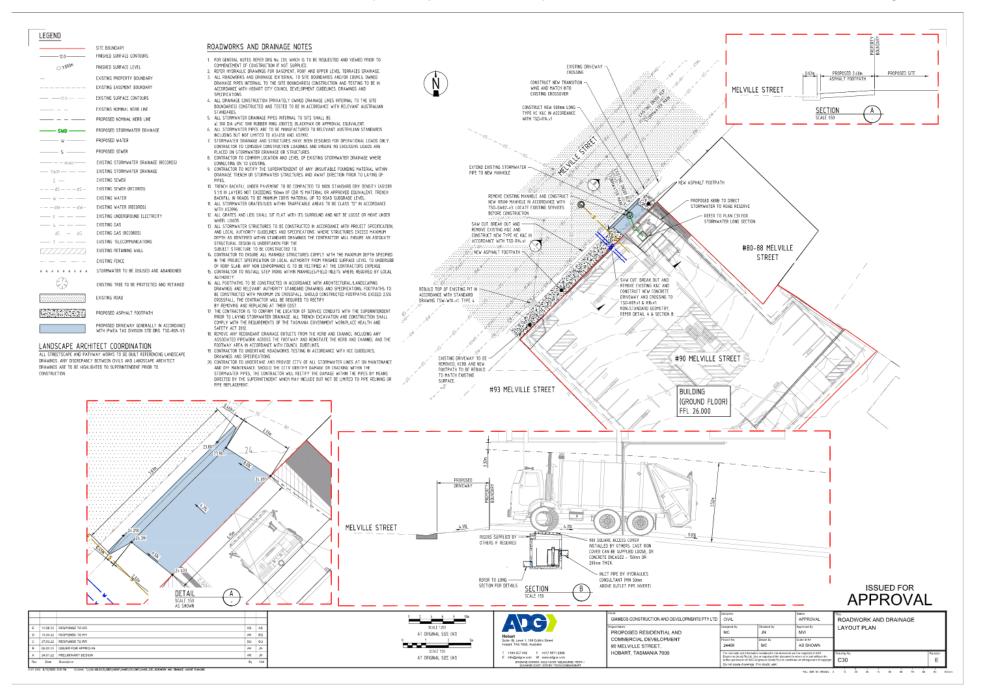
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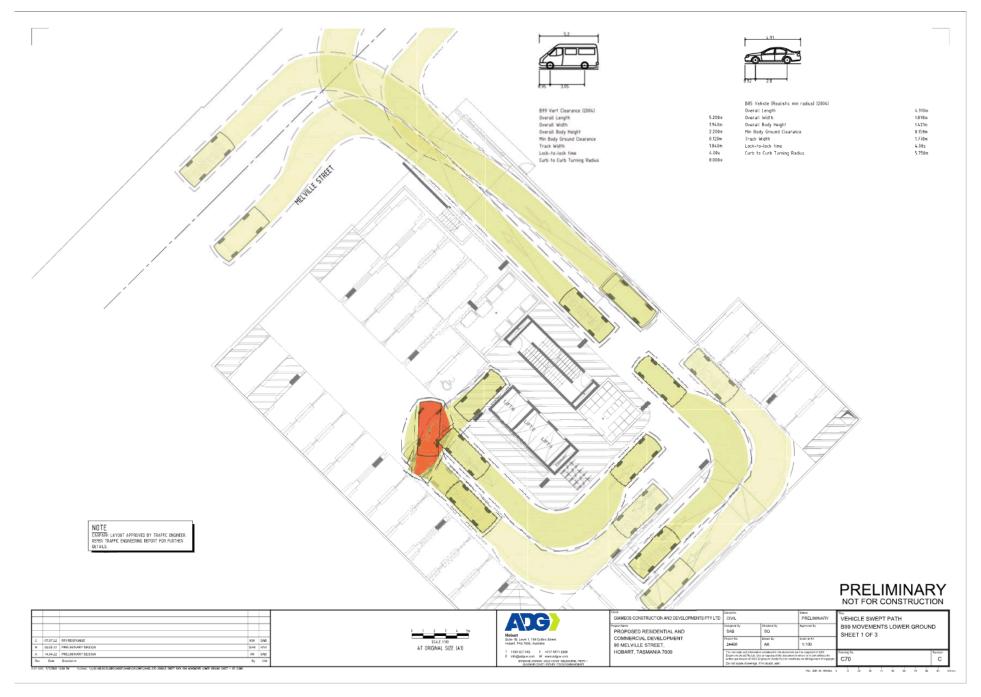
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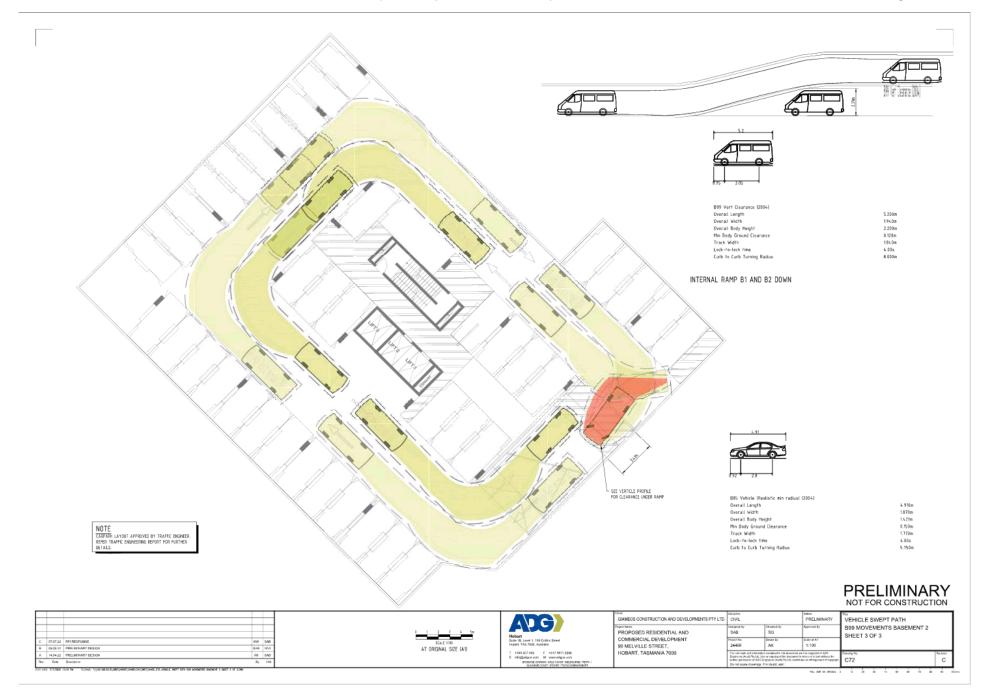
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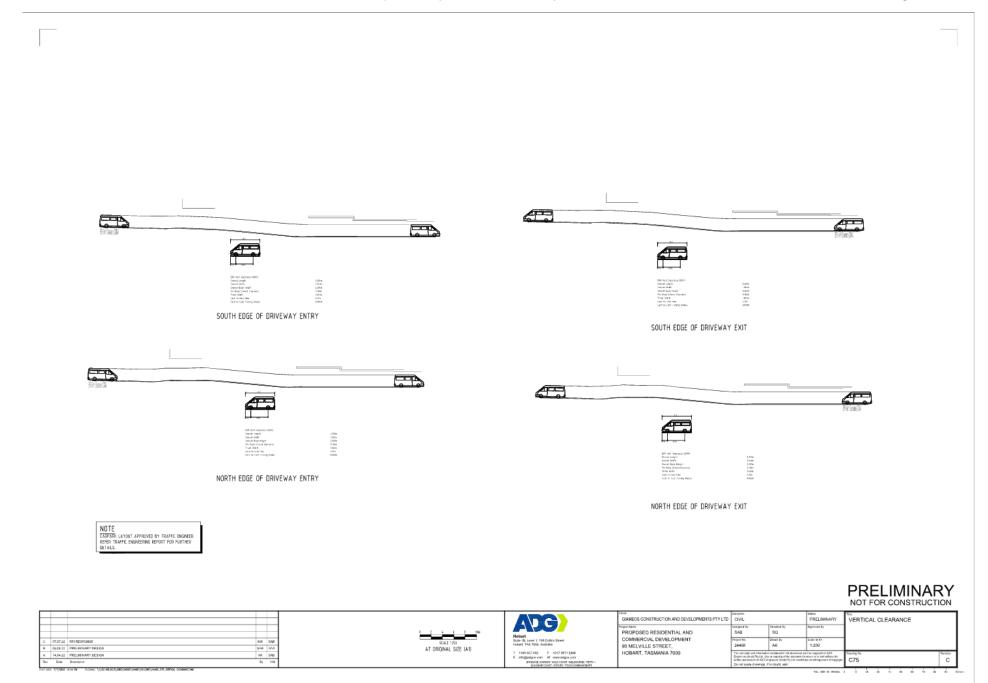














# Proposed Mixed Use Commercial and Residential Development 90 Melville Street, Hobart TAS

**Civil Engineering Report** 

Site Based Stormwater Management & Engineering Services

Giameos Constructions and Developments Pty Ltd May 2022



90 Melville St, Hobart TAS 24468 C R001 Rev02 (05.05.22).docx May 2022

### **Document Verification**

Job Title 90 Melville Street, Hobart TAS

Job Number 24468

Document Title Civil Engineering Report

### **Document Control**

Date	Document	Revision No.	Author	Reviewer
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08.02.22	Civil Engineering Report	01	CJG	JN
05.05.22	Civil Engineering Report	02	SAB	СМ

### Approval for Issue

Name	Signature	Date
Sean Barten		05.05.22
Cameron Moore	C. Mare	05.05.22
Michael Van Itallie	Muchado	05.05.22

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Appendix A Site Survey Plan

Appendix B Architectural Drawings

Appendix C Pre-Developed Catchment Plan

Appendix D Post-Developed Catchment Plan

Appendix E Conceptual Stormwater Management Layout Plan

Appendix F Conceptual Civil Services Layout Plan

Appendix G Rational Method Calculations

Appendix H MUSIC Model Information

Appendix I SQID Maintenance

Appendix J HCC Infrastructure Mapping

Appendix K DBYD Information



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### EXECUTIVE SUMMARY

ADG Engineers (Aust.) Pty Ltd was engaged by Giameos Developments And Construction to prepare a Civil Engineering Report suitable for submission to Hobart City Council (HCC) for a site located at 90 Melville Street, Hobart TAS. The proposed development is for a 9-storey mixed use commercial and residential tower.

The purpose of this Civil Engineering Report is to provide advice on the proposed development as detailed in the Jaws Architects architectural drawings in **Appendix B**. The works described herein are subject to further approvals and cover works required to service the proposed development including roadworks, stormwater draingage, and sewerage and water supply.

The changes to this report are due to an updated development scheme. The differences from this scheme to the previous arrangement is usage but the overall footprint is the same.

The stormwater quantity objective was to demonstrate that there is no increase in peak discharges from the subject site. This considered storm events up to and including the Q100 storm event. The purpose is to ensure that the existing infrastructure and/or downstream properties are not adversely affected. As the pre and post-developed sites have the same impervious area there will be no increase in flow volume or rate due to the development. As such, no on-site detention will be required.

This report includes a summary of the modelled water quality results. Water Sensitive Urban Design (WSUD) features and/or Council Approved Proprietary Water Quality Treatment Products have been included in the design to achieve the water quality objectives for Hobart City Council specified in the Tasmanian State Stormwater Strategy 2010, namely, the removal of gross pollutants, suspended solids, nitrogen, and phosphorus to target reduction levels. ADG recommends the use of the following devices to meet the water quality objectives identified within the State Stormwater Strategy:

> 2 x (690) PSorb cartridge StormFilter system within a 1200 x 1200 Manhole

All relevant standards and guidelines are addressed in this report including criteria from:

- HCC Interim Planning Scheme 2015
- > State Stormwater Strategy 2010
- TasWater Standards
- > Tasmanian Stormwater Policy Guidance and Standards for Development
- ) Local Government Association Tasmania (LGAT) Municipal Standards



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### 1 INTRODUCTION

### 1.1 Background

ADG Engineers (Aust.) Pty Ltd was engaged by Giameos Developments And Construction to carry out a Civil Engineering Report suitable for submission to Hobart City Council and any required referral agencies for a site located at 90 Melville Street, Hobart TAS.

The purpose of this Civil Engineering Report is to provide advice on the proposed development with regard to stormwater drainage, sewerage and water supply, stormwater quality and quantity measures, and flooding. The required infrastructure will be subject to the conditions attached to the Development Approval to be provided by Hobart City Council and any nominated referral agencies.

### 1.2 Property Detail

The details of the property for the proposed development can be seen in Table 1 below.

Table 1 - Property Detail

Title	Lot 1 on SP180200
Street Address	90 Melville Street, Hobart TAS
Site Area	1709 m²

The location of the proposed development is demonstrated in Figure 1.



Figure 1 - Site Location (as accessed from Google maps 04.02.22)



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### 2 EXISTING SITE

### 2.1 Existing Site Features

The subject site comprises of an existing outdoor and undercover carpark.

- The site is bound by:
  - · Melville Street to the northwest
  - · Retail and commercial developments to all other boundaries.
- The site slopes from south to north at a grade of approximately 5.0%

The existing site features can be seen in Figure 2.



Figure 2 - Site Layout (as accessed from Nearmaps 04.02.22)

The existing boundary between 90 Melville Street and 129A Bathurst Street has been amended to the boundary shown in **Figure 2**. For more information refer to the architectural drawings attached in **Appendix B** of this report.

The existing contours, surface levels and the location of the existing buildings are identified on the survey plan as attached in **Appendix A** of this report.



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### 3 ROADWORKS

### 3.1 Existing Infrastructure

The subject site is adjacent to the following roads:

Melville Street – suburban road, with kerb and channel drainage on each side and a two-way crossfall.

The site is currently accessed via two vehicle crossovers along Melville Street.

### 3.2 Proposed Infrastructure

ADG anticipate that both existing vehicle cross overs to be made redundant, demolished, and removed offsite. A new vehicle crossover will be constructed adjacent to the northern corner of the site. Kerb and footpath to be reinstated to Hobart City Council standards.

The development may require works in the verge for regrading, in order to achieve council standards.

Refer to the architectural drawings attached in Appendix B for further information.



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### 4 FLOODING

### 4.1 Flood Impacts

Hobart City Council Potential Inundation Hazard Areas Map indicate that there is no flooding within the subject site, however, Melville Street adjacent to the site floods during the 1% AEP storm. Whilst Melville Street floods, Council mapping indicates that site access and egress is maintained through the southern side of the site's frontage. This will only cater for pedestrians as the developments driveway is located on the northern side of the frontage.

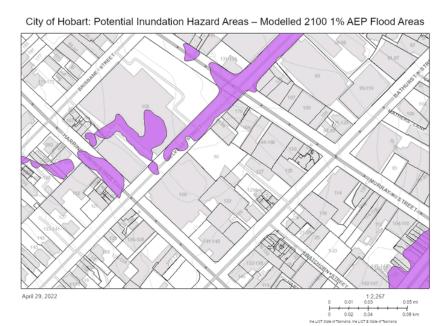


Figure 3 – HCC Potential Inundation Hazard Areas Map



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### 5 STORMWATER INFRASTRUCTURE

### 5.1 Existing Infrastructure

The survey, DBYD Information, and Hobart City Council infrastructure mapping identified the following stormwater infrastructure within the vicinity of the subject site:

- A 300mm RCP main flowing northeast along Melville Street.
- A 375mm RCP main flowing northeast along Melville Street.
- 2 inlet pits along Melville Street, between Harrington Street and Murray Street
- > A 300mm RCP property connection in the north corner of the subject site.

Refer to the survey in **Appendix A** and Hobart City Council mapping in **Appendix J** for further information regarding the existing stormwater infrastructure.

### 5.2 Lawful Point of Discharge (LPD)

### 5.2.1 Existing LPD

Based on information gathered via survey, contour data, aerial imagery, DBYD information, site inspection, and Hobart City Council infrastructure mapping it has been determined that the subject site discharges flows to existing Council infrastructure. Site flows are directed to Council infrastructure via an internal drainage network and connection to an existing maintenance hole located within Melville Street adjacent to the subject site.

### 5.2.2 Proposed LPD

It is proposed to maintain the lawful point of discharge in Melville Street, as per the existing flow regime.



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### 6 STORMWATER QUANTITY ASSESSMENT

The aim of the stormwater quantity assessment is to ensure that the development shall impose no adverse effects on downstream properties or receiving water bodies and that the conveyance of flows will be in a safe manner with minimal risk of human endangerment as well as the following objectives:

- Address the need for stormwater quantity control measures.
- Ensure there is no increase in peak discharges from the subject site for events up to and including the 100 year ARI event.
- Ensure proposed quantity control measures detain and convey flows in accordance with Hobart City Council Interim Planning Scheme 2015.

This section of the report should be read in conjunction with **Appendix G** which shows the values used to calculate the peak flow rates.

### 6.1 Proposed Development and Associated Issues

It is essential that there are no increases in volume and flow rate of stormwater runoff, and that any increases are mitigated such that post-developed peak flows do not exceed those for the pre-developed case. As the development leads to an unaltered impervious area, there will be no increase in either discharge volume or flow rate.

### 6.2 Flow Rate Methodology

### 6.2.1 Design Storm Events

Based on the Hobart City Council Interim Planning Scheme 2015, section A3 of clause E7.7.1 the major and minor storm events were selected as follows:

- Minor Event: 20 year ARI
  - Surface drainage infrastructure sized for a 20 year ARI through to point of discharge
- ) Major Event: 100 year ARI
  - Roof water capture system is to capture and pipe all flows up to and including the 100 year ARI through to the LPD.
  - Surface drainage overflows in events up to and including the 100 year ARI will not present a
    hazard to people or cause significant damage to property.

Pipe sizing will be performed during detailed design and increased as required to ensure a safe depth vs velocity is maintained at all times during the major event.

### 6.2.2 Rational Method for Peak Flow Rate

The peak flow rate for the site has been obtained using the Rational Method in accordance with ARR guidelines and the Hobart City Council Interim Planning Scheme 2015. Summaries of the hydrology calculations can be seen in **Sections 6.3** and **6.4** for the pre and post-development scenarios respectively.

 $Q = (2.78 \times 10^{-3}) \text{ Cy Iy A}$ 

Equation 1

Q = Peak flow rate (m3/s) for average recurrence interval



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Cy = Co-efficient of runoff for ARI of y years (dimensionless)

A = Catchment area (ha)

ly = Average rainfall intensity (mm/hr) for a design duration of t hours and an ARI of y years

### 6.2.3 Catchment Area (A)

Catchment areas were measured using AutoCAD, contour surface data and known cadastral boundaries. Catchment boundaries and areas for both the pre-developed and post-developed scenarios can be seen in **Appendix C** and **Appendix D** respectively.

### 6.2.4 Co-efficient of runoff (C)

In lieu of any C values from Hobart City Council the C value has been taken from Melbourne Water Hydrologic and Hydraulic Design, Table 1. Melbourne Water states that for Commercial/Industrial developments  $C_5 = 0.7 - 0.9$ , and  $C_{100} = 0.9$ , based on this ADG has assumed that the  $C_{10}$  value is 0.9 (worst case).

### 6.2.5 Time of Concentration

The time of concentration  $(t_c)$  for each catchment was calculated using a combination of sheet flow, channel flow and standard inlet times.

### 6.3 Pre-Development Hydrology

The hydrology of the pre-developed catchment has been assessed using the Rational Method. The theoretical calculated peak discharge for storm events ranging from the 1 year ARI to 100 year ARI has been calculated and a summary of the results is presented in **Appendix G**.

The subject site has a total area of  $1709m^2$  and currently comprises of a carpark. The subject site discharges flows to Council infrastructure manhole in Melville Street via an internal piped system. The Coefficient of discharge ( $C_{10}$ ) value for each catchment was derived as per **Section 6.2.4**.

The total time of concentration was determined to be 5 minutes. Rational Method calculations were performed, the results of which can be seen in **Table 2**.

Please refer to Appendix G for a summary of the Rational Method calculations and all parameters used.

Time of Catchment Area  $Q_{20}$ Q<sub>100</sub>  $C_{20}$ C<sub>100</sub> Concentration (m<sup>2</sup>) $(m^3/s)$  $(m^3/s)$ I.D **Impervious**  $(t_c)$ 1.00 5 0.074 Α 1709 100% 0.95 0.045 Total 1709 100% 0.95 1.00 5 0.045 0.074

Table 2 - Pre-development Catchment Details

### 6.4 Post-Development Hydrology

The total land area considered for the post-development was 1709 m². A catchment plan for the post-developed site was determined based on preliminary architectural drawings. The post-development catchment plan is attached within **Appendix D** for further information.

Rational Method calculations were performed, the results of which can be seen in **Table 3**. As there was only a very minor change increase in area of the subject site and the fraction impervious remained the same as the pre-developed catchment, the results identify no on-site detention was required.



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Please refer to Appendix G for a summary of the Rational Method calculations and all parameters used.

Table 3 - Post-development Catchment Details

Catchment I.D	Area (m²)	% Impervious	C <sub>20</sub>	C <sub>100</sub>	Time of Concentration (t <sub>c</sub> )	Q <sub>20</sub> (m³/s)	Q <sub>100</sub> (m³/s)
А	1709	100%	0.95	1.00	5	0.045	0.074
Total	1709	100%	0.95	1.00	5	0.045	0.074

### 6.5 Existing Network Capacity

To ensure the existing Council infrastructure has capacity to receive runoff from the site, calculations were done to determine the capacity during the minor and major events.

### 6.5.1 Minor Event – 20 year ARI

The existing stormwater infrastructure discharges into a 300mm diameter RCP pipe flowing northeast along Melville Street. To determine the available capacity within the receiving stormwater main, the catchment area discharging into the network was assessed (including the subject site) to determine current use. Based on survey, DBYD information, and Hobart City Council mapping the total catchment area was determined to be 6128m² as can be seen in **Figure 4** below.



Figure 4 - Total Catchment Area

The Rational Method was used to assess the catchment discharging into the existing network and the outcomes can be seen in **Table 4** below.



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### Table 4 - Existing Stormwater Pipe Hydrology

Catchment I.D	Area (m²)	% Impervious	Time of Concentration (t <sub>c</sub> )	Required capacity Q <sub>20</sub> (m³/s)	Existing 300mm pipe capacity Q <sub>20</sub> (m³/s)
EX1	6128	100	5	0.160	0.168

Based on the survey information available at the time of this report, the above table represents the existing main within Melville Street with an assumed grade of 3.0%. As the longitudinal grade of Melville Street is 5.0% from survey information this assumption is reasonable. This demonstrates that during the minor event the existing network has capacity. Confirmation of the grade of the stormwater main will be required during detailed design, refer **Appendix G** for calculations.

### 6.5.2 Major Event - 100 year ARI

The capacity of Melville Street as an overland flow path needs to be assessed in the case of a major storm. To calculate the capacity of the road Manning's Equation has been used.

Q = VA Equation 2  $Q = Flow rate (m^3/s)$   $A = Effective Channel Flow Area (m^2)$  V = Average Flow Velocity (m/s)  $V = (1/n)*R^{2/3}*S^{1/2}$  Equation 3

n = Manning's Roughness

R = Hydraulic Radius (m)

S = Channel Slope (Uniform Flow Conditions) (m/m)

R = A/P Equation 4

A = Effective Channel Flow Area (m<sup>2</sup>)

P = Wetted Perimeter (m)

To calculate the effective channel flow area (A) and wetted perimeter (P) the cross section of Melville Street was drawn up in AutoCAD as shown in **Figure 5**.



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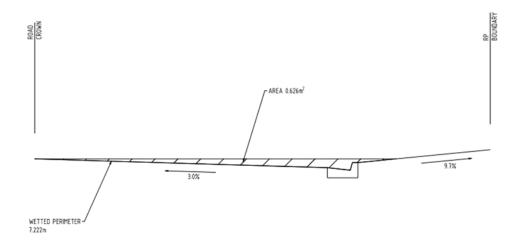


Figure 5 - Melville Street Cross Section

The cross fall of Melville Street was assumed to be 3% for LGAT Standard drawing TSD-R06-v3, the kerb and channel, and verge are drawn as per the survey. The slope of Melville Street was calculated to be 5.0% along the sites northwest boundary from the survey.

Manning's Equation was used to assess the existing capacity of Melville Street which was found to be  $1.523 \, \mathrm{m}^3/\mathrm{s}$ , which is greater than the Q100 storms peak discharge of  $0.264 \, \mathrm{m}^3/\mathrm{s}$  calculated form the rational method. This demonstrates that during the major event the road reserve has capacity to cater for the major storm event, refer **Appendix G** for calculations.

It has been assumed that there is no backwater or tailwater conditions in the existing infrastructure during the minor and major events. Nor has the flooding on Melville Street, as per **Section 4**, been considered.



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### 7 STORMWATER QUALITY ASSESSMENT

### 7.1 Treatment Objectives

This assessment identifies issues relating to stormwater quality runoff and assesses possible methods of treatment if required. The aim of this section of the report is to determine practical approaches to achieving improvements in the quality of the stormwater run-off from the site that can be readily implemented.

The Hobart City Council Interim Planning Scheme 2015 proposes criteria which apply to 'new developments' for stormwater drainage and disposal if any of the following criteria apply:

- The size of new impervious area is more than 600m<sup>2</sup>,
- New car parking is provided for more than 6 cars, or
- A subdivision is for more than 5 lots

The proposal includes carparking for more than 6 cars, thus meeting the second criteria, requiring water sensitive urban design to be added to the stormwater design for the proposed development.

The Hobart City Council Interim Planning Scheme 2015 suggests the development aims to:

- Avoid or otherwise minimises adverse impacts on the environmental values of receiving waters, arising from:
- altered stormwater quality or flows, and
- wastewater (other than contaminated stormwater and sewage), and
- ) the creation or expansion of non-tidal artificial waterways, and
- Demonstrate compliance with the HCC interim planning scheme 2015 clause E7.7.1.

The following table identifies the stormwater quality targets required for developments as per Appendix (ii) in the State Stormwater Strategy 2010:

Table 5 - State Stormwater Code 2010 Targets

Total Suspended	Total Phosphorus	Total Nitrogen	Gross Pollutants
Solids (TSS)	(TP)	(TN)	>5mm
80% Removal	45% Removal	45% Removal	90% Removal

The objective is to provide the following

- Nitrogen and Phosphorous removal
- Gross Pollutant and Suspended Solids Removal
- > All of the site's impervious areas discharge to suitable treatment device/s
- Treatment device selection criteria are to be in accordance with Industry Best Practice and, WSUD Engineering Guidelines
- > Provide engineering diagrams of the stormwater quality treatment of the proposed development



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### 7.2 Erosion and Sediment Control

### 7.2.1 Pre-Development Phase

Prior to construction commencing, the following erosion and sediment control measures will need to be installed around the subject site to minimise disturbance and ensure the quality of runoff discharging from the site is of an acceptable standard:

- Sediment barriers to be installed on all entrances to downstream stormwater infrastructure (i.e. gully pits);
- Designation of transport routes through the site to minimise vegetation disturbance;
- Maximise retention of existing vegetation to reduce soil disturbance and provide filter strip treatment for runoff:
- Install construction entry and exit shakedown areas;
- > Sediment fences are to be installed on the downstream boundaries of the subject site; and
- Install dust control measures as required.

All erosion and sediment control measures are to be designed and installed in accordance with IECA Guidelines and LGAT standard drawings. Further details regarding the proposed erosion and sediment control measures will be provided during the detailed design phase of the development.

### 7.2.2 Bulk Earthworks Phase

During the bulk earthworks phase, the following erosion and sediment control measure will need to be installed in addition to the aforementioned measures (Pre-Development Phase) to ensure there is minimal disturbance to downstream receiving water bodies:

- Construction chutes to control runoff over earthworks batters;
- Construction of temporary bunds at the top of all earthworks batters to ensure runoff is directed away from exposed batters;
- Sediment basins to be constructed at low points within each stage of the proposed development;
- Construction of temporary diversion drains to divert water to sediment basins and around any stockpiles;
- > Sediment fences to be installed on the downstream side of any stockpiles; and
- Stabilisation of all batters upon reaching the finished earthworks levels.

All erosion and sediment control measures are to be designed and installed in accordance with IECA Guidelines and LGAT standard drawings. Further details regarding the proposed erosion and sediment control measures will be provided during the detailed design phase of the development.

### 7.2.3 Construction Phase

During the construction phase of the development, there is a risk of sedimentation transport due to large areas of disturbed land. The following erosion and sediment control measure will need to be installed in addition to the aforementioned measures (Pre-Development and Bulk Earthworks Phases) to ensure there is minimal disturbance and the quality of runoff is maintained to an acceptable standard:



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- Construction of temporary diversion drains to divert water to sediment basins;
- Construction of temporary diversion drains to divert water to protect bioretention and treatment devices as required;
- Sediment barriers to be installed on all entrances to newly constructed stormwater infrastructure (i.e. gully pits);
- Sediment fences to be installed on the downstream side of any stockpiles and batters; and
- Re-vegetation of all disturbed areas within two (2) weeks of completion.

All erosion and sediment control measures are to be designed and installed in accordance with IECA Guidelines and LGAT standard drawings. Further details regarding the proposed erosion and sediment control measures will be provided during the detailed design phase of the development.

### 7.2.4 Maintenance

All erosion and sediment control devices are to be maintained through the entire phase of the development leading up to the operational phase. Erosion and sediment control devices will need to be monitored closely throughout the entire project to ensure they are operating correctly and efficiently. No erosion and sediment control devices are to be removed unless otherwise authorised by a suitably qualified engineer or the site superintendent.

### 7.3 Operational Phase Treatment

During the operational phase, it is proposed to have the roof area drain through a *Stormfilter* device before discharging to Melville Street.

Internal stormwater drainage shall be designed and constructed in accordance with AS3500.3 and all other relevant standards and guidelines.

### 7.4 Stormwater Quality Improvement Devices (SQIDs)

The proposed stormwater quality treatment measures for the development will consist of

2 x (690) PSorb cartridge StormFilter system within a 1200 x 1200 Manhole

### 7.4.1 Ocean Protect 'StormFilter'

The Stormfilter consists of rechargeable, media filled cartridges that can be placed within standard manholes and/or tank vaults, to filter pollutants such as Hydrocarbons from stormwater. If the treatable flows generated from the development are greater than 80L/s a by-pass inlet pit shall be placed in front of (and upstream) of the Stormfilter.

### 7.5 MUSIC Model

The sites stormwater run-off was modelled using MUSIC (version 6.3.0) and the water quality objectives for Hobart City Council specified in the Interim Planning Scheme 2015 and the State Stormwater Strategy 2010 of 80% TSS reduction, 45% TP reduction, 45% TN reduction, and 90% Gross Pollutants reduction.



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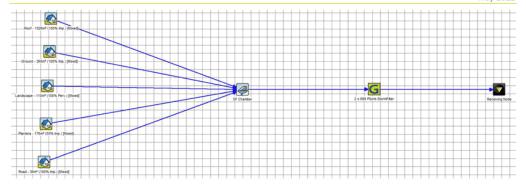


Figure 6 - Treatment Train

The results of the above MUSIC model are presented in Figure 7.

	Sources	Residual Load	% Reduction
Flow (ML/yr)	0.638	0.638	0
Total Suspended Solids (kg/yr)	37.2	6.17	83.4
Total Phosphorus (kg/yr)	0.12	0.0276	77
Total Nitrogen (kg/yr)	1.39	0.698	50
Gross Pollutants (kg/yr)	24.4	0	100

Figure 7 - Results for the Treatment Train

The above results meet the percent reduction water quality objectives identified by Hobart City Council interim planning scheme and the State Stormwater Strategy 2010.

Details of the MUSIC model are attached within Appendix H for further information.

### 7.6 On-site Treatment Lifecycle Costs

A lifecycle cost analysis is not a part of the scope of this report. All the recommended water quality treatment infrastructure lies within the development site and it shall be maintained and serviced by the owners of the development at no cost to Council.

### 7.7 Water Quality Monitoring

No water quality monitoring is proposed for this development at this stage due to the nature of the development and the expected pollutant levels. This would not be considered a high risk source.

### 7.8 Maintenance

Maintenance of the SQIDs will be the responsibility of the owners of the development. The maintenance should be carried out in accordance with the manufacturer's recommendations and as a minimum shall include the following:

Ocean Protect 'Stormfilter' - Maintenance to be carried out by manufacturer's maintenance staff including but not limited to de-silting of cartridges. Refer to **Appendix I** for further information regarding the maintenance of the proposed StormFilter.



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### 8 WATER SUPPLY

### 8.1 Existing Infrastructure

The survey and DBYD search identified the following water infrastructure relevant to the subject site:

- > A 150mm DICL main in Melville Street adjacent to the northwest boundary of the subject site;
- > A 100mm CICL main in Melville Street on the opposite side to the development;
- An existing property connection at the sites west corner which stems off the 150mm DICL main in Melville Street.

Refer to the survey and DBYD information in **Appendix A** and **Appendix K** respectively for further information regarding the existing water infrastructure.

### 8.2 Point of Connection

ADG Engineers anticipate that the proposed development will be connected to the existing 150mm main along Melville Street adjacent to the site. Details and confirmation of the proposed connections will be provided at the detailed design stage.

To understand with greater certainty the requirements from TasWater for this development, ADG recommends that an initial enquiry be made to the authority for confirmation of the proposed connection.



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### 9 SEWERAGE RETICULATION

### 9.1 Existing Infrastructure

A survey and DBYD search identified the following sewerage infrastructure relevant to the subject site:

> A 150mm VC main located beneath Melville Street

Refer to the survey and DBYD information in **Appendix A** and **Appendix K** respectively for further information regarding the existing sewerage infrastructure.

### 9.2 Point of Connection

ADG Engineers anticipate that the proposed development will be connected to the existing 150mm main along Melville Street. Details and confirmation of the proposed connections will be provided at the detailed design stage.

To understand with greater certainty the requirements from TasWater for this development, ADG recommends that an initial enquiry be made to the authority for the confirmation of the proposed connections.



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### 10 CONCLUSION

The site appears to be well serviced by reticulated water, stormwater infrastructure, and sewerage. These services will need to be connected during development. Information discussed in this report is inferred from DBYD records and information gathered via survey.

As outlined in **Section 6** of this report, the proposed development results in an unaltered impervious area. As a result, no stormwater detention measures have been proposed.

In preparing this report, we have achieved all requirements for Stormwater Management Plans as required by the State Stormwater Strategy 2010 and the Hobart City Council Interim Planning Scheme 2015. ADG recommends the use of the following treatment devices to meet the treatment targets specified by the relevant authorities:

2 x (690) PSorb cartridge StormFilter system within a 1200 x 1200 Manhole

Detailed engineering diagrams and management requirements for the proposed development are to be submitted to Council for approval prior to any works commencing on site with design certification prepared by a qualified stormwater engineer or scientist.



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# INFORMATION ONLY

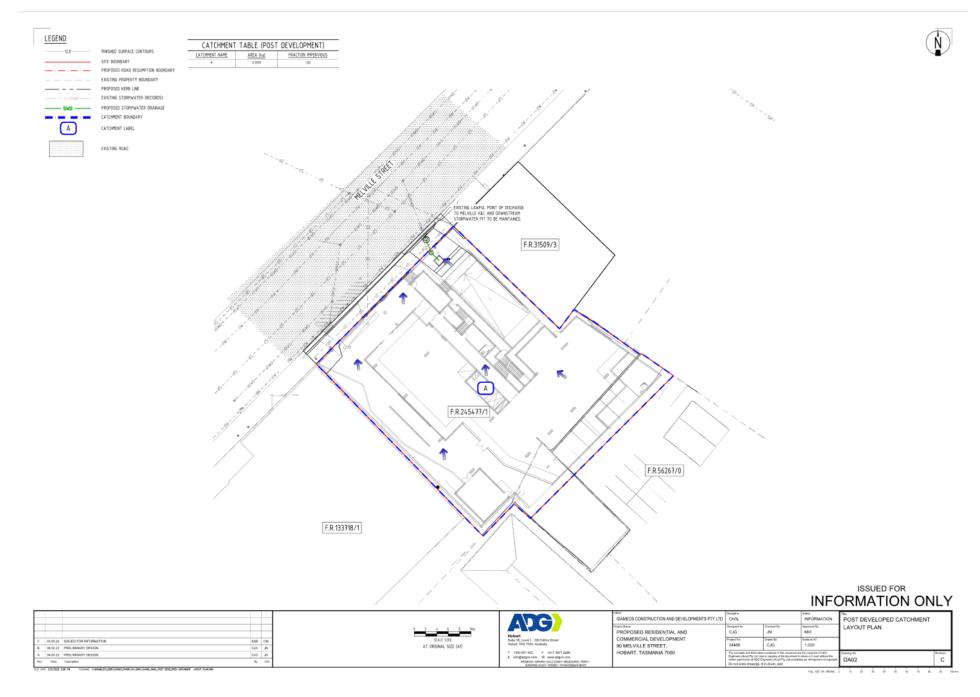
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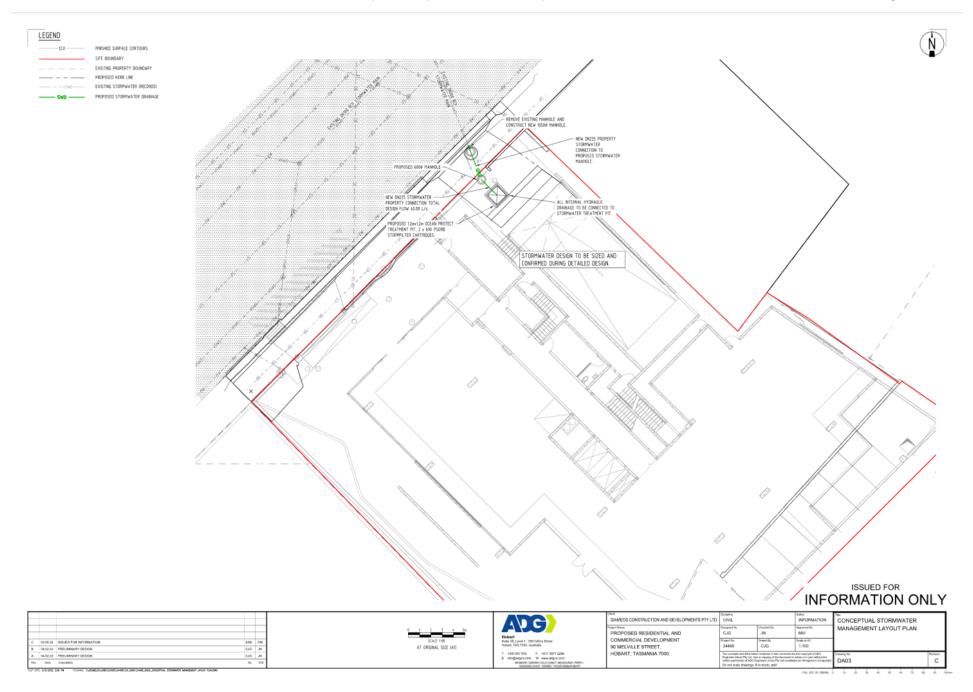


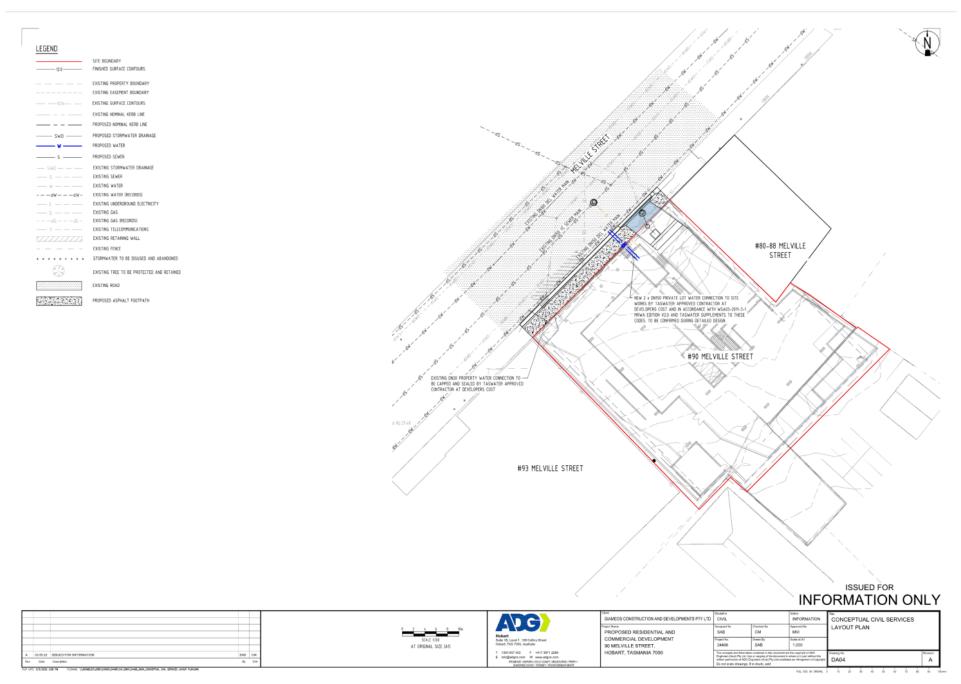


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### **CIVIL DESIGN SPREADSHEETS**

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### **CIVIL DESIGN SPREADSHEETS**

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Project   Proj	0   0   0   0   0   0   0   0   0   0	Peak Peak Flow Flow Flow Flow GM3/s) (m3/s) (m3/s) 0.160 0.264 0.160 0.264 0.2	
Project   Project   Project   Project   Initial Development Calculation - QUDM Method   Project   Projec	0   0   0   1   0   0   0   0   0   0	Peak Peak Peak Peak Peak Peak Peak Peak	
Project   PROPOSED RESIDENTIAL DEVELOPMENT   Park   Project   PRUPOSED RESIDENTIAL DEVELOPMENT   Post-Development   Project   Project   PRUPOSED RESIDENTIAL DEVELOPMENT   Post-Development   Project   Proj	O	Peak Peak Peak Peak Peak Peak Peak Peak	



90 Melville St, Hobart TAS 24468 C R001 Rev02 (05.05.22).docx May 2022

### **MUSIC Model Information**

### Introduction:

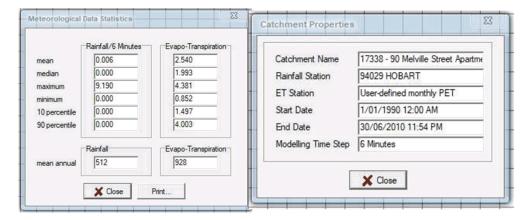
The quality of stormwater runoff and the impact of the proposed stormwater quality improvement measures were analysed using MUSIC Version 6.3.0 according to the Melbourne MUSIC Guidelines 2018 (Melbourne Water 2016). A summary of the modelled catchment is presented in the table below.

Catchment I.D	Land Use	Area (m²)	% Impervious
А	Mixed Commercial and Residential	1709	88.43%

### Meteorological Data:

The MUSIC model was carried out using the following parameters:

- The modelling period should be 10 years with a time step of 6 minutes.
- The nearest available 6 minute time step rainfall series to the subject site is Ellerslie Road Station.





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### Source Nodes - Pollutant Exports:

Pollutant export parameters were assigned as per Table 3 of the Melbourne MUSIC Guidelines 2018.

The pollutant exports parameters adopted in the MUSIC model are summarized in the table below.

Pollutant	Surface Type	Storm Flow		Base Flow	
	antini	Mean (log mg/L)	SD (log mg/L)	Mean (log mg/L)	SD (log
	Roof	1.301	0.333	n/a*	n/a
	Road and paved areas	2.431	0.333	n/a	n/a
SS	Urban area not covered by roof, road or paved areas	1.900	0.333	0.96	0.401
	Roof	-0.886	0.242	n/a	n/a
	Road and paved areas	-0.301	0.242	n/a	n/a
TP	Urban area not covered by roof, road or paved areas	-0.700	0.242	-0.731	0.360
	Roof	0.301	0.205	n/a	n/a
	Road and paved areas	0.342	0.205	n/a	n/a
TN	Urban area not covered by roof, road or paved areas	0.243	0.182	0.455	0.363

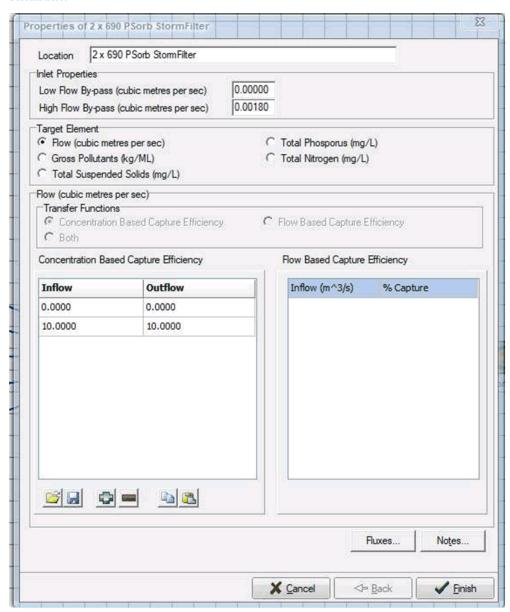
Table 3 - Pollutant concentration data for source nodes. \* n/a indicates that base flow does not occur from these surfaces. (Source: Fletcher, 2007. Background Study for the revision of Melbourne Water's MUSIC Input Parameter Guidelines. Not published)



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### Input Parameters:

### StormFilter:





# StormFilter

Operations & Maintenance Manual

### Ocean Protect | StormFilter Operations & Maintenance Manual

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Ocean Protect | StormFilter Operations & Maintenance Manual

### Introduction

The primary purpose of stormwater treatment devices is to capture and prevent pollutants from entering waterways, maintenance is a critical component of ensuring the ongoing effectiveness of this process. The specific requirements and frequency for maintenance depends on the treatment device and pollutant load characteristics of each site. This manual has been designed to provide details on the cleaning and maintenance processes for the StormFilter as recommended by the manufacturer.

The StormFilter is designed and sized to meet stringent regulatory requirements. It removes the most challenging target pollutants (including fine solids, soluble heavy metals, oil, and soluble nutrients) using a variety of media. For more than two decades, StormFilter has helped clients meet their regulatory needs and, through ongoing product enhancements, the design continues to be refined for ease of use and improved performance.

### Why do I need to perform maintenance?

Adhering to the inspection and maintenance schedule of each stormwater treatment device is essential to ensuring that it functions properly throughout its design life.

During each inspection and clean, details of the mass, volume and type of material that has been collected by the device should be recorded. This data will assist with the revision of future management plans and help determine maintenance interval frequency. It is also essential that qualified and experienced personnel carry out all maintenance (including inspections, recording and reporting) in a systematic manner.

Maintenance of your stormwater management system is essential to ensuring ongoing at-source control of stormwater pollution. Maintenance also helps prevent structural failures (e.g. prevents blocked outlets) and aesthetic failures (e.g. debris build up), but most of all ensures the long term effective operation of the StormFilter.

### Ocean Protect | StormFilter Operations & Maintenance Manual

### **Health and Safety**

Access to a StormFilter unit requires removing heavy access covers/grates, and it is necessary to enter into a confined space. Pollutants collected by the StormFilter will vary depending on the nature of your site. There is potential for these materials to be harmful. For example, sediments may contain heavy metals, carcinogenic substances or objects such as broken glass and syringes. For these reasons, all aspects of maintaining and cleaning your StormFilter require careful adherence to Occupational Health and Safety (OH&S) guidelines.

It is important to note that the same level of care needs to be taken to ensure the safety of non-work personnel. As a result, it may be necessary to employ traffic/pedestrian control measures when the device is situated in, or near areas with high vehicular/pedestrian activity.

### Personnel health and safety

Whilst performing maintenance on the StormFilter, precautions should be taken in order to minimise (or, if possible, prevent) contact with sediment and other captured pollutants by maintenance personnel. The following personal protective equipment (PPE) is subsequently recommended:

- Puncture resistant gloves
- · Steel capped safety boots
- Long sleeve clothing, overalls or similar skin protection
- Eve protection
- · High visibility clothing or vest

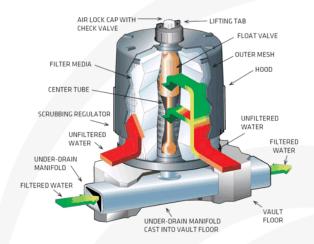
During maintenance activities, it may be necessary to implement traffic control measures. Ocean Protect recommend that a separate site-specific traffic control plan is implemented as required to meet the relevant governing authority guidelines.

Whilst some aspects of StormFilter maintenance can be performed from surface level, there will be a need to enter the StormFilter system (confined space) during a major service. It is recommended that all maintenance personnel evaluate their own needs for confined space entry and compliance with relevant industry regulations and guidelines. Ocean Protect maintenance personnel are fully trained and carry certification for confined space entry applications.

### Ocean Protect | StormFilter Operations & Maintenance Manual

### How does it Work?

Stormwater enters the cartridge chamber, passes through the filtration media and begins filling the cartridge center tube. When water reaches the top of the cartridge the float valve opens and filtered water is allowed to drain at the designed flow rate. Simultaneously, a one-way check valve closes activating a siphon that draws stormwater evenly throughout the filter media and into the center tube. Treated stormwater is then able to discharge out of the system through the underdrain manifold pipework.



As the rain event subsides, the water level outside the cartridge drops and approaches the bottom of the hood, air rushes through the scrubbing regulators releasing the water column and breaking the siphon. The turbulent bubbling action agitates the surface of the cartridge promoting trapped sediment to drop to the chamber floor. After a rain event, the chamber is able to drain dry by way of an imperfect seal at the base of the float valve.

### **Maintenance Procedures**

To ensure optimal performance, it is advisable that regular maintenance is performed. Typically, the StormFilter requires an inspection every 6 months with a minor service at 12 months. Additionally, as the StormFilter cartridges capture pollutants the media will eventually become occluded and require replacement (expected media life is 1-3 years).

### **Primary Types of Maintenance**

The table below outlines the primary types of maintenance activities that typically take place as part of an ongoing maintenance schedule for the StormFilter.

	Description of Typical Activities	Frequency
Inspection	Visual Inspection of cartridges & chamber Remove larger gross pollutants Perform minimal rectification works (if required)	Every 6 Months
Minor Service	Evaluation of cartridges and media Removal of accumulated sediment (if required) Wash-down of StormFilter chamber (if required)	Every 12 Months
Major Service	Replacement of StormFilter cartridge media	As required

### Ocean Protect | StormFilter Operations & Maintenance Manual

Maintenance requirements and frequencies are dependent on the pollutant load characteristics of each site. The frequencies provided in this document represent what the manufacturer considers to be best practice to ensure the continuing operation of the device is in line with the original design specification.

### Inspection

The purpose of the inspecting the StormFilter system is to assess the condition of the StormFilter chamber and cartridges. When inspecting the chamber, particular attention should be taken to ensure all cartridges are firmly connected to the connectors. It is also an optimal opportunity to remove larger gross pollutants and inspect the outlet side of the StormFilter weir.

### **Minor Service**

This service is designed to ensure the ongoing operational effectiveness of the StormFilter system, whilst assessing the condition of the cartridge media.

- 1. Establish a safe working area around the access point(s)
- 2. Remove access cover(s)
- 3. Evaluate StormFilter cartridge media (if exhausted schedule major service within 6 months)
- Measure and record the level of accumulated sediment in the chamber (if sediment depth is less than 100 mm skip to step 9)
- 5. Remove StormFilter cartridges from the chamber
- 6. Use vacuum unit to removed accumulated sediment and pollutants in the chamber
- 7. Use high pressure water to clean StormFilter chamber
- 8. Re-install StormFilter cartridges
- 9. Replace access cover(s)

### Major Service (Filter Cartridge Replacement)

For the StormFilter system a major service is reactionary process based on the outcomes from the minor service, specifically the evaluation of the cartridge media.

Trigger Event	Maintenance Action	
Cartridge media is exhausted <sup>[1]</sup>	Replace StormFilter cartridge media <sup>[2]</sup>	

[1] Multiple assessment methods are available, contact Ocean Protect for assistance [2] Replacement filter media and components are available for purchase from Ocean Protect.

This service is designed to return the StormFilter device back to optimal operating performance

- 1. Establish a safe working area around the access point(s)
- 2. Remove access cover(s)
- By first removing the head cap, remove each individual cartridge hood to allow access to the exhausted media.
- 4. Utilise a vacuum unit to remove exhausted media from each cartridge
- 5. Use vacuum unit to remove accumulated sediment and pollutants in the chamber
- 6. Use high pressure water to clean StormFilter chamber
- 7. Inspect each empty StormFilter cartridges for any damage, rectify damage as required
- 8. Re-fill each cartridge with media in line with project specifications
- 9. Re-install replenished StormFilter cartridges
- 10. Replace access cover(s)

Ocean Protect | StormFilter Operations & Maintenance Manual

### **Additional Types of Maintenance**

Occasionally, events on site can make it necessary to perform additional maintenance to ensure the continuing performance of the device.

### **Hazardous Material Spill**

If there is a spill event on site, the StormFilter unit should be inspected and cleaned. Specifically, all captured pollutants and liquids from within the unit should be removed and disposed in accordance with any additional requirements that may relate to the type of spill event. Additionally, it will be necessary to inspect the filter cartridges and assess them for contamination, depending on the type of spill event it may be necessary to replace the filtration media.

### **Blockages**

In the unlikely event that flooding occurs upstream of the StormFilter system the following steps should be undertaken to assist in diagnosing the issue and determining the appropriate response.

- 1. Inspect the upstream diversion structure (if applicable) ensuring that it is free of debris and pollutants
- 2. Inspect the StormFilter unit checking the underdrain manifold as well as both the inlet and outlet pipes for obstructions (e.g. pollutant build-up, blockage), which if present, should be removed.

### Major Storms and Flooding

In addition to the scheduled activities, it is important to inspect the condition of the StormFilter after a major storm event. The focus is to inspect for damage and higher than normal sediment accumulation that may result from localised erosion. Where necessary damaged components should be replaced and accumulated pollutants should be removed and disposed.

### **Disposal of Waste Materials**

The accumulated pollutants found in the StormFilter must be handled and disposed of in a manner that is in accordance with all applicable waste disposal regulations. When scheduling maintenance, consideration must be made for the disposal of solid and liquid wastes. If the filter media has been contaminated with any unusual substance, there may be additional special handling and disposal methods required to comply with relevant government/authority/industry regulations.

### **Maintenance Services**

With over a decade and a half of maintenance experience Ocean Protect has developed a systematic approach to inspecting, cleaning and maintaining a wide variety of stormwater treatment devices. Our fully trained and professional staff are familiar with the characteristics of each type of system, and the processes required to ensure its optimal performance.

Ocean Protect has several stormwater maintenance service options available to help ensure that your stormwater device functions properly throughout its design life. In the case of our StormFilter system we offer long term pay-as-you-go contracts, pre-paid once off servicing and replacement media for cartridges.

For more information please visit www.OceanProtect.com.au

Item No. 7.1.1

# Agenda (Open Portion) City Planning Committee Meeting - 19/9/2022



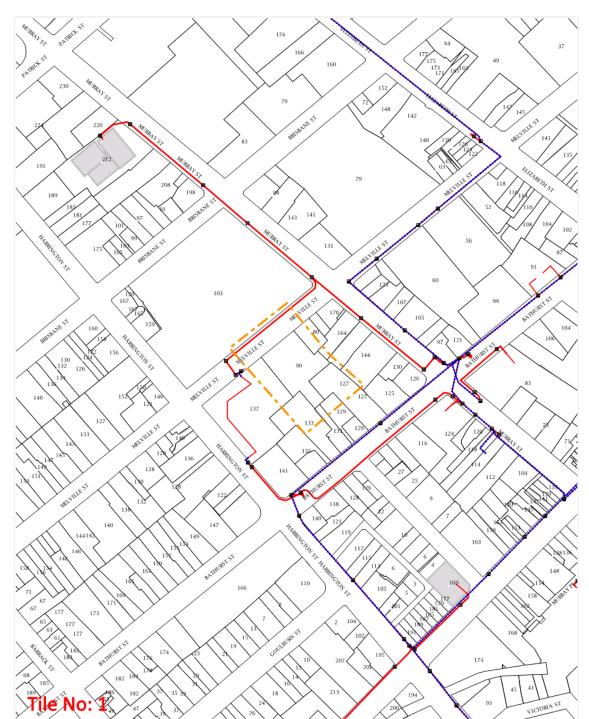
90 Melville St, Hobart TAS 24468 C R001 Rev02 (05.05.22).docx May 2022

Appendix J HCC Infrastructure Mapping

### City of Hobart: Stormwater Network







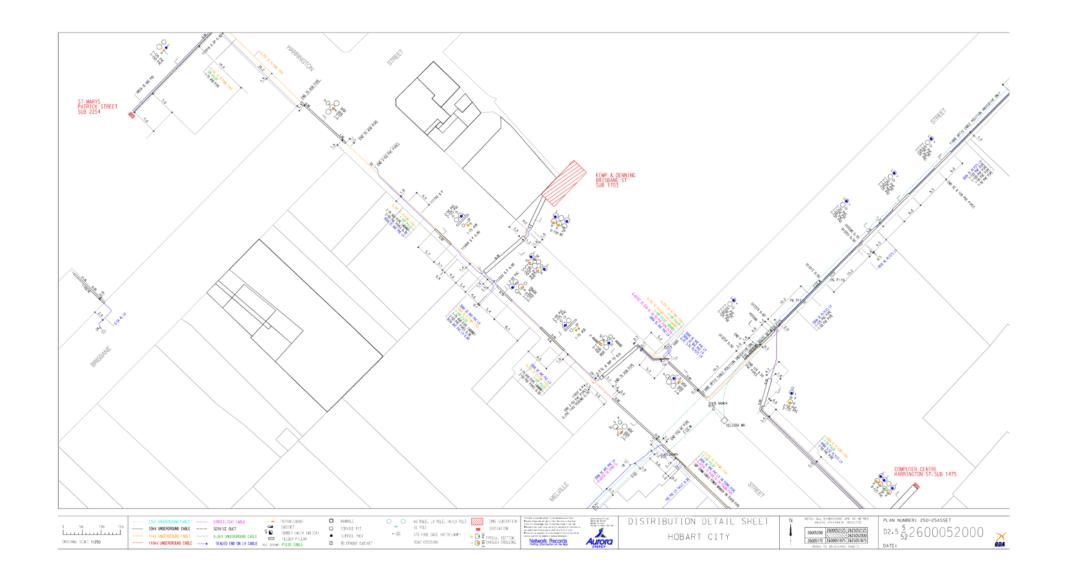
WARNING: This document is confidential and may also be privileged. Confidentiality nor privilege is not waived or destroyed by virtue of it being transmitted to an incorrect addressee. Unauthorised use of the contents is therefore strictly prohibited. Any information contained in this document that has been extracted from our records is believed to be accurate, but no responsibility is assumed for any error or omission. Optus Plans and information supplied are valid for 30 days from the date of issue. If this timeline has elapsed, please raise a new enquiry.

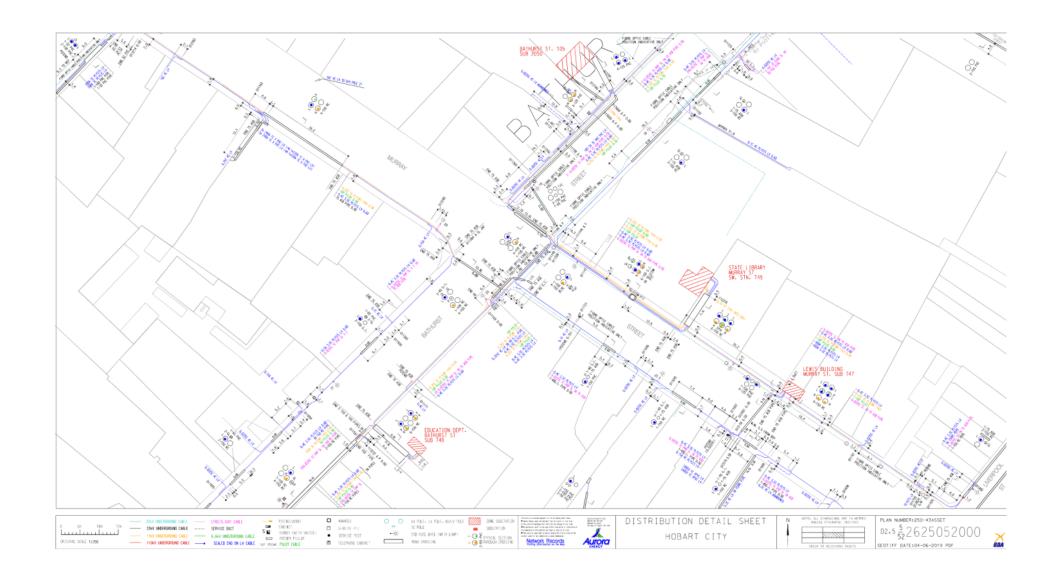
Sequence Number: 203756907 Date Generated: 06 Oct 2021



For all Optus DBYD plan enquiries – Email: Fibre.Locations@optus.net.au For urgent onsite assistance contact 1800 505 777 Optus Limited ACN 052 833 208













06/10/2021

ADG Engineers - James Nation

ADG Engineers PO Box 1492

Toowong BC QLD 4066 Job No: 30642582 Sequence No: 203756903

Location Specified in Request (Site): 90 Melville Street Hobart

# TASNETWORKS HAS RECORDS OF UNDERGROUND ELECTRICAL AND/OR TELECOMMUNICATIONS ASSETS IN OR AROUND THE SITE. Do not proceed without reading and understanding the following

Do not proceed without reading and understanding the following requirements.

#### Our assets

TasNetworks owns and maintains electrical and telecommunications assets. Our electrical assets include Transmission Extra High Voltage (EHV) and Distribution High Voltage (HV) and Low Voltage (LV) Networks. TasNetworks' telecommunication underground assets can be direct buried, within a conduit and/or installed with other services. Our assets may be located underground or overhead.

#### Our records

TasNetworks has records of underground assets owned by TasNetworks located in or around the Site. The approximate locations of these underground assets are set out in the plans enclosed. The plans and asset information provided with this letter are a guide only and may not provide an exact location of TasNetworks' underground assets.

On occasion, infrastructure not owned by TasNetworks may show up in our records and our DBYD response to you. If you believe that infrastructure shown on our DBYD response is not owned by TasNetworks, please contact us for further assistance.

#### Private assets

TasNetworks does not maintain records for privately owned infrastructure. You will need to make enquiries about the location of any privately owned assets with the relevant property owner.

### **On-site Location Services**

The location of TasNetworks' assets on the enclosed plans is approximate only. TasNetworks recommends you engage the services of a DBYD accredited cable location service provider to determine the exact location of underground assets. DBYD accredited locators can be found at <a href="https://www.dbydlocator.com">www.dbydlocator.com</a>.

### Liability

TasNetworks will not be liable to you or any person for any loss or damage (whether direct, indirect, special, consequential or otherwise) suffered or incurred if you (or any other person) act, or fail to act, on any information set out in these instructions.

You must obtain updated plans from TasNetworks if you undertake work more than 30 days from the date of this letter by submitting a new DBYD enquiry. If any doubt exists as to your requirements or obligations when excavating around TasNetworks' assets, then contact the Customer Service Centre prior to any work commencing.

Regards

Customer Service Centre Officer TasNetworks Pty Ltd Phone: 1300 137 008

www.tasnetworks.com.au

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### Your Obligations: Working near TasNetworks' Ground Mounted Infrastructure and Underground Power Cables

For work that involves excavation or boring with penetration **below 100 mm and within 5 metres** of TasNetworks' underground assets, you must:

### Plan work

- 1. Conduct Dial Before You Dig search.
- 2. Follow instructions on response.
- Engage an accredited cable locator to locate and mark the location of the relevant assets showing alignment and depth.
- Pothole by hand or use other non-destructive methods to expose the cable and verify location and depth of the assets.
- Develop a safety management plan or Safe Work Method Statement (SWMS), which outlines how the risks associated with cables will be managed.

### Inform TasNetworks

- TasNetworks must be notified by contacting 1300 137 008 at least 7 days prior to the commencement of the works if:
  - a. The proposed work is within 2 metres of TasNetworks' ground mounted assets; or
  - b. The proposed work is within 1 metre of TasNetworks' underground assets, e.g. cables.
- Include location of the work, dates and time work will commence and cease, work methodology and name of contact person resposible for site safety.
- TasNetworks will provide a response as to whether the work can be undertaken and any requirements that must be adhered to when undertaking the work.
  - Work cannot proceed without prior written authorisation from TasNetworks. Failure to notify TasNetworks may be an offence under the Electrical Supply Industry Act.

### Perform work

 If excavations are within the vicinities outlined in the table below, no mechanical excavation is allowed (only hand digging or vacuum truck excavation is permitted), unless approved by TasNetworks.

Cable Type	Depth of Excavation	Proximity to Cable (Horizontal)
Communication or LV	500 millimetres	2 metres
HV	500 millimetres	2 metres
EHV	100 millimetres	5 metres
Substations	400 millimetres	2 metres

- 2. Cables must be supported.
- 3. A TasNetworks representative must be on-site (at cost) for work under assets >1m long.

### Reinstate site

- The installation (including cable markers, bedding materials and mechanical protection) must be reinstated to AS3000 Standard.
- 2. An electrical practitioner must perform reinstatement works.



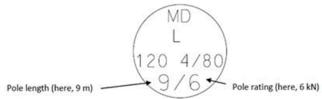


### Your Obligations: Working near TasNetworks' Poles

### Plan work

1. Determine pole strength from identification tag or contact TasNetworks. An example of a pole identification tag is shown below (Figure 1). The last two numbers on the tag represent the length and strength rating of the pole.

Figure 1: Pole Identification Tag



2. Check depth and distance against pole strength using the table below (Figure 2).

Figure 2: Temporary excavation limits when working near TasNetworks poles

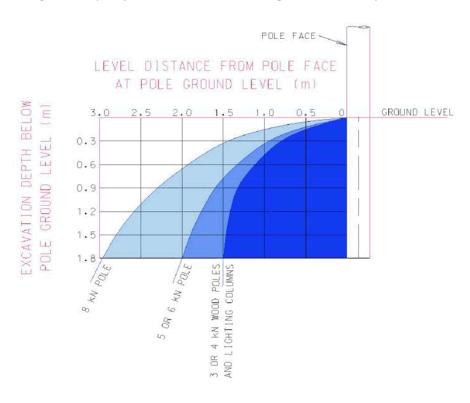






Figure 2 applies to TasNetworks' timber poles and lighting columns with a length between 9m and 12m, strength of 3 kN to 8 kN, and assumes that the excavation is open for no more than one week.

If the pole is made from a material other than timber then:

- If the pole is 125 mm rectangular hollow section (RHS), it should be treated like a 4 kN timber pole when using Figure 2.
- Any other pole type should be treated like an 8 kN timber pole when using Figure 2.

### Inform TasNetworks

- If excavations are located outside of the limit curves in Figure 2 or do not exceed 300 mm in depth then work may proceed without notifying TasNetworks.
- If the excavation falls within the limit curves (the shaded area) in Figure 2 and exceeds 300 mm in depth, this will affect electrical infrastructure and the Contractor shall obtain written advice from a suitably qualified and experienced engineer detailing:
  - 1. How the pole is to be kept safe during the excavation; and
  - 2. How the ground around the structure should be reinstated.
- A copy of the engineer's advice along with the name, qualifications and contact details of the
  advising engineer must be emailed to <u>customer.enquiries@tasnetworks.com.au</u> at least 7 days
  prior to the commencement of works.

### Perform work

- 1. The Contractor must ensure the advising engineer's advice is fully implemented.
- If the engineering advice requires that the pole be physically supported then this should be undertaken by TasNetworks.
- If pole support is required, TasNetworks must be notified at least 21 days prior to commencement of works. A quote will be provided by TasNetworks for the pole support works.
- 4. No excavation is to be undertaken near condemned poles.

### Reinstate site

- 1. The installation must be reinstated to AS3000 Standard.
- 2. An electrical practitioner must perform reinstatement works.





# Your Obligations: Working near TasNetworks' Telecommunications Assets

For work that involves excavation or boring with penetration **below 100 mm and within 5 metres** of TasNetworks' telecommunications, you must:

#### Plan work

- You must possess a current TasNetworks Dial Before You Dig response (submitted and received within 14 days of the proposed excavation).
- 2. Follow instructions on response.
- 3. Engage a Dial Before You Dig Certified Locator to identify and mark the location of the relevant assets showing alignment and depth.
  - Most telecommunications underground assets are non-conductive in nature and contained in conduit.
  - Locations must be determined using active locations methods incluing Sondes and Duct Rods.
  - c. In specific locations TasNetworks have installed EMS Transponders directly above telecommunications conduits.
  - d. If actual locations differ significantly from that detailed on the TasNetworks response contact TasNetworks on 1300 137 008.
- 4. Pothole by hand or use other non-destructive methods to expose the conduit, earth mats or cable and visually verify location and depth of the assets.
- Develop a safety management plan or Safe Work Method Statement (SWMS), which outlines how the risks associated with telecommunication assets, will be managed.

#### Inform TasNetworks

- TasNetworks must be notified by contacting 1300 137 008 at least 7 days prior to the commencement of the works if:
  - The proposed work is within 5 metres of TasNetworks' telecommunications facility e.g. microwave tower: or
  - The proposed work is within 1 metre of TasNetworks' underground assets, e.g. conduits and cables.
- Your notification must include location of the work, dates and time work will commence and cease, work methodology and name of contact person resposible for site safety. TasNetworks will provide a response as to whether the work can be undertaken and any requirements that must be adhered to when undertaking the work.

It is a criminal offence under the Criminal Code Act 1995 (Cth) to tamper or interfere with communication facilities owned or operated by a carrier and any damages suffered, or costs incurred by TasNetworks as a result of any such unauthorised works may be claimed against you.

### Perform work

- If excavations are within 1m, no mechanical excavation is allowed (only hand digging or vacuum truck excavation is permitted), unless approved by TasNetworks.
- 2. Any work undertaken must not interfere with TasNetworks Telecommunications assets.
- 3. A TasNetworks representative must be on-site (at cost) for work under assets >1m long.

### Reinstate site

The installation (including cable markers, bedding materials and mechanical protection) must be reinstated to ACIF C524 2013.

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### Your Obligations: Earthing Infrastructure

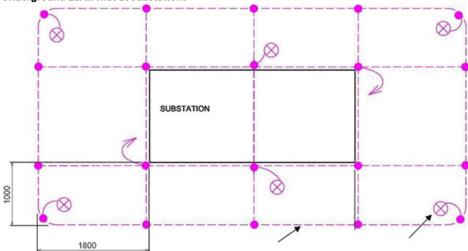
Earthing systems are essential for providing electrical safety and TasNetworks places a high emphasis on protecting these assets.

Earthing systems are connected to many of TasNetworks' electrical assets. The earthing systems are laid in the ground, both near the assets and underneath them. Typically transformer poles, turrets and cabinets are earthed by means of a 1.8 m earth rod (copper rod driven into ground), while substations are earthed using earth rods and an earth mat. Earth mats are installed approximately 0.5 m below ground level and extend approximately 1.8 m from the extremities of the substation. Earthing systems are made from copper and are not insulated.

If during excavations an earth rod or earth mat is uncovered or damaged then stop work immediately and contact TasNetworks on 13 2004.

Provided TasNetworks is notified immediately, TasNetworks will repair the earth system at no cost to the Contractor.

### **Underground Earth Mat at Substations**



Earth mat

Earth rod

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# Working Safely



Electricity infrastructure can cause **SERIOUS INJURY (INCLUDING DEATH)** if damaged or interfered with.

# Immediately report any contact with TasNetworks' electricity infrastructure or telecommunications assets by telephoning 132 004.

- Follow the Dial Before You Dig (DBYD) Best Practice Guide for Locating Underground Services
- Exercise reasonable skill, care and diligence so that you do not interfere with any of TasNetworks' assets.
- Fibre optic assets are fragile; contact with a fibre optic cable may cause internal damage, even
  when no external damage is present.
- It is an offence under section 109 of the Electricity Supply Industry Act 1995 (Tas) to interfere
  with TasNetworks' electrical infrastructure or an electrical installation without TasNetworks'
  consent
- Ensure an emergency plan for contact with energised electric lines is developed and maintained so it is effective for each workplace or site.
- If during excavations an earth rod or earth mat is uncovered or damaged then stop work immediately and contact TasNetworks on 13 2004.
- The majority of overhead powerlines are not insulated. Getting too close to them with any
  material that conducts electricity can have fatal results.
- Ensure no part of a person or vehicle comes within three metres of any powerline.

### **Emergencies or Faults**

If TasNetworks' electrical assets are damaged during works then:

- 1. Stop work immediately;
- 2. Contact TasNetworks immediately on 13 2004;
- 3. Keep all people at least 8m away from the fallen power lines, damaged underground cables or infrastructure until TasNetworks crews arrive on site; and
- Supervise site to ensure members of the public and others do not approach the vicinity until TasNetworks crews arrive.

For more information see the TasNetworks website www.tasnetworks.com.au



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### **Enquiry Details**

Enquiry Details	
Utility ID	50300
Job Number	30642582
Sequence Number	203756903
Enquiry Date	06/10/2021 14:21
Address	90 Melville Street Hobart
Location in Road	Road,Nature Strip,Footpath
Activity	Mechanical Excavation,Non-Destructive Digging

Enquirer Details			
Customer ID	3062002		
Contact	James Nation		
Company	ADG Engineers		
Email	jnation@adgce.com		
Phone	+61413009412	Mobile	

Assets			
Affected Assets	Conduit, HV Cable, LV Cable, Fibre Optic Cable		







### Plan description

A colour overview map and index map(s) are attached. Key to symbols are included on these plans. All maps highlight the Site in a green colour. To ensure the symbols are easily identified, these maps must not be printed in black and white.

Where relevant, detailed underground asset plans for TasNetworks owned assets may also be attached as separate PDFs.

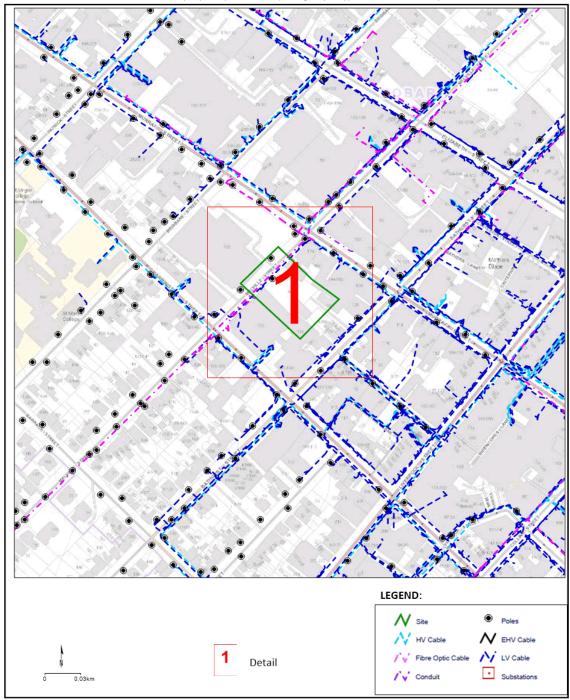




Overview Map **Job No:** 30642582 **Sequence No:** 203756903

90 Melville Street Hobart

TasNetworks contact details: 1300 137 008 (enquiries) or 132 004 (emergency only), email customer.enquiries@tasnetworks.com.au



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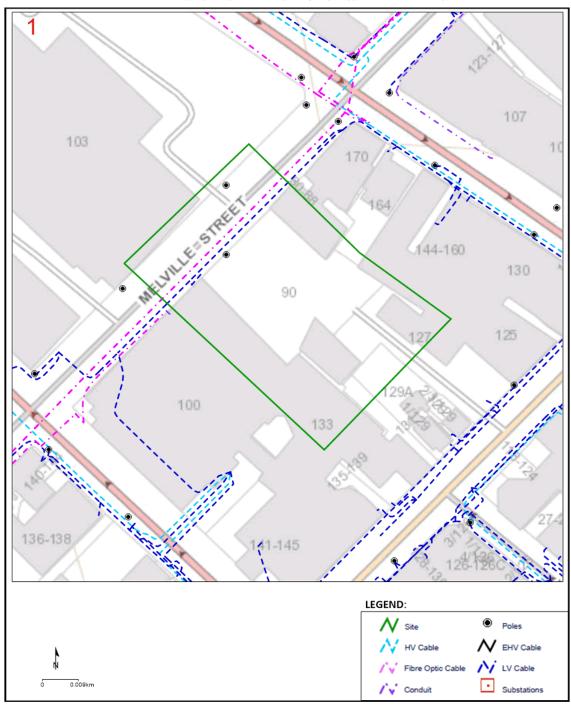




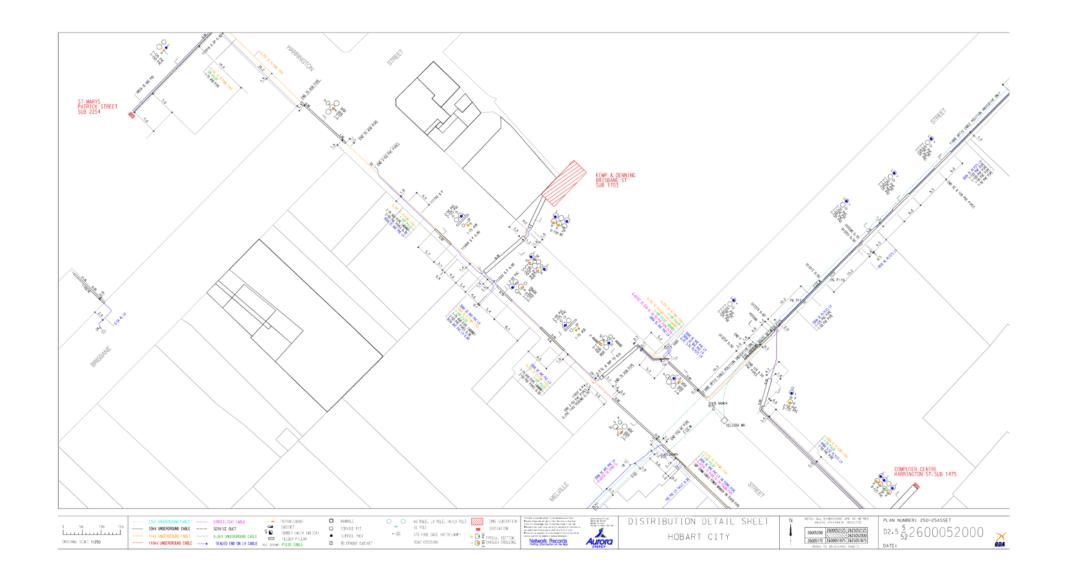
**Detail Map 1 Job No:** 30642582 **Sequence No:** 203756903

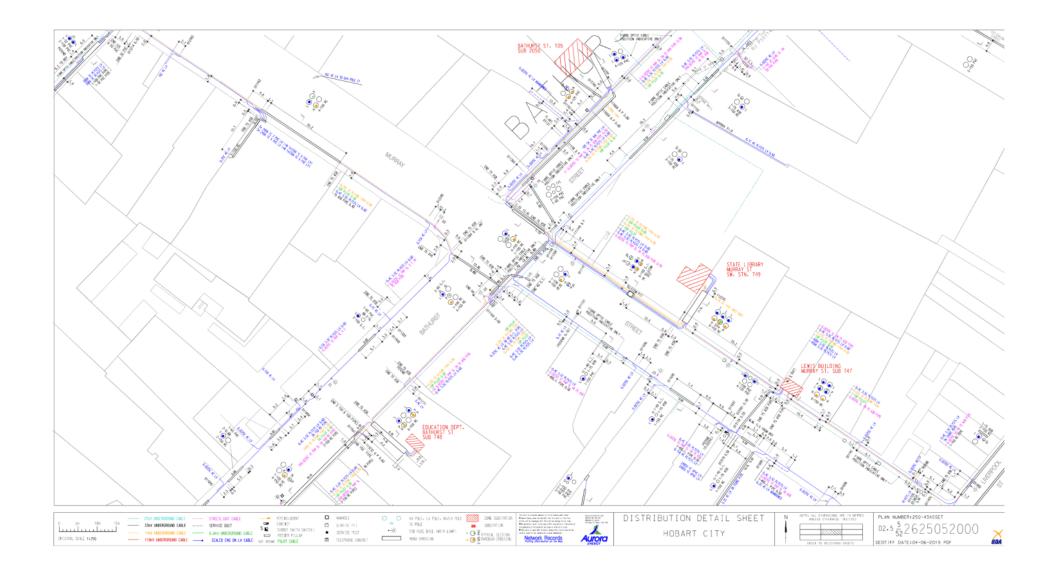
90 Melville Street Hobart

TasNetworks contact details: 1300 137 008 (enquiries) or 132 004 (emergency only), email customer.enquiries@tasnetworks.com.au



Page 11 of 11 Job No. 30642582 Sequence No: 203756903







Form BMSDOC-18-1001 Status - Approved Current Version: 10.0 Published Date: April 2017

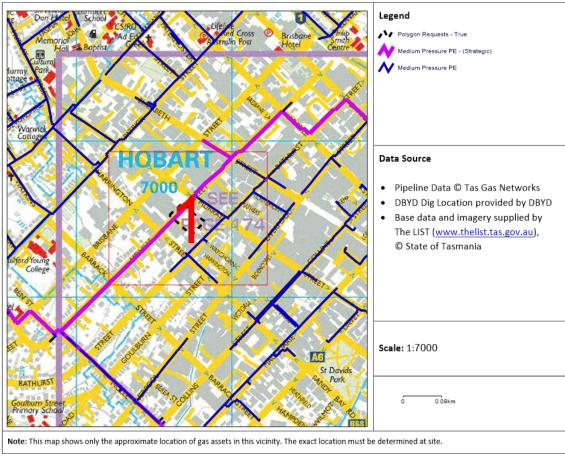
### DBYD Requirements of Work - Strategic Polyethylene Pipe

DBYD Sequence Number	203756900	DBYD Enquiry Date	06/10/2021	
Location	90 Melville Street Hobart			
Enquirer's Name	ADG Engineers - James Nation			
Enquirer's Address	PO Box 1492			
Response email	jnation@adgce.com		ASSET TYPE	STRATEGIC PE

Tas Gas Networks operates and maintains high pressure gas infrastructure in the area of your interest, which:

### is affected by your proposed works or your interest. (Mechanical Excavation, Non

The location of the high pressure gas infrastructure operated by Tas Gas Networks in the area of your interest is indicated on the map below. Thank you for your assistance in maintaining a safe and secure gas pipeline network.

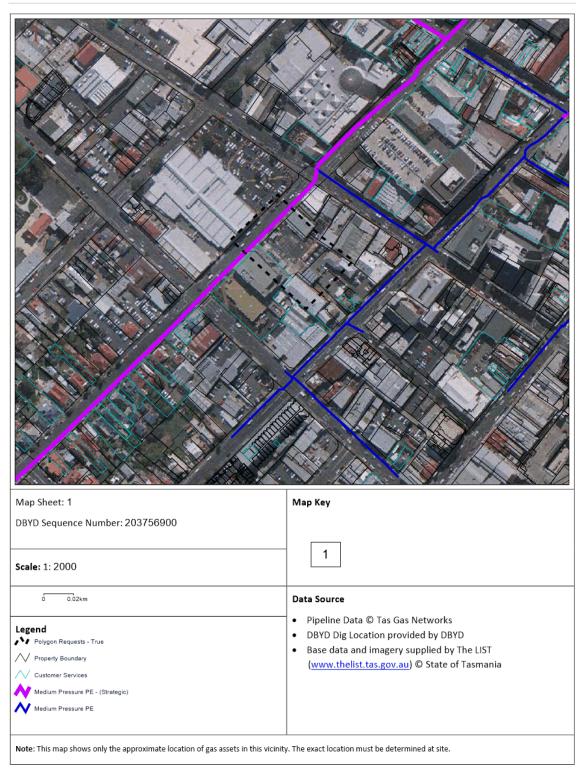


Tas Gas Networks, 5 Kiln Court, St. Leonards, TAS, 7250 | Ph: 03 6336 9350 | Fax 03 6336 9355 | Email: TasGas.DBYD@tasgas.com.au



Form BMSDOC-18-1001 **Status - Approved** Current Version: 10.0

### DBYD Requirements of Work - Strategic Polyethylene Pipe





Form BMSDOC-18-1001 Status - Approved Current Version: 10.0

DBYD Requirements of Work - Strategic Polyethylene Pipe

### REQUIREMENTS TO BEGIN WORK

Dear DBYD Enquirer,

The attached maps indicate that you may be planning works near a Tas Gas Networks **Strategic PE** gas main. These gas pipelines are typically the single feed for large areas of the network and have the potential to create a catastrophic incident if the integrity is jeopardised. Extreme care must be taken, and all instructions provided by Tas Gas must be followed.

The following steps must be followed prior to work within 25 metres of a Tas Gas Strategic PE main.

Failure to follow these steps can result in financial penalties, prosecution and serious safety risks.

### 1. Understand the Tas Gas requirements for the work

Tas Gas requirements for work near Strategic PE mains include:

- Tas Gas asset mark out (trace) for all works within 25 m;
- Issue of a Third Party Works Agreement for all works within 5 m; and
- Tas Gas standover for all works within 1 m.

**Note:** Gas assets can be marked out with or without the enquirer on site. A Third Party Works Agreement is a document issued by Tas Gas at site on the day of the works.

### 2. Book the required Tas Gas services

Call Tas Gas reception on (03) 6336 9350 with at least 48 hours' notice to book a Gas Service Technician to provide the required services.

**Note:** Where the work is conducted within one standard working day, there is no charge for these services.

Failure to comply with these conditions may expose you to serious safety risks, financial penalties, and/or prosecution under Sections 96, 109 and 110 of the Gas Safety Act 2019 as amended. This document does not constitute approval to initiate works.

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Tas Gas

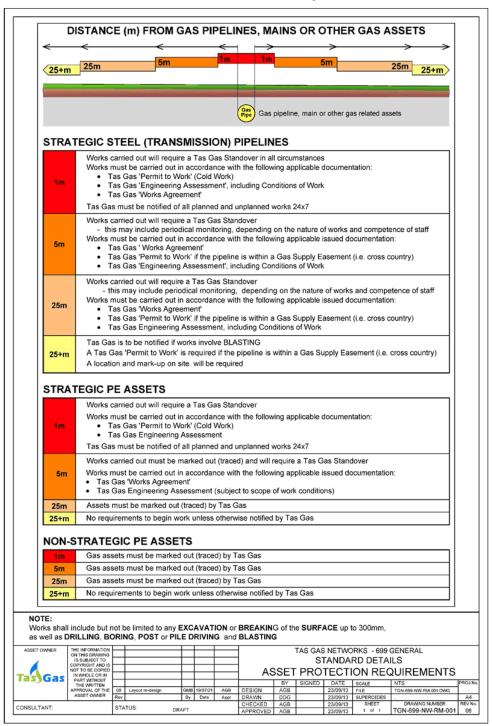


Form BMSDOC-18-1001 Status - Approved

Current Version: 10.0

DBYD Requirements of Work - Strategic Polyethylene Pipe

### ASSET PROTECTION REQUIREMENTS





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DBYD Requirements of Work - Strategic Polyethylene Pipe

### **ADDITIONAL WORK REQUIREMENTS**

- A Tas Gas Engineer must be notified of any blasting work within 100 m of gas assets. Blasting work
  poses a different set of risks due to ground-borne vibrations, and must be monitored to ensure the
  safety of all personnel and infrastructure.
- Tas Gas provides free asset location services. Please contact Tas Gas on (03) 6336 9350 with 48 hours' notice to request an asset location.
- Under no circumstances should excavation or boring/drilling works take place within 1 m (horizontal)
  of Tas Gas Strategic mains or pipelines without a Tas Gas representative on site.
- 4. Third parties must be issued with a *Third Party Works Agreement* for planned excavation within 25 m of Strategic Steel pipelines and 5 m of Strategic PE mains.
- Vacuum trucks used to expose gas assets must have a nozzle pressure not greater than 135 bar (2000 psi). Pressures above this can damage PE pipe and steel pipeline coatings.
- 6. Excavation and saw cutting to a depth of 300 mm from existing ground level is permitted. No further use of mechanical excavation is allowed deeper than 300 mm when excavating within 1 m of the known alignment of gas assets.
- 7. Refer to the following pages for minimum clearances between gas and other assets. If these clearances cannot be achieved, a Tas Gas Engineer must provide approval before installation.
- 8. No structure or installation is permitted above or directly adjacent to any Tas Gas main or service without the prior written approval of the Tas Gas Asset Manager, or delegate. Loads from adjacent structures or installations must not transfer to gas assets.
- 9. Tas Gas DBYD documents are valid for 60 days from issue. DBYD documents must be requested for each new work proposal.
- 10. If you smell gas or hear gas escaping from a gas asset, follow the Gas Emergency procedure on page 7.
- 11. If damage, denting, scouring or gouging occurs to pipe or pipe coating, contact Tas Gas immediately on 180 2111. Minor damage to pipeline coatings can affect the pipe's integrity and the safety of the pipe may be severely compromised if left unreported.
- 12. Contact us for further information on (03) 6336 9350.



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DBYD Requirements of Work - Strategic Polyethylene Pipe

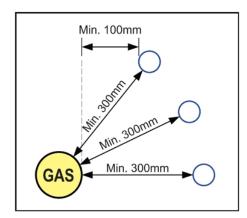
### **CLEARANCES BETWEEN ASSETS**

### Minimum clearances between gas pipelines and mains and other infrastructure:

- 300 mm where assets cross a gas main or pipeline (500 mm for electrical assets).
- 500 mm where assets are laid parallel to a gas main.
- 300 mm between the bottom of road boxing and the top of a gas main or pipeline.
- 500 mm between earthing stakes and any gas asset.

**Electrical assets are not permitted to cross above gas assets** unless approved by a Tas Gas Engineer. Approval may be granted for low voltage electrical asset where the minimum separation requirements are achieved.

The following diagram can be used for assistance:



**NOTE:** Minimum separation to be 300 mm with a horizontal separation of 100 mm (500 mm horizontal separation required for electrical assets).

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### Minimum clearances between gas services (usually 20 or 32 mm PE) and other infrastructure:

- 150 mm where assets cross a gas services (500 mm for electrical assets).
- 300 mm where assets are laid parallel to a gas service (500 mm for electrical assets).
- 150 mm between the base of a concrete driveway or footpath a gas service.
- 300 mm between the bottom of road boxing and the top of a gas service.
- 500 mm between all gas assets and earthing stakes.
- No separation requirement between gas services installed in conduits and other assets (excluding electrical assets).



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### DBYD Requirements of Work – Strategic Polyethylene Pipe

### GAS EMERGENCY PROCEDURE

Basic steps for Third Parties in the event of a gas escape

### **GAS EMERGENCY PHONE NUMBER: 180 2111**

- Remove and/or switch off all ignition sources except diesel plant in the immediate area (i.e. extinguish cigarettes
  and naked flames; turn off petrol and electrical motors and vehicles, mobile phones and battery operated
  equipment).
- DO NOT turn off diesel powered machinery, or restart it, until instructed to do so by an appointed Gas Officer from Tas Gas.
- 3. Never cover a damaged gas main or service; or attempt to carry out a repair. The temptation will be to cover the leaking pipe with earth or sand or even an excavator bucket. This is not advised and could cause more serious issues with gas being diverted into other underground voids, drill bore holes etc.
- 4. Determine the wind direction and move away from the immediate gas escape area towards the source of the wind. Move <u>at least</u> 100 m (approximately 6 residential houses) to where the area is open and air is freely circulating. Gas can only burn if exposed to an ignition source do NOT use naked flames, smoke, or use mobile phones in the vicinity.
- 5. Contact **180 2111** and report details of the gas escape or alternatively, contact **000** if other services or infrastructure have been affected and/or if injury or property damage has occurred.
- 6. Wait for Tas Gas' emergency team to arrive on site.
- Prevent onlookers and other non-emergency vehicles from entering the area. Where possible keep access to the immediate area free for emergency vehicles.
- 8. **DO NOT** attempt to evacuate houses or premises adjacent to the gas escape unless directed to do so by emergency service personnel or an appointed Gas Officer from Tas Gas.
- 9. When the Tas Gas' emergency team arrives on site, co-operate and do as instructed. You will be advised when it is safe to re-enter the immediate area.

### During an uncontrolled escape, natural gas will behave in the following ways:

- In open excavation where there is a clear path to the atmosphere, natural gas will rise, dilute and disperse in the air.
- If the path to the atmosphere is blocked, the gas will travel through ducts, drains, sewers and voids or follow the line of
  other buried utility services. This can lead to gas entering a building or other confined spaces, and may lead to a fire or
  explosion.

### **Attendance of Emergency Services:**

### Police primary roles:

- Safeguard life and to restrict pedestrian access and vehicular movements near the gas leak;
- Instigate road closures and control onlookers and other third parties;
- · Protect any crime scene that may be present; and
- Provide advice and information at a general level to enquirers, media and government entities.

### Fire Service primary roles:

- Safeguard life and property;
- Secure the area and then undertake evacuations as required or as requested;
- Set up control spray monitors if the gas escape has ignited to cool adjacent structures or facilities, or to dampen areas
  around the gas leak site to reduce the risk of sparks. The area should NOT be flooded with water so delaying any repairs or
  isolation of the gas; and
- Do NOT try to extinguish the fire as unburned gas creates a greater risk.



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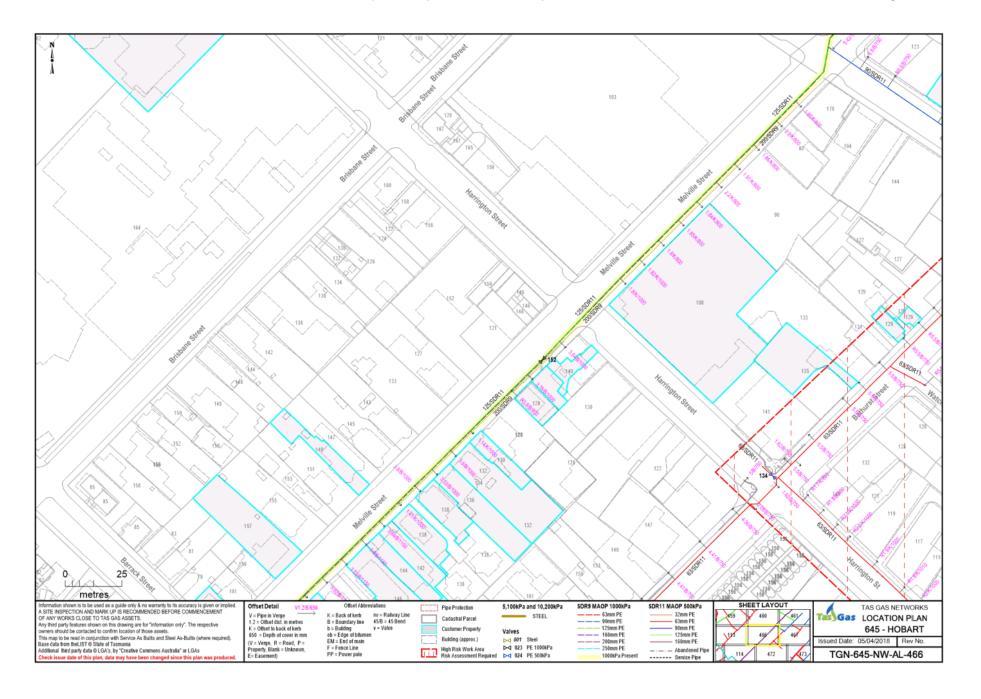
### DBYD Requirements of Work - Strategic Polyethylene Pipe

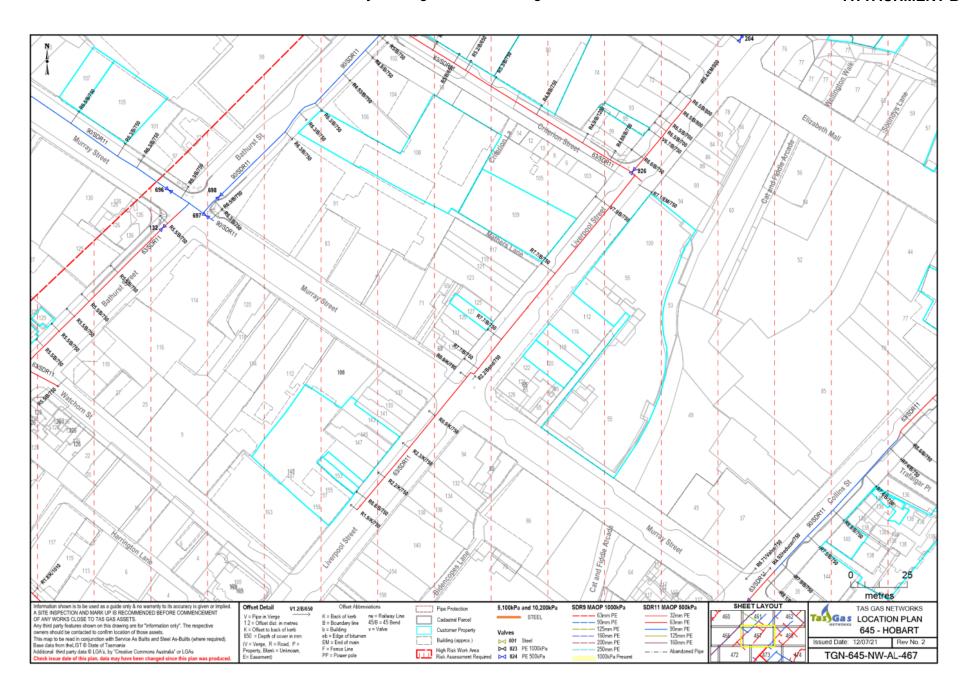
### DUTY OF CARE

- It is the responsibility of the person(s) carrying out the works to exercise their Duty of Care, and
  have the utmost regard for the safety of property and life. Tas Gas Networks have provided these
  minimum Conditions of Works and they must be complied with by the person(s) carrying out the
  works. Under no circumstances will Tas Gas Networks accept liability for the acts or omissions of
  person(s) carrying out works.
- Service lines from the gas mains to consumer premises are not shown on DBYD documents in many instances. The outlines of connected properties are shown in light blue on the map on page 2 of this document. The location of any below ground gas asset must be <u>proven by hand</u> <u>excavation</u>. Restrictions on excavating near gas assets are stated on Page 5.
- Every care has been taken to ensure that the location of gas mains shown on Tas Gas plans or
  given verbally is accurate. Variations from records do exist and complete accuracy cannot be
  guaranteed. Tas Gas does not accept any responsibility for any inaccuracies of its plans. If in
  doubt, contact a Tas Gas Asset Engineer on (03) 6336 9350.
- If damage does occur to a Tas Gas asset, Tas Gas reserves the right to make safe and repair the
  asset at its discretion, and may seek compensation for damage to property and/or prosecution
  under Sections 96, 109 and 110 of the Gas Safety Act 2019 as amended.

### LEGISLATIVE REQUIREMENTS

It should be noted that any excavation works near gas assets are deemed to be "High Risk Construction Work" in accordance with the Work Health and Safety Regulations 2012 (Clause 291(i)). This puts a requirement on the person undertaking the work to prepare, amongst other things, a Safe Work Method Statement before the works commence (Clause 299). TGN will most likely request to see this document before works are allowed to commence. Accordingly, you must read, understand and comply with documents issued as part of this enquiry.





# Aboriginal Heritage SEARCH RECORD

### This search in response to your DBYD request

Job Number: 30642582 (Sequence Number: 203756905)

has not identified any registered Aboriginal relics or apparent risk of impacting Aboriginal relics.

This Search Record has been requested for James Nation at 2:30PM on 06 October 2021 and delivered to jnation@adgce.com.

This Search Record expires on 06 April 2022.

Your personal Search Identification Number is PS0181167.

Please be aware that the absence of records on the <u>Aboriginal Heritage Register</u> for the nominated area of land does not necessarily mean that the area is devoid of Aboriginal relics. If at any time during works you suspect the existence of Aboriginal relics, cease works immediately and contact Aboriginal Heritage Tasmania for advice.

It is also recommended that you have on hand during any ground disturbance or excavation activities the <u>Unanticipated Discovery Plan</u>, to aid you in meeting requirements under the *Aboriginal Heritage Act 1975* should Aboriginal relics be uncovered. There are requirements that apply under the <u>Aboriginal Heritage Act 1975</u>. It is an offence to destroy, damage, deface, conceal or otherwise interfere with relics without a permit granted by the Minister. There is an obligation to report findings of relics as soon as practicable.

This Search Record is confirmation that you have checked the Aboriginal Heritage Property Search website or the Dial Before You Dig referral service for this search area. This Search Record will expire in six months from the search date.

If you have any queries please do not hesitate to contact <u>Aboriginal Heritage Tasmania</u> on 1300 487 045 or at <u>aboriginal@heritage.tas.gov.au</u>.



# **Unanticipated Discovery Plan**

Procedure for the management of unanticipated discoveries of Aboriginal relics in Tasmania

For the management of unanticipated discoveries of Aboriginal relics in accordance with the Aboriginal Heritage Act 1975 and the Coroners Act 1995. The Unanticipated Discovery Plan is in two sections.

# Discovery of Aboriginal Relics other than Skeletal Material

#### Step 1:

Any person who believes they have uncovered Aboriginal relics should notify all employees or contractors working in the immediate area that all earth disturbance works must cease immediately.

### Step 2:

A temporary 'no-go' or buffer zone of at least  $10m \times 10m$  should be implemented to protect the suspected Aboriginal relics, where practicable. No unauthorised entry or works will be allowed within this 'no-go' zone until the suspected Aboriginal relics have been assessed by a consulting archaeologist, Aboriginal Heritage Officer or Aboriginal Heritage Tasmania staff member:

### Step 3:

Contact Aboriginal Heritage Tasmania on I 300 487 045 as soon as possible and inform them of the discovery. Documentation of the find should be emailed to

aboriginal@heritage.tas.gov.au as soon as possible. Aboriginal Heritage Tasmania will then provide further advice in accordance with the *Aboriginal Heritage Act 1975*.

### **Discovery of Skeletal Material**

### Step I:

Call the Police immediately. Under no circumstances should the suspected skeletal material be touched or disturbed. The area should be managed as a crime scene. It is a criminal offence to interfere with a crime scene.

### Step 2:

Any person who believes they have uncovered skeletal material should notify all employees or contractors working in the immediate area that all earth disturbance works cease immediately.

### Step 3:

A temporary 'no-go' or buffer zone of at least  $50 \, \mathrm{m} \times 50 \, \mathrm{m}$  should be implemented to protect the suspected skeletal material, where practicable. No unauthorised entry or works will be allowed within this 'no-go' zone until the suspected skeletal remains have been assessed by the Police and/or Coroner.

### Step 4:

If it is suspected that the skeletal material is Aboriginal, Aboriginal Heritage Tasmania should be notified.

### Step 5:

Should the skeletal material be determined to be Aboriginal, the Coroner will contact the Aboriginal organisation approved by the Attorney-General, as per the *Coroners Act 1995*.



#### Guide to Aboriginal site types

#### **Stone Artefact Scatters**

A stone artefact is any stone or rock fractured or modified by Aboriginal people to produce cutting, scraping or grinding implements. Stone artefacts are indicative of past Aboriginal living spaces, trade and movement throughout Tasmania. Aboriginal people used hornfels, chalcedony, spongelite, quartzite, chert and silcrete depending on stone quality and availability. Stone artefacts are typically recorded as being 'isolated' (single stone artefact) or as an 'artefact scatter' (multiple stone artefacts).

#### Shell Middens

Middens are distinct concentrations of discarded shell that have accumulated as a result of past Aboriginal camping and food processing activities. These sites are usually found near waterways and coastal areas, and range in size from large mounds to small scatters. Tasmanian Aboriginal middens commonly contain fragments of mature edible shellfish such as abalone, oyster, mussel, warrener and limpet, however they can also contain stone tools, animal bone and charcoal.

#### Rockshelters

An occupied rockshelter is a cave or overhang that contains evidence of past Aboriginal use and occupation, such as stone tools, middens and hearths, and in some cases, rock markings. Rockshelters are usually found in geological formations that are naturally prone to weathering, such as limestone, dolerite and sandstone

#### Quarries

An Aboriginal quarry is a place where stone or ochre has been extracted from a natural source by Aboriginal people. Quarries can be recognised by evidence of human manipulation such as battering of an outcrop, stone fracturing debris or ochre pits left behind from processing the raw material. Stone and ochre quarries can vary in terms of size, quality and the frequency of use.

#### **Rock Marking**

Rock marking is the term used in Tasmania to define markings on rocks which are the result of Aboriginal practices. Rock markings come in two forms; engraving and painting. Engravings are made by removing the surface of a rock through pecking, abrading or grinding, whilst paintings are made by adding pigment or othre to the surface of a rock.

#### Burials

Aboriginal burial sites are highly sensitive and may be found in a variety of places, including sand dunes, shell middens and rock shelters. Despite few records of pre-contact practices, cremation appears to have been more common than burial. Family members carried bones or ashes of recently deceased relatives. The Aboriginal community has fought long campaigns for the return of the remains of ancestral Aboriginal people.

Further information on Aboriginal Heritage is available from:

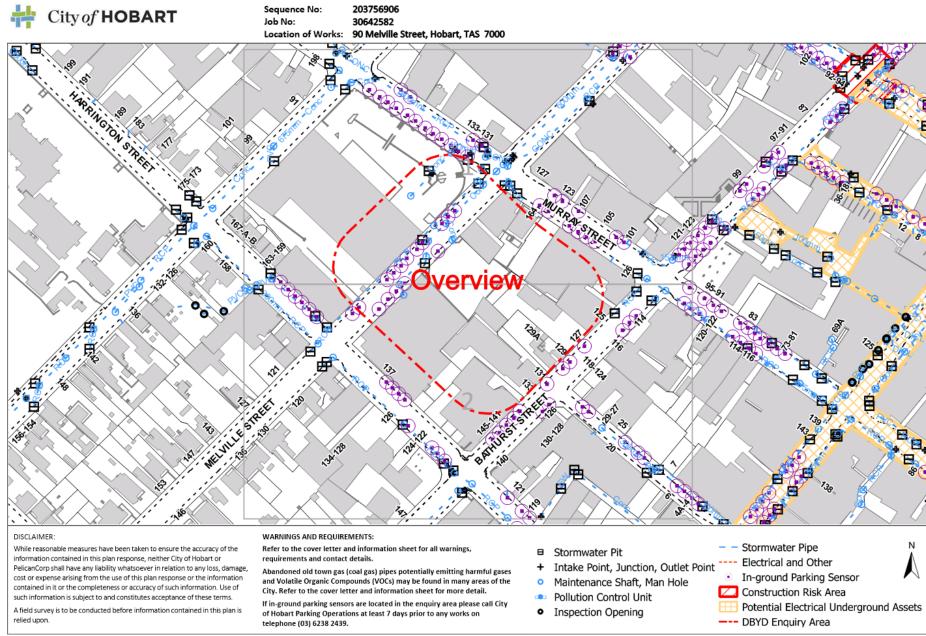
Aboriginal Heritage Tasmania Natural and Cultural Heritage Division Department of Primary Industries, Parks, Water and Environment GPO Box 44 Hobart TAS 7001

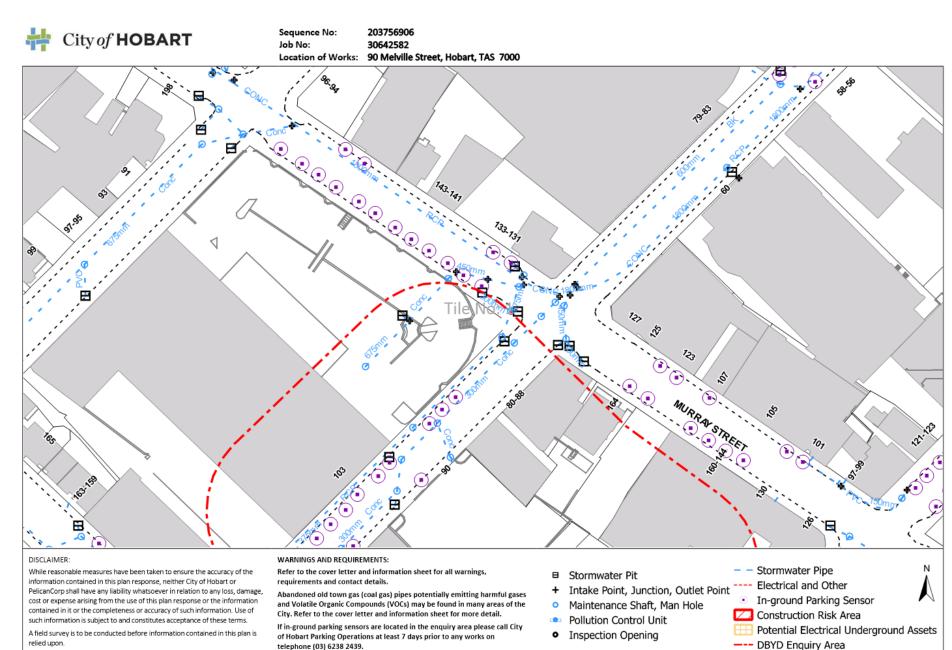
Telephone: 1300 487 045

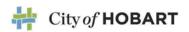
Email: aboriginal@heritage.tas.gov.au
Web: www.aboriginalheritage.tas.gov.au

This publication may be of assistance to you but the State of Tasmania and its employees do not accept responsibility for the accuracy, completeness, or relevance to the user's purpose of the information and therefore disclaims all liability for any error loss or other consequence which may arise from relying on any information in this publication.



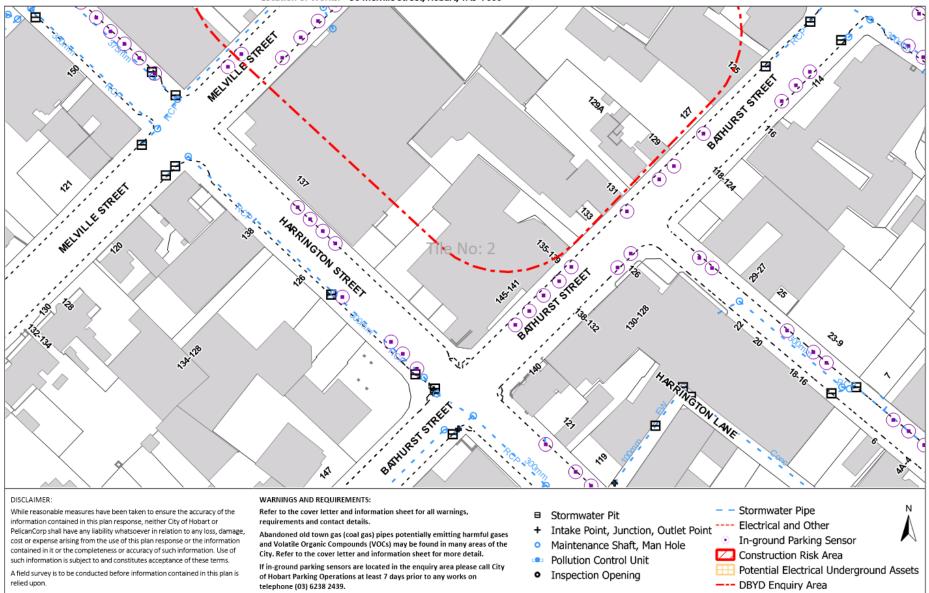






Sequence No: 203756906 Job No: 30642582

Location of Works: 90 Melville Street, Hobart, TAS 7000



#### Agenda (Open Portion) City Planning Committee Meeting - 19/9/2022

#### Page 293 **ATTACHMENT B**

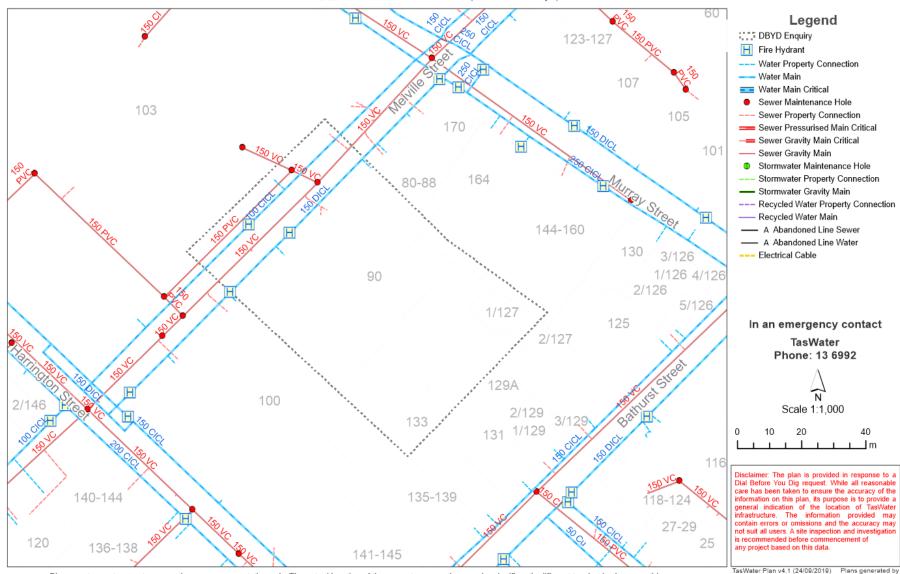


Job # 30642582 Seg # 203756902

Provided by: TasWater

Date Generated: 06/10/21 (valid for 30 days)





Please note most property connections are representative only. The actual location of the property connection may be significantly different to what is shown on this map.

TasWater Plan v4.1 (24/09/2019) Plans generated by SmarterWX™ Automate

#### Brisbane

596 Milton Road Toowong, QLD 4066 PO Box 1492

Toowong BC, QLD 4066 **Phone:** +61 07 3300 8800 **Email:** info@adgce.com

#### Sydney

13 / 20 Berry Street, North Sydney NSW 4006 Phone: +61 02 8908 5400 Email: info@adgce.com

#### Melbourne

Suite 309, 838 Collins Street, Docklands VIC 3008

**Phone:** +61 03 9269 6300 **Email:** info@adgce.com

#### **Gold Coast**

Suite 201, Level 1, 1 Short Street Southport, QLD 4215 PO Box 208 Southport, QLD 4215

**Phone:** +61 07 5552 4700 **Email:** info@adgce.com

#### **Sunshine Coast**

Level 3, 2 Emporio Place Maroochydore, QLD 4558 PO Box 5014

Maroochydore BC, QLD 4558 **Phone:** +61 07 5444 0400 **Email:** info@adgce.com

#### Toowoomba

Tenancy 8, 158 Margaret Street
Toowoomba QLD 4350, Australia
Phone: +61 07 3300 8800
Email: info@adgce.com

#### Darwin

Tenancy 3, LvI 1, 5 Edmunds St, Darwin NT 0800 GPO Box 2422 Darwin, NT 0801

**Phone:** +61 08 8944 6300 **Email:** info@adgce.com

### Perth

Level 3, Suite 15, 23 Railway Road, Subiaco, WA 6008 PO Box 443 Subiaco, WA 6904

**Phone**: +61 08 9217 0900 **Email:** info@adgce.com

#### Hobart

Suite 1B, Level 1, 199 Collins Street Hobart TAS 7000

**Phone:** +61 1300 657 402 **Email:** info@adgce.com





# Agenda (Open Portion) City Planning Committee Meeting - 19/9/2022



1300 657 402

www.adgce.com

31 August 2022

Attention: Phil Papps TasWater GPO Box 1393 HOBART TAS 7001

Dear Phil

Re: 90 MELVILLE STREET, HOBART 24468.001 / C L001, HOBART

PL-22-321 TWDA 2002/01350-HCC

Regarding FRI dated 25/08/2002, please see below responses:

- a. Total sewage flow at the point of connection. 31.8 KL per day
- b. The required Peak day flow rate in L/s and the required residual pressure (kPa) at the point of connection. 7.72 l/s @ 200kPa
- c. Peak day usage in L/day. 35.3 kl per day
- d. Probable simultaneous water demand (PSD) for the proposed development. 7.72 l/s
- e. The required fire flow rate in L/s and the required residual pressure (kPa) at the point of connection. 32 l/s @ 200 kPa
- f. Calculations of the number of Equivalent Tenements. 56.16 et

Kind regards,

MICHAEL VAN ITALLIE Associate Director - Civil

ADG ENGINEERS (AUST) PTY LTD

BRISBANE / SYDNEY / MELBOURNE / GOLD COAST / SUNSHINE COAST / TOOWOOMBA / DARWIN / PERTH / HOBART ABN 63 131 876 143 ACCREDITED | QUALITY ASSURANCE ISO 9001:2015 | WORK HEALTH SAFETY ISO 45001:2018 | ENVIRONMENTAL MANAGEMENT ISO 14001:2015



# **Giameos Construction & Development**

# **90 Melville Street, Hobart Traffic Impact Assessment**

May 2022







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# Appendix A Veolia Waste Management Letter



### 1. Introduction

#### 1.1 Background

Midson Traffic were engaged by Giameos Construction and Development to prepare a traffic impact assessment for a proposed mixed-use development at 90 Melville Street, Hobart.

#### 1.2 Traffic Impact Assessment (TIA)

A traffic impact assessment (TIA) is a process of compiling and analysing information on the impacts that a specific development proposal is likely to have on the operation of roads and transport networks. A TIA should not only include general impacts relating to traffic management, but should also consider specific impacts on all road users, including on-road public transport, pedestrians, cyclists and heavy vehicles.

This TIA has been prepared in accordance with the Department of State Growth (DSG) publication, *Traffic Impact Assessment Guidelines*, August 2020. This TIA has also been prepared with reference to the Austroads publication, *Guide to Traffic Management*, Part 12: *Traffic Impacts of Developments*, 2019.

Land use developments generate traffic movements as people move to, from and within a development. Without a clear understanding of the type of traffic movements (including cars, pedestrians, trucks, etc), the scale of their movements, timing, duration and location, there is a risk that this traffic movement may contribute to safety issues, unforeseen congestion or other problems where the development connects to the road system or elsewhere on the road network. A TIA attempts to forecast these movements and their impact on the surrounding transport network.

A TIA is not a promotional exercise undertaken on behalf of a developer; a TIA must provide an impartial and objective description of the impacts and traffic effects of a proposed development. A full and detailed assessment of how vehicle and person movements to and from a development site might affect existing road and pedestrian networks is required. An objective consideration of the traffic impact of a proposal is vital to enable planning decisions to be based upon the principles of sustainable development.

This TIA addresses the relevant clauses of E5.0, *Road and Railway Assets* Code, and E6.0, *Parking and Access Code*, of the Hobart Interim Planning Scheme, 2015.

#### 1.3 Statement of Qualification and Experience

This TIA has been prepared by an experienced and qualified traffic engineer in accordance with the requirements of Council's Planning Scheme and The Department of State Growth's, *Traffic Impact Assessment Guidelines*, August 2020, as well as Council's requirements.

The TIA was prepared by Keith Midson. Keith's experience and qualifications are briefly outlined as follows:

- 26 years professional experience in traffic engineering and transport planning.
- Master of Transport, Monash University, 2006
- Master of Traffic, Monash University, 2004



- Bachelor of Civil Engineering, University of Tasmania, 1995
- Engineers Australia: Fellow (FIEAust); Chartered Professional Engineer (CPEng); Engineering Executive (EngExec); National Engineers Register (NER)

#### 1.4 Project Scope

The project scope of this TIA is outlined as follows:

- Review of the existing road environment in the vicinity of the site and the traffic conditions on the road network.
- Provision of information on the proposed development with regards to traffic movements and activity.
- Identification of the traffic generation potential of the proposal with respect to the surrounding road network in terms of road network capacity.
- Review of the parking requirements of the proposed development. Assessment of this parking supply with Planning Scheme requirements.
- Traffic implications of the proposal with respect to the external road network in terms of traffic
  efficiency and road safety.

#### 1.5 Subject Site

The subject site is located at 90 Melville Street, Hobart. The site was formally a timber yard for K&D Warehouse and is currently utilised as a car park that contains a total of 64 spaces. Two existing vehicular crossovers are located on Melville Street.

The subject site and surrounding road network is shown in Figure 1. The current site layout is shown in Figure 2.



Figure 1 Subject Site & Surrounding Road Network



Image Source: LIST Map, DPIPWE



Figure 2 Current Site Layout



#### 1.6 Reference Resources

The following references were used in the preparation of this TIA:

- Hobart Interim Planning Scheme, 2015 (Planning Scheme)
- Austroads, Guide to Traffic Management, Part 12: Traffic Impacts of Developments, 2019
- Austroads, Guide to Road Design, Part 4A: Unsignalised and Signalised Intersections, 2021
- Department of State Growth, Traffic Impact Assessment Guidelines, 2020
- Roads and Maritime Services NSW, Guide to Traffic Generating Developments, 2002 (RMS Guide)
- Roads and Maritime Services NSW, Updated Traffic Surveys, 2013 (Updated RMS Guide)
- Australian Standards, AS2890.1, Off-Street Parking, 2004 (AS2890.1:2004)



# 2. Existing Conditions

#### 2.1 Transport Network

For the purpose of this report, the transport network consists of Melville Street, Harrington Street and Murray Street.

#### 2.1.1 Melville Street

Melville Street connects between Hill Street and Campbell Street and provides a collector role function along the western edge of Hobart CBD. It provides access to commercial property and a large pool of onstreet car parking along its length.

Melville Street runs parallel to Bathurst Street to the west. It is a two-lane, two-way road and carries approximately 9,000 vehicles per day near Harrington Street. The weekday hourly traffic volumes of Melville Street are shown in Figure 3. Melville Street has a relatively consistent traffic flow during normal business hours, with a minor peak during the morning. Peak traffic flow is approximately 800 vehicles per hour between 8:00am and 9:00am.

Melville Street viewed from the subject site is shown in Figure 4.

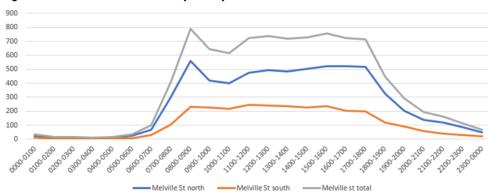


Figure 3 Melville Street Weekday Hourly Flow



Figure 4 Melville Street



#### 2.1.2 Harrington Street

Harrington Street is a one-way collector road that connects between Sandy Bay Road and Murray Street, connecting at a Y-junction immediately northwest of the Warwick Street intersection. It has three lanes along the majority of its length and most of the junctions along its length are signalised. Harrington Street carries approximately 15,000 vehicles per day near the subject site.

#### 2.1.3 Murray Street

Murray Street is a major collector road that connects North Hobart and West Hobart with Hobart's CBD. It is a one-way road with three lanes along the majority of its length. Most of the junctions along its length are signalised. Murray Street carries approximately 15,000 vehicles per day near the subject site.

#### 2.1.4 Melville Street/ Harrington Street Intersection

The intersection of Melville Street and Harrington Street is signalised with a two-phase operation. The layout of the intersection is shown in Figure 5.



Figure 5 Melville St/ Harrington St Intersection Layout



#### 2.1.5 Melville Street/ Murray Street Intersection

The intersection of Melville Street and Murray Street is signalised with a two-phase operation. The layout of the intersection is shown in Figure 6.



Figure 6 Melville St/ Murray St Intersection Layout



#### 2.2 Road Safety Performance

Crash data can provide valuable information on the road safety performance of a road network. Existing road safety deficiencies can be highlighted through the examination of crash data, which can assist in determining whether traffic generation from the proposed development may exacerbate any identified issues.

Crash data was obtained from the Department of State Growth for a 5+ year period between 1<sup>st</sup> January 2015 and 30<sup>th</sup> November 2020 for Melville Street and Brisbane Street between Harrington Street and Murray Street.

The findings of the crash data is summarised as follows:

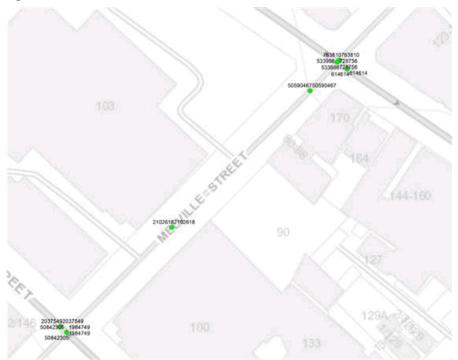
#### Melville Street.

- A total of 20 crashes were reported in Melville Street during this period.
- Severity. 3 crashes involved minor injury; 1 crash involved first aid at the scene; 16 involved property damage only.
- <u>Time of day</u>. 17 crashes were reported between 8:00am and 6:00pm. 3 crashes were reported between 8:30pm and 10:00pm.
- <u>Day of week.</u> Weekday crashes were dominant. 7 crashes were reported on Thursdays; 5 crashes were reported on Tuesdays; 4 crashes reported on Fridays; 2 crashes on Wednesdays; 1 crash on a Monday and a Sunday; and no crashes on Saturdays.
- <u>Crash types</u>. 6 crashes involved 'cross-traffic' collisions; 3 crashes involved 'side-swipe' collisions;
   2 crashes involved 'near-side' collisions;
   2 crashes involved 'far-side' collisions;
   3 crashes involved 'side-swipe' collisions;
   4 crashes involved 'side-swipe' collisions;
   5 crashes involved 'side-swipe' collisions;
   6 crashes involved 'side-swipe' collisions;
   7 crashes involved 'side-swipe' collisions;
   8 crashes involved 'side-swipe' collisions;
   9 crashes involved 'side-swipe' collisions;
   10 crashes involved 'side-swipe' collisions;
   10 crashes involved 'side-swipe' collisions;
   11 crashes involved 'side-swipe' collisions;
   12 crashes involved 'side-swipe' collisions;
   13 crashes involved 'side-swipe' collisions;
   14 crashes involved 'side-swipe' collisions;
   15 crashes involved 'side-swipe' collisions;
   16 crashes involved 'side-swipe' collisions;
   17 crashes involved 'side-swipe' collisions;
   18 crashes i
- <u>Crash locations</u>. 11 crashes were reported at the Murray Street intersection; 7 crashes were reported at the Harrington Street intersection; and 2 crashes were reported at midblock locations. The crash locations are shown in Figure 7.
- <u>Vulnerable road users</u>. 5 crashes involved pedestrians. 1 crash involved a motorcycle (this crash involved a motorcycle and a pedestrian). 2 of these crashes involved minor injury.

The crash data does not indicate that there are any existing road safety deficiencies in the network that might be exacerbated by traffic generated by the development. The crash rates at the Murray Street and Harrington Street intersections are typical of busy signalised intersections in a CBD environment. Importantly there were few crashes in midblock locations in Melville Street and Brisbane Street near the subject site, and few crashes involving property access.



Figure 7 **Crash Locations** 



Source: Department of State Growth



# 3. Proposed Development

#### 3.1 Development Proposal

The proposal is a multi-storey, mixed-use development consisting of 22 residential apartments ( $18 \times 2$ -bedroom and  $4 \times 3$ -bedroom) and offices (offices over five levels with total floor area of  $5,637.24 \text{ m}^2$ ).

The University of Tasmania is currently in negotiations with Giameos Construction and Development for a long-term lease to occupy all commercial floors for office use.

The development includes underground car parking for 108 spaces. Provision for 2 motorcycle parking spaces is also provided. The parking will service the residential and office components of the development, as well as provide private leased parking spaces as follows:

#### Basement 2 Parking

$\rightarrow$	Private vehicle parking	35 spaces
$\rightarrow$	Private vehicle parking (small car spaces)	5 spaces

#### Basement 1 Parking

$\rightarrow$	Office parking	22 spaces
$\rightarrow$	Office parking (small car spaces)	4 spaces
$\rightarrow$	Private vehicle parking	13 spaces
$\rightarrow$	Private vehicle parking (small car spaces)	1 space

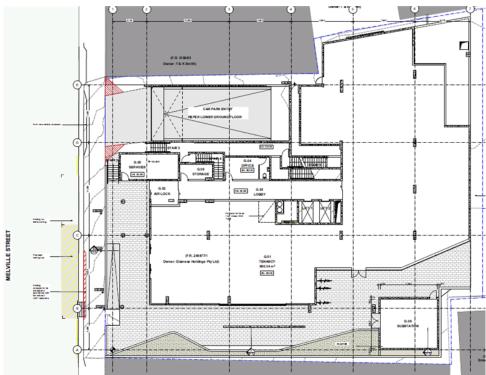
#### Lower Ground Floor Parking

$\rightarrow$	Office parking	2 spaces
$\rightarrow$	Residential parking	26 spaces

The proposed development plans relating to parking and access is shown in Figure 8, Figure 9, Figure 10 and Figure 11 for the ground floor, lower ground floor, basement level 1 and basement level 2 car parking levels respectively.



Figure 8 Ground Floor Development Plans





**Lower Ground Floor Development Plans** Figure 9 **\***  $\ge$ NN. 23,940



Figure 10 Basement Level 1 Development Plans <del>\*\*\*\*</del> | I | | | BASE MENT 1 CARPARK 100.36/00 į 🛭 3 B 1 ũ - Đ 



Figure 11 Basement Level 2 Development Plans <del>\*\*\*\*</del> Ample 1 Tarlow States **86.173** (0) Topicary (Topicary į t · 1



### 4. Traffic Impacts

#### 4.1 Trip Generation

Traffic generation rates associated with the development were sourced from the RMS Guide.

#### 4.1.1 Existing Traffic Generation

The current use of the site is a commercial car park. The traffic generation of the site is estimated to be 254 vehicles per day with a peak of 47 vehicles per hour<sup>1</sup>.

#### 4.1.2 Residential Traffic Generation

The residential component of the traffic generation at the site's access with Melville Street was investigated. This relates to the parking provision associated with the residential component of the development. For high density residential dwellings the following traffic generation rates are provided:

- Daily traffic generation rate per parking space 3.22 trips per unit per day
- AM peak hour generation rate per parking space 0.35 trips per unit per hour
- PM peak hour generation rate per bedroom
   0.26 trips per unit per hour

This equates to the following traffic generation for the residential component of the development:

Daily traffic generation
 AM peak hour generation
 PM peak hour generation
 PM peak hour generation
 7 vehicles per hour

#### 4.1.3 Office Traffic Generation

The development has office a total of 5,637.24 m<sup>2</sup> of floor area spread over five levels.

The office component of the development is likely to generate 10 trips per  $100 \text{ m}^2$  of floor area per day, with a peak of 2 vehicles per hour per  $100 \text{ m}^2$ .

This equates to 564 vehicles per day with a peak of 113 vehicles per hour.

Note that not all traffic generated by this component of the development will access the car park. Some of the traffic generation associated with the development will occur elsewhere in the network, such as onstreet parking and public car parks.

The traffic generation associated with the office component of the development at the site's access relates to the on-site parking provision. In an unconstrained environment, offices require a parking provision of approximately 1 space per 40m<sup>2</sup>. This would equate to 141 spaces. With a total of 28 spaces provided,

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<sup>&</sup>lt;sup>1</sup> Source: 90 Melville Street TIA, Midson Traffic, June 2018.

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the traffic generation is likely to be 112 vehicles per day with a peak of 22 vehicles per hour (ie. 28 /141 x traffic generation).

#### 4.1.4 Private Vehicle Parking Generation

The development includes a total of 19 spaces that will be leased as private parking spaces. Parking spaces are likely to be used by nearby offices as long term leases. In this regard the spaces will be commuter spaces with an average turnover of 1.2 times per day.

The traffic generation of the private vehicle parking spaces is therefore 46 vehicles per day with a peak of 15 vehicles per hour.

#### 4.1.5 Total Development Traffic Generation

The total traffic generation of the development at the site's access is 241 vehicles per day with peaks of 46 vehicles per hour and 44 vehicles per hour during the AM and PM peaks respectively.



#### 4.2 Trip Assignment

The trip distribution of the traffic generated by the proposal is summarised in Table 1. The resulting turning movements are summarised in Figure 12 and Figure 13 for the AM and PM peaks respectively.

Table 1 Trip Distribution Summary

Component	Directional Split	Approach/ Departure Direction
Residential component - AM peak 9 vph - PM peak 7 vph	AM: 30% inward/ 70% outward 3 vph inward/ 6 vph outward PM: 60% inward/ 40% outward 4 vph inward/ 3 vph outward	50% even split between arrivals and departures north and south along Melville Street.
Office component - AM & PM peaks 22 vph	AM: 70% inward/ 30% outward 15 vph inward/ 7 vph outward PM: 20% inward/ 80% outward 4 vph inward/ 18 vph outward	50% even split between arrivals and departures north and south along Melville Street.
Private vehicle parking - AM & PM peaks 15 vph	AM: 70% inward/ 30% outward  11 vph inward/ 4 vph outward  PM: 20% inward/ 80% outward  3 vph inward/ 12 vph outward	
TOTAL	AM: 29 vph inward/ 17 vph outward  PM: 11 vph inward/ 33 vph outward	



Figure 12 AM Turning Movements

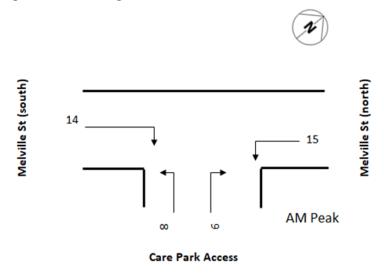
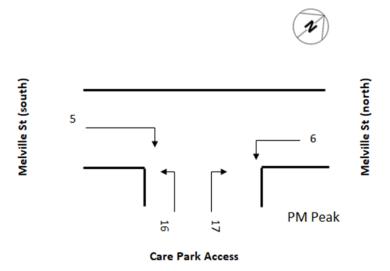


Figure 13 PM Turning Movements





#### 4.3 Traffic Generation Impacts

Melville Street has a peak flow of approximately 800 vehicles per hour. The additional peak of 123 vehicles per hour generated by the proposed development will not have any significant adverse impacts on the efficiency of the surrounding network.

The Acceptable Solution A3 of Clause E5.5.1 of the Planning Scheme states "The annual average daily traffic (AADT) of vehicle movements, to and from a site, using an existing access or junction, in an area subject to a speed limit of 60km/h or less, must not increase by more than 20% or 40 vehicle movements per day, whichever is the greater".

The existing traffic generation is 254 vehicles per day. An increase of 20% of this generation is 305 vehicles per day (20% is greater than 40 vehicles per day). The traffic generation of the proposal is 241 vehicles per day at the site's access represents an increase that is less than 20% and therefore the Acceptable Solution A3 of Clause E5.5.1 of the Planning Scheme is met.

#### 4.4 Sight Distance

#### 4.4.1 Vehicle Sight Distance

The Acceptable Solution A1 of Clause E5.6.4 of the Planning Scheme states that "sight distances at an access or junction must comply with the Safe Intersection Sight Distance shown in Table E5.1".

Table E5.1 of the Planning Scheme requires a Safe Intersection Sight Distance of 80 metres for vehicle speed of 50-km/h in a speed limit of 60-km/h or less.

Full sight distance is available from the site's Melville Street access through the Harrington Street and Murray Street junctions. This is distance exceeds 80 metres in both directions. The Acceptable Solution A1 of Clause E5.6.4 of the Planning Scheme is therefore met.

#### 4.4.2 Pedestrian Sight Distance

The pedestrian sight distance requirements are provided in AS2890.1 as shown Figure 14.

Pedestrian sight lines are provided in accordance with AS2890.1 requirements at the site's access with Melville Street, as shown in Figure 15.



Figure 14 AS2890.1 Pedestrian Sight Distance Requirements

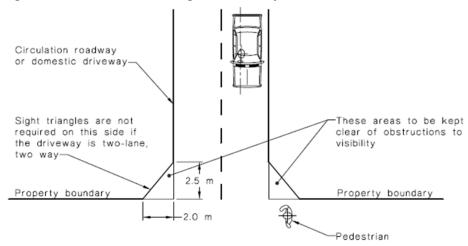
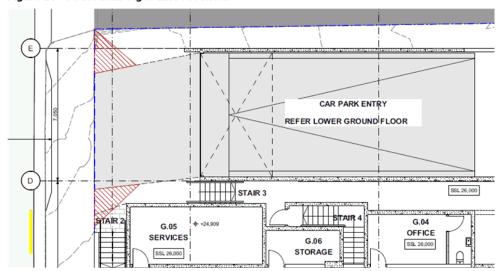


Figure 15 Pedestrian Sight Line Provision





#### 4.5 Pedestrian Impacts

The proposed development is likely to generate a moderate level of pedestrian activity in the surrounding road network as people walk to or from their parked vehicle within the site.

The existing footpath provision in the surrounding road network has the capacity to service a high level of pedestrian activity (being in a CBD environment). The existing footpath infrastructure is considered more than adequate to cater for any pedestrian traffic that might be generated.

#### 4.6 Road Safety Impacts

No significant road safety impacts are foreseen for the proposed car park development. This is based on the following:

- The surrounding road transport network is capable of absorbing the relatively small traffic generation of the proposed car park.
- The site was previously a timber yard and more recently a permit holder car park that utilised the two accesses. The number of vehicular accesses will be reduced as a result of the proposed development. Heavy vehicles will no longer utilise these access (as they would have done when it was a timber yard).
- The crash history of the surrounding road network near the subject site does not indicate that
  there are any specific road safety issues that are likely to be exacerbated by the proposed
  development.



# 5. Parking Assessment

#### 5.1 Parking Provision

The proposed development provides a total of 108 on-site car parking spaces over three levels (28 spaces on the lower-ground floor and 80 spaces two basement levels). One disabled parking space is provided. The parking provision is set out as follows:

#### Basement 2 Parking

$\rightarrow$	Private vehicle parking	35 spaces
$\rightarrow$	Private vehicle parking (small car spaces)	5 spaces

#### Basement 1 Parking

$\rightarrow$	Office parking	22 spaces
$\rightarrow$	Office parking (small car spaces)	4 spaces
$\rightarrow$	Private vehicle parking	13 spaces
$\rightarrow$	Private vehicle parking (small car spaces)	1 space

#### Lower Ground Floor Parking

$\rightarrow$	Office parking	2 spaces
$\rightarrow$	Residential parking	26 spaces

#### 5.2 Unconstrained Parking Demand

The RMS Guide provides parking demands for high-density residential and commercial tenancies as follows:

#### High density Residential Flat Buildings

٠	0.4 spaces per 1-bedroom unit	0 spaces
٠	0.7 spaces per 2-bedroom unit	12.6 space
٠	1.2 spaces per 3-bedroom unit	4.8 spaces
٠	1 space per 7 units visitor parking	3.1 spaces
٠	<u>Total</u>	21 spaces

### Commercial Component

1 space per 30m² of floor area
 23 spaces

#### <u>Total</u>

44 spaces



On this basis, the development is likely to generate a parking demand of 44 spaces. The provision of 110 spaces satisfies this demand.

#### 5.3 Planning Scheme Requirements

For parking requirements in the Central Business Zone, the Acceptable Solution A1 of Clause E6.6.5 of the Planning Scheme states:

- "(a) No on-site parking is provided; or
- (b) on-site parking is provided at a maximum rate of 1 space per 200m² of gross floor area for commercial uses; or
- (c) on-site parking is provided at a maximum rate of 1 space per dwelling for residential uses; or
- (d) on-site parking is required operationally for an essential public service, including, hospital, police or other emergency service".

This is a requirement for 50 spaces (comprised of 28 space requirement for the commercial tenancy and 22 space requirement for the residential component).

In this case the development provides a total of 108 spaces. The parking provision does not comply with the requirements of Acceptable Solution A1 of Clause E6.6.5 of the Planning Scheme as the provision exceeds the maximum requirement by 58 spaces.

The Performance Criteria P1 of Clause E6.6.5 of the Planning Scheme states:

"Car parking provision:

- (a) is in the form of a public car parking station provided as part of a development which utilises a major existing access; or
- (b) must not compromise any of the following:
  - (i) pedestrian safety, amenity or convenience;
  - (ii) the enjoyment of 'al fresco' dining or other outdoor activity;
  - (iii) air quality and environmental health;
  - (iv) traffic safety".

In this case subclause (a) is not relevant. The following is relevant with respect to subclause (b):

- Pedestrian safety, amenity, convenience. The car park will reduce the number of driveways on Melville Street from two to one, thus reducing pedestrian conflict on the Melville Street footpath. The car park will be located on three levels that will not be visible from the street. The layout of the car park will be generally in accordance with the requirements of AS2890.1.
- ii. Al fresco dining. Not applicable.



- iii. <u>Air quality and environmental health</u>. The car park will be located on three levels that will be undercover. Adequate ventilation will be provided within the car park.
- iv. <u>Traffic safety</u>. The car park will reduce the number of driveways on Melville Street from two to one, thus reducing pedestrian conflict on the Melville Street footpath. The car park design will be in accordance with the requirements of AS2890.1.

Based on the above assessment, the development meets the requirements of Performance Criteria P1 of Clause E6.6.5 of the Planning Scheme.

#### 5.4 Car Parking Layout

The Acceptable Solution A1 of Clause E6.7.5 of the Planning Scheme states that "The layout of car parking spaces, access aisles, circulation roadways and ramps must be designed and constructed to comply with section 2 "Design of Parking Modules, Circulation Roadways and Ramps" of AS/NZS 2890.1:2004 Parking Facilities Part 1: Off-street car parking and must have sufficient headroom to comply with clause 5.3 "Headroom" of the same Standard".

The on-site car parking consists of a mix of:

- 32 x User Class 1A
- 65 x Class 2 spaces
- 1 x disabled space
- 10 x Small Car spaces.

Australian Standards, AS2890.1, defines the parking as User Class 1A - 'Residential, domestic and employee parking'. These spaces are intended for use by the residential component of the development. The basic physical dimensions required for User Class 1A are outlined as follows:

Space length 5.4m, or 4.8m where parking is to a low kerb

Space width 2.4mAisle width 5.8m

User Class 2 is defined as `Long term city and town centre parking, sports facilities, entertainment centres, hotels, motels, airport visitors (generally medium-term parking)'. The dimensions for User Class 2 spaces are as follows:

Space length 5.4m, or 4.8m where parking is to a low kerb

Space width 2.5mAisle width 5.8m

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Small car spaces are designed for cars that represent the  $50^{th}$  percentile of the Australian vehicle fleet. The AS2890.1 dimensions of small car spaces are as follows:

Space length 5.0mSpace width 2.3mAisle width 5.8m

All parking spaces comply with the relevant AS2890.1 dimensional requirements. The headroom requirements in Section 5.3 of AS2890.1 are also met (minimum headroom requirement of 2.2 metres).

The Acceptable Solution A1 of Clause E6.7.5 of the Planning Scheme is met.

#### 5.5 Disabled Parking

The Acceptable Solution A1 of Clause E6.6.2 of the Planning Scheme states that "car parking spaces must be provided for people with a disability must: (a) satisfy the relevant provisions of the Building Code of Australia; (b) be incorporated into the overall car park design; and (c) be located as close as practicable to the building entrance".

The Building Code of Australia (BCA) requires 1 space for every 50 car parking spaces to be provided for a Class 6² building. This is applicable for the commercial component of the development (and hence the commercial car parking component). This is a requirement for a total of 1 space. A total of 1 accessible parking spaces are provided and therefore Acceptable Solution A1 of E6.6.2 of the Planning Scheme is met.

#### 5.6 Motorcycle Parking

The Acceptable Solution A1 of Clause E6.6.3 of the Planning Scheme states "The number of on-site motorcycle parking spaces provided must be at a rate of 1 space to each 20 car parking spaces after the first 19 car parking spaces except if bulky goods sales, (rounded to the nearest whole number). Where an existing use or development is extended or intensified, the additional number of motorcycle parking spaces provided must be calculated on the amount of extension or intensification, provided the existing number of motorcycle parking spaces is not reduced".

The Acceptable Solution requires a total of 5 motorcycle parking spaces. The development provides 2 motorcycle spaces and therefore does not comply with Acceptable Solution A1 of Clause E6.6.3 of the Planning Scheme.

<sup>&</sup>lt;sup>2</sup> BCA Class 6 is defined as "a shop or other building for the sale of goods by retail or the supply of services direct to the public, including – an eating room, café, restaurant ...".

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The Performance Criteria P1 of Clause E6.6.3 of the Planning Scheme states:

"The number of on-site motorcycle parking spaces must be sufficient to meet the needs of likely users having regard to all of the following, as appropriate:

- (a) motorcycle parking demand;
- (b) the availability of on-street and public motorcycle parking in the locality;
- (c) the availability and likely use of other modes of transport;
- (d) the availability and suitability of alternative arrangements for motorcycle parking provision".

The following is relevant with respect to the development proposal:

- a. <u>Motorcycle parking demand</u>. The parking associated with the development is residential and office. Motorcycle parking is not typically provided for residential developments. Motor vehicle ownership will be a personal decision for residents of the development, who may choose to utilise car parking spaces for motorcycle parking if required. The availability of motorcycle (and car) parking spaces will be known and understood by residents of the development site. The office parking component of the site can rely upon the provision of normal car parking spaces noting that the development provides an excess of parking as noted in Section 5.3.
- b. On-street and public motorcycle parking. There is a relatively large pool of on-street and public motorcycle parking in the surrounding network. This includes motorcycle parking in Murray Street, Bathurst Street, and Melville Street<sup>3</sup>.
- Other modes of transport. The site is located within Hobart's CBD. Other modes of transport are readily available and include walking, cycling, bus and car.
- d. <u>Alternative motorcycle parking arrangements</u>. No alternative motorcycle parking is considered necessary in light of a, b and c above.

Based on the above findings, the motorcycle parking provision meets the requirements of Performance Criteria P1 of Clause E6.6.3 of the Planning Scheme.

#### 5.7 Commercial Vehicles

No commercial vehicle access will be required within the site. Waste collection is proposed on-street. A copy of the waste management recommendations from Veolia is provided in Appendix A.

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 $<sup>{\</sup>color{red}^3} \textbf{ Source:} \ \underline{\text{https://www.hobartcity.com.au/files/assets/public/city-services/parking/motorbike-parking-map.pdf}$ 



# 6. Conclusions

This traffic impact assessment (TIA) investigated the traffic and parking impacts of a proposed development at

The key findings of the TIA are summarised as follows:

- The proposal is likely to generate 241 vehicles per day with a peak of up to 44 vehicles per hour.
- The traffic generation of the development meets the requirements of Acceptable Solution A3 of Clause E5.5.1 of the Planning Scheme.
- The parking provision of 108 spaces meets the requirements of Performance Criteria P1 of Clause E6.6.5 of the Planning Scheme.
- The provision of 2 motorcycle parking spaces meets the requirements of Performance Criteria P1
  of Clause E6.6.3 of the Planning Scheme.

Based on the findings of this report the proposed development is supported on traffic grounds.



 $\mathsf{Appendix}\, A$ 

Veolia Waste Management Methodology





27th April 2022

To whom it may concern,

Site Assessment - 90 Melville Street, Hobart.

A site assessment and review of the plans has been conducted at 90 Melville Street Hobart for Jaws Architects to determine the most appropriate methodology in relation to the provision of a waste and recycling collection service at the above address. The assessment conclusions/recommendations are as follows:

- A medium size Rear lift truck is considered the most appropriate method for the provision
  of the service/s.
- Veolia would service the bins from Melville Street to avoid reversing into the complex.
- The Veolia operator would require access to the building's waste compound to service the bins.
- The site at Melville Street has a moderate gradient but this is manageable.
- Visibility is reasonable.
- · Trucks will have flashing safety beacon lights operating and reversing cameras.
- Peak traffic times will be avoided when providing collection services
- A formal Risk Assessment / Work Instruction will be provided to Veolia operators detailing the above requirements and restrictions, prior to commencing the service/s.

Should further information be required in relation to the above, please contact the undersigned on 0459 836 924.

Regards

**Martin Robinson** 

Takel

General Manager Business Development/Marketing



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# **Document Status**

Revision	Author	Review	Date
0	Keith Midson	Zara Kacic-Midson	9 May 2022
1	Keith Midson	Zara Kacic-Midson	11 May 2022



Keith Midson Midson Traffic Pty Ltd 28 Seaview Avenue Taroona TAS 7053 0437 366 040

13 July 2022

Neil Shephard On behalf of Giameos Construction and Developments Pty Ltd PO Box 273 Hobart TAS 7000

Dear Neil,

#### 90 MELVILLE ST - RESPONSE TO COUNCIL RFI

This letter has been prepared in response to the traffic and parking matters in Council's request for further information regarding the abovementioned development.

The response to items E6.7.2, E6.7.3, E6.7.4, E6.7.5, E6.7.6, E6.7.10, E6.7.13, and E6.7.14 are provided in the following sections.

#### 1. E6.7.2 Vehicular Access

The proposed development includes a car park that will service spaces for residential and office use. No commercial access is proposed for the development's car park whatsoever. The car park design is therefore limited to the provisions of Australian Standards, AS2890.1, *Off-Street Car Parking*, 2004.

The Acceptable Solution A1 of Clause E6.7.2 of the Planning Scheme states that the design of vehicle access points must comply with "in the case of non-commercial vehicle access; the location, sight distance, width and gradient of an access must be designed and constructed to comply with section 3—"Access Facilities to Off-street Parking Areas and Queuing Areas" of AS/NZS 2890.1:2004 Parking Facilities Part 1: Off-street car parking".

Each of these requirements are detailed as follows.

# Access Location

The access is classified as a Category 2 access (servicing more than 100 parking spaces accessing a local road).

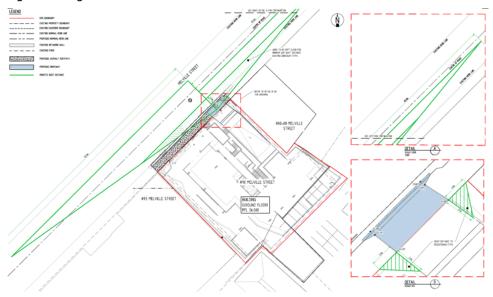
The access is not located opposite a signalised or unsignalised intersection. The access location requirements in Section 3.2.3 of AS2890.1 are met.

#### Sight Distance

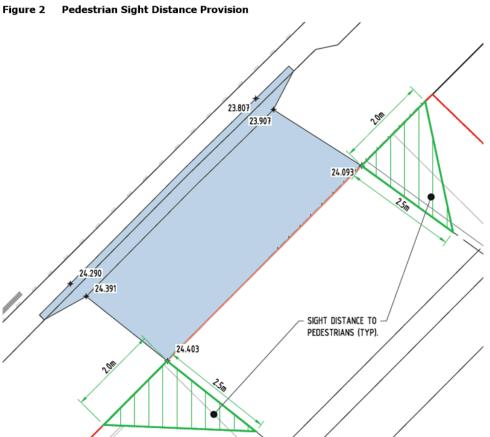
Section 3.2.4 of AS2890.1 provides sight distance for accesses. For a frontage road speed of 50-km/h, the minimum sight distance requirement is 45 metres.

Drawings have been prepared by ADG. The relevant sight distance diagram is reproduced in Figure 1. The available sight distance exceeds the minimum AS2890.1 requirements.

Figure 1 Sight Distance Provision



Pedestrian sight distance was also assessed. AS2890.1 requires sight triangles to be provided in accordance with Figure 3.3 in Section 3.2.4(b). The pedestrian sight triangle provision at the access is shown in Figure 2.



#### 2. E6.7.3 Vehicular Passing Bays

The Acceptable Solution A1 of Clause E6.7.3 of the Planning Scheme states:

"Vehicular passing areas must:

- (a) be provided if any of the following applies to an access:
- (i) it serves more than 5 car parking spaces;
  - (ii) is more than 30 m long;
  - (iii) it meets a road serving more than 6000 vehicles per day;
- (b) be 6 m long, 5.5 m wide, and taper to the width of the driveway;
- (c) have the first passing area constructed at the kerb;
- (d) be at intervals of no more than 30 m along the access".

The access services more than 5 car parking spaces, the access is 30 metres between the kerb and the first parking space, and the access fronts onto a road that carries approximately 9,000 vehicles per day.

The width of the access is 6.0 metres for its full length. The passing bay requirements of Acceptable Solution A1 of Clause E6.7.3 of the Planning Scheme are therefore automatically met (ie. the access width is greater than the 5.5m passing bay width requirement for the full length of the access).

#### 3. E6.7.4 On-Site Turning

The Acceptable Solution A1 of Clause E6.7.4 of the Planning Scheme states:

"On-site turning must be provided to enable vehicles to exit a site in a forward direction, except where the access complies with any of the following:

- (a) it serves no more than two dwelling units;
- (b) it meets a road carrying less than 6000 vehicles per day".

The car park and access service more than two dwelling units and it fronts onto a road that carries more than 6,000 vehicles per day. On-site turning is therefore required.

The design of the car park facilitates forward entry and exit for all car parking spaces. In the event of all parking spaces being occupied, a vehicle can also turn on-site as shown in Figure 3. The Acceptable Solution A1 of Clause E6.7.4 of the Planning Scheme is therefore met.

BASEMENT 2
CAPPARK

STOCKED

S

Figure 3 On-Site Turning

# 4. E6.7.5 Layout of Parking Areas

Detailed plans of the car parking areas have been prepared and have been submitted separately.

The details relating to the compliance of the car parking design in accordance with AS2890.1 are provided in Section 5.4 of the TIA prepared in May 2022.

Council have requested the swept path of B99 vehicles within the car park. AS2890.1 also provides the requirements of the type of vehicles used in parking areas. There are two 'car' vehicle types contained in AS2890.1: B85 and B99 vehicles. These vehicles represent the 85<sup>th</sup> and 99<sup>th</sup> percentile cars in the Australian fleet respectively.

AS2890.1 states the following with respect to B99 vehicles:

"Design dimensions based on the B99 vehicle are required at all locations where failure of a vehicle to be able to physically fit into the facility would occasion intolerable congestion and possible hazard. Such locations shall include all access driveways, ramps and circulation roadways, unless there are special circumstances of severe space limitation coupled with relatively low traffic volumes in which case the B85 vehicle dimensions may be used".

In this case the development proposal provides car parking for residential and office use and will not provide public car parking. With a peak generation of 44 vehicles per hour it would not be possible to create 'intolerable' congestion.

Regardless, the swept paths of B99 vehicles were tested within the car park, as shown in Figure 4, Figure 5 and Figure 6.

The layout of the car parking areas complies with the requirements of Acceptable Solution A1 of Clause E6.7.5 of the Planning Scheme.



Figure 4 B99 Vehicle Swept Paths – Lower Ground Floor

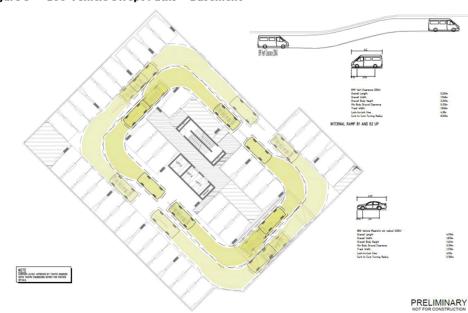
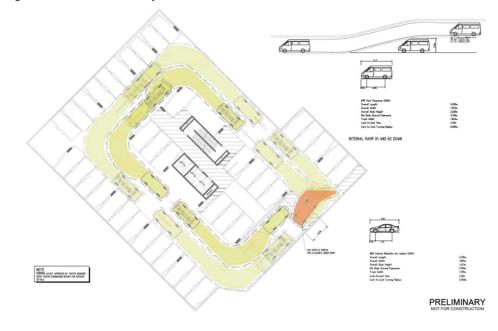


Figure 5 B99 Vehicle Swept Paths – Basement

Figure 6 B99 Vehicle Swept Paths – Basement 2



# 5. E6.7.6 Surface Treatment of Parking Areas

Separate plans have been provided that demonstrate compliance with Acceptable Solution A1 of Clause E6.7.6 of the Planning Scheme.

# 6. E6.7.13 Commercial Vehicles

Council have requested details relating to access to the site for commercial vehicles.

No commercial vehicle access is proposed for the development. The requirements of Clause E6.7.13 are not relevant to the proposed development.

#### 7. E6.7.14 Access to a Road

Separate plans have been provided detailing the access design for the connection of the driveway to Melville Street.

These plans comply with the requirements of AS2890.1.

Please contact me on 0437 366 040 if you require any further information.

Yours sincerely,

Keith Midson BE MTraffic MTransport FIEAust CPEng EngExec NER

**DIRECTOR** 

**Midson Traffic Pty Ltd** 





# 90 MELVILLE STREET, HOBART

December 2019

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Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

# **DOCUMENT CONTROL**

Title	Version	Date	Author	Reviewed By
Environmental Site Assessment. 90 Melville Street, Hobart, Tasmania	Version 1	17/12/19	Sarah Joyce	JP Cumming

Environmental Site Assessment: 90 Melville Street, Hobart, December 2019.

#### **EXECUTIVE SUMMARY**

This report presents the findings from Environmental Site Assessment (ESA) undertaken by Geo-Environmental Solutions Pty. Ltd. (GES) at 90 Melville Street, Hobart, Tasmania - hereby referred to as 'The Site'. GES was engaged by Giameos Holdings Pty Ltd to conduct this investigation.

The requirement for the ESA was under the Interim Planning Schemes, Potentially Contaminated Land Code *E2.6.2 P1 Excavation Works* as the site is potentially contaminated from former site activities (timber yard). This report has been prepared by a suitably qualified and experience practitioner in accordance with procedures and practices detailed in NEPM (2013) guidelines and key regulations and policies.

The following conclusions were made from the desktop assessment:

- The site is inferred to be underlain with Tertiary aged boulder deposits of predominantly dolerite with possible shallow subsurface dolerite or Parmeener rock.
- The site is approximately 25m above sea level. Groundwater is inferred to be directed towards the site from the west.
- There are no registered groundwater bores in the central business area of Hobart and recent deep drilling at 103 Melville street by GES to depths of 18m failed to encounter groundwater.
- The Praxis Historical report confirmed that the site has been owned by Kemp & Denning since approximately 1910.
- Historical Aerial photographs of the site and the Praxis Historical report for the site showed the following: in the early 1900's the dwellings on site were demolished, and in the period between 1958 and 1990 there were two additional large sheds for timber storage on the site. The larger K&D site at 103 Melville Street hosted a range of sheds/warehouses prior to 1986, and soon after that time the existing K&D buildings were constructed. The adjacent site at 100 Melville Street was developed from former offices and warehouses to the current buildings in the period 2005-2013. At the adjacent down gradient property at 88 Melville Street vehicle servicing activities have been operational for over 70 years.
- The dangerous goods search (Worksafe Tasmania records) failed to find any records for the site but confirmed that the K&D Hardware Store at 103 Melville Street held LPG from October 1997 to March 2013.
- As determined in the site history report (Praxis) the site had been a timber yard for over 90 years
  and the entire site is an area of potential concern (AOPC). This investigation is based upon grid
  sampling on the site in natural materials until drilling refusal in the underlying natural boulder
  deposits
- The following contaminants of potential concern (COPC) are associated with demolition of former residential buildings and timber storage/vehicle parking: Total Petroleum/Recoverable Hydrocarbons (TPH/TRH); Mono Aromatic hydrocarbons: Benzene, Toluene, Ethylbenzene, Xylene (BTEX); Polycyclic Aromatic Hydrocarbons (PAH); Heavy Metals.

The following conclusions have been made from the soil investigation based on the sampling around AEC's and based on analysed COPC's and based on the nominated threshold limit criteria for assessing risks from proposed site development works and proposal:

#### Human Health:

There were no human health guideline exceedances for dermal contact, dust inhalation, soil
ingestion assessment for Health Investigation Levels for commercial/industrial land use. There
were also no trench worker guideline limit or Health Screening Level (HSL) exceedances for soil
vapour.

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Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

#### **Environment:**

 There were PAH (BaP) detections that exceeded guidelines limits in 1 of the 16 samples taken from soil at the site. There was also a single Ecological Investigation Level guideline exceedance for copper. Due to the urban environmental and lack of proximal receptors no risk from contamination to ecological receptors was identified.

#### Excavated Soil Management:

• The soil samples were compared against IB105 guidelines for soil disposal. The soil was classified as a mix of Level 1, Level 2, and Level 3 Material due to the presence of various heavy metals and PAH (BaP). GES recommends that all soil excavated for the site is stockpiled, sampled by a suitably qualified and experienced environmental consultant and results compared against IB105 guideline limits for appropriate soil disposal. Where necessary, it is to be transported to an approved facility (Copping). A permit to transport the waste (obtained through the EPA) will be required.

#### GES recommends the following:

Although an ecological risk has not been identified, a soil and water management plan should be
put in place for general sediment control to reduce loadings into the waterways.

#### Statement of Suitability

The findings from the current soil investigation can confirm that there is no evidence that the land is contaminated in terms of evaluated risks to human health or the environment.

Therefore, providing the above recommendations are followed in relation to the environment, GES can confirm that the planned excavation works and change of use will not adversely impact human health or the environment.

No additional contamination remediation or management measures will be required during the site redevelopment works.

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# **ABREVIATIONS**

AEC Areas of Environmental Concern

AHD Australian Height Datum

ALS Analytical Laboratory Services

ANZECC Australia and New Zealand Environment and Conservation Council

BGS Below Ground Surface

BH Borehole

BTEX Benzene Toluene Ethylbenzene Xylene
CMP Contamination Management Plan

COA Certificate of Analysis
COC Chain of Custody

COPC Contaminant of Potential Concern

CRC CARE Corporative Research Centre for Contamination Assessment and Remediation of the

Environment

CSM Conceptual Site Model
DQO Data Quality Objectives

EOH End Of Hole

EIL Ecological Investigation Levels
ESL Ecological Screening Levels

EPA Environmental Protection Authority
ESA Environmental Site Assessment
GDA94 Geocentric Datum of Australia 1994
GES Geo-Environmental Solutions Pty. Ltd.

HIL Health Investigation Levels
HSL Health Screening Levels
IL Investigation Levels

LiDAR Light Detection And Ranging

LOR Limits of Reporting

MCRWBA Minimum Construction Requirements for Water Bores in Australia

MDL Mean Detection Limit

NATA National Association of Testing Authorities

NEPM ASC National Environmental Protection (Assessment of Site Contamination) Measure

NHMRC National Health and Medical Research Council
NRMMC Natural Resource Management Ministerial Council

NL Non Limiting

NRMMC Natural Resource Management Ministerial Council

PAH Polynuclear Aromatic Hydrocarbons
PCP Physico-Chemical Parameters
PEV Protected Environmental Values

PHC Petroleum Hydrocarbons
PID Photo-Ionisation Detector

PPA Preferential (PVI) Pathways Assessment

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PSH Phase Separated Hydrocarbons PVIPetroleum Vapour Intrusion Redox Reduction / Oxidation Potential SCA Site Contamination Assessment SCM Site Contamination Model TPH Total Petroleum Hydrocarbons Total Recoverable Hydrocarbons TRH USCS Unified Soil Classification System

WRG Water Resource Group

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

#### 1 INTRODUCTION

#### 1.1 General

This report presents the findings from Environmental Site Assessment (ESA) undertaken by Geo-Environmental Solutions Pty. Ltd. (GES) at 90 Melville Street, Hobart, Tasmania - hereby referred to as 'The Site'. GES was engaged by Giameous Holdings Pty Ltd to conduct this investigation. The Site location is presented in Figure 1 and the current site aerial photograph is presented in Figure 2.

The requirement for the ESA was under the Interim Planning Schemes, Potentially Contaminated Land Code *E2.6.2 P1 Excavation Works* as the site is potentially contaminated from former site activities (timber storage yard).

This report has been prepared by a suitably qualified and experience practitioner in accordance with procedures and practices detailed in NEPM ASC (2013) guidelines and key regulations and policies identified in the References section of this document. Personnel engaged in preparing this ESA are listed in Appendix 1 along with their relevant qualifications and years of experience.



Figure 1 Site Location (image sourced from the LIST)

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.



Figure 2 Aerial Phtograph of the Current Site Layout (c/o Google Earth) April 2019

### 1.2 Site Details

Site details are presented in Table 1.

#### Table 1 Site Details

Site Address		
90 Melville Stree	t, Hobart,	Tasmania

**Current Title identification details** PID 7408842 Title Reference CT245477/1

Previous land use Timber storage yard

Current land use Vacant block/car parking

Current Ownership (as per current certificates of title; the LIST)

Giameous Holdings Pty Ltd

Zoning

The site is Central Business under the Tasmanian Interim Planning Scheme, 2015.

Local Council

Hobart City Council

Proposed Site Use

Multistorey development

Requirement for current Investigation

The site is listed as a potentially contaminated site under the Interim Planning Scheme as it supported a previous commercial use of timber storage and sales

#### 1.3 Investigation Objectives

The objective of the ESA was to address E2.6.2 P1 performance criteria under the Interim Planning scheme.

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#### 1.4 Scope of Works

The scope of works of this ESA was to:

- Conduct a desktop assessment, site history; plus undertake an invasive soil assessment.
- A total of 16 primary soil samples were collected for analysis of Total Recoverable Hydrocarbons (TRH), Benzene Toluene Ethylbenzene Xylene Naphthalene (BTEXN), Polynuclear Aromatic Hydrocarbons (PAHs) and a suite of 15 Metals.
- All soil samples were sent to a National Association of Testing Authorities (NATA) accredited laboratory to determine the presence/absence of contamination and at what level;
- · All samples were sent with quality assurance/quality control samples for analysis;
- All analytical results against were compared against NEPM ASC (2013) guidelines as well as
  other relevant guidelines for assessing hydrocarbon vapour and soil dermal contact risks; and
- Present the findings of the site investigation, conduct a risk assessment and develop a conceptual site model (CSM) plus present future contamination management recommendations in this ESA document

### 1.5 Adopted Land Use Settings for the Investigation

The following investigation limits/guidelines were adopted for the site:

- Ecosystem the closest ecological receptor is the stormwater drainage network then connected
  to the Hobart Rivulet; the following guidelines were adopted:
  - Soil Urban residential / public open spaces land use EILs and ESLs
- The period during excavation phase of former refuelling infrastructure for all site workers:
  - HSL D for vapour intrusion risk to onsite commercial workers plus TRENCHWORK specific vapour assessment;
  - HSL D (CRC CARE) for assessing dermal contact risk to onsite commercial workers;
     and
  - HIL D for assessing dust inhalation and soil ingestion risk to onsite commercial workers.
- Future land users:
  - HSL D for vapour intrusion risk to onsite plus TRENCHWORK specific vapour assessment;
  - HSL D (CRC CARE) for assessing dermal contact risk; and
  - HIL D for assessing dust inhalation and soil ingestion risk.
  - o Zoning Also permits Residential use, these criteria have also been considered.

### 2 PLANNING

#### 2.1 Overview

An ESA is the principal requirement within the IPS E2.0 performance criteria. According to the Interim Planning Scheme 2015 (IPS), the ESA report must be prepared by an suitably qualified person and define the nature, extent and levels of existing contamination and the actual or potential risk to human health or the environment, on or off the site, resulting from that contamination, prepared in accordance with the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended 16 May 2013.

There is no proposed change of use but excavation works was conducted at the site, and therefore E2.6.2 P1 performance criteria are to be addressed.

# 2.2 Excavation Works E2.6.2 P1

As excavation works were conducted at the site, there are no acceptable solutions to proposed works, E2.6.2 P1 performance criteria are to be addressed. The performance criteria identify that the excavation works must not adversely impact on health and the environment, having regard to:

- (a) an environmental site assessment that demonstrates there is no evidence the land is contaminated; or
- (b) a plan to manage contamination and associated risk to human health and the environment that includes:

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

- i. an environmental site assessment;
- any specific remediation and protection measures required to be implemented before excavation commences; and
- a statement that the excavation does not adversely impact on human health or the environment.

## 2.3 Zoning

The site is zoned *Central Business* under the Tasmanian Interim Planning Scheme of 2015 (Figure 3) and is surrounded by *Central business and Commercial zoned land*.



Figure 3 Council planning zones (2015) under the Tasmanian Interim Planning Scheme

### 3 PRELIMINARY INVESTIGATION - DESKTOP

### 3.1 Groundwater

# 3.1.1 Potential Up-Gradient Contamination Sources

Groundwater is likely to drain towards the site from the southwest and then turn to the south near Elizabeth Street to drain south east towards Hobart Rivulet. The site is situated close to the Central Business District of Hobart which has been build up for over 100 years, as a consequence there may be many sources of potential contamination past and present. There are several upgradient vehicle workshops and servicing centres including at 121-123 Melville Street (*JP Automotive*), 152 Harrington Street (*Cramp Brothers Body Works*), 134 Brisbane Street (Former garage), 171-175 Harrington Street (*Bargan Car Rentals*) and 91-93 & 95-97 Brisbane Street (*Sparco*).

### 3.1.2 Downgradient Ecological Receptors

The closest ecological receptor is the River Derwent, 0.5km southeast of the site.

#### 3.1.3 Groundwater Bores

Mineral Resources Tasmania Registered water bores are presented in Appendix 2. Three groundwater bores were identified in a 5 km radius, none of these bores are in the same water shed as the site. Registered bores include the following; Bore # 41515 located 1.8km west from the site on Pottery Creek;

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Bore # 17284 located 2.5km southwest of the site near Cascade Brewery and Bore # 40210 located 2.6km west of the site on Brushy Creek (which feeds New Town Rivulet). Nothing further has been considered for this investigation.

# 3.2 MRT Geology Mapping

The geology of the site has been mapped by Mineral Resources Tasmania (Figure 4). The site is inferred to be underlain with Tertiary aged boulder deposits (Tcbd) with possible shallow subsurface dolerite or Parmeener rock. The surrounding geology comprises of similar deposits.



Figure 4 Mineral Resources Tasmania 1:25000 Scale Mapping (The LIST).

## 3.3 Site Topography, Drainage & Hydrogeology

The site has a gradual gradient of approximately 5% sloping to east. Groundwater is inferred to be migrating to the northeast then turning towards the southeast based on broad scale topographic trends (Figure 5). On a local scale, groundwater is inferred to be migrating towards Elizabeth Street from the investigation area. Surface waters at the site are currently diverted into stormwater drains which drain into the Hobart Rivulet (400m from site) and the River Derwent (1km from site).

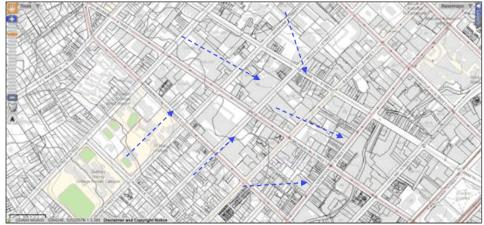


Figure 5 Surface Topography and Inferred Groundwater Flow

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#### 3.4 Historical Aerial Photography Interpretation

Historical aerial photographs of the site and surrounding areas (in particular upgradient) were collated from the Department of Primary Industries, Parks, Water and Environment (DPIPWE) and Google Earth Imagery. Error! Not a valid bookmark self-reference. presents a summary of alterations to the site between photographic events and the individual aerial photos are presented in Error! Reference source not found. to 4.

Table 2 Historical Aerial Photograph Log

Photo	Observations
2008	<ul> <li>Site still in use as a timber yard with timber racks small site office and rear shed.</li> <li>Historical Aerial Photograph Error! Reference source not found.</li> </ul>
1990	Site showing timber yard use open yard with site office and rear shed
	Main K&D site at 103 Melville as it today, and one adjacent building at 100 Melville Street present
	Historical Aerial Photograph Error! Reference source not found
1977	Timber yard evident with large shed on front of property and narrow shed along western boundary
	Former buildings at 100 Melville Street still present, K&D building not present, varied arrangement of sheds and buildings evident
	Historical Aerial Photographs Error! Reference source not found.
1958	<ul> <li>Site appears as an open timber yard, similar to earlier images in the praxis historical report from the 1940's. Historical information suggests K&amp;D established the timber yard in 1910 following demolition of old houses on the site</li> </ul>
	Historical Aerial Photographs Error! Reference source not found

#### 3.5 Dangerous Goods Records (WorkSafe Tasmania)

Worksafe Tasmania was contacted for records or dangerous goods held for the site and no records were available

#### 3.6 Council Environmental Records

The Hobart City Council records indicate the following information regarding neighbouring properties around the site, from the Council's Potentially Contaminated Sites register.

- 95 97 Brisbane Street Sparco potentially contaminated with hydrocarbons.
- 121 123 Melville Street *JP Automotive* Motor dealers contaminated with hydrocarbons.
- 80 88 Melville Street Specialist Car Centre motor dealers etc contaminated with hydrocarbons – possible wash-bay with oil water separator.
- 170 Murray Street not on register (currently Animal tuckerbox)
- 103 Melville Street (previously known as 114-116 Brisbane Street) Was on the HCC's list as
  potentially hazardous but is marked to be removed. Gas cylinders were held at the site and there
  was also a joinery on a small portion of the site. The site has recently been assessed by GES for
  redevelopment and no significant contamination found.
- 134 Brisbane Street Names associated with site Vacuum Oil Company (1953-1954) and Hilmer Hedberg. Possible Contaminant – Hydrocarbons
- 152 Harrington Street; Activity Bodyworks, Names associated with site Cramp Brothers Bodyworks (current), Possible Contaminant – Hydrocarbons and chemical residue
- 100 Melville (adjacent) not considered as site recently redeveloped with full excavation and basement carparking.

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#### 3.7 Tasmanian EPA

A property information request (PIR) search was submitted on the 19<sup>th</sup> of November 2019. The response is still outstanding at the time of reporting, and the report will be updated once available.

#### 3.8 Historical Site Environmental Investigations

GES is not aware of any previous environmental investigations for the site.

#### 3.9 Potential Contamination Issues

#### 3.9.1 Areas of Potential Concern

As determined in this desktop assessment, the site was used as timber yard for over 100 years following demolition of old dwellings on the site in the early 1900's, given this prolonged historical use, the entire site is an area of potential concern (AOPC). This investigation has therefore undertaken a broad grid sampling program to assess any potential hotspots of site potential contamination.

#### 3.9.2 Contaminants of Potential Concern

The following contaminants of potential concern (COPC) could be associated with imported fill and the past use of timber storage and sales:

- Total Petroleum/Recoverable Hydrocarbons (TPH/TRH);
- Mono Aromatic hydrocarbons: Benzene, Toluene, Ethylbenzene, Xylene (BTEX);
- · Polycyclic Aromatic Hydrocarbons (PAH) and
- · Heavy Metals.

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#### 4 FIELD INVESTIGATION PROCEDURES

### 4.1 Works Summary

A total of 2 site visits were conducted to complete the environmental site assessment, see details in Table 3; borehole locations are presented in Figure 6. Photographs of site are presented in Appendix 4.

Table 3 Summary of Site Investigation Work Dates

Scope	Data	Lab Report	Details
Site walkover, competition of services clearance and pilot holes for drilling	28 <sup>th</sup> November 2019	-	Site photographs taken.
Drilling/ Sample collection	7 <sup>th</sup> December 2019	EM1921103	Seven soil bores drilled, 16 samples collected plus QC.

#### 4.2 Site Walkover

A site walkover was completed by GES staff on the 28th November 2019. Images of the current site conditions are presented in Appendix 4.

## 4.2.1 Surface Coverings

The surface across the site is 100% concrete and asphalt with no evidence of significant surface staining.

## 4.2.2 Signs of Contamination

The visual assessment failed to find any visible signs of site contamination. There was no indication of former storage infrastructure or potentially contaminating substances.



Figure 6 Sampling Plan

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### 4.3 Soil Investigation

#### 4.3.1 Soil Sampling

At each of the bore locations, the following precautions were put in place to avoid disrupting underground service assets:

- Dial Before You Dig plans were obtained;
- · Archers Underground Service were engaged; and
- · A hand auger was used to clear the first metre where possible.

A total of seven (7) 65 mm diameter soil bores were drilled for assessing site geology and sampling for contamination impact. The bores were drilled by GES using a hand auger and or the industry recognized Geoprobe direct push drilling system. The selected drilling method involved using a Geoprobe dual tube to retain wall integrity and eliminates risk of profile collapse whilst allowing extraction of 1.0 m length sample cores and allows for deployment of pre packed well systems.

Soil sampling was conducted per the National Environmental Protection Measure (NEPM ASC 2013) and AS4482 sampling guidelines. Table 4 presents a summary of the soil assessment methodology adopted at the site.

Table 4 Summary of Soil Sampling Methods

Activity	Details / Comments	
Underground Service	At each testing location, the following precautions were put in place to avoid disrupting underground service assets:  • Dial Before You Dig plans were obtained;	
Clearance	Archers Underground Service were engaged; and     Where practical, the first meter of the bore was cleared with a hand auger.	
Sampling Method	Soil samples were collected were collected every 0.5 m depth or change in geology. Discrete sampling was conducted where there were visual signs of contamination (discoloration) or odours present within the soil.	
Soil Logging	Logging the soil was conducted in accordance with the unified soil classification system (USCS) as detailed in AS1726 (1993).	
Decontamination of Sampling Equipment	Decon 90 was used to decontaminate reusable sampling equipment (hand auger and core trays) which was triple rinsed, the final rinse with deionised water.	
Soil Sample Collection	In accordance with AS4482.2. Individual soil samples were collected using disposable nitrile gloves from approximately at 1.0m intervals below ground surface (bgs) and/or change in geology.	
Soil Screening	In accordance with AS4482.2. Collected samples were screened for volatile fractions using a Photoionisation Detector (PID). This was done by placing the samples within snap lock bags and analysing the headspace with a PID probe. A service record for GES's PID is included in Appendix 5.	
Sample Selection	A minimum number of samples were carefully selected which would provide enough information to identify hydrocarbon contamination in soils.	
Sample preservation	Samples were placed into a jar for laboratory analysis. Soil jars were placed in a pre- chilled cool box with ice bricks.	
Sample holding times	Sample holding times were within acceptable range (based on NEPM B3-2013) from collection to extraction.	

#### 4.3.2 Soil Analysis

Primary and QC samples were submitted to Analytical Laboratory Services (ALS) Environmental, Springvale Avenue in Melbourne for analysis. The samples were analysed for TPH/TRH, BTEX, PAHs and 15 Metals. One duplicate sample was collected. Chain of Custody (COC) documentation was completed and is provided in Appendix 6; Sample Receipt Notification (SRN) in Appendix 7. Table 5 presents a summary of the laboratory analyses undertaken for the soil samples.

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Table 5 Overview of Soil Analysis and Quality Control

Analytes	Primary Soil Samples	<b>Duplicate</b> <sup>a</sup>	IISb	Rinsate Blank	Trip Blank
TPH/TRH	16	1	-	1	-
BTEX	16	1	-	1	-
PAH	16	1	-	1	-
15 Heavy Metals	16	1	-	1	-

Given that lead was analysed, there was requirement to assess the following soil physical properties to determine soil threshold investigation levels:

- Soil grain class (sand/silt or clay)
- % Clay content;
- Cation exchange capacity; and
- Soil pH

The soil physical properties were assessed through site assessment and chemical properties were based on knowledge of similar soil types encountered around the greater Hobart.

Sampling Quality Control Standards (AS4482): a – One (1) in twenty (20) inter laboratory duplicate samples

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#### 5 QUALITY CONTROL

All Field and laboratory Quality Assurance and Quality Control (QA/QC) details, outputs and reports are presented in Appendix 8.

#### 5.1 Field

It is standard to expect up to 10% error in field duplication and up to 10% laboratory error. Therefore, in theory up to 20% error can be assumed on duplicate analysis. Some variation may exist in soil and groundwater because even though all efforts are made to split samples homogeneously of materials may bias samples in certain elements.

Relative Percentage Differences (RPDs) for the duplicate and triplicate samples where applicable are calculated using the method outlined below.

The acceptance criteria used for the RPDs depend on the levels of contaminants detected and the laboratory's Method Detection Limits (MDL). The closer the levels detected are to the MDL the greater the acceptable RPD. RPDs are calculated as follows:

- RPD <50% for low level results (<20 \* MDL)</li>
- RPD <30% for medium level results (20-100 \* MDL)
- RPD <15% for high level results (>100 \* MDL)
- No limit applies at <2 \* MDL (Method Detection Limit)</li>

Field QA/QC procedures and compliance are summarised in Table 6.

Table 6 Soil Field QA/QC procedures and Compliance

QA/QC Requirement	Compliance	Comments
Appropriate sampling strategy used, and representative samples collected	Yes	Sampling program was undertaken in accordance with AS4482.1-2005
Appropriate and well documented sample collection, handling, logging and transportation procedures.	Yes	Appropriate and well documented
Decontamination	Yes	Appropriate decontamination such as cleaning tools before sampling and between sample locations was undertaken
Chain-of-custody documentation completed	Yes	COC were completed in accordance with NEPM Schedule B2, Section 5.4.5 and transported under strict COC procedures. The signed COC documents are included in this report, which includes the condition report on arrival of samples to the Laboratory, cross checking of sample identification and paperwork and preservation method.
Required number of splits: Duplicate & inter-lab splits: 1 per 20 primary samples	Partially	A total of 16 Primary samples were selected for analysis; 1 duplicate sample was collected for analysis. 1 interlab split was not collected but would be preferred.
QA/QC samples reported method detection limits within indicated guidelines.	Acceptable	For Duplicate pairs, all analytes complied except 2 metals.
Trip blanks collected with no laboratory detections?	Acceptable	Trip blanks are required where volatile hydrocarbons may be detected. Site history suggested highly unlikely to be present
Required numbers of rinse blank samples collected with no laboratory detections?	Yes	Yes, plus Geopropbe sampling system with clean liners utilised between each sampling hole and sampling depth
Samples delivered to the laboratory within sample holding times and with correct preservative	Yes	All samples were sent to the laboratory within holding times and correct preservative.

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# 5.2 Laboratory

Soil laboratory QA/QC procedures and compliance are summarised in Table 7.

Table 7 Soil Laboratory QA/QC Procedures and Compliance

QA/QC Requirement	Compliance	Comments
All analyses NATA accredited	Yes	ALS Laboratories is NATA Accredited. Appropriate analytical methods used, in accordance with Schedule B(3) of the NEPM ASC 2013. Acceptable laboratory limits of reporting (LORs) adopted.
Method Blanks: zero to <practical limit<br="" quantitation="">(PQL)</practical>	Yes	There were no method blank value outliers in any of the QC1 reports.
Laboratory Control Samples: 70% to 130% recovery for soil.	Yes	There were no laboratory control outliers in any of the QC1 reports.
Matrix spikes: 70% to 130% recovery for organics or 80%-120% recovery for inorganics	Yes	There were no matrix spike outliers in any of the QC1 reports.
Duplicate Samples: 0% to <20% RPD.	Yes	There were no duplicate sample outliers.
Surrogates: 70% to 130% recovery	Yes	There were no surrogate recovery outliers in any of the QC1 reports.
Analysis holding time outliers	Yes	No hold-time outliners exist for any of the QC1 reports.
Quality Control Sample Frequency Outliers	Yes	No quality control sample frequency outliers in samples. Matrix Spike outliers present for Phenols and semi volatile TRH: NEPM 2013 B3 & ALS QC Standard.

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#### 6 FIELD INVESTIGATION FINDINGS

### 6.1 Geological Interpretation

In general, the Mineral Resources Tasmania (MRT) geological mapping was consistent with the ground conditions encountered during the investigation. The profile of the boreholes drilled was generally asphalt or concrete slab over a thin layer of gravel fill (0.1m), sandy CLAYEY SILT (0.1m) below was dense silty CLAY dark brown and moist derived from Dolerite boulder deposits. For bore logs see Appendix 9.

#### 6.1.1 Grain Class Interpretation

Grain size classifications are applied to all soils at the site to determine threshold screening level concentrations for hydrocarbons to assess soil ecological and human health risks.

Grain class threshold values are determined based on either the:

- sample grain size (in the case of ecological screening levels or chromium limits); or
- average grain class overlying the sample point (when assessing petroleum vapour screening levels).

When assessing petroleum vapour intrusion screening levels, where soil is proposed to be excavated from the site, the excavated material is excluded from the grain class averaging. The corresponding depth class from which the sample is collected is also shallowed based on the renewed basement depth.

Table 8 provides a summary of the grain class averages for material overlying the sample.

Table 8 Summary of Grain Class Based on USCS Classification

Red			Soil Grain Size Class Averaging Above Soil Sample													Attenuation		ion	HSL						
Sample	Footing Excavation Depth <sup>A</sup> - Fill Thickness <sup>A</sup> - Green	Sample PVI Depth (m) Relative to Slab/Cut Depth	GW	GP	GM	GC	sw	SP	SM	sc	ML	CL	OL	МН	СН	он	а	Rock (R )	Existing Pavement (P)	Craw1Space Thickness (m)	Proposed CONCRETE (CH)	CrawlSpace	Biodegradation	Petrokeum Vapour Intrusion Grain Class*	SAMPLE USCS
BH1 0.5-0.6	6.7	<																		NA	0.2	1.0	1.0	CLAY	СН
BH1 1.5-1.6	6.7	<																		NA	0.2	1.0	1.0	CLAY	CL
BH1 2.5-2.6	6.7	<																		NA	0.2	1.0	1.0	CLAY	CL
BH2 0.5-0.6	6.7	<																		NA	0.2	1.0	1.0	CLAY	СН
BH2 1.5-1.6	6.7	<												Ш						NA	0.2	1.0	1.0	CLAY	CL
BH3 0.5-0.6	6.7	<																		NA	0.2	1.0	1.0	CLAY	СН
BH3 1.5-1.6	6.7	<																		NA	0.2	1.0	1.0	CLAY	CL
BH4 0.5-0.6	6.7	<																		NA	0.2	1.0	1.0	CLAY	СН
BH4 1.5-1.6	6.7	<																		NA	0.2	1.0	1.0	CLAY	SC
BH5 0.5-0.6	6.7	<																		NA	0.2	1.0	1.0	CLAY	GW
BH5 1.5-1.6	6.7	<																		NA	0.2	1.0	1.0	CLAY	SC
BH6 0.5-0.6	6.7	<																		NA	0.2	1.0	1.0	CLAY	СН
BH6 1.5-1.6	6.7	<																		NA	0.2	1.0	1.0	CLAY	CL
BH7 0.5-0.6	6.7	<																		NA	0.2	1.0	1.0	CLAY	СН
BH7 1.5-1.6	6.7	<																		NA	0.2	1.0	1.0	CLAY	CL

## 6.1.2 Soil Contamination Observations

The soils on site appear to be largely natural clay soils derived from the underlying boulder deposits. Only shallow gravel base as present under the concrete or asphalt surface. A small amount of fill was noted in bore hole 7, which contained brick fragments and charcoal.

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#### 7 SOIL ECOLOGICAL IMPACT ASSESSMENT

#### 7.1 Protected Environmental Values

The requirement for protecting soil from contaminated activities in Tasmania is managed under the Environmental Management and Pollution Control Act 1994 (EMPCA) which states in Part 5A:

- (2) An area of land is a contaminated site if -
  - (a) there is in, on or under that area of land a pollutant in a concentration that -
    - (i) is above the background concentration; and
    - (ii) is causing or is likely to be causing serious or material environmental harm or environmental nuisance, or is likely to cause serious or material environmental harm or environmental nuisance in the future if not appropriately managed;

Potential soil impact at the site is assessed through application of the following environmental investigation guidelines.

### 7.2 NEPM ASC (2013) Guidelines

The following ecological investigation guidelines are to be addressed to assess acceptable levels of risk to terrestrial ecosystems:

- NEPM ASC (2013) Ecological Investigation Levels (EIL's) have been developed for selected
  metal and organic substances. EIL's depend on specific soil and physicochemical properties
  and land use scenarios and generally apply to the top two (2) metres of the soil profile (NEPM
  2013):
- NEPM ASC (2013) Ecological Screening Levels (ESL's) have been developed for selected
  petroleum hydrocarbon compounds and total petroleum hydrocarbon fractions. ESL's broadly
  apply to coarse- and fine-grained soils and various land use scenarios within the top two (2)
  metres of the soil profile (NEPM ASC 2013).

Soil analytical results are compared against Ecological Screening Levels (ESL's) and Ecological Investigation Levels (EIL's) limits presented in Table 9.

Table 9 Summary of Soil Investigation Limits Considered at the Site based in NEPM ASC (2013)

	Analytes Investigated													
Investigation Levels (IL)	Hydrocarbo	ns		Metals										
	BTEX	TRH (F1 to F4)	Benzo(a) pyrene (PAH)	Naphthalene (PAH)	Zn, Cu, Cr(III), Ni & As	Lead	DDT							
ESL's	Analysed	Analysed	Analysed	> <	> <	$>\!\!<$	$>\!\!<$							
EIL's	$\geq <$	><		Analysed	Analysed	Analysed	Not Analysed							

#### 7.3 Guidelines

### 7.3.1 Ecological Screening Levels

The following compounds were compared against NEPM (2013) Ecological Screening Levels (ESL's):

- BTEX;
- F1 to F4 TRH; and
- Benzo(a)pyrene

Selection of ESL threshold investigation limits are set out in the NEPM (2013) guidelines and require classification of the soil according to:

- Land use sensitivity:
  - Areas of ecological significance
  - Urban residential and public open space; and
- · Dominant particle size passing through a 2 mm sieve into:
  - Coarse sand sizes and greater; and
  - Fine clay and silt sizes.

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Adopted NEPM (2013) soil and land use classifications are presented below.

#### 7.3.2 Ecological Investigation Levels

The following compounds were compared against Environmental Investigation Levels:

- Lead; and
- Naphthalene.

There was a requirement to classify the soil according to physicochemical properties given that the above listed compounds. Adopted physicochemical parameters are presented in the results tables.

Selection of EIL threshold investigation limits are set out in the NEPM ASC (2013) guidelines and require classification of the soil per specific soil and physicochemical properties which are presented in the results tables. The adopted land use scenario applied was Urban Residential/ Public Open Space land use guidelines because it was the best fit for current and future land use of the site.

#### 7.4 Findings

#### 7.4.1 Ecological Screening Levels

Laboratory analytical results for soil are presented in Appendix 10. Table 10 summaries all soil analytical results against relevant ESLs guideline limits for urban residential / public open spaces land use. Concentrations which exceed laboratory limits of reporting (LOR) are highlighted in bold. ESL exceedances are highlighted with a coloured cell. Samples that have been excavated are marked with an X.

A single sample taken from soil at the site exceeds ESL limits for Benzo-a-pyrene (BaP). Therefore, if that soil is disturbed in that area it may pose a risk to ecological receptors if not managed.

Table 10 Summary of Soil Analytical Results Compared with Ecological Screening Level's for commercial / Industrial land use

NEPM Ecological S	Screening Level	ls for So	il		ВТ	EX		РАН		TRH	I	
Bold - Indicates LG X - Indicates San Colour Shading - >1 x, * 2-5 x, ** 5	nple has beer Indicates ESI	Exceed	lances:	8 enzene	Toluene	Ethylbenzene	Xylenes	Benzo(a)pyrene	F1 (C6 - C10)	F2 (>C10 - C16)	F3 (>C16 - C34)	F4 (>C34 - C40)
				Be	Tol	盐	⋧	Be	F1	F2	£3	F4
QI	Jate	: dass irse)	se	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	Sample Date	Soil Texture Clas (fine /coarse)	Land Use	LOR 0.2	LOR 0.5	LOR 0.5	LOR 0.5	LOR 0.5	LOR 10	LOR 50	LOR 100	LOR 100
BH1 0.5-0.6 X	7/12/19	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH1 1.5-1.6 X	7/12/19	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH1 2.5-2.6 X	7/12/19	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH2 0.5-0.6 X	7/12/19	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH2 1.5-1.6 X	7/12/19	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH3 0.5-0.6 X	7/12/19	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH3 1.5-1.6 X	7/12/19	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH4 0.5-0.6 X	7/12/19	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH4 1.5-1.6 X	7/12/19	С	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH5 0.5-0.6 X	7/12/19	С	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH5 1.5-1.6 X	7/12/19	С	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH6 0.5-0.6 X	BH6 0.5-0.6 X 7/12/19 F COM/INC				<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH6 1.5-1.6 X	7/12/19	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH7 0.5-0.6 X						<0.5	<0.5	24.3***	<10	100	1640	340
BH7 1.5-1.6 X	7/12/19	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100

#### 7.4.2 Ecological Investigation Levels

Laboratory analytical results are presented in Appendix 10. Table 11 compares all soil analytical results against relevant ecological investigation limits (EIL's) for urban residential / public open spaces land use. Concentrations which exceeded laboratory LOR are detailed in the table. EIL exceedances are highlighted with a coloured cell and samples that were excavated are marked with an X. There was a single EIL guideline exceedances for copper and a low risk to ecological receptors has been identified.

Table 11 Soil Analytical Results Compared Against Ecological Investigation Levels for commercial / industrial land use

NEPM Ecological		on Levels fo	r Soil										
<b>Bold - Indicates L</b> X - Indicates Sar			d Exca	vation									
Colour Shading >1 x, * 2-5 x, ** !													
Q	Date	EIL Land Use Sensitivity Gass	ŒC (amolc/kg)		ture dass oarse)	Copper (ŒC)	Copper (pH)	Nickel	Zinc	Chromium III	Lead	Arsenic	Naphthalene
Sample ID	Sample Date	EIL Land Use Sensitivity G	Soil Œ	Soil pH	Soil Texture C (fine /coarse)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH1 0.5-0.6 X	7/12/19	COM/IND	45	4.5 (3)	F	30	30	11	11	8	6	<5	<1
BH1 1.5-1.6 X	7/12/19	COM/IND	35	4.5 (3)	F	36	36	54	49	14	8	<6	<1
BH1 2.5-2.6 X	7/12/19	COM/IND	35	4.5 (3)	F	37	37	39	49	12	8	<5	<1
BH2 0.5-0.6 X	7/12/19	COM/IND	45	4.5 (3)	F	66	66	30	50	39	5	<5	<1
BH2 1.5-1.6 X	7/12/19	COM/IND	35	4.5 (3)	F	101	101	21	51	5	<5	<5	<1
BH3 0.5-0.6 X	7/12/19	COM/IND	45	4.5 (3)	F	30	30	18	16	9	7	<5	<1
BH3 1.5-1.6 X	7/12/19	COM/IND	35	4.5 (3)	F	34	34	70	48	10	<5	<5	<1
BH4 0.5-0.6 X	7/12/19	COM/IND	45	4.5 (3)	F	29	29	10	16	11	9	<5	<1
BH4 1.5-1.6 X	7/12/19	COM/IND	20	4.5 (3)	C	18	18	21	32	8	6	<5	<1
BH5 0.5-0.6 X	7/12/19	COM/IND	10	4.5 (3)	O	56	56	25	25	21	6	<5	<1
BH5 1.5-1.6 X	7/12/19	COM/IND	20	4.5 (3)	С	57	57	29	33	8	<5	<5	<1
BH6 0.5-0.6 X	7/12/19	COM/IND	45	4.5 (3)	F	29	29	8	11	9	6	<5	<1
BH6 1.5-1.6 X	7/12/19	COM/IND	35	4.5 (3)	F	68	68	20	48	23	<5	<5	<1
BH7 0.5-0.6 X	7/12/19	COM/IND	45	4.5 (3)	F	77	77	10	133	6	90	34	<1
BH7 1.5-1.6 X	7/12/19	F	80	80	62	46	27	<6	<6	<1			

#### pH Designation:

<sup>1)</sup> Using 0.01M CaCl2 extract. Rayment, G.E. and Lyons, D.J. (2011). "Soil Chemical Methods – Australasia". 495+20 pp. CSIRO Publishing, Melbourne.

<sup>2)</sup> pHF (1:5). Adjusted by subtracting 0.75 with +/- 0.25 error to calibrate to the CaCl2 method (per comm. ALS Brisbane Acid Sulphate Soils Laboratory). Methods in accordance with Ahern, C.R., Stone Y., and Blunden B. (1998b). 'Acid Sulphate Soils Assessment Guidelines'. Acid Sulphate Soils Management Advisory Committee, Wollongbar, NSW, Australia.

<sup>3)</sup> Classified in accordance with parent material typical soil pH as per the Tasmanian soils database / or on-site testing

#### 8 SOIL HUMAN HEALTH DIRECT CONTACT ASSESSMENT

#### 8.1 Guidelines

Guidelines presented herein are based on potential exposure of human receptors to soil impact which may include:

- Onsite excavation works which may include basement carpark and deep foundations. Receptors
  include onsite commercial contractors, offsite residential receptors as well as sensitive land use
  and recreational receptors;
- Proposed future onsite residential land users which may be exposed to potential shallow soil
  impact in non-paved areas of the site not likely given the entire site will be sealed by a concrete
  carpark;
- Trench workers repairing or building services (typically to 1 m bgs) as assessed against commercial worker guidelines for dermal contact and HIL's.

#### 8.1.1 Land Use Classification

The NEPM (2013) guidelines have been referenced to ensure that the correct land use and density category has been adopted for the site and the surrounding properties (where applicable). As per NEPM (2013) guidelines, the adopted land use class is dependent on the building density and the opportunity for soil access by site occupants (exposure to potentially impacted soil). Aspects needing to be considered include:

- Whether the site is of sensitive land use such as a childcare centre, preschool, primary school or aged care facility in which case land use Class A is applicable;
- The proportion of paved area to determine direct contact exposure risk and therefore classification as low or high density; and
- Classification based on residential, recreational or commercial/industrial setting.

#### 8.1.2 Adopted Land Use Classification

The adopted land use class is presented in Table 12.

Table 12 Summary of Land Use Spatial and Temporal Setting for Determining Exposure Risk

Soil Samples	Current/future use	Location	Land Use	Pathway*	Land Use Class
All	Current	Onsite	Commercial workers	ALL	D
			Trench workers	ALL	D & Standard
	Potential site redevelopment	Onsite	Trench workers	ALL	D & Standard
			Commercial contractors	ALL	D
	Future – post	Onsite	Commercial workers	ALL	D
	potential redevelopment		Trench workers	ALL	D & Standard
			Residents (upper floors no soil contact) for any maintenance excavations only	DI	D

<sup>\*</sup> Pathways:

#### 8.2 Findings

#### 8.2.1 Dermal Contact - Petroleum Hydrocarbons

Laboratory analytical results are presented in Appendix 10. Table 13 presents soil hydrocarbon analytical results compared against CRC CARE (Friebel & Nadebaum, 2011) Health Screening Levels (HSL) guidelines for assessing dermal contact to commercial workers, potential future residents and Trench workers. Concentrations which exceeded laboratory LOR are highlighted in bold. HSL exceedances are highlighted with a coloured cell indicating the highest HSL land used class which is exceeded. There were no exceedances identified.

DC - Dermal Contact - HSL Trench Worker Guidelines (CRC CARE 2013)

DI - Dust Inhalation - HIL Guidelines (NEPM ASC 2013)

SI – Soil Ingestion - HIL Guidelines (NEPM ASC 2013)

ALL - All of above

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

Table 13 Soil Analytical Results Compared Against CRC CARE Guidelines for Dermal Contact

CRC CARE Health Screening Level			EP	080: BTE	(N			EP080/	071: TRH	
Dermal Cont	_	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	C6 - C10 Fraction	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
Units		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR		0.2	0.5	0.5	0.5	1	10	50	100	100
	ercial/Industrial	430	99000	27000	81000	11000	26000	20000	27000	38000
Intrusive Mai	ntenance Worker	1100	120000	85000	130000	29000	82000	62000	85000	120000
Date	Sample									
7/12/2019	BH1 0.5-0.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
7/12/2019	BH1 1.5-1.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
7/12/2019	BH1 2.5-2.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
7/12/2019	BH2 0.5-0.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
7/12/2019	BH2 1.5-1.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
7/12/2019	BH3 0.5-0.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
7/12/2019	BH3 1.5-1.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
7/12/2019	BH4 0.5-0.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
7/12/2019	BH4 1.5-1.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
7/12/2019	BH5 0.5-0.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
7/12/2019	BH5 1.5-1.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
7/12/2019	BH6 0.5-0.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
7/12/2019	BH6 1.5-1.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
7/12/2019	7/12/2019 BH7 0.5-0.6 X		<0.5	<0.5	<0.5	<1	<10	100	1640	340
7/12/2019	7/12/2019 BH7 1.5-1.6 X			<0.5	<0.5	<1	<10	<50	<100	<100

#### 8.2.2 Dust Inhalation & Soil Ingestion

Laboratory analytical results are presented in Appendix 10. Table 14 presents the soil analytical results compared against combined dust inhalation and soil ingestion risk is assessed through the application of NEPM (2013) Health Investigation Levels (HILs) for exposure to soil contaminants. Concentrations which exceeded laboratory LOR would be presented in bold, metals are simply reported. HIL exceedances would be highlighted with a coloured cell indicating the highest HIL land used class which is exceeded. Samples that have been excavated are marked with an X.

There were no exceedances identified.

Table 14 Soil Analytical Results Compared Against NEPM (2013) Health Investigation Limit Guidelines

	Son Analytical	1 Tecoures		J 111 C 1		5441131	- 121		(2010	,,			5				iii es	_								_	_	_	_	_	_				
Exceedan	- Indicates LOR ace in Non Metalic ompounds	EA055: Moisture Content	EG005T:	Total N	Metal	s by ICP- <i>l</i>	AES										EG035T: Total Recoverable Mercury by FIMS	EP075	(SIM	B: Pol	ynucl	ear Ar	omat	ic Hyd	rocart	oons									
1	ealth Investigation vels (HIL's)																																		
	halation and Soil ion Assessment	¥						_											a)							зие		anthene	anthene		3.cd)pyrene	racene	/lene		теа (wно
1	tes Sample Within d Excavation Zone	Moisture Content	Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium Total	Cobalt	Copper	Lead	Manganese	Nickel	Selenium	Vanadium	Zinc	Mercury	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benz(a)anthrac	Chrysene	Benzo(b)fluora	Benzo(k)fluorar	Benzo(a)pyrene	Indeno(1.2.3.cc	Dibenz(ah)anthracen	Benzo(g.h.i)perylene	PAHs	Benzo(a)pyreneTEQ (WHO)
Units		%	mg/kg	mg/kg	mg/kg	ng/kg	mg/kg	mg/kg	mg/kg	By/Bu	mg/kg	Bk/Bu	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR		1 _	5	10	1	20	1	2	2	5	5	5	2	ın	5	5	0.1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
HIL D Comme	erial/Industrial	₩ HIL D	3000		500	300000	900		4000	240000	1500	60000	6000	10000		400000	730																	4000	40
Sample date	: Sample ID																	Ш															$\square$		Ш
7/12/2019	BH1 0.5-0.6 X	22.3	<5	370	<1	<50	<1	8	13	30	6	32	11	<5	67	11	<0.1	-	_	_	$\overline{}$	$\overline{}$	$\overline{}$	$\overline{}$	_		-						<0.5	$\overline{}$	
7/12/2019	BH1 1.5-1.6 X	17.7	<6	<60	<6	<60	<3	14	58	36	8	497	54	<6	95	49	<0.1	-	$\rightarrow$	$\overline{}$	$\overline{}$	$\overline{}$	$\overline{}$	$\overline{}$	$\overline{}$	_	-		$\overline{}$	_	_	-	<0.5	$\overline{}$	$\overline{}$
7/12/2019	BH1 2.5-2.6 X	21.6	<5	<50	<5	<50	<2	12	13	37	8	303	39	<5	101	49	<0.1	<0.5	_	_	_	_	-	$\overline{}$	<0.5	_	-		$\overline{}$	<0.5	_	-	<0.5	<0.5	<0.5
7/12/2019	BH2 0.5-0.6 X	20	<5	340	<1	<50	<1	39	47	66	5	640	30	<5	98	50	<0.1	l ∠n ∈ l.	<0.5 l	<0.5 l	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
7/12/2019	BH2 1.5-1.6 X	14.5									-		_	_	50		VU.1	-	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$			-	$\overline{}$	-	$\overline{}$	_	-				
7/40/0040		14.5	<5	140	<1	<50	<1	5	28	101	<5	263	21	<5	111	51	<0.1	<0.5	<0.5	⊲0.5	$\rightarrow$	<0.5	$\rightarrow$	$\rightarrow$	<0.5	$\overline{}$	-		$\overline{}$	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
7/12/2019	BH3 0.5-0.6 X	21.6	<5	280	1	<50 <50	<1 <1	9	25	101 30	<5 7	263 30	21 18	_	111 70		<0.1 <0.1	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
7/12/2019	BH3 0.5-0.6 X BH3 1.5-1.6 X	21.6 19.6		280 280	1 7	<50 <50	-	-	_		<5 7 <5		-	<5	111	51	<0.1 <0.1 <0.1	<0.5 <0.5 <0.5	<0.5 <0.5 <0.5	<0.5 <0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5
7/12/2019 7/12/2019	BH3 1.5-1.6 X BH4 0.5-0.6 X	21.6 19.6 24.8	S S S	280 280 170	1 7 <1	<50 <50 <50	<1	9 10 11	25 291 8	30 34 29	7	30 681 60	18 70 10	<5 <5 <5 <5	111 70 83 75	51 16 48 16	<0.1 <0.1 <0.1 <0.1	<0.5 < 0.5 < 0.5 < 0.5 < 0.5 <	<0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5	<0.5 <0.5 <0.5	<0.5 <0.5 <0.5	<0.5 <0.5 <0.5	<0.5 <0.5 <0.5	<0.5 <0.5 <0.5	<0.5 <0.5 <0.5	<0.5 <0.5 <0.5	<0.5 <0.5 <0.5	<0.5 <0.5 <0.5	<0.5 <0.5 <0.5	<0.5 <0.5 <0.5	<0.5 <0.5 <0.5	<0.5 <0.5 <0.5	<0.5 <0.5 <0.5
7/12/2019 7/12/2019 7/12/2019	BH3 1.5-1.6 X BH4 0.5-0.6 X BH4 1.5-1.6 X	21.6 19.6 24.8 22.5	\displays \displ	280 280 170 70	1 7 <1 3	<50 <50 <50 <50	<1	9 10 11 8	25 291 8 29	30 34 29 18	7 <5	30 681 60 106	18 70 10 21	<5 <5 <5 <5	111 70 83 75 32	51 16 48 16 32	<0.1 <0.1 <0.1 <0.1 <0.1	<0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 <	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5
7/12/2019 7/12/2019 7/12/2019 7/12/2019	BH3 1.5-1.6 X BH4 0.5-0.6 X BH4 1.5-1.6 X BH5 0.5-0.6 X	21.6 19.6 24.8 22.5 19.8	\$ \$ \$ \$	280 280 170 70 600	1 7 <1 3 2	<50 <50 <50 <50 <50	<1 <2 <1	9 10 11 8 21	25 291 8 29 22	30 34 29 18 56	7 <5 9	30 681 60 106 51	18 70 10 21 25	<5 <5 <5 <5 <5	111 70 83 75 32 105	51 16 48 16 32 25	<0.1 <0.1 <0.1 <0.1 <0.1 <0.1	<0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 < < 0.5 <	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<ul><li>0.5</li><li>0.5</li><li>0.5</li><li>0.5</li><li>0.5</li><li>0.5</li><li>0.5</li></ul>	<0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5	Ø.5 Ø.5 Ø.5 Ø.5 Ø.5	<0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5
7/12/2019 7/12/2019 7/12/2019 7/12/2019 7/12/2019	BH3 1.5-1.6 X BH4 0.5-0.6 X BH4 1.5-1.6 X BH5 0.5-0.6 X BH5 1.5-1.6 X	21.6 19.6 24.8 22.5 19.8	\$ \$ \$ \$ \$	280 280 170 70 600 220	1 7 <1 3 2	<50 <50 <50 <50 <50 <50	<1 <2 <1 <1 <1 <1 <1 <1	9 10 11 8 21 8	25 291 8 29 22 33	30 34 29 18 56 57	7 <5 9	30 681 60 106 51 780	18 70 10 21	<5 <5 <5 <5 <5 <5	111 70 83 75 32 105 88	51 16 48 16 32 25 33	<0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	<0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 <0.5	0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	<ul><li>0.5</li><li>0.5</li><li>0.5</li><li>0.5</li><li>0.5</li><li>0.5</li><li>0.5</li><li>0.5</li></ul>	<ul><li>0.5</li><li>0.5</li><li>0.5</li><li>0.5</li><li>0.5</li><li>0.5</li><li>0.5</li></ul>	<ul><li>0.5</li><li>0.5</li><li>0.5</li><li>0.5</li><li>0.5</li><li>0.5</li><li>0.5</li></ul>	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5	Q.5 Q.5 Q.5 Q.5 Q.5 Q.5 Q.5 Q.5 Q.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<ul><li>0.5</li><li>0.5</li><li>0.5</li><li>0.5</li><li>0.5</li></ul>	<ul><li>∅.5</li><li>∅.5</li><li>∅.5</li><li>∅.5</li><li>∅.5</li></ul>	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5	Ø.5 Ø.5 Ø.5 Ø.5 Ø.5 Ø.5 Ø.5
7/12/2019 7/12/2019 7/12/2019 7/12/2019	BH3 1.5-1.6 X BH4 0.5-0.6 X BH4 1.5-1.6 X BH5 0.5-0.6 X BH5 1.5-1.6 X BH6 0.5-0.6 X	21.6 19.6 24.8 22.5 19.8	\$ \$ \$ \$	280 280 170 70 600 220 250	1 7 <1 3 2	<50 <50 <50 <50 <50	<1 <2 <1 <1 <1	9 10 11 8 21 8	25 291 8 29 22	30 34 29 18 56	7 <5 9 6	30 681 60 106 51	18 70 10 21 25	<5 <5 <5 <5 <5	111 70 83 75 32 105 88 68	51 16 48 16 32 25	<ul> <li>0.1     <li>0.1     <li>0.1     </li> <li>0.1     </li> <li>0.1     </li> <li>0.1     </li> <li>0.1     </li> <li>0.1     </li> </li></li></ul>	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<pre>&lt;0.5</pre> <pre>&lt;0.5</pre> <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<ul> <li>0.5</li> <li>0.5</li></ul>	<ul><li>0.5</li><li>0.5</li><li>0.5</li><li>0.5</li><li>0.5</li><li>0.5</li><li>0.5</li><li>0.5</li></ul>	<ul> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> </ul>	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<ul><li>0.5</li><li>0.5</li><li>0.5</li><li>0.5</li><li>0.5</li><li>0.5</li><li>0.5</li><li>0.5</li></ul>	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<pre>&lt;0.5 &lt;0.5 &lt;0.5 &lt;0.5 &lt;0.5 &lt;0.5 &lt;0.5 &lt;0.5</pre>	<ul> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> </ul>	<ul><li>∅.5</li><li>∅.5</li><li>∅.5</li><li>∅.5</li><li>∅.5</li><li>∅.5</li></ul>	<0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5	<0.5 <0.5 <0.5 <0.5 <0.5	Ø.5 Ø.5 Ø.5 Ø.5 Ø.5 Ø.5 Ø.5
7/12/2019 7/12/2019 7/12/2019 7/12/2019 7/12/2019 7/12/2019 7/12/2019	BH3 1.5-1.6 X BH4 0.5-0.6 X BH4 1.5-1.6 X BH5 0.5-0.6 X BH5 1.5-1.6 X BH6 0.5-0.6 X BH6 1.5-1.6 X	21.6 19.6 24.8 22.5 19.8 18 22.9	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	280 280 170 70 600 220 250	1 7 <1 3 2 <1 <1 <1 <1 <1	<50 <50 <50 <50 <50 <50 <50 <50 <50 <50	<1 <2 <1 <1 <1 <1 <1 <1	9 10 11 8 21 8 9 23	25 291 8 29 22 33 9	30 34 29 18 56 57 29 68	7 <5 9 6 6 <5 6	30 681 60 106 51 780 33 247	18 70 10 21 25 29 8 20	\(\delta\)	111 70 83 75 32 105 88 68	51 16 48 16 32 25 33 11 48	<ul> <li>0.1</li> </ul>	<0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 <	<pre>&lt;0.5</pre> <pre>&lt;0.5</pre> <pre>&lt;0.5</pre> <pre>&lt;0.5</pre> <pre>&lt;0.5</pre> <0.5 <0.5 <0.5 <0.5 <0.5	<ul> <li>Ø.5</li> </ul>	<ul> <li>0.5</li> <li>0.5</li></ul>	<ul> <li>0.5</li> </ul>	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<ul> <li>&lt;0.5</li> <li>&lt;0.5</li> <li>&lt;0.5</li> <li>&lt;0.5</li> <li>&lt;0.5</li> <li>&lt;0.5</li> </ul>	<ul> <li>Ø.5</li> <li>Ø.5</li> <li>Ø.5</li> <li>Ø.5</li> <li>Ø.5</li> <li>Ø.5</li> </ul>	<0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<ul> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> </ul>
7/12/2019 7/12/2019 7/12/2019 7/12/2019 7/12/2019 7/12/2019	BH3 1.5-1.6 X BH4 0.5-0.6 X BH4 1.5-1.6 X BH5 0.5-0.6 X BH5 1.5-1.6 X BH6 0.5-0.6 X	21.6 19.6 24.8 22.5 19.8 18 22.9	\$ \$ \$ \$ \$ \$	280 280 170 70 600 220 250	1 7 <1 3 2 <1 <1	<50 <50 <50 <50 <50 <50 <50 <50	<1 <2 <1 <1 <1 <1 <1 <1 <1	9 10 11 8 21 8	25 291 8 29 22 33 9	30 34 29 18 56 57 29	7 <5 9 6 6 <5	30 681 60 106 51 780 33	18 70 10 21 25 29 8	\( \square\) \( \s	111 70 83 75 32 105 88 68	51 16 48 16 32 25 33	<ul> <li>0.1     <li>0.1     <li>0.1     </li> <li>0.1     </li> <li>0.1     </li> <li>0.1     </li> <li>0.1     </li> <li>0.1     </li> </li></li></ul>	<0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 < <0.5 <0.5	<pre>&lt;0.5 &lt;0.5 &lt;0.5 &lt;0.5 &lt;0.5 &lt;0.5 &lt;0.5 &lt;0.5</pre>	<ul> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>1.3</li> </ul>	<ul> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>2.8</li> </ul>	<ul> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>39.7</li> </ul>	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<ul> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>19.5</li> </ul>	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <19.3	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <15.8	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <1.1	<ul> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>4.8</li> </ul>	<0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0.5   <0	<0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5	<ul> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>0.5</li> <li>36</li> </ul>

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#### 9 INDOOR INHABITANT PVI ASSESSMENT - HSL's

This PVI assessment has been conducted in accordance with relevant CRC CARE Technical Documentation and NEPM 2013 guidelines presented in references section of this report. The HSL assessment approach is generally the first (Tier 1) investigation phase adopted for assessing PVI risk at petroleum hydrocarbon (PHC) impacted sites. HSL guidelines have been applied for samples collected from the site to account for risks that may be associated with volatile hydrocarbon vapour intrusion into confined spaces where there may be an inhalation risk through longer term exposure. This does not constitute a full vapour risk assessment but provides additional information from which to further quantify any risk.

A detailed investigation (Tier 2 to 3) is recommended over an HSL assessment where an acute risk has been identified at the site (CRC CARE 2013) because of:

- · Migrating product on surface soils beneath buildings;
- · Strong PHC odours;
- · Flammable risk in confined spaces; and/or
- Health complaints from occupants.

Based on the site visits, none of the above conditions have been identified at the site. If the outcome of this Tier 1 assessment reveals HSL exceedances for hydrocarbon vapour intrusion, a more detailed (Tier 2) assessment will be required to further evaluate the human health risk.

PVI risk is initially interpreted through the development of HSL threshold limits from the following classifications:

- · The geology and or hydrogeology of the investigation point; and
- · Land use sensitivity:

The resulting HSL threshold limits are compared with laboratory analytical results.

#### 9.1 Selected Media for Assessing PVI Risk

Table 15 presents a summary of the preferred HSL approach to assessing PVI risk. In this case, all soil investigated was within the excavation zone. Groundwater was eliminated as a source due to the documented depth (>18m) well in excess of the vertical exclusion depth (NEPM & CRC CARE).

Table 15 Preferred Methods for Determining Site PVI Risk

Media Analysed	Method	Limitations	Order of Preference
Soil Gas	Concentrations of a soil gas through a soil vapor probe	This approach provides the most reliable data in interpreting PVI risk, although direct modelling should be applied if concentrations exceed HSL threshold limits.	Primary
Groundwater	Concentrations of PHC in groundwater through deployment of monitoring wells	More robust and reliable that soil in determining onsite and in particular, offsite risks. Determining PVI risk based on groundwater is inherently conservative when interpreting vapour risk to account for not readily discernible preferential pathways. Reference may be drawn to alternative assessment approaches:  1) Application of site-specific conditions to the CRC CARE model for assessing PVI risk 2) Soil gas interpretation for areas where a PVI risk is identified from groundwater analysis.	Secondary
Soil	Concentrations of PHC in soil	Concentrations in soil may be subject variability due to soil moisture, organic content and oxygen ingress all which create significant bias in threshold values. Reliance is place on utilizing groundwater analysis over soil. Soil results provide localised information.	Tertiary

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#### 9.2 Land Use Class

For surrounding properties, the potential PVI risk is characterized through application of CRC CARE HSL's for each individual property based on their existing land use (NEPM 2013; Friebel & Nadebaum 2010). The CRC CARE guidelines have been referenced to ensure that the correct land use and density category has been adopted for surrounding land use to ensure health risks are consistent with the HSL models. Aspects considered include the:

- · Sensitivity of the existing or potential land use;
- · Percentage of paved area for defining potential vapour migration risk;
- Type of basement garage which may influence the confinement of PHC vapours;
- Presence of a slab or cavity for discerning vapour intrusion risk.

If hydrocarbon impacted soil is discerned at the site, consideration is given to downgradient receptors. Where applicable, land use class therefore considers:

- · Downgradient receptors where onsite HSL exceedances have been identified in soil; and
- Variations in land use for different parts of the proposed development.

The current and future land uses have been considered, including:

- HSL D for commercial workers at the site (current and future)
- HSL D for residents in upper level apartments above basement carparking (future use)

#### 9.3 Soil Assessment

Laboratory analytical results are presented in Appendix 10. Table 16 presents the results against a potential indoor vapour risk. Concentrations which exceeded laboratory LOR are highlighted in bold. HSL exceedances are highlighted with a coloured cell.

There were no exceedances identified.

Table 16 Soil Analytical Results Compared Against HSL D for Indoor Vapour Risk

Soil Hydrocarbo Intrusion (NEPI Soil Sample An	M 2013)	sessing Indoor	Vapour		EP080: BTEXN					EP080/0	171: TRH
Bold - Indicates L	OR Exceedances	i			a	<u></u>	Ethylbenzene	Total Xylenes	Naphthalene		
Colour Shading	- Indicates HS	L Exceedances		cen	ene	lbe	×	hth			
>1 x, * 2-5 x, **	5-20 x, *** 20	-50 x, **** >50		Benzene	Toluene	Ethy	Tota	Nap	F1	F2	
Sample ID	Sample Date	Depth Class	Grain	HSL	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample 10	Sample Date	Deptil Class	Class	ПЭС	LOR 0.2	LOR 0.5	LOR 0.5	LOR 0.5	LOR 1	LOR 10	LOR 50
BH1 0.5-0.6	7/12/2019	>SLAB/CUT RL	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH1 1.5-1.6	7/12/2019	>SLAB/CUT RL	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH1 2.5-2.6	7/12/2019	>SLAB/CUT RL	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH2 0.5-0.6	7/12/2019	>SLAB/CUT RL	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH2 1.5-1.6	7/12/2019	>SLAB/CUT RL	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH3 0.5-0.6	7/12/2019	>SLAB/CUT RL	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH3 1.5-1.6	7/12/2019	>SLAB/CUT RL	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH4 0.5-0.6	7/12/2019	>SLAB/CUT RL	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH4 1.5-1.6	7/12/2019	>SLAB/CUT RL	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH5 0.5-0.6	7/12/2019	>SLAB/CUT RL	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH5 1.5-1.6	7/12/2019	>SLAB/CUT RL	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH6 0.5-0.6	7/12/2019	>SLAB/CUT RL	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	
BH6 1.5-1.6	7/12/2019	>SLAB/CUT RL	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	
BH7 0.5-0.6	7/12/2019	>SLAB/CUT RL	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	100
BH7 1.5-1.6	7/12/2019	>SLAB/CUT RL	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50

#### 10 TRENCH WORKER PVI ASSESSMENT - HSL's

#### 10.1 Classification

The following Health Screening Assessment is based on hydrocarbon vapour intrusion risk to subsurface excavation workers within excavations. This is assessed through analysis of vapours from soil and soil vapours. Groundwater is generally not used to assess risk as threshold limits for all depth and grain classes are non-limiting. Land use classes are not applicable when assessing vapour intrusion into trenches

Soil and soil vapour HSL's for assessing hydrocarbon risk to maintenance workers are based on CRC CARE Technical Report 10 guidelines (Friebel & Nadebaum 2011) and the following variables:

- Dominant grain size class of material at the soil sample depth or based on the dominant grain class of the backfill material based on US Agriculture Soil Classification System (SCS) and partitioning into either sand, silt or clay; and
- Classifying soil according to depth ranges: 0 to 2 m; 2 to 4 m; 4 to 8 m; and greater than 8 m;

#### 10.2 Findings

Laboratory analytical results are presented in Appendix 10. Summary of Soil Analytical Results Compared against HSL's for Assessing PVI Risk to Trench Workers are presented in Table 17. Concentrations that exceeded laboratory LOR are highlighted in bold, and if there were any HSL exceedances they would be highlighted with a coloured cell. There were no exceedances identified.

Table 17 Summary of Soil Analytical Results Compared against HSL's for Assessing PVI Risk to Trench Workers

workers										
CRC CARE Health Scro for PHC Inhalation Ri Soil Sample Analysis	sk To Trench Wo		n		EP	080: BTE	XN		EP080/	071: TRH
Bold - Indicates LOR	Exceedances					ene	nes	ine	C10 Fraction	C16 Fraction
Dark Grey Shading - I >1 x, * 2-5 x, ** 5-20			:	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	C6 - C10 F	>C10 - C1
Sample ID	Sample Date	Depth	Grain	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample 15	Sample Date	Class	Class	LOR 0.2	LOR 0.5	LOR 0.5	LOR 0.5	LOR 1	LOR 10	LOR 50
BH1 0.5-0.6	7/12/2019	4 to 8m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH1 1.5-1.6	7/12/2019	4 to 8m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH1 2.5-2.6	7/12/2019	4 to 8m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH2 0.5-0.6	7/12/2019	4 to 8m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH2 1.5-1.6	7/12/2019	4 to 8m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH3 0.5-0.6	7/12/2019	4 to 8m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH3 1.5-1.6	7/12/2019	4 to 8m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH4 0.5-0.6	7/12/2019	4 to 8m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH4 1.5-1.6	7/12/2019	4 to 8m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH5 0.5-0.6	7/12/2019	4 to 8m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH5 1.5-1.6	7/12/2019	4 to 8m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH6 0.5-0.6	7/12/2019	4 to 8m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH6 1.5-1.6	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50		
BH7 0.5-0.6	7/12/2019	4 to 8m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	100
BH7 1.5-1.6	7/12/2019	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	

#### 11 SOIL DISPOSAL ASSESSMENT

#### 11.1 Guidelines

Soil which is excavated from the site for landfill disposal is to be assessed against Information Bulletin 105 (IB105) for Classification and Management of Contaminated Soil for Disposal. The Environmental Protection Authority (EPA) uses 4 categories to classify contaminated soil as per Table 18:

- · (Level 1) Fill Material;
- (Level 2) Low Level Contaminated Soil;
- (Level 3) Contaminated Soil; and
- (Level 4) Contaminated Soil.

Fixed numerical values are presented for soil concentrations and leachable fraction concentrations.

Table 18 Summary of IB105 Classification Guidelines

	Classification (with reference to Table 2)	Controlled Waste <sup>1</sup>	Comments
Fill Material <sup>2</sup> (Level 1)	Soil that exhibits levels of contaminants below the limits defined under <i>Fill Material</i> in Table 2.	Unlikely	Soil classified as Fill Material can still be a 'pollutant' under the Environmental Management and Pollution Control Act 1994 and needs to be responsibly managed.
Low Level Contaminated Soil (Level 2)	Soil that exhibits levels of contaminants above the limits defined under <i>Fill Material</i> but below the limits defined under <i>Low Level Contaminated Soil</i> in Table 2.	Likely	Where leachable concentrations have not been prescribed, maximum total concentrations will be used to classify the soil.
Contaminated Soil (Level 3)	Soil that exhibits levels of contaminants above the limits defined under Low Level Contaminated Soil but below the limits defined under Contaminated Soil in Table 2.	Yes	Where leachable concentrations have not been prescribed, maximum total concentrations will be used to classify the soil.
Contaminated Soil for Remediation (Level 4)	Soil that exhibits levels of contaminants above the limits defined under Contaminated Soil in Table 2 (regardless of the maximum total concentrations) is generally not considered acceptable for offsite disposal without prior treatment.	Yes	Soil that contains contaminants that do not have criteria for leachable concentrations (e.g. petroleum hydrocarbons), and the levels of contaminants exceed the maximum total concentrations listed in Contaminated Soil, are generally classified as Contaminated Soil for Remediation.

#### 11.2 Findings

The soil samples that were excavated and stockpiled were compared against IB105 guidelines for soil disposal, see Table 19. The soil was classified as a mix of Level 1, 2 and 3 Material due to the presence of various heavy metals. A single sample is identified as level 4 due to Benzo-a-pyrene (BaP), however leachate testing is likely to allow reclassification to a lower level (e.g. level 2). All soil excavated and to be removed from site must ensure adequate testing and appropriate transport to an approved facility.

Table 19 Soil Analytical Results Compared Against IB105 Investigation Limits for soil Disposal

Classificatio of Conta	tion Bulletin 105 n and Management minated Soil For Disposal	Arsenic	Barium	Beryllium	Cadmium	Chromium Total	Copper	Cobalt	Lead	Manganese	Mercury	Nickel	Selenium	Zinc	Benzo(a)pyrene	C6 - C9 Fraction	C10 - C36 Fraction (sum)	Sum of polycyclic aromatic hydrocarbons	Benzene	Toluene	Ethylbenzene	Total Xylenes
Unit		mg/kg				mg/kg					mg/kg		mg/kg	mg/kg		mg/kg		mg/kg		mg/kg	mg/kg	
LOR	1	5	10	1	1	2	5	2	5	5	0.1	2	5	5	0.5	10	50	0.5	0.2	0.5	0.5	0.5
Investigation I	Level Selected																					$\Box$
IB105 Level 1		<20	<300	<2	<3	<50	<100	<100	<300	<500	<1	<60	<10	<200	<0.08	<65	<1000	<20	<1	<1	<3	<14
IB105 Level 2		20	300	2	3	50	100	100	300	500	1	60	10	200	0.08	65	1000	20	1	1	3	14
IB105 Level 3		200	3000	40	40	500	2000	200	1200	5000	30	600	50	14000	2	650	5000	40	5	100	100	180
IB105 Level 4	_	750	30000	400	400	5000	7500	1000	3000	25000	110	3000	200	50000	20	1000	10000	200	50	1000	1080	1800
7/12/2019	BH1 0.5-0.6 X	<5	370	<1	<1	8	30	13	6	32	<0.1	11	<5	11	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
7/12/2019	BH1 1.5-1.6 X	<6	<60	<6	<3	14	36	58	8	497	<0.1	54	<6	49	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
7/12/2019	BH1 2.5-2.6 X	<5	<50	<5	<2	12	37	13	8	303	<0.1	39	<5	49	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
7/12/2019	BH2 0.5-0.6 X	<5	340	<1	<1	39	66	47	5	640	<0.1	30	<5	50	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
7/12/2019	BH2 1.5-1.6 X	<5	140	<1	<1	5	101	28	<5	263	<0.1	21	<5	51	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
7/12/2019	BH3 0.5-0.6 X	<5	280	1	<1	9	30	25	7	30	<0.1	18	<5	16	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
7/12/2019	BH3 1.5-1.6 X	<5	280	7	<2	10	34	291	<5	681	<0.1	70	<5	48	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
7/12/2019	BH4 0.5-0.6 X	<5	170	<1	<1	11	29	8	9	60	<0.1	10	<5	16	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
7/12/2019	BH4 1.5-1.6 X	<5	70	3	<1	8	18	29	6	106	<0.1	21	<5	32	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
7/12/2019	BH5 0.5-0.6 X	<5	600	2	<1	21	56	22	6	51	<0.1	25	<5	25	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
7/12/2019	BH5 1.5-1.6 X	<5	220	<1	<1	8	57	33	<5	780	<0.1	29	<5	33	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
7/12/2019	BH6 0.5-0.6 X	<5	250	<1	<1	9	29	9	6	33	<0.1	8	<5	11	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
7/12/2019	BH6 1.5-1.6 X	<5	130	<1	<1	23	68	18	<5	247	<0.1	20	<5	48	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
7/12/2019	BH7 0.5-0.6 X	34	60	<1	<1	6	77	15	90	348	<0.1	10	<5	133	24.3	<10	1880	268	<0.2	<0.5	<0.5	<0.5
7/12/2019	BH7 1.5-1.6 X	<6	660	<6	<3	27	80	29	<6	3530	<0.1	62	<6	46	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5

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#### 12 CONCEPTUAL SITE MODEL

The conceptual site model is based upon the current assessment results.

#### 12.1 Potential & Identified Sources of Contamination

#### 12.1.1 Potential Primary Onsite Contamination

The primary potential sources of contamination includes the following:

- · Fill material beneath the existing pavement; and
- · Any surface spillage of fluids from machinery/vehicles that have occupied the site

GES is not aware of any other potentially contaminating activities at the site.

#### 12.1.2 Potential Primary Offsite Contamination

Potential primary offsite contaminating activities may have occurred at the following locations:

- Potential oil/fluid leaks from workshops on upgradient sites at 120-128 Melville Street; and
- Potential oil/fluid leaks from workshops upgradient at 121 Melville Street & 152 Harrington Street;

#### 12.1.3 Potential Secondary Onsite Contamination

- · Soil and groundwater which may have been impacted by upgradient sources including:
  - Potential oil/fluid leaks from workshops on upgradient sites at 120-128 Melville Street;
  - o Potential oil/fluid leaks from workshops at 121 Melville Street & 152 Harrington Street;

#### 12.1.4 Identified Primary Sources

Although shallow fill has been noted on site no significant contamination from that source has been identified and no health criteria were exceeded. A single ESL exceedance was identified for assessing risk from PAH's (BaP from combustion by-products – appears to be charcoal in site fill) and a single EIL exceedance has been identified for copper. Based upon implementation of soil and waster management controls and the lack of proximal ecological receptors no transport pathway has been identified for potential receptors.

The use of machinery for cutting timber and forklifts trucks and other vehicles on the site may have been a primary source of contamination due to leakage of fuels, hydraulic fluids and oil, however no hydrocarbon contamination was detected. No potential health risk has been identified from identified primary sources.

#### 12.1.5 Identified Secondary Sources

No source of secondary contamination affecting the site was identified during the assessment. There are no registered groundwater bores near the site or groundwater extraction in the local area. Recent deep geotechnical drilling on nearby sites (100 & 103 Melville Street) has failed to intercept groundwater at depths of up to 18m, well below the required vertical separation distance of 9m (NEM HSL guidance documents) to eliminate a vapour intrusion risk to site occupants. Therefore, there is no identified pathway from potential off site groundwater contamination to on site receptors.

#### 12.1.6 Site model conclusion

No complete contaminant to receptor pathways were identified during the assessment and no further investigation or management is required.

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#### 13 CONCLUSIONS

#### 13.1 Desktop Assessment

The following conclusions were made from the desktop assessment:

- The site is inferred to be underlain with Tertiary aged boulder deposits of predominantly dolerite with possible shallow subsurface dolerite or Parmeener rock.
- The site is approximately 25m above sea level. Groundwater is inferred to be directed towards the site from the west.
- There are no registered groundwater bores in the central business area of Hobart and recent deep drilling at 103 Melville street by GES to depths of 18m failed to encounter groundwater.
- The Praxis Historical report confirmed that the site has been owned by Kemp & Denning since approximately 1910.
- Historical Aerial photographs of the site and the Praxis Historical report for the site showed the following: in the early 1900's the dwellings on site were demolished, and in the period between 1958 and 1990 there were two additional large sheds for timber storage on the site. The larger K&D site at 103 Melville Street hosted a range of sheds/warehouses prior to 1986, and soon after that time the existing K&D buildings were constructed. The adjacent site at 100 Melville Street was developed from former offices and warehouses to the current buildings in the period 2005-2013. At the adjacent down gradient property at 88 Melville Street vehicle servicing activities have been operational for over 70 years.
- The dangerous goods search (Worksafe Tasmania records) failed to find any records for the site but confirmed that the K&D Hardware Store at 103 Melville Street held LPG from October 1997 to March 2013.
- As determined in the site history report (Praxis) the site had been a timber yard for over 90 years
  and the entire site is an area of potential concern (AOPC). This investigation is based upon grid
  sampling on the site in natural materials until drilling refusal in the underlying natural boulder
  deposits
- The following contaminants of potential concern (COPC) are associated with demolition of former residential buildings and timber storage/vehicle parking: Total Petroleum/Recoverable Hydrocarbons (TPH/TRH); Mono Aromatic hydrocarbons: Benzene, Toluene, Ethylbenzene, Xylene (BTEX); Polycyclic Aromatic Hydrocarbons (PAH); Heavy Metals.

#### 13.2 Soil Assessment Findings

The following conclusions have been made from the soil investigation based on the sampling around AEC's and based on analysed COPC's and based on the nominated threshold limit criteria for assessing risks from proposed site development works and proposal:

#### Human Health:

There were no human health guideline exceedances for dermal contact, dust inhalation, soil
ingestion assessment for Health Investigation Levels for commercial/industrial land use. There
were also no trench worker guideline limit or Health Screening Level (HSL) exceedances for soil
vapour.

#### Environment:

There were hydrocarbons (PAH) detections that exceeded guidelines limits in 1 of the 16 samples
taken from soil at the site. There was also a single Ecological Investigation Level guideline
exceedance for copper. Due to the urban environmental and local proximal receptors no risk from
contamination to ecological receptors was identified

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#### Excavated Soil Management:

• The soil samples were compared against IB105 guidelines for soil disposal. The soil was classified as a mix of Level 1, Level 2, and Level 3 Material due to the presence of various heavy metals and PAH (BaP). GES recommends that all soil excavated for the site is stockpiled, sampled by a suitably qualified and experienced environmental consultant and results compared against IB105 guideline limits for appropriate soil disposal. Where necessary, it is to be transported to an approved facility (Copping). A permit to transport the waste (obtained through the EPA) will be required.

#### 13.3 ESA Conclusions

The following are general conclusion about the site investigation:

- The findings from the current soil investigation can confirm that there is no evidence that the land
  is contaminated in terms of evaluated risks to human health or the environment.
- Therefore, providing the above recommendations are followed in relation to the environment, GES
  can confirm that the planned excavation works and change of use will not adversely impact human
  health or the environment.

#### 14 RECOMMENDATIONS

GES recommends the following:

- Although an ecological risk has not been identified, a soil and water management plan should be
  put in place for general sediment control to reduce loadings into the waterways.
- No additional contamination remediation or management measures will be required during the site redevelopment works.

Yours faithfully,

Sarah Joyce BSc (Hons)

Environmental Scientist

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#### LIMITATIONS STATEMENT

This ESA Report has been prepared in accordance with the scope of services between Geo-Environmental Solutions Pty. Ltd. (GES) and Giameos Holdings Pty Ltd ('the Client'). To the best of GES's knowledge, the information presented herein represents the Client's requirements at the time of printing of the Report. However, the passage of time, manifestation of latent conditions or impacts of future events may result in findings differing from that described in this Report. In preparing this Report, GES has relied upon data, surveys, analyses, designs, plans and other information provided by the Client and other individuals and organisations referenced herein. Except as otherwise stated in this Report, GES has not verified the accuracy or completeness of such data, surveys, analyses, designs, plans and other information.

The scope of this study does not allow for the review of every possible soil and groundwater contaminant over the whole area of the site. Samples collected from the investigation area are assumed to be representative of the areas from where they were collected and indicative of the contamination status of the site at that point in time. The conclusions described within this report are based on these samples, the results of their analysis and an assessment of their contamination status.

This report does not purport to provide legal advice. Readers of the report should engage professional legal practitioners for this purpose as required.

No responsibility is accepted for use of any part of this report in any other context or for any other purpose by third party.

Note If the design of the proposed sewer pump station is altered than there may be a requirement to assess the soil results against alternative guidelines or conduct further site investigations.

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Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

#### Appendix 1 GES Staff

GES is a specialist geotechnical and environmental consultancy providing advice on all aspects of soils, geology, hydrology, and soil and groundwater contamination across a diverse range of industries.

Geo Environmental Solutions Pty Ltd:

- ACN 115 004 834
- ABN 24 115 004 834

#### GES STAFF - ENGAGED IN SITE INVESTIGATION WORKS

Dr John Paul Cumming B.Agr.Sc (Hons) Phd CPSS GAICD

- · Principle Author and Principle Environmental Consultant
- PhD in Environmental Soil Chemistry from the University of Tasmania in 2007
- 18 years' experience in environmental contamination assessment and site remediation.

Ms Sarah Joyce BSc (Hons)

- · Environmental Geologist
- Honours in Geography and Environmental Science at the University of Tasmania in 2003;
- Undergraduate Degree Double Major in Geology and Geography & Environmental Science
- 15 years professional work experience and 7 years contaminated site assessment

Mr Grant McDonald (Adv. cert. hort.)

- Soil Technician
- 10 years' experience in hydrocarbon and heavy metal contamination sampling of soils and groundwater.

#### GES STAFF – WITH CONTAMINATED SITES EXPERIENCE

Mr Aaron Plummer (Cert. IV)

- Soil Technician
- 5 years' experience in hydrocarbon and heavy metal contamination sampling of soils and groundwater.

Mr Kris Taylor Bsc (Hons)

- Senior Environmental & Engineering Geologist
- Honours in Environmental Geology at the University of Tasmania in 1998
- 20 years' experience in environmental contamination assessments and hydrogeology (including honours in mine site tailing pollution assessment). Including 15 years' experience in asbestos assessment.

Mr Mark Downie B.Agr.Sc (Hons)

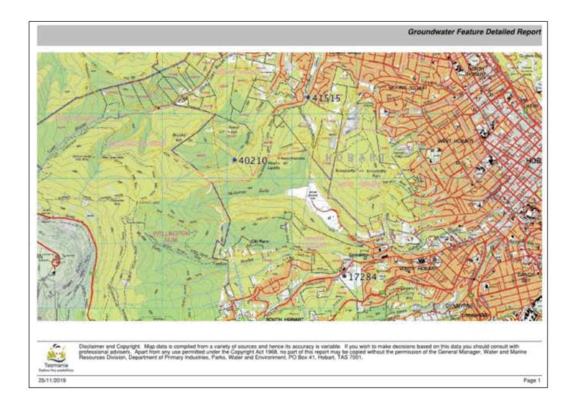
- Soil Scientist
- 8 Year experience in contamination assessment and reporting of soils and groundwater.

Ms Peri Lucas B.Agr.Sc (Hons)

- Soil Scientist
- 3Year experience in contamination assessment and reporting of soils and groundwater.

Appendix 1 GES Staff Page 40

### **Appendix 2 Surrounding Bore Data**



### **Appendix 3 Historical Site Photographs**



Plate 1 Historical Aerial Photograph the Site 2008



Plate 2 Historical Aerial Photograph the Site 1990



Plate 3 Historical Aerial Photograph the Site 1977

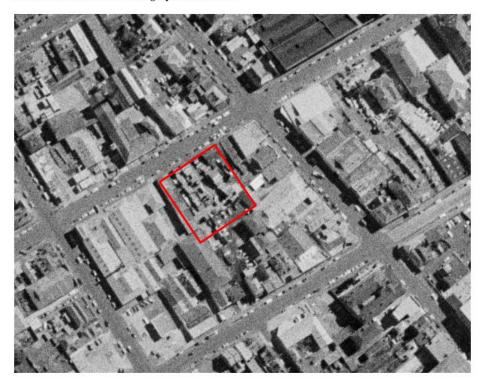


Plate 4 Historical Aerial Photograph 1958

### Appendix 4 Site Photographs





Appendix 4 Site Photographs





 ${\it Environmental Site Assessment: 90 Melville Street, Hobart. \, December \, 2019.}$ 

#### **Appendix 5 PID Calibration Record**

imbros	Imbros Pty Ltd 1059 Cambridge Road Cambridge TAS 7170 Australia	info@imbros.com.au www.imbros.com.au	ABN 29 009 525 053 Ph: (03) 6216 1500 Fax: (03) 6216 1555
	SERVICE / REPAI	R REPORT	
Cash Sales Aaron Plumme 0400 821 977 aplummer@ge	r osolutions.net.au	Job No: Cust ABN: Date: Service Enginee	4161 24/07/2019 F7 Hills, Adrian
Reported Fault / Requ RAE SYSTEMS PGM7: Serial Number: 590-902	300 MiniRAE Lite		
Service and calibration	035000000000000000000000000000000000000		dulia de iniciale de la composició
Incoming evaluation - no Calibration carried out s Functionality test - pass	uccessfully.		
See calibration sheet for	full details.		

Poge 1 of 1

Technology for Laboratory and Marine Science

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

Phone (03) 6216 1500 Fax (03) 6216 1555 info@imbros.com.au

1059 Cambridge Road, Cambridge Tasmania Australia 7170

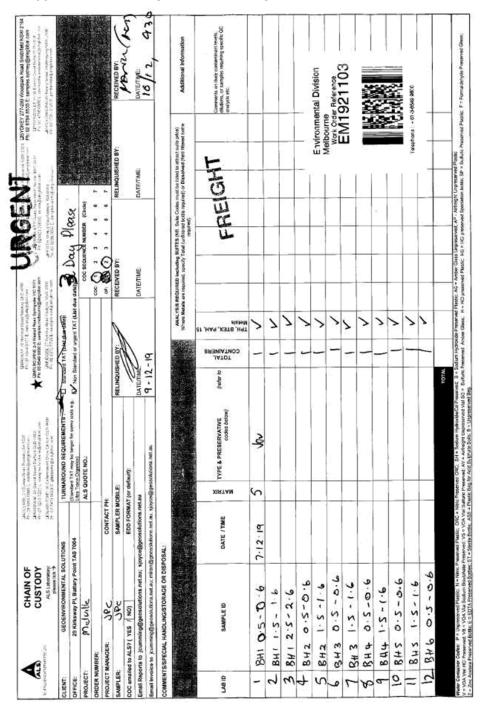
Imbros Pty Ltd

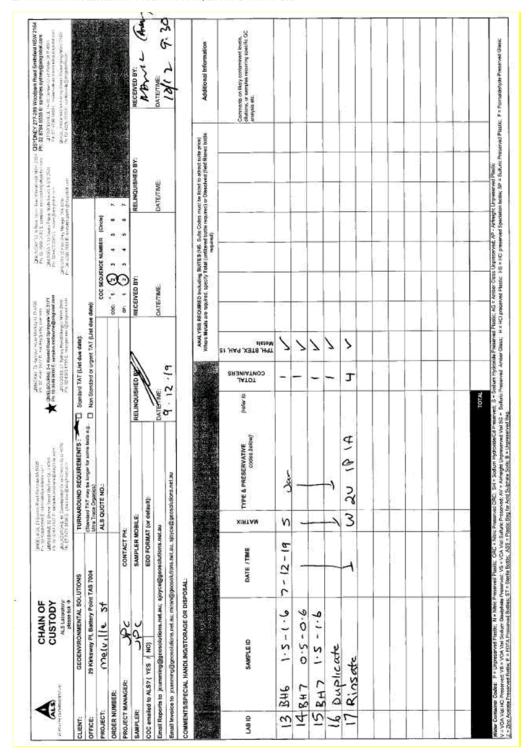
Calibration Test Certificate

MiniRAE Lite 24/01/2020 Imbros Cal Lab Inlet 5: No N/N Inlet 4: No Unit Programmed: Device Type: Next Cal Due: Dock Location: Inlet 3: No Inlet 2: Yes 100ppm Isobutelyne RAE Systems Z309-002181 100.0 ppm 24/07/2020 590-902123 sobutelyne Isobutelyne Yes 20.9 % Purge N/A Type: Result: Final Reading: Next Calibration Due: Dock Serial Number. Datalog Interval: H2S STEL Period: Device Serial Number: Manufacturer: **Test Station** Used: Concentration: Type: Test Result Set Points
Type:
High Alarm:
Low Alarm:
TWA Alarm:
STEL Alarm: 24/07/2019 Sensors Options

Technology for Laboratory and Marine Science

#### **Appendix 6 Laboratory Chain of Custody**





#### Appendix 7 Laboratory Sample Receipt Notification



### SAMPLE RECEIPT NOTIFICATION (SRN)

	SAMPLE RECEIP	I NOTIFICATION (3	KIV)
Work Order	: EM1921103		
Client Contact Address	: GEO-ENVIRONMENTAL SOLUTIONS : DR JOHN PAUL CUMMING : 29 KIRKSWAY PLACE BATTERY POINT TASMANIA, AUSTRALIA 7004	Contact : Shirley I	mental Division Melbourne LeCornu II Rd Springvale VIC Australia
E-mail Telephone Facsimile	: jcumming@geosolutions.net.au : +61 03 6223 1839 : +61 03 6223 4539	E-mail : shirley.le Telephone : +61385- Facsimile : +61-3-8	
Project Order number C-O-C number Site Sampler	: Melville : : : JPC		GEOENVSOL0001 (EN/222) 013 B3 & ALS QC Standard
Dates Date Samples Receive Client Requested Due Date	d : 10-Dec-2019 09:30 : 13-Dec-2019	Issue Date Scheduled Reporting Date	: 10-Dec-2019 : 13-Dec-2019
Delivery Details Mode of Delivery No. of coolers/boxes Receipt Detail	: Carrier : 4 :	Security Seal Temperature No. of samples received / analyse	: Intact. : 5.2*C - loe present d : 17 / 17

#### General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- Please direct any queries related to sample condition / numbering / breakages to Client Services.
- Sample Disposal Aqueous (3 weeks), Solid (2 months) from receipt of samples.
- Analytical work for this work order will be conducted at ALS Springvale.
- Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

Appendix 7 SRN Page 50

**Page 387 ATTACHMENT B** 

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

: 10-Dec-2019

Issue Date Page Work Order Client 2 of 3 EM1921103 Amendment 0

GEO-ENVIRONMENTAL SOLUTIONS



#### Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

No sample container / preservation non-compliance exists.

#### Summary of Sample(s) and Requested Analysis

process necessal tasks. Packages as the determinal tasks, that are included if no sampling default 00:00 on its provided, the	ny for the execut may contain ad atany contain ad atended in the package, time is provided, the date of samplin sampling date w displayed in bra	the sampling time will ig. If no sampling date ill be assumed by the cokets without a time	SOIL - EADSS-103 Mosture Content	SOIL - S-03 15 Metals (NEPM 2013 Subs - Incl. Digeston)	SOIL - S-07 TRHBTE XWPAH (SIM)
EM1921103-001	07-Dec-2019 00:00	BH1 0.5-0.6	1	1	1
EM1921103-002	07-Dec-2019 00:00	BH1 1.5-1.6	1	1	1
EM1921103-003	07-Dec-2019 00:00	BH1 2.5-2.6	1	1	1
EM1921103-004	07-Dec-2019 00:00	BH2 0.5-0.6	1	1	1
EM1921103-005	07-Dec-2019 00:00	BH2 1.5-1.6	1	1	1
EM1921103-008	07-Dec-2019 00:00	BH3 0.5-0.6	1	1	1
EM1921103-007	07-Dec-2019 00:00	BH3 1.5-1.6	1	1	1
EM1921103-008	07-Dec-2019 00:00	BH4 0.5-0.6	1	1	1
EM1921103-009	07-Dec-2019 00:00	BH4 1.5-1.6	1	1	1
EM1921103-010	07-Dec-2019 00:00	BH5 0.5-0.6	1	1	1
EM1921103-011	07-Dec-2019 00:00	BH5 1.5-1.6	1	1	1
EM1921103-012	07-Dec-2019 00:00	BH6 0.5-0.6	1	1	1
EM1921103-013	07-Dec-2019 00:00	BH6 1.5-1.6	1	1	1
EM1921103-014	07-Dec-2019 00:00	BH7 0.5-0.6	1	1	1
EM1921103-015	07-Dec-2019 00:00	BH7 1.5-1.6	1	1	1
EM1921103-016	07-Dec-2019 00:00	Duplicate	1	1	4
Matrix: WATER Laboratory sample	Client sampling date / time	Client sample ID	WATER - W.03T 5 Metals (Total) (NEPM)	WATER - W-07 TRHB TE XWPAH	

#### Proactive Holding Time Report

EM1921103-017 07-Dec-2019 00:00 Rinsate

Sample(s) have been received within the recommended holding times for the requested analysis.

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Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

Issue Date : 10-Dec-2019 Page

- Attachment - Report (SUBCO)

- Chain of Custody (CoC) (COC)

- EDI Format - XTab (XTAB)

- EDI Format - ENMRG (ENMRG)

3 of 3 EM1921103 Amendment 0



#### Work Order Client GEO-ENVIRONMENTAL SOLUTIONS Requested Deliverables All Invoices - A4 - AU Tax Invoice (INV) Email smcintosh@geosolutions.net.au JOHN PAUL CUMMING - "AU Certificate of Analysis - NATA (COA) Email jcumming@geosolutions.net.au - "AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) jcumming@geosolutions.net.au Email - "AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) jcumming@geosolutions.net.au Email - A4 - AU Sample Receipt Notification - Environmental HT (SRN) Email icumming@geosolutions.net.au - A4 - AU Tax Invoice (INV) Email jcumming@geosolutions.net.au - Attachment - Report (SUBCO) Email jcumming@geosolutions.net.au - Chain of Custody (CoC) (COC) Email jcumming@geosolutions.net.au - EDI Format - ENMRG (ENMRG) Email icumming@geosolutions.net.au - EDI Format - XTab (XTAB) Email jcumming@geosolutions.net.au MIRAN - A4 - AU Tax Invoice (INV) Email miran@geosolutions.net.au SARAH JOYCE - "AU Certificate of Analysis - NATA (COA) Email sjoyce@geosolutions.net.au - "AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email sjoyce@geosolutions.net.au - \*AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) Email sjoyce@geosolutions.net.au - A4 - AU Sample Receipt Notification - Environmental HT (SRN) Email sjoyce@geosolutions.net.au - A4 - AU Tax Invoice (INV) Email sjoyce@geosolutions.net.au

Email

Email

Email

Email

sjoyce@geosolutions.net.au

sjoyce@geosolutions.net.au

sjoyoe@geosolutions.net.au

sjoyce@geosolutions.net.au

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Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

#### Appendix 8 Quality Assurance and Quality Control Documentation

#### Soil Duplicate

Duplicate Comparrison	Sample	Arsenic	Taken	Bergian	Cadmius	Ouronium Youal	Cohatt	Copper	lend	Magazese	Nichel	Vanadum	Zinc	Mercury	Nighthäese	Aceaphtylese	Aceaphthene	Fluorete	Denardrene	Arthracase	Parameter	Pyme	Besu(a)anthracese	Orysene	Besotbiliscanhore	Beschüfuranbese	Benedalpyran	Indianoj 1.2 3. offgyrane	Dhese(a3)aethracese	Besoff hi)perfere	Sum of polycyclic aromatic hydr-	Bessolajbyrene HG (MHO)	Reacon	Tolume	Ethylbercene	meta- 8 para Yylene	artho Xpinne	Sun of IIIIX	Total Ayenes	Of Observer	Ch. Chronica	A Contraction	CB - LB Fradber	CB - CB fraction	CID - CIG Fraction (sum)	Ob - CLD Fraction	-	ACID - CL6 Frantisk	ACIG - CIA fraction:	-CM: CM fraction	CID : CID Fraction (surv)	12	Benzo(alpyrene HG (half LOB)	Bessel approve TEQ (LOR)
Unit		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ng/kg	mg/kg	mg/kg r	rig/kg/m	e/kg m	g/kg mg	y/kg mg	s/kg m	e/kg m	g/kg =	rg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	me/ker	e/ke m	e/kg/n	g/kg/m	e/ke/me	/kg mg	/kg/mg	/kg/me	Ne me	/kg Ir	ng/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/ky
LOR		8	10	1	1	2	2	5	5	5	2	5	5 0	0 1.0	0.5	1.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.5	0.5	0.5	0.5 0	12 0	5	1 1	0 5	0 10	00	100	50	10	10	50	100	100	50	50	0.5	0.5
7/12/2019	BH1 1.5-1.6	<8	<60	45	43	14	58	36		497	54	95	49 <	01 4	0.5	0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<b>&lt;0.5</b>	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	40.5	<0.2	<0.5	<0.5 e	05	05 <	0.2	25 <	1 <	10 <5	0 <1	00	<100	<50	<10	<10	₹50	<100	<100	<50	450	0.6	12
7/12/2019	Duplicate	<6	<60	45	<3	10	37	33	46	320	42	74	44 40	01 4	0.5	05 4	0.5	40.5	<0.5	40.5	40.5	4D.5	<0.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	40.5	<d.2< td=""><td>40.5</td><td>0.5</td><td>10.5</td><td>05 4</td><td>0.2 4</td><td>05 4</td><td>1 41</td><td>10 45</td><td>0 &lt;1</td><td>00</td><td>&lt;100</td><td>&lt;50</td><td>&lt;10</td><td>&lt;10</td><td>450</td><td>&lt;100</td><td>&lt;100</td><td>&lt;50</td><td>450</td><td>0.6</td><td>1.2</td></d.2<>	40.5	0.5	10.5	05 4	0.2 4	05 4	1 41	10 45	0 <1	00	<100	<50	<10	<10	450	<100	<100	<50	450	0.6	1.2
Relative Percentage Difference (RP		NA.	NA.	NA.	NA.	33.3	44.2	8.7	NA.	43.3	25.0 2	14.9 1	0.8 8	IA I	IA I	NA .	NA.	NA.	NA.	NA.	NA.	- NA	NA.	NA.	NA.	NA.	NA.	NA.	NA.	NA.	NA.	NA	NA.	NA.	NA.	NA.	NA I	NA N	IA N	A N	A N	A N	IA.	NA.	NA	NA.	NA.	NA	NA.	NA.	NA .	NA.	0.0	0.0
RPD Compliance Limit %	-,	NA.	NA.	NA.	N/A	50	30	50	NA.	80	30	50	50 N	IA A		_	NA.		NA.	NA:	NA.	NA	NA.	NA	NA	NA	NA	NA.	NA	NA	NA	NA.	114	NA	NA	NA	NA I	46 8	ia s	A N	A N	4 N	UA.	NA.	MA	NA	NA.	NA	NA	NA	NA:	NA	NA	50
Method Detection Limit (MOL)		NA.	NA	NA.	NA	40	200	100	NA.	500	200	100	00 8	14 8	44	NA.	NA	NA.	NA.	NA	NA	NA	NA	NA.	NA.	NA	NA	NA.	NA.	NA.	NA	NA	NA	NA	NA	NA.	NA I	NA B	ia s	4 6	4 1	4 9		NA.	NA	NA.	NA.	NA	NA	NA.	NA.	N/A	NA.	10
MDL Class		-	NONE	PICALE.	NONE	100	ARTO	100	HOAR.	MATO.	NATO I	COAL I	200 00	W. E.	DAVE AV	ONE N	ONE	I CAST	HOME.	HONE	NONE	NONE	NONE	HOAR	NONE	NUCAUE	NO.	NO.	NONE	NONE	NONE	NONE	NO.	NONE I	CAUT	CANT N	ONE N	ONE N	WE NO	AUT NO	wit his	NE NO	WE .	HOWE !	HONE	NO.	HOAIF	NONE	NONE	HONE	NONE	NONE	E-CAUT	100
	12.02.2.2.2.2.2.2	NONE	NUNE	NUME.	MUNE	UUW	NED	UNIV	M/ME	NACO.	NAES	WAN, D	JW N.	mes NV	JNE N	JONE N	Unit /	SHOW	nu/NE	NV/NE	NU/NE	ne,/ret	N/WE	W/WE	nu/Nt	MUNE	NUME	NUNE	NONE	NO. THE	NUNE	PRUME.	reu/NE	munite 1	rumt N	runt N	LITTLE NO	JTRE NO.	me M.	ms NO	me NU	NE NO	me N	NUMB.	MUNE.	PILINE)	MUNE	MUNE	mONE.	PACHE	MUNE	NONE	THUME.	LUW
RPD Compliance With MDL?	54/56 (96%)	785		YES	Y25	725	NO:	415	Y2.5	NO:	FES.	FES. 1	T5 T	ES- Y	E3: 7	123	153	TES	715		77.5	YES 1	753	FES	YK5-	T05	713	125	725	185	333	Y25	775	TES-	YES:	125 T	123 7	73Y	T5 9	137 13	15 YE	S- 17	45 -	VY5-		( TES /	TES		775	YES	773	1113	713	110

#### Rinsate Blanks

Quality Control Blanks	Arsenic	Beryllium	Barium	Cadinium	Chromium	Cobalt	Copper	pean	Manganese	Nickel	Selenium	Vanadium	Doctor.	Mercury	A programme	Benzene Toluene	Ethylbenzene	meta-& para-Xylene	ortho-Xylene Total Xylenes	Sum of BTEX	Naphthalene	C10 - C14 Fraction	C15 - C28 Fraction	C29 - C36 Fraction	C10 - C36 Fraction (sum)	C6 - C10 Fraction minus BTEX (F1)	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	>C10 - C40 Fraction (sum)	>C10 - C16 Fraction minus Naphthalene (F2)	Naphthalene	Acenaphthylene	Acenaphthene	Phenanthrene	Anthracena	Fluoranthene	Pyrene	Benz(a)anthracene	Chrysene	Benzo(b+j)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indena(1.2.3.cd)pyrene	Dibenz(ah)anthracene	Benzolg.h.i)perylene	Sum of polycyclic aromatic hydrocarbons	Dental hyperical reserve
Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L r	ng/L m	/L mg	/L mg	/L H	g/Lug/	Lug/L	ив/Ци	g/4µg/	Lug/L	ag/L µg	/L µg/	µg/L	ug/L	g/L µg	/L ug/	L µg/L	µg/L	µg/L	µg/L	µg/L	ug/L I	IZ/L II	g/L µs	/L µg	/L µg	/L µg	/L ug/	L µg/	L µg/L	µg/L	µg/L	µg/L	µg/L	ug/L s	ug/L p	ид/L ид	/L
LOR	0.001	0.001	0.001	0.0001	0.001	0.001	0.001	0.001	0.001	0.001	0.01	0.01	05 0.0	0.00	001	1 2	2	2 :	2 2	1	5 2	0 50	100	50	50 2	0 20	100	100	100	100	100	1	1	1	1	. 1	. 1	1	1	1	1	1	0.5	1	1	1 (	0.5 0.	5
Date Sample																																																
7/12/2019 Rinsate	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	<0.001	<0.01 <	0.01 <0.0	05 <0:	05 < 0.0	001 <	1 <2	<2	<2 <	2 <2	<1	S <2	0 <50	<100	<50 <	50 <2	0 <20	<100	<100	<100	<100	<100 <	1.0 <	1.0 <1	1.0 <1	0 <1.0	0 <1	0 <1.0	0 <1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0 <	1.0 <	1.0	0.5 <0.	5

Appendix 8 QA/QC Page 53



#### QA/QC Compliance Assessment to assist with Quality Review

Work Order	EM1921103	Page	: 1 of 9
Client	: GEO-ENVIRONMENTAL SOLUTIONS	Laboratory	: Environmental Division Melbourne
Contact	: DR JOHN PAUL CUMMING	Telephone	:+6138549 9630
Project	: Melville	Date Samples Received	: 10-Dec-2019
Site		Issue Date	: 13-Dec-2019
Sampler	: JPC	No. of samples received	: 17
Order number	:	No. of samples analysed	: 17

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

#### **Summary of Outliers**

#### **Outliers: Quality Control Samples**

This report highlights outliers flagged in the Quality Control (QC) Report.

- NO Method Blank value outliers occur.
- NO Duplicate outliers occur.
- . NO Laboratory Control outliers occur.
- . Matrix Spike outliers exist please see following pages for full details.
- For all regular sample matrices, NO surrogate recovery outliers occur.

#### **Outliers: Analysis Holding Time Compliance**

. NO Analysis Holding Time Outliers exist.

#### **Outliers : Frequency of Quality Control Samples**

• Quality Control Sample Frequency Outliers exist - please see following pages for full details.

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

Page : 2 of 9 Work Order : EM1921103

Client : GEO-ENVIRONMENTAL SOLUTIONS

Project : Melville

Outliers: Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

#### Matrix: SOIL

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
latrix Spike (MS) Recoveries							
EG005(ED093)T: Total Metals by ICP-AES	EM1921103007	BH3 1.5-1.6	Barium	7440-39-3	Not Determined		MS recovery not determined, background level greater than or equal to 4x spike level.
EG005(ED093)T: Total Metals by ICP-AES	EM1921103007	BH3 1.5-1.6	Manganese	7439-96-5	Not Determined	e demands	MS recovery not determined, background level greater than or equal to 4x spike level.

#### Outliers: Frequency of Quality Control Samples

#### Matrix: WATER

Method		ount	Rai	te (%)	Quality Control Specification
Metrod	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)					
PAH/Phenols (GC/MS - SIM)	0	1	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	1	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)					
PAH/Phenols (GC/MS - SIM)	0	1	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	1	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

#### Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for <u>VOC in soils</u> vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Evaluation: ≼ = Holding time breach; ✓ = Within holding time.

Method		Sample Date	E	traction / Preparation			Analysis	
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 10	5-110°C)							
Soil Glass Jar - Unpreserved (EA055)		100001000-00000-0						
BH1 0.5-0.6,	BH1 1.5-1.6,	07-Dec-2019	( <del></del> -	(753)		10-Dec-2019	21-Dec-2019	1
BH1 2.5-2.6,	BH2 0.5-0.6,							
BH2 1.5-1.6,	BH3 0.5-0.6,							
BH3 1.5-1.6,	BH4 0.5-0.6,							
BH4 1.5-1.6,	BH5 0.5-0.6,							
BH5 1.5-1.6,	BH6 0.5-0.6,							
BH6 1.5-1.6,	BH7 0.5-0.6,							
BH7 1.5-1.6.	Duplicate							

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Method		Sample Date	E	traction / Preparation			breach; <= Withi Analysis	
Container / Client Sample ID(s)		- Anna Control of the Anna Control of the	Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG005(ED093)T: Total Metals by ICP	AES							
Soil Glass Jar - Unpreserved (EG005								,
BH1 0.5-0.6,	BH1 1.5-1.6,	07-Dec-2019	11-Dec-2019	04-Jun-2020	1	11-Dec-2019	04-Jun-2020	1
BH1 2.5-2.6,	BH2 0.5-0.6,							
BH2 1.5-1.6,	BH3 0.5-0.6,							
BH3 1.5-1.6,	BH4 0.5-0.6,							
BH4 1.5-1.6,	BH5 0.5-0.6,							
BH5 1.5-1.6,	BH6 0.5-0.6;							
BH6 1.5-1.6,	BH7 0.5-0.6,							
BH7 1.5-1.6,	Duplicate							
EG035T: Total Recoverable Mercury	y by FIMS							
Soil Glass Jar - Unpreserved (EG035	T)	(1) (S1-8-1) (V/S408)	MHIS COOP	5000 N 00000	1 22	approximate and the second	25/06) 08/3592	- 72:
BH1 0.5-0.6,	BH1 1.5-1.6,	07-Dec-2019	11-Dec-2019	04-Jan-2020	1	11-Dec-2019	04-Jan-2020	1
BH1 2.5-2.6,	BH2 0.5-0.6,							
BH2 1.5-1.6,	BH3 0.5-0.6,							
BH3 1.5-1.6,	BH4 0.5-0.6,							
BH4 1.5-1.6,	BH5 0.5-0.6,							
BH5 1.5-1.6,	BH6 0.5-0.6,							
BH6 1.5-1.6,	BH7 0.5-0.6,							
BH7 1.5-1.6,	Duplicate							
EP075(SIM)B: Polynuclear Aromatic	Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075)		\$19.00 \$1.00 \$1.00	APPLIES DOWN CORPORATION	and the second second second				
BH1 0.5-0.6,	BH1 1.5-1.6,	07-Dec-2019	11-Dec-2019	21-Dec-2019	1	11-Dec-2019	20-Jan-2020	1
BH1 2.5-2.6,	BH2 0.5-0.6,							
BH2 1.5-1.6,	BH3 0.5-0.6,							
BH3 1.5-1.6,	BH4 0.5-0.6,							
BH4 1.5-1.6,	BH5 0.5-0.6,							
BH5 1.5-1.6,	BH6 0.5-0.6,							
BH6 1.5-1.6,	BH7 0.5-0.6,							
BH7 1.5-1.6.	Duplicate		)	, s				

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Matrix: SOIL					Evaluation	Holding time	breach ; < = Withi	ri noiding tir
Method	THE RESERVE OF LABOUR.	Sample Date		traction / Preparation			Analysis	
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarb	ons				tir -		0	
Soil Glass Jar - Unpreserved (EP080)	42.000.000		40.5	20.5		40.0 0040		523
BH1 0.5-0.6,	BH1 1.5-1.6,	07-Dec-2019	10-Dec-2019	21-Dec-2019	1	12-Dec-2019	21-Dec-2019	1
BH1 2.5-2.6,	BH2 0.5-0.6,							
BH2 1.5-1.6,	BH3 0.5-0.6,							
BH3 1.5-1.6,	BH4 0.5-0.6,							
BH4 1.5-1.6,	BH5 0.5-0.6,							
BH5 1.5-1.6,	BH6 0.5-0.6,							
BH6 1.5-1.6,	BH7 0.5-0.6,							
BH7 1.5-1.6,	Duplicate					-		
Soil Glass Jar - Unpreserved (EP071)		7	i mmi	1111 11111		1111	-	
BH1 0.5-0.6,	BH1 1.5-1.6,	07-Dec-2019	11-Dec-2019	21-Dec-2019	1	11-Dec-2019	20-Jan-2020	1
BH1 2.5-2.6,	BH2 0.5-0.6,							
BH2 1.5-1.6,	BH3 0.5-0.6,							
BH3 1.5-1.6,	BH4 0.5-0.6,							
BH4 1.5-1.6,	BH5 0.5-0.6,							
BH5 1.5-1.6,	BH6 0.5-0.6,							
BH6 1.5-1.6,	BH7 0.5-0.6,							
BH7 1.5-1.6,	Duplicate							
EP080/071: Total Recoverable Hydroca	urbons - NEPM 2013 Fractions							,
Soil Glass Jar - Unpreserved (EP080)			1					
BH1 0.5-0.6,	BH1 1.5-1.6,	07-Dec-2019	10-Dec-2019	21-Dec-2019	1	12-Dec-2019	21-Dec-2019	1
BH1 2.5-2.6,	BH2 0.5-0.6,					_		
BH2 1.5-1.6,	BH3 0.5-0.8,							
BH3 1.5-1.6,	BH4 0.5-0.6,							
BH4 1.5-1.6,	BH5 0.5-0.6,							
BH5 1.5-1.6.	BH6 0.5-0.6.							
BH6 1.5-1.6.	BH7 0.5-0.6.							
BH7 1.5-1.6.	Duplicate							
Soil Glass Jar - Unpreserved (EP071)				7	<u> </u>	7	Taxana and A	
BH1 0.5-0.6,	BH1 1.5-1.8,	07-Dec-2019	11-Dec-2019	21-Dec-2019	1	11-Dec-2019	20-Jan-2020	1
BH1 2.5-2.6,	BH2 0.5-0.6,			1 5 50		1117 1		27
BH2 1.5-1.6,	BH3 0.5-0.6,							
BH3 1.5-1.6,	BH4 0.5-0.6,							
BH4 1.5-1.6.	BH5 0.5-0.6.							
BH5 1.5-1.6.	BH6 0.5-0.6.							
BH6 1.5-1.6.	BH7 0.5-0.6.							
BH7 1.5-1.6.	Duplicate							

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Matrixe SOIL Method		Sample Date	E	traction / Preparation	Lydidaloi	- Troiding time	breach ; ✓ = Withi Analysis	ii nording ti
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080: BTEXN								
Soil Glass Jar - Unpreserved (EP080)			1111	1 1 1		1 1	IIIIII .	
BH1 0.5-0.6,	BH1 1.5-1.6,	07-Dec-2019	10-Dec-2019	21-Dec-2019	1	12-Dec-2019	21-Dec-2019	1
BH1 2.5-2.6,	BH2 0.5-0.6,			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
BH2 1.5-1.6,	BH3 0.5-0.6,							
BH3 1.5-1.6,	BH4 0.5-0.6,							
BH4 1.5-1.6,	BH5 0.5-0.6,							
BH5 1.5-1.6,	BH6 0.5-0.6,							
BH6 1.5-1.6.	BH7 0.5-0.6.							
BH7 1.5-1.6,	Duplicate							
Matrix: WATER					Evaluation	x = Holding time	breach ; ✓ = Withi	n holding t
Method		Sample Date	Ex	traction / Preparation			Analysis	
Container / Client Sample ID(s)		0	Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG020T: Total Metals by ICP-MS								
lear Plastic Bottle - Unfiltered; Lab-	acidified (EG020A-T)	200200 - 5000	77.000 CA 11.000 CB 1999	2270000000000				1.020
Rinsate	objections and contract of section	07-Dec-2019	11-Dec-2019	04-Jun-2020	✓	11-Dec-2019	04-Jun-2020	1
EG035T: Total Recoverable Mercury								
Clear Plastic Bottle - Unfiltered; Lab-	acidified (EG035T)					Colonia to a protect to the pro-		
Rinsate		07-Dec-2019				11-Dec-2019	04-Jan-2020	1
EP075(SIM)B: Polynuclear Aromatic								
Amber Glass Bottle - Unpreserved (E	P075(SIM))							
Rinsate		07-Dec-2019	10-Dec-2019	14-Dec-2019	1	11-Dec-2019	19-Jan-2020	1
EP080/071: Total Petroleum Hydroc	arbons arbons							
Amber Glass Bottle - Unpreserved (E	P071)	1000001 0000	00020 32000		2	83342 00033		121
Rinsate		07-Dec-2019	10-Dec-2019	14-Dec-2019	1	11-Dec-2019	19-Jan-2020	1
Imber VOC Vial - Sulfuric Acid (EP08	30)			24.2	2014	40.0	11111	
Rinsate		07-Dec-2019	10-Dec-2019	21-Dec-2019	1	12-Dec-2019	21-Dec-2019	1
EP080/071: Total Recoverable Hydro								
mber Glass Bottle - Unpreserved (E	P071)	07.0 0040	40 0 0040	14 0 2010		44 0	10 1 2020	135
Rinsate		07-Dec-2019	10-Dec-2019	14-Dec-2019	1	11-Dec-2019	19-Jan-2020	1
mber VOC Vial - Sulfuric Acid (EP08 Rinsate	30)	07-Dec-2019	10-Dec-2019	21-Dec-2019	1	12-Dec-2019	21-Dec-2019	1
THE RESERVE OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TW		07-Dec-2013	10-Dec-2013	21-060-2018	V	12-060-2013	21-060-2018	V
EP080: BTEXN								
Imber VOC Vial - Sulfuric Acid (EP08	30)	07-Dec-2019	10-Dec-2019	21-Dec-2019		12-Dec-2019	21-Dec-2019	1
Rinsate		01-Dec-2013	10-060-2013	21-060-2018	/	12-060-2013	F1-Dec-7018	V

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#### Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Quality Control Sample Type			Count		Rate (%)		Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	Property of the Consider Little and Exercises Consideration (Consideration Consideration Considerati
aboratory Duplicates (DUP)							
Moisture Content	EA055	3	23	13.04	10.00	1	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	16	12.50	10.00	1	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	4	36	11.11	10.00	1	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	4	37	10.81	10.00	1	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	16	12.50	10.00	1	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	17	11.76	10.00	V	NEPM 2013 B3 & ALS QC Standard
aboratory Control Samples (LCS)							
PAH/Phenois (SIM)	EP075(SIM)	1	16	6.25	5.00	V	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	38	5.56	5.00	1	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	37	5.41	5.00	1	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	16	6.25	5.00	1	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	17	5.88	5.00	1	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	16	6.25	5.00	1	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	36	5.56	5.00	1	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	37	5.41	5.00	1	NEPM 2013 B3 & ALS QC Standard
RH - Semivolatile Fraction	EP071	1	16	6.25	5.00	1	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	17	5.88	5.00	1	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)				-			
PAH/Phenois (SIM)	EP075(SIM)	1	18	6.25	5.00	/	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	36	5.56	5.00	1	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	37	5.41	5.00	1	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	16	6.25	5.00	1	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	17	5.88	5.00	1	NEPM 2013 B3 & ALS QC Standard
latrix: WATER				Evaluatio	n: v = Ouality Co	ntrol fraguancy	not within specification : <pre></pre>
Quality Control Sample Type		- 9	Count	Evaluatio	Rate (%)	illa of frequency	Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	Quanty Control Specification
Laboratory Duplicates (DUP)			- Cl	7101001	Expedico		
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	1	0.00	10.00	*	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	17	11.76	10.00	× /	NEPM 2013 B3 & ALS QC Standard
Fotal Metals by ICP-MS - Suite A	EG020A-T	1	5	20.00	10.00	V	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	E9020A-1	0	1	0.00	10.00	2	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	20	10.00	10.00	1	NEPM 2013 B3 & ALS QC Standard
	EFUOU		-	1,710.5		-	The second secon
Laboratory Control Samples (LCS) PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	1	100.00	5.00	/	NEPM 2013 B3 & ALS QC Standard

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Quality Control Sample Type		-	ount		Rate (%)		Quality Control Specification
STATE OF THE PROPERTY OF THE P	Method		T	10404004	The state of the s	Evaluation	Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation/	
aboratory Control Samples (LCS) - Continued							
Total Mercury by FIMS	EG035T	1	17	5.88	5.00	1	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	5	20.00	5.00	1	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	1	100.00	5.00	1	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	V	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	1	100.00	5.00	1	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	17	5.88	5.00	1	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	5	20.00	5.00	1	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	1	100.00	5.00	1	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	-1	20	5.00	5.00	1	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	1	0.00	5.00	36	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	17	5.88	5.00	1	NEPM 2013 B3 & ALS QC Standard
otal Metals by ICP-MS - Suite A	EG020A-T	1	5	20.00	5.00	1	NEPM 2013 B3 & ALS QC Standard
RH - Semivolatile Fraction	EP071	0	1	0.00	5.00	Se	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1.	20	5.00	5.00	1	NEPM 2013 B3 & ALS QC Standard

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### **Brief Method Summaries**

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM (2013) Schedule B(3) Section 6.1 and Table 1 (14 day holding time).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM (2013) Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
FRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015A. Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM amended 2013.
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270D. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 502 and 507)
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260B. Extracts are analysed by Purge and Trap, Capillary GC/MS.  Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM amended 2013.
Total Metals by ICP-MS - Suite A	EG020A-T	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Total Mercury by FIMS	EG035T	WATER	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS)  FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the unfiltered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
TRH - Semivolatile Fraction	EP071	WATER	In house: Referenced to USEPA SW 846 - 8015A. The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with the QC requirements of NEPM (2013) Schedule B(3)
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	WATER	In house: Referenced to USEPA SW 846 - 8270D Sample extracts are analysed by Capillary GC/MS in SIM Mode and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3)

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Analytical Methods	Method	Matrix	Method Descriptions
TRH Volatiles/BTEX	EP080	WATER	In house: Referenced to USEPA SW 846 - 8260B Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve.  Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM (2013) Schedule B(3)
Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM (2013) Schedule B(3) (Method 202)
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
Digestion for Total Recoverable Metals	EN25	WATER	In house: Referenced to USEPA SW846-3005. Method 3005 is a Nitric/Hydrochloric acid digestion procedure used to prepare surface and ground water samples for analysis by ICPAES or ICPMS. This method is compliant with NEPM (2013) Schedule B(3)
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510B 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM (2013) Schedule B(3). ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for sparging.

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### Appendix 9 Borehole Logs

	ENVIRONMENTAL	90 Melville CLIENT: Jaws Archit							E	AST	ING		52	BH01 6372.8 52254.4	GDA9
LOCATIO	ACTION OF THE PROPERTY.	<u> </u>	DATE	E:	7/12/20	19			-	EVA		0.00	26		m AHI
CONTRA	ACTOR: Geo-Environmental Solu	itions	INVE	STIC	SATION TYPE	E	SA	<u> </u>		27170	3.163		H (m	0 10 10 10 10 10 10 10 10 10 10 10 10 10	
EQUIPN	MENT/METHOD: Direct Push Core		SAM	PLIN	ig: Co	ore				ogo			-	GM & JPC	
				Г	S	AMPL	ES:		Н	lath	So		ning		
DEPTH (metres)	MATERIAL DESCRIPTION	USCS	TINO	MOISTURE	Sample	Grain Class	HSL	Field PID (ppm)		Exce	eda	ance	F1 F2	MONITORING WELL	ELEVATION (metres)
0.0	FILL: Bitumen FILL: Concrete recovered as crushed material	Conc.	FILL			0	T		80	- 11	1 ×	Z			ш
0.2	Sandy SILTY CLAY: dark grey-brown, moist, firm, high plasticity		2												
0.4															
0.6				5	BH1 0.5-0.6		D		×	××	×	×	××		
0.8		CH													
1.0-	Sandy SILTY CLAY: yellow-brown, mo- firm, high plasticity	st,													
1.2															
1.4	Sifty SANDY CLAY: orange/yellow, slightly moist, stiff to very stiff, low plasticity, weathered material. Refusal		a												
1.6				3	BH1 1.5-1.6		D		×	××	×	×	××		
1.8-															
2.0		CL													

	ES	PROJECT: 90 Melville	Stre	et				20	ı	.00	j of		BH01	
	ENVIRONMENTAL	Jaws Archi	itants						5.174	STIN	20.00	_	6372.8	GDA94
Para estado e	D L U T I O N S	Jaws Alcili			7/40/00			_	v = 7 = 2		NG:		52254.4	GDA94
LOCATIO	pro- special contraction and a special contr	70 <b>4</b> 11- <b>44</b> 1-1-1-1-1	DATE	e de la companya de l	7/12/20				2000	VATIO	one.	26.	Name of the	m AHD
	ACTOR: Geo-Environmental S		-	0.177	SATION TYPE		SA	١.				H (m)		
EQUIPM	ENT/METHOD: Direct Push Core	e	SAM	PLIN	2000 1000 	ore			47.00		D BY		GM & JPC	
		≿		문	S	AMPL	ES:			Le				
DEPTH (metres)	MATERIAL DESCRIPTION	USCS	UNIT	MOISTURE	Sample	Grain Class	HSL	Field PID (ppm)			Napthalene		MONITORING WELL	ELEVATION (metres)
2.2					BH1 2 5-2.6	0	D D					××		
O F.	vices montal Caludians + CV/I UCI	EVOCED LUCE, V. E.	CO 10 / 6 7	NO.E	Contract Allera	11.00	200		20.0	- no		FAT	200 E 200 E20	O E00

GEO-		PROJECT:  90 Melville  CLIENT:	Stre	et					E	L		<b>g</b> (	2477	_	BH02 26353.2	GDA9
S	OLUTIONS	Jaws Archit	tects	3					N	OR	тн	INC	3:	52	52270.1	GDA9
LOCATIO	ON. Hobart CBD		DATE	E:	7/12/20	19			E	LEV	ATI	ON:		25	5	m AH
CONTRA	ACTOR: Geo-Environmental Solu	itions	INVE	STIC	GATION TYPE	E	ESA	4	т	ОТ	AL	DE	PT	Н (п	n): 1.6	
EQUIPM	MENT/METHOD: Direct Push Core		SAM	PLIN	ig: C	ore			ī	.00	GE	D	BY:		GM & JPC	1
	7	1		T.	s	AMPL	ES:		Н	ela		Scre		ing		
DEPTH (metres)	MATERIAL DESCRIPTION	USCS	TINO	MOISTURE	Sample	Grain Class	HSL	Field PID (ppm)	enzene		cee	dan	nce	s.	MONITORING WELL	ELEVATION (metres)
0.0	FILL: Bitumen FILL: Concrete recovered as crushed material	4Conc.4	FILL		7-1	0	1		180		ш	×	2 1			ш
0.2-	Sandy SILTY CLAY: dark grey-brown, moist, firm, high plasticity															
0.4-	Sandy SILTY CLAY: yellow-brown, mo firm, high plasticity	ist,														
0.6		СН			BH2 0.5-0.6		D	×	×	×	×	×	×	××	•	
0.8-			٥													
1.0	Silty SANDY CLAY: orange/yellow, slightly moist, stiff to very stiff, low plasticity, weathered material. Refusal															
1.2-		CL														
1.4							100									
1.6					BH2 1.5-1.6		D		×	×	×	×	×	××	(	
Seo-En	avironmental Solutions * PVI HSL EX	CEEDANCE: X: EX	CAVAT	ION	< II NI. A	1.21	B 2.	5 C 5	20	D.	20-	-50:	· F	- 50	-200 F: 200-500	G >5

GEO-	the a section and and	PROJECT:  90 Melville  CLIENT:	Stre	et						L		77.00	of	_	BH03 26362.3	GDA9
		Jaws Archit	tects	3					1	VOF	RTH	liN	G:	52	252248.6	GDA9
LOCATIO	ON: Hobart CBD		DATE	E:	7/12/20	19			1	ELEV	VAT	ION	É	26	3.3	m AH
CONTRA	ACTOR: Geo-Environmental Solu	itions	INVE	STIC	GATION TYPE	E	ESA	4	1	от	AL	DE	PT	Н (п	n): 1.6	
EQUIPM	MENT/METHOD: Direct Push Core		SAM	PLIN	ig: Ci	ore			1	LOC	GG	ED	BY		GM & JPC	
				Ü.	S	AMPL	ES:		۲	lela		Scr		ing		
DEPTH (metres)	MATERIAL DESCRIPTION	USCS	TINO	MOISTURE	Sample	Grain Class	HSL	Fleid PID (ppm)	lanzana				lapthalene ou	8. C3	MONITORING WELL	ELEVATION (metres)
0.0	FILL: Bitumen FILL: Concrete recovered as crushed material	B	FILL									_	_			
0.4-	Sandy SILTY CLAY: yellow-brown, mo firm, high plasticity	ist,		1			0.774									
0.6		<u> </u>			BH3 0.5-0.6		D		×	×	×	×	×	××		
0.8-	Sity SANDY CLAY: orange/yellow, slightly moist, stiff to very stiff, low plasticity, weathered material. Refusal		a													
1.0-		CL														
1.4-					.5 .5		. 10									
1,6-					BH3 1.5-1.6		D		×	×	×	×	×	××		
1.6-				]	BH3 1.5-1.6		D	3	×	×	×	×	×	××	•	

Solutions re hed	S Archit	DATE	E: STIC	2000 1250 			Field PID (ppm)	T(	DTAI OGC	L DE	BY:	26 H (m	): 1.6 GM & JPC	m AHC
nre	D A DCOnc.	SAM	STIC	GATION TYPE	ore AMPL	ES:		L	OGO elath	SED Sci Leve	BY:	H (m	): 1.6 GM & JPC	
nre	D A DCOnc.	SAM	PLIN	vg: Co	ore AMPL	ES:		L	OGC elath I	SED Sci Leve	BY:	ing	GM & JPC	NOI (St
hed	B D A D A A A	TINO	Π	S/	AMPL	(2)	Field PID (ppm)	Н	elath	Sci	reen el ince	ing s*		NOI (88)
hed	B D A D A A A		MOISTURE	2 1	0	(2)	Field PID (ppm)		Exce	Leve	el ince	s*	MONITORING WELL	NOI (se
hed	B D A D A A A		MOISTUR	Sample	Grain Class	HSL	Field PID (ppm)	Benzene	Toluene	Xylene 5	lapthalene	2	MONITORING WELL	NO (S
	D A A A	FILL				_	-			9.7		L L		ELEVATION (metres)
	Conc.	FILL												
own,			Ι.											
n, moist,	СН			BH4 0.5-0.6		D		×	××	(X	×	××		
ow, naterial.		a												
	SC													
				5 (1										
				BH4 1.5-1.6		D		×	××	(X	×	××		
	w, naterial.	naterial.	anaterial. Q	naterial. Q	sc sc	sc sc	sc sc	sc sc	sc.	sc sc	sc sc	sc sc	sc sc	sc sc

EO-	ENVIRONMENTAL C	0 Melville							E	AS	TIN	iG:		52	6346.1	GDA9
Sic	JUTIONS	aws Archi	tects	3					N	OR	тн	ING	1	52	52261.8	GDA9
LOCATIO	N Hobart CBD		DATE	Ē:	7/12/20	19			E	LEV	ATI	ON:		25	.6	m AHI
CONTRA	CTOR: Geo-Environmental Solut	ions	INVE	STIC	GATION TYPE		ESA	4	Т	ОТА	ΑL	DE	PTI	H (m	): 1.4	
EQUIPME	ENT/METHOD: Direct Push Core		SAM	PLIN	ig: C	ore			-	.OG		_		_	GM & JPC	
				ш	s	AMPL	ES:		۲	elat	Le	vel		,=		
DEPTH (metres)	MATERIAL DESCRIPTION	USCS	TINO	MOISTURE	Sample	Grain Class	HSL	Field PID (ppm)	Benzene	Folnene				F2	MONITORING WELL	ELEVATION (metres)
0.0	FILL: Bitumen FILL: Concrete recovered as crushed material	- Conc. Δ														
0.2	FILL: Clayey SANDY GRAVEL; grey/brown, slightly moist to dry, dense	0.0	FILL													
0.4-		GW CGW			BH5 0.5-0.6		D	1			v	,		к×		
0.6	Sandy SILTY CLAY: dark grey-brown, moist, firm, high plasticity			2	BH3 0.3-0.0		0			٥	^	^		1		
0.8-		СН														
1.0	Sitty CLAYEY SAND: orange/yellow, slightly moist, dense, weathered material Refusal		a													
1.2-		SC														
1.4		9/////	<u></u>		g		ke							1		

ntal Solution Core	vs Archit	DATE INVE	STIC	2000 - 1120 		ESA	<b>.</b>	TC	EVAT	2000	.50	252245.5 7.3 n): 1.6	m AHI
n Core		SAM	STIC	GATION TYPE	E	ES <i>A</i>		тс	TAL	2000	04000	0	m AHI
n Core		SAM	PLIN	ig: Co		SA	١.			DEP	TH (r	n): 1.6	
RIPTION	USCS	Process.	Γ	2000 - 1120 	ore			13/8					
	USCS	TI.	Ù,	9				LC	OGG	ED B	Y:	GM & JPC	
	USCS	E		S	AMPL	ES:		V-10	L	evel	ening		
crushed		TINO	MOISTURE	Sample	Grain Class	HSL	Field PID (ppm)			(ylene	es"	MONITORING WELL	ELEVATION (metres)
	Β D . Δ . D 4Conc. Δ D . Δ . D	FILL					14						
ey-brown,			8										
brown, moist,	-												
	СН			BH6 0.5-0.6		В		*	××	XX	X		
ff, low													
	CL												
	_			BH6 1.5-1.6		D		×	××	××	×	•	
	yellow, ff, low al. Refusal	yellow, ff, low al. Refusal	yellow, ff, low al. Refusal	yellow, ff, low al. Refusal	yellow, ff, low al. Refusal	yellow, ff, low al. Refusal	CH  Q  yellow, ff, low al. Refusal  CL	CH  BH6 0.5-0.6  D  yellow, ff, low al. Refusal	CH  BH6 0.5-0.6  D  X  yellow, ff, low al. Refusal	CH  BH6 0.5-0.6  D  XXX  yellow, ff, low al. Refusal	CH  Q  yellow, ff, low al. Refusal	CH  Q  yellow, ff, low al. Refusal  CL	CH  Q  yellow, ff, low al. Refusal  CL

	ENVIRONMENTAL	90 Melville  CLIENT:  Jaws Archit						20	H	AS	TIN	NG:	-	52	BH07 26338.7	GDA9
S	1000 1000 000 000 000 000 000 000 000 0	Jaws Alcilli	DATE		7/12/20	110			H	2-7-		liNe	-		252254.2	GDA9
		- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1								0000		ION	-100	254	5.7	m AH
	ACTOR: Geo-Environmental Solu	utions	70.000	G 2772	SATION TYPE	- 15	SA	١	Т	OT	AL	DE	PT	Н (п	Sec. Sec.	_
EQUIPM	MENT/METHOD: Direct Push Core		SAM	PLIN	ig: C	ore			-	200			BY	_	GM & JPC	
		≿		ш	S	AMPL	ES:		ľ		L	eve	4	ing		
(metres)	MATERIAL DESCRIPTION	USCS	UNIT	MOISTURE	Sample	Grain Class	HSI.	Field PID (ppm)	Senzene				lapthalene ou	F1	MONITORING WELL	ELEVATION (metres)
0.0	FILL: Bitumen FILL: Concrete recovered as crushed material	P A P	FILL		at a			A								2700, 00
0.2	Sandy SILTY CLAY: dark grey-brown, moist, firm, high plasticity															
0.4-																
0.6					BH7 0.5-0.6		D		×	×	×	×	×	××		
0.8-		CH														
1.0	Sandy SILTY CLAY: yellow-brown, mo firm, high plasticity	ist,	a													
1.2-																
1.4-	Silty SANDY CLAY: orange/yellow, slightly moist, stiff to very stiff, low plasticity, weathered material. Refusal				BH7 1.5-1.6		D		v	¥	¥	¥	×	××		
1.6-		CL						3			•					
1.8-																
2.0-		185					Ļ									Ţ

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

### **Appendix 10 Certificate of Analysis**



	CERTIFIC	ATE OF ANALYSIS	
Work Order	EM1921103	Page	: 1 of 18
Client	GEO-ENVIRONMENTAL SOLUTIONS	Laboratory	Environmental Division Melbourne
Contact	: DR JOHN PAUL CUMMING	Contact	: Shirley LeCornu
Address	29 KIRKSWAY PLACE	Address	: 4 Westall Rd Springvale VIC Australia 3171
	BATTERY POINT TASMANIA, AUSTRALIA 7004		
Telephone	: +61 03 6223 1839	Telephone	: +6138549 9630
Project	: Melville	Date Samples Received	10-Dec-2019 09:30
Order number	(5,000)	Date Analysis Commenced	: 10-Dec-2019
C-O-C number		Issue Date	: 13-Dec-2019 15:19
Sampler	: JPC		INTA NATA
Site			
Quote number	: EN/222		Accreditation No. 825
No. of samples received	: 17		Accredited for compliance with
No. of samples analysed	: 17		ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Postori	Accreditation Category
Dilani Fernando	Senior Inorganic Chemist	Melbourne Inorganics, Springvale, VIC
Nikki Stepniewski	Senior Inorganic Instrument Chemist	Melbourne Inorganics, Springvale, VIC
Xing Lin	Senior Organic Chemist	Melbourne Organics, Springvale, VIC

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Project : Melville



### **General Comments**

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contact for details.

Key: CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

- A = This result is computed from individual analyte detections at or above the level of reporting
- ø = ALS is not NATA accredited for these tests.
- ~ = Indicates an estimated valu
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to
  Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.od)pyrene (0.1),
  Dibenz(a,h)anthracene (1.0), Benzo(g,h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benzo(a)pyrene (0.1), Chrysene (0.01), Benzo(b†) & Benzo(a)pyrene (1.0), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h.i)perylene (0.01). Less than LOR results for TEQ Zero' are treated as zero, for TEQ 1/2LOR' are treated as half the reported LOR, and for TEQ LOR' are treated as being equal to the reported LOR. Note: TEO 1/2LOR and TEQ LOR will calculate as 0.6mg/kg and 1.2mg/kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EG005T:EM1921103\_002, 003, 007,015 and 016 have been diluted prior to analysis for Arsenic, Barium, Beryllium, Boron , Cadmium, Lead and Selenium due to sample matrix. LORs have been raised accordingly.

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Client : GEO-ENVIRONMENTAL SOLUTIONS

Project : Melville



Analytical Results								
Sub-Matrix: SOIL (Matrix: SOIL)		Client sample ID			BH1 1.5-1.6	BH1 2.5-2.6	BH2 0.5-0.6	BH2 1.5-1.6
110	Cli	ent sampli	ng date / time	07-Dec-2019 00:00	07-Dec-2019 00:00	07-Dec-2019 00:00	07-Dec-2019 00:00	07-Dec-2019 00:0
Compound	CAS Number	LOR	Unit	EM1921103-001	EM1921103-002	EM1921103-003	EM1921103-004	EM1921103-005
	1741			Result	Result	Result	Result	Result
EA055: Moisture Content (Dried	d @ 105-110°C)							
Moisture Content	22	1.0	%	22.3	17.7	21.6	20.0	14.5
EG005(ED093)T: Total Metals b	y ICP-AES							
Arsenic	7440-38-2	5	mg/kg	<5	<8	<5	<5	<5
Barium	7440-39-3	10	mg/kg	370	<80	<50	340	140
Beryllium	7440-41-7	- 1	mg/kg	<1	<6	<5	<1	<1
Boron	7440-42-8	50	mg/kg	<50	<80	<50	<50	<50
Cadmium	7440-43-9	1	mg/kg	<1	<3	<2	<1	<1
Chromium	7440-47-3	2	mg/kg	8	14	12	39	5
Cobalt	7440-48-4	2	mg/kg	13	58	13	47	28
Copper	7440-50-8	5	mg/kg	30	36	37	66	101
Lead	7439-92-1	5	mg/kg	6	8	8	5	<5
Manganese	7439-96-5	5	mg/kg	32	497	303	640	263
Nickel	7440-02-0	2	mg/kg	11	54	39	30	21
Selenium	7782-49-2	5	mg/kg	<5	<8	<5	- <5	<5
Vanadium	7440-82-2	5	mg/kg	67	95	101	98	111
Zinc	7440-68-6	5	mg/kg	11	49	49	50	51
EG035T: Total Recoverable Me							0 -	
Mercury	7439-97-8	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
The second secon	NAME OF TAXABLE PARTY.							-
EP075(SIM)B: Polynuclear Aron Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-98-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	83-32-9 86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-73-7 85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	208-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	7,7,10,0,5	0.5	mg/kg mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3		mg/kg	20537	<0.5	10,775	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	12015	<0.5	1,0000	2555
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5

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Client GEO-ENVIRONMENTAL SOLUTIONS

Project Melville



### Analytical Results Sub-Matrix: SOIL Client sample ID BH1 0.5-0.6 BH1 1.5-1.6 BH1 2.5-2.6 BH2 1.5-1.6 BH2 0.5-0.6 (Matrix: SOIL) 07-Dec-2019 00:00 07-Dec-2019 00:00 07-Dec-2019 00:00 07-Dec-2019 00:00 07-Dec-2019 00:00 Client sampling date / time EM1921103-001 EM1921103-002 EM1921103-003 EM1921103-004 EM1921103-005 CAS Number LOR Compound Result Result Result Result Result EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued < 0.5 <0.5 < 0.5 < 0.5 0.5 mg/kg < 0.5 Benzo(g.h.i)perylene 191-24-2 Sum of polycyclic aromatic hydrocarbons 0.5 mg/kg < 0.5 <0.5 < 0.5 < 0.5 < 0.5 A Benzo(a)pyrene TEQ (zero) 0.5 < 0.5 <0.5 < 0.5 <0.5 < 0.5 mg/kg 0.5 0.6 0.6 A Benzo(a)pyrene TEQ (half LOR) mg/kg 0.6 0.6 0.6 ^ Benzo(a)pyrene TEQ (LOR) 0.5 1.2 1.2 1.2 1.2 1.2 mg/kg EP080/071: Total Petroleum Hydrocarbons 10 <10 <10 <10 <10 C6 - C9 Fraction mg/kg <10 C10 - C14 Fraction 50 mg/kg <50 <50 <50 <50 <50 C15 - C28 Fraction 100 <100 <100 <100 <100 <100 mg/kg C29 - C36 Fraction <100 100 mg/kg <100 <100 <100 <100 mg/kg ^ C10 - C36 Fraction (sum) 50 <50 <50 <50 <50 <50 EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions C6 - C10 Fraction C6\_C10 10 mg/kg <10 <10 <10 <10 <10 ^ C6 - C10 Fraction minus BTEX C6\_C10-BTEX 10 mg/kg <10 <10 <10 <10 <10 >C10 - C16 Fraction 50 mg/kg <50 <50 <50 <50 <50 >C16 - C34 Fraction 100 mg/kg <100 <100 <100 <100 <100 <100 <100 <100 >C34 - C40 Fraction 100 <100 <100 mg/kg ^ >C10 - C40 Fraction (sum) 50 <50 <50 <50 <50 <50 mg/kg 50 mg/kg <50 <50 <50 <50 <50 ^ >C10 - C16 Fraction minus Naphthalene (F2) EP080: BTEXN Benzene 0.2 < 0.2 <0.2 < 0.2 < 0.2 < 0.2 71-43-2 mg/kg Toluene 0.5 < 0.5 <0.5 < 0.5 < 0.5 < 0.5 108-88-3 mg/kg < 0.5 Ethylbenzene 100-41-4 0.5 mg/kg <0.5 < 0.5 <0.5 < 0.5 meta- & para-Xylene 108-38-3 106-42-3 0.5 < 0.5 <0.5 < 0.5 < 0.5 < 0.5 mg/kg 0.5 < 0.5 <0.5 < 0.5 < 0.5 < 0.5 mg/kg ortho-Xylene 95-47-8 < 0.2 <0.2 < 0.2 < 0.2 < 0.2 0.2 A Sum of BTEX mg/kg ^ Total Xylenes 0.5 mg/kg <0.5 <0.5 < 0.5 <0.5 < 0.5 <1 Naphthalene 1 mg/kg <1 <1 <1 <1 91-20-3 EP075(SIM)S: Phenolic Compound Surrogates 0.5 96 104 Phenol-d6 13127-88-3 99.4 103 98.0 99.7 2-Chlorophenol-D4 93951-73-6 0.5 96 110 104 110 105 106 2.4.6-Tribromophenol 118-79-6 0.5 96 69.0 38.9 38.2 54.3 50.3

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Project : Melville



### Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)	Client sample ID			BH1 0.5-0.6	BH1 1.5-1.6	BH1 2.5-2.6	BH2 0.5-0.6	BH2 1.5-1.6
	Cli	ent samplin	ig date / time	07-Dec-2019 00:00				
Compound	CAS Number	LOR	Unit	EM1921103-001	EM1921103-002	EM1921103-003	EM1921103-004	EM1921103-005
				Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	96	113	96.4	101	97.5	99.1
Anthracene-d10	1719-06-8	0.5	96	115	117	123	121	120
4-Terphenyl-d14	1718-51-0	0.5	96	105	100	110	103	103
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	96	76.7	74.4	77.1	78.7	85.3
Toluene-D8	2037-26-5	0.2	96	82.5	81.1	84.9	85.4	92.5
4-Bromofluorobenzene	460-00-4	0.2	96	95.8	96.3	97.2	105	108

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GEO-ENVIRONMENTAL SOLUTIONS Client

Melville



### Project Analytical Results Client sample ID Sub-Matrix: SOIL BH3 0.5-0.6 BH3 1.5-1.6 BH4 0.5-0.6 BH4 1.5-1.6 BH5 0.5-0.6 (Matrix: SOIL) Client sampling date / time 07-Dec-2019 00:00 07-Dec-2019 00:00 07-Dec-2019 00:00 07-Dec-2019 00:00 07-Dec-2019 00:00 EM1921103-006 EM1921103-007 EM1921103-008 EM1921103-009 EM1921103-010 Compound CAS Number Result Result Result Result Result EA055: Moisture Content (Dried @ 105-110°C) 1.0 Moisture Content 96 21.6 19.6 24.8 22.5 19.8 EG005(ED093)T: Total Metals by ICP-AES 7440-38-2 5 <5 <5 <5 <5 <5 mg/kg mg/kg Barium 7440-39-3 10 280 280 170 70 600 Beryllium <1 3 2 mg/kg 1 7 7440-41-7 50 mg/kg <50 <50 <50 <50 <50 Boron 7440-42-8 <1 <2 <1 <1 <1 Cadmium 7440-43-9 mg/kg 9 10 11 21 Chromium 7440-47-3 mg/kg 25 Cobalt 7440-48-4 mg/kg 291 8 29 22 30 34 29 18 56 Copper 7440-50-8 5 mg/kg Lead 5 mg/kg 7 <5 9 6 6 7439-92-1 Manganese 7439-96-5 5 mg/kg 30 681 60 106 51 Nickel 7440-02-0 2 18 70 10 21 25 mg/kg <5 <5 <5 Selenium 7782-49-2 5 mg/kg <5 <5 70 83 Vanadium 7440-62-2 5 mg/kg 75 32 105 Zinc 7440-86-8 16 48 16 32 25 5 mg/kg EG035T: Total Recoverable Mercury by FIMS Mercury 7439-97-6 0.1 < 0.1 <0.1 < 0.1 < 0.1 < 0.1 mg/kg EP075(SIM)B: Polynuclear Aromatic Hydrocarbons 0.5 < 0.5 <0.5 < 0.5 <0.5 Naphthalene 91-20-3 mg/kg < 0.5 <0.5 <0.5 Acenaphthylene 0.5 mg/kg < 0.5 <0.5 < 0.5 208-96-8 Acenaphthene 0.5 mg/kg < 0.5 <0.5 <0.5 < 0.5 <0.5 83-32-9 Fluorene 0.5 mg/kg < 0.5 <0.5 <0.5 < 0.5 <0.5 86-73-7 Phenanthrene 0.5 < 0.5 <0.5 < 0.5 < 0.5 < 0.5 85-01-8 mg/kg < 0.5 <0.5 < 0.5 < 0.5 < 0.5 Anthracene 120-12-7 0.5 mg/kg <0.5 <0.5 < 0.5 < 0.5 <0.5 Fluoranthene 206-44-0 0.5 mg/kg < 0.5 <0.5 < 0.5 < 0.5 < 0.5 Pyrene 0.5 mg/kg 129-00-0 < 0.5 <0.5 <0.5 < 0.5 <0.5 Benz(a)anthracene 0.5 mg/kg 56-55-3 0.5 < 0.5 <0.5 < 0.5 < 0.5 < 0.5 Chrysene 218-01-9 mg/kg 205-99-2 205-82-3 < 0.5 <0.5 < 0.5 < 0.5 < 0.5 mg/kg < 0.5 <0.5 < 0.5 < 0.5 <0.5 Benzo(k)fluoranthene 207-08-9 0.5 mg/kg < 0.5 <0.5 < 0.5 < 0.5 < 0.5 Benzo(a)pyrene 50-32-8 0.5 mg/kg < 0.5 Indeno(1.2.3.cd)pyrene 193-39-5 0.5 mg/kg <0.5 < 0.5 < 0.5 < 0.5 0.5 < 0.5 <0.5 <0.5 < 0.5 <0.5 Dibenz(a.h)anthracene 53-70-3 mg/kg

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### Project Melville Analytical Results Client sample ID Sub-Matrix: SOIL BH3 0.5-0.6 BH3 1.5-1.6 BH4 0.5-0.6 BH4 1.5-1.6 BH5 0.5-0.6 (Matrix: SOIL) 07-Dec-2019 00:00 07-Dec-2019 00:00 07-Dec-2019 00:00 07-Dec-2019 00:00 07-Dec-2019 00:00 Client sampling date / time Compound CAS Number LOR EM1921103-006 EM1921103-007 EM1921103-008 EM1921103-009 EM1921103-010 Result Result Result Result Result EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued Benzo(g.h.i)perylene 191-24-2 0.5 mg/kg < 0.5 <0.5 < 0.5 < 0.5 < 0.5 Sum of polycyclic aromatic hydrocarbons 0.5 <0.5 <0.5 <0.5 <0.5 < 0.5 mg/kg A Benzo(a)pyrene TEQ (zero) 0.5 <0.5 <0.5 < 0.5 < 0.5 < 0.5 mg/kg ^ Benzo(a)pyrene TEQ (half LOR) 0.5 mg/kg 0.6 0.6 0.6 0.6 0.6 Benzo(a)pyrene TEQ (LOR) 0.5 mg/kg 1.2 1.2 1.2 1.2 1.2 ---EP080/071: Total Petroleum Hydrocarbons <10 <10 <10 <10 <10 C6 - C9 Fraction 10 mg/kg C10 - C14 Fraction 50 mg/kg <50 <50 <50 <50 <50 C15 - C28 Fraction 100 mg/kg <100 <100 <100 <100 <100 C29 - C36 Fraction 100 mg/kg <100 <100 <100 <100 <100 ---^ C10 - C36 Fraction (sum) 50 mg/kg <50 <50 <50 <50 <50 EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fraction C6 - C10 Fraction C6\_C10 10 mg/kg <10 <10 <10 <10 <10 10 <10 <10 <10 <10 <10 A C6 - C10 Fraction minus BTEX C6\_C10-BTEX mg/kg (F1) >C10 - C16 Fraction <50 <50 <50 <50 <50 50 mg/kg >C16 - C34 Fraction <100 <100 <100 <100 100 <100 mg/kg >C34 - C40 Fraction 100 mg/kg <100 <100 <100 <100 <100 ^ >C10 - C40 Fraction (sum) 50 mg/kg <50 <50 <50 <50 <50 >C10 - C16 Fraction minus Naphthalene 50 <50 <50 <50 <50 <50 mg/kg (F2) **EP080: BTEXN** Benzene 71-43-2 0.2 mg/kg < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 Toluene 108-88-3 0.5 mg/kg < 0.5 <0.5 < 0.5 < 0.5 < 0.5 Ethylbenzene 100-41-4 0.5 mg/kg < 0.5 <0.5 <0.5 < 0.5 <0.5 meta- & para-Xylene 0.5 < 0.5 <0.5 < 0.5 < 0.5 < 0.5 108-38-3 106-42-3 mg/kg ortho-Xylene 95-47-8 0.5 mg/kg < 0.5 <0.5 < 0.5 < 0.5 < 0.5 Sum of BTEX 0.2 mg/kg < 0.2 <0.2 < 0.2 < 0.2 < 0.2 ^ Total Xylenes 0.5 < 0.5 <0.5 < 0.5 <0.5 < 0.5 mg/kg Naphthalene <1 <1 <1 <1 <1 91-20-3 1 mg/kg EP075(SIM)S: Phenolic Compound Surrogates Phenol-d6 13127-88-3 0.5 96 99.8 102 95.7 99.3 101 0.5 96 106 110 102 106 2-Chlorophenol-D4 93951-73-6 108 96 51.9 52.3 53.1 53.6 51.5 2.4.6-Tribromophenol 118-79-6 0.5

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### Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)	Client sample ID			BH3 0.5-0.6	BH3 1.5-1.6	BH4 0.5-0.6	BH4 1.5-1.6	BH5 0.5-0.6
	Cli	ent samplin	ng date / time	07-Dec-2019 00:00				
Compound	CAS Number	LOR	Unit	EM1921103-006	EM1921103-007	EM1921103-008	EM1921103-009	EM1921103-010
				Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-80-8	0.5	96	99.4	102	95.4	99.5	99.4
Anthracene-d10	1719-06-8	0.5	96	123	127	116	122	124
4-Terphenyl-d14	1718-51-0	0.5	96	104	106	98.9	104	102
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	96	87.7	74.0	84.5	83.1	68.0
Toluene-D8	2037-26-5	0.2	96	94.8	80.3	91.5	88.6	65.5
4-Bromofluorobenzene	460-00-4	0.2	96	108	93.2	103	103	87.4

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### Analytical Results Client sample ID BH5 1.5-1.6 BH6 1.5-1.6 BH7 1.5-1.6 Sub-Matrix: SOIL BH6 0.5-0.6 BH7 0.5-0.6 (Matrix: SOIL) 07-Dec-2019 00:00 Client sampling date / time 07-Dec-2019 00:00 07-Dec-2019 00:00 07-Dec-2019 00:00 07-Dec-2019 00:00 EM1921103-011 EM1921103-012 EM1921103-013 EM1921103-014 EM1921103-015 Compound CAS Number Result Result Result Result Result EA055: Moisture Content (Dried @ 105-110°C) 1.0 Moisture Content 96 18.0 22.9 132 7.8 15.3 EG005(ED093)T: Total Metals by ICP-AES <5 <5 34 7440-38-2 5 mg/kg <5 <8 Barium 7440-39-3 10 mg/kg 220 250 130 60 660 Beryllium mg/kg <1 <1 <1 <1 <8 7440-41-7 <50 <50 <50 <50 <80 Boron 7440-42-8 50 mg/kg Cadmium mg/kg <1 <1 <1 <1 3 7440-43-9 Chromium 7440-47-3 2 8 9 23 6 27 mg/kg 33 18 Cobalt 2 15 29 7440-48-4 mg/kg Copper 7440-50-8 57 29 68 77 80 mg/kg <5 <5 90 <8 Lead 7439-92-1 5 mg/kg Manganese 7439-96-5 5 mg/kg 780 33 247 348 3530 Nickel 7440-02-0 mg/kg 29 8 20 10 62 <5 Selenium <5 <5 <5 <8 7782-49-2 mg/kg Vanadium 7440-62-2 88 68 110 52 95 mg/kg Zinc 7440-66-6 mg/kg 33 11 48 133 46 EG035T: Total Recoverable Mercury by FIMS 7439-97-8 0.1 mg/kg < 0.1 <0.1 < 0.1 < 0.1 < 0.1 Mercury EP075(SIM)B: Polynuclear Aromatic Hydrocarbons Naphthalene 0.5 mg/kg <0.5 <0.5 < 0.5 8.0 < 0.5 91-20-3 Acenaphthylene 0.5 <0.5 <0.5 < 0.5 3.2 < 0.5 208-96-8 mg/kg Acenaphthene 83-32-9 0.5 mg/kg < 0.5 <0.5 < 0.5 1.3 < 0.5 < 0.5 <0.5 <0.5 <0.5 Fluorene 86-73-7 0.5 mg/kg 2.8 Phenanthrene 85-01-8 0.5 mg/kg < 0.5 <0.5 < 0.5 39.7 < 0.5 Anthracene 120-12-7 0.5 < 0.5 <0.5 < 0.5 8.7 < 0.5 mg/kg Fluoranthene 206-44-0 0.5 < 0.5 <0.5 <0.5 42.9 <0.5 mg/kg Pyrene 0.5 < 0.5 <0.5 < 0.5 43.0 < 0.5 129-00-0 mg/kg Benz(a)anthracene 0.5 mg/kg < 0.5 <0.5 < 0.5 19.5 < 0.5 56-55-3 < 0.5 <0.5 <0.5 < 0.5 Chrysene 0.5 mg/kg 19.3 218-01-9 Benzo(b+j)fluoranthene 205-99-2 205-82-3 0.5 mg/kg < 0.5 <0.5 < 0.5 18.2 < 0.5 Benzo(k)fluoranthene 207-08-9 0.5 <0.5 <0.5 < 0.5 15.8 < 0.5 mg/kg < 0.5 <0.5 < 0.5 24.3 < 0.5 Benzo(a)pyrene 50-32-8 0.5 mg/kg Indeno(1.2.3.cd)pyrene < 0.5 <0.5 < 0.5 11.1 < 0.5 193-39-5 0.5 mg/kg Dibenz(a.h)anthracene 53-70-3 0.5 mg/kg < 0.5 <0.5 <0.5 4.8 <0.5

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### Analytical Results Client sample ID BH6 1.5-1.6 Sub-Matrix: SOIL BH5 1.5-1.6 BH6 0.5-0.6 BH7 0.5-0.6 BH7 1.5-1.6 (Matrix: SOIL) Client sampling date / time 07-Dec-2019 00:00 07-Dec-2019 00:00 07-Dec-2019 00:00 07-Dec-2019 00:00 07-Dec-2019 00:00 EM1921103-011 EM1921103-012 EM1921103-013 EM1921103-014 EM1921103-015 Compound CAS Number LOR Result Result Result Result Result EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued <0.5 Benzo(g.h.i)perylene 191-24-2 0.5 mg/kg < 0.5 <0.5 < 0.5 12.9 A Sum of polycyclic aromatic hydrocarbons 0.5 < 0.5 <0.5 <0.5 268 < 0.5 mg/kg A Benzo(a)pyrene TEQ (zero) 0.5 < 0.5 <0.5 <0.5 35.9 <0.5 mg/kg ^ Benzo(a)pyrene TEQ (half LOR) 0.5 mg/kg 0.6 0.6 0.6 35.9 0.6 Benzo(a)pyrene TEQ (LOR) 0.5 mg/kg 1.2 1.2 1.2 35.9 1.2 ----EP080/071: Total Petroleum Hydrocarbons C6 - C9 Fraction 10 mg/kg <10 <10 <10 <10 <10 C10 - C14 Fraction 50 mg/kg <50 <50 <50 <50 <50 C15 - C28 Fraction 100 mg/kg <100 <100 <100 1280 <100 -C29 - C36 Fraction <100 <100 <100 <100 100 mg/kg 600 <50 <50 <50 ^ C10 - C36 Fraction (sum) 50 mg/kg <50 1880 EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions C6 - C10 Fraction 10 <10 <10 <10 <10 <10 C6\_C10 mg/kg 10 <10 <10 <10 <10 <10 <sup>^</sup> C6 - C10 Fraction minus BTEX C6\_C10-BTEX mg/kg >C10 - C16 Fraction 50 mg/kg <50 <50 <50 100 <50 >C16 - C34 Fraction 100 mg/kg <100 <100 <100 1640 <100 >C34 - C40 Fraction 100 <100 <100 <100 340 <100 mg/kg <50 ^ >C10 - C40 Fraction (sum) 50 mg/kg <50 <50 2080 <50 ^ >C10 - C16 Fraction minus Naphthalene 50 mg/kg <50 <50 <50 100 <50 (F2) EP080: BTEXN 71-43-2 0.2 mg/kg < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 Benzene Toluene 108-88-3 0.5 < 0.5 <0.5 < 0.5 < 0.5 < 0.5 mg/kg < 0.5 <0.5 < 0.5 < 0.5 < 0.5 Ethylbenzene 100-41-4 0.5 mg/kg < 0.5 <0.5 <0.5 < 0.5 <0.5 meta- & para-Xylene 108-38-3 108-42-3 0.5 mg/kg < 0.5 <0.5 < 0.5 < 0.5 < 0.5 ortho-Xylene 0.5 mg/kg 95-47-6 0.2 < 0.2 <0.2 < 0.2 < 0.2 < 0.2 Sum of BTEX mg/kg <sup>^</sup> Total Xylenes <0.5 <0.5 < 0.5 < 0.5 <0.5 0.5 mg/kg Naphthalene 91-20-3 <1 <1 <1 <1 <1 mg/kg EP075(SIM)S: Phenolic Compound Surrogates Phenol-d6 13127-88-3 0.5 96 102 99.4 100 103 100 96 108 2-Chlorophenol-D4 93951-73-6 0.5 105 107 107 106 118-79-6 52.9 2.4.6-Tribromophenol 0.5 96 52.8 50.5 81.1 66.1

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### Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)	Client sample ID			BH5 1.5-1.6	BH6 0,5-0.6	BH6 1.5-1.6	BH7 0.5-0.6	BH7 1.5-1.6
	Cli	ent samplin	g date / time	07-Dec-2019 00:00				
Compound	CAS Number	LOR	Unit	EM1921103-011	EM1921103-012	EM1921103-013	EM1921103-014	EM1921103-015
			1	Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	96	111	99.6	101	108	110
Anthracene-d10	1719-06-8	0.5	96	127	112	129	98.5	119
4-Terphenyl-d14	1718-51-0	0.5	96	107	102	106	91.0	107
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	96	89.9	83.6	80.3	82.6	77.9
Toluene-D8	2037-26-5	0.2	96	99.7	90.9	89.3	92.7	85.7
4-Bromofluorobenzene	460-00-4	0.2	96	115	108	100	104	99.6

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roject Melville	INVINCIONALITY AL SOLOTI	13.01						(AL
nalytical Results								
ub-Matrix: SOIL Matrix: SOIL)		Clie	ent sample ID	Duplicate	87.00		1557	17772
,	Cli	ent samplir	ng date / time	07-Dec-2019 00:00				
compound	CAS Number	LOR	Unit	EM1921103-016	-			, <u>, , , , , , , , , , , , , , , , , , </u>
	-00/00/00/00/00/00/00/00/00/00/00/00/00/			Result				
A055: Moisture Content (Dried	1@ 105-110°C)							
Moisture Content		1.0	96	17.1	(71.1)	122	( <u>-11</u> )	1922
G005(ED093)T: Total Metals b	v ICP-AES							
Arsenic	7440-38-2	- 5	mg/kg	<8				
Barium	7440-39-3	10	mg/kg	<80			· 1000	1 1000
Beryllium	7440-41-7	1	mg/kg	<8		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	·	1 1
Boron	7440-42-8	50	mg/kg	<80	77.70	1	Comp.	1 3.00
Cadmium	7440-43-9	1	mg/kg	<3	7000	3,000	· com.	4 (J. 1992)
Chromium	7440-47-3	2	mg/kg	10		1,		1
Cobalt	7440-48-4	2	mg/kg	37	7779	1	1 (1 <del>111</del> )	1 3.000
Copper	7440-50-8	5	mg/kg	33	7000	1 12-7-7-1	· ama	1 3000
Lead	7439-92-1	5	mg/kg	<8	7007	1 10000	CTT.	1 N-1-1
Manganese	7439-96-5	5	mg/kg	320		l a <del>ren</del> a	1	1 1. <del>110</del> .4
Nickel	7440-02-0	2	mg/kg	42		l s <del>an</del> a	1.1 <del></del>	3.000
Selenium	7782-49-2	5	mg/kg	<8		( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )	8 <del></del>	1.000
Vanadium	7440-62-2	5	mg/kg	74		T carrier	3 <del>1 7 7</del> 3	1,000
Zinc	7440-86-8	5	mg/kg	44		<del></del>	N <del>-000</del> 0	i <del>any</del> a
G035T: Total Recoverable Me	ercury by FIMS							
Mercury	7439-97-6	0.1	mg/kg	<0.1	<u> </u>	1	9 <u>9-22-</u> 9	( <u></u> -
P075(SIM)B: Polynuclear Aron	natic Hydrocarbons							
Naphthalene	91-20-3	0.5	mg/kg	<0.5		1		1 22
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	200			122
Acenaphthene	83-32-9	0.5	mg/kg	<0.5				
Fluorene	86-73-7	0.5	mg/kg	<0.5		_	-	-
Phenanthrene	85-01-8	0.5	mg/kg	<0.5		_		
Anthracene	120-12-7	0.5	mg/kg	<0.5				
Fluoranthene	208-44-0	0.5	mg/kg	<0.5		_		
Pyrene	129-00-0	0.5	mg/kg	<0.5		-		-
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5		1 1 <del>-</del>	-	
Chrysene	218-01-9	0.5	mg/kg	<0.5			_	
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5		_		
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5			_	-
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5		_	_	-
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5		_	-	-
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5		1	_	1 2-

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### Analytical Results Client sample ID Sub-Matrix: SOIL Duplicate (Matrix: SOIL) 07-Dec-2019 00:00 Client sampling date / time Compound CAS Number EM1921103-016 Result EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued Benzo(g.h.i)perylene 191-24-2 0.5 mg/kg < 0.5 0.5 < 0.5 Sum of polycyclic aromatic hydrocarbons mg/kg 0.5 < 0.5 ^ Benzo(a)pyrene TEQ (zero) mg/kg ^ Benzo(a)pyrene TEQ (half LOR) 0.5 mg/kg 0.6 ^ Benzo(a)pyrene TEQ (LOR) 0.5 mg/kg 1.2 200 EP080/071: Total Petroleum Hydrocarbons 10 <10 C6 - C9 Fraction mg/kg ---C10 - C14 Fraction 50 mg/kg <50 C15 - C28 Fraction 100 mg/kg <100 C29 - C36 Fraction 100 <100 \_\_\_\_ mg/kg ^ C10 - C36 Fraction (sum) <50 50 mg/kg 1 \_ \_ -EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions C6 - C10 Fraction C6\_C10 10 mg/kg <10 <sup>^</sup> C6 - C10 Fraction minus BTEX C6\_C10-BTEX 10 mg/kg <10 >C10 - C16 Fraction 50 <50 mg/kg >C16 - C34 Fraction 100 <100 mg/kg <100 >C34 - C40 Fraction 100 mg/kg ---\_ ----<50 ^ >C10 - C40 Fraction (sum) 50 mg/kg 50 <50 ^ >C10 - C16 Fraction minus Naphthalene mg/kg (F2) **EP080: BTEXN** Benzene 71-43-2 0.2 < 0.2 mg/kg ---< 0.5 Toluene 108-88-3 0.5 mg/kg Ethylbenzene 100-41-4 0.5 mg/kg < 0.5 meta- & para-Xylene 0.5 < 0.5 108-38-3 106-42-3 mg/kg 0.5 < 0.5 mg/kg ortho-Xylene 95-47-6 < 0.2 0.2 A Sum of BTEX mg/kg ^ Total Xylenes 0.5 mg/kg < 0.5 Naphthalene <1 91-20-3 1 mg/kg \_ EP075(SIM)S: Phenolic Compound Surrogates Phenol-d6 0.5 % 90.6 13127-88-3 2-Chlorophenol-D4 0.5 96 98.8 93951-73-6 2.4.6-Tribromophenol 118-79-6 0.5 % 60.9

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4-Bromofluorobenzene



### Analytical Results Sub-Matrix: SOIL Client sample ID Duplicate (Matrix: SOIL) Client sampling date / time 07-Dec-2019 00:00 EM1921103-016 Compound CAS Number LOR Result EP075(SIM)T: PAH Surrogates % 0.5 93.8 321-60-8 Anthracene-d10 0.5 96 122 1719-06-8 4-Terphenyl-d14 96 100 1718-51-0 0.5 \_ \_ EP080S: TPH(V)/BTEX Surrogates 1.2-Dichloroethane-D4 0.2 96 78.1 17060-07-0 2037-26-5 0.2 96 85.3

99.8

96

460-00-4

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### Analytical Results Client sample ID Sub-Matrix: WATER Rinsate (Matrix: WATER) 07-Dec-2019 00:00 Client sampling date / time Compound CAS Number EM1921103-017 Result EG020T: Total Metals by ICP-MS Arsenic 7440-38-2 0.001 mg/L <0.001 Boron 7440-42-8 0.05 mg/L <0.05 <0.001 **Barium** 7440-39-3 0.001 mg/L <0.001 Beryllium 7440-41-7 0.001 mg/L 7440-43-9 0.0001 mg/L <0.0001 0.001 mg/L <0.001 Cobalt 7440-48-4 ----\_\_\_ <0.001 0.001 mg/L Chromium 7440-47-3 Copper 7440-50-8 0.001 mg/L < 0.001 Manganese 7439-96-5 0.001 mg/L <0.001 Nickel 0.001 <0.001 7440-02-0 mg/L <0.001 Lead 7439-92-1 0.001 mg/L Selenium 7782-49-2 0.01 mg/L < 0.01 Vanadium 7440-62-2 0.01 < 0.01 mg/L ----Zinc 7440-66-6 0.005 mg/L <0.005 EG035T: Total Recoverable Mercury by FIMS 7439-97-6 0.0001 mg/L < 0.0001 EP075(SIM)B: Polynuclear Aromatic Hydrocarbons Naphthalene 1.0 µg/L <1.0 91-20-3 Acenaphthylene 1.0 <1.0 208-96-8 µg/L Acenaphthene 1.0 <1.0 83-32-9 µg/L Fluorene 86-73-7 1.0 µg/L <1.0 Phenanthrene 1.0 <1.0 85-01-8 µg/L 1.0 <1.0 Anthracene µg/L 120-12-7 ----<1.0 Fluoranthene 206-44-0 1.0 µg/L Pyrene 129-00-0 1.0 µg/L <1.0 <1.0 Benz(a)anthracene 56-55-3 1.0 µg/L Chrysene <1.0 218-01-9 1.0 µg/L <1.0 Benzo(b+j)fluoranthene 205-99-2 205-82-3 1.0 µg/L Benzo(k)fluoranthene 1.0 µg/L <1.0 207-08-9 \_\_\_ Benzo(a)pyrene < 0.5 0.5 50-32-8 µg/L ----\_\_\_ Indeno(1.2.3.cd)pyrene 193-39-5 1.0 µg/L <1.0 Dibenz(a.h)anthracene 53-70-3 1.0 µg/L <1.0 Benzo(g.h.i)perylene 1.0 <1.0 191-24-2 µg/L 0.5 <0.5 µg/L ^ Sum of polycyclic aromatic hydrocarbons

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### Analytical Results Sub-Matrix: WATER Client sample ID Rinsate (Matrix: WATER) 07-Dec-2019 00:00 Client sampling date / time ----CAS Number LOR EM1921103-017 Compound Result EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued --- 0.5 <0.5 \* Benzo(a)pyrene TEQ (zero) µg/L \_\_\_ \_ EP080/071: Total Petroleum Hydrocarbons C6 - C9 Fraction 20 <20 µg/L C10 - C14 Fraction 50 µg/L <50 C15 - C28 Fraction 100 µg/L <100 50 <50 C29 - C36 Fraction µg/L 50 <50 ^ C10 - C36 Fraction (sum) µg/L EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions C6 - C10 Fraction C8\_C10 20 µg/L <20 <20 <sup>^</sup> C6 - C10 Fraction minus BTEX C6\_C10-BTEX 20 µg/L (F1) >C10 - C16 Fraction 100 µg/L <100 >C16 - C34 Fraction 100 µg/L <100 100 <100 >C34 - C40 Fraction µg/L <100 ^ >C10 - C40 Fraction (sum) 100 µg/L 100 <100 ^ >C10 - C16 Fraction minus Naphthalene µg/L (F2) EP080: BTEXN Benzene 71-43-2 1. µg/L <1 <2 Toluene 108-88-3 µg/L Ethylbenzene 100-41-4 µg/L <2 <2 meta- & para-Xylene 108-38-3 106-42-3 2 µg/L <2 ortho-Xylene 95-47-6 2 µg/L A Total Xylenes 2 µg/L <2 A Sum of BTEX <1 µg/L Naphthalene <5 5 µg/L 91-20-3 EP075(SIM)S: Phenolic Compound Surrogates Phenol-d6 13127-88-3 1.0 96 45.0 2-Chlorophenol-D4 96 87.7 93951-73-6 1.0 2.4.6-Tribromophenol 118-79-6 1.0 96 92.7 EP075(SIM)T: PAH Surrogates 2-Fluorobiphenyl 321-60-8 1.0 96 114 Anthracene-d10 1719-06-8 1.0 96 100 % 94.5 4-Terphenyl-d14 1718-51-0 1.0

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### Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Clie	ent sample ID	Rinsate	 	 
	Cli	ent samplii	ng date / time	07-Dec-2019 00:00	 	 
Compound	CAS Number	LOR	Unit	EM1921103-017	 	 
				Result	 	 
EP080S: TPH(V)/BTEX Surrogates						
1.2-Dichloroethane-D4	17060-07-0	2	%	93.7	 	 
Toluene-D8	2037-26-5	2	%	75.4	 	 
4-Bromofluorobenzene	460-00-4	2	%	86.4	 	 

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### Surrogate Control Limits

Sub-Matrix: SOIL		Recovery	Limits (%)
Compound	CAS Number	Low	High
EP075(SIM)S: Phenolic Compound	Surrogates		
Phenol-d6	13127-88-3	54	125
2-Chlorophenol-D4	93951-73-6	65	123
2.4.6-Tribromophenol	118-79-6	34	122
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	61	125
Anthracene-d10	1719-06-8	62	130
4-Terphenyl-d14	1718-51-0	67	133
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	51	125
Toluene-D8	2037-26-5	55	125
4-Bromofluorobenzene	460-00-4	56	124
Sub-Matrix: WATER		Recovery	Limits (%)
Compound	CAS Number	Low	High
EP075(SIM)S: Phenolic Compound	Surrogates		
Phenol-d6	13127-88-3	10	46
2-Chlorophenol-D4	93951-73-6	23	104
2.4.6-Tribromophenol	118-79-6	28	130
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	36	114
Anthracene-d10	1719-06-8	51	119
4-Terphenyl-d14	1718-51-0	49	127
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	73	129
Toluene-D8	2037-26-5	70	125
4-Bromofluorobenzene	460-00-4	71	129



Statement of Historical Archaeological Potential

Archaeological Impact Assessment &

Archaeological Method Statement

heritage

planning

archaeology

po box 338 north hobart tasmania 7002

0418 303 184 info@prax.com.au 90 Melville Street HOBART TASMANIA

Brad Williams Historical Archaeologist

November 2019

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This document was written by Brad Williams (BA.Hons Archaeology, G.Dip Maritime Archaeology, MA Cultural Heritage Management, G.Dip Environmental Planning) Historical Archaeologist, Heritage Consultant and Director of Praxis Environment. Praxis Environment is a division of Praxis Synergy Pty. Ltd. Supporting historical research was provided by Alan Townsend.

Unless otherwise stated, all photographs were taken by Brad Williams, December 2019.

Unless otherwise stated, the north point (or approximate) of maps and plans is to the top of the page.

Cadastral information depicted in this document must not be relied upon without verification by a Surveyor.

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1. Introduction

1.1. Introduction and brief

This report has been commissioned by JAWS Architects, on behalf of Giameos Holdings Pty. Ltd. in order to accompany an application to the Hobart City Council for a proposed redevelopment of the place known as 90 Melville Street, Hobart.

The subject site is on the south-eastern side of Melville Street, between Murray and Harrington Streets, Hobart, PID 7408842, and comprising of Certificate of Title 245771/1.

The site is not listed on the Tasmanian Heritage Register, nor is a Heritage Place on Table E.13.1 of the Hobart Interim Planning Scheme 2015 - although it is within the Places of Archaeological Sensitivity as defined by Figure E.13.1 of the Hobart Interim Planning Scheme 2015, therefore the provisions of Part E.13.10 of the planning scheme is applicable. Accordingly, the brief for this project was to develop a **statement of historical archaeological potential** as the basis for archaeological planning in any future development of the subject site.

If archaeological potential is predicted, then this is to inform the design of the proposed development, and if archaeological impact considered possible, then an **archaeological impact assessment** is to be undertaken and if such impact is deemed unavoidable, then an **archaeological method statement** is to be formulated to industry standard.

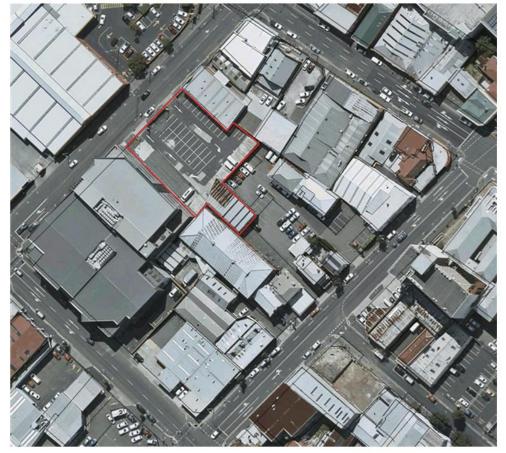
Although not listed on the Tasmanian heritage Register, the archaeological approach in this document has been developed with regard to the Tasmanian Heritage Council's Practice Note 2 – *Managing Historical Archaeological Significance in the Works Application Process* <sup>1</sup>, and the Tasmanian Heritage Council's *Guidelines for Historical Archaeological Research on Registered Places* <sup>2</sup> as a means of demonstrating a sound and best-practice approach.

<sup>1</sup> http://www.heritage.tas.gov.au/media/pdf/2%20Practice%20note%20-%20Archaeology.pdf

 $^2\,http://www.heritage.tas.gov.au/media/pdf/Archae\%20ResGlines\%20\%20FINAL\%20-\%20June\%202009.pdf$ 

**Praxis Environment 2019** 

1



 $\label{thm:continuous} \mbox{Figure 1.1-A recent aerial image of the area-the subject site depicted in red. } \underline{\mbox{www.thelist.tas.gov.au}}$ 



 $\label{eq:control_figure_1.2-Detail} \textbf{ Figure 1.2-Detail of a recent aerial image of the area-the subject site depicted in red. } \underline{ www.thelist.tas.gov.au }$ 



Figure 1.3 – Cadastral parcels surrounding the subject site (depicted in red) and surrounds (www.thelist.tas.gov.au).

### 1.2. Limitations

This document has the following stated limitations:

- This document is largely a predictive analysis (i.e. non-invasive) of the possible archaeological resource and might be subject to further on ground testing to verify findings if deemed necessary by any stakeholder.
- All depictions of the location of site features are approximate. A surveyor should be engaged if any party requires exact confirmation of locations.
- The depiction of expected archaeological features in this report largely relies on the accuracy of historical surveys and data no guarantee of the accuracy of this historical data is given.
- The scope of this project only included historic heritage values. Consideration of Aboriginal heritage values is outside the scope.
- Any implications of the location of underground services may only be approximate. Confirmation
  where necessary must be sought from professional underground asset locators.

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### 2. Statutory heritage requirements

This report has been commissioned to consider the historical archaeological potential of the subject site arising from any applicable statutory listings. The following statutory heritage responsibilities that relate to historical archaeology are to be met in any development of the subject site:

### 2.1 Hobart Interim Planning Scheme 2015

The place is within the area defined in Figure E13.1 of the Hobart Interim Planning Scheme 2015 (the *scheme*) as a *Place of Archaeological Potential*, therefore the provisions of Part E13.10 are applicable.

Part E13.10 of the scheme details the *Development Standards for Places of Archaeological Potential*, with the following *Objectives*:

13.10.1: Building, Works and Demolition: To ensure that building, works and demolition at a place of archaeological potential is planned and implemented in a manner that seeks to understand, retain, protect, preserve and otherwise appropriately manage significant archaeological evidence.

13.10.2: Subdivision: To ensure that subdivision does not increase the likelihood of adverse impact on a place of archaeological potential.

The scheme prescribes *Performance Criteria* for each of these *Objectives* and pursuant to Part E.13.5 of the scheme, the Planning Authority may require the following to accompany any application for development of a place of archaeological potential in order to assess the proposal against the performance criteria:

- (f) a statement of archaeological potential;
- (g) an archaeological impact assessment;
- (h) an archaeological method statement;

Under the definitions of the scheme:

(f) means:

a report prepared by a suitably qualified person that includes all of the following:

a. a written and illustrated site history;

- b. overlay plans depicting the main historical phases of site development and land use on a modern base layer;
- c. a disturbance history.
- d. a written statement of archaeological significance and potential accompanied by an archaeological sensitivity overlay plan depicting the likely surviving extent of important archaeological evidence (taking into consideration key significant phases of site development and land use, and the impacts of disturbance).

#### (g) means:

a report prepared by a suitably qualified person that includes a design review and describes the impact of proposed works upon archaeological sensitivity (as defined in a statement of archaeological potential).

#### (h) means:

a report prepared by a suitably qualified person that includes the following where relevant to the matter under consideration:

- a. strategies to identify, protect and/or mitigate impacts to known and/or potential archaeological values (typically as described in a Statement of Archaeological Potential);
- b. collections management specifications including proposed storage and curatorial arrangements;
- c. identification of measures aimed at achieving a public benefit;
- d. details of methods and procedures to be followed in implementing and achieving (a), (b) and (c) above
- e. expertise to be employed in achieving (d) above;
- f. reporting standards including format/s and content, instructions for dissemination and archiving protocols.

	Acceptable Solution	Performance Criteria	
	A1. Building and works do not involve excavation or	P1. Buildings, works and demolition must not unnecessarily impact on archaeological resources at places of archaeological	
	ground disturbance.		
ion		potential, having regard to:	
olit		a) the nature of the archaeological evidence, either	
Dem		known or predicted;	
an I		b) measures proposed to investigate the	
r		archaeological evidence to confirm predictive	
the		statements of potential;	
ks c		c) strategies to avoid, minimise and/or control impacts	
Nor		arising from building, works and demolition;	
l pu		d) where it is demonstrated there is no prudent and	
ga		feasible alternative to impacts arising from building,	
ildir		works and demolition, measures proposed to realise	
Bu.		both the research potential in the archaeological	
.1-		evidence and a meaningful public benefit from any	
E.13.10.1 – Building and Works other than Demolition		archaeological investigation;	
E. 1		(a) measures proposed to preserve significant	
		archaeological evidence 'in situ'.	
uc	A1. Subdivision provides for building restriction envelopes	P1. Subdivision must not impact on archaeological resources	
visi	on titles over land defined as the Place of Archaeological	at Places of Archaeological Potential through demonstrating	
E. 13. 10.2 – Subdivision	Potential in Table E13.4.	either of the following:	
- St		(a) that are much analogical anidomorphism as the land.	
0.2		(a) that no archaeological evidence exists on the land;	
13.1		(b) that there is no significant impact upon	
E.		archaeological potential.	

The current document aims to fulfil those points in a consolidated manner in the assessment of the proposed development to assist the planning authority to make an informed assessment against the performance criteria of the scheme.

# 2.2. Tasmanian Heritage Register

The subject site is not listed on the Tasmanian Heritage Register therefore is not subject to the provisions of the *Historic Cultural Heritage Act 1995*. Nonetheless, the archaeological approach in this document has been developed with regard to the Tasmanian Heritage Council's Practice Note 2 – *Managing Historical* 

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Archaeological Significance in the Works Application Process<sup>3</sup>, and the Tasmanian Heritage Council's Guidelines for Historical Archaeological Research on Registered Places<sup>4</sup> as a means of demonstrating a sound and best-practice approach.

#### 2.3. Other statutory heritage registers/lists

The subject site is not listed on any of the following statutory registers:

- The National Heritage List
- The Commonwealth Heritage List
- The World Heritage List

Nor is it included in any buffer zones arising from those lists, therefore is not subject to the historic heritage provisions of the respective Acts which enable statutory input into development of places on those lists.

#### 2.4. Aboriginal Heritage Act 1975 (amended 2017)

An assessment of any possible Aboriginal heritage values is not part of the brief for this report; nonetheless the provisions of the Aboriginal Heritage Act 1975 are applicable to the place. A search of the Tasmanian Aboriginal Heritage sites register (Job # 18704152) did not identify any registered Aboriginal relics or apparent risk of impacting Aboriginal relics (search valid until 6/6/2020). The Tasmanian Government Unanticipated Discovery Plan - Procedure for the management of unanticipated discoveries of Aboriginal relics in Tasmania must be implemented in the event that any Aboriginal heritage items are discovered during the course of any works.

<sup>&</sup>lt;sup>3</sup> http://www.heritage.tas.gov.au/media/pdf/2%20Practice%20note%20-%20Archaeology.pdf

 $<sup>^{4}\,\</sup>underline{\text{http://www.heritage.tas.gov.au/media/pdf/Archae\%20ResGlines\%20\%20FINAL\%20-\%20June\%202009.pdf}$ 

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# 3. Archaeological Methodology

This statement of archaeological potential is derived from a process which identifies the potential of the site to yield archaeological remains, the significance of any remains, and their potential to yield meaningful information about the site, and which might contribute to relevant key archaeological and historical themes. The following briefly outlines the methodology followed:

<u>Determining general archaeological potential:</u> Through a desktop analysis of historical data and secondary sources, as well as non-invasive site observations, an understanding of the evolution of the site has been gained which has allowed an assessment of the archaeological potential (however significant) of any part of the site - resulting in substantiated predictions of the likelihood of finding *something* upon any particular part of the site.

This has been done by analysing primary source material, summarizing the developmental history of the site and developing a chronological narrative detailing an overview of the history of all known features to have ever existed on the site. Where possible, developmental overlays have been developed from historic maps, plans, photographs and other visual documentation. This overlay has been supported by other observations providing supplementary information, and also includes processes such as demolition and disturbance which may have removed or destroyed potential remains – and may have diminished the archaeological potential.

Assessing the significance and potential of any likely archaeological resources to yield meaningful information: Upon understanding the archaeological potential through desktop and site analysis, the next step was to understand its relationship to any aspect of the identified significance of the place – e.g. do the remains have the potential to demonstrate an aspect of the significance of the site or related key historic theme? The potential for any of the archaeological remains to demonstrate important aspects of the history of the site, whether in a state, regional or thematic context, is to be considered.

<u>Understanding possible impact of development and formulation of management strategies</u>: Based on any identified archaeological potential and significance of the site, consideration will be given as to whether the proposed development will impact upon any likely archaeological remains and if necessary broad management strategies will be proposed to manage any impact.

Table 1 (below) demonstrates the steps of this assessment:

Methodology for formulation of the statement of archaeological potential			
	If 'no'	If 'yes'	
1. Archaeological potential.			
Are you likely to find something if you dig here? (i.e. a <u>Statement of Archaeological</u> <u>Potential).</u>	Further action may not be required, although a contingency plan may be required for unexpected finds.		
2. Significance.  Could anything you find here greatly contribute to our understanding of the site or related significant theme?	, , ,	The likely integrity of the archaeological remains should be investigated.	
3. Integrity.  Are any archaeological remains likely to be intact?	Further action may not be required, although a contingency plan is required for unexpected integrity.	The likelihood of significant archaeological remains is confirmed.	
4. Impact Will proposed works impact upon the significant archaeological remains? i.e. an Archaeological Impact Assessment.	Further action may not be required, although a contingency plan may be		

## 4. Historical background of the subject site

#### 4.1. Research methodology

For this initial assessment of archaeological potential, the depiction of the physical history of the site will be the main consideration – with other aspects of site history (i.e. social histories, economic history, associations *et. al.*) likely to be more useful in any post-investigation analysis of findings (i.e. artifact assessment), therefore beyond the scope of the current document. Similarly, the history of other townscape developments is beyond the scope of the current document however may be useful in further detailed analysis of future archaeological findings.

The following overview of the known physical development history of the site aims to aid in the prediction of the likely archaeological remains. This does not represent a comprehensive site history, and has been limited to a history of the physical development of the site as relevant to the archaeological resource.

#### **Primary sources**

Broadly, the primary sources consulted in the development of the statement of archaeological potential include:

- Hobart City Council building files (AE417 series, Tasmanian Archive and Heritage Office).
- Historic maps, photographs (NS and PH series) Tasmanian Archive and Heritage Office.
- Department of Primary Industry, Parks, Water and Environment (DPIPWE) aerial photo collection (Service Tasmania).
- DPIPWE Land Data Branch, historic map collection (basement)
- DPIPWE Land Data Branch, titles.
- Historic newspapers, via the National Library of Australia's Newspapers Online portal.

#### Secondary sources

No secondary source documents are known to exist which are of particular relevance to the history or archaeology of the subject site.

In order to gain an overview of what once existed on the site, as the basis for predicting archaeological remains, the following is a brief overview of the historical development of the site based on primary source documents (the subject site depicted in red) as well as overviews drawn from the secondary sources as detailed above. Note that this is a brief historical overview, concentrating solely on physical development, sufficient only for

basic archaeological planning. As per above, further historical research is required in order to refine a detailed archaeological research design, which is provided here in Section 5. Such detail is also required to supplement the interpretation of archaeological findings – requiring an iterative process of the assessment of findings against further historical and comparative research from both primary and secondary sources, which should be provided in an archaeological method statement and post-excavation analysis.

#### 4.2. Historical overview

#### Pre-European settlement

The land was the home of the Mouheneener people for tens of thousands of years, prior to displacement by European settlers in 1804.

## Original land grants

The subject area comprises the whole of two colonial era land grants; for the sake of simplicity, this background history considers each grant separately.

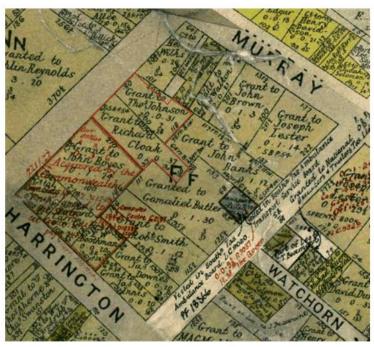


Figure 4.1 – Original land grants in the subject area (from  $\underline{www.thelist.tas.gov.au}$ )

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The Johnston grant (31 perches – the portion of land closest to Murray Street)

Thomas Johnston was granted a 31 perch allotment in Melville Street in July 1839<sup>5</sup>. This grant resulted from a Caveat Board application, the original of which has not survived, thus, it is unclear what land tenure arrangements may have been in place before July 1839. The 1839 Frankland survey first depicts a building on this site (see Figure 4.3) and Sprent's 1845 survey (see Figure 4.4) denotes a timber structure on the site.

Valuation roll data from 1861 into the early 20<sup>th</sup> century simply lists the property as a house.

In July 1839 (at the same time the land was granted), Thomas Johnston married Isabella Gunning<sup>6</sup>. Johnston then conveyed the land to Thomas Jackson and Archibald Johnston as trustees for Isabella. Under the terms of the conveyance, Isabella was to have possession of the property for her lifetime, with the trustees being

empowered to sell the property after her death for the benefit of her children.<sup>7</sup>

In April 1881, trustee Archibald Johnston applied to be recognized as owner of the 31 perch grant<sup>8</sup>. No transfer document for this land under Archibald Johnson has been discovered, however a survey from 1892 (see below)

clearly shows that by this time, Johnston's grant was owned by Richard Cloak (see below).

The Moon / Cloak grant (37 perches – the portion of land closest to Harrington Street)

This allotment was originally located to a Mr. Moon in February 1823. From evidence given many years later, it appears that Moon was first mate on a ship in which Dr Robert Espie was surgeon. Also aboard was Ann Kevill, who was 'put in possession' of the property in October 1823. Moon himself left the colony shortly afterwards, leaving his affairs in the hands of William Wilson, to whom he was indebted for an unknown

amount of money.

Wilson later gave evidence that "Benjamin Symes and Carey built the cottage for Dr Espie's brother" in 1820. This is the cottage first seen on the c1832 survey (Figure 4.2). Ann Kevill was given the keys in 1823, and retained possession until 1842, when Wilson sold the property to a John Morgan. Then, in 1857, Ann Kevill and her husband Michael applied successfully to the Caveat Board for title to the property, arguing that Ann was the rightful owner and that Wilson had no title to sell. The Caveat Board decided in her favour.<sup>9</sup>

<sup>5</sup> The Tasmanian 26 July 1839 p.7

<sup>6</sup> TAHO RGD37/1/1 No 234

<sup>7</sup> DPIPWE The LIST Mem 2/2719

8 The Mercury 7 April 1881

<sup>9</sup> Colonial Times 11 June 1857 p3



Figure 4.2 – Excerpt from a c1832 map of Hobart and surrounds. DPIPWE Map Hobart H5.

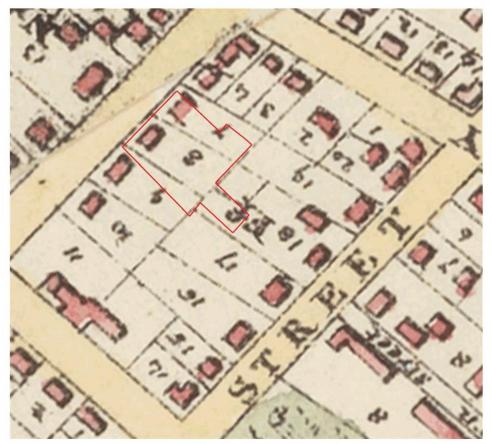


Figure 4.3 – Excerpt from Frankland's 1839 map of Hobart and surrounds. Libraries Tasmania Allport Stack 912.94661MAP.

Reference to the Sprent survey shows that at least until 1845, this weatherboard house was the only structure on the grant. Later sale notices indicate that it was a five roomed weatherboarded cottage <sup>10</sup>. Between February 1858 and March 1859, Ann Kevil executed a series of conveyances which transferred all of the grant to John Boys, owner of the neighboring property in Melville Street. The grant was split into three portions (see below). The first, which included the "messuage or dwelling house and other buildings thereon", was conveyed to Boys as trustee for Ann, who stated that she would be sharing the property with her daughter Eliza and son-in-law Richard Cloak. Under the terms of the conveyance, the property would revert to Ann if

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Richard Cloak did not provide her with food, medicine, clothing and accommodation<sup>11</sup>. The remainder of the grant was split into two portions, both of which were conveyed to Boys without condition<sup>12</sup>.

In December 1873, Richard Cloak applied for title to the whole 37 perch grant. As can be seen above, he would have gained possession to the first third of the grant through his relation to Ann Kevill's daughter. It is not clear how he gained possession of the remaining two portions. Whatever the case may have been, Cloak was granted the entire 37 perch allotment in December 1873<sup>13</sup>. It is likely that Cloak substantially developed the land in the 1870s-80s, with an additional dwelling built on the rear (see Figures 4.10-11) and the two earlier cottages fronting Melville Street appear to have been replaced with similarly sized and placed buildings – note that the western building appears in a different location between the Sprent and MDB surveys (and also note the title plans below which suggest that two different buildings have been in this location) and the eastern building appears as a different shape between the Sprent and MDB surveys (noting that these surveys are known to have a very high degree of accuracy).

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<sup>&</sup>lt;sup>11</sup> DPIPWE The LIST Mem 4/7015

<sup>12</sup> DPIPWE The LIST Mem 4/6544 and 4/5389

<sup>&</sup>lt;sup>13</sup> The Mercury 24 Decmber 1873 p4

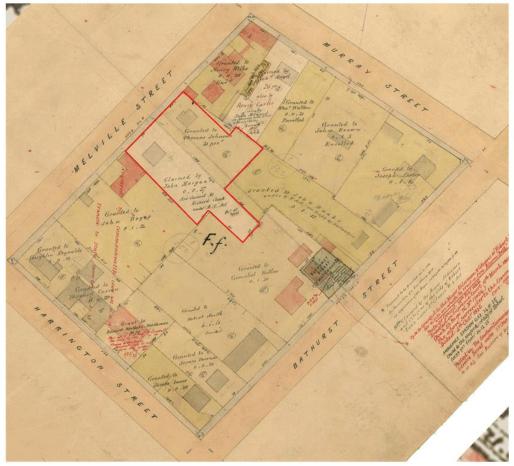


Figure 4.4 - Excerpt from Sprent's c1845 map of Hobart and surrounds. www.thelist.tas.gov.au).

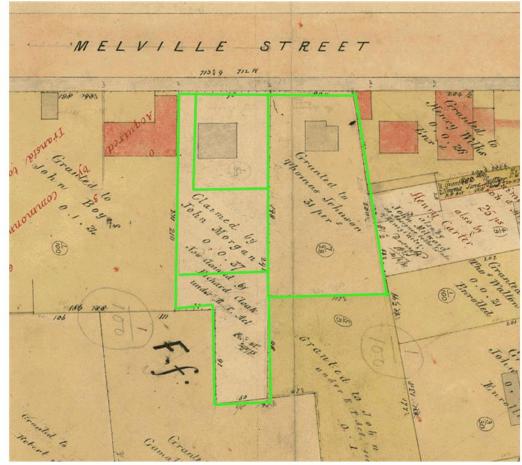


Figure 4.5 - Excerpt from Sprent's c1845 map of Hobart and surrounds showing the 1858 title configuration as divided by Ann Kevill (green lines). <a href="https://www.thelist.tas.gov.au">www.thelist.tas.gov.au</a>).

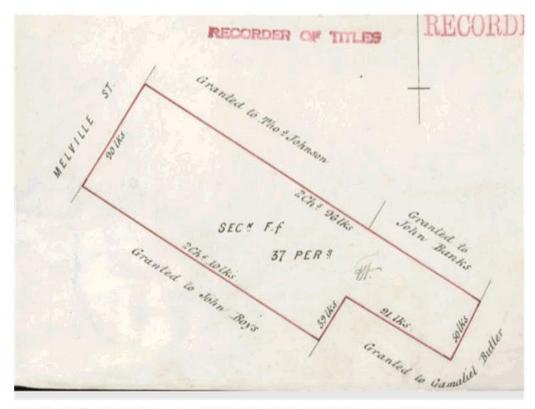


Figure 4.6 - Detail from DPIPWE Purchase Grant 222/119 showing the title as issued to Richard Cloak in 1873. Note that the allotment has reverted back to its original outline as shown in the Sprent survey.

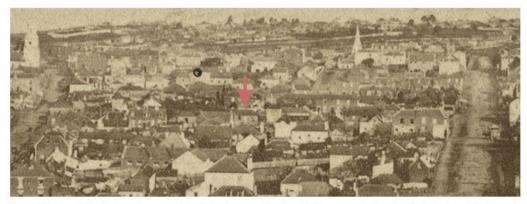


Figure 4.7 – A c1870s photograph across Hobart showing a small cottage (with no veranda) on the Cloak allotment (red arrow). Libraries Tasmania LPIC147\_3\_124



Figure 4.8 – Excerpt from the 'Hobart Birds Eye' view, The Town and Country Journal Nov 17 1894 pp26-7 showing two buildings on the Melville Street frontage of the lot.

As has been noted above, by 1892 Cloak had also obtained the Johnson grant, creating a total holding which reflects the modern title. Richard Cloak died in May 1885<sup>14</sup>, leaving a will which gave very specific instructions as to how the enlarged allotment was to be divided up amongst his heirs. This division is shown in the 1892 Survey Diagram (see below). By the terms of Cloak's will, the allotment was divided into four portions, each of which was created as a separate title under the Real Property Act.<sup>15</sup> The beneficiaries of Cloak were Ellen Matilda Jackson, Kitty Anne Tapping, Eliza Purden and John Cloak (children of Richard Cloak). Note that as per Figure 4.9, this depicts a house in a different location to that of the c1820 building, suggesting that during Cloak's ownership that earlier house was replaced (noting also that the Kevill subdivision of 1858 could not include a house in that location, as also depicted on the 1907 Metropolitan Drainage Board survey due to the laneway to the rear lot.

<sup>14</sup> TAHO RGD35/1/10 Number 2377

<sup>&</sup>lt;sup>15</sup> See DPIIPWE 90062: Survey Diagram Hobart 7-11

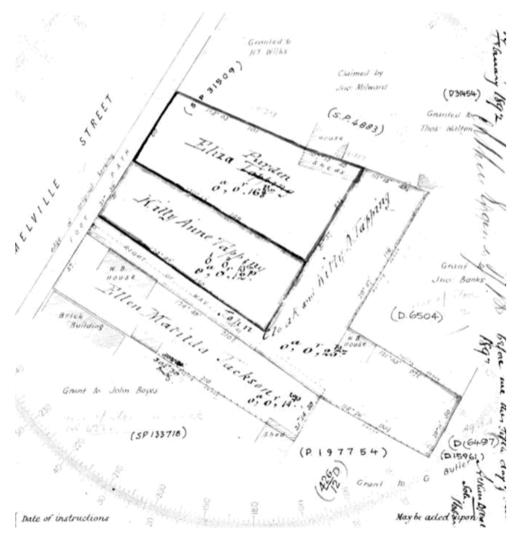


Figure 4.9 - Detail from DPIPWE 90062 / Hobart 7-11 showing 1892 title configuration.

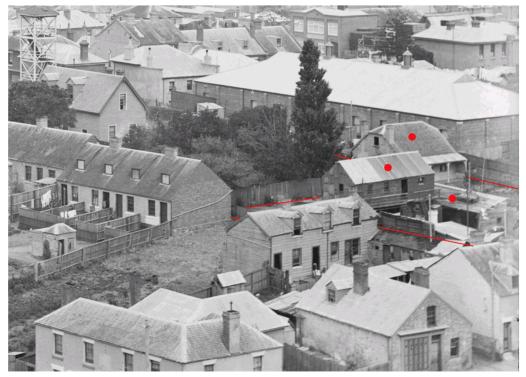


Figure 4.10 - A c1910 excerpt from a panorama of Hobart facing south. The red dots denote buildings within the subject site and the lines denote the boundaries as visible in this image. Tasmanian Archive and Heritage Officer NS392-1-736.



 $Figure\ 4.11-1907\ Metropolitan\ Drainage\ Board\ survey\ showing\ the\ subject\ site\ and\ surrounds.\ (Hobart\ Sheet\ 16)$ 

Between November and December 1911, Andrew Garrington Kemp and Victor Ernest Denning bought all four of the Cloak titles which comprise the present title <sup>16</sup>. In November 1917, the amalgamated title was transferred from Kemp and Denning as individuals to the company Kemp & Denning Pty Ltd. The buildings were presumably cleared shortly thereafter for the establishment of a timber yard and joinery workshop. Kemp and Denning had established themselves with a sawmill in Harrington Street as early as 1902 (within the block currently now commonly known as the K&D site). The subject site heralding an expansion of their CBD activities ahead of their further acquisition of practically all the block bounded by Brisbane, Harrington, Murray and Melville Streets from the late 1910s onwards.

The next depiction of the site is from the 1946 aerial run of Hobart (Figure 4.12) which shows much of the site stacked with timber and a shed running along the western edge. By 1968 a further two sheds had been built (one of which remains at the rear of the site).



Figure 4.12 - The subject site taken from the 1946 aerial run of Hobart (Run 1, 10894).



Figure 4.13 – Excerpt from the 1958 aerial run of Hobart. Hobart Run 5-T332-12 (March 1958).



Figure 4.14 - Excerpt from the 1968 aerial photograph of Hobart. Hobart Run 6-153, February 1968.

The subject site has a very simple development history that can be summarised as the following:

- A timber dwelling had been built on the western corner of the land (near the street frontage) as early as 1820.
- A second timber dwelling was built on the eastern corner (near the street frontage) around 1839.
- A third dwelling (brick) had been built at the rear of the land by the 1880s.
- It is possible that both of the earlier dwellings were replaced with similar sized and located dwellings later in the c19th.
- These three buildings had minor outbuildings associated.

- The site was cleared in the 1910s for the establishment of a timber yard, which has been the purpose of the land until recently.
- Buildings associated with the timber yard have generally been ephemeral sheds.

The following figures depict the evolution of the buildings on the site as per the historical sources above:



Figure 4.15 – Overlay of the of pre-c1832 depiction of the buildings within the subject site (blue). Note that the accuracy of this survey is known to be low – merely depicting the *presence* of buildings, rather than necessarily an accurate location.



Figure 4.16 – Overlay of the of pre-1839 depiction of the buildings within the subject site (green). Note that the accuracy of this survey is known to be low – merely depicting the *presence* of buildings, rather than necessarily an accurate location.



Figure 4.17 – Overlay of the of the mid-1840s depiction of the buildings on the subject site as per the Sprent survey (green) in relation to the subject site (red). This survey is known to have a very high degree of accuracy.



Figure 4.18 – Overlay of the of the pre-1907 depiction of the buildings on the subject site (purple) based on the Metropolitan Drainage Board survey, in relation to the subject site (red). This survey is known to have a very high accuracy.



Figure 4.19 – Composite overlay of the footprint of all most-accurate known pre-1907 buildings and site features (colours as per coding above) in relation to the subject site (red).



Figure 4.20 – Overlay of the of the 1946 timber yard shed (light blue) based on the 1946 aerial photograph, in relation to the subject site (red).



Figure 4.21 – Overlay of the of the 1968 timber yard sheds (orange) based on the 1968 aerial photograph, in relation to the subject site (red).

# 5. The likely significance and research potential of archaeological remains

As depicted above, the subject site has a reasonably simple development history, with the two 1820s-30s dwellings and the later (c1880s) cottage – with a likelihood that the two earlier cottages were redeveloped c1870s-80s, before the whole site was cleared in the 1910s. The portion of the subject site which was subject to that c19th development was wholly residential and appears to have remained as such until the 1910s.

Given the demolition of the buildings and formation of a generally ephemeral (i.e. open shed) type buildings and carpark over any remains in the 1910s, it is likely that there may be substantial subsurface remains of this earlier occupation of the site. Any such remains would be limited to low-level structure (i.e. foundations, possible lower courses of the buildings) and any subsurface features such as basements, wells, cesspits etc. – although no such structures have been determined through historical research (i.e. no such structures are described in early accounts of the buildings, or from living memory), although are considered possible. There is also the possibility of artefactual remains relating to the habitation and use of the buildings as per the thematic discussion below.

The site may also yield information on site formation processes which have acted upon the site, both pre and during construction (e.g. alteration of the natural landform, construction rubble), use (e.g. occupation deposits), demolition (e.g. demolition rubble) and post-demolition use (e.g. fill and disturbance).

Remains associated with the residences, particularly those dating back to the 1830s, and their domestic occupation are considered to be of high archaeological potential due to their earliness and have the potential to demonstrate 19<sup>th</sup> century domestic life in the area (and wider Tasmania for that matter). These represent a small contiguous section of an inner-city Hobart community from the 1830s onwards. Such investigations include those undertaken as part of the Menzies Centre (Liverpool/Campbell Streets) excavations, which investigated several prominent 1820s-onwards inner city residences, including Crowther's (Godden Mackay Logan/Arctas). Similarly, investigations at Peter Degraves house in Collins Street (Hadleys Hotel development, Godden Mackay Logan) and preliminary investigations at the original Hobart Port Officer's residence at 100 Salamanca Place (Praxis Environment) have investigated early inner-city residential sites. Forthcoming reports on excavations on other Hobart domestic sites such as Kemp's house (36 Argyle Street), Judge Pedder's house (173 Macquarie Street), Crowther's house/surgery (177 Macquarie Street) will also act to build upon knowledge and provide comparative datasets of early and substantial Hobart residences.

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There have been few examples of archaeological investigations into wider communities around the Hobart CBD, i.e. investigations which cover a wide number of adjacent sites representing different functions (such as the Whale Fishery Inn and adjacent housing). Notable examples however are the range of Wapping investigations (e.g. Austral Archaeology 1996, 1998, 2002, 2009) and the forthcoming report on the Montpelier Retreat excavations undertaken by Austral Tasmania in 2015.

From a wider regional perspective, archaeological data and remains yielded from the subject site, whether coupled with other Hobart/Tasmanian data, has the potential to strengthen a comparative dataset for research into intra-colonial society through comparison with mainland (and indeed inter-colonial society on an international level). For example early inner-city working-class communities such as Broadway, Cumberland/Gloucester Streets and the Rocks (Sydney) and Little Lonsdale Street (Melbourne) and portside working-class areas such as Port Adelaide, all of which have had substantial archaeological works undertaken which include early inner-city housing and would provide useful datasets for the inter-colonial analysis of any Tasmanian data which would in-turn add to the depth and scope of the analysis of those collections on the range of themes as outlined above (and others).

From a temporal perspective, any remains from the investigation of such colonial communities represent a formative period of the settlement of Hobart and are likely to be of significance when considering their research potential.

It is considered unlikely that any archaeological significance nor research potential would derive form the 1910-onwards use of the site as a timber/joinery yard.

Consistent with the 'Tiered research question' approach outlined in the Tasmanian Heritage Council's *Guidelines* for Historical Archaeological Research on Registered Places<sup>17</sup>, the following questions could be investigated in the archaeological remains expected to be present within the subject site:

**Tier 1 Questions:** These questions outline the essential knowledge base needed for any site research or significance evaluations. Such questions are often empirical in nature, and straightforward answers can be

<sup>17</sup> http://www.heritage.tas.gov.au/media/pdf/Archae%20ResGlines%20%20FINAL%20-%20June%202009.pdf

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sought and often identified – generally limited to a physical knowledge of that particular place. Questions relevant to the subject site may include:

- · How closely did the buildings and site features conform to the historic plans?
- What construction methods were used in the buildings and other infrastructure?
- What evidence of alteration of the natural landscape and cultural interventions to the site is
  archaeologically determinable (e.g. filling of the site, demolition events, site formation
  processes etc.).
- Are the distinct use/development phases of the buildings distinguishable?
- Can the layout and function of the buildings, and indeed individual rooms or yard spaces be ascertained?
- How thoroughly were the buildings demolished?

Answers to these questions provide a foundation of information about the structure, type, use and duration of site occupation which enables the researcher to consider a second tier of questions.

**Tier 2 Questions:** Conclusions that can be drawn about a site that connect the material remains found on a site to specific behavior. For instance, do artifacts relate to the lifeways of the households that lived and/or worked on the site? For instance, do any artifacts represent class, gender, taste and health/hygiene of those living/working on the site? Particularly if artifacts can be specifically dated, and with supplementary historical research, artifact assemblages from this site may contribute knowledge and provide tangible connectedness to known inhabitants etc. and how they lived.

**Tier 3 Questions:** These questions represent the highest level of inquiry. Such questions associate the activities and behavior at individual sites with broad social, technological and cultural developments – which can be of interest on local, national or global lines of enquiry. Whilst these questions posed for a single site may not reach conclusions in the short term (as Tier 1 and 2 questions might) – the collection of data can contribute to future research by the provision of a comparable dataset. The goal of such research is to develop increasingly refined and tested understandings of human cultures within broader theoretical or comparative contexts. Lines of wider enquiry that findings from within the subject site may contribute to are:

• Do any activities archaeologically apparent on the site (e.g. drinking, food, hygiene, entertainment) provide meaningful comparisons on aspects of those themes with other contemporary residential

Hobart enclaves or wider Hobart/Tasmania or for that matter Australian or international 1820s+ residential sites?

- Do the conclusions on gender, class, economic and social status of the inhabitants of the residences and associated buildings conform to the 'normal' early-mid Victorian households?
- Are there class or status differences evident in the material culture of the inhabitants of this area (subject to further historical research) when compared to, say, other early residential enclaves or sites in contemporary rural areas and/or other cities?
- Did any changes in material culture through time in the residences coincide with wider Tasmanian or local events or technology (e.g. urbanisation/development of Hobart, railway/port upgrades, start of rubbish collection etc.)?

# 6. Current site observations and assessment of prior disturbance

As per the methodology outlined in Section 2.1, Section 3.3 has formed a desktop assessment of the factors which have influenced the development of the possible archaeological resource within the subject site over a 180+ year period.

However, it is critical to understand other factors, in particular site disturbance, which may have impacted upon the archaeological potential of the site and its ability to provide meaningful archaeological remains which answer research questions such as those above.

This section will review site observations and likely scenarios which would have resulted in disturbance, in order to assist in understanding the likelihood of the survival of archaeological remains.

#### 6.1. General site observations

Little insight into the archaeological potential of the site can be gained from site observations as no historic structure is evident and the entire ground surface is covered with asphalt and concrete. Of importance is the gentle rise in elevation of the carpark area which suggests that there has been no extensive bulking-out or terracing of the site and this gentle rise is consistent with what is expected to be historic ground level in this area. There appears to have been some filling near Melville Street and the existing pre-1968 building is clearspan on concrete pad footings which is indicative of the types of later buildings on that site requiring minimal excavation therefore less likely to have caused impact upon earlier archaeological remains.



Figure 6.1 – Overview of the site from Melville Street.

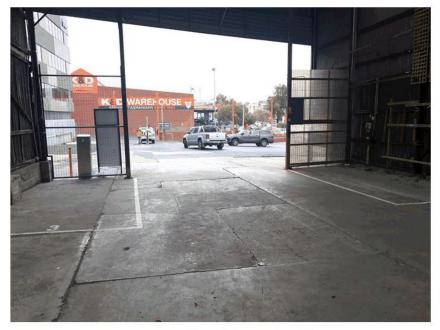


Figure 6.2 – Overview of the site looking towards Melville Street.

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#### 6.2. Likely specific disturbance events

Whilst the observations above give little real detail on possible disturbance, a disturbance history can also be built from a desktop assessment - i.e. known events which are likely to have impacted upon archaeological remains. Section 3.3 has detailed the evolution of the site from the historical information which is available.

The possible impact upon archaeological remains deriving from each of these events will be detailed below:

#### Demolition of the 1820s-30s buildings

It is probable that the early buildings on the subject site were all demolished in the later c19th and replaced with similarly scaled and sited residential buildings. It is not known how thoroughly these earlier buildings were demolished, however knowing that this was pre-mechanical excavation is it unlikely that mass excavation was associated with that demolition. Later, all residential buildings and outbuildings were cleared for the establishment of the Kemp and Denning timber yard (c1910s). No archival details of these demolitions were found, and it is not known how thoroughly they were demolished (i.e. were they demolished only to ground level? Were foundations removed? Was the site bulked out after?). As per the observations above, and the nature of the later buildings as discussed below, it is likely that given that the current topography of the site appears to be near what is expected to be the natural topography of the land, and that the later buildings were all very ephemeral sheds, it is likely that there would have been a desire to deeply remove past occupation layers for subsequent development.

### Construction of subsequent buildings

The later timber yard buildings are likely to have been somewhat ephemeral sheds, merely serving the purpose of providing undercover areas for timber processing and sales. These are likely to have been relatively clearspan and open and are unlikely to have required extensive earthworks as would have been required for more robust buildings. A search of Hobart City Council building application files only revealed detail of applications for 1986 signage and carpark<sup>18</sup> which give no indication of any associated earthworks.

As per above, it is not known how the earlier buildings were demolished. It is also not known whether these buildings had basements, and it is possible that demolition rubble was used to fill the site, which would result

<sup>&</sup>lt;sup>18</sup> Tasmanian Archive and Heritage Office AE417/9/756 and AE417/9/917).

in extensive archaeological remains of that fill and in-situ structure which appears unlikely to have been impacted by subsequent development.

#### Subsequent service trenches etc.

A search of public underground asset registers via the 1100.com.au system does not reveal any major public underground assets running through the site (with the exception of a NBN connection in the western corner of the site from Melville Street). <sup>19</sup> Note that this does not necessarily indicate any privately-owned underground assets nor any redundant services which may have caused some localised/linear impact. However, it does appear that the site has not been subject to any extensive/major disturbance from such trenches.

<sup>&</sup>lt;sup>19</sup> Note that this search is indicative only and must not be relied upon for the location of services in any construction/excavation process. Professional service locators must be engaged to inform any future excavations.

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7. Archaeological zoning plan and policies

As per the methodology outlined in Section 3, this section has built a chronology of site development which has detailed the physical evolution of the site and events/processes which would have acted to build the archaeological record. Section 5 has discussed the likely significance of those archaeological remains and what they may yield in terms of research potential alongside key historic, regional, thematic and temporal lines of enquiry. Section 6 has provided an assessment of the later events which may impacted upon the integrity of those archaeological remains.

From the above, it is therefore plausible to propose that due to the site being the location of early development, which has probably not been subject to substantial disturbance, it may yield archaeological remains which have the potential to contribute to a knowledge of important Tasmanian heritage themes as per the research framework in Section 5.

The site may yield physical remains of those buildings, as well as artifacts relating to the occupation and use of those buildings, which may yield information which is not readily available (or available at all) from historical sources.

Note that the overlay plans of known early building footprints as depicted in Figures 4.15-4.21 do not cover the entire subject site (i.e. are concentrated towards the front and rear of the site) it is feasible to propose that parts of the subject site have different abilities to yield building remains and remains of concentrated habitation. This is not to imply that archaeological remains are only found within building footprints, but the concentration of such remains is likely to be less the further away from building footprints (noting that there may still be remains of ancillary features and other occupational debris outside building footprints).

Based on the known and likely early building footprints, the following archaeological zoning plan is proposed for the subject site:



Figure 7.1 – Archaeological zoning plan for the subject site. Red denoting areas of high archaeological potential, orange depicting areas of medium archaeological potential and green depicting areas of low archaeological potential.

The following table considers the archaeological remains which may be found within each specific area.

Area	Likely remains	Likely integrity	Significance/potential
Red	Structural remains of c18202s-30s residential	Likely to be largely intact owing to the lack of	Of high archaeological potential and historical interest
	buildings, probably overlain with c1870s-1880s	substantial development post demolition.	in demonstrating the establishment and evolution of the
	residential development. Artifactual remains arising		site, the layout and construction of the early buildings
	from deposition associated with c90 years of domestic		and the material culture of those using/inhabiting the
	occupation from colonial times through to the 1910s.		buildings throughout the colonial period into the early
			c20th.
Orange	This area is likely to yield remains of ancillary	Likely to be largely intact owing to the lack of	Of medium archaeological potential and historical
	structures and features associated with all phases of	substantial development post demolition.	interest in demonstrating the later evolution of the site,
	development on the site (i.e. from c1830s onwards)		the layout and construction of the later and ancillary
	e.g. outbuildings, drains, cesspits, paths etc.		buildings/features on the site.
Green	Unlikely to be any significant nor substantial		Of low or no archaeological potential.
	archaeological remains due to a lack of known		
	development in these areas and also being areas		
	where any substantial ancillary infrastructure is likely.		

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#### Accordingly, the following archaeological management policies are recommended:

- Any excavation proposed in areas of high archaeological potential must be preceded by an archaeological impact assessment, and if necessary, an archaeological method statement, which details measures to be taken to avoid or mitigate impact upon the archaeological resource. That method statement must be in accordance with industry standard (e.g. the Tasmanian Heritage Council's Practice Note 2 Managing Historical Archaeological Significance in the Works Application Process) and implemented in the works process.
- 2. Any excavation in areas of medium archaeological potential, are to be monitored by a historical archaeologist in order to confirm any possible presence of archaeological remains. If it becomes apparent that no such remains exist, then archaeological input may cease. If significant remains are confirmed, then this area is to be managed in accordance with industry standard (e.g. the Tasmanian Heritage Council's Practice Note 2 Managing Historical Archaeological Significance in the Works Application Process) and implemented in the works process. Note that any remains in this area need not be wholly investigated and that an indicative sample of such remains may be investigated at the discretion of the archaeologist sufficient to yield answers to research questions.
- 3. No archaeological input is required for excavation in areas of **low archaeological potential**; however any unexpected finds must be reported to a qualified historical archaeologist who is to assess their significance and deal with any significant finds as per (1) and (2) above.

## 8. The proposed development and archaeological impact

A development has been proposed for a mixed-use development on the site, which will include:

- Entire coverage of the site
- Three levels of basement parking (and access)
- Ground floor commercial tenancies
- 10 levels of apartments (56 apartments in total)
- Rooftop terraces at various levels

The proposed development is shown on JAWS Architects, 90 Melville Street, Project No. 19066, Drawings SD01 to SD14 (preliminary sketch design set used in the current assessment, dated 21/11/2019).

The project design is supported by the architect's design statement (supplied as part of the development application package). The pertinent points drawn from the architect's statement in the rationale for bulk excavation of the site are:

- On-site car parking is required for both practical and commercial reasons. Each residential and commercial unit requires a parking space to alleviate reliance on the restricted public parking available in the CBD, and to provide convenience and amenity to residents and tenants;
- Each unit also requires storage.
- The provision of car parking and storage at ground or above ground level (i.e. without excavation) is not an efficient or effective use of the site from town planning, design and commercial perspectives, and will add to the height and bulk of the proposed development. Given the constraints on overall height that prevail within the Hobart Interim Planning Scheme 2015, it is essential that the above-ground development is the most productive portion, and equally provides the greatest amenity, and contributes responsibly to both the streetscape and townscape.
- The levels provided for parking and storage are utilitarian in nature and consequent design. They do
  not contribute to the aesthetics of the building and are detrimental to the desired streetscape
  amenity. They also would have the potential to displace commercial elements from street level, thus
  preventing activation of the street frontage, and the proposed connecting laneway to Bathurst Street.
- The solution to provide these facilities below ground level, is a commonly accepted practice, particularly where there is a natural grade to the site, as is the case here.

The scheme would necessitate the removal of all archaeological remains from the site.

The retention of archaeological remains in-situ with no/minimal disturbance would not allow a feasible or viable subterranean parking area and the above objectives would be compromised – and the advantages in undergrounding parking are clear from the architect's statement from a design, urban form, traffic and public interface context. Whilst not downplaying the importance of archaeology, it is considered critical that other wider public-benefit initiatives must be considered within the context of archaeological significance to provide a balanced development which can also act as a conduit to the realisation of archaeological research potential.

As per the likely significance of archaeological remains in Section 5, although the site does have archaeological potential in its ability to demonstrate early domestic life in Hobart, as per the research framework in that section, it is not considered necessary to retain those remains in-situ, and in this instance it is considered to provide an appropriate offset benefit that any development that the archaeological research potential of the site be yielded ahead of the development and that interpretation of those values be included in that development. It is noted that although these remains represent 1820s-onwards residential development in Hobart, there are numerous still-standing examples of such and the archaeological remains, although these are able to yield archaeological information, they do not represent any fabric that should essentially be retained as a remarkable example. It is considered in this instance that yielding the archaeological potential provides a more widespread benefit than retention, subject to a rigorous archaeological methodology which will be detailed in Section 9.

### 9. Archaeological method statement

Given the archaeological impacts likely to arise from the proposed development as described in Section 8, this section will propose a mitigation strategy in accordance with the Tasmanian Heritage Council's *Practice Note* 2 – *Managing Historical Archaeological Significance in the Works Application Process* which is considered to be a sound industry standard for the approach to archaeology in this instance.

### 9.1. Distinct areas, methodology and sequencing.

Based on the likely impacts, the construction plan, desire to 'test' and ground-truth archaeological theories, as well as a range of logistics, the approach to archaeology is proposed to follow the sequence in the table below, as per the areas of archaeological zoning plan on Figure 9.1:



Figure 9.1 – Areas proposed for archaeological investigations, to be read in conjunction with the table below

ead of the works
e excavated under
an archaeological
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ding as the higher
1

Remainder of the site	Whilst the remainder of the site has not been the location of any	No archaeological monitoring is proposed for this area, however it is to
	known major development there may be archaeological remains	be managed with call-in provisions for any unexpected finds as per the
	of significance/interest across the site that were ancillary to other	methodology below.
	uses (e.g. drains, cesspits etc.). Whilst these are unlikely to be	
	individually significant, the basic investigation and recording of	
	such structures, or salvage of artifacts may assist in a wider site	
	understanding and/or have interpretive potential.	

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9.2. Implementation timeframe

As per the table above, it is proposed that the archaeological investigation of the 1820s-30s building sites (i.e. the red zones) be undertaken ahead of the works program and/or during the early works program, so as to allow the full and detailed implementation of the archaeological program without the risk of disrupting the critical timepaths of the works program.

Monitoring of the orange areas will be undertaken concurrently with works. The archaeology and site supervisors will need to liaise closely so as to allow the works to proceed with minimal disruption, but allow the necessary archaeological investigation and recording of the likely remains (noting that this will involve a more basic recording and artifact salvage than those more significant 'red' zones).

9.3. Approach to works

Demolition and removal of non-significant overburden

Demolition of the existing building and the mechanical excavation of any non-significant and clearly modern overburden/structure (e.g. slabs of existing buildings and carpark surfaces) may be undertaken without archaeological supervision.

Following demolition, the archaeological crew will direct their own excavator operator in areas of high potential (i.e. red areas) to clear any overburden which is not readily apparent as modern until such time as in-situ structure and/or in-situ artifact yielding deposits are encountered then mechanical excavation will cease until an understanding of the nature of the remains is ascertained and the provisions for significant remains (below) can be implemented. In medium archaeological potential areas (i.e. orange) either the archaeologist will direct an inducted operator from the works crew (as this is intended to be a works monitoring exercise, rather than a standalone archaeological approach).

If no significant archaeological remains are encountered (to a depth of sterile ground level) then the provisions of 'cessation of archaeological input' (below) will be implemented.

Where significant archaeological remains are encountered in high sensitivity areas (red)

In areas where significant archaeological remains are encountered, those areas will be gridded to the expected horizontal extent of the remains (generally as a liner grid for strip footings), and excavation will continue by

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hand (as per methodology below), to expose the remains in order to gain further understanding of their nature, and to thoroughly record them (as per methodology below). Mechanical excavation in those areas will only continue if the archaeologist is satisfied that this can occur without detriment, that required outcomes can be achieved and that excavation by hand is not necessary.

The general approach to excavation will be by gridding the area in units which are responsive to the nature of the remains (e.g. in horizontal control units no greater than 1000x1000mm, or the width of the linear trench, in areas where remains appear to be complex or concentrated, or in larger control units where remains are not as complex or concentrated) and removal of each contextual unit or spit (in depths as deemed appropriate by the archaeologist, according to the nature of the strata and/or remains). Apart from non-significant overburden, all spoil will be sieved through mesh of a gauge no greater than 12mm and any significant artifacts managed as per below.

It is expected that in areas of high archaeological potential the stratigraphic sequence will be relatively simple, that of post demolition (possibly including some disturbance), demolition, occupation (which may include several distinct phases including habitation and construction and that of pre-construction (specifically noting that there appears to have been two development phases of similarly scaled residential development). Excavation of remains within the defined contexts in reverse order of deposition will occur and each unit/context thoroughly recorded (as per below) prior to removal to facilitate the development

It is proposed that all depositional strata be removed initially, as per above, with the aim of exposing and retaining any/all structural remains in-situ for holistic recording, prior to their removal ahead of the works excavation program. Any salvageable building materials will be retained for use elsewhere at the discretion of the site owner (possibly in interpretive installations or contemporary recycled features).

Where remains of historical/archaeological interest are encountered in medium sensitivity areas (orange)

In areas of medium sensitivity, a similar methodology to the above will be implemented, however this will be a more broadscale approach without as tight horizontal control – in that the footprints of buildings will be exposed in a less constrained manner and most likely be undertaken via mechanical excavation and horizontal control will be achieved using site features (e.g. building, backyard etc.) rather than as a tight grid. Vertical strata will still be controlled and artifacts yielded from such will be assigned to those contexts. Unless deemed necessary in-field, spoil will not be sieved and only a representative sample of artifacts retained.

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It is possible that the any basements of the buildings might be encountered and if present there is a high likelihood that these may contain demolition rubble or fill in a secondary context. Depending on the nature of the fill and whether any significant depositional arrangement is evident, this will be removed by a means deemed pragmatic by the archaeologist in order to expose significant remains and yield as much information as is considered necessary from that fill.

### 9.4. Call-in provisions – areas of low archaeological potential

The green areas on Figure 9.1 are areas where there is considered to be a low (or no) likelihood of significant archaeological remains present – generally areas of no major development, usually yard spaces, circulation areas etc. Note that this does not necessarily preclude archaeological remains such as occupational debris, unknown minor buildings, ancillary features such as paths, drains etc. It is also possible that more complex/significant features may be found, such as cesspits, wells, etc. – in which case these will be redesignated as areas of high archaeological potential and dealt with as per the provisions above.

Whilst archaeological monitoring of these areas is not considered necessary, the possibility of unforeseen archaeological remains in these areas requires a stringent call-in protocol to be put into place, which will require site excavation crews to immediately call-in an archaeologist should any substantial structure or dense artifact deposits be encountered. This will require a thorough briefing of the works crew by an archaeologist at the outset of works — which will include an overview of the site history, discussion on the possibility of the above described possible remains, as well as the process for stop-work and call-in. An archaeologist is to be engaged to periodically 'audit' the site during excavations in areas of low archaeological potential in order to ensure that those protocols will be implemented.

#### 9.5. Cessation of archaeological input

Archaeological input will cease only when the archaeologist is satisfied that all significant remains have been investigated and thoroughly recorded, as per this method statement and any conditions of statutory approvals, or if sterile ground is encountered, and that adequate consultation has been undertaken with Hobart City Council's Heritage Officer to verify that all on-site archaeological requirements have been met (and archaeological conditions satisfied).

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9.6. Recording

Any structure or significant cultural deposit encountered in the 'red' areas will be thoroughly recorded (both photographically (from ground level and via drone) and sketched at a scale of no smaller than 1:20 and plotted on the site plan at a scale of a scale no smaller than 1:200). Any structure encountered in the 'orange' areas will be recorded photographically (from ground level and via drone).

9.7. Artifacts

Any significant artifacts found during excavations will be retained and have the required in-field conservation treatments and packaging undertaken. Artifacts will be bagged and tagged with spatial identification and removed from the site (to a secure location) daily. Trench-notes will further detail the context and initial interpretation of artifacts.

Basic post-field curation of artifacts will be undertaken. Glass and ceramic items will be washed, whilst any organics or metals will be dry-brushed. Artifacts will be packaged in acid-free archive bags, tagged with appropriate tags, and boxed in archival quality boxes (with appropriate padding if required). Should any urgent conservation treatment be required, a professional Conservator will be consulted at the earliest possible instance. A detailed catalogue of artifacts will be included in the final report on works.

After any required analysis, these will be archived (with a copy of relevant reports) on-site of the new development (upon completion) – however at the owner's discretion and with the approval of Hobart City Council's Heritage Officer, alternative arrangements for storage and longer-term curation/display may be made with an appropriate repository.

9.8. Reporting requirements

Excavations and monitoring must be recorded to appropriate professional standards (for example Section 4.2 of the Tasmanian Heritage Council's Practice Note 2). A final report must include (at a minimum):

• An executive summary of findings

Details of the methodology employed

- Detailed interpretations of findings
- · Relevant annotated photographs (including drone photographs)
- Site plans at a scale of no less than 1:200
- Trench plans at a scale of no less than 1:50
- Feature plans/sketches at a scale of no less than 1:20
- · Overlay plans of structure encountered in relation to historical sources
- Photograph log

A copy of the final report, and project archive, will be deposited with Hobart City Council (and any other appropriate repositories) within 6 months of completion of the excavations.

#### 9.9. Public benefit

Subject to the exact nature and findings of the archaeological program, the following public benefit program will be considered by the proponents of the development:

- An interpretation plan which would consider options for the interpretation of the heritage values of
  the site in the new development (e.g. static/multimedia installations, curated objects, recycling of
  materials in contemporary installations etc.).
- The project report will be made publicly available, through appropriate repositories such as Hobart
  City Council, Heritage Tasmania, the State Library of Tasmania and the National Library of Australia
  (Trove).
- If archaeological results warrant, an academic publication may be produced (not at the proponent's
  expense). In any case, archaeological results will be made freely available for future archaeological
  research.

It is not considered feasible to have any on-site public benefit events during the works program – given that this will be a private works site.

#### 9.10. Aboriginal heritage

This document deals primarily with the management of historic cultural heritage and has only briefly considered in-situ Aboriginal cultural heritage insofar as a search of Aboriginal Heritage Tasmania's register

was undertaken, which has confirmed that no known Aboriginal heritage remains are within the subject site and that there is a low risk of such. There is the possibility of encountering Aboriginal heritage in a secondary context (e.g. fill). Archaeological monitoring should be mindful of this possibility, and follow the Tasmanian Government's *Unanticipated Discovery Plan – Procedure for the management of unanticipated discoveries of Aboriginal relics in Tasmania* 

#### 9.11. Site contamination

It is the responsibility of the proponent of the development to investigate the possibility of site contaminants, and to either verify that no site contaminants are present, or to take required measures to deal with any known or likely contaminants during excavation works (noting that any necessary decontamination works may require archaeological input).



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#### Mr Tim Lucas

**TSL Property Directions** 

Via email: tim@tslpropertydirections.com.au

8th December 2021

# Condition Endorsement Planning only - further approvals may be require Only the condition listed below here beneathed to yins CEP The Council does not check all calculations and design details, it developes it responsible for doing ac. Condition endorsement www.noartdity.com.au with developer of responsibility for reddiring rewith a developer of responsibility for reddiring re responsibility for reddiring re responsibility for reddiring re reddirectors and re reddirectors a

Date: 22/12/2021 Division: City Planning Unit/s: Heritage Cond/s: HERs1

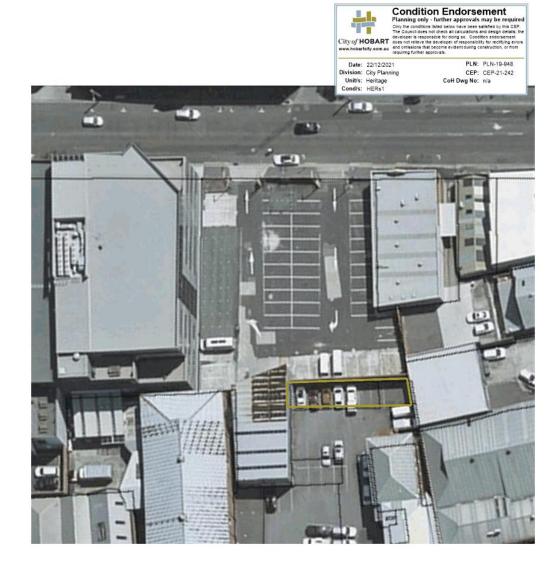
CEP: CEP-21-242 CoH Dwg No: n/a

Dear Tim

Thank you for the instruction to provide commentary on the archaeological potential of an additional area of land now adhered to 90 Melville Street as part of the forthcoming approved development of that site. I understand that a 'land exchange' has occurred which removes a portion of the rear of the former extent of 90 Melville Street and adds a strip of land formerly being part of 127 Bathurst Street. The following figures depict the former subject site (red) and the current subject site (green).



Therefore, in effect, the following figure (outlined in orange) is the 'extra' area of land which requires consideration of archaeological potential as it is also included in Table E.13.4 of the Hobart Interim Planning Scheme 2015 (Places of Archaeological Potential), as defined by Figure E.13.4.1 of the scheme, therefore Clause E.13.10.1 of the scheme applies.



This commentary is to be read in conjunction with the document *Statement of Historical Archaeological Potential, Archaeological Impact Assessment & Archaeological Method Statement, 90 Melville Street, Hobart Tasmania* (Praxis Environment November 2019). That document provides the historical background of the site, statutory archaeological requirements, assessment methodology and recommendations for the site.

That document accompanied a development application for the redevelopment of the site, which was approved by Hobart City Council in 2020. That approval included the following condition to ensure that the archaeological values of the added portion of the site are appropriately considered (note that the brief for the original project was '90 Melville Street' and did not include any adjacent property at that time):

#### HER s1

An addendum to the Praxis Environment report must be completed which assesses the archaeological potential of the land currently on 127 Bathurst Street that is to be adhered to the existing 90 Melville Street site and identified in the site plan (drawing 19066\_DA02, dated March 2020), prior to the commencement of work.

#### Reason for condition

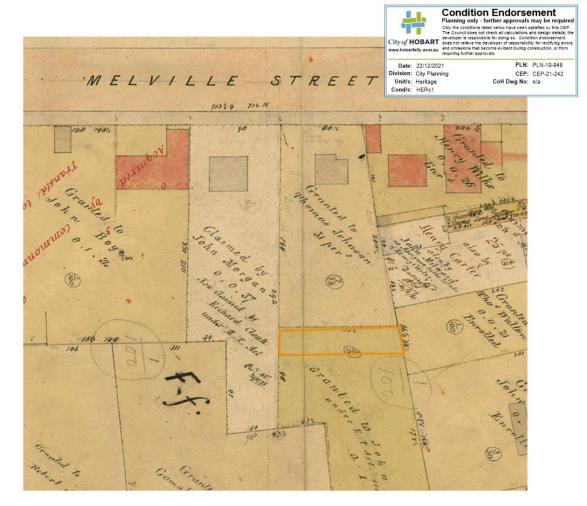
To ensure the archaeological potential of the place is managed in a manner that seeks to understand, retain, protect, preserve and otherwise appropriately manage significant archaeological evidence

This document, and any subsequent recommendations, seeks to fulfil that condition.

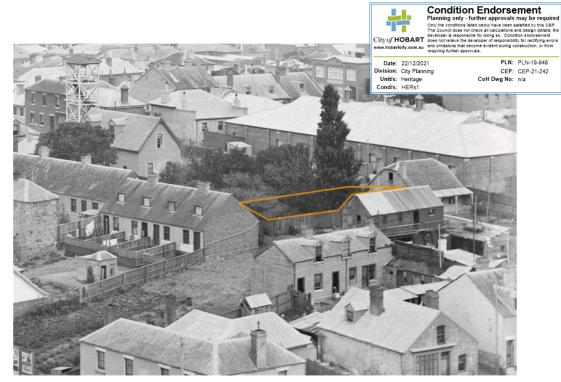
The following amended historical overview is drawn from the 2019 Praxis report and shows the historical evolution of



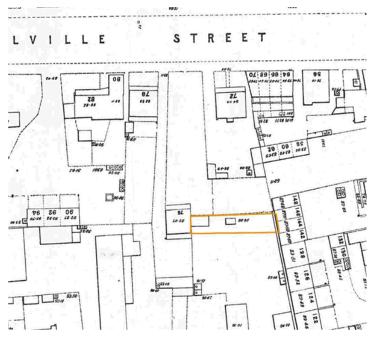
Excerpt from a c1832 map of Hobart and surrounds showing the additional portion of the site outlined orange. No development is shown in this area. DPIPWE Map Hobart H5.



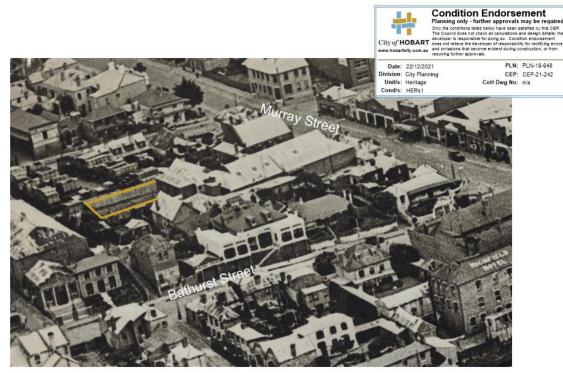
Excerpt from Sprent's c1845 map of Hobart and surrounds showing the additional portion of the site outlined orange. No development is shown in this area. <a href="https://www.thellst.tas.gov.au">www.thellst.tas.gov.au</a>).



A c1900 excerpt from a panorama of Hobart facing south (i.e. Melville Street to the right). The orange lines depict the additional portion of the subject site as garden devoid of development. No development is shown in this area. Tasmanian Archive and Heritage Office NS392-1-736.



1907 Metropolitan Drainage Board survey showing the subject site and surrounds. What appears to be two sheds associated with 127 Bathurst Street appear within the additional portion of the subject site. (Hobart Sheet 16)

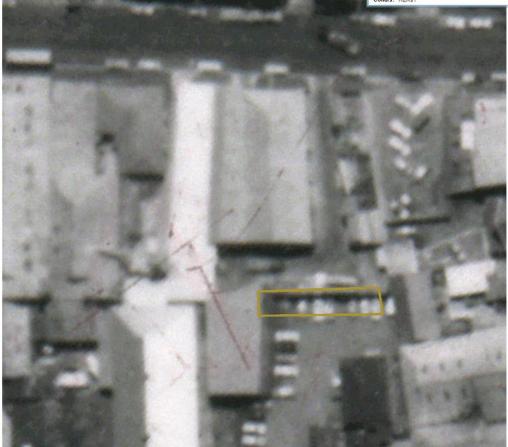


An excerpt from a 1921 panorama of Hobart facing north (i.e. Melville Street to the top-right). The orange lines depict the additional portion of the subject site as garden devoid of development. Tasmanian Archive and Heritage Office NS892-1-61.



The subject site taken from the 1946 aerial run of Hobart (Run 1, 10894).





Excerpt from the 1968 aerial photograph of Hobart. Hobart Run 6-153, February 1968.

The above historical sources show:

- That there has never been any substantial development on this part of the site.
- It has always been backyard space of 127 Bathurst Street.
- There may have been some ephemeral sheds on the site in the early c20th, which appear not to have survived for more than 20 years maximum. These would offer little in terms of archaeological research potential.
- That part of the site has been car parking since at least 1921.

Accordingly, I conclude that this additional part of the subject site is unlikely to have any significant archaeological potential. Further I recommend that no further archaeological input is required for this additional part of the site.

I propose that submission of this addendum to Hobart City Council will fulfill the requirement of Condition HERs1 as per above.

Please contact me if you have any further queries or require any clarification.

Regards



Brad Williams BA. (Hons.) Archaeology, MA Cultural Heritage Management, G.Dip. Environmental Planning.

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#### Mr Tim Lucas

TSL Property Directions

Via email: tim@tslpropertydirections.com.au

7th July 2022

Dear Tim

Thank you for the instruction to provide commentary on the archaeological potential of the near perimeter of 90 Melville Street, Hobart, as a means of addressing the City of Hobart request for further information dated 7<sup>th</sup> June 2022 HER Fi.

As I understand, the construction of the development at that address requires temporary shoring during the construction of basements, which require a series of ground anchors to be installed to the perimeter of the site, as detailed in the AGD Engineers memo dated 12<sup>th</sup> May 2022 (Project no. 24468). Further to that documentation, and by way of your further explanation, I understand that these anchors are proposed to:

- Comprise of four rows of anchors (vertically) starting at 1.5m below current ground level then each spaced 1500mm below the above anchor.
- Each row spaced approximately 1.5m apart.
- To be drilled on a 30-degree downwards angle to a maximum of 10 metres into adjoining sites.
- The drill diameter for each anchor will be approximately 15mm diameter with 2-4 strands per anchor. I will therefore adopt an assumption of a 70mm path of disturbance for each anchor.

For the purpose of this assessment I will consider an site environs 'study area' of 10 metres around the site.

To address the RFI, there are two key questions:

- 1. Does that 10m site perimeter have any archaeological potential? And if so, at what depth?
- 2. Will the disturbance for the ground anchors have any archaeological impact?
- 3. Are any mitigation strategies required?

This commentary is to be read in conjunction with the document *Statement of Historical Archaeological Potential, Archaeological Impact Assessment & Archaeological Method Statement, 90 Melville Street, Hobart Tasmania* (Praxis Environment November 2019). That document provides the historical background of the site, statutory archaeological requirements, assessment methodology and recommendations for the site.

It is also to be read in conjunction with the document *Report on Archaeological Investigations, 90 Melville Street Hobart Tasmania* (Praxis Environment January 2022).

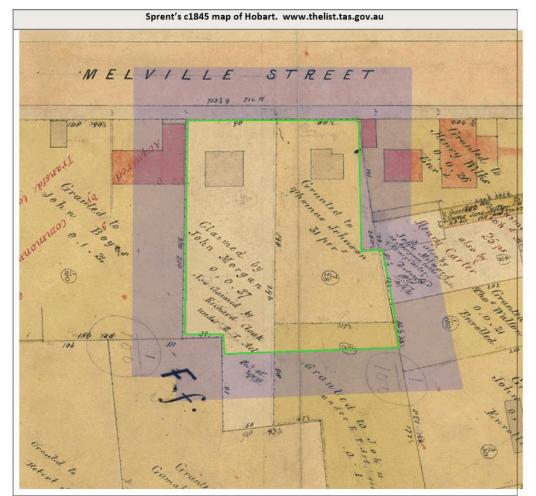
The following figure depicts the 'study area' considered here.



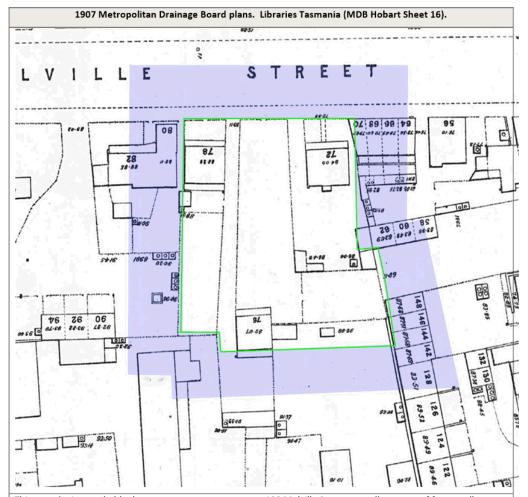
The following amended historical overview is drawn from the 2019 Praxis report and shows the historical evolution of the site and environs:



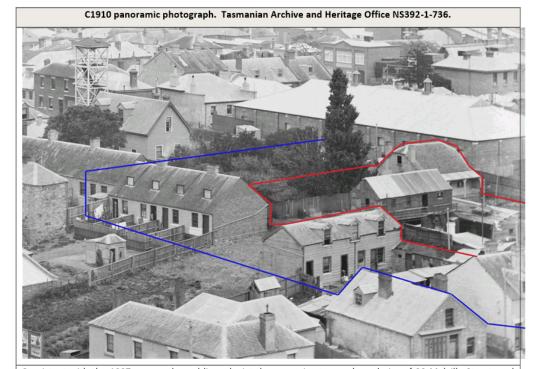
This map depicts a masonry structure to the west of the site, on the site of what is now 100 Melville Street. No other development is shown within the study area.



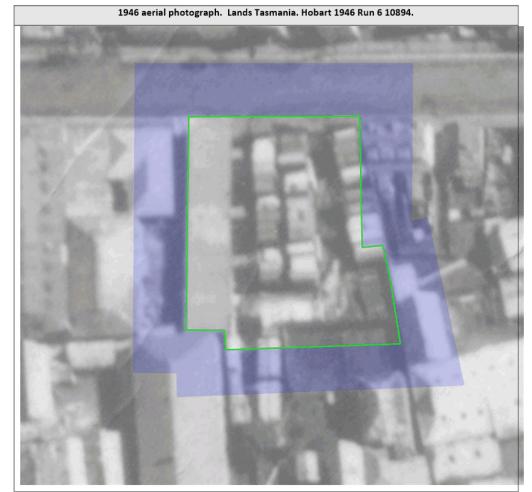
This map depicts probably the same (extended?) masonry structure on 100 Melville Street, as well as a complex of masonry structures (plus a long timber structure) on what is now 80-88 Melville Street to the east. No other development is shown within the study area.



This map depicts probably the same masonry structure on 100 Melville Street, as well as a row of four small terrace houses fronting Melville Street on what is now 80-88 Melville Street. Three small terrace houses are also at the rear of that site. There are another four small terrace houses on the rear of 164 Murray Street and another on what is now 144-160 Murray Street. The large theatre building (still standing) on what is now 133 Bathurst Street had not yet been built – a long building appears on that site. The southern edge of the study area appears generally devoid of development.



Consistent with the 1907 survey, the red lines depict the approximate rear boundaries of 90 Melville Street, and those buildings with the blue line within the study area. This shows the small terrace houses as depicted on the 1907 survey. This also shows the still-standing theatre building at 133 Bathurst Street and open area to the south of the site (garden area denoted by large tree).



The 1946 aerial photograph shows that the area of 80-88 Melville Street had been converted to a timber yard, with the seven terrace houses having been demolished. The three terrace houses on the rear of 144-160 Murray Street had survived. The building to the west had been replaced by a building of a similar size.

The above sources show that the immediate environs of the site was the location of about a dozen c19th residential dwellings, comprising largely of small-scale terrace houses along the eastern edge of the site, and a larger building (probably also residential) to the west. The following figure depicts their footprints (orange lines):



A detailed disturbance history of the surrounding sites is probably not warranted (given further commentary below), however I expect that the construction of 100 Melville Street would have removed all archaeological traces of the former building to the west. Similarly, the early 1900s development of 133 Bathurst Street would probably have impacted the earlier remains on that site.

The results of the January 2022 archaeological excavations on 90 Melville Street failed to find any substantive archaeological remains representing the 3+ main building known to have existed on that site – with the conclusion that the site has been previously highly disturbed, probably as a means of flattening what previously was a somewhat 'mounded' site. It is likely that this disturbance occurred as part of the 1920s timber yard establishment. Although a detailed disturbance history of 80-88 Melville Street has not been undertaken, it is possible that that site also had the same disturbance in the expansion of the timber yard that previously included that site (noting that site is now reasonably flat). It is not known what disturbance may have occurred to the terrace house sites at the rear of 144-160 Murray Street.

In the absence of a detailed statement of historical archaeological potential for the surrounds of 90 Melville Street, it would appear that:

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- There is no archaeological potential along the western and southern sides.
- It is possible that the eastern side has some archaeological potential, relating to small-scale inner-city terrace houses of the c19th. It is likely that at least some of this area is highly disturbed.
- The presence of any archaeological remains in the road reserve is not known, although in this instance there is no reason to suspect any significant archaeological remains in this area.

In any case, the question of whether the proposed ground anchors would impact any significant archaeological remains, if these exist, particularly along the eastern side of the site.

As per the brief points above, the anchors would leave the subject site at a depth of approximately 1500mm, downwards on a 30-degree angle. Given that the above historical overview indicates that the only likely archaeological potential in the immediate environs of the site are those relating to small-scale terrace houses, it is considered very unlikely that any associated archaeological remains would be deep – it is considered highly unlikely that disturbance deeper than 1.5 metres would encounter any archaeological remains.

Further, the small diameter of the drilling for the anchors (~70mm) would not result in widespread archaeological impact in any case – noting however that such impact is unlikely in any case given the proposed depth.

In considering what mitigation strategies may be appropriate, firstly it is not considered necessary to consider mitigation – as it is concluded here that it is unlikely that significant archaeological remains will be encountered. If a mitigation strategy was required, it is not considered feasible to implement such – given that the footprint of all possible archaeological remains are obscured by buildings which are not part of the development site, and that the act of excavation would cause more damage to archaeological remains than the very limited scope of drilling required for the ground anchors – then mitigation strategies would not be feasible – even if necessary.

Accordingly, I conclude that the ground anchors <u>are unlikely to have any archaeological impact.</u> Further I recommend that <u>no further archaeological input is required</u> for their installation.

I propose that submission of this addendum to Hobart City Council will fulfill the requirement of the RFI as per above.

p

Please contact me if you have any further queries or require any clarification.

Regards

(JR)

Brad Williams BA. (Hons.) Archaeology, MA Cultural Heritage Management, G.Dip. Environmental Planning.

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# **Environmental Management Plan**

90 Melville Street Basement Retention Works
Giameos Construction & Development

# Environmental Management Plan



90 Melville Street

### **DOCUMENT CONTROL & DISTRIBUTION**

#### **REVISION REGISTER**

Rev.	Date	Prepared by	Reviewed by	Approved by
0.1	7/2/2022	C. Osborne	C. Osborne	

### **REVISION STATUS**

Rev.	Section Changes
0.1	Draft for Review

### **DISTRIBUTION LIST**

Position	Name	Organisation
Client Representative	Tim Lucas	TSL Property Directions

# Environmental Management Plan



### 90 Melville Street

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**Environmental Management Plan** 



90 Melville Street

# 1 EMP Scope and Purpose

## 1.1 Scope

The Environmental Management Plan (EMP) addresses the environmental aspects and impacts of the Basement Retention Works located at 90 Melville Street. The EMP applies to the following scope of work including (but not limited to):

- Demolition
- Bulk Earthworks
- Piling
- Concreting (Capping Beam & Piles)
- Drill & Install Wall Anchors
- Shotcrete

## 1.2 Purpose

The purpose of the EMP is to provide a framework for managing the environmental impacts of the project works. The EMP will describe and communicate:

- 1. Scope and purpose of the EMP
- 2. Project environmental aspects and impacts, including significant environmental aspects
- 3. Environmental objectives and targets
- 4. Legal and other requirements
- 5. Monitoring and reporting requirements for environmental aspects
- 6. Project environmental control measures
- 7. Incident reporting and investigation
- 8. Emergency preparedness and response
- 9. Environmental inspections and auditing
- 10. Soil & Stormwater Management Plan

# 2 Key Project Details

Project:	90 Melville Stree	90 Melville Street - Basement Retention			
Developer:	Giameos Constr	Giameos Construction & Development Pty Ltd			
Municipality:	City of Hobart				
Principal	TDC	TDC			
Contractor:	IBC	TBC			
Superintendent:	TBC	TBC			
Proposed Work	Mon – Fri:	7am to 6pm			
Hours:	Sat:	8am to 6pm			
	Sun and P Holidays: 10am to 6pm with Superintendent approval				

**Environmental Management Plan** 



90 Melville Street

# 3 Project Environmental Aspects and Impacts

The following Environmental Aspects & Impacts have been identified for the project. Significant environmental aspects (SEA) may require special attention to ensure environmental impacts are appropriately managed to minimise significant environmental risk(s):

Environmental Aspects	Environmental Impacts	SEA
Noise	Environmental nuisance	Х
Vibration	Environmental nuisance Damage to buildings and infrastructure	
Air Quality	Dust nuisance Vehicle emissions	Х
Weeds and Pathogens	Introduction of new weeds and pathogens Spread of existing infestations Disruption to plant and animal habitats and ecosystem processes	
Surface Water	Point source pollution e.g. oil spill Non-point source (diffuse) pollution e.g. soil erosion, stream sedimentation or tracking of soil & debris from the worksite into the Council road reserve	х
Ground water	Interception and diversion of groundwater Contamination/pollution of groundwater aquifers	
Cultural Heritage	Disturbance to heritage sites	
Contaminated Soils	Environmental impacts	Х
Waste	Litter and environmental nuisance Potential for asbestos and other contaminated materials	Х
Hazardous Materials	Ground and surface water contamination	

# 4 Objectives and Targets

The goal of the EMP is to minimise the environmental impact of the project works. Environmental objectives are assigned based on project environmental aspects. Environmental targets assist in providing verifiable evidence the environmental objectives have been achieved.

The environmental objectives and targets for this project are:

<b>Environmental Aspect</b>	Objective	Target
Noise	Minimise the impact of project noise on neighbours	Less than 1 noise complaint per month from project related works
Vibration	Minimise vibration damage to infrastructure and environmental nuisance	Dilapidation surveys completed for at risk infrastructure

# **Environmental Management Plan**



90 Melville Street

		No vibrational damage to surrounding infrastructure as a result of construction activities
Air quality	Maintain air quality outside the project construction area boundary	Less than 1 dust complaint per month from project related works
Weeds and Pathogens	No new weed infestations resulting from project works	All heavy machinery to be washed down, inspected and verified weed and disease free prior to being accepted for work on site
Surface Water	Minimise construction impacts on aquatic ecosystems	Zero complaints of environmental nuisance as a result of site activities impacting local stormwater
Groundwater	Protect groundwater resources	Spills contained, cleaned up immediately and reported
Cultural Heritage	Protect aboriginal or European historic heritage sites	No unauthorised disturbance to heritage sites
Contaminated Soils	Contain & manage any identified contamination	Contamination reported, classified, and disposed of as per regulatory and contractual requirements
Waste	Reduce waste, recycle or reuse	Waste streams to be segregated and disposal tracked
Hazardous Materials	Protect soil and water from contamination	No hazardous material spills causing environmental harm

# 5 Legal & Other Requirements

The key legal and other requirements to be complied with during the project are:

# Commonwealth

Environment Protection & Biodiversity Conservation Act 1999

National Environment Protection (Ambient Air Quality) Measure

#### Tasmania

Aboriginal Heritage Act 1975

Dangerous Goods (Road and Rail Transport) Act 2010

Environmental Management & Pollution Control Act 1994

Environmental Management & Pollution Control (Controlled Waste Tracking) Regs 2010

Environmental Management & Pollution Control (Waste Management) Regs 2020

Fire Services Act 1979

Historic Cultural Heritage Act 1995

Land Use Planning & Approvals Act 1993 (LUPAA)

Litter Act 2007

## **Environmental Management Plan**



#### 90 Melville Street

Nature Conservation Act 2002
Threatened Species Protection Act 1995
Weed Management Act 1999
Work Health and Safety Act 2012
Environmental Protection Policy (Air Quality) 2004
Environmental Protection Policy (Noise) 2009
State Policy on Water Quality Management 1997
Tasmanian Wash-down Guidelines for Weed & Disease Control 2004

Access to relevant legislation, codes of practice and standards for this project shall be administered by the Principal Contractor. State Environmental Acts, subordinate legislation and Environmental Policies are available from:

Tasmania <a href="http://epa.tas.gov.au/epa/">http://epa.tas.gov.au/epa/</a>

Workers shall be informed of the location and availability of environmental legislation, standards and codes of practice during induction.

## 6 Environmental Training and Induction

It is essential that the Principal Contractor provides training and induction to cover the key elements of the project Environmental Management Plan. Site inductions ensure all staff and contractors receive training and instructions on environmental aspects and impacts specific to the project site and in accordance with regulatory authorities.

All environmental training & induction records shall be able to be accessed from the project site at all times.

#### 7 Environmental Control Measures

Environmental aspects and impacts will be managed using the following environmental control measures:

#### 7.1 Noise

## **Construction Phases & Anticipated Equipment**

Phase	Heavy Equipment Used
Mobilisation	Semi & Machine Float
Demolition	Excavator Tip Truck Demolition Trailer Elevated Work Platform
Earthworks	Excavator Tip Truck

## **Environmental Management Plan**



#### 90 Melville Street

Piling & Wall anchors	Hydraulic Rotary and Percussive Drilling Rigs Elevated Work Platform	
Concrete	Agitator Trucks Boom Pump	
Shotcrete	Agitator Trucks Shotcrete Pump	

#### **Control Measures**

Project construction work must be undertaken within the hours set out in in accordance with local authority requirements:

- 7am 6pm Mon to Fri and 8am 6pm Sat
- Construction work on Sunday's or State Recognise Public Holidays is not permitted unless approved by the Superintendent.

A commencement of works notification to all relevant stakeholders, including adjacent properties will be sent out prior to work commencing. This will include key details of the project, including key dates, project contacts and work times.

Plant and equipment shall be well maintained in accordance with OEM recommendations. Evidence of routine maintenance and servicing shall be verified by the Principal Contractor prior to mobile plant commencing work.

Project noise will be monitored as part of daily site supervision and excessive noise likely to generate a nuisance complaint investigated and actioned as required.

### 7.2 Vibration

Infrastructure at risk of vibration damage from project works shall be subject to preconstruction dilapidation surveys which shall be provided to the Superintendent prior to commencement of works.

All heavy equipment and mobile plant are to be utilised in accordance with OEM recommendations.

At completion of construction works, a post construction dilapidation survey shall take place with a copy provided to the Superintendent.

In the unlikely instance that a report of vibration damage is received, a proportionate investigation is to commence immediately, and the Superintendent notified. Where any damage is identified to be likely a result of construction, work is to cease immediately and not recommence until such time that the issue is resolved, and the Superintendent has given approval to recommence construction.

## **Environmental Management Plan**



90 Melville Street

#### 7.3 Air Quality

Plant & equipment operating on the project must not emit visible smoke for >10 consecutive seconds.

Plant and equipment shall be well maintained in accordance with OEM recommendations. Evidence of routine maintenance and servicing shall be verified by the Principal Contractor prior to mobile plant commencing work.

Dust emissions will be visually monitored to ensure dust plumes from project surfaces, stockpiles and machinery do not cause environmental nuisance beyond the project boundary.

Local water feeds shall be available at all times to minimise nuisance dust when required. Where water suppression is deemed ineffective or impractical for managing stockpile dust, these should be temporarily covered until such time as conditions improve or they can be removed from site.

Where dust suppression does not reduce the risk of nuisance, the Project Manager must be informed, and consideration given to stopping dust generating works until conditions improve.

#### 7.4 Weeds and Pathogens

Heavy machinery will be washed down prior to entering the project site to remove soil and other materials capable of spreading weed seeds and soil borne pathogens.

Machinery will be inspected prior to being unloaded to confirm the equipment is weed and disease free

Inspections will be recorded on a site wash down register and made available to the Superintendent on request.

Machinery being removed from site will be either washed down prior to leaving, or be transported to a suitable, offsite wash bay where it can be washed and sanitised in accordance with local regulations.

## 7.5 Surface Water

Erosion and sediment controls will be established as part of the staging of project earthworks.

Priority should be given to erosion control over sediment control wherever practicable.

Erosion control aims to prevent soil being displaced by erosive forces (e.g. rainfall) causing soil erosion and transporting sediment into streams and water bodies.

Whilst the 90 Melville Street site will have minimal exposed batters or sloped ground throughout the bulk of construction, any batters will be constructed considering practicality of implementation of erosion control

Erosion control strategies may include:

## **Environmental Management Plan**



90 Melville Street

- Install rock check drains, coir logs or similar structures in areas of concentrated flow to reduce water velocity
- Place rock spalls/beaching at culvert outlets and in other areas of concentrated flow to protect the soil surface
- Protect at risk areas with anything that will provide groundcover e.g. temporary mulch, rock, gravel, geotextile, shotcrete

Sediment controls aim to capture displaced soil and treat suspended soil particles to minimise the risk of environmental harm to waterways from elevated stream turbidity. Sediment controls are generally less effective than erosion controls and include:

- Temporary sediment traps at culvert outlets
- Drainage diverting dirty water from disturbed ground to a sediment control pond
- Where mud or dirt 'caked' tyres when plant leaves site, present a point of
  contamination to the local stormwater network, an appropriate wheel wash system
  shall be implemented in accordance with local guidelines. Any runoff generated from
  this system to be directed into the site sediment pond.
- Discharge to local stormwater infrastructure to be in accordance with approved design plans and specification.
- Flocculation applied where required to remove suspended clay particles from ponds prior to discharge
- · Silt fences (not recommended for areas of concentrated flow)

Erosion and sediment controls will be monitored daily as part of general site supervisory requirements and inspected weekly during formal, documented HSE inspections.

#### 7.6 Groundwater

Project design should aim to minimise potential impacts on groundwater resources.

Where project works intercept groundwater flows or aquifers, work should stop in the immediate area and the client informed so that specialist advice can be obtained on appropriate mitigation strategies.

Groundwater flows should be directed away from disturbed ground to minimise the risk of soil erosion and to reduce pooling that could potentially impact on project works.

Hazardous material spills must be contained, cleaned up and reported immediately. Appropriately sized and number of spill management kits shall be available and readily accessible at all times throughout the works

### 7.7 Aboriginal and European Cultural Heritage

Management of any Aboriginal or European Cultural Heritage sites shall be informed by preconstruction heritage surveys and contract specifications.

Known heritage sites shall only be disturbed under the authority of a permit issued by the Government regulator in consultation with the relevant advisory body.

## **Environmental Management Plan**



90 Melville Street

Known sites identified as requiring protection from disturbance will be delineated with appropriate fencing and must not be disturbed by construction activities.

Any unanticipated discovery of an Aboriginal or European Cultural Heritage will be managed as per the project unanticipated discovery plan. In summary, this will require work to stop in the immediate area and for the site to be reported to the Superintendent and protected from disturbance whilst further expert advice is obtained on the site's significance and ongoing management requirements.

#### 7.8 Contaminated Soil

Seven test holes were bored at locations around the site in late 2019. Samples were taken around 0.5m and 1.5m at each bore location and sent to ALS for testing. There was a range of contaminants identified across the seven test areas. Of these there were no human health guideline exceedances for dermal contact, dust inhalation, inhalation, soil ingestion assessment for Health Investigation Levels for commercial/ industrial land use. There were also no trench worker guideline limit or Health Screening Level (HSL) exceedances for soil vapour.

However, when compared against IB105 Guidelines for Soil Disposal the soil was classified as a mix of Level 1, Level 2 and Level 3 material due to the various heavy metals and PAH (BaP) content.

GES recommends that all potentially contaminated soil is to be further sampled and tested to ascertain the appropriate level of contamination, handling, and disposal.

The Principal Contractor shall develop a sampling and testing regime that will provide a level of identification of contaminants across the site, to enable suitable transport, disposal, and any required approval. This sampling and testing regime shall be in accordance with local and state regulatory requirements and be coordinated under an appropriately qualified environmental consultant.

Any potentially asbestos containing materials (ACM) outside of what has been highlighted in the preliminary environmental reports, shall be reported immediately to the Project Supervisor and Project Manager. Suspected contamination areas will be quarantined from other works and investigated to characterise the nature and extent of the contaminated material.

Where contamination is confirmed, containment and disposal strategies will be determined in consultation with appropriate specialists and in accordance with regulatory requirements.

#### 7.9 Waste

Waste containers shall be supplied for the collection of general waste, recyclables, hydrocarbon contaminated waste & demolition waste.

Waste containers shall be clearly labelled and fitted with lids to prevent windblown litter.

Appropriately licenced contractors to be used to dispose of project wastes and recyclables.

## **Environmental Management Plan**



90 Melville Street

Periodic inspections and scheduled pumping of temporary toilet facilities must be undertaken to prevent overflow and discharge to the environment.

#### 7.10 Hazardous Materials

The use and storage of hazardous materials will be minimised on site to the extent reasonably practicable.

Hazardous materials will be stored in a bunded area consistent with regulatory requirements.

Well stocked spill kits will be maintained on the project site close to hazardous material storage areas.

Spills will be contained, cleaned up and reported immediately.

Workers will be provided with instructions on spill response procedures during site specific project inductions

Refuelling is not permitted within 10m of any watercourse or drainage line.

Contaminated soils and hydrocarbon waste will be segregated from other waste streams and disposed of in accordance with regulatory and specification requirements.

# 8 Environmental Monitoring & Reporting

The following table outlines the Environmental monitoring and reporting requirements for the project. Particular emphasis should be given to activities with a high potential for environmental harm or nuisance.

<b>Environmental Aspect</b>	Monitoring & Reporting Requirements		
Noise	Daily monitoring of plant and equipment Weekly documented HSE inspections Noise nuisance complaints to be reported immediately to the Project Manager and Superintendent		
Vibrations	Vibration monitoring to be conducted as per client or Permit requirements		
Air Quality	Vehicle and dust emissions from project works to be visually monitored for potential environmental nuisance Weekly HSE inspections Complaints to be reported to the Project Manager and Superintendent		
Surface Water	Daily visual inspection of erosion and sediment controls especially after a significant rainfall event Weekly HSE inspection of erosion and sediment controls Water quality monitoring in accordance with the approved design plans, contract specification or Permit Client reporting as above Report to Project Manager and EPA (in line with regulations) incidents causing, or having the potential to cause environmental harm or nuisance to waterbodies or streams		

## **Environmental Management Plan**



#### 90 Melville Street

Groundwater	Visually monitor project works for potential impacts on groundwater flows or aquifers Report hazardous material spills to ground to the Supervisor Report to Project Manager and seek advice from client on identified groundwater impacts
Cultural Heritage	Daily visual checks to ensure any identified exclusion zones remain undisturbed Weekly HSE inspections Report to Project Manager, Superintendent and regulatory authority any unauthorised disturbance to a known site Report unanticipated discoveries to the Project Manager, Superintendent and regulatory authority for assessment
Contaminated Soil	Sampling and testing to a predetermined testing regime to local and state regulations Daily visual monitoring of site works for potential soil contaminations (i.e staining, debris) Report suspected contamination to the Project Manager and Superintendent for assessment & characterisation
Waste	Daily visual monitoring for litter and storage bin levels Weekly HSE inspections as above

# 9 Environmental Incident Reporting and Investigation

## 9.1 Environmental Incidents

An environmental incident will include, but will not necessarily be limited to the following events for reporting and investigation purposes:

- · Hazardous material spills to ground or water
- Any death or injury to threatened fauna within the site boundary
- Unauthorised destruction of threatened flora
- · A breach of an environmental exclusion zone
- Unauthorised disturbance to an aboriginal or historic heritage site
- Any public complaint relating to environmental nuisance or harm
- A notifiable incident that results in actual or potential environmental nuisance or harm

All project related environmental incidents must be reported as soon as practicable to the Principal Contractor's Project Manager and will be entered into Principal Contractor's electronic reporting system. The Project Manager will report the incident to the Superintendent in accordance with contractual requirements.

#### 9.2 Notifiable Incidents

State environmental legislation requires a person to take such steps as are practicable or reasonable to prevent or minimise environmental harm or environmental nuisance caused, or likely to be caused, by an activity conducted by that person.

## **Environmental Management Plan**



90 Melville Street

Environmental incidents involving potential or actual environmental nuisance or harm may be regarded as Notifiable Incidents under State and Local Government legislation and must be reported to the Principal Contractor's Project Manager or Site Manager immediately on becoming aware an incident has occurred. The Manager will escalate the incident notification process in accordance with the Principal Contractor's incident notification protocol to ensure the relevant Local or State Government Environmental Regulator is notified within 24 hrs of the Principal Contractor becoming aware an incident has occurred.

Examples of notifiable environmental incidents include:

- significant fish kills
- hazardous material truck/vehicle rollovers
- hazardous material fires
- pipeline breaks
- major sewage spills
- significant diesel spills to ground or any hydrocarbon spill to water

In Tasmania, notifiable incidents shall be reported through the **EPA Tasmania Pollution Incident Hotline 1800 005 171.** 

The State Pollution Hotline number is available 24 hours a day, 7 days a week. Notifications should include:

- · Your full name, address and telephone contact details
- · Date, time and duration of the incident
- Type of pollutant or a description of the incident, discharge or emission
- · Location of the incident, being as specific as possible
- · Source and cause of pollution if known
- Extent or size of the area where the pollution is visible
- · Anything else that is relevant to the incident

Alternatively, if the incident is not occurring at the time, you can contact the Regulator by lodging the above information by email:

Tasmania: incidentresponse@environment.tas.gov.au

# 9.3 Incident Investigation

All environmental incidents are entered into Principal Contractor's' electronic incident reporting system for investigation. The investigation process is as follows:

- Incidents are reviewed by Principal Contractor's' Environmental Manager and assigned to an incident Owner
- The Owner conducts the incident investigation and assigns corrective actions to the responsible person(s)
- · Corrective actions are tracked and may only be closed once satisfactorily completed
- When all corrective actions have been completed, the incident is closed out.

**Environmental Management Plan** 



90 Melville Street

# 10 Emergency Preparedness and Response

Credible environmental emergency scenarios and emergency contacts are documented in a Project Emergency Response Plan. For most projects, the most likely environmental emergency would involve a spill or uncontrolled release of an environmentally hazardous substance.

Spills that have the potential to cause environmental nuisance or harm will be reported to the Project Manager, Superintendent and the State Environmental Regulatory Authority within 24 hours as required under State Government legislation.

All spills will be contained & cleaned up immediately. Project workers will be instructed during the site-specific induction process on environmental spill responsibilities, including containment, clean up and reporting protocols.

#### 11 Environmental Inspections and Auditing

#### 11.1 Environmental Inspections

Environmental inspections will be conducted as follows:

- Daily informal visual inspections conducted by staff, supervisors and project workers as
  part of working to plan and constantly monitoring the site for environmental compliance
- Weekly HSE Site inspections documented using the project HSE Checklist. The
  performance of HSE inspections is monitored by the Project Manager with all nonconformances reported in accordance with the Project Specification.

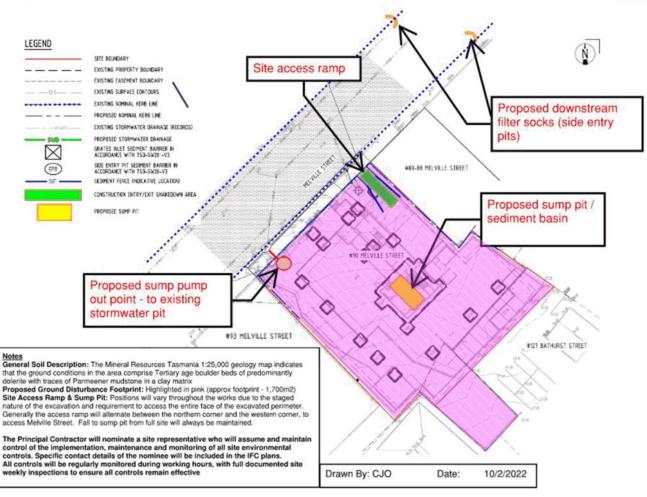
**Environmental Management Plan** 



90 Melville Street

#### 12 Soil & Water Management Plan







# **Submission to Planning Authority Notice**

Council Planning Permit No.	PLN-22-321			Cou	ncil notice date	18/08/2022
TasWater details						
TasWater Reference No.	TWDA 2022/01350-HCC			Date	e of response	08/09/2022
TasWater Contact	Phil Papps		Phone No.	047	0474 931 272	
Response issued to						
Council name	CITY OF HOBART					
Contact details	coh@hobartcity.com.au					
Development deta	ils					
Address	90 MELVILLE ST,	HOBART		Prop	perty ID (PID)	9901372
Description of development	Demolition and New Mixed Use Building					
Schedule of drawings/documents						
Prepar	Drawing/	document No.		Revision No.	Date of Issue	
Jaws Architects		Site Plan / DA01			02	17/06/2022
Jaws Architects		Floor Plan / DA02 – DA 13			02	17/06/2022
ADG		Civil Engineering Report			02	05/05/2022

#### **Conditions**

ADG

Pursuant to the *Water and Sewerage Industry Act* 2008 (TAS) Section 56P(1) TasWater imposes the following conditions on the permit for this application:

Civil Services Plan / DA04

# **CONNECTIONS, METERING & BACKFLOW**

A suitably sized water supply with metered connections and sewerage system and connections to the
development must be designed and constructed to TasWater's satisfaction and be in accordance with
any other conditions in this permit.

**Advice**: TasWater will not accept direct fire boosting from the network unless it can be demonstrated that the periodic testing of the system will not have a significant negative effect on our network and the minimum service requirements of other customers serviced by the network. To this end break tanks may be required with the rate of flow into the break tank controlled so that peak flows to fill the tank do not also cause negative effect on the network.

- Any removal/supply and installation of water meters and/or the removal of redundant and/or installation of new and modified property service connections must be carried out by TasWater at the developer's cost.
- 3. Prior to commencing use of the development, any water connection utilised for the development must have a backflow prevention device and water meter installed, to the satisfaction of TasWater.

# **DEVELOPMENT ASSESSMENT FEES**

4. The applicant or landowner as the case may be, must pay a development assessment fee of \$723.84 to TasWater, as approved by the Economic Regulator and the fee will be indexed, until the date paid to TasWater. The payment is required within 30 days of the issue of an invoice by TasWater.

03/05/2022



#### Advice

#### General

For information on TasWater development standards, please visit <a href="https://www.taswater.com.au/building-and-development/technical-standards">https://www.taswater.com.au/building-and-development/technical-standards</a>

For application forms please visit <a href="https://www.taswater.com.au/building-and-development/development-application-form">https://www.taswater.com.au/building-and-development/development-application-form</a>

#### Water Submetering

As of July 1 2022, TasWater's Sub-Metering Policy no longer permits TasWater sub-meters to be installed for new developments. Please ensure plans submitted with the application for Certificate(s) for Certifiable Work (Building and/or Plumbing) reflect this. For clarity, TasWater does not object to private sub-metering arrangements. Further information is available on our website (<a href="www.taswater.com.au">www.taswater.com.au</a>) within our Sub-Metering Policy and Water Metering Guidelines.

#### **Service Locations**

Please note that the developer is responsible for arranging to locate the existing TasWater infrastructure and clearly showing it on the drawings. Existing TasWater infrastructure may be located by a surveyor and/or a private contractor engaged at the developers cost to locate the infrastructure. The location of this infrastructure as shown on the GIS is indicative only.

## **Water Servicing**

The proposed development is in the Hobart City Low Level zone and modelling indicates there is capacity in the existing network to supply the requested demand.

Total boundary heads (HGL), not pressures, at the proposed connection point are:

	HGL (m)
Peak Day demand of 7.72 L/s	91
Peak Day demand + 32 L/s Fire Flow	91

It should be noted that these are the boundary heads in the water main itself at the proposed connection point and do not include losses through the actual connection or associated pipework.

#### **Boundary Trap Area**

The proposed development is within a boundary trap area and the developer will need to provide a boundary trap that prevents noxious gases or persistent odours back venting into the property's sanitary drain. The boundary trap is to be be contained within the property boundaries and the property owner remains responsible for the ownership, operation and maintenance of the boundary trap.

#### Declaration

The drawings/documents and conditions stated above constitute TasWater's Submission to Planning Authority Notice.

# TasWater Contact Details

Phone	13 6992	Email	development@taswater.com.au
Mail	GPO Box 1393 Hobart TAS 7001	Web	www.taswater.com.au

# URBAN DESIGN ADVISORY PANEL REPORT

# ITEM

#### 90 MELVILLE STREET - PLN-22-321

Attending: Neil Shepherd – Neil Shepherd & Associates

Hanz Lee - Jaws Architects

George Giameos – Giameos Holdings Pty Ltd Stefan Giameos – Giameos Holdings Pty Ltd

The Panel met to discuss the proposal in detail and the below report is a summary of the Panel's views and is provided for the consideration of the proponents and officers.

## Description:

The proposal is for the demolition of the existing building on site and construction of a residential apartment and office complex comprising of 5 levels of office space and 4 levels of residential with 3 levels of basement car parking.

The development presents a 13319m2 building form featuring entrance and lobby, office podium with residences above contained within a setback element with a reduced footprint. The building has nine above ground storeys, a maximum height of 30m with an additional enclosure for the rooftop plant equipment area. There are three basement levels containing a total of 108 car parking spaces, residential storage, bin storage, bicycle parking with an additional store on the ground floor. The entirety of the 5 levels of office space is to potentially be used by the University of Tasmania. The residential component includes 22 dwellings consisting of 18 two Bedroom and 4 three Bedroom apartments. All apartments have private balconies with a 128m2 communal roof garden space facing northeast to be provided at Level 5.

The design of the office podium features extensive glazing on all elevations incorporating aluminium panelling in various sizes in combination with vertical sun shade fins as well as the inclusion of patterned concrete panels. The residential section above is primarily clad in light coloured concrete panelling with inset sections of glazing and balconies. Within these sections a mid-grey aggregate concrete panelling is also utilised on the north-east and south-west elevations. The rooftop plant area is enclosed within an aluminium fin clad structure.

The ground level includes a setback undercover entrance area featuring brickwork which continues to a laneway area that extends to the rear boundary of the site. The landscaped laneway area is to potentially incorporate public artwork including lighting installations and interactive works, it would also allow for a future potential opportunity for a pedestrian link through to Bathurst Street.

## Panel Report:

The Panel noted that 90 Melville Street – PLN-22-321 is a lodged planning application currently under assessment, where additional information can be requested. The Panel noted that it had considered and generally supported a previous, but similar, proposal for the site on 20 April 2020. The following comments will be provided to the applicant and Development Appraisal Planner.

The Panel felt that the activation of the ground plane was somewhat lacking. The Panel noted that the entrance of the building was behind a solid and reasonably high wall to the street and questioned whether people will have an opportunity to see in beyond the planting, creating a sense of it being blocked off from the street. The Panel queried whether the accessibility to the building will be inviting and easy enough for people of all abilities, particularly when pedestrians have to go past the stairs to get to the access ramp on an incline.

The Panel noted that there was enormous potential for the street edge given it is in a sunny northwest facing position and questioned if there was an opportunity for the rising ground line of Melville Street to create connections between the building's ground floor and the street. The Panel were concerned with the height of the roller door and the scale it gives to the street. The Panel wanted to see more work done relating the development to the specifics of the street, instead of taking its street relationship from the scale and height of the building next door, which is on the upper side of the rising street. The building has been designed as level, off this adjacent building, but there is almost a two storey height difference to the street at the lower end of the development.

The Panel noted that with the proposed building aligned with the building next door, such as the ground floor level, it creates a somewhat clumsy streetscape, without regard to the natural rise. A better opportunity would be to set the proposed building's ground floor level down.

The Panel also felt that the overall sense of 'transition' within the street and townscape was of resulting 'bulkiness'. In comparison with the previous scheme, the residential

apartments are not only more uniform, but also lack the same material diversity. The result is diminished differentiation and character at the townscape scale.

In terms of the through site link, the Panel noted that until agreement was reached with the neighbour for creating the walkway, a condition should be recommended to gate the area after hours to prevent the space becoming an entrapment area. Notwithstanding the Panel's support of considering future through-block links, the Panel felt that the design doesn't necessarily set up a desirable future through-site link with the location and form of the substation impacting on the arrangement. The Panel was concerned that this walkway has the potential to be a "dead end" for a long time, being dependant on the neighbouring site behind to finalise it.

The Panel noted that the property sits on the fringe of the Central Business Zone and the proposed development will significantly stand out compared to the scale of existing buildings. The sense of layering offered by the topography of the site, and the existing streetscape, will mean the north-east edge will be most prominent. The Panel also felt that the further away from the building it was viewed, the heavier it gets; it is the lower levels that have lightness in their design. The Panel felt that while there was strong articulation to the apartment upper levels in the middle of the building, the further away the building was viewed, the blank walls will dominate. The Panel would prefer to see a more considered resolution of the concrete façade edges, which would be particularly prominent when viewed from the higher ground of West Hobart.

The Panel would also like more attention and consideration given to the landscape areas, particularly given the potential for the garden area on the 5<sup>th</sup> floor to be detrimentally impacted if development happens on the adjoining site.

The Panel would like to see a condition on materials used, particularly consideration to the predominate use of concrete façade on the upper apartment levels.

7.1.2 90 MELVILLE STREET, 137 HARRINGTON STREET ALSO KNOWN AS 100 MELVILLE STREET, HOBART, 80 MELVILLE STREET, 164 MURRAY STREET, 133 BATHURST STREET, 144-160 MURRAY STREET, 127 BATHURST STREET, HOBART - STRUCTURAL WORKS

PLN-22-314 - FILE REF: F22/94603

Address: 90 Melville Street, 137 Harrington Street Also

known as 100 Melville Street, Hobart, 80 Melville Street, 164 Murray Street, 133 Bathurst Street, 144-160 Murray Street, 127 Bathurst Street,

Hobart

Proposal: Structural Works

Expiry Date: 19 September 2022

Extension of Time:

Author: Ben Ikin

## RECOMMENDATION

That pursuant to the *Hobart Interim Planning Scheme 2015*, the City Planning Committee, in accordance with the delegations contained in its terms of reference, approve the application for Structural Works at 90 Melville Street, 80 Melville Street, 137 Harrington St, 144-160 Murray Street, 164 Murray Street, 127 Bathurst Street, and 133 Bathurst Street for the reasons outlined in the officer's report and a permit containing the following conditions be issued:

# GEN

The use and/or development must be substantially in accordance with the documents and drawings that comprise PLN-22-314 - 90 MELVILLE STREET HOBART TAS 7000 - Final Planning Documents except where modified below.

Reason for condition

To clarify the scope of the permit.

**SW 1** 

Prior to the issue of any approval under the *Building Act 2016* or the commencement of work on the site (whichever occurs first), a pre- construction structural condition assessment and visual record (eg video and photos) of the Hobart City Council's stormwater infrastructure within/adjacent to the proposed development must be submitted to the City of Hobart as a Condition Endorsement.

The condition assessment must include at least:

- a site plan clearly showing the location of the investigation, with access points and all segments and nodes shown and labelled, with assets found to have a different alignment from that shown on the City of Hobart's plans to be marked on the ground and on the plan;
- a digital recording of a CCTV inspection and written condition assessment report in accordance with WSA 05-2013 Conduit Inspection Reporting Code of Australia, in a 'Wincan' compatible format; and
- 3. photos of any existing drainage structures connected to or modified as part of the development.

The pre-construction condition assessment will be relied upon to establish the extent of any damage caused to Hobart City Council's stormwater infrastructure during construction. If the owner/developer fails to provide the City of Hobart with an adequate pre-construction condition assessment then any damage to the City of Hobart's infrastructure identified in the post-construction condition assessment will be the responsibility of the owner/developer.

Advice:

This condition requires further information to be submitted as a Condition

Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

## **SW 2**

Prior to occupancy or the commencement of the approved use (whichever occurs first), a post-construction structural condition assessment and visual record (eg video and photos) of the Hobart City Council's stormwater infrastructure within/adjacent to the proposed development, along with photos of any existing drainage structures connected to or modified as part of the development, must be submitted to the City of Hobart.

The condition assessment must include at least:

- a site plan clearly showing the location of the investigation, with access points and all segments and nodes shown and labelled, with assets found to have a different alignment from that shown on the City of Hobart's plans shall be marked on the ground and on the plan;
- a digital recording of a CCTV inspection and written condition assessment report in accordance with WSA 05-2013 Conduit Inspection Reporting Code of Australia, in a 'Wincan' compatible format; and
- 3. photos of any existing drainage structures connected to or modified as part of the development.

The post-construction condition assessment will be relied upon to establish the extent of any damage caused to the Hobart City Council's stormwater infrastructure during construction. If the owner/developer fails to provide the City of Hobart with an adequate post-construction condition assessment then any damage to the Hobart City Council's infrastructure identified in the post-construction CCTV will be deemed to be the responsibility of the owner/developer.

## **SW 3**

The proposed development must be designed to ensure the protection and access to the Hobart City Council's stormwater infrastructure.

Prior to the issuing of any approval under the *Building Act 2016* 

or commencement of works (whichever occurs first), a detailed design must be submitted and approved as a Condition Endorsement. In addition to plans provided 12/8/22 (ADG, our ref DA-22-38996), the detailed design must be prepared by a suitably qualified expert and must:

- demonstrate how the design will ensure the protection of and provide access to the Hobart City Council's stormwater main;
- 2. show detailed clearances of all structural elements from public infrastructure including access chambers.

All work required by this condition must be undertaken in accordance with the approved detailed design.

# Advice:

This condition requires further information to be submitted as a Condition

Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

# ENG<sub>1</sub>

Any damage to council infrastructure resulting from the implementation of this permit, must, at the discretion of the Council:

- 1. Be met by the owner by way of reimbursement (cost of repair and reinstatement to be paid by the owner to the Council); or
- 2. Be repaired and reinstated by the owner to the satisfaction of the Council.

A photographic record of the Council's infrastructure adjacent to the subject site must be provided to the Council prior to any commencement of works.

A photographic record of the Council's infrastructure (e.g. existing property service connection points, roads, buildings, stormwater, footpaths, driveway crossovers and nature strips, including if any, pre-existing damage) will be relied upon to

establish the extent of damage caused to the Council's infrastructure during construction. In the event that the owner/developer fails to provide to the Council a photographic record of the Council's infrastructure, then any damage to the Council's infrastructure found on completion of works will be deemed to be the responsibility of the owner.

# Reason for condition

To ensure that any of the Council's infrastructure and/or site-related service connections affected by the proposal will be altered and/or reinstated at the owner's full cost.

## ENG r1

The excavation and/or earth-retaining structures supporting the highway reservation must not undermine the stability and integrity of the highway reservation and its infrastructure.

Detailed design drawings, structural certificates and associated geotechnical assessments of the rock anchor and retaining walls supporting the Melville Street highway reservation must be submitted and approved as a Condition Endorsement, prior to the commencement of work and must:

- 1. Be prepared and certified by a suitable qualified person and experienced engineer;
- 2. Not undermine the stability of the highway reservation;
- 3. Be designed in accordance with AS 4678, with a design life in accordance with table 3.1 typical application major public infrastructure works;
- Take into account any additional surcharge loadings as required by relevant Australian Standards;
- 5. Take into account and reference accordingly any Geotechnical findings;
- 6. Detail any mitigation measures required;
- 7. Detail the design and location of the footing adjacent to the Melville Street highway reservation; and
- 8. Include a structural certificate which notes the driveway slab will not transfer additional loads onto the existing retaining wall.

The structure certificated and/or drawings should note accordingly the above

All work required by this condition must be undertaken in accordance with the approved select design drawing and structural certificates.

Advice:

This condition requires further information to be submitted as a Condition

Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

Reason for condition

To ensure that the stability and integrity of the Council's highway reservation is not compromised by the development.

# ENV<sub>2</sub>

Sediment and erosion control measures, in accordance with an approved soil and water management plan (SWMP), must be installed prior to the commencement of work and maintained until such time as all disturbed areas have been stabilised and/or restored or sealed to the Council's satisfaction.

A SWMP must be submitted as a Condition Endorsement prior to the issue of any approval under the *Building Act 2016* or the commencement of work, whichever occurs first. The SWMP must be prepared in accordance with the Soil and Water Management on Building and Construction Sites fact sheets (Derwent Estuary Program, 2008), available here.

All work required by this condition must be undertaken in accordance with the approved SWMP.

Advice:

This condition requires further information to be submitted as a Condition

Endorsement. Refer to the Condition Endorsement advice at the

end of this permit.

Reason for condition

To avoid the pollution and sedimentation of roads, drains and natural watercourses that could be caused by erosion and runoff from the development.

## ENVHE 1

Recommendations in the report Environmental Site
Assessment 90 Melville Street Hobart, dated December 2019
must be implemented, for the duration of the development.

# Specifically:

- Excavated soils for disposal must be in stockpiled and sampled by a suitably qualified person in accordance with the EPA's IB105 guidelines, and,
- A soil and water management plan should be documented and actioned for general sediment control to reduce loadings into the storm water infrastructure and waterways.

Reason for condition

To ensure that the risk to the environment remains low and acceptable.

# Part 5 r1

Part 5 agreement and/or legal agreement during construction and after for private structures supporting or within the highway reservation.

Part 5 1 The owner(s) of the property must enter into an agreement with the Council pursuant to Part 5 of the *Land Use Planning and Approvals Act 1993* with respect to the protection of retaining wall adjacent to the Melville Street highway reservation prior to the commencement of work.

The owner must not undertake any works at any time

(including excavation and building) that will have any effect on the integrity of the Melville Street highway reservation or any retaining structure adjacent to Melville Street highway reservation or the road formation themselves or undermine the structural integrity of the highway reservation.

All costs for the preparation and registration of the Part 5 Agreement must be met by the owner.

The owner must comply with the Part 5 Agreement which will be placed on the property title.

Advice:

For further information with respect to the preparation of a Part 5 Agreement please contact Council Development Engineering Unit.

Reason for condition

To ensure the protection of Council are retained.

## ADVICE

The following advice is provided to you to assist in the implementation of the planning permit that has been issued subject to the conditions above. The advice is not exhaustive and you must inform yourself of any other legislation, by-laws, regulations, codes or standards that will apply to your development under which you may need to obtain an approval. Visit the Council's website for further information.

Prior to any commencement of work on the site or commencement of use the following additional permits/approval may be required from the Hobart City Council.

# CONDITION ENDORSEMENT

If any condition requires that further documents are submitted and approved, you will need to submit the relevant documentation to satisfy the condition via the Condition Endorsement Submission on Council's online services e-planning portal. Detailed instructions can be found here.

A fee of 2% of the value of the works for new public assets (stormwater infrastructure, roads and related assets) will apply for the condition endorsement application.

Once approved, the Council will respond to you via email that the condition has been endorsed (satisfied).

Where building approval is also required, it is recommended that documentation for condition endorsement be submitted well before submitting documentation for building approval. Failure to address condition endorsement requirements prior to submitting for building approval may result in unexpected delays.

# **BUILDING PERMIT**

You may need building approval in accordance with the *Building Act* 2016. Click here for more information.

This is a Discretionary Planning Permit issued in accordance with section 57 of the Land Use Planning and Approvals Act 1993.

# **WORK PLACE HEALTH AND SAFETY**

Appropriate occupational health and safety measures must be employed during the works to minimise direct human exposure to potentially-contaminated soil, water, dust and vapours. Click here for more information.

# PROTECTING THE ENVIRONMENT

In accordance with the *Environmental Management and Pollution Control Act 1994*, local government has an obligation to "use its best endeavours to prevent or control acts or omissions which cause or are capable of causing pollution." Click here for more information.

# **LEVEL 1 ACTIVITIES**

The activity conducted at the property is an environmentally relevant activity and a Level 1 Activity as defined under s.3 of the *Environmental Management and Pollution Control Act 1994*. For further information on what your responsibilities are, click here.

# **WASTE DISPOSAL**

It is recommended that the developer liaise with the Council's City Resilience Unit regarding reducing, reusing and recycling materials associated with demolition on the site to minimise solid waste being directed to landfill.

Further information regarding waste disposal can also be found on the Council's website.

# **DIAL BEFORE YOU DIG**

Click here for dial before you dig information.

Attachment A: PLN-22-314 - 90 MELVILLE STREET HOBART

TAS 7000 - Planning Committee or Delegated

Report  $\mathbb{I}$ 

Attachment B: PLN-22-314 - 90 MELVILLE STREET HOBART

TAS 7000 - CPC Agenda Documents J. 🖺



# **APPLICATION UNDER HOBART INTERIM PLANNING SCHEME 2015**

City of HOBART

Type of Report: Committee

Committee: 19 September 2022 Expiry Date: 19 September 2022

Application No: PLN-22-314

Address: 90 MELVILLE STREET, HOBART

137 HARRINGTON STREET ALSO KNOWN AS 100 MELVILLE STREET

HOBAR1

80 MELVILLE STREET, HOBART 164 MURRAY STREET, HOBART 133 BATHURST STREET, HOBART 144 - 160 MURRAY STREET, HOBART 127 BATHURST STREET, HOBART

Applicant: Hanz Lee ObO GCD Developments Pty Ltd (JAWS Architects)

level 1, 21 Castray Esplanade

Proposal: Structural Works

Representations: Three

Performance criteria: Potentially Contaminated Land Code, Historic Heritage Code

# 1. Executive Summary

1.1 Planning approval is sought for Structural Works at 90 Melville Street, 80 Melville Street, 137 Harrington St, 144-160 Murray Street, 164 Murray Street, 127 Bathurst Street, and 133 Bathurst Street.

- 1.2 More specifically the proposal is for soil nails as structural support for the redevelopment of 90 Melville Street.
- 1.3 The proposal relies on performance criteria to satisfy the following standards and codes:
  - 1.3.1 Potentially Contaminated Land Code Excavation on a Potentially Contaminated Site
  - 1.3.2 Historic Heritage Code Excavation in an area of Archaeological Potential

- 1.4 Three objections were received during the statutory advertising period between 29 August and 12 September 2022.
- 1.5 The proposal is recommended for approval subject to conditions.
- 1.6 The final decision is delegated to the City Planning Committee because three objections were received.

## 2. Site Detail

2.1 The site is 90 Melville Street, and its adjoining titles.



Figure 1. The site is bordered in blue. 90 Melville St is highlighted yellow.

# 3. Proposal

- 3.1 Planning approval is sought for Structural Works at 90 Melville Street, 80 Melville Street, 137 Harrington St, 144-160 Murray Street, 164 Murray Street, 127 Bathurst Street, and 133 Bathurst Street.
- 3.2 More specifically the proposal is for soil nails as structural support for the redevelopment of 90 Melville Street.

# 4. Background

4.1 The redevelopment of the site has existing approval under PLN-19-948. To facilitate that development, structural works in the form of soil nails are required. These structural works are considered to be development requiring planning approval, because they are considered to be permanent works. The works were not included in the original PLN-19-948, hence approval is now being sought for them separately.

4.2 There is a live planning application PLN-22-321, to be determined by the Council at its 26 September 2022 meeting, for a redesign of the redevelopment of the site approved under PLN-19-948. The structural works proposed in this current planning application (PLN-22-314) will also facilitate that redevelopment.

# 5. Concerns raised by representors

- 5.1 Three representations objecting to the proposal was received during the statutory advertising period between 29 August and 12 September 2022.
- 5.2 The following table outlines the concerns raised in the representations received. Those concerns which relate to a discretion invoked by the proposal are addressed in Section 6 of this report.

I wish to lodge an objection against the proposed development. I have not given permission for ground anchors to either of my properties.

Additionally I have other concerns that I would like to discuss with the Planner on this project, as I was receiving calls from tenants due to the development notice on 164 Murray Street – Tasmanian Walking Company expressing concerns.

I was un aware that notices would be placed on my property without being advised.

In saying that George Giameos asked me to meet with him, Stephan Giameos and Tim Lucas back in June where they showed me some plans of their development of 90 Melville Street that had anchors going under 82 Melville Street and 164 Murray Street. At the meeting Tim Lucas stated that they were revising these plans and would inform me in due course. My understanding was that I would receive a final draft prior to submission to council.

I phoned George Giameos last week to enquire as to progress of plans. Unaware that the proposed plans had been submitted. The fact that in June I was advised may well be deemed that I have been advised.

I have had preliminary discussions with a consultant on my position in relation to the request to anchor under my property. I was waiting on final plans to take the next step. Deed of agreement, compensation and so on should I wish to agree.

I would like to add this supplementary email detailing my objections.

- 1. Business disruption to Specialist Car Centre.
- a. Traffic movement
- b. Noise and vibration from excavation for example rock breaking and works associated with a project of this scale.
- 2. Due to the depth of excavation there is likelihood of damage to 82-88 Melville Street as the Myer / Cat and Fiddle Arcade example.
- 3. I am of the opinion 82-88 Melville Street property should have some guarantee that the stability of the building will not be disturbed during construction if planning approval is granted.

We are the owners of a property that shares a rear boundary with 90 Melville Street. As we have been interstate for some time, we were totally unaware until an adjoining neighbour informed us of some potential concerns in the structural plans which is why have now looked into it to the best of our ability. We are obliged to lodge this representation prior to our return from interstate.

We refer to Page 47 of the structural plans and the installation of temporary ground anchors. The anchors are shown very close to our boundary and we are concerned that during the construction process they could be installed under our property without consultation, which could then cause potential problems and cost during any future development of our property. We do not give permission for ground anchors under our property. Can council require the developer to give a guarantee that this will not occur without our written agreement.

strongly oppose this development on several grounds.

- 1) It is markedly over scaled for the area where it's proposed
- 2) Its brutal, minimlist architecture is alien to Hobart
- 3)Its lack of architectural detail and the dreary colour proposed, creates a depressing effect
- 4) It will set a negative precedent for that part of the city .

#### 6. Assessment

- 6.1 The Hobart Interim Planning Scheme 2015 is a performance based planning scheme. To meet an applicable standard, a proposal must demonstrate compliance with either an acceptable solution or a performance criterion. Where a proposal complies with a standard by relying on one or more performance criteria, the Council may approve or refuse the proposal on that basis. The ability to approve or refuse the proposal relates only to the performance criteria relied on.
- The site is located within the Central Business zone of the *Hobart Interim Planning Scheme 2015.*
- 6.3 The existing use is a car park. The proposed use is associated with the existing approved, or the proposed, redevelopment of 90 Melville Street. These proposed uses are business and professional services, residential (above ground floor level), food services, and general retail and hire. All approved and proposed uses are permitted.
- 6.4 The proposal has been assessed against:

6.4.1	Part D22.0	Central	Business	Zone.

- 6.4.2 E2.0 Potentially Contaminated Land Code
- 6.4.3 E13.0 Historic Heritage Code
- The proposal relies on the following performance criteria to comply with the applicable standards:
  - 6.5.1 Potentially Contaminated Land Code:

Excavation 2.6.2 P1

6.5.3 Historic Heritage Code:

Archaeology Part E13.10.1 P1

- 6.6 Each performance criterion is assessed below.
- 6.7 Potentially Contaminated Land Code Excavation
  - 6.7.1 There is no acceptable solution for clause E2.6.2 A1.
  - 6.7.2 The proposal includes excavation of a potentially contaminated site.
  - 6.7.3 There is no acceptable solution; therefore assessment against the performance criterion is relied on.
  - 6.7.4 The performance criterion at clause E2.6.2 P1 provides as follows:

Excavation does not adversely impact on health and the environment, having regard to:

- (a) an environmental site assessment that demonstrates there is no evidence the land is contaminated; or
- (b) a plan to manage contamination and associated risk to human health and the environment that includes:
- (i) an environmental site assessment;
- (ii) any specific remediation and protection measures required to be implemented before excavation commences; and
- (iii) a statement that the excavation does not adversely impact on

human health or the environment.

- 6.7.5 The Council's Environmental Health Officer has indicated that the proposal meets the above performance criterion, subject to a condition requiring compliance with the submitted ESA.
- 6.7.6 The proposal complies with the performance criterion.
- 6.8 Historic Heritage Code Archaeology
  - 6.8.1 There is no acceptable solution at clause E13.10.1 A1.
  - 6.8.2 The proposal includes excavation of a site within an area of archaeological potential.
  - 6.8.3 The proposal has been assessed by the Council's Senior Cultural Heritage Officer who has provided the following report:

This application is a revised proposal previously assessed as PLN-19-948, with a PAM-21-5 and CEP-21-242.

There is another current DA PLN-22-321. That DA has lodged with it a document dated 7 July 2022 in the form of an addendum to previous reports by Praxis Environment. (see documents in TRIM DA-22-33968 and in the advertised documents set DA-22-40056). The 7 July 2022 report specifically deals with the soil nails and what impacts it might have on features of archaeological potential.

That report concludes: "it is considered highly unlikely that disturbance deeper than 1.5 metres would encounter any archaeological remains." on the eastern side of the site, given their proposed depth and the small size of the drilling of anchors.

That report makes the final conclusion that:

"the ground anchors are unlikely to have any archaeological impact. Further I recommend that no further archaeological input is required for their installation."

While this document was submitted as part of another DA (PLN-22-321), and omitted from the documents for this current DA, the conclusions for the same work are the same and relevant in this instance.

Therefore, within the subject site and outside the site in the area for the installations of soil nails, no further archaeological assessment under clause E13.10 or new conditions are warranted.

On this basis the proposal can be considered to satisfy E13.10.1 P1 (a) to (e).

6.8.4 The proposal complies with the performance criterion.

#### 7. Discussion

- 7.1 Planning approval is sought for Structural Works at 90 Melville Street, 80 Melville Street, 137 Harrington St, 144-160 Murray Street, 164 Murray Street, 127 Bathurst Street, and 133 Bathurst Street.
- 7.2 The application was advertised and three representations were received. Two representations raised concerns including that permission had not been granted for works on adjoining properties, disruption to business during construction from traffic and noise and vibration, impact of depth of excavation on adjoining properties including possible damage to existing buildings. These matters are generally speaking not planning considerations. There is no requirement at the planning stage for written permission to be obtained from other owners of land on which development is proposed. (It is understood that this permission must be obtained at the building stage.) Matters relating to construction, including potential damage to neighbouring properties, are covered by other regulations. (Note that the excavation associated with the substantive development in PLN-22-321 is subject to conditions requiring a construction environmental management plan and construction traffic management plan.)

The third objection raised concerns about the substantive building above ground, which is not the subject of this application.

- 7.3 The proposal has been assessed against the relevant provisions of the planning scheme and is considered to perform well.
- 7.4 The proposal has been assessed by other Council officers, including the Council's Development Engineer, Cultural Heritage Officer, and Roads Engineer, Environmental Health Officer, and Technical Officer Environmental. The officers have raised no objection to the proposal, subject to conditions.
- 7.5 The proposal is recommended for approval.

### 8. Conclusion

8.1 The proposed Structural Works at 90 Melville Street, 80 Melville Street, 137 Harrington St, 144-160 Murray Street, 164 Murray Street, 127 Bathurst Street, and 133 Bathurst Street satisfies the relevant provisions of the *Hobart Interim Planning Scheme 2015*, and as such is recommended for approval.

#### 9. Recommendations

That:

Pursuant to the *Hobart Interim Planning Scheme 2015*, the City Planning Committee, in accordance with the delegations contained in its terms of reference, approve the application for Structural Works at 90 Melville Street, 80 Melville Street, 137 Harrington St, 144-160 Murray Street, 164 Murray Street, 127 Bathurst Street, and 133 Bathurst Street for the reasons outlined in the officer's report and a permit containing the following conditions be issued:

#### **GEN**

The use and/or development must be substantially in accordance with the documents and drawings that comprise PLN-22-314 - 90 MELVILLE STREET HOBART TAS 7000 - Final Planning Documents except where modified below.

Reason for condition

To clarify the scope of the permit.

#### **SW 1**

Prior to the issue of any approval under the *Building Act 2016* or the commencement of work on the site (whichever occurs first), a preconstruction structural condition assessment and visual record (eg video and photos) of the Hobart City Council's stormwater infrastructure within/adjacent to the proposed development must be submitted to the City of Hobart as a Condition Endorsement.

The condition assessment must include at least:

- a site plan clearly showing the location of the investigation, with access points and all segments and nodes shown and labelled, with assets found to have a different alignment from that shown on the City of Hobart's plans to be marked on the ground and on the plan;
- a digital recording of a CCTV inspection and written condition assessment report in accordance with WSA 05-2013 Conduit Inspection Reporting Code of Australia, in a 'Wincan' compatible format; and
- 3. photos of any existing drainage structures connected to or modified as part of the development.

The preconstruction condition assessment will be relied upon to establish the extent of any damage caused to Hobart City Council's stormwater

infrastructure during construction. If the owner/developer fails to provide the City of Hobart with an adequate pre-construction condition assessment then any damage to the City of Hobart's infrastructure identified in the postconstruction condition assessment will be the responsibility of the owner/developer.

#### Advice:

This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

#### **SW 2**

Prior to occupancy or the commencement of the approved use (whichever occurs first), a post-construction structural condition assessment and visual record (eg video and photos) of the Hobart City Council's stormwater infrastructure within/adjacent to the proposed development, along with photos of any existing drainage structures connected to or modified as part of the development, must be submitted to the City of Hobart.

The condition assessment must include at least:

- a site plan clearly showing the location of the investigation, with access points and all segments and nodes shown and labelled, with assets found to have a different alignment from that shown on the City of Hobart's plans shall be marked on the ground and on the plan;
- a digital recording of a CCTV inspection and written condition assessment report in accordance with WSA 05-2013 Conduit Inspection Reporting Code of Australia, in a 'Wincan' compatible format; and
- 3. photos of any existing drainage structures connected to or modified as part of the development.

The postconstruction condition assessment will be relied upon to establish the extent of any damage caused to the Hobart City Council's stormwater infrastructure during construction. If the owner/developer fails to provide the City of Hobart with an adequate post-construction condition assessment then any damage to the Hobart City Council's infrastructure identified in the postconstruction CCTV will be deemed to be the responsibility of the owner/developer.

#### **SW** 3

The proposed development must be designed to ensure the protection and

access to the Hobart City Council's stormwater infrastructure.

Prior to the issuing of any approval under the *Building Act 2016* or commencement of works (whichever occurs first), a detailed design must be submitted and approved as a Condition Endorsement. In addition to plans provided 12/8/22 (ADG, our ref DA-22-38996), the detailed design must be prepared by a suitably qualified expert and must:

- 1. demonstrate how the design will ensure the protection of and provide access to the Hobart City Council's stormwater main;
- 2. show detailed clearances of all structural elements from public infrastructure including access chambers.

All work required by this condition must be undertaken in accordance with the approved detailed design.

Advice:

This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

#### ENG<sub>1</sub>

Any damage to council infrastructure resulting from the implementation of this permit, must, at the discretion of the Council:

- Be met by the owner by way of reimbursement (cost of repair and reinstatement to be paid by the owner to the Council); or
- Be repaired and reinstated by the owner to the satisfaction of the Council.

A photographic record of the Council's infrastructure adjacent to the subject site must be provided to the Council prior to any commencement of works.

A photographic record of the Council's infrastructure (e.g. existing property service connection points, roads, buildings, stormwater, footpaths, driveway crossovers and nature strips, including if any, pre-existing damage) will be relied upon to establish the extent of damage caused to the Council's infrastructure during construction. In the event that the owner/developer fails to provide to the Council a photographic record of the Council's infrastructure, then any damage to the Council's infrastructure found on completion of works will be deemed to be the responsibility of the owner.

#### Reason for condition

To ensure that any of the Council's infrastructure and/or site-related service connections affected by the proposal will be altered and/or reinstated at the owner's full cost.

#### ENG r1

The excavation and/or earth-retaining structures supporting the highway reservation must not undermine the stability and integrity of the highway reservation and its infrastructure.

Detailed design drawings, structural certificates and associated geotechnical assessments of the rock anchor and retaining walls supporting the Melville Street highway reservation must be submitted and approved as a Condition Endorsement, prior to the commencement of work and must:

- Be prepared and certified by a suitable qualified person and experienced engineer;
- 2. Not undermine the stability of the highway reservation;
- Be designed in accordance with AS 4678, with a design life in accordance with table 3.1 typical application major public infrastructure works;
- 4. Take into account any additional surcharge loadings as required by relevant Australian Standards;
- 5. Take into account and reference accordingly any Geotechnical findings;
- 6. Detail any mitigation measures required;
- Detail the design and location of the footing adjacent to the Melville Street highway reservation; and
- Include a structural certificate which notes the driveway slab will not transfer additional loads onto the existing retaining wall.

The structure certificated and/or drawings should note accordingly the above

All work required by this condition must be undertaken in accordance with the approved select design drawing and structural certificates.

#### Advice:

This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

Reason for condition

To ensure that the stability and integrity of the Council's highway reservation is not compromised by the development.

#### ENV<sub>2</sub>

Sediment and erosion control measures, in accordance with an approved soil and water management plan (SWMP), must be installed prior to the commencement of work and maintained until such time as all disturbed areas have been stabilised and/or restored or sealed to the Council's satisfaction.

A SWMP must be submitted as a Condition Endorsement prior to the issue of any approval under the *Building Act 2016* or the commencement of work, whichever occurs first. The SWMP must be prepared in accordance with the Soil and Water Management on Building and Construction Sites fact sheets (Derwent Estuary Program, 2008), available here.

All work required by this condition must be undertaken in accordance with the approved SWMP.

#### Advice:

This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

#### Reason for Condition

To avoid the pollution and sedimentation of roads, drains and natural watercourses that could be caused by erosion and runoff from the development.

### **ENVHE 1**

Recommendations in the report Environmental Site Assessment 90 Melville Street Hobart, dated December 2019 must be implemented, for the duration of the development.

### Specifically:

- Excavated soils for disposal must be in stockpiled and sampled by a suitably qualified person in accordance with the EPA's IB105 guidelines , and,
- A soil and water management plan should be documented and actioned for general sediment control to reduce loadings into the storm water infrastructure and waterways.

Reason for condition

To ensure that the risk to the environment remains low and acceptable.

#### Part 5 r1

Part 5 agreement and/or legal agreement during construction and after for private structures supporting or within the highway reservation.

Part 5 1 The owner(s) of the property must enter into an agreement with the Council pursuant to Part 5 of the *Land Use Planning and Approvals Act 1993* with respect to the protection of retaining wall adjacent to the Melville Street highway reservation prior to the commencement of work.

The owner must not undertake any works at any time (including excavation and building) that will have any effect on the integrity of the Melville Street highway reservation or any retaining structure adjacent to Melville Street highway reservation or the road formation themselves or undermine the structural integrity of the highway reservation.

All costs for the preparation and registration of the Part 5 Agreement must be met by the owner.

The owner must comply with the Part 5 Agreement which will be placed on the property title.

Advice:

For further information with respect to the preparation of a Part 5 Agreement please contact Council Development Engineering Unit.

Reason for condition

To ensure the protection of Council are retained.

#### ADVICE

The following advice is provided to you to assist in the implementation of the planning permit that has been issued subject to the conditions above. The advice is not exhaustive and you must inform yourself of any other legislation, by-laws, regulations, codes or standards that will apply to your development under which you may need to obtain an approval. Visit the Council's website for further information.

Prior to any commencement of work on the site or commencement of use the following additional permits/approval may be required from the Hobart City Council.

#### CONDITION ENDORSEMENT

If any condition requires that further documents are submitted and approved, you will need to submit the relevant documentation to satisfy the condition via the Condition Endorsement Submission on Council's online services e-planning portal. Detailed instructions can be found here.

A fee of 2% of the value of the works for new public assets (stormwater infrastructure, roads and related assets) will apply for the condition endorsement application.

Once approved, the Council will respond to you via email that the condition has been endorsed (satisfied).

Where building approval is also required, it is recommended that documentation for condition endorsement be submitted well before submitting documentation for building approval. Failure to address condition endorsement requirements prior to submitting for building approval may result in unexpected delays.

#### **BUILDING PERMIT**

You may need building approval in accordance with the *Building Act 2016*. Click here for more information.

This is a Discretionary Planning Permit issued in accordance with section 57 of the *Land Use Planning and Approvals Act 1993*.

#### **WORK PLACE HEALTH AND SAFETY**

Appropriate occupational health and safety measures must be employed during the works to minimise direct human exposure to potentially-contaminated soil, water, dust and vapours. Click here for more information.

## PROTECTING THE ENVIRONMENT

In accordance with the *Environmental Management and Pollution Control Act 1994*, local government has an obligation to "use its best endeavours to prevent or control acts or omissions which cause or are capable of causing pollution." Click here for more information.

#### **LEVEL 1 ACTIVITIES**

Item No. 7.1.2

## Agenda (Open Portion) City Planning Committee Meeting - 19/9/2022

The activity conducted at the property is an environmentally relevant activity and a Level 1 Activity as defined under s.3 of the *Environmental Management and Pollution Control Act 1994*. For further information on what your responsibilities are, click here.

#### **WASTE DISPOSAL**

It is recommended that the developer liaise with the Council's City Resilience Unit regarding reducing, reusing and recycling materials associated with demolition on the site to minimise solid waste being directed to landfill.

Further information regarding waste disposal can also be found on the Council's website.

## **DIAL BEFORE YOU DIG**

Click here for dial before you dig information.

Item No. 7.1.2

## Agenda (Open Portion) City Planning Committee Meeting - 19/9/2022

Page 551
ATTACHMENT A

(Ben Ikin)

**Senior Statutory Planner** 

As signatory to this report, I certify that, pursuant to Section 55(1) of the Local Government Act 1993, I hold no interest, as referred to in Section 49 of the Local Government Act 1993, in matters contained in this report.

Kluy

(Karen Abey)

Manager Development Appraisal

As signatory to this report, I certify that, pursuant to Section 55(1) of the Local Government Act 1993, I hold no interest, as referred to in Section 49 of the Local Government Act 1993, in matters contained in this report.

Date of Report: 13 September 2022

Attachment(s):

Attachment B - CPC Agenda Documents

**Page 552** ATTACHMENT B

8/25/22, 9:38 AM Icon Software Administration 🥯 PLN-22-314 - 90 MELVILLE STREET 🅯 PLN-22-314 - 137 HARRINGTON STREET ALSO KNOWN AS 100 MELVILLE STREET @ PLN-22-314 - 80 MELVILLE STREET @ PLN-22-314 - 164 MURRAY STREET @ PLN-22-314 -133 BATHURST STREET PLN-22-314 - 144 - 160 MURRAY STREET Application Information Application Details PLN-22-314 Structural Works Submitted on: 18/05/2022 Accepted as Valid on: 19/05/2022 Target Time Frame: 42 Days. Elapsed Time: 98 Days (Stopped: 66 Days) = 32 Days Expiry date: 04/09/2022 Officer: Senior Statutory Planner Have you obtained pre application advice? Yes If YES please provide the pre application advice number eg PAE-17-xx Are you applying for permitted visitor accommodation as defined by the State Government Visitor Accommodatio information button for definition. No Is the application for SIGNAGE ONLY? If yes, please enter \$0 in the cost of development, and you must enter the r Other Details below. \* No If this application is related to an enforcement action please enter Enforcement Number Details What is the current approved use of the land / building(s)? \* Commercial development Please provide a full description of the proposed use or development (i.e. demolition and new dwelling, swimming and garage) \* Structural work

Estimated cost of development \*

575000.00

Existing floor area (m2) Proposed floor area (m2) Site area (m2)

25/22, 9:38 AM	Icon Softwar	e Administration
Carparking on Site		
Total parking spaces	Existing parking spaces	N/A
		○ Other (no selection chosen)
Other Details		
Does the application includ	e signage? * ter 0 if there are none involved in	No     No
this application? *		
Tasmania Heritage Reg	ister	
Is this property on the Tasm	nanian Heritage Register?	



## **RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



#### SEARCH OF TORRENS TITLE

VOLUME	FOLIO
180200	1
EDITION	DATE OF ISSUE
1	19-May-2021

SEARCH DATE : 10-Feb-2022 SEARCH TIME : 01.16 PM

## DESCRIPTION OF LAND

City of HOBART
Lot 1 on Sealed Plan 180200
Derivation: Part of 0A-0R-31P Gtd. to T. Johnston, Part of 0A-0R-37P Gtd. to R. Cloak and Part of 0A-1R-12P (Sec. FF) Gtd. to John Banks
Prior CTs 245477/1 and 6504/1

### SCHEDULE 1

M683859 & M865273 TRANSFER to GIAMEOS HOLDINGS PTY LTD Registered 19-May-2021 at 12.01 PM

### SCHEDULE 2

Reservations and conditions in the Crown Grant if any SP180200 FENCING PROVISION in Schedule of Easements

### UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

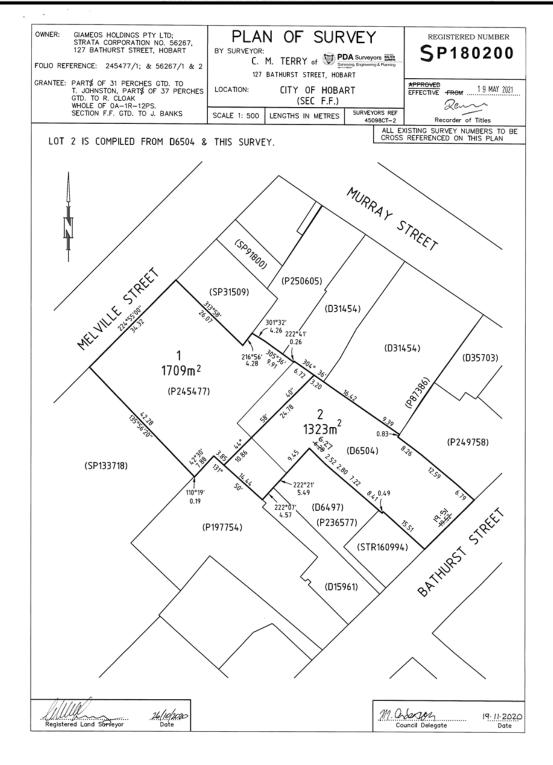


## **FOLIO PLAN**

RECORDER OF TITLES



Issued Pursuant to the Land Titles Act 1980



Search Date: 10 Feb 2022

Search Time: 01:18 PM

Volume Number: 180200

Revision Number: 01

## Page 556 ATTACHMENT B



## **RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



#### SEARCH OF TORRENS TITLE

VOLUME	FOLIO
133718	1
EDITION	DATE OF ISSUE
5	25-Nov-2020

SEARCH DATE : 25-Aug-2022 SEARCH TIME : 09.25 AM

## DESCRIPTION OF LAND

City of HOBART Lot 1 on Sealed Plan 133718 Derivation: For grantees see plan Derived from Sealed Plan No. 133718 Prior CT 12388/1

#### SCHEDULE 1

C690356 TRANSFER to GIAMEOS HOLDINGS PTY LTD Registered  $11-{\rm Apr}-2006$  at noon

#### SCHEDULE 2

Reservations and conditions in the Crown Grant if any D32636 MORTGAGE to Commonwealth Bank of Australia Registered 28-Nov-2011 at noon

E58861 LEASE to MYSTATE FINANCIAL LIMITED of a leasehold estate for the term of 15 years from 1-Mar-2012 of

estate for the term of 15 years from 1-Mar-2012 of that part of the said land within described shown hatched on the plan annexed thereto Registered

05-Dec-2016 at noon

### UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations



## **FOLIO PLAN**

RECORDER OF TITLES



Issued Pursuant to the Land Titles Act 1980 REGISTERED NUMBER OWNER The Crown. PLAN OF SURVEY BY SURVEYOR P.N. Anderson of Practice, Darcey & Anderson Pty. Ltd.
Authorised Surveyors.
LOCATION 121 BATHURST STREET - HORACT SP133718 FOLIO REFERENCE C.T. 12388-1. GRANTEE Part of 0<sup>th</sup> 1<sup>th</sup> 12<sup>th</sup> Gid to Robert Smith.
Whole of 0<sup>th</sup> 0<sup>th</sup> 19<sup>th</sup>, Gid to Loughlin Reynolds.
Whole of 0<sup>th</sup> 0<sup>th</sup> 19<sup>th</sup>, Gid to Bernard Carron.
Whole of 0<sup>th</sup> 0<sup>th</sup> 1<sup>th</sup> 1<sup>th</sup> to Tohn Boyes.
Whole of 0<sup>th</sup> 0<sup>th</sup> 20<sup>th</sup> Gid to E W Boothman. EFFECTIVE FROM - 4 OCT 2000 CITY OF HOBART (SEC. FF)
SCALE 1:500 LENGTHS IN METRES MAPSHEET MUNICIPAL CODE No. (5225-52) 114 ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN LAST PLAN LAST UPI No. (SP4883) (SP31509) (7/11)4.0 (221/27) 40. 1 (5/13)Lo (426/12°)  $3370 \, \text{m}^2$ (P197754) (0<sub>12388</sub>) (11/7 HAS) LO. (P270) DO. (014629) BATHURS' STREET (D53184) (89/88)00

Search Date: 25 Aug 2022

Search Time: 09:26 AM

Volume Number: 133718

Revision Number: 01

Page 1 of 1



## SCHEDULE OF EASEMENTS

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



#### SCHEDULE OF EASEMENTS

Registered Number

NOTE: THE SCHEDULE MUST BE SIGNED BY THE OWNERS & MORTGAGEES OF THE LAND AFFECTED. SIGNATURES MUST BE ATTESTED.

SP 133718

PAGE 1 OF 1PAGE/S

#### **EASEMENTS AND PROFITS**

Each lot on the plan is together with:-

- such rights of drainage over the drainage easements shown on the plan (if any) as may be necessary to drain the stormwater and other surplus water from such lot; and
- any easements or profits a prendre described hereunder.

Each lot on the plan is subject to:-

- such rights of drainage over the drainage easements shown on the plan (if any) as passing through such lot as may be necessary to drain the stormwater and other surplus water from any other lot on the plan; and

(2) any easements or profits a prendre described hereunder. The direction of the flow of water through the drainage easements shown on the plan is indicated by arrows.

No easements or profits a prendre are to be created

Signed by THE HONOURABLE DAVID EDWARD LLEWELLYN the Minister for the time being administering the Crown Lands Act 1976 for and on behalf of the Crown in the presence of :

Buch Adrisa

(USE ANNEXURE PAGES FOR CONTINUATION)

PLAN SEALED BY: SUBDIVIDER: The Crown DATE: ..... FOLIO REF: SOLICITOR ...... & REFERENCE: The Crown Solicitor REF NO. Council Delegate

NOTE: The Council Delegate must sign the Certificate for the purposes of identification.

## Page 559 ATTACHMENT B



## **RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



#### SEARCH OF TORRENS TITLE

VOLUME 31509	FOLIO 3
EDITION	DATE OF ISSUE
6	01-Mar-2012

SEARCH DATE : 25-Aug-2022 SEARCH TIME : 09.27 AM

### DESCRIPTION OF LAND

City of HOBART
Lot 3 on Sealed Plan 31509
(Formerly Lots 1 & 2 on Sealed Plan 31509)
Derivation: Part of 26 Perches Gtd. to H Wilks, Part of 19.
2/10 Perches Gtd. to W A Walton & Ors and Part of 31 Perches Gtd. to T Johnson
Prior CT 4380/28

### SCHEDULE 1

D4392 TRANSFER to TIMOTHY STANLEY SMITH and KAREN DAPHNE SMITH Registered 01-Mar-2012 at noon

#### SCHEDULE 2

Reservations and conditions in the Crown Grant if any SP 4883 EASEMENTS in Schedule of Easements SP 31509 COVENANTS in Schedule of Easements SP 31509 FENCING COVENANT in Schedule of Easements

## UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

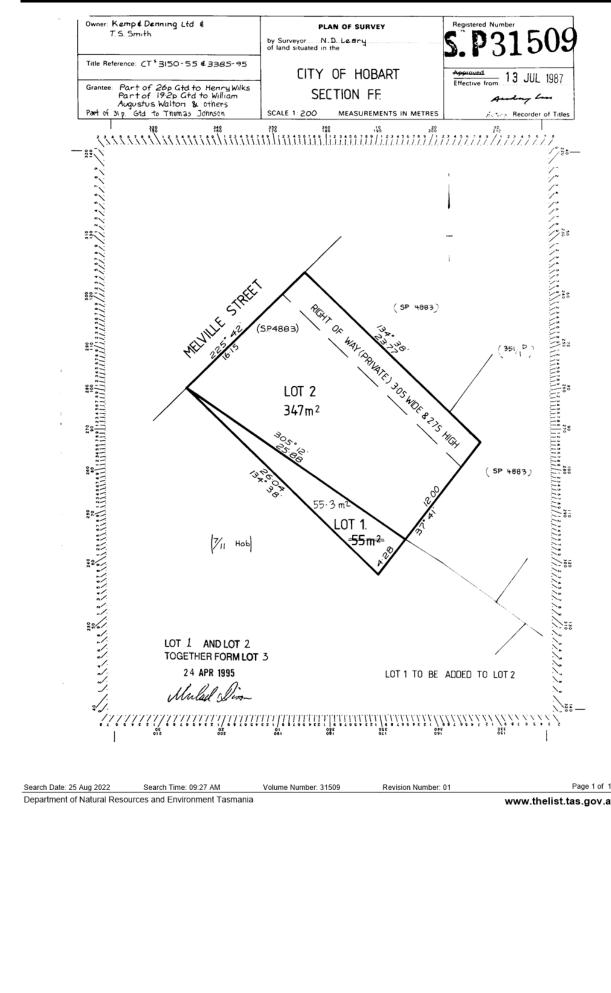


## **FOLIO PLAN**

RECORDER OF TITLES



Issued Pursuant to the Land Titles Act 1980



Page 1 of 1



## SCHEDULE OF EASEMENTS

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980





#### SCHEDULE OF EASEMENTS

Note:—The Town Clerk or Council Clerk must sign the certificate on the back page for the purpose of identification.

The Schedule must be signed by the owners and mortgagees of the land affected. Signatures should be attested.

This core schillens consists of 1

#### EASEMENTS AND PROFITS

Each lot on the plan is together with:-

- such rights of drainage over the drainage easements shewn on the plan (if any)
  as may be necessary to drain the stormwater and other surplus water from such
  lot; and
- (2) any easements or profits à prendre described hereunder.

Each lot on the plan is subject to:-

- (1) such rights of drainage over the drainage easements shewn on the plan (if any) as passing through such lot as may be necessary to drain the stormwater and other surplus water from any other lot on the plan; and
- (2) any easements or profits à prendre described hereunder.

The direction of the flow of water through the drainage easements shewn on the plan is indicated by arrows.

#### RIGHT OF WAY

Lot 2 is subject to a right of carriageway (appurtenant to Lots 1 to 4 on Sealed Plan No. 48#3) over the right of way shown hereon limited throughout to a constant height of 2.75 metres above the existing surface thereof commencing at its junction with Melville Street.

#### FENCING COVENANT

The owner of Lot 1 on the plan covenants with the Vendor Kemp & Denning Limited that the Vendor shall not be required to fence.

#### COVENANT

- 1.
  - The owner of Lot Z on the plan covenants with the Vendor to the intent that the burden of this covenant shall run with and bind the covenantors lot and each and every part thereof and that the benefit thereof shall be annexed to and devolve with each and every part of the residue of the land in folio of the register volume 3150 Folio 55 to observe the following stipulation:
    - (a) Not to erect affix or place or cause to be erected affixed or placed on the common boundary or common boundary wall or common boundary fence between the covenantors lot and the residue of the land in Folio of the register volume 3150 folio 55 any sign placard or painting without the consent in writing of the registered proprietor of the land benefitted first had and obtained.

### **Page 562** ATTACHMENT B



## SCHEDULE OF EASEMENTS

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



3150

SIGNED by TIMOTHY STANLEY SMITH

the registered proprietor of the property comprised and described in the Certificate of Title Volume 3385 Folio 95 in the presence of:

THE COMMON SEAL of CLEARSTORY PTY. LTD.

as Morrgagee under Memorandum of Mortgage Number A867260 was hereunto Affixed in the presence of:

Director

Director

THE COMMON SEAL of KEMP & DENNING LTD.

the registered proprietor of the lands comprised and described in Certificate Volume 3150 Folio 55 was hereunto affixed in accordance with its Articles of Association in the presence of:

Director

Director

Cecretary

SAVING BANK as Mortgagee under Memoranda of Mortgage numbers A420609, A664351 and B23890 was hereunto

SIGNED for and on behalf of AUSTRALIA AND NEW ZEALAND BANKING GROUP LIMITED

as Mortgagee under Memorandum of Mortgage number A474674 by its duly constituted Attorney

who solemnly and sincerely declares that he has not received any notice of revocation of Power of Attorney number 54 8529 given to him by the said bank and that the said Power of Attorney is still enforced in the presence of:

GERHAL AND MAY TEMAND BANNING CROUP TID.

by its Attorney

Minarer and Corporate Banking

Search Date: 25 Aug 2022

Search Time: 09:27 AM

Volume Number: 31509

Revision Number: 01

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## SCHEDULE OF EASEMENTS

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



31509

SIGNED BY THE HOBART SAVINGS BANK as Mortgagee under Mortgages No. A420609, A664351 & B23890 by its attorney karen Euzabeth Potter and February under Power No. 62/0094 (and the said Adden County Potter and Geclare that they have received no Notice of revocation of the received the process of

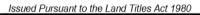
of the said power ) in the presence of Mitness Exik Than

## Page 564 **ATTACHMENT B**



## **SCHEDULE OF EASEMENTS**

RECORDER OF TITLES





31505

This is the schedule of easements attached to		
	(Insert Subdivider's Full Na	me)
KEMP AND DENNING LTD AND	T. S. SMITH	affecting land in
	.CT. 3385 - 95 Insert Title Reference)	
Sealed by HOBART CTTY COUNCIL	on 20TH MAR.	CH 1987
Solicitor's Reference	Council Clerk Town Cler	

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Volume Number: 31509

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## Page 565 ATTACHMENT B



## **RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



#### SEARCH OF TORRENS TITLE

VOLUME	FOLIO
250605	1
EDITION	DATE OF ISSUE
3	05-Jul-2007

SEARCH DATE : 25-Aug-2022 SEARCH TIME : 09.29 AM

### DESCRIPTION OF LAND

City of HOBART Lot 1 on Plan 250605 Derivation: Part of Location to T Carter, Part of 26 Perches Gtd to H Wilks, Part of 2.3/10Ps Gtd to E J Walker and 19. 2/10Ps Gtd to W A Walton & Ors Prior CT 3427/38

#### SCHEDULE 1

(C355395) C781443 TRANSFER to TIMOTHY STANLEY SMITH and KAREN DAPHNE SMITH Registered 05-Jul-2007 at 12.01 PM

### SCHEDULE 2

Reservations and conditions in the Crown Grant if any BENEFITING EASEMENT: a right of carriageway (appurtenant to the said land within described excepting the land containing 0.4/10Ps on Diagram No. 79772) over the Right of Way on Sealed Plan No. 91800 limited throughout to a constant height of 2.75 metres above the existing surface thereof commencing at its junction with Melville Street

### UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

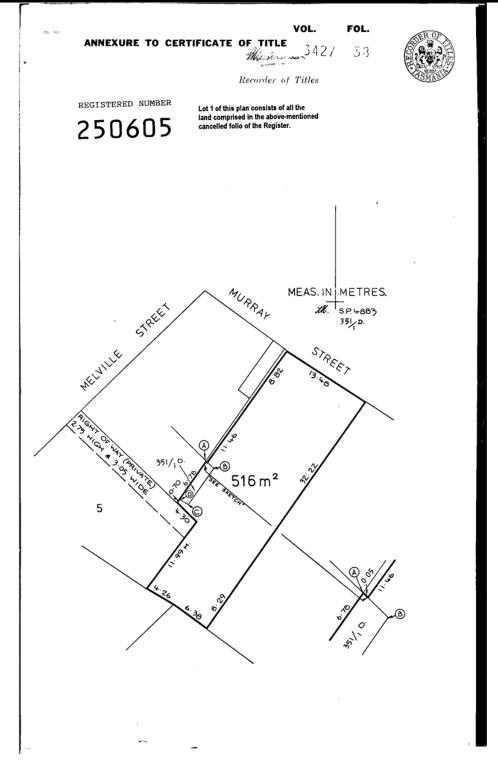


## **FOLIO PLAN**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980





Search Date: 25 Aug 2022

Search Time: 09:29 AM

Volume Number: 250605

Revision Number: 01

Page 1 of 1



## **RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



#### SEARCH OF TORRENS TITLE

VOLUME 197754	FOLIO 1
EDITION	DATE OF ISSUE
5	12-Aug-2014

SEARCH DATE : 25-Aug-2022 SEARCH TIME : 09.31 AM

#### DESCRIPTION OF LAND

City of HOBART Lot 1 on Plan 197754

Derivation: Part of 1R-30Ps. and 1R-12Ps. (Section F.f.) Gtd.

to G. Butler & R. Smith respectively.

Prior CT 3966/2

#### SCHEDULE 1

M476686 TRANSFER to OXFORD ENTERPRISES (TAS) PTY LTD Registered 12-Aug-2014 at 12.01 PM

#### SCHEDULE 2

Reservations and conditions in the Crown Grant if any BENEFITTING EASEMENT the right and liberty for the Company its successors and assigns and the owners and occupiers of the said land within described to allow the spouting of the present buildings on the said land within described to overhang to a width of 0.13 metres or thereabouts and also for storm water drain pipes as the same now exist and are shown between the points marked C. and D. on Plan 197754

BENEFITTING EASEMENT a full right and liberty for the Company its successors and assigns and the tenants and occupiers for the time being of the building at present erected on the said land within described and known as the "King's Hall" to use between the points marked A. and B. on Plan 197754 the south western outer wall of the present dwelling house known as "Ithaca" now erected on or any future building hereafter to be erected on the adjoining land to the north east as a north eastern side or wall of and support for the King's Hall

BURDENING EASEMENT the full and free right and liberty for the owners and occupiers for the time being of the said adjoining land to allow the eaves and spouting of the said dwelling house known as "Ithaca" or any future buildings on the said adjoining land to overhang as

## Page 568 ATTACHMENT B



## **RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



the eaves and spouting are shown on Plan 197754 between the points marked E. and B.

D137649 MORTGAGE to Australia and New Zealand Banking Group Limited Registered 12-Aug-2014 at 12.02 PM

## UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

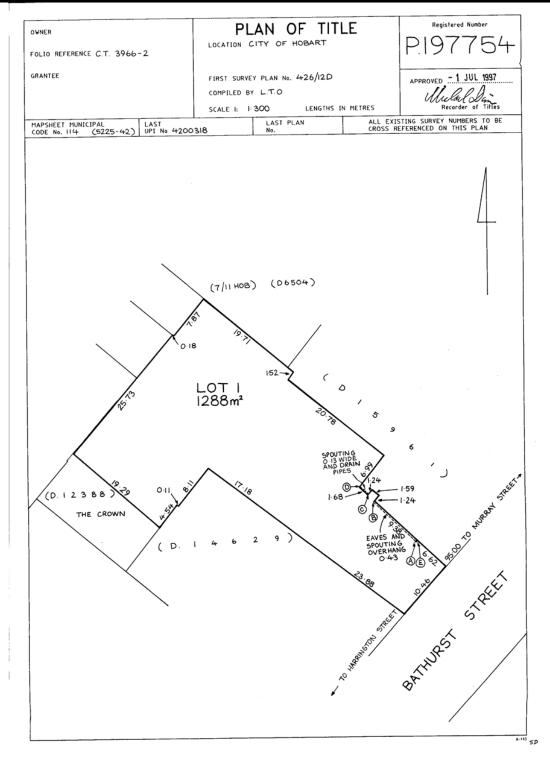


## **FOLIO PLAN**

RECORDER OF TITLES







Search Date: 25 Aug 2022

Search Time: 09:31 AM

Volume Number: 197754

Revision Number: 02

Page 1 of 1

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## **RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



#### SEARCH OF TORRENS TITLE

VOLUME	FOLIO
31454	1
EDITION	DATE OF ISSUE
5	03-Nov-2004

SEARCH DATE : 25-Aug-2022 SEARCH TIME : 09.37 AM

## DESCRIPTION OF LAND

City of HOBART Lot 1 on Diagram 31454 Derivation : Part of 0A-1R-3Ps. Gtd. to John Brown and Whole of 0A-0R-21Ps. Gtd. to Thomas Walton Prior CT 4412/99

#### SCHEDULE 1

C557149 TRANSFER to ESSBEE PTY LTD Registered 03-Nov-2004 at 12.01 PM

#### SCHEDULE 2

Reservations and conditions in the Crown Grant if any C588603 CAVEAT by Essbee Pty Ltd Registered 03-Nov-2004 at 12.02 PM

C617329 AGREEMENT pursuant to Section 71 of the Land Use Planning and Approvals Act 1993 Registered 22-Feb-2005 at noon

## UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

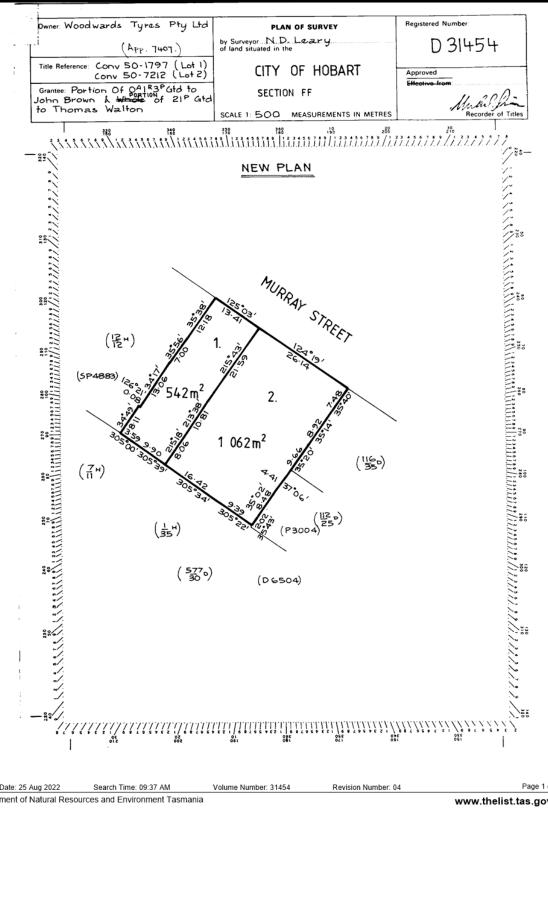


## **FOLIO PLAN**

RECORDER OF TITLES



Issued Pursuant to the Land Titles Act 1980



Search Date: 25 Aug 2022

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## Page 572 ATTACHMENT B



## **RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



#### SEARCH OF TORRENS TITLE

VOLUME	FOLIO
180200	2
EDITION	DATE OF ISSUE
1	19-May-2021

SEARCH DATE : 25-Aug-2022 SEARCH TIME : 10.58 AM

## DESCRIPTION OF LAND

City of HOBART Lot 2 on Sealed Plan 180200 Derivation : Part of 0A-1R-12P (Sec. FF) Gtd. to John Banks and Part of 0A-0R-37P Gtd. to R. Cloak Prior CTs 6504/1 and 245477/1

#### SCHEDULE 1

B584370 & M865251 TRANSFER to BATHURST NOMINEES PTY LTD Registered 19-May-2021 at noon

#### SCHEDULE 2

Reservations and conditions in the Crown Grant if any SP180200 FENCING PROVISION in Schedule of Easements D64534 MORTGAGE to Australia and New Zealand Banking Group Limited Registered 29-Aug-2012 at 12.02 PM

#### UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

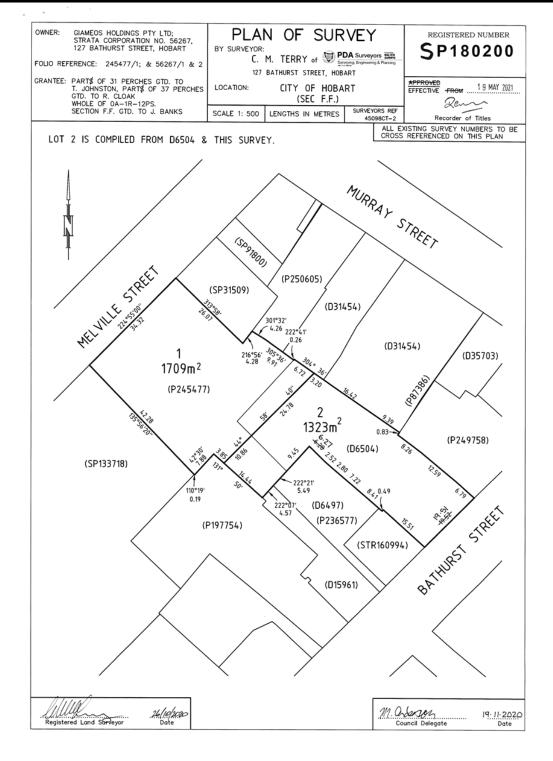


## **FOLIO PLAN**

RECORDER OF TITLES



Issued Pursuant to the Land Titles Act 1980



Search Date: 25 Aug 2022

Search Time: 10:59 AM

Volume Number: 180200

Revision Number: 01



## SCHEDULE OF EASEMENTS

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



#### SCHEDULE OF EASEMENTS

NOTE: THE SCHEDULE MUST BE SIGNED BY THE OWNERS & MORTGAGEES OF THE LAND AFFECTED.

SIGNATURES MUST BE ATTESTED.

Registered Number

PAGE 1 OF 3 PAGE/S

#### EASEMENTS AND PROFITS

Each lot on the plan is together with:

- such rights of drainage over the drainage easements shown on the plan (if any) as may be necessary to drain the stormwater and other surplus water from such lot; and
- (2) any easements or profits a prendre described hereunder. Each lot on the plan is subject to:

- such rights of drainage over the drainage easements shown on the plan (if any) as passing through such lot as may be necessary to drain the stormwater and other surplus water from any other lot on the plan; and
- any easements or profits a prendre described hereunder.

The direction of the flow of water through the drainage easements shown on the plan is indicated by arrows.

#### FENCING PROVISION

In respect of the Lots shown on the Plan, the Vendors (Giameos Holdings Pty Ltd & Bathurst Nominees Pty Ltd ) shall not be required to fence.

2017 BZ

GIAMEOS HOLDINGS PTY LTD

BATHURST NOMINEES PTY LTD

(USE ANNEXURE PAGES FOR CONTINUATION)

SUBDIVIDER: GIAMEOS HOLDINGS PTY LTD & BATHURST NOMINEES PTY LTD

FOLIO REF: 245477-1 & 3039-81

SOLICITOR

& REFERENCE: AES 192196

PLAN SEALED BY: THE HOBART CITY COUNCIL

DATE: 19TH NOVEMBER 2020

STR - 20 - 54

REF NO.

NOTE: The Council Delegate must sign the Certificate for the purposes of identification.

Search Date: 25 Aug 2022

Search Time: 10:59 AM

Volume Number: 180200

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## SCHEDULE OF EASEMENTS

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



### ANNEXURE TO SCHEDULE OF EASEMENTS

PAGE 2 OF 3 PAGES

Registered Number

SUBDIVIDER: GIAMEOS HOLDINGS PTY LTD & BATHURST NOMINEES PTY LTD FOLIO REFERENCE: 245477-1 & 3039-81

EXECUTED by GIAMEOS HOLDINGS PTY LTD	))
(ACN 057 712 268) in its capacity as trustee for	)
Yiormanique Trust), as registered proprietor of the land	)
comprised in Folio of the Register Volume 245477 Folio 1	)
pursuant to section 127 of the Corporations Act 2001 by:	
Director Signature	
n	
Director Full Name (print)	
G. Ganlos.	
Director/*Secretary Signature SOLE SILECTOR / SOLE SECRETARY SIGNATURE	
HEOLUE GIAMERS	
*Director/*Secretary_Full Name (print)	
ole directoil / soce secretary	
(*please strike out inapplicable *if Sale Director/Secretary write 'Sale')	

BATHURST NOMINEES PTY LTD

NOTE: Every annexed page must be signed by the parties to the dealing or where the party is a corporate body be signed by the persons who have attested the affixing of the seal of that body to the dealing.

Search Date: 25 Aug 2022

Search Time: 10:59 AM

Volume Number: 180200

Revision Number: 01

Page 2 of 3



## SCHEDULE OF EASEMENTS

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



## ANNEXURE TO SCHEDULE OF EASEMENTS

PAGE 3 OF 3 PAGES

Registered Number

SP 180200

SUBDIVIDER: GIAMEOS HOLDINGS PTY LTD & BATHURST NOMINEES PTY LTD FOLIO REFERENCE: 245477-1 & 3039-81

EXECUTED by BATHURST NOMINEES PTY LTD	)
(ACN 009 509 317) as registered proprietor of the land	)
comprised in Folio of the Register Volume 3039 Folio 81	)
pursuant to section 127 of the Corporations Act 2001 by:	)
flav 1	
Director Signature	
Anthony Mark Peacock.	
Director Full Name (print)	
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*Director/*Secretary Signature	
*Director/*Secretary Full Name (print)	
(*please strike out inapplicable *if Sole Director/Secretary write 'Sole')	

Sole Director J. Jean Secretary
GIAMEOS HOLDINGS PTY LTD

SOLE

Director
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PROJECT: 90 Melville St, Hobart

ADG Ref: 24468

Author: Alex Symes

### 24468 S M001

Subject: Basement Retention Wall

Date: 12 May 2022

ATTENTION: Hanz Lee - JAWs Architects, George Giameos -GCD, Stefan Giameos - Giameos

Developments, Tim Lucas - TSL Property Directions

## Introduction

This consultant design advice memo summaries the ground anchor requirements in the basement retention system for the above project

## **Project Description**

The project as described by the JAWs Architects drawings, involves the structural design and documentation of a 9 level residential development with 3 No. underground basement levels, located at 90 Melville Street, Hobart. The basement is proposed to extend to the full footprint of the site.

The structure will be predominately concrete framed with post-tensioned suspended concrete slabs supported by a combination of precast columns and walls. Lateral stability of the building is to be provided by precast concrete shear cores. The buildings are to be supported off high level foundations into Lower boulder beds as described by the geotechnical report.

Proposed basement shoring wall is formed of 600-900mm dia bored piles generally at 1800crs with a 175mm thick shotcrete wall spanning horizontally between. To temporarily restrain the piles 4 no. stressed ground anchors are to be installed per pile.

## **Design Standards**

The following standards shall be used as a minimum in the design of the building structure:-

- Building Code of Australia
- AS/NZS 1170.0 Structural Design Actions Part 0: General Principles
- AS/NZS 1170.1 Structural Design Actions Part 1: Permanent, Imposed and Other Actions
- AS2159: Piling Design and Installation
- AS3600: Concrete Structures
- ▶ AS4678: Earth Retaining Structures





90 MELVILLE ST ADG Ref: 24468 S M001\_90 Melville St\_Basement Retion Memo

Geotechnical Report by EDG Consulting Ref: M03058-1AB dated 24/01/2022.

## **Ground Anchor Description**

Ground anchors specified in the retention shoring design are temporary in nature and are not critical in the permanent design of the building.

The anchors are initially used in restraining the piled wall while the bulk excavation and foundations can be constructed safely while minimising disturbance adjacent properties. They generally consist of 2 to 4 15.2mm Día high tensile strands drilled and installed to a length of approximately 10m into the retained soil/ rock strata and grouted in position. Once grouted the anchors are then stressed by means of hydraulic jacks to resist the large retention loads and surcharges of the neighbouring buildings.

This process is an extremely common practice throughout most deep basement construction in Australia and is a proven technique making basement construction feasible. Without this measure deep basement construction would not economically viable as costs and logistics in doing without would be astronomical.

As mentioned previously the anchors are considered temporary as once all basement and ground level suspended slabs are cast and cured the anchors are no longer required to restrain the shoring wall. Once this stage of construction has been achieved the anchors will be decommissioned by means of hydraulic destressing.

Once destressing occurs anchors are no longer required for the stability of the basement wall and could be demolished if future developments of neighbouring properties required. The demolition of these anchors would be deemed low risk task of any future excavation.

Should you require any further clarifications of these items please contact the ADG representative below.

Yours sincerely

ADG ENGINEERS (AUST) PTY LTD

ALEX SYMES

Associate - Structural



# Residential Development 90 Melville St

Hobart, TAS

**Structural Performance Brief** 

Giameos Constructions and Developments Pty Ltd

16 February 2022



RESIDENTIAL DEVELOPMENT 90 MELVILLE ST

ADG Ref: 24468 SP001 Structural Performance Brief 16.02.2022.docx

16 February 2022

## **Document Verification**

Job Title RESIDENTIAL DEVELOPMENT 90 MELVILLE ST

Job Number 24468

Document Title Structural Performance Brief

## **Document Control**

Date	Document	Revision No.	Author	Reviewer
16/02/2022	Structural Performance Brief	00	AS	MO

## Approval for Issue

Name	Signature	Date
Alex Symes	Myen	16 February 2022

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## RESIDENTIAL DEVELOPMENT 90 MELVILLE ST

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RESIDENTIAL DEVELOPMENT 90 MELVILLE ST

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## 1 SUMMARY

This report outlines the minimum structural criteria adopted in the design of the 90 Melville Street at Hobart.

The project as described by the JAWs Architects drawings, involves the structural design and documentation of a 9 level residential development with 3 No. underground basement levels, located at 90 Melville Street, Hobart. The basement is proposed to extend to the full footprint of the site.

The structure will be predominately concrete framed with post-tensioned suspended concrete slabs supported by a combination of precast columns and walls. Lateral stability of the building is to be provided by precast concrete shear cores. The buildings are to be supported off high level foundations into Lower boulder beds as described by the geotechnical report.

The site is approximately 35m wide by 45m long and accessible by Melville Street on the north west boundary. The site is bounded by private property along each of the other boundaries and is currently being used as a paved carpark.

Buildings adjacent to the site and within the zone of influence of the basement comprise a five level development adjacent to the southwestern boundary and two level factory warehouses to the south and northeast

## 2 PROJECT DESCRIPTION

## 2.1 SCOPE

The structural engineering scope for the Prospect St project includes

- Design, documentation and certification of pad foundations, basement slabs, retaining walls, stairs, columns, lift shaft, suspended floors, structural steel, precast panels and load bearing masonry
- ADG will design the retention walls are in accordance with specific geotechnical information provided by the geotechnical engineer.

Key Elements that will be addressed in the design process include:

- Brief for Geotechnical Engineering required for basement and retention design.
- 3D lateral computer modelling of structure under wind loads to ensure most economical vertical structure is adopted.
- Preliminary profile sketches and rates for budgetary purposes.
- The use of post tensioning where applicable, results in overall weight / cost and time savings generally.
- Finite element computer analysis of all slabs (RAM), allowing the design to be refined to maximise cost savings and weight. This includes both post tensioned and reinforced slabs.
- Review and compare various wall / column systems available for the project (block / precast / concrete).
- Practical, technically complete and concise structural documentation.
- Full design and documentation of post tensioned elements to allow hard tendering of subcontractor



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Continuous input into the construction processes to solve timing and cost issues.

Provision of the following are specifically excluded:

- Preparation of shop drawings.
- Pool design and documentation.
- Temporary Shoring.
- Temporary construction items such as crane bases, scaffolding requirements, hoist requirements etc.
- Dilapidation Reports
- Roof Truss Design (layout plans to be provided by ADG Engineers, design and certification by Truss Manufacturer).
- Geotechnical advice, investigations and reporting.
- Lightweight or Steel Stairs.
- Design and certification of any proprietary products.
- Wind engineering advice (including pedestrian wind studies, cladding pressure testing and analysis etc.).
- Construction costings and quantity take-offs for costing purposes. Any quantities provided by ADG are to be verified by a qualified quantity surveyor.
- As-built construction drawings for structural reinforcement and subcontractor designed items.
- Verification and testing of materials for conformity with design specification requirements (i.e. concrete compressive strength testing).

## 2.2 THE PROJECT

This brief covers the design assumptions and constraints for the Melville St Development in Hobart.

Geotechnical investigations have been carried out by EDG Consulting (detailed in report Ref M03058-1AB dated 24/01/2022). The geotechnical reports indicate the following subsurface profiles:

▶ Unit 1 – Silty Clay Colluvium

Silty clay was encountered underlying a thin layer of concrete or asphalt and pavement across the site. The silty clay was generally described as high plasticity and of firm consistency in the upper metre becoming verystifftohardwithdepth. Minorcomponents of sand and rounded gravels were observed.

Unit 2a – Upper Boulder Beds

At a depth of about 4m a mixture of soil and cobbles was encountered. The proportion of clasts encountered in each of the boreholes were variable and between 0% to 70% in the upper portion of the unit. The upper portion of the unit was predominantly described as matrix supported.

The soil matrix comprised predominantly clay with minor components of sand and gravel. Borehole logs indicate a consistency of medium dense to dense, descriptors for a granular soil. We consider the use of cohesive consistency terms for the predominantly clay described soil matrix are more relevant and have inferred a hard consistency for the soil matrix.



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The cobbles were predominantly described as moderately to slightly weathered dolerite of inferred high to very high strength. Minor proportions of siltstone and sandstone cobbles were also noted. The cobble and boulder size encountered was variable but predominantly observed during borehole drilling as about 100mm to 300mm diameter and up to about 800mm diameter, respectively.

## 1 Unit 2b - Lower Boulder Beds

At a depth below about 10m the proportion of clasts encountered in each of the boreholes was described as between about 25% to 80% and predominantly about 60% to 70%. Some intervals of the borehole logs describe the material as clast supported at depths greater than 10m but this was not observed to be laterally consistent across the unit.

The descriptions of soil matrix materials and clasts were consistent with the upper portion of the unit with the exception that the clay matrix was described as either weakly or moderately cemented. We consider that the cementation described is consistent with a Tertiary aged soil in the process of lithification.

Ground water was recorded at an AHD of 20.00m.

## 3 ASSOCIATED DOCUMENTATION

This documentation must be read in conjunction with the following drawings and specifications.

## 3.1 STRUCTURAL SPECIFICATIONS

- SP002 Bulk Earthworks and Detailed Groundworks
- SP003 Concrete Masonry
- SP005 Construction of Ground Anchors
- ▶ SP007 Reinforced Concrete
- > SP008 Structural Steel
- SP009 Post Tensioned Concrete

## 4 STANDARDS AND CODES

## 4.1 INTRODUCTION

Structural engineering design of the building work is to comply with the relevant requirements of the Building Code of Australia, all relevant Australian Standards and other statutory requirements.

## 4.2 DESIGN STANDARDS

The following standards shall be used as a minimum in the design of the building structure:-

- Building Code of Australia
- AS/NZS 1170.0 Structural Design Actions Part 0: General Principles
- AS/NZS 1170.1 Structural Design Actions Part 1: Permanent, Imposed and Other Actions
- AS/NZS 1170.2 Structural Design Actions Part 2: Wind Actions
- AS/NZS 1170.4 Structural Design Actions Part 4: Earthquake Loads



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- AS2159: Piling Design and Installation
- AS3600: Concrete Structures
- AS3700: Masonry Structures
- AS4100: Steel Structures
- AS4600: Cold Formed Steel Structures
- AS4678: Earth Retaining Structures
- **)** Geotechnical Report by EDG Consulting Ref: M03058-1AB dated 24/01/2022.

The above is the minimum standards that should be considered. All other relevant standards and codes must be adopted as deemed necessary.

## 4.3 DESIGN LIFE

As a minimum standard, the concrete structure will be designed to have a "design life" of 40 to 60 years in accordance with Clause 4.1 of AS3600, the Australian Standard for Concrete Structures.

## 4.4 DURABILITY

The following exposure classifications for concrete elements in accordance with AS3600 have been adopted:

- Slabs on ground A1
- Footings A2
- Suspended slabs, columns and walls Interior Environments A1
- > Suspended slabs, columns and walls Exterior Environments B1.

Relevant concrete strengths and covers to reinforcement have been specified on the drawings.

All exposed structural steelwork is to be hot dipped galvanized in accordance with ADG drawings and specifications.

All non-galvanized steelwork is to be specified with a 25+ year to first maintenance surface finish, for its relevant exposure classification in accordance with AS2312.1 and AS2312.2.

Please refer to ADG structural documentation for all surface treatment and finish requirements.

## 4.5 DEFLECTION CRITERIA

## 4.5.1 Serviceability Performance Criteria

Floor Design Deflection Criteria

_		
)	Slabs	Span / 250 or 25mm (whichever is less)
)	Beams	Span / 500 of 25mm (whichever is less)
)	Supporting Masonry	Span / 500
>	Supporting Glass Façade	Span / 250 or 15mm (whichever is less)

Long Term Deflection



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Cantilevers

Cantilever / 125 or 15mm (whichever is less)

Transfer Structures

Span /500 or 25mm (whichever is less)

## 4.5.2 Lateral Deflection Criteria

Lateral movement under wind and seismic loads at serviceability loads

- > Total movement not greater than building Height / 500
- Inter-storey drift not greater than Floor to Floor Height / 500.

## 4.6 LOADING CRITERIA

The Design of the structure for stability, strength and serviceability shall take account of the effects arising from the following loading:

- ) Dead and Live
- Wind
- Earthquake.

Notwithstanding the above, the structure will be designed for additional loads imposed during construction and from the construction methodology adopted by the contractor. This office should be advised in advance if the loading criteria provided in Clause 4.7 dead and live loads will be exceeded.

The building structures will be designed using 3D finite element analysis to determine refined loadings and load paths through the buildings. Various structural stiffness conditions will be modelled to capture a rational loading envelope and ensure suitable redundancy within the system.

The building shall be designed for building importance level 3 and is not required to serve a post-disaster function.

## 4.7 DEAD AND LIVE LOADS

Unless noted otherwise, the following table provides a summary for the vertical imposed actions.

Please refer to Architectural floor plans for the extent of different areas of use and hence different live and superimposed dead loads: (loads marked "NR" are non-reducible)

Element or Area	Area Loads- kPa	Point Loads - kN (as applicable)	Comment
Dead Loads			
Balconies	2.0		
Lobbies	1.5		
Residential levels	1.5		
Car Park Floors	0.5		
Ground Floor Concourse / Terrace Areas	2		
Landscaping Areas / Planters	Assessed as per landscape		



## RESIDENTIAL DEVELOPMENT 90 MELVILLE ST

ADG Ref: 24468 SP001 Structural Performance Brief 16.02.2022.docx 16 February 2022

Element or Area	Area Loads- kPa	Point Loads - kN (as applicable)	Comment
	documentation		
Plant Room Floors	2.5		
Roof	1.0		
Refuse	1.0		
Live Loads			
Basement 1 to 2 Car Park Floors	2.5	13	
Ground Floor Commercial	4.0	3.6	
Ground Floor Concourse / Terrace Areas	5.0	31	
Residential Apartments	1.5	1.8	
Balconies	2.0	1.8	
Corridors, Hallways, Aisles, Meeting / Waiting Areas / Lobbies	4.0	4.5	
Stairs	4.0	4.5	
Ground Floor Landscape Areas / Planter	7.5		
Plant Rooms Floors	5.0	4.5	
Lift Motor Room	5.0	4.5	
Roof	0.25		

Area Loads and Point Loads are not to be applied in combination and are to be analysed as separate cases, and design carried out for the most adverse effect (Refer AS1170.1 for details).

## 4.8 EARTHQUAKE LOADING

The structure will be designed in accordance with AS1170.4 for the following criteria:

- ➤ Hazard Factor Z 0.08
- ♪ Site Sub-Soil Class Ce
- ▶ Importance Factor 2
- ▶ Design Working Life 50 Years
- ▶ Earthquake Design Category II
- ▶ Earthquake Loading Return Period 1 In1000
- ▶ Probability Factor Kp 1.3.



RESIDENTIAL DEVELOPMENT 90 MELVILLE ST

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## 4.9 WIND LOAD

The structure will be designed in accordance with AS11470.2 for the following criteria:

Wind Region A5

Terrain Category 2

Shielding Multiplier Refer AS1170.2

Topographic Multiplier Refer AS1170.2

Structure Importance 2

Ultimate Wind ARO 1 in 500

Regional Wind Speed (Ultimate) 45 m/s

Serviceability Wind ARO 1 in 25

Regional Wind Speed (Serviceability) 37 ms

Terrain Height Multiplier, Mzcat Refer AS1170.2

## 4.10 EARTH PRESSURE

Earth pressures shall be derived from the recommendation provided in the geotechnical reports.

## 4.11 LIQUID PRESSURE

Liquid pressure shall be derived from the recommendations provided in the geotechnical report.

The basement will be designed as a "wet basement" for the purposes of the structural design.

Retention drainage is to be provided to the retaining wall typically in accordance with the geotechnical engineer's recommendations.

The slab on grade will be jointed and drained using spoon drains to the perimeter which feed to the under-slab drainage.

Due to the level of groundwater observed in the boreholes on site being higher than the final proposed basement level; the contractor is to consider a suitable dewatering methodology for the pre and post-construction conditions.



RESIDENTIAL DEVELOPMENT 90 MELVILLE ST

ADG Ref: 24468 SP001 Structural Performance Brief 16.02.2022.docx 16 February 2022

## 5 MATERIALS

## 5.1 CONCRETE

Concrete strengths (generally unless noted on the drawings will be the following):

- Foundations/ slabs on ground : Min 40MPa
- > Suspended Floor Slab / Beams : min 40MPa
- ▶ Load Bearing Walls and Cols: min 40MPa
- Precast concrete elements: 40MPa min.

All concrete elements of the structure will comply with the durability requirements of AS3600-2009.

## 5.2 REINFORCING AND POST TENSIONING

Reinforcing steel will be grade 500 and all post-tensioning specified will be low relaxation super strand.

## 5.3 FORMWORK

Formwork class is to be in accordance with the architectural requirements and specification related to the different to the different areas of use and in accordance with the Australian Standards.

All products used shall satisfy the requirements of the Australian Standard and industry practice.

## 5.4 STRUCTURAL STEEL

All structural steel work will be designed in accordance with the relevant codes and AS4100.

## 6 STRUCTURAL SYSTEM

## 6.1 INTRODUCTION

The structural system proposed for this project has been assessed in terms of current expectations for flexibility, adaptability, cost and constructability.

The framing system is a concrete frame which utilised the lift and stair cores to provide lateral resistance. The horizontal post-tensioned floors will also be supported by these elements.

All external and internal walls will be non-load bearing unless noted otherwise. Precast, blockwork and insitu elements will be considered for the vertical structural elements.

## 6.2 LATERAL RESISTANCE

Resistance to lateral loading from wind and earthquake forces will be provided by cantilevered cores. Limited frame action will be considered.

## 6.3 FOUNDATION SYSTEM

All load bearing structural elements will be supported on high level foundations UNO onto lower boulder beds. The geotechnical investigation provided notes expected rock levels and ground conditions.

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## 6.4 FIRE RESISTANCE

All slabs I and above will be designed to achieve a 90 minute FRL typically to all levels. Please note there are no bathroom set-downs to typical 200THK levels requiring further consideration. Slabs L1 and below will be designed to achieve 120 minute FRL.

Columns and walls will be designed to achieve 120 minute FRL's typically.

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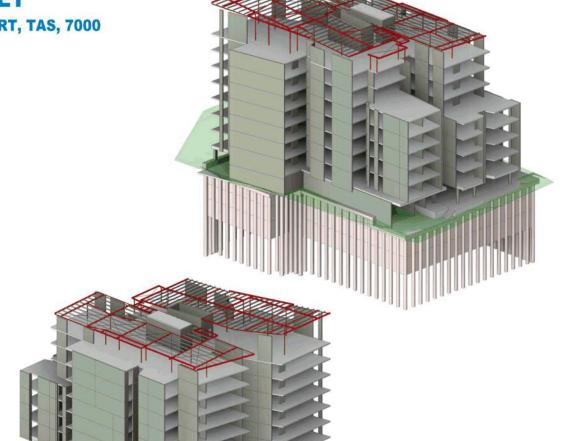
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509-011	FOOTINGS GENERAL ARRANGEMENT PLAN	1
509-031	BASSMENT 2 SENSRAL ARRANGEMENT PLAN	- 1
529-94.1	BASEMENT 1 GENERAL ARRANGEMENT PLAN	1
589-851	COVER GROUND GENERAL ARRANGEMENT PLAN	-
584,061	CROUND SCHOOL ARRANCEMENT PLAN	

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\$16-05.1	LEVEL OF GENERAL ARRANGEMENT PLAN	1
\$10-061	CEVEL ON GENERAL ARRANGEMENT PLAN	1
\$16-03.1	LEVEL OF GENERAL ARRANGEMENT PLAN	1
\$10-383	LEVEL OF GENERAL ARRANGEMENT PLAN	1



**ADG STRUCTURAL SERVICES** 

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## Agenda (Open Portion) City Planning Committee Meeting - 19/9/2022

# **90 MELVILLE STREET**

## 90 MELVILLE STREET, HOBART, TAS, 7000

### GENERAL

- REMEMBER.
  THESE SPANNESS SHALL BE FEAD IN CONJUNCTION WITH ARCHITECTURAL AND OTHER CROSSIC HARTS GRAININGS AND SPECIFICATIONS AND HITS SURF OTHER WHITE IN RESINCTIONS OF SECTIONS AS THAT HE SOURCE DRAWNED FOR CONSTANT AND DISCREPANCY SHALL BE REFERRED TO THE SUFFERNITHERISM STARM PROCEDURE WITH VALUE.
- 2. SETTING-OUT CHENSONS AND SIZES OF STRUCTURAL HEMBERS SHALL NOT BE OBTAINED BY SCALING THE STRUCTURAL DRAWINGS. AN SETTING-OUT DIMENSIONS SHOWN IN THE STRUCTURAL DRAWINGS SANLE BE CHECKED BY THE CONTRACTOR BEFORE CONSTRUCTION
- UNLESS NOTED OTHERWISE ALL LEVELS ARE IN METRES AND ALL DIMENSIONS ARE IN MILLIMETRES.
- 4. HATERIALS AND WORMANSHP SHALL BE IN ACCORDANCE WITH THE SPECIFICATION, CURRENT NCC BUILDING REGULATIONS AND AUSTRALIAN STANDARDS CODES AND THE REQUIREMENTS OF ANY OTHER RELEVANT
- 5. BURNS CONSTRUCTION THE STRUCTURE SHALL BE HAINTAINED IN A TABLE CONDITION AND NO PART SHALL BE EVERSTRESSED.
- A. BRESS SPECIFICALLY STATED CHRONING, DOCUMENTATION RELATES TO STRICTURE IN ITS PERMARKET CONDITION OILY, ADDITIONAL RECOMBERED OF CONTRACTION SEQUENCES, THEPWARE WORKS, PROPERTY, BRANCE, CONSTRUCTION LARGING SET WHE LEGS TO BE BOOMEDITED BY SPECIALIST CHISALILARIS AND CONTRACTIONS.
- 7. CONTRACTOR TO COORCINATE ALL SERVICES TO AVOID CLASHES WITH STRUCTURAL ELEMENTS. ALL EXISTING SERVICES SHALL BE LOCATED PRIOR TO THE COMMENCEMENT OF WIRKS.
- B. CONTRACTOR TO PROVIDE MINIMUM 25 HOURS NOTICE FOR ALL
- ALTERNATIVE DETAILS OR WHERE DETAILS HAVE NOT BEEN INCLUDED. WITHIN THE CURRENT DOCUMENTATION PRIOR TO PROCEEDING WITH
- 45 NO DENETRATIONS, CODING OR CHASING COMP THAN THOSE SHOWN ON THE STRUCTURAL DRAWAGE SHALL NOT BE PERMITTED WITHIN STRUCTURAL ELEMENTS WITHOUT WRITTEN APPROVAL.
- TE PROPRETARY ITEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS. ELEMENTS DESIGNED BY OTHERS SHALL BE INSPECTED AND CERTIFIED BY THE SAME AND WILL NOT BE INCLUDED WITHIN THE STRUCTURAL CERTIFICATION PROVIDED BY ADG

### STRUCTURAL MONITORING

- 1. PRIOR TO THE COMMENCEMENT OF EXCAVATION, THE CONTRACTOR SHALL UNDERTAKE A COMPREHENSIVE DILAMBATION SURVEY OF EXISTING ADJACENT BUILDINGS, PAVEMENTS AND SERVICES.
- 2. ESTABLISH SUBVEY MARKS AND MONITORING FOURMENT AT COTICAL LOCATIONS OR IN THE LOCATIONS NOMINATED ON PLANS.
- 3. SURVEY MARKS ARE TO BE ACCURATELY SURVEYED BY A LICENSED
- 4. RECORDS SHALL BE RESULARLY MUNITAINED OF ALL MINITORING RESULTS AND SUBMITTED TO THE PROJECT TEAM FOR REVEW SHOULD THERE BE MORE THAN SAM MOVEMENT OR MORE THAN THE NUMBATES TRIGGER LEVELS. THE CONTRACTOR IS 10 NOTIFY ADG ENGINEERS
- 5. REFER TO THE GEOTECHNICAL CONSULTANT FOR ANY GEOTECHNICAL

#### DESIGN CRITERIA

- 1. THE STRUCTURAL COMPONENTS DETAILED ON THESE DRAWINGS HAVE DEEN DESIGNED IN ACCERDANCE WITH ASJN251170 AND LOCAL AUTHORITY (PERMANERS, DESERT IN STRUCTURAL REPRESENTANCE ROSE DOCUMENT LINEESS NOTED OTHERWISE
- 2. FOR SURVEY INFORMATION RELATED TO THIS PROJECT, REFER TO
- 3. REFER TO ADE STRUCTURAL PERFORMANCE BREF FOR PURTHER
- STRIP FOOTINGS: MIN 600 NP4 WORKING BEARING CAPACITY.
- 5. SEARING PRESSURE UNDER FOOTINGS TO BE CONFIRMED ON SITE BY
- 6. REFER TO LOADING PLANS FOR FLOOR DESIGN LOADS
- PRORTAME LEVEL: 2 VS: 35 MVS (SER)

DESIGN PARAMETERS

- ANNUAL PROBABILITY OF EXCEEDANCE 1500
- HAZARD FACTOR DOS STRUCTURAL DUCTILITY PACTOR 2 EARTHOUAKE DESIGN CATEGORY: 3
- SITE SUB-SOIL CLASS: Co.
- STRUCTURAL STEEL EXPOSED INTERNALLY: ZINC BASED PRIMER NON-EXPOSED: ZINC BASED FRIMER

- ALL PIPE AND TRENCH EXCAVATIONS SHALL BE CARRED OUT CAREFULLY AND SHALL BE KEPT TO A MINIMUM SIZE, EXCAVATIONS SHALL BE BACKFELED WITH APPROVED GRANULAR MATERIAL AND SHALL BY PLACED IN LAYERS NOT EXCEEDING 200MM LODGE DEPTH AND COMPACTED BY VISRATING PLATE TO A MINIMUM DRY DENSITY OF
- I, THE CONTRACTER SHALL ALLOW FOR 2 NO FELD ORY DENSITY TESTS TO BE CARRED OUT AT MID-HOURT AND THAL SURFACE LIVEL OF BESCHILL IN PET STREMES SECTIONS I HETE OEEP FELD ORY DENSITY TESTS TO BE CARRED OUT IN ACCORDANCE WITH AUSTRALIAN STANDARD AS 1049 - TEST E.3.2.
- 3. EXCAVATE FOR BEAMS AND FOOTINGS TO THE OMENSIONS SHOWN ON THE DRAWNES ENGLISHED THAT THE BASE AND SEES OF THE EXCAVATIONS ALWAYS REMAIN FULLY COMPACTED.

- UNDERSIDE OF SLAB AREA AND ASSOCIATED BEAMS. THE MEMBRANE SHALL BE LAPPED 300mm MINIMUM AT JOINTS AND TAPED CONTINUOUSLY WITH MOSTING PROOF PRESSURE SENSITIVE THREE WRAP AND TAPE ALL PIPE PENETRATIONS ANY HOLES ARE TO BE

### FOUNDATION

- IS FOOTING DESIGN HAS BEEN PORPUSED BASED ON INFORMATION PROVIDED IN THE GEOTECHNICAL REPORT, IT IS THE BULLDERS RESPONSIBILITY TO MAKE REFERENCE TO THIS REPORT, AND ITS RECEIPMENDATIONS.
- 2. THE BULDER MUST BE AWARE THAT FOUNDATIONS MAY VARY BETWEEN TEST LOCATIONS REFERRED TO IN THE GEOTECHNICAL REPORT. IF FOLADATION CONDITIONS DEFER FROM THOSE DESCRIBED IN THE GESTECHNICAL REPORT IN PERFORMING EARTHWORKS OR FOOTING EXCAVATION, THEN AGG ENGINEERS MUST BE NOTIFIED IN WRITING IMMEDIATELY AS AN AMENOMENT TO THE SITE CLASSIFICATION AND/OR
- 4. FOR GENTEONICAL INFORMATION RELATED TO THIS PROJECT REFER TO 3. THIS DESIGN HAS BEEN BASED ON THE ASSUMPTION THAT THE GEOTECHNICAL OR OTHER SLOPE INSTABILITY PROBLEMS.
  - & FOOTINGS SHALL BE LOCATED CENTRALLY UNDER WALLS AND COLUMNS ON ESS NOTED DOMERNISE
  - S. ALL LIBRAR MATERIALS AND WATER TO BE CLEANED OUT OF THE
  - OF ALL FOUNDATIONS IMPEDIATELY AFTER VERIFICATION OF THE BEARING CAPACITY BY THE EEDITED INICAL ENGINEER. WHERE THE FOUNDING HATERIAL IS DEEPER THAN REQUIRED FOR THE FOOTING. THE EXCAVATION IS TO BE BADKFILLED WITH A WEAK MIX CONCRETE IN(0) TO THE UNCERSIDE OF THE FOOTING.
  - 3. UNLESS OTHERWISE APPROVED BY ADD ENGINEERS. THE LIMITATIONS



- FOUNDATION LEVEL WITHOUT THE APPROVAL OF AGG ENGINEERS.
- 9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AN EXCAVATION IN A STABLE CONDITION WITHOUT ADVERSELY AFFECTING SURROLADING PROPERTY, INCLUDING SERVICES, THIS INCLUDES OBTAINING ALL NECESSARY APPROVALS FOR SHORING AND ANCHORING SYSTÈMS. THE CONTRACTOR SHALL BE RESPONDING FOR DETERMINING AND LOCATING ALL EXISTING UNDERCRIBEDING SERVICES PRIOR TO ANY EXCAVATION COMMENCIAL
- GREATER DEPTH HAY BE NECESSARY TO ADMENE SPECIFIED FOUNDING
- PRECAUTIONS ARE TO BE TAKEN TO AVOID MOSTURE VARIATIONS. THE HATTERIAL UNDERLYING THE SITE IS EXPANSIVE CLAY. THE LOWING PRECAUTIONS ARE TO BE TAKEN TO AVOID MOISTURE
- BATONS.

  a. AVIOL LANGSCAPE PLANTING (LOSE TO FOOTINGS.
  b. PROPET REPAIR OF LEAVING SERVICES.
  c. FINSHED LEVELS SHALL ENGINE SIRFACE WATER CAN NOT POIND AGAINST FOOTING.

#### CONCRETE

- NORP AND HATTOKES CHELL BY IN ACCORDANCY WITH ASSISSO AND THE CONCRETE SPECIFICATION
- 2. CONCRETE SIZES DO NOT INCLUDE PINSHES
- THE DRAWINGS SHALL BE MADE IN CONCRETE BLEMENTS WITHOUT ENGINEER'S APPROVAL.
- CETALS, HANTAIN MINIMUM COVER TO REINFORCEMENT AT THESE
- 6. PROVICE A HORIZONTAL SUP JOINT TO THE UNDERSIDE OF CONCRETE
- SLABS AND SUPPORTING MASONRY WITH TWO LAYERS OF SUITABLE MEMBRANE IMALTHEE OR EQUIVALENTI, VERTICAL PACES SHALL BE SEPARATED BY APPROVED BOWN ROFAKER
- 3. CONSTRUCTION IDN'TS WHERE NOT SHOWN SHALL BE LOCATED AND
- CONTINUOUS THROUGH CONTRACTION JOINTS.
- 9. THE PINISHED CONCRETE SHALL BE A DENSE HOHOSENEOUS HASS. COMPLETELY FILING THE FORMWORK THOROUGHLY EMBEDDING THE RENEGREEMENT AND FREE OF STONE POCKETS, ALL CONCRETE NULLONG SLABS ON GROUND AND FOOTINGS SHALL BE COMPACTED.
- 10. CURE CONCRETE BY AN APPROVED METHOD FOR THE FOLLOWING PERIODS OLIVING REGARD FOR THE FLOOR PRIGHES! a. (XPOSURE CLASSIFICATION A), A2, CONTINUOUSLY CURE FOR
- b. EXPOSIBE CLASSIFICATION BL BZ. CL CZ CONTINUOUSLY CLEE
- H. CONSTRUCTION SUPPORT PROPPING SHALL BE LEFT IN PLACE WHERE
- EQUIRED TO ANOD EVERSTRESSING THE STRUCTURE DUE TO 12. STRIPPING AND BACK PROPPING OF SOFRITS SHALL NOT ECCUR WATE.

  CONCRETE HAS REACHED 15% OF SPECIFED 28 DAY STRENGTH NO
  MASONRY WALLS SHALL BE BUILT ON SUSPENDED ELEMENTS UNTIL
- REMOVAL OF ALL FORMS AND PROPS. 19 UND ALL CONCRETE SHALL HAVE A SLUMP OF ROMA AND A MAXIMUM

NOMINAL ASSESSMENT SIZE OF 20mm

- WHERE IL IS THE PROJECTION BEYOND COLUMN OR WALL FACE, AND TO FORMADEK OF SLARS WHERE NOTED ON PLAN HANTAN THE SLAR
- \$6.00 NOT BUILD BRICK OR BLOCKWORK ON SUSPENDED WORK LATE, ALL SHORING HAS BEEN REMOVED AND THEN ONLY AFTER BRICKS OR BLOCKS HAVE BEEN STACKED ADJACENT TO THER FUTURE POSITION.
- 19. THE BELOW TABLE IS TO BE USED WHEN CONCRETE PROPERTIES ARE

## CONCRETE PROPERTIES SCHEDULE TYPE CONCRETE COVER (mm) SPECIAL F00TINGS ALL N32 75 50 COLUMNS INTERNAL EXTERNAL N32 1632 BITERNAL N32 50 30 EXTERNAL N32 50 40 1632

### CONCRETE CONTINUED

- 18. COVER IS THE CLEAR DISTANCE BETWEEN ABY REMFOREING BRILLIDING FITHEMIS AND THE FACE OF THE STRUCTURAL ELEMENT.
- TIL PROVIDE DOWN POLYTHENE HOSTURE BARRER FOR SLABS AND BEAMS
- SLABS THE BAR CHARS SHALL BE AT 1988 I 1999 INDIGHT HAXPHUM
  CENTRES, BAR CHARS SHALL BE PROVIDED ALONG THE EDGES OF ALL. 3. SLAB REMOREDMENT SHALL EXTEND 45mm ONTO HASDWRY SUPPORT CONSTRUCTION JOINTS, STOP ENGS SHALL NOT BE USED TO MAINTAIN
- AND WATER PENETRATION AND ARE CLASSIFIED BIL
- 23 IN EXPENSION CONDITIONS DEPARTMENTAL THAN BY USE ONLY PLASTIC

### REINFORCEMENT

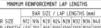
- AUL MATERIAL SUPPLEES TO HAVE A CURRENT AUSTRALASIAN CERTIFICATION AUTHORITY FOR RENFORCING AND STRUCTURAL STEEL
- 2. THE ENGINEER SHALL BE GIVEN A MINIMUM OF 24 HOURS NOTICE FOR REINFORCEMENT INSPECTION AND CONCRETE SHALL NOT BE DROCKED UNTIL FINAL APPROVAL IS DRITANED.
  - WALLS AND SON OF BOTTOM PENFORCEMENT SHALL BE COGGED TO ACHEVE ANCHORAGE AT SIMPLY SUPPORTED ENGS.

  - 5. UND AT PENETRATIONS DETAILED REINFORCEMENT SHALL NOT BE CUT BUT SHALL BE GATHERED EQUALLY TO EACH SIDE OF PENETRATION AND EXTRA REINFORCEMENT PROVIDED BETWEEN THE PENETRATIONS AS DEFITED BY THE ENGINEER A MARKET DISTRICTION RADIS TO MAIN DERIFORCHMENT ARE NOT SHOW
  - IN BRAWNES PROVIDE HINHUM MIS AT 300 CENTRES FOR RC SLABS AND MI AT LEO CENTRES FOR PT SLABS, LAPPED LÉDING WHERE REGURES.
  - REFERENCE NUMBER FOR MESH TE AS 4670. B. LAP MESH 2 TRANSVERSE BARS PLUS 50mm OR 250mm WHICHEVER IS
  - 1. ALL PULL-OUT BARS SHALL BE "TEMPORE" OR QUENCHED AND CHPCRED PRODUCT. ALL BENDING AND RESENDING OF RENFORCEMENT HALL BE IN STREET ACCORDANCE WITH THE REQUIREMENTS OF
  - 18. WHERE CRUL IS EPOXY GROUT IS CALLED UP ON THE DRAWINGS USE HUTI HY-250-R MORTAR INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS OR AN APPROVED EQUIVALE UNLESS NOTED OTHERWISE, REFER TO POST FIXED ANCHOR NOTES FOR DETAILED REQUIREMENTS
  - M E DEMENDEDMENT AND DOCT TENSIONING DATES AND MOTED IN THE LE PRIMERIZZANI AND MOST TRANSMANG RAPES AND MOTEON IN THE DECOMENSATION ENGINEE ARE AN ENTERHALD OF THE QUANTITIES INCLUDED FOR STRUCTURAL ELIPHINTS IN THE FINAL, CASE ONLY. THE CONTRACTOR DEPOSIT SECTION OF STRUCTURE ADMINISTRATION, REPOSIT, PURIL PROMESTING E. TERMINION OF STRUCTURE ADMINISTRATION, REPOSIT, PURILIFIS, SCHEDIS ETC., MOLLIAG MARGING, WASTE AND ADDITIONAL BUANTITIES REQUIRED FOR CONSTRUCTION ACTIVITIES.
  - 12 ALL BENFORTHENT SHALL BE FRINLY SUPPORTED IN BENFORTHEN SHALL BE TED AT ALTERNATE INTERSECTIONS ON EXPOSURE CONDITIONS EREATER THAN BY USE ONLY PLASTIC CHARS.)
  - 13. WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWNING OR APPROVED BY THE ENGINEER. JAPTER WRITTER REGLESTI.
  - N. JOGGLES TO BARS SHALL BE IN BAR GIAMETER OVER A LENGTH OF IS BAR DIAMETERS UNIO 15. ALL BARS IN TRIPPER BAR GROUPS SHALL BE THE SAME LENGTH
  - SYMBOLOGY IS SHOWN ON PLANT. SPACE BARS AT APPRICIMATELY BARS TO BE SCHEDULED AS STRAIGHT AND DRAPED ON SITE IN DRECTIONS INDICATED ON PLAN AT TIME OF PLACING BAR.
  - 13. DISTRIBUTION REINFORCEMENT WHERE REQUIRED TO BE LAPPED 450mm HINMUM AND COGGED 300mm AS REQUIRED, ALL DISTRIBUTION BARS TO BE COSSED AND LAPPED AS REQUIRE IAS MAIN BARSI LOCAL TO SET DOWNS AND STEES/EDUDS IN SLAR



TO BE LOCATED ON CENTRE LINE OF COLUMN IN BOTH DIRECTIONS OF MESPAN BETWEEN COLUMNS AS INDICATED.

### REINFORCEMENT CONTINUED





BARS TO BE SCHEOULED AS STRAIGHT AND DRAPED ON SITE IN DIRECTION INDICATED ON THIS PLAN AT THE OF PLACING BAR. THESE BARS WILL BE SBOWN STRAIGHT ON TOP REINFORCEMENT PLAN BARS IND DIAMETER AND ABOVE - PROVIDE WITH PRE FORMED CRAIKES AS INDICATED ON

B. THE BELOW TABLE IS TO BE USED WHERE REINFORCEMENT LAP LENGTHS ARE NOT SHOWN ON STRUCTURAL DRAWINGS.

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GIAMEOS CONSTRUCTIONS AND DEVELOPMENTS PTY LTD

98 MELVILLE STREET, HOBART, TAS, 7000

GENERAL NOTES SHEET 02

STRUCTURAL	APPROVAL		
Designed By A.S.	Checked by M.C.	Approved By M.O.	
Projection 24468	Drawn By _191,	1 : 100	(8.81
S01-102			2

**APPROVAL** NOT FOR CONSTRUCTION **PRINT IN COLOUR** 

## Agenda (Open Portion) City Planning Committee Meeting - 19/9/2022

## **90 MELVILLE STREET** 90 MELVILLE STREET, HOBART, TAS, 7000

#### PRESTRESSED CONCRETE

- CHP AND INSTALLATION SHALL BY IN ACCORDANCE WITH AS 3400, EXCEPT WHERE VARIED BY THE
- SHRINKAGE STRAIN OF 700us AT 56 DAYS AND A MAXIMUM w/c RATIO
- 3. ALL MATERIAL SUPPLIERS TO HAVE A CURRENT AUSTRICAGIAN CERTIFICATION AUTHORITY FOR REINFORCING AND STRUCTURAL STEEL JACRSI PRODUCER CERTIFICATE, PRE-STRESSING TENDONS TO CONSIST OF SUPER GRADE STRESS RELIEVED LOW RELAXATION STRANGS (TO
- AS 1919 SHALL BE: a. 12 Page STRAND, 1914N MIN BREAKING LOAD, MAX JACKING
- LCAD ISGNUSTRAND. 25% = 39km AT 48995 MAX, DR 7HP2. TS 2mm STRAND, 250km MW 89EAKING LOAD, MAX, JACKING 25% = 534N AT 48HRS MAX, ER 23MPa.
- A ALL CARLY DEEDNATY DIMENSION SHOWN ON DRAWNES ARY TO THE INDERSIDE OF DUCTS FROM SLAR SOFFIT EXCEPT AT ANDIOPAGES MODESHIE OF DOUS HIMP SLAD SUPIL EXCEPT AT ACCORDANG MEETE DIPENSIONS MODERED ARE TO THE CENTRELINE OF THE TENDON BOTTS SWALL BE LOCATED WITHIN SHIR OF CORRECT POSI-AND BE PARABOLIC BETWEEN HIGH AND LOW POINTS UND. DUCTS SMALL BE SEQUELY SUPPORTED AT MAK NORMM CENTRES.
- 20ww. MINOR DEVIATIONS FROM THE SPECIFED PLAN POSITION MAY DISCREPANCES OR OBSTACLES TO ADD ENGINEERS FOR DIFECTION PRIOR TO INSTALLATION
- ALL STRESSING OPERATIONS SHALL BE BY EXPERIENCED PERSONNEL AND ENSURE SAFETY OF ALL SITE PERSONNEL DURING STRESSING.
- DETAILS AND CAUBRATION CHARTS SHALL BE PROVIDED A MIN OF 3 DAYS BEFORE EACH STRESSING STAGE AND APPROVAL OBTAINED FROM THE ENGINEER FOR GROUTING AFTER EXTENSIONS HAVE BEEN
- R. ALL SACKS AND GALISES SHALL BE CALEBRATED BO MOST THAN 1 POWER DETOILS USE ON THIS SITE, CHARLES SHOWING BENTFICATION
  NUMBERS OF EQUIPMENT SHALL BE SUPPLIED TO ADD ENGINEERS
  PROR TO USE ON THIS SITE.
- 9. TOLERANCE ON REQUIRED TENDON EXTENSION SHALL BE -/- 5X.
- 5 DAYS AT 22HPAI AFTER CASTING UNIO, CONCRETE STRENGTH TESTS USING SITE CURED CYLINDERS SHALL BE MADE TO AVOID OVERSTRESSING THE CONCRETE.
- #L EXPECTED LOSSES DUE TO SHANKAGE CREEP, RELAXATION, FRICTION EXPECTED LOSSES DUE TO SHRANGEE, CHEEP, RELAXATION, HE HAND CRAW IN TO BE SUPPLIED TO THE INSIDER I WERE PRIOR: SITE ASSEMBLY, THE CESSION ASSEMBLY A THIN AND SOME & THE BEEP DUCTS OF ZIN'S COLATED STEEL HAVING A CURVATURE CO-EMPICENT DUI = 0.20 AND AN ANDULAR COEMPLEINT (80 = 0.02)
- PLANKS ON BLOCKS ACROSS SLAB BANDS FOR ACCESS AND RESTRANT OF CONCRETE PUMP LINES OR PLACE LINES ON TIMBER
- 19. GROUTING SHALL BE CONDUCTED WITHIN IN BAY'S AFTER FINA
- REMOVED AND RILLED WITH WELL COMPACTED STIFF CONCRETE
- 15. PRESTRESSED SLABS SHALL HAVE ZERO PRECAMBER UND.
- 95. IMPERIATE LOSS DESIGN ASSUMPTIONS ENGINEER TO BE ADVISED OF THESE IF THEY ARE NOT APPLICABLE.
- 19. PLACING OF REINFORCEMENT SHALL BE COORDONATED TO SUIT PLACING OF PRESTRESSING TENDOWS.

#### PRECAST COLUMNS & WALLS SUPPORT OF UNITS TO BE THE

- REBATE DETAILS, FRISHES, PATTERNS, COLOURS, WATERPROOFING AND FIRE BARRIERS
- HAMPHY STRUCTURAL THICKNESSES AND DO NOT INCLUDE ANY REBATIES OR 26 ALL PULL OUT / STARTER BARS ARE TO BE TEMPORE GRADE 500 PLUS PATTERNING ETC
- A ADDITIONAL CONCERNATION AND ADDITION AND ADDITIONAL AMOUNTS AND ADDITIONAL ADDITIONAL
- 6. UND. HINHUM CHARACTERISTIC COMPRESSIVE STRESS OF CONCRETE. EV-25 MPs AT LIETING FROM MOULD
- 3. ALL PERRIEFS TO BE HOT DR GALVANCED TO AS MISS ENTER
- BE ALLOWED BETWEEN AND/CRACE -/- NORM, NUMEYER, REFER ANY 9, ALL CAST IN FERRALES ARE TO HAVE NO AND/GRACE BARS AND SHALL BE CAPABLE OF DEVELOPING THE PULL TENSILE AND SHEAR CAPACITY OF THE BOLT / BAS TO BE USED IN CONJUNCTION WITH THE PERSONS.

  - 12. LOCATE GROUT TUBE VENTS TO SUF ARCHITECTURAL REQUIREMENTS.
  - 49 UND CONCRETE COURS TO DESIGNATIONS TO ME HOUSE ALONG AFTER
  - SA, THE REMOREPHINE SHOWN IN THE DETAILS IS INDICATIVE ONLY. REFER TO THE COLUMN AND WALL SCHEDULE FOR REINFORCEMENT, CONCRETE STRENGTH AND ADDITIONAL DETAILS.
- 10. TENSIDNING IS REQUIRED IN 2 STAGES IAPPROX, 244RS AT 7MPs AND 15. FOR ALL PRECAST TERMINATION AND PRECAST TO INSTITUTE THAT SEEDS IN THE SECOND IN SECURITY OF THE SECOND IN SECOND IN SECURITY OF THE SECOND IN SECON TO THE INSTRUCTION DETAILS.
  - 16. GROUTING OF DOWELS AND JOINTS SHALL BE CARRED OUT USING AN STORED, HANDLED AND PLACED IN STRET ACCORDANCE WITH THE HANDLACTURES SPECPICATIONS. UND GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH EDUR. TO THAT OF THE ELEMENT ABOVE
  - ACCORDANCE WITH ASSETSE2 AND ASSISTER. INTIALLY TEST 2 MORTAR CUBES AT 1, 7 AND 28 DAYS TO ESTABLISH COMPLIANCE, THEN TEST 2 DUBES AT 28 DAYS FROM EACH BATCH OR PLOOR LEVEL.
  - 18. ALL FAMEL JOINT & CLIPPLY JOINT LOCATIONS TO MY COLORDWATED WITH THE
  - 19. THE PRECASE PANELS HAVE BEEN DESIGNED FOR IN SERVICE CONDITIONS ONLY BE LEADS THAT THE PRECASE ELEMENTS ARE SUBJECTED TO AFTER THE PREPARENT STRUCTURE HAS BEEN COMPLETED.
  - 28.IT IS THE RESPONSIBILITY OF THE PRECAST SUBCONTRACTOR MANUFACTURER TO DESIGN ALL PRECAST ELEMENTS FOR STRESSES IMPOSED. DURING REMOVAL FROM THE MOULD HANDLING, LIFTING. TRANSPORTATION AND ERECTION
  - 21 DIGING FRECTION OF PREFAST REPRENTS. THE CONTRACTOR SHALL PROVIDE COMMO ERCTION OF PREZIST EXPENTS, THE CONTINUEDS SHARE PROVIDE HELL NECESSARY TEMPORARY SUPPORTS TO ENGINE STABLITY OF TO PRECAST ELEMENTS UNIT, ALL PERMANNET STRUCTURAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE ORGANISS. BRECTION PROCEDURES ARE TO BE IN ACCORDANCE WITH THE PRECAST MANUFACTURERS CESION AND ARE TO ENSURE THAT THE PROCAST ELEMENTS ARE NOT OVERSTRESSED DURING CONSTRUCTION.
  - 22. ALL REINFORCEMENT AND CONNECTIONS DETAILED ON ASSOCIATED DRAWINGS ART FOR PRECAST ELEMENTS. IN PLACE COLD
  - 28 THE PRICASE SUPPLIES SHALL ALLOW FOR ALL STITLINGS

### PRECAST COLUMNS & WALLS CONTINUED

- INC CO-ORDINATE ALL DRAWNES AND DETAILS IN RELATION TO FIXINGS AND
- 25,PROVIDE L BARS TO EVERY PANEL CORNER, SIZE TO MATCH EDGE TRIMPER, THEIR LAPPING WITH U BARS MAY BE USED IN PLACE OF L BARS TO REDUCE LAPS IF NECESSARY.
- REINFORCEMENT AND ALL BENDING AND RE-BENDING OF BARS IS TO BE IN STRICT ACCORDANCE WITH AS 3600.
- 49 CHARTOLETINA CESSALES THAT WHISH DC DVSHED HIS CHICKETINA OC

### DEMOLITION

- LL DEHOLITION IS TO BE IN ACCORDANCE WITH ASSURE . DEMOLITION
- INSPECTED FOR SOUNDNESS BY A STRUCTURAL ENGINEER SUITABLY OPERENCED IN DEMOLITION WORKS. ANY UNSUUND ELEMENTS TO BE MADE GOOD BEFORE PROCEEDING WITH WORKS.
- A. INDICATIVE CONDICIONATIONS OF EVICTING STRUCTURAL IN ENDICES NOCATIVE (OMIGNATIONS OF EXISTING STRUCTURAL ELEMENTS Expresented on these drawings are based on information Presented on the existing conditions a lodge of applicated Elemes plans prepared by the architect based on survey Gramines. The contractor is responsible for herpication of DEMOLITION OF EXISTING STRUCTURE. WHERE CONFLICT OCCUR BETWEEN DRAWINGS AND ACTUAL CONDITIONS ENCOUNTERED ON SITE THE CONTRACTOR SHALL CONTACT THE STRUCTURAL ENGINEERS ADD FOR ADVICE IN WRITING PIKIN TO PROCEEDING WITH DEMOLITION
- THE EXTENT OF THE DEPOLITION OF EXSTING STRUCTURE (PEPRESENTED ON THESE DRAWINGS) IS INDICATIVE ONLY, REFER TO THE ARCHITECTURAL DRAWINGS FOR ALL (IMPOSIONAL, /SET DUT
- 6. THE DEMOLITION DRAWINGS PREPARED BY ADD SHOW THE GENERAL KTENT OF DEHOLITON AND IDENTIFIES WHERE PERHANENT SUPPLEMENTARY SUPPORT STRUCTURE IS REQUIRED TO FACILITATE THOUGH AND TO MAINTAIN THE STRUCTURAL INTEGRITY OF THE NOTICE THE THAT REMAINS AFTER THE DEPUT AND THE
- DEVELOPMENT OF DETAILED PROCEDURES AND WORK METHODS FOR THE DEMOLITION OF ELEMENTS OF THE EXISTING BUILDING REMAINS THE RESPONSIBILITY OF THE DEMOLITION CONTRACTOR. THE DEMOLITION CONTRACTOR SHALL UNDERTAKE THE NECESSARY STRUCTURAL DESIGN ANALYSIS REQUEED TO ASSESS AND VERFY THE STRUCTURAL ADEQUACY OF THE PROPOSED DEMOUTION PROCEDURES AND SHALL PROVICE ADDITIONAL TEMPORARY BRACING / PROPPING AS REQUIRED. TO PERMIT SAFE DEMOLITION AND HAINTAIN THE STRUCTURAL
- B. IF TEMPORARY SUPPORT IS REQUIRED, DERTPICATION FOR ITS DESIGN AND INSTALLATION IS REQUIRED FROM A PROPESSIONAL ENGINEER ENGAGED BY THE CONTRACTOR.
- 9. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SELECT APPROPRIAT SEMOLITION SEQUENCES, PROCEDURES AND METHODS TO ENSURE THAT DEMOLITIES WORKS DO NOT DISTURB RETAINED SECTIONS OF ADJACENT
- 10. NO "OVER-CUTTING" WITH LARGE CHAMETER SAW BLACES IS TO OCCUR.
- TI. ALL DEMOLITION WORKS ARE TO BE CARRED DUT USING "LOW MPACT" DEMOLITION TECHNIQUES IE.G. : PLAME CUTTING OF STEEL BEAMS, DEMOLITION OF REINFORCED CONCRETE STRUCTURE WITH HAND HELD AUDITUATE THE THAT THE PROBRED TO CORRESPO 24 LITTLE THAT THE ATTORITY OF THE RETAINED STRUCTURE IS ALT COMPROMISED

#### FORMWORK

- POATON AND PROFORMANCE OF THE PORHWORK
- 2. ALL WORDHANSHP AND HATTRIALS SHALL BE IN ACCORDANCE WITH
- STACKED MATERIALS EXCEEDS THE DESIGN LOADS AS DETAILED ON THE LOADING PLANS
- A. REFER TO THE ENGINEER FOR MINIMUM BLOX-PROPPING REGULEREMENTS. ARRE TO THE DECREE FOR IMMITM BLID-HOUSE GOURDMENT.

  OF MAIL TSERIES FOR LUDGES, TYPICAL, FROOK CONCEIL FRAMES SHALL

  ES SEPPENDO BY AT LEAST I COMPLIED FLOORS UNKER IN AUDIO

  FOR ANATHERS I ELEMONIS WERE SEPPENDER FLOORS HAVE POST
  FENCIONES, FINAL STEEDING SHALL BE CARRED OFF PORT TO

  ENCOMETE FOUR STEEDING SHALL BE CARRED OFF PORT TO

  FLOORISE FOUR STEEDING SHALL BE CARRED OFF PORT TO

  FLOORISE FOUR STEEDING SHALL BE CARRED OFF THE HOUSE

  FLOORISE FOR STEEDING SHALL TROODS WARE FRALL.
- THE PERMANENT STRUCTURE WITHOUT PRICE ENGINEERS APPROVAL
- A FOR EMISH AND EXPRESSED CLASS REFER TO THE SPECIFICATIONS
- SHALL EXTEND AT LEAST 3 LEVELS BOLOW THE PLOOR BEING CAST PROP REMOVAL, PROGRAMMED TO AVOID DISTRESS TO PREVIOUSLY CAST FLOORS. RE-SHORING OR BACK PROPPING IS SUBJECT TO THE APPROVAL OF THE PROJECT DESCN PAGINERS.

- 1. THE CONTRACTOR SHALL ALLOW FOR IN THEIR PRICE ALL COSTS. ASSOCIATED WITH THE DESIGN, SUPPLY INSTALLATION AND REVOLUD. OF ALL TEMPORARY BACK PROPERS SAFETY SCREENS SCAFFOLDING AND OTHER REQUIREMENTS OF THE CONSTRUCTION PROCESS. THE CONTRACTOR SHALL ENGAGE SUITABLY QUALIFIED BROMBER REFERRED TO AC YOUNDALTIONS DISCOURSE TO DOCKNI MORETY AND OTHER
- CONTRACTOR ENGAGERING DRAWINGS TO THE STRUCTURAL ENGAGER FOR INFORMATION
- 1. IT IS THE CONTRACTOR'S RESPONSIBLITY TO ENSURE THE OVERAL IT IS THE COMMONITIONS REPORTED TO BROWN THE COMMONITY STREET OF STREET OF THE THE AND NO PART IS OVERSTRESSED QUE TO CONSTRUCTION IN NOTALLAND WE PRODUCED AMOUNT EQUIPMENT OURNING CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN ADVICE FROM THE CONTRACTOR'S ENGINEER.
- STATEMENTS PREPARED AND SUBMITTED FOR GENERAL REVIEW TO ENSURE IT IS IN ACCORDANCE WITH THE DESIGN INTENT.
- 5. ALL VERTICAL DISPLACEMENTS AND HOVEMENTS ARE TO BE LIMITED. TO ENSURE THE STRUCTURE IS NOT SUBJECTED TO LOADS OR THEW TRIMERS YEAR OF ZZERTZIO LIBRICTURES DIGNISS ZTRIMENO THE STRUCTURE IS BEING TEMPORARLY SUPPORTED.
- SKORENKE, PRE-LOADING OF STREETLINKE ELEMENTS MAY BE REQUIRED

  BE LOAD BEARING BEKKS TO BE LAD PROOF UP, DICTOT FOR THE TOP

  COURTE LOADING OFFICENCE OFFICENCES.

### STRUCTURAL BRICKWORK / BLOCKWORK

- BLOCKS DEFIFW ACCORDING TO AS 2739. ALL BRICKS SHALL HAV MINIMUM COMPRESSIVE STRENGTH OF 25 MPW TO AS 1225. THE
- UNRESTRAINED FIVE-YEAR EXPANSION OF BRICKS SHALL BE 0.7mm/m. 3. LIND THE NOMENUL PROPORTIONS BY VIOLINE OF HORTAR SHALL BE HS IN ACCORDANCE WITH AS 3700 TABLE 111, WITH A 28-DAY COMPRESSIVE STRENGTH OF 5.5 MPs.
- LIND, SIGNIT USED TO FILL CAVINE'S AND CIENT MIRCHESTON STRENGTH OF HASONRY SHALL HAVE A MINIMIM 28-DAY COMPRESSIVE STRENGTH OF 28 MPA AND A SLUMP OF 225-250m, WITH A MAKENIA MODESSATE OF Nam, PROVIDE CLEAN BUT HOLES AT BASE OF PLASTERS AND EVERY CORE OF REINFORCED WALLS.
- SOTING VERTICAL SPACING FOR ALL CONCRETE BLOCKWORK CONCRETE RECKNORY AND CALCIER SLICATE RECKNORY
- A FULLY BYD FACE SHELLS AND ODESS MERS IN HOLLOW BLOCK WALLS
- HOLLOW BLOCKWORK OPENINGS GREATER THAN GORNY VERTILLIY CE HORCONTALLY SHALL BE RINNEDD AT THE SIDES AND BOTTOM BY FILLING AND GOME AND REPORDER WITH MUZ EXTERNING SOONS PAST DENNING. THE TOP OF THE OPENING SHALL HAVE A RENDEZICE UNITE. BEAM, ARCH BAR OR STEEL ANGLE SUPPORT AS DETAILED.
- 8. ALL TES AND REINFORCEMENT SHALL HAVE HINHUM CLEAR COVER OF San TO EXTERNAL FACE OF MASONEY
- 9. ALL WALLS SHALL BE THEO OR BONDED AT THEIR INTERSECTIONS
- 11, NO CHASES OR HOLES SHALL BE MADE WITHOUT PROR APPROVAL OF 12 ALL TES NOTED, HANGFACTURED BY "CERRA METALWORKS" OF
- ED EQUIVALENT, TIES TO BE FIXED TO CONCRETE WORK WITH 2 No. DAMSET COME COM
- 19. PROVIDE CAVITY WALL TES AT 600mm CRS BOTH VERTICALLY AND HORIZONTALLY LING. TIES TO BE 3 TOMM CIA. SALVANISED OR EQUIVALENT.
- 14. WATERPROOF AND FREFROOF JOINTS TO ARCHITECTURAL CETALS, FOR LOCATIONS REPER TO ARCHITECTURAL DRAWNES. 15. WHERE CONCRETE SLAB IS SUPPORTED IN BLOCKWORK WALLS. THE
- TOP COURSE OF BLOCKS SHALL BE EITHER SOLID BLOCKS OR HOLLOW BLOCKS WITH CANTIES FILLED TO A SMOOTH SURFACE.
- 17. WHERE WALLS ARE NON-LOAD BEARING, PROVIDE HORIZONTAL AND VERTICAL SEPARATION AT CONCRETE WITH 20NN COMPRESSIBLE
- LOAD GLAND BRUSS TO BE LAW PRODUCE, CALLY FOR THE LIP COURSE WINN SEPTORTING A CONCRETE SLAB OR BEAM, BRIDWOOKS SAKEL HAVE A SMOUTH LAYER OF MORTAR ON TOP, WITH 2 SHETS OF WLORE OR APPROVED BOWNALINT, THE TOP 2 COURSES OF BROX SHALL HAVE REINFORCED BED JOINTS.
- 19. VERTICAL JOINT LOCATIONS TO BE AT 12000mm MAXIMUM CENTRES AND AT 6000mm FROM CORNERS AND AT LOCATIONS AS SHOWN ON ARCHITECTURAL CRAVINGS.
- a. AT MAJOR CHANGES IN WALL HEIGHT b. AT CHANGES IN WALL THICKNESS OTHER THAN FOR PIERS
- AT CONTROL JOINTS IN THE FOOTINGS, ROOF AND FLOORS.
   AT DIASES AND RECESSES FOR PIPING, COLUMNS, FIXTURES
- 28 ASRCULTURAL GRAINS AND FILTER MATERIAL SHALL BE PLACED BEHNO RETAINING WALLS AND GRADED TO OUTLETS

## STRUCTURAL BRICKWORK / BLOCKWORK CONTINUED

- FLDED WEE TO AS 2975.
- URD MEE, TO AS 2975.
  MINDTHE BIRKL TO THE WIDTH OF THE SOLID MALL, LESS THE
  TIME COVER REQUIRED BY AS 3700, CLAUSE 683 FROM EACH
  SIRPACE OF THE MORTAR JENT.
  PLACEMENT, IN THE PRIST, SECOND 3. THRO JOINT ABOVE FLOOR. LEVEL AT VERTICAL SPACING NOT EXCEEDING 600mm, IN THE FIRST, SECOND AND THEO BED JOINT FROM THE TOP OF THE WALL. IN THE FIRST TWO BED JOINTS ABOVE AND BELOW OPENINGS OR ABOVE & BELOW HEAD & SILL FLASHINGS TO
- INSTALLATION LAD DOINFORCEMENT LISTON AT SPLICES FROM
- 23. PROVIDE TIES AT SLAB LEVEL TO PROVIDE LATERAL SUPPORT AT LODING CRS. TIES TO BE CAST INTO THE SLAB OR SECURELY SHOT RIVED THE ENGINEER TO BE ADVISED OF THE THE MODEL AND EDGING

ROM BARS		
SPAN	SIZE	TYPE
P 10 850mm	85 x 85 x 8 EA	GALINTEL.
5 line 10 530nm	100 × 100 × 5 EA	GALINITES.
Sidne TO 1600mm	100 x 100 x 6 EA	GALINTEL
80lns T0 2400ns	150 x 100 x 6 UA	GALINTEL
140ten TO 2700m	150 x 100 x 8 UA	GALMTEL
70fee TO 1000ee	50 x 100 x 10 UA	GALINTEL

ALL ANGLES TO HAVE LONG LEG VERTICAL AND 100mm MIN. END





GIAMEDS CONSTRUCTIONS AND DEVELOPMENTS PTY LTD. 90 MELVILLE STREET, HOBART, TAS, 7000

GENERAL NOTES SHEET 03

STRUCTURAL		APPROVAL	
A.S.	Hill.	Approved By M.O.	
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# **90 MELVILLE STREET**

## 90 MELVILLE STREET, HOBART, TAS, 7000

#### STRUCTURAL STEELWORK

- MAY SY ALIN A MARIN LINKS STRIBLER OF AS SIBT AND AS 1538 AND THE STRUCTURAL STEEL SPECIFI
- 2. THE BULDER IS TO PROVIDE ALL TEMPORARY BRACING TO ENGINE TH BULDING IS STABLE DURING ALL STAGES OF CONSTRUCTION
- 3. THE FABRICATOR SHALL BE RESPONSIBLE FOR SHIP GRAWINGS WHICH SHALL COMPLY WITH THESE DRAWINGS. THREE COMES TO BE SUBMITTED TO THE ENGINEER FOR RENEW AT LEAST 7 DAYS BEFORE FABRICATION COMMENCES.

- VELOS TO BE 600 CONTINUOUS PILLETS CATEGORY SP USING for = 450 MPa UND.
- ALL PLATES TO BE 10mm THICK. BOLTS TO BE M20 BB/S IN 22mm DIAMETER HOLES, PROVIDE
- HOLDING DOWN BOLTS TO BE GRADE 4.6/S.
- FABRICATOR SHALL PROVIDE ALL FIXINGS FOR ARCHITECTURAL AND OTHER ELEMENTS ETC.
- 5. PROVIDE MID SAG ROOS AT 1/1 POINTS FOR ALL WINDOW HEADS.
- 6. ALL EXTERNAL STEELWORK INCLUDING FIXINGS AND FASTENERS TO BE
- 7. ALL STEELWORK BELOW GROUND SHALL BE ENCASED BY 75mm of
- B. CONCRETE ENCASED STRUCTURAL STEEL TO BE WRAPPED WITH FOWLE PLACED 25mm CLEAR OF STEEL PROVIDE 50mm HINMUM ENCASING
- 9. ALL STEELWERK NOT TO BE ENCASED IN CONCRETE SHALL BE SIVEN
- 10. THE BOLTING PROCESURE IS DESIGNATED AS FOLLOWS:

  a. 4.6/5 REFERS TO COMPERION, BOLTS OF STRENGTH GRADE

  4.6 TO AUSTRALIAN STANDARD AS THE TIGHTENED USING A
- STANDARD WRENCH TO A SNUG-TIGHT CONDITION. b. B.B/S - REFERS TO HIGH STRENGTH BOLTS OF STRENGTH RADE 88 TO AUSTRALIAN STANDARD AS 1252 TIGHTENED GRAZ BE TO AUSTRALIAN STAMPARE AS 1922 TOUTIFIED USAG & STAMPARD VIRGINI TO SEME-TREST CONDITION 6 MATE - RETORS TO HER STEMBERS BOLTS OF STRENGTS GRAZE BET OUSTRALIAN STAMPARE AS 1929 ALL TRINSCHILD TE AUSTRALIAN STAMPARE AS 1929 ALL TOUTIFIED TO THE STAMPARE AS 1930 ALL AS ERCENT THE STAMPARE AS 1930 ALL BANTS - REFERS TE HIGH STREAMEN BOLTS OF STRENGTH BANTS - REFERS TE HIGH STREAMEN BOLTS OF STRENGTH CONTINUES AS 1930 ALL STAMPARE AS 1930 ALL BANTS - REFERS TE HIGH STREAMEN BOLTS OF STRENGTH CONTINUES AS 1930 ALL STAMPARE AS 1930 ALL BANTS - REFERS TE HIGH STREAMEN BOLTS OF STRENGTH CONTINUES AS 1930 ALL BANTS - REFERS TE HIGH STREAMEN BOLTS OF STRENGTH CONTINUES AS 1930 ALL BANTS - REFERS TE HIGH STREAMEN BOLTS OF STRENGTH CONTINUES AS 1930 ALL BANTS - REFERS TO HIGH STREAMEN BOLTS OF STRENGTH CONTINUES AS 1930 ALL BANTS - REFERS TO HIGH STREAMEN BOLTS OF STRENGTH CONTINUES AS 1930 ALL BANTS - REFERS TO HIGH STREAMEN BOLTS OF STRENGTH CONTINUES AS 1930 ALL BANTS - REFERS TO HIGH STREAMEN BOLTS OF STREAMEN BOLTS
- GRADE 88 TO AUSTRALIAN STANDARD AS 1252 FULLY TENSICHED TO AUSTRALIAN STANDARD AS 4100, DESIGNED AS A BEARNS TYPE XINT.
- THE ALL BOLTS SHALL BE OF SUCH LENGTH THAT AT LEAST ONE FULL THREAD IS EXPOSED BEYOND THE NUT AFTER THE NUT HAS BEEN
- TE, MINMUM ONE WASHER SHALL BE USED UNDER THE NUT IN ALL SITUATIONS. IF TIGHTENING IS CARRIED OUT AT THE HEAD, AN ADDITIONAL WASHER SHALL BE USED UNDER THE HEAD, FOR SLUTTED HOLES USE HARDENED WASHER UNDER THE NUT AND BOLT HEAD.
- 19, UND. ALL MATERIAL SUPPLIERS TO HAVE A CURRENT AUSTRALASIA CERTIFICATION AUTHORITY FOR REINFORCING AND STRUCTURAL STEEL

- DIPRODUCED CONTRACT AND TO BE IN HIS THE BEAT SHARE SHARE SET TO AS 3678 IN HIS THELES SECTIONS, GRADE 360 TO AS 3678 IN HIS THELES SECTIONS, GRADE 360 TO AS 36792 IN HIS DIPRODUCED CONTRACT AND AS 36792 IN HIS DIPRODUCED CONTRACT AND TO AS 3679 IN DIPRODUCED CONTRACT AND TO AS 3670 IN DIPRODUCED CONTRACT AND TO AS 3670 IN DIPRODUCED CONTRACT AND TO AS
- 14. PSBW AND FPBW WELDS SHALL BE SPICLASS TESTED AND INSPECTED IN ACCORDANCE WITH AS 4100 AS 5191. AS 1554.1 AND AS 1554.2

### STRUCTURAL STEELWORK CONTINUED

ELEMENT	CATEGORY		
ELEMENT	SERVICE	FABRICATION	CONSTRUCTI
PERMANENT STRUCTURAL STEELWORK	502	PE2	CC2
NA SURFACE TREATMENT CRAF	NE IN ACCOR	DANCE WITH AS	591

ELEMENT	TREATMENT GRADE
PERMANENT STRUCTURAL STEELWORK	P2

- COLTING QUALITY ELEMENT SE STRUCTURAL STEEL MOT ENCASED IN CONCRETE SHALL HAVE THE
- THE SPECIFICATION, ALSO REFER TO ARCHTECT'S SPECIFICATION. ELEMENT SURFACE CLEANING PRIMING FINSH
- POWER WIFE BRUSH ELEAN TO CLASS 25 PROSPHATE SPECS.

  B. EPOXY TO FIX DEEPER REINFORCEMENT INTO SOLID CONCRETE SHALL EXTERNAL EXPOSED ABRASIVE BLAST HOT DP CLEAN TO CLASS 15 SALVANTED
- MI. HOT OPPED GREVANIONS SHALL BE IN ACCORDANCE WITH AUSTRALIAN MI. THE CONTRACTOR IS TO ALLOW FOR PROOF TESTING OF ANCHORS, A STANDARD AS 4680, AS 1214 & AS 2312 WITH AN AVERAGE COATING
- AND DREMMOS ETC. NOT SHOWN ON PLANS.
- 22. ALL STEELWORK EXPOSED TO WEN SHALL HAVE WELD SPLATTER. FLEX DAGS AND RUBBS REMOVED AND ALL SEALING AND RUTT WELDS GROUND FLUSH PRIOR TO SLEFACE PREPARATION AND COATING
- 23.STEELWORK FIRE RATING REQUIREMENTS ARE TO MEET THOSE
- CONSTRUCTION THE STRUCTURE IS MAINTAINED IN A STABLE CONDITION AND NO PART OF THE STRUCTURE IS OVERSTRESSED.

### POST FIXED ANCHORS

- ALL HAZERIALS, MORHANSHP AND INSTALLATION SHALL O MITH THE REQUIREMENTS OF AS 52% AND BE STRUCKY IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION HIP AND INSTALLATION SHALL COMPLY
- 2. ANDIOR HOLES ARE TO BE HAMMER DRILLED, HAMMER DRILLING IS NO TO BE SUBSTITUTED WITH CORE DRILLING UNLESS APPROVED BY THE
- 3. REINFORCEMENT/POST-TENSIONING IS NOT TO BE DAMAGED/OUT BY ANDIOR INSTALLATION. THE BULGER IS TO INCORPORATE CLASH DETECTION MEASURES SUCH AS CONCRETE GPR SCANNING OR PLUT HOLE DRILLING TO LOCATE COSTING REINFORCEMENT/POST-TI FILLED WITH A CEMENTITIOUS FILLER APPROVED BY ADG.
- A. INSTALLATION OF ANCHORS SHOULD BE PERFORMED BY AN AEFAC MANUFACTURER/SUPPLIER OF THE SPECIFIED PRODUCT
- 5. THE ENGINEER MUST BE CONSULTED FOR AN APPROVAL OF AN
- 6. CHEMICAL ANCHORS FIRED INTO SOLID CONCRETE SHALL BE HILTI HIT-H1204\_R WITH HT-V STUD.
- NL SEE ARCH. 2. CHEMICAL ANCHORS FIXED INTO HOLLOW CONCRETE HASBINGY OR SOLID CLAY MASONRY SHALL BE HET! HIT-HY 270 WITH HIT-Y STUD AND PROVIDE A PROPRIETARY SLEEVE SYSTEM FOR HOLLOW MASONRY.

  - HIT-RESCOVE EPEKY MORTAR IS TO BE USED AND THE DESIGN RE-CHEDIED.
  - MINIMUM TEST SAMPLE POPULATION SHALL BE THREE SPECMENS OR 25% OF THE TOTAL ANCHOR POPULATION INMOMENTS IS SOCIETY IS 25% of "He TOTAL ANCHOR POPULATION, NAMESWERF IS SEATER #
    A SPECE FAMILIE OF SCHOOLS THE PROPILET SAVING PROPI ANDHOR POPULATION, HAVING THE SAME TYPE OF ANDHOR, THE SAME BASE MATERIAL ITHAT HAS NOT EXPERIENCED DIFFERENT DIVIDINENT EXPOSURES, SAME INSTALLATION METHOD AND SAME
  - E. ALL AND/ORS FOR TESTING ARE TO BE NOWINATED BY ADG. THE BUILDER IS TO COMPARY THE LOCATIONS OF THE AND/ORS WITH ADD PRIOR TO TESTING, ADG-CDS OR APPROVED EQUIVALENT TO PROOF

INSTALLATION PERSONNEL, WHERE ANY OF THESE VARIABLES CHANG

12. THE MACHITUDE OF THE PREST LOAD IS TO BE APPROVED BY ASS

TEST NOMINATED ANDIORS.

13. ALL POST INSTALLED ANCHORS ARE TO BE TIGHTENED USING HAND TOOLS DIKLY, DO NOT USE A RATTLE GUN OR SIMILAR TO TIGHTON

### COMPOSITE FLOORING

- SOME SHALL COMPLY WITH THE
- AS 2327 COMPOSITE STRUCTURE
- 2. REFER TO PLANS FOR CONCRETE, RENFORCOMENT AND METAL DEDKING 3. WHERE LOAD CONCENTRATION OCCURS ON TOP PLATES FROM BEAMS,
- 3. UNIO MESH RENFORCEMENT ISL OR RL) SHALL BE CRIENTATED PARALLEL TO THE DECK SPAN. WITH THE MAIN BARS LOCATED ON
- THEO TO TOP OF MESH.
- OLLOWNOR MARRIER REQUIREMENTS

  a. METAL SHEETS SHALL BE LYSAGHT BONDEK BR APPROVED EDWARDEN;
  b. 18. BASE METAL THICKNESS.
  c. MRS. 27 MAY BOETT LINGTH
  d. PROVING AS INDICATED ON THE DRAWINGS.
- e. MIN SORE END BEARING AT ALL SUPPORT LOCATIONS.
- 3. ALL METAL DECKING SHEETS SHALL BE TIED TO THE SUPPORTING ONTRACTOR TO PROVIDE TE DOWN METHODOLOGY TO ADS ENGINEERS
- SHAPE INCLUDING HEAD) WITH A10 MPa MIN TENSILE
- NON COMPOSITE BEAMS + 1 STUD AT 1200mm SPACING
- D. INDE. COMPASSITE ELEMENT 1 STORD AT CODEN SPACING.
  OPENSATE COMPASSITE ELEMENT 1 STORD AT CODEN SPACING.
  SECONDARY COMPASSITE ELEMENT 1 STORD AT 3000m SPACING.
  STOLL ELEMENT SHALL BE 4 CONDECTE ECPTH MANS CHEEK.
  A THARMY OF 2 STORD SHALL BE PROVIDED PICK STEEL.
  SPACES.
  PREST AND LAST STOLD SHALL BE TORNE FROM THE EDIES OF
- 9. THE CONTRACTOR SHALL DETERMINE CONSTRUCTION SEQUENCING SLEMIT ALL RELEVANT DOCUMENTATION TO ADD ENGINEERS FOR
- DRAWNES SHALL BE SUBMITTED TO ADD ENGINEERS FOR REVIEW.

### STRUCTURAL TIMBER

- CHP THEIR COMPLY WITH AS 1720 THOSE ENGINEERING CODE AND AS 1684 RESIDENTIAL TIMBER FRAMING COD
- POINT LOAD AS SPECIFIED OR AS DETAILED BY ROOF TRUSS.
- 4. ALL TE BOWN ROOS AND BRADING WALL CONNECTIONS TO SLAB TO BE . [LEMENTS CLARKE GREETION.
- 5. NOT ACCEPTABLE: RAMSET NO., NO., RAMSET HANNER CAPSULES.
- THAT IS PARALLEL TO MAIN MESH BARS SHALL BE PLACED LAST AND 6. ALL EXTERNAL STEELWORK INCLUDING FROMES TO BE HOT DIPPED
- 6. UNLESS NOTED OTHERWISE METAL DECKING SHEETS SHALL HAVE THE 7. AT THE PRACTICAL COMPLETION OF THE CONTRACT, AND AGAIN AT AT THE MOD OF THE MANTENANCE PERSON AND IN RECESSARY, OURNAL
  THAT PERSON, THE CONTRACTOR SHALL BE TREFER ALL BOLTS TO
  APPROVAL BUILT THAT WILL BE MACCESSARE AFTER COMPLETION OF
  THE PROJECT, SHALL BE RE-TIGHTEND PHEDIATELY PROR TO BEING
  - BUILDING IS STABLE DURING ALL CONSTRUCTION STAGES.

  - SPECIFICATIONS FOR ANY ACCITIONAL FINISHES/TREATHENTS REQUIRED.
  - 11. EDGE DISTANCES FOR FASTENERS IN TIMBER IFROM ENDS AND SIDES) SHALL BE IN ACCORDANCE WITH AS 1720.
  - a. UNIO. NAILS 210 END DISTANCE, SD EDGE DISTANCE, 210
  - b. UNIO. SCREWS 100 END DISTANCE, SD EDGE DISTANCE, 100
  - ZENTRES. UND. BOLTS AND COACH SCREWS, SD END DISTANCE, 20

### STRUCTURAL TIMBER TRUSS

- 3. THE TRUSS MANUFACTURER IS RESPONSIBLE FOR ANY ACCITIONAL BRACING REQUIRED BY THE DESIGN AND FOR THE STABILITY OF AL
- 4. LIND. ALL TRUSSES TO MANUFACTURERS DESIGN AT 900mm CRS MAX. CONNECTIONS, HALD DINAY BOLTS TO BE AS SPECIFED BY THE MANUFACTURER. LERRIFICATION FOR DESIGN AND ERECTION TO BE FROM A RESISTERIO PROFESSIONAL INVANEER.
- UNITS AND ACCESS WALKWAYS, REFER TO SERVICES AND
- A BODE CONTRACTOR TO PROVIDE TIMERS TRUCK BAFTER & BATTER
- NALED OFF WITH 6 NAILS PLUS NAILED TO EACH INTERMEDIATE TRUSS/RAFTER WITH 2 NAILS. STRAP BRACING LAYOUT ON PLAN SHOWN DIAGRAMMATIC ONLY & TO BE INSTALLED IN ACCORDANCE WITH

- CELLING/FLOOR DIAPHRAGM ACCORDANCE WITH THE TYPICAL BRACING DETAILS
- 3. BRACING NOTATION, EXAMPLE PLY/18 INDICATES

- 2. ALL CHEMICAL ANCHORS SHALL HAVE FORM COMPRETE EDGE DISTANCE 2. TRUSS'S SHOWN ON THE ROOF FRAMING PLAN IS DIAGRAPMENT COLD. TRESSES SHOWN ON THE HOOF PRAFMED FLANTS EMPLOYMENT ON ALL TRESSES, GREEN TRUSSES, HAP TRUSSES ETC AND ANY ADDITIONAL SUPPORTS, BEAHS, LINTELS, STEFFENING ETC AND CONVECTIONS REQUIRED BY THE DESIGN.

  - NEW CONTINUE ON TO PROVIDE THESE THUSS, NATION & SATION DESCRIPTION PRIOR TO ERECTION OF ANY ROOF HEMBERS. CERTIFICATION FOR DESIGN AND ERECTION TO BE FROM A REGISTERD PROFESSIONAL ENGINEER.
  - ROOF TRUSS HANGEACTURER'S DESIGN DRAWINGS.

- STRUCTURAL TIMBER BRACING WALL

  1. ALL BRACING AND WALLS TO BE IN ACCORDANCE WITH AS MAKE 2 AND
  AS MAKE TO NON-CYCLORE AND CYCLORE AREAS PREPECTIVELY
  AND INSTALLED STRUCTLY TO HAMIFACTUREY'S SPECIFICATIONS.

- 4. BRACING WALL TYPES FOR 27th MGB WALL PLY- SINGLE SIZED PLY 6.486/th CAPACITY (TYPE H(A) AS PER AS 1684) 2PLY-COURLE SEED PLY 12.RHA/N CAPACITY (TYPE H(A) AS PER
  - B. SINGLE SEED HURDBOARD & DANIMIN CAPACITY ITYPE NED AS

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**APPROVAL** 

28.01.22 ISSUED FOR COORDINATION



GIAMEOS CONSTRUCTIONS AND DEVELOPMENTS PTY LTD.

90 MELVILLE STREET, HOBART, TAS, 7000

GENERAL NOTES

scano STRUCTURAL		APPROVAL.
migrani By	Checked by	Approved By
A.S.	H.C.	M.G.
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24.68	J.H.	1 : 100 (al. n
C01 104		Minister 2

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## Agenda (Open Portion) City Planning Committee Meeting - 19/9/2022

## **90 MELVILLE STREET** 90 MELVILLE STREET, HOBART, TAS, 7000

### BULK EXCAVATION

- THE EARTHWORKS GRAWINGS AND THESE NITES ARE CONJUNCTION WITH THE EARTHWORK'S SPECIFICATION WHITE AND THESE BUTES ARE TO BE GOAD IN
- GRASS AND TOP SOIL SHALL BE STAPPED TO A DEFTH OF TOOMS OVER THE EXTENT OF THE WORKS UALESS OPECTED OTHERWISE AND STOOPHED FOR PUTURE USE AS MON-STRUCTURAL FILL IF REQUIRED
- 3. ALL MORES TO BE CONSTRUCTED IN ACCORDANCE WITH LICEL COUNCE & EGINAL DEVELOPMENT GUOLINES, ASSOCIATED STANDARD DRAWINGS 3. SHORING WALLS SHOWN SHALL BE INSTALLED TO STABILIZE THE & SPECFICATIONS UND.
- 4. CONTRACTOR SHALL BE RESPONDEDLE FOR REPAIR OF ANY DAMAGE TO COUNCE'S INFRASTRICTURE. SUCH REPAIR OR REHISTATEMENT TO BE DA OUT PRECIDENTLY TO THE SATISFACTION OF LOCAL COUNCIL.
- EXISTING SERVICES PRIOR TO THE COMMERCEMENT OF ANY WORKS ON THE SITE IDENTIFY ALL EXISTING SERVICES BOTH WITHIN THE SITE AND TS SURROUNDS THAT MAY BE AFFECTED BY THE BUILD EXCANATION WORKS DO NOT DAMAGE ANY DISTING "LINE" SERVICE SIDY DAMAGE SHALL ME PECTIVED AT THE CONTRACTOR'S EXPINED DATASE APPROVAL FOR THER REMOVAL, TEMPORARY SEALING OR PROTECTION AS APPLICABLE.
- CHISTING SERVICES MAYE BETTE PROTEIN PROFESSION SERVICED DATA MAY AS SIGNI-THER ACCURRACY CAMBOT BE GAMANISTEEL IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH THE LOCATION AND LIVEL OF ALL DISTING SERVICES PRICE TO THE COMPERCIPIENT OF ANY WORK, ANY DISCREPANCES SHALL BE REPORTED TO THE SUPERMICHIGHOUT.
- 7. BASE EXCAVATION SHALL BE GRADED / DRAINED TO SUMPS AND PUMPED AS REQUIRED TO MAINTAIN THE EXCAVATION FREE OF SURFACE MATER INITIAL EXCAVATION MAY BE CARRIED BUT TO LEVELS ABOVE
- 9. THE SECTEO-NICAL ENGINEER SHALL INSPECT AND APPRILVE BATTERS PRICE TO THE FIRST PANEL INSTALLATION OR VERTICAL CUTS IN EACH ELEVATION THE ENGINEER CAN I BY ADVISED PRESENTED Y & ANY CROSS WATER MATER 45 THE CONTRACTOR CANN. PRESENT AND PAY FOR A CONTENSION. S DUCK WITERED IN SITE OR AT JAN OTHER STATE MARRE DANNELTON IS EXCOUNTERED ON SITE, OK AT ART OTHER STALE MEDIC FORMATION MATERIALS OFFERING FROM TROSE NOTED IN THE REPORT OR AS OBSERVED IN THE INITIAL EXCAVATION.
- CATCH DRAIN OR OTHER HETHODS TO PREVENT SURFACE RUN-OFF ENTERING THE EXCAVATION.
- THE PRIOR BOLL TO DETECT SHET SHOUL BEHOVE SHET SHOTS AND RACKELL. TO DEFEN TO CONSTRUCTORS PROCEDURE NOTES AND ARCHOR MOTES.
- 49 IND ANY CIT DEDUBED BENEATH BANGMENTS TO BE A MOS. DESIRENE. UND ANY PEL PECUPED BEBATH PAYEMENTS TO ES A NON-DYNASIVE SULECT PELL PREE OF DEBANC HATTER WITH NO STONES LARCES TO SHEATER SORIN WITH A YIM EDR OF TOX AND A EURARE SHRANCE NOT SHEATER THAN BY, SHALL BE PLACED MINERE RECEIPED BY UNDORN LAYERS NOT EXCEEDING JORNIN LIDSE THEOMESS AND COMPACTED TO A CHEVIC A NEK STANDARD TO AS 1289 5.11
- 18, UNO SURPLUS SPOL TO BE REMOVED FROM SITE.
- NA, TEP SELL TO ME STECKPIED FOR PUTURE LANCEGAPING LISE OR DISPESSED OF
- 15. ANY CONTAMINATED MATERIAL SHALL BE DENTIFIED AND REMOVED FROM SITE IN ACCORDANCE WITH THE RELEVANT AUTHORITY REQUIREMENTS

#### SHORING - GENERAL

- ALL HATERIALS AND MERCHARPHY SHALL COPPLY WITH ASSATE AN TO BE BESIMED AND CRETPELD BY A SPECILIST CONTRACTOR. SHORM MALLS SHOWN SHALL BE INSTALLED TO STABALLEE THE EXCAVATION ON THE PROPERTY OR ELSEWERE CURING CONSTRUCTION. THE STADE HELD VIOLET THE GROW
- CRITERIA SECTION ON THIS GRAWING FOR CECTECHNICAL REPORT NUMBER & INFORMATION.
- . SHAMMA WALLS SHAMM SHALL DE NOTALLIO IN STRUCKE THE DECLAVATIONS ON DE PROPERTY SHOWARDES ON RESEAUCHE CONSTRUCTION UNLESS NOTED OTHERWISE SHORMS WALLS SHALL BE DESIDED AND INSTRUCTED LIMIT LATERAL DEFECTION TO JOHN ON HAVIO, MANIFE DES LESS. WHER REDORNINGS STRUCTURES ARE PRESENT THE LATERAL EFFECTION IS TO BE LIMITED TO SIMM.
- ANCHORS HAVE BEEN INSTALLED AND STRESSED, PROVIDE WRITTEN CONFERNATION PRICE TO COMMENCEMENT OF EXCAVATION
- 5. AN INTERMEDIATE BENCH MAY BE REQUIRED DUE TO VARYING SOIL
- CALLY MONTORING OF THE TOP OF THE SHORING WALL MUST BE CARRED OUT BY A SURVEYOR, ANY MOVEMENT GREATER THAN SHIR. IS. TO BE REPORTED TO ADD PREDIATELY.
- 7. ALL BURED PIERS ARE TO BE INSPECTED BY A GUALIFIED GENTECHNICAL ENGINEER TO CERTIFY THEY HAVE BEEN FOUND IN SUITABLE MATERIAL CAPABLE OF RESISTING THE NUMBERTED VERTICAL AND LATERAL LOADS.
- 8. ROCK LEVELS IF NORMATED ARE NOCATIVE ONLY AND INTERPOLATES \$ INSTALL STRP CRAINS & REINFORCING FOR NEXT POUR OF SHOTCRETS
- NOTED ON THE ELEVATIONS AND DETAILS. IF A NOTICEABLE WET 20ME IS ENCOUNTERED IN THE ENCAVATED FACE ADDITIONAL DRAINAGE CELLS. A EXCAVATE INSTALL STRP GRAINS, WALL REINFORCING, ANDHORS AND
- ENGINEER TO VERIFY THE DESIGN, INSTALLATION AND STABILITY OF ALL
- IL HURIORNE EXISTINO SERVICES & STRUCTURES ARE SHOWN
  DAGRAPHINE DIN TO BE ALL MAD SECTIONS THE SHOWN
  CONFIRCTION BRIST LOCATE. ALL INFORMOS SERVICES AND SERVICES BY SURVEY PRIOR TO COMMENCEMENT OF EXCAVATION AND ANCHORNE.
- IS FOR CONCRETE STORNOTH AND CONCRETE COVER TO ALL SHORMS

### SHORING - POST & PANEL TYPE

- EVATIONS OURNO ERLING A RESTEEMENT BUSINESS PROFIT MISTINSPEC HAD COMPRY THAT THE PIERS HAVE SUPPORT THEODYNAMING THE CONDINC HATERIAL TO SUPPORT THE APPROVED VERTICAL AND
- 2. SHOULD THE DEPTH TO THE PIERS WARY SQUIFECANTLY FROM THAT INDICATED ON THE SHORING WALL ELEVATIONS, ADE ENGINEERS IS TO BE CONTACTED PRICE TO CONCRETE PLACEMENT.
- 3. ON COMPLETION OF PER INSTALLATION, EXCAVATION FOR THE CAPPING CAN COMPLISHE OF PEN HONOLOGISM, PENNINGH FOR THE CAPPING DEAM IS TO BE CAPRIDD OUT, MIGHE EXCANATION FOR THE CAPPING BEAM EXTENDS BELINE WISTING GROUND SUPPORT GEOTECHNICAL DIGNEER MUST ADVISE ANY GROUND SUPPORT MEASURES REQUIRED TO ENSURE BOUNDARY STANLITY.
- TO NOT MORE THAN SIGNA BOLOW THE PROPOSED FIRST ROW OF ANCHORS, THEN INSTALL ANCHORS, EXCANATION NOT TO PROCEED UNTIL WRITTEN APPROVAL FROM GEDTEOWNEAL ENGINEER IS RECEIVED. NCHORS ARE TO BE DESIGNED, INSTALLED, GROUTED AND CERTIFIED BY
- 5. INSTALL STOP DRAWS & RENFORCING FOR FIRST POUR OF SHITTORITE A TRAINAL DITHY ORANG & RESPONDING FOR FIRST POUR OF SHITCHESS WALL ALLOWING RESPONDES LAP BELOW BENCH LEVEL FOR SECOND POUR SPRAY SHOTCHESS WALL ONLY AFTER INSPECTION AND APPROVAL BY 405.
- 6. EXCAVATE TO SOOM BELOW THE NEXT ROW OF ANCHORS THEN INSTALL AND TEST ANCHORS, EXCAVATION NOT TO PROCEED UNTIL WRITTEN APPROVAL FROM GEDTEOINICAL ENGINEER IS RECEIVED ANDHORS ARE TO BE DESIGNED, INSTALLED, GROUTED AND CERTIFIED BY
- I NUTLICE STOP CHAINS IN HUMBRING FOR HICK FOUR OF SHOTHERTE HALL ALLOWING REMPOROUS LAP BELOW BENOV LEVEL FOR SUBSEQUENT FOUR SPRAY SHOTHERE WALL ONLY AFTER INSPECTION AND APPROVAL BY AN UNGINEER FROM ADE ENGINEERS.
- SHOTCRETE WALL FOR SUBSEQUENT STAGES OF EXCAVATION UNTIL LOVEST BASEMENT LEVEL READIED STRICTLY FOLLOWING ABOVE SECURISE OF PROCEDURES AND APPROVALS
- 4 FOR ANDHORD WALL SECTIONS BLOOD SLARS PREDIATELY AROUS AND

#### TEMPORARY GROUND ANCHORS

- GROUND ANDHORS ARE TO BE DESIGNED AND INSTALLED IN ACCORDANCE WITH ASSATIO FOR THE HINNELTH WORKING LOADS AS SPECIFED, AS
- 3. ANCHORS ARE CONSIDERED TEMPORARY WITH A 5 YEAR DESIGN LIFE.
- A. GROUND ANDHORS SHALL CONSIST OF LOW RELAXATION STRESS RELIEVED SUPER GRADE STEEL STRAND TO ASSESS AND ANCHORAGES SHALL COMFORM TO ASSIST.
- 5. WORKING LOADS NOT TO EXCEED ISSN OF THE DHARACTERISTIC YIELD
- ANCIRE LIBETIS AND ANGES SHOWN ON THE DIAMNESS AND

  3. DRILL MELES SHULL BE EIGHER ROTARY ON PRECUSSION

  ANGEARE. HE CRETIFICATION IS RESPONDED. FOR THE BESIDE AND

  DRILLAGE STORMERS.

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  2. ADRILL BE TORMERS.

  2. ADRIL BE TORMERS.

  2. ADRILL BE TOR ANCHOR LENGTHS AND ANGLES SHOWN ON THE DRAWINGS ARE INDICATIVE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND LOAD CAPACITY BY PROOF LOADING ANCHORS IN ACCORDANCE WITH THE 25 ANCHORS TO BE FITTED WITH A GROUT TUBE THAT EXITINGS TO THE NOTE BRIDE
- THE CONSISTING IS TO WEST LICENSON OF ALL RESISSIONS.

  SITE OF THE CONTROL OF A THE CONTROL THE COMMENCEMENT OF DRILLING
- 8. ANCHORS SHALL BE STRESSED AT THE APPROPRIATE STAGES OF THE CONSTRUCTION SERVENCE, PROVIDED THAT AT LEAST THREE DAYS HAVE FLAPSID AFTER GROUTING THE ANCHORAGE LENGTH ENDING.
- A EACH ADDRESS PAUL BE PROFILED OF STREEMS TO SES OF THE ADDRESS O EASED BACK, THE ANCHOR SHALL THEN BE STRESSED TO THE NOMINATED LOAD PER THE GEOTECHNICAL CONSULTANT'S ADMICE AND STRUCTURAL DRAWINGS AND LODGED OFF, ANY ANDIOR THAT FAILS TO RESIST THE PROOF LOAD SHALL BE REMOVED AND REPLACED. ADEQUATE SUPPLIES OF ADDITIONAL CARLE ANDHORAGES, SPORT ETC. ARE TO BE HEPT ON SITE TO ENSURE NO DELAY TO ANCHOR
- 10. THE CONTRACTOR SHALL HONTOR STRESS LEVELS IN INSTALLED ANCHORS AND THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY IF ANY STRESS LOSSES ARE OBSERVED.
- 11. DICE THE PERMANENT FLOOR SLABS HAVE BEEN CONNECTED TO THE RETENTION WALL AND TEMPORARY HOLEMENT JUNES ARE SPORTED GROUND ANDHORS ARE TO BE DE-STRESSED AND OUT BACK. INCHORAGES REMOVED, AND SOLDERS MADE GOOD.
- 12. SITE RECORDS IBLATES AND CETALS! FOR THE POLLOWING STAGES SHALL BE HANTARKE BY THE CONTRACTOR:

  a. MOMER INSTALLATION INCLIDING CONTRIBATION OF FREE LEWSTH, BOND LENGTH AND ANXIES.
- GROOTING OF AND/ICES.
   STRESSING AND PROOF LOADING OF AND/ICES INCLUDING
- CONFERNATION OF ACCEPTABLE PERFORMANCE
- HONTORNE OF ANCHORS. e. DE-STRESSMG OF ANCHORS

### TEMPORARY GROUND ANCHORS

- 11. ANDHORS ARE CONSIDERED TEMPORARY WITH A 5 YEAR DESIGN LIFE 12. ANDIORS SHALL CONSIST OF 15.2mm DAMETER HIGH YIELD TONSLE STEEL (LOW RELEXATION) STRAND
- 14 DRILL HOLES TO BE COMPLETELY FLLED WITH CROSE. 15. ALL EXPOSED STEEL COMPONENTS TO BE HOT OIP GALVANISED. 16. ALL ANCHORS TO BE TEST LOADED IN ACCORDANCE WITH

## 2.1. DRULL HOLES TO BE DRILLED TO THE HIMMEM DEPTHS SHOWN ON PLANS.

- 2.2. DRILL HOLE DAMETER TO BE 100mm.

- ROTTOM OF THE ANCHOR. GROUTING OF ANCHORS
- 3.1 GROUT SHALL CONSIST OF DROMARY PORTLAND CEMENT, WATER AND AN APPROVED NON-SHIRK ADDITIVE.
- 3.5 THE GROUTING OPERATION SHALL TAKE PLACE WITHIN 24 HOURS OF
- THE ANCHOR BEING INSTALLED INTO THE DRILL HOLE. STRESSING OF ANCHORS 4.1. ANDIGRS SHALL NOT BE STRESSED UNTIL THE GROUT HAS READED A
- MINIMUM DURE STRENGTH OF STAPLA
- A.A.NO ANCHOR SHALL BE STRESSED TO MERE THAN 85% OF THE
- 4.5.EACH AWCHOR TO BE TESTED, LOADED TO 155% OF ITS DESIGN
- 5 MINUTES TO DETERMINE ANY CREEP IN THE AINCHOR BOND ZONE. 4.7.EACH ANCHOR IS TO BE SUBJECTED TO AN IMPEDIATE LIFT OFF TEST TO DETERMINE THE RESIDUAL LOAD IN THE AMERICA AFTER ALL

#### ANCHOR CORROSION PROTECTION S.1. ANDIOR FREE LINGTHS TO BE GREASED AND SHEATHED.

## 5.2 LMON COMPLETION OF THE STRESSING DEPARTOR AND APPROVAL OF THE STRESSING RESULTS THE ANCHOR STAMES ARE TO BE TRIMMED AND A GROUT FILLED GAP PLACED OVER THE ANCHOR STRESSING

- PLES AND PLING INCLUDING RETENTION SYSTEMS) TO BE IN ACCORDANCE WITH ASSIST AND ARE TO BE DESIGNED BY A SPECIALIST PLING CINTRACTOR.
- 3. PRIOR TO COMMENCEMENT OF ANY SITE WORKS REFER DESIGN CRITERIA SECTION ON THIS GRAWING FOR SECTECHNICAL REPORT NUMBER IS INFORMATION. THE CONTRACTOR SHOULD MAKE ALL NECESSARY SITS INVESTIGATIONS TO COMPRIM THE ACCURACY OR OTHERWISE OF THE
- MAXIPUM VERTICAL DEVIATION IS 1 IN 25.
- 5. THE PLES ARE TO BE DESIGNED FOR THE LOADS ON THE ENGINEERS ADDITION TO A LATERAL STABILITY LOAD OF 25N OF THE MAXIMUM
- PLING IS TO BE DESIGNED, CONSTRUCTED AND CERTIFIED IN ACCORDANCE WITH THE SPECIFICATION AND REQUIREMENTS SET OUT ON THE DRAWINGS DETAILS OF EACH PILE TYPE AND CAPACITY ARE TO BE
- 3. THE PLE LOADS SPECIFIED ON THE DRAWINGS DICLUDE SELF-WEIGHT

- CLEANED AND FREE OF LOOSE MATERIAL AND WATER PRIOR TO POURING CONCRETE
- IN TREME METHODS TO BE USED FOR ALL PLES AND ANY GROUPDWATER TO BE PUMPED FROM THE BORE HOLE IMMEDIATELY PRICE TO CONCRET
- 12. DE COMPLETION OF PUINS, A DRAWING PREPARED BY A REGISTERED SURVEYOR SHALL BE PROPARED GIVING THE POSITION OF THE PUIES RELATIVE TO THERE ROMINATED POSITION AND LEVEL OF THE TOP OF THE PILES, TO BE FORWARDED TO THE ENGINEER.
- RECTIFICATION OF ANY WORK ASSOCIATED WITH THE PILES EXCEEDS THE ABOVE TOLERANCES, PROPOSED REMEDIAL MEASURES TO BE PROVIDED TO THE ENGINEER FOR REVEW.
- 16. UND PILES TO BE DESIGNED FOR THE FOLLOWING TOLERANCES UNDER
- WORKING LOADS.

  a. MAX SETTLEMENT AT THE TOP OF PILE OR PILE DROUP :

d. HAX HORZONTAL MEVENENT - 20mm

PILE GROUPS INCLUENG ELASTIC SETTLEMENTS : 10mm 0F

- THE CONTRACTOR SMALL INVESTIGATE THE PRESENCE OF ANYTHING EXISTING IN THE GROUND LINELY TO BE AFFECTED BY THE PILING OPERATIONS, CONFIDERATION OF THE INVESTIGATION AND FINAL DESIGN DRAWINGS TO BE SENT TO THE ENGINEER, IN CAD FORMAT, PRIOR TO

- SUBMITTED TO THE ENGINEER BEFORE PLING IS COMMENCED.
- AND DOWN DRAG EFFECTS

- 19. THE PLUS CONTRACTED SHALL BE DESPONSIBLE FOR THE DESIGN AND

- DISTANCE/SM WHIDEVER IS SREATER. HAX POTATION OF THE PILE CAP DUE TO PILE SETTLEMENT. BUILDING HEIGHT/1000



ADG

28.01.22 ISSUED FOR COORDINATION

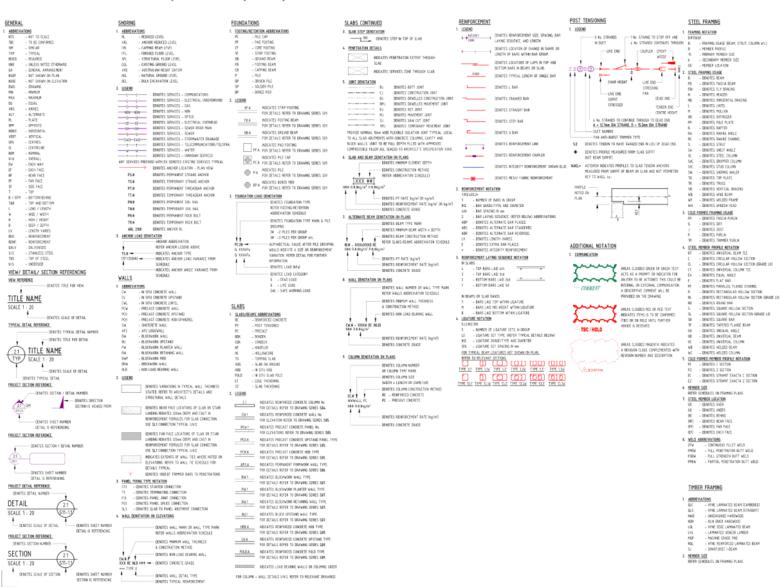
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GENERAL NOTES SHEET 05

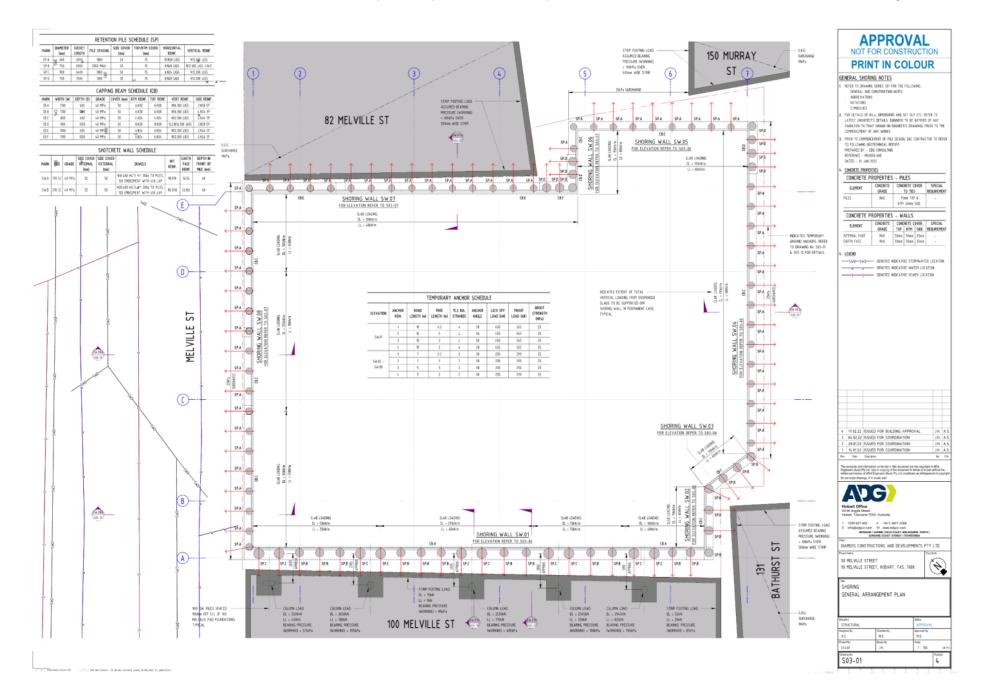
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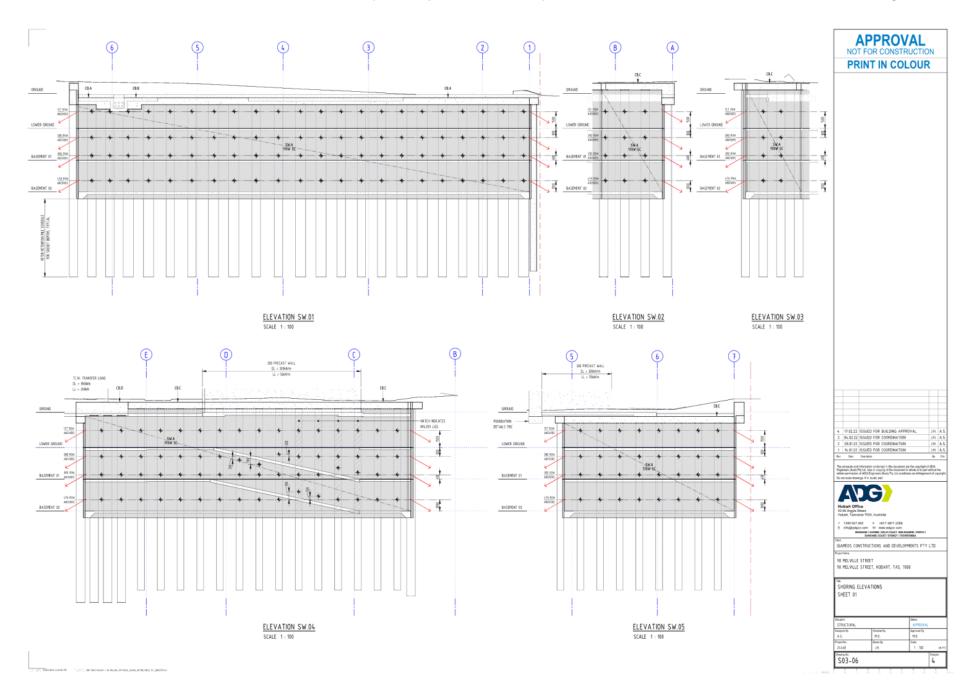
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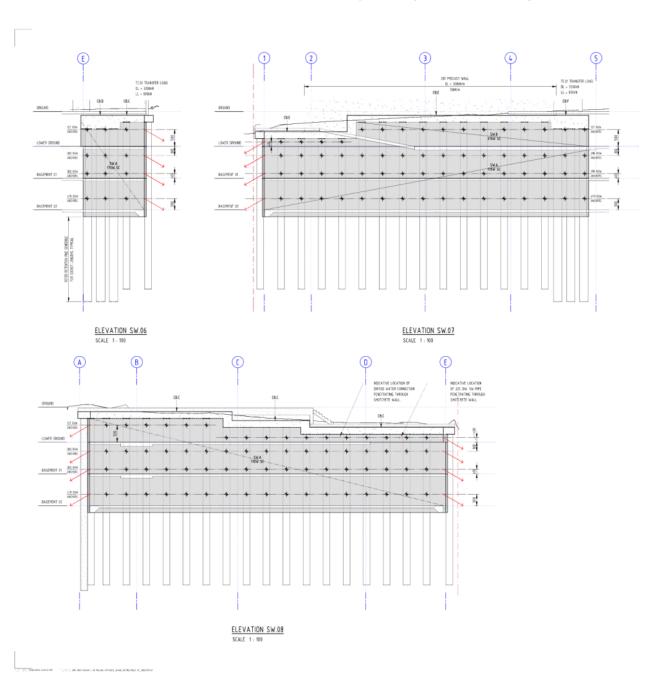
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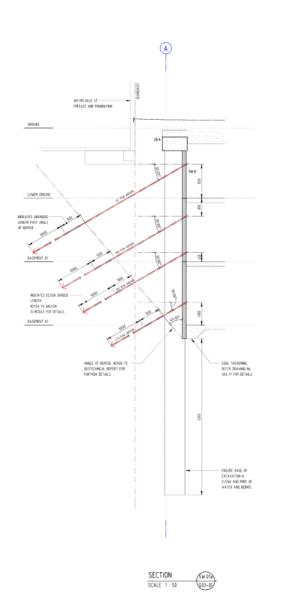


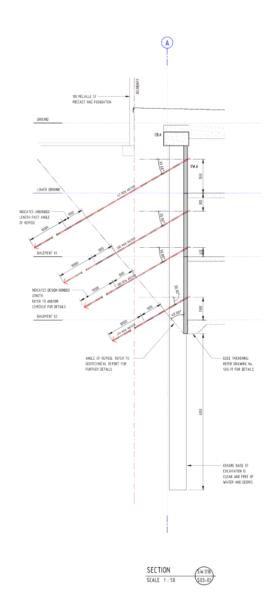


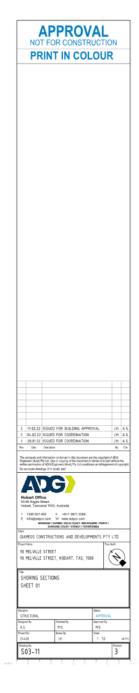


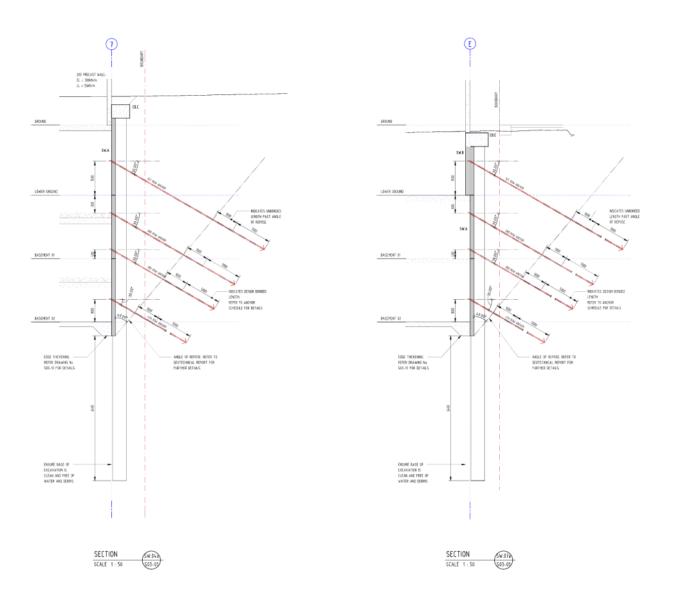
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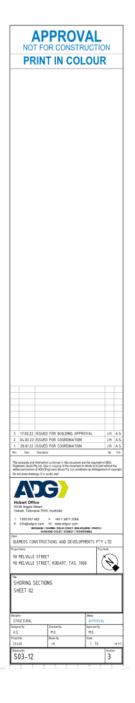
## Page 601 ATTACHMENT B

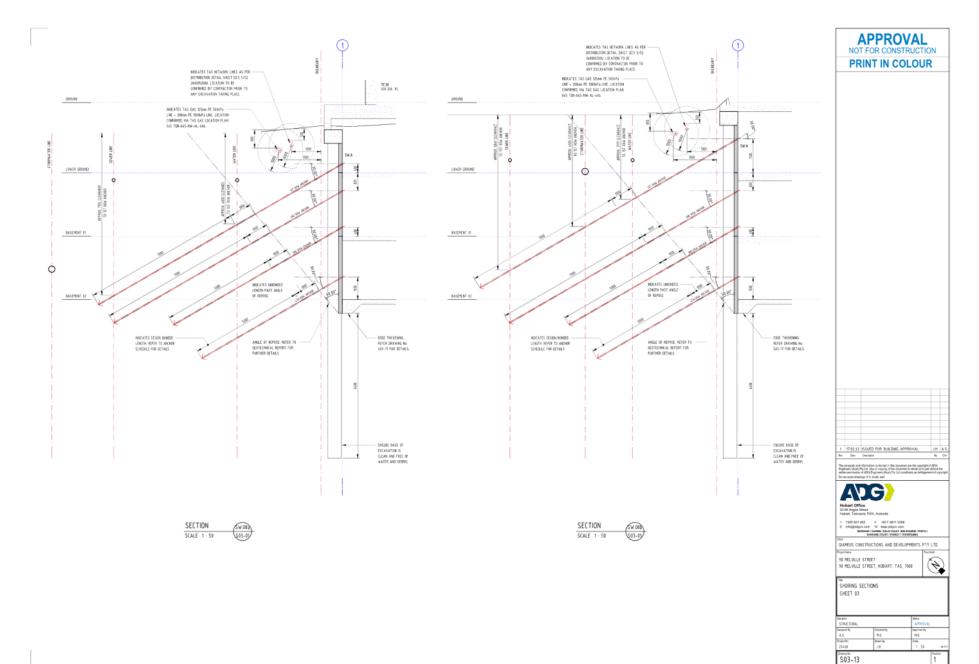


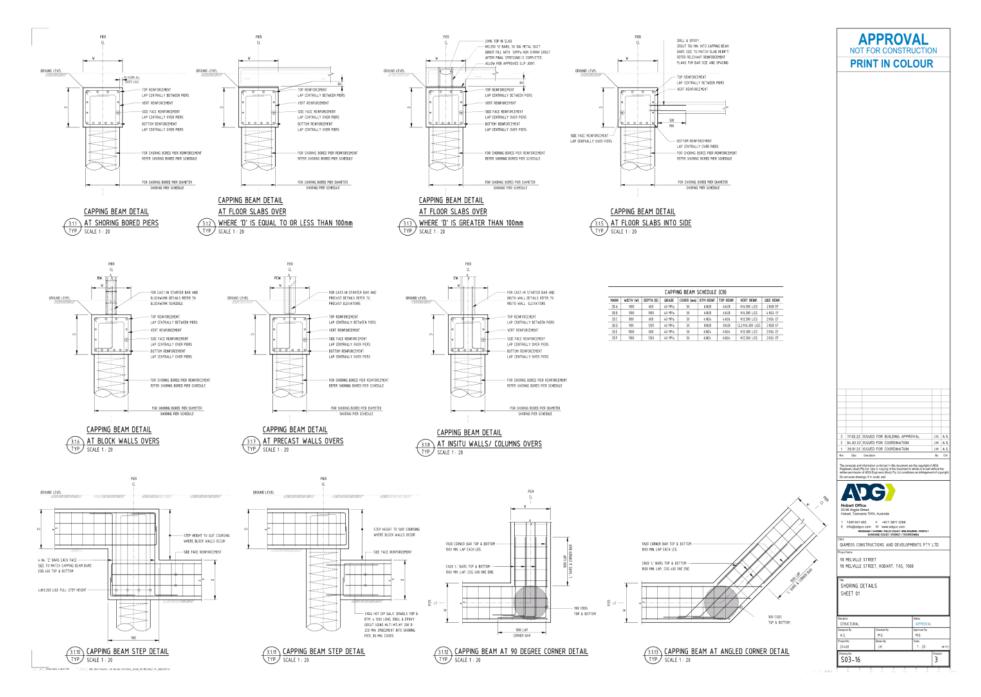


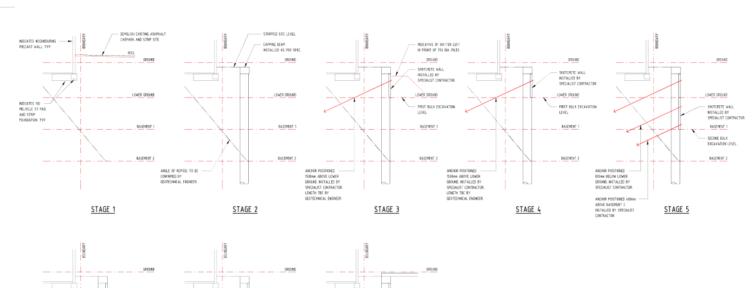


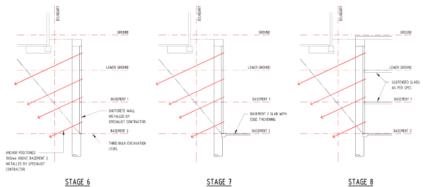














## **PRINT IN COLOUR**

### STAGE 1

DEMOLISH EXISTING PAVEMENT AND STRP SITE READY FOR PLINS.

## STAGE 2

STAGE 3 STANCE 3

ICHANIE TO PROT BURK EX, LEVEL IN FRONT OF 162

DA PIES FROST AND INSTALL AND ORS MEEP BATTER
ASSENT THE ORA PLES

INSTALL STIPE FORM SHOWD MALL

INSTALL WILL REPROSECTED.

INSTALL STIPE FORM SHOWD MALL

STIPECHT FROM INSTALL BOOK AND ORS.

STIPECHT WALL TO A MERY SHOP, CONCEPT
STIPECHT FIRM INSTALL BOOK AND ORS.

SPRAY SHOULD WALL.

## STAGE 4

- I EXCLUSION OF PROBET OF 750 DIA PALES TO FIRST PALE CK. LEVEL.
   INSTALL STEP CRAIN REHNOL WALL.
   INSTALL STEP CRAIN REHNOL WALL.
   INSTALL STEP CRAIN REHNOL WALL.
   SIGNICESTER WALL TO AUTHOR STEP CONCERTE STEPWISH THEN INSTALL ROOK ANTHORS.
   SPEARY SHOCKETE WALL.

- STAGE 5

- EVALUATE TO MANEAR 250 BEPTH
   NOTALL TEMPORARY MANORS TO GESTECHNICAL
   DEWINESS ANNOE.
   NOTALL STIPP GRAIN BEHIND MALL
   NOTALL WALL REPROPREHENT.
   SPARAY MONORERY WALL.

### STAGE 6

- COMPLETE EXCAVATION TO FRAM, LEVEL
   NOTALL STIMP CRAME ORDER MALL
   NOTALL SALE REPROSERMENT.
   SPARK SHOTCHER WALL
   NULL TO ACKIVE SHAW CONCRETE STRENGTH THEN
  NOTALL BOCK ARCHES.

1. LOCALLY EXCAVATE FOR EDGE STRIP/STRIP FOOTING &

## STAGE 8

- POUR ALL BASEMENT SLABS AND EROUND FLOOR
   DISTRESS ANCHORS SE DAYS MIN AFTER SLAB POURS AND ONCE SLABS AND GROUT ACHEVE FULL STRENGTH.
   PROVIDE CAPPING BEAM AT GROUND LEVEL.

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2	1242 22	ISSUED FOR BUILDING APPROVAL	JH.	ł
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GIAMEOS CONSTRUCTIONS AND DEVELOPMENTS PTY LTD

98 MELVILLE STREET

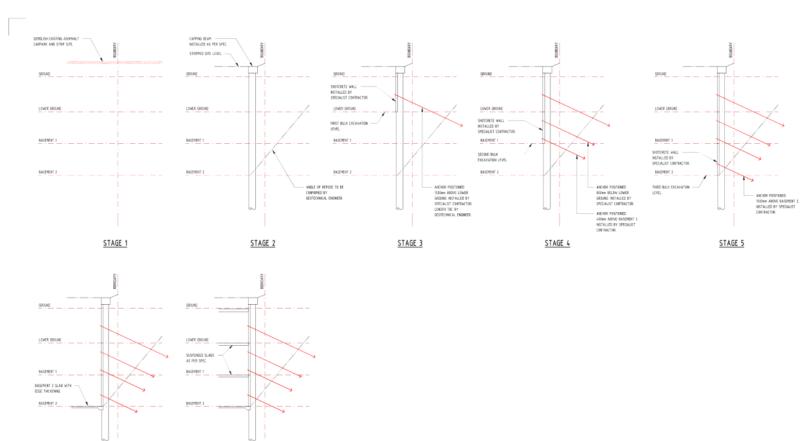
98 MELVILLE STREET, HOBART, TAS, 7000

SHORING WALL SW.01 CONSTRUCTION PROCEDURE

Designed By	Checked By	Sepressi By	
AS.	HO.	MO.	
Project No.	Drown By	fore	
24468	J.H.	1:190	100.74

STAGE 6

STAGE 7

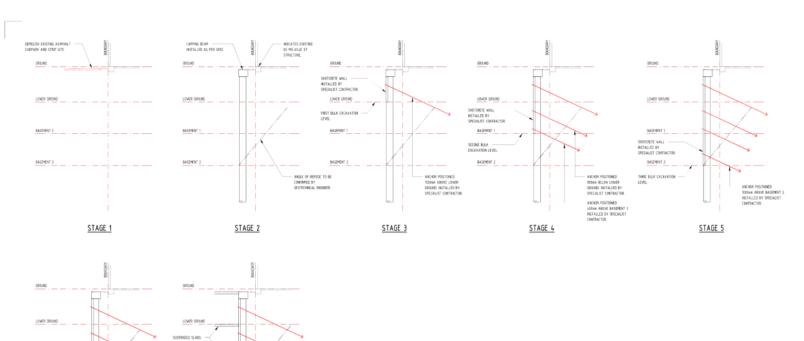




BASEMENT 2 SLAB WITH

STAGE 6

STAGE 7





DEMOLISH EXISTING PAVEMENT AND STRIP SITE READY FOR PLING.

## STAGE 2

CONSTRUCT PILES & CAPPING BEAM TO DESIGN LEVELS.

## STAGE 3

- 1. EXAMPLE TO FIRST BULK EX LEVEL.
  2. NOTING, STOP DRAW BOHND WALL
  3. NOTING, WAIL PROPRIETING.
  4. SHOTOETE WALL TO ADMIT SIZE ADDRESS TROUGH THE WISTALL BOX ANDRES.
  5. SPRAY SHOTDETE WALL.

  5. STRAY SHOTDETE WALL.

### STAGE 4

- EXCAVATE TO HAXMEN 250 CEPTH
   TOTALL TEPFORARY ANCHES TO CECTEMECA;
   ESTALL STAP DAVIC
   TOTALL STAP DAVIN BOND WALL
   NGTALL STAP DAVIN BOND WALL
   NGTALL STAP DAVIN BOND
   STAP SHOTCHET WALL

## STAGE 5

- CEMPLETE EXCAVATION TO FINAL LEVEL.
  NGTALL STEP DRAING EDING MALL
  NGTALL WALE REPRESENTE.
  SPRAY SHOTDETE MAY
  NALL TO ACKEVE 25MPA CONCRETE STRONGTH THEN
  NGTALL ROOK ANCHERS.

## STAGE 6

LECALLY EXCAVATE FOR EDGE STRP/STRP FOOTING & DRAWARF

## STAGE 7

- POUR ALL BASEMENT SLABS AND GROUND FLOOR.
   DESTRESS ANDHORS SE DAYS MIN AFTER SLAB POURS AND OWCE SLABS AND GROUT ACHEVE PULL STRENGTH.
   PROVIDE CAPPING BEAM AT ERIOLING LEVEL.





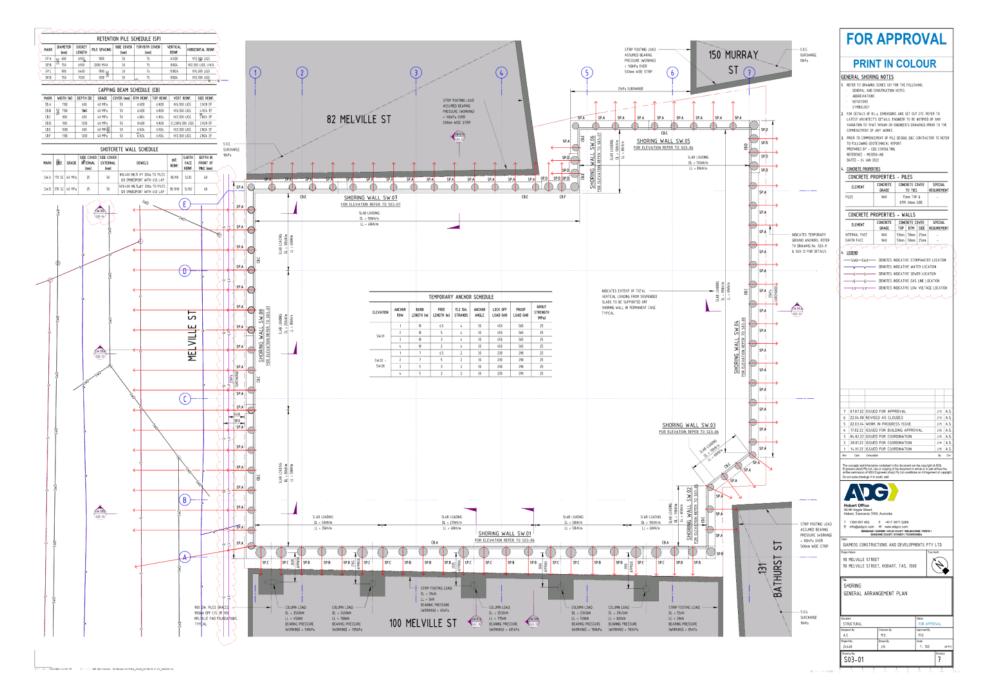
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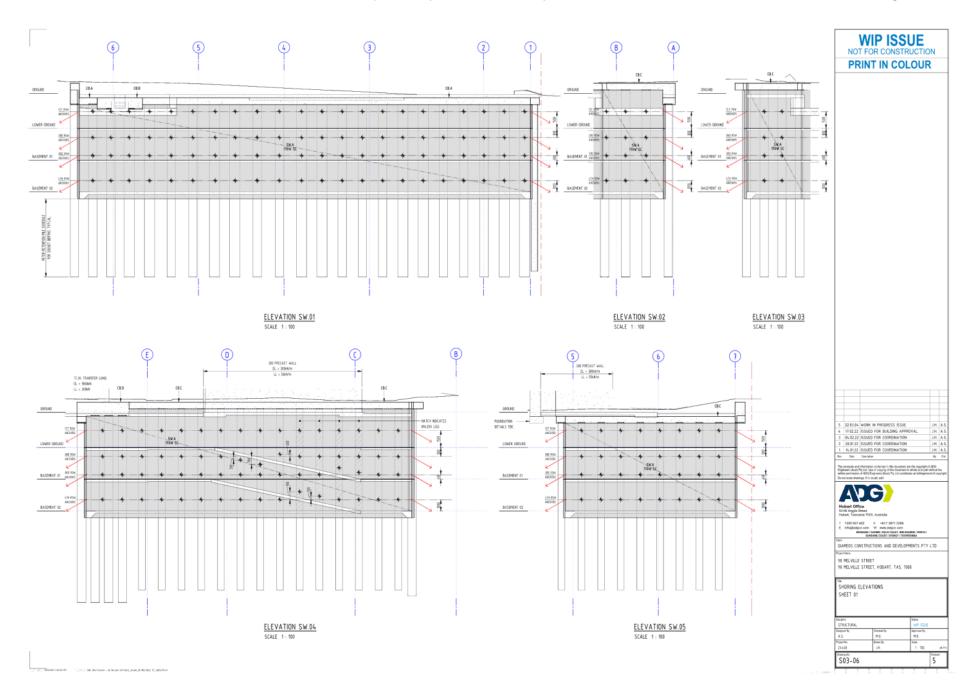
90 MELVILLE STREET, HOBART, TAS, 7000

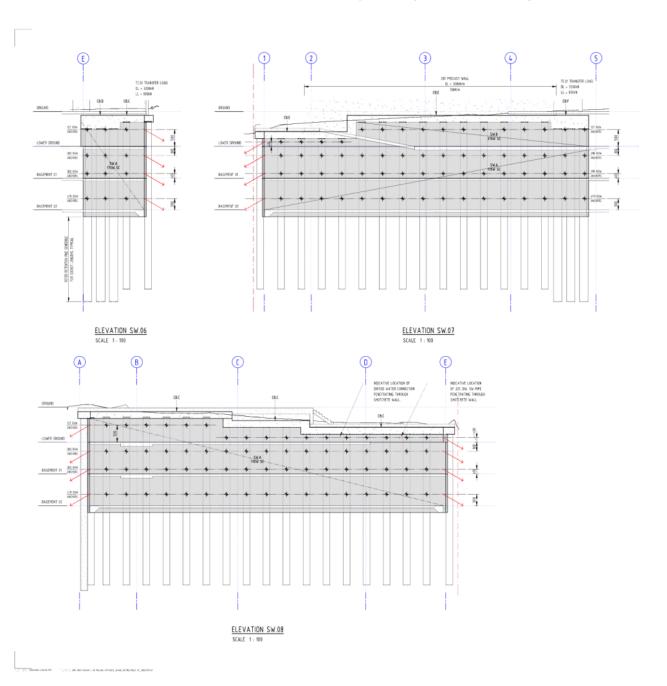
SHORING WALL SW.07 CONSTRUCTION PROCEDURE

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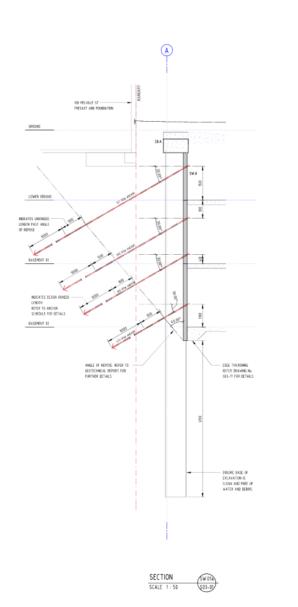
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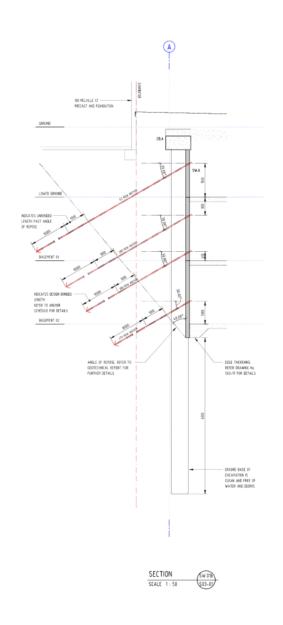


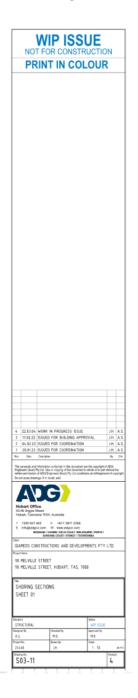


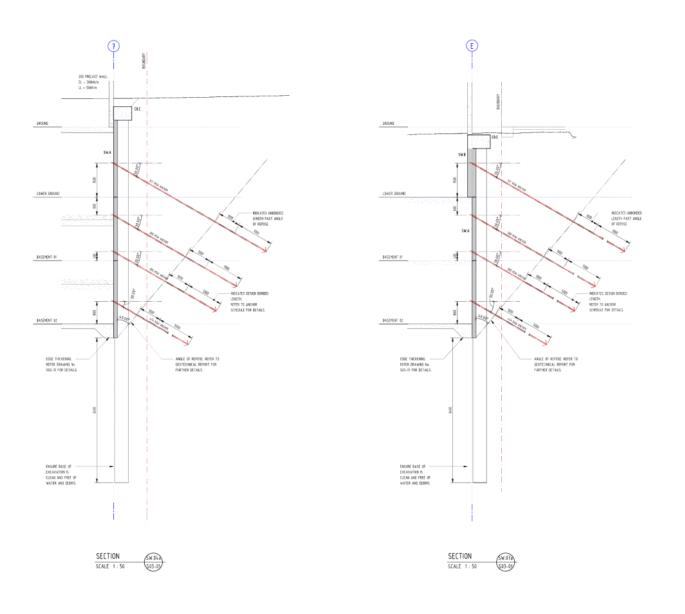


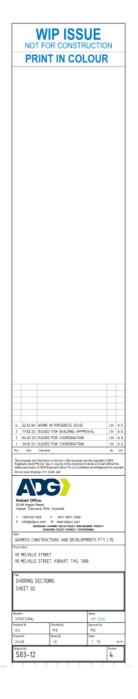
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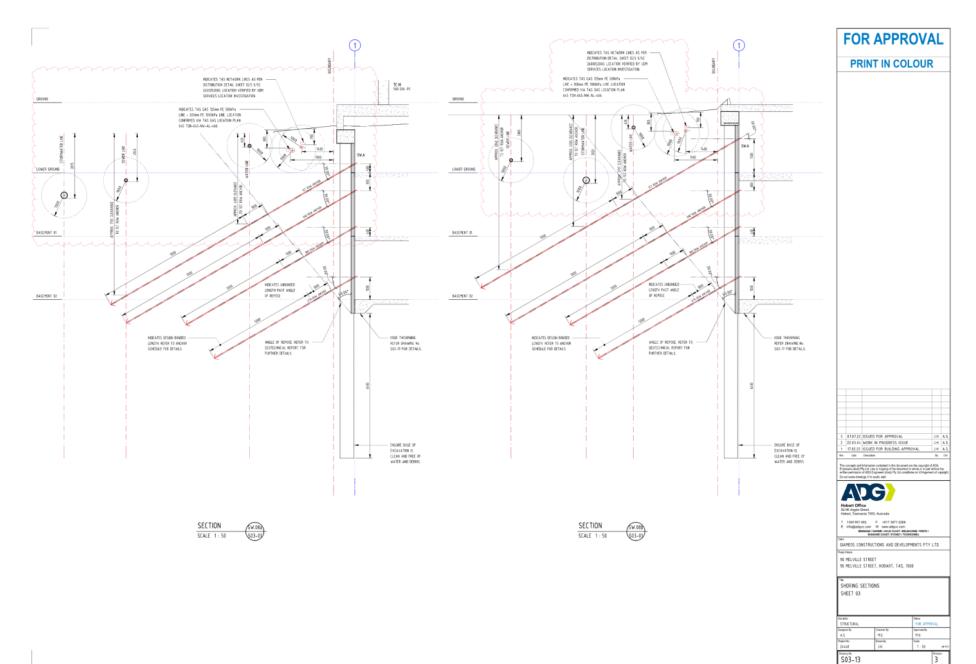


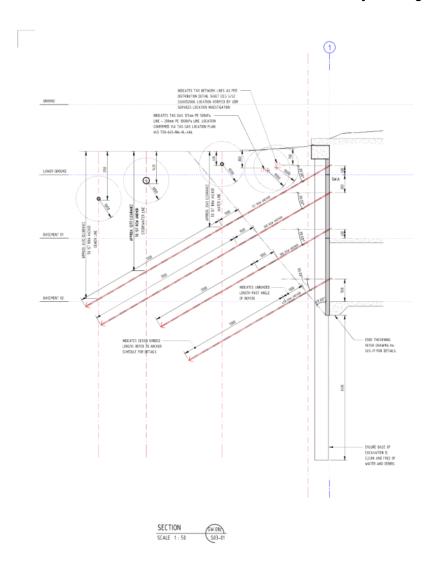


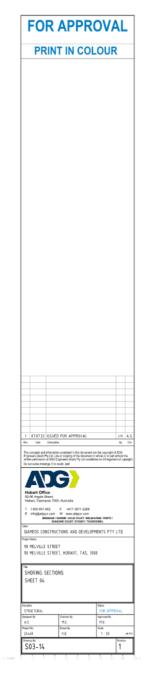
















# 90 MELVILLE STREET, HOBART

December 2019

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ATTACHMENT B

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

# **DOCUMENT CONTROL**

Title	Version	Date	Author	Reviewed By
Environmental Site Assessment. 90 Melville Street, Hobart, Tasmania	Version 1	17/12/19	Sarah Joyce	JP Cumming

Environmental Site Assessment: 90 Melville Street, Hobart, December 2019.

#### **EXECUTIVE SUMMARY**

This report presents the findings from Environmental Site Assessment (ESA) undertaken by Geo-Environmental Solutions Pty. Ltd. (GES) at 90 Melville Street, Hobart, Tasmania - hereby referred to as 'The Site'. GES was engaged by Giameos Holdings Pty Ltd to conduct this investigation.

The requirement for the ESA was under the Interim Planning Schemes, Potentially Contaminated Land Code *E2.6.2 P1 Excavation Works* as the site is potentially contaminated from former site activities (timber yard). This report has been prepared by a suitably qualified and experience practitioner in accordance with procedures and practices detailed in NEPM (2013) guidelines and key regulations and policies.

The following conclusions were made from the desktop assessment:

- The site is inferred to be underlain with Tertiary aged boulder deposits of predominantly dolerite with possible shallow subsurface dolerite or Parmeener rock.
- The site is approximately 25m above sea level. Groundwater is inferred to be directed towards the site from the west.
- There are no registered groundwater bores in the central business area of Hobart and recent deep drilling at 103 Melville street by GES to depths of 18m failed to encounter groundwater.
- The Praxis Historical report confirmed that the site has been owned by Kemp & Denning since approximately 1910.
- Historical Aerial photographs of the site and the Praxis Historical report for the site showed the following: in the early 1900's the dwellings on site were demolished, and in the period between 1958 and 1990 there were two additional large sheds for timber storage on the site. The larger K&D site at 103 Melville Street hosted a range of sheds/warehouses prior to 1986, and soon after that time the existing K&D buildings were constructed. The adjacent site at 100 Melville Street was developed from former offices and warehouses to the current buildings in the period 2005-2013. At the adjacent down gradient property at 88 Melville Street vehicle servicing activities have been operational for over 70 years.
- The dangerous goods search (Worksafe Tasmania records) failed to find any records for the site but confirmed that the K&D Hardware Store at 103 Melville Street held LPG from October 1997 to March 2013.
- As determined in the site history report (Praxis) the site had been a timber yard for over 90 years
  and the entire site is an area of potential concern (AOPC). This investigation is based upon grid
  sampling on the site in natural materials until drilling refusal in the underlying natural boulder
  deposits
- The following contaminants of potential concern (COPC) are associated with demolition of former residential buildings and timber storage/vehicle parking: Total Petroleum/Recoverable Hydrocarbons (TPH/TRH); Mono Aromatic hydrocarbons: Benzene, Toluene, Ethylbenzene, Xylene (BTEX); Polycyclic Aromatic Hydrocarbons (PAH); Heavy Metals.

The following conclusions have been made from the soil investigation based on the sampling around AEC's and based on analysed COPC's and based on the nominated threshold limit criteria for assessing risks from proposed site development works and proposal:

#### Human Health:

There were no human health guideline exceedances for dermal contact, dust inhalation, soil
ingestion assessment for Health Investigation Levels for commercial/industrial land use. There
were also no trench worker guideline limit or Health Screening Level (HSL) exceedances for soil
vapour.

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Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

#### Environment:

 There were PAH (BaP) detections that exceeded guidelines limits in 1 of the 16 samples taken from soil at the site. There was also a single Ecological Investigation Level guideline exceedance for copper. Due to the urban environmental and lack of proximal receptors no risk from contamination to ecological receptors was identified.

#### Excavated Soil Management:

• The soil samples were compared against IB105 guidelines for soil disposal. The soil was classified as a mix of Level 1, Level 2, and Level 3 Material due to the presence of various heavy metals and PAH (BaP). GES recommends that all soil excavated for the site is stockpiled, sampled by a suitably qualified and experienced environmental consultant and results compared against IB105 guideline limits for appropriate soil disposal. Where necessary, it is to be transported to an approved facility (Copping). A permit to transport the waste (obtained through the EPA) will be required.

# GES recommends the following:

Although an ecological risk has not been identified, a soil and water management plan should be
put in place for general sediment control to reduce loadings into the waterways.

#### Statement of Suitability

The findings from the current soil investigation can confirm that there is no evidence that the land is contaminated in terms of evaluated risks to human health or the environment.

Therefore, providing the above recommendations are followed in relation to the environment, GES can confirm that the planned excavation works and change of use will not adversely impact human health or the environment.

No additional contamination remediation or management measures will be required during the site redevelopment works.

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# **ABREVIATIONS**

AEC Areas of Environmental Concern

AHD Australian Height Datum

ALS Analytical Laboratory Services

ANZECC Australia and New Zealand Environment and Conservation Council

BGS Below Ground Surface

BH Borehole

BTEX Benzene Toluene Ethylbenzene Xylene
CMP Contamination Management Plan

COA Certificate of Analysis
COC Chain of Custody

COPC Contaminant of Potential Concern

CRC CARE Corporative Research Centre for Contamination Assessment and Remediation of the

Environment

CSM Conceptual Site Model
DQO Data Quality Objectives

EOH End Of Hole

EIL Ecological Investigation Levels
ESL Ecological Screening Levels

EPA Environmental Protection Authority
ESA Environmental Site Assessment
GDA94 Geocentric Datum of Australia 1994
GES Geo-Environmental Solutions Pty. Ltd.

HIL Health Investigation Levels
HSL Health Screening Levels
IL Investigation Levels

LiDAR Light Detection And Ranging

LOR Limits of Reporting

MCRWBA Minimum Construction Requirements for Water Bores in Australia

MDL Mean Detection Limit

NATA National Association of Testing Authorities

NEPM ASC National Environmental Protection (Assessment of Site Contamination) Measure

NHMRC National Health and Medical Research Council
NRMMC Natural Resource Management Ministerial Council

NL Non Limiting

NRMMC Natural Resource Management Ministerial Council

PAH Polynuclear Aromatic Hydrocarbons
PCP Physico-Chemical Parameters
PEV Protected Environmental Values

PHC Petroleum Hydrocarbons
PID Photo-Ionisation Detector

PPA Preferential (PVI) Pathways Assessment

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ATTACHMENT B

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PSH Phase Separated Hydrocarbons PVIPetroleum Vapour Intrusion Redox Reduction / Oxidation Potential SCA Site Contamination Assessment SCM Site Contamination Model TPH Total Petroleum Hydrocarbons Total Recoverable Hydrocarbons TRH USCS Unified Soil Classification System

WRG Water Resource Group

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### 1 INTRODUCTION

#### 1.1 General

This report presents the findings from Environmental Site Assessment (ESA) undertaken by Geo-Environmental Solutions Pty. Ltd. (GES) at 90 Melville Street, Hobart, Tasmania - hereby referred to as 'The Site'. GES was engaged by Giameous Holdings Pty Ltd to conduct this investigation. The Site location is presented in Figure 1 and the current site aerial photograph is presented in Figure 2.

The requirement for the ESA was under the Interim Planning Schemes, Potentially Contaminated Land Code *E2.6.2 P1 Excavation Works* as the site is potentially contaminated from former site activities (timber storage yard).

This report has been prepared by a suitably qualified and experience practitioner in accordance with procedures and practices detailed in NEPM ASC (2013) guidelines and key regulations and policies identified in the References section of this document. Personnel engaged in preparing this ESA are listed in Appendix 1 along with their relevant qualifications and years of experience.



Figure 1 Site Location (image sourced from the LIST)



Figure 2 Aerial Phtograph of the Current Site Layout (c/o Google Earth) April 2019

### 1.2 Site Details

Site details are presented in Table 1.

### Table 1 Site Details

Site Address		
90 Melville Street,	Hobart,	Tasmania

**Current Title identification details** PID 7408842 Title Reference CT245477/1

Previous land use Timber storage yard

Current land use Vacant block/car parking

Current Ownership (as per current certificates of title; the LIST)

Giameous Holdings Pty Ltd

Zoning

The site is Central Business under the Tasmanian Interim Planning Scheme, 2015.

Local Council

Hobart City Council

Proposed Site Use

Multistorey development

Requirement for current Investigation

The site is listed as a potentially contaminated site under the Interim Planning Scheme as it supported a previous commercial use of timber storage and sales

### 1.3 Investigation Objectives

The objective of the ESA was to address E2.6.2 P1 performance criteria under the Interim Planning scheme.

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#### 1.4 Scope of Works

The scope of works of this ESA was to:

- Conduct a desktop assessment, site history; plus undertake an invasive soil assessment.
- A total of 16 primary soil samples were collected for analysis of Total Recoverable Hydrocarbons (TRH), Benzene Toluene Ethylbenzene Xylene Naphthalene (BTEXN), Polynuclear Aromatic Hydrocarbons (PAHs) and a suite of 15 Metals.
- All soil samples were sent to a National Association of Testing Authorities (NATA) accredited laboratory to determine the presence/absence of contamination and at what level;
- · All samples were sent with quality assurance/quality control samples for analysis;
- All analytical results against were compared against NEPM ASC (2013) guidelines as well as
  other relevant guidelines for assessing hydrocarbon vapour and soil dermal contact risks; and
- Present the findings of the site investigation, conduct a risk assessment and develop a conceptual site model (CSM) plus present future contamination management recommendations in this ESA document.

### 1.5 Adopted Land Use Settings for the Investigation

The following investigation limits/guidelines were adopted for the site:

- Ecosystem the closest ecological receptor is the stormwater drainage network then connected
  to the Hobart Rivulet; the following guidelines were adopted:
  - o Soil Urban residential / public open spaces land use EILs and ESLs
- · The period during excavation phase of former refuelling infrastructure for all site workers:
  - HSL D for vapour intrusion risk to onsite commercial workers plus TRENCHWORK specific vapour assessment;
  - HSL D (CRC CARE) for assessing dermal contact risk to onsite commercial workers;
     and
  - HIL D for assessing dust inhalation and soil ingestion risk to onsite commercial workers.
- · Future land users:
  - HSL D for vapour intrusion risk to onsite plus TRENCHWORK specific vapour assessment;
  - HSL D (CRC CARE) for assessing dermal contact risk; and
  - HIL D for assessing dust inhalation and soil ingestion risk.
  - o Zoning Also permits Residential use, these criteria have also been considered.

### 2 PLANNING

#### 2.1 Overview

An ESA is the principal requirement within the IPS E2.0 performance criteria. According to the Interim Planning Scheme 2015 (IPS), the ESA report must be prepared by an suitably qualified person and define the nature, extent and levels of existing contamination and the actual or potential risk to human health or the environment, on or off the site, resulting from that contamination, prepared in accordance with the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended 16 May 2013.

There is no proposed change of use but excavation works was conducted at the site, and therefore E2.6.2 P1 performance criteria are to be addressed.

# 2.2 Excavation Works E2.6.2 P1

As excavation works were conducted at the site, there are no acceptable solutions to proposed works, E2.6.2 P1 performance criteria are to be addressed. The performance criteria identify that the excavation works must not adversely impact on health and the environment, having regard to:

- (a) an environmental site assessment that demonstrates there is no evidence the land is contaminated; or
- (b) a plan to manage contamination and associated risk to human health and the environment that includes:

- i. an environmental site assessment;
- any specific remediation and protection measures required to be implemented before excavation commences; and
- a statement that the excavation does not adversely impact on human health or the environment.

# 2.3 Zoning

The site is zoned *Central Business* under the Tasmanian Interim Planning Scheme of 2015 (Figure 3) and is surrounded by *Central business and Commercial zoned land*.



Figure 3 Council planning zones (2015) under the Tasmanian Interim Planning Scheme

### 3 PRELIMINARY INVESTIGATION - DESKTOP

## 3.1 Groundwater

# 3.1.1 Potential Up-Gradient Contamination Sources

Groundwater is likely to drain towards the site from the southwest and then turn to the south near Elizabeth Street to drain south east towards Hobart Rivulet. The site is situated close to the Central Business District of Hobart which has been build up for over 100 years, as a consequence there may be many sources of potential contamination past and present. There are several upgradient vehicle workshops and servicing centres including at 121-123 Melville Street (*JP Automotive*), 152 Harrington Street (*Cramp Brothers Body Works*), 134 Brisbane Street (Former garage), 171-175 Harrington Street (*Bargan Car Rentals*) and 91-93 & 95-97 Brisbane Street (*Sparco*).

# 3.1.2 Downgradient Ecological Receptors

The closest ecological receptor is the River Derwent, 0.5km southeast of the site.

#### 3.1.3 Groundwater Bores

Mineral Resources Tasmania Registered water bores are presented in Appendix 2. Three groundwater bores were identified in a 5 km radius, none of these bores are in the same water shed as the site. Registered bores include the following; Bore # 41515 located 1.8km west from the site on Pottery Creek;

Bore # 17284 located 2.5km southwest of the site near Cascade Brewery and Bore # 40210 located 2.6km west of the site on Brushy Creek (which feeds New Town Rivulet). Nothing further has been considered for this investigation.

# 3.2 MRT Geology Mapping

The geology of the site has been mapped by Mineral Resources Tasmania (Figure 4). The site is inferred to be underlain with Tertiary aged boulder deposits (Tcbd) with possible shallow subsurface dolerite or Parmeener rock. The surrounding geology comprises of similar deposits.



Figure 4 Mineral Resources Tasmania 1:25000 Scale Mapping (The LIST).

# 3.3 Site Topography, Drainage & Hydrogeology

The site has a gradual gradient of approximately 5% sloping to east. Groundwater is inferred to be migrating to the northeast then turning towards the southeast based on broad scale topographic trends (Figure 5). On a local scale, groundwater is inferred to be migrating towards Elizabeth Street from the investigation area. Surface waters at the site are currently diverted into stormwater drains which drain into the Hobart Rivulet (400m from site) and the River Derwent (1km from site).

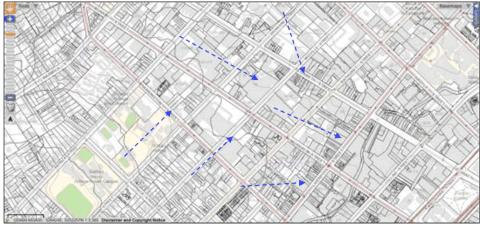


Figure 5 Surface Topography and Inferred Groundwater Flow

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#### 3.4 Historical Aerial Photography Interpretation

Historical aerial photographs of the site and surrounding areas (in particular upgradient) were collated from the Department of Primary Industries, Parks, Water and Environment (DPIPWE) and Google Earth Imagery. Error! Not a valid bookmark self-reference. presents a summary of alterations to the site between photographic events and the individual aerial photos are presented in Error! Reference source not found. to 4.

Table 2 Historical Aerial Photograph Log

Photo	Observations
2008	Site still in use as a timber yard with timber racks small site office and rear shed.
	Historical Aerial Photograph Error! Reference source not found.
1990	Site showing timber yard use open yard with site office and rear shed
	Main K&D site at 103 Melville as it today, and one adjacent building at 100 Melville Street present
	Historical Aerial Photograph Error! Reference source not found.
1977	Timber yard evident with large shed on front of property and narrow shed along western boundary
	<ul> <li>Former buildings at 100 Melville Street still present, K&amp;D building not present, varied arrangement of sheds and buildings evident</li> </ul>
	Historical Aerial Photographs Error! Reference source not found
1958	<ul> <li>Site appears as an open timber yard, similar to earlier images in the praxis historical report from the 1940's. Historical information suggests K&amp;D established the timber yard in 1910 following demolition of old houses on the site</li> </ul>
	Historical Aerial Photographs Error! Reference source not found

#### 3.5 Dangerous Goods Records (WorkSafe Tasmania)

Worksafe Tasmania was contacted for records or dangerous goods held for the site and no records were available

#### 3.6 Council Environmental Records

The Hobart City Council records indicate the following information regarding neighbouring properties around the site, from the Council's Potentially Contaminated Sites register.

- 95 97 Brisbane Street Sparco potentially contaminated with hydrocarbons.
- 121 123 Melville Street JP Automotive Motor dealers contaminated with hydrocarbons.
- 80 88 Melville Street Specialist Car Centre motor dealers etc contaminated with hydrocarbons – possible wash-bay with oil water separator.
- 170 Murray Street not on register (currently Animal tuckerbox)
- 103 Melville Street (previously known as 114-116 Brisbane Street) Was on the HCC's list as
  potentially hazardous but is marked to be removed. Gas cylinders were held at the site and there
  was also a joinery on a small portion of the site. The site has recently been assessed by GES for
  redevelopment and no significant contamination found.
- 134 Brisbane Street Names associated with site Vacuum Oil Company (1953-1954) and Hilmer Hedberg. Possible Contaminant – Hydrocarbons
- 152 Harrington Street; Activity Bodyworks, Names associated with site Cramp Brothers Bodyworks (current), Possible Contaminant – Hydrocarbons and chemical residue
- 100 Melville (adjacent) not considered as site recently redeveloped with full excavation and basement carparking.

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#### 3.7 Tasmanian EPA

A property information request (PIR) search was submitted on the 19<sup>th</sup> of November 2019. The response is still outstanding at the time of reporting, and the report will be updated once available.

#### 3.8 Historical Site Environmental Investigations

GES is not aware of any previous environmental investigations for the site.

#### 3.9 Potential Contamination Issues

#### 3.9.1 Areas of Potential Concern

As determined in this desktop assessment, the site was used as timber yard for over 100 years following demolition of old dwellings on the site in the early 1900's, given this prolonged historical use, the entire site is an area of potential concern (AOPC). This investigation has therefore undertaken a broad grid sampling program to assess any potential hotspots of site potential contamination.

### 3.9.2 Contaminants of Potential Concern

The following contaminants of potential concern (COPC) could be associated with imported fill and the past use of timber storage and sales:

- Total Petroleum/Recoverable Hydrocarbons (TPH/TRH);
- Mono Aromatic hydrocarbons: Benzene, Toluene, Ethylbenzene, Xylene (BTEX);
- · Polycyclic Aromatic Hydrocarbons (PAH) and
- · Heavy Metals.

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### 4 FIELD INVESTIGATION PROCEDURES

### 4.1 Works Summary

A total of 2 site visits were conducted to complete the environmental site assessment, see details in Table 3; borehole locations are presented in Figure 6. Photographs of site are presented in Appendix 4.

Table 3 Summary of Site Investigation Work Dates

Scope	Data	Lab Report	Details
Site walkover, competition of services clearance and pilot holes for drilling	28 <sup>th</sup> November 2019	-	Site photographs taken.
Drilling/ Sample collection	7 <sup>th</sup> December 2019	EM1921103	Seven soil bores drilled, 16 samples collected plus QC.

#### 4.2 Site Walkover

A site walkover was completed by GES staff on the 28th November 2019. Images of the current site conditions are presented in Appendix 4.

# 4.2.1 Surface Coverings

The surface across the site is 100% concrete and asphalt with no evidence of significant surface staining.

# 4.2.2 Signs of Contamination

The visual assessment failed to find any visible signs of site contamination. There was no indication of former storage infrastructure or potentially contaminating substances.



Figure 6 Sampling Plan

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### 4.3 Soil Investigation

### 4.3.1 Soil Sampling

At each of the bore locations, the following precautions were put in place to avoid disrupting underground service assets:

- Dial Before You Dig plans were obtained;
- Archers Underground Service were engaged; and
- · A hand auger was used to clear the first metre where possible.

A total of seven (7) 65 mm diameter soil bores were drilled for assessing site geology and sampling for contamination impact. The bores were drilled by GES using a hand auger and or the industry recognized Geoprobe direct push drilling system. The selected drilling method involved using a Geoprobe dual tube to retain wall integrity and eliminates risk of profile collapse whilst allowing extraction of 1.0 m length sample cores and allows for deployment of pre packed well systems.

Soil sampling was conducted per the National Environmental Protection Measure (NEPM ASC 2013) and AS4482 sampling guidelines. Table 4 presents a summary of the soil assessment methodology adopted at the site.

Table 4 Summary of Soil Sampling Methods

Activity	Details / Comments	
Underground Service Clearance	At each testing location, the following precautions were put in place to avoid disrupting underground service assets:  • Dial Before You Dig plans were obtained;  • Archers Underground Service were engaged; and  • Where practical, the first meter of the bore was cleared with a hand auger.	
Sampling Method	Soil samples were collected were collected every 0.5 m depth or change in geology. Discrete sampling was conducted where there were visual signs of contamination (discoloration) or odours present within the soil.	
Soil Logging	Logging the soil was conducted in accordance with the unified soil classification system (USCS) as detailed in AS1726 (1993).	
Decontamination of Sampling Equipment	Decon 90 was used to decontaminate reusable sampling equipment (hand auger and core trays) which was triple rinsed, the final rinse with deionised water.	
Soil Sample Collection	In accordance with AS4482.2. Individual soil samples were collected using disposable nitrile gloves from approximately at 1.0m intervals below ground surface (bgs) and/or change in geology.	
Soil Screening	In accordance with AS4482.2. Collected samples were screened for volatile fractions using a Photoionisation Detector (PID). This was done by placing the samples within snap lock bags and analysing the headspace with a PID probe. A service record for GES's PID is included in Appendix 5.	
Sample Selection	A minimum number of samples were carefully selected which would provide enough information to identify hydrocarbon contamination in soils.	
Sample preservation	Samples were placed into a jar for laboratory analysis. Soil jars were placed in a pre- chilled cool box with ice bricks.	
Sample holding times	Sample holding times were within acceptable range (based on NEPM B3-2013) from collection to extraction.	

#### 4.3.2 Soil Analysis

Primary and QC samples were submitted to Analytical Laboratory Services (ALS) Environmental, Springvale Avenue in Melbourne for analysis. The samples were analysed for TPH/TRH, BTEX, PAHs and 15 Metals. One duplicate sample was collected. Chain of Custody (COC) documentation was completed and is provided in Appendix 6; Sample Receipt Notification (SRN) in Appendix 7. Table 5 presents a summary of the laboratory analyses undertaken for the soil samples.

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Table 5 Overview of Soil Analysis and Quality Control

Analytes	Primary Soil Samples	<b>Duplicate</b> <sup>a</sup>	IISb	Rinsate Blank	Trip Blank
TPH/TRH	16	1	-	1	-
BTEX	16	1	-	1	-
PAH	16	1	-	1	-
15 Heavy Metals	16	1	-	1	-

Given that lead was analysed, there was requirement to assess the following soil physical properties to determine soil threshold investigation levels:

- Soil grain class (sand/silt or clay)
- % Clay content;
- Cation exchange capacity; and
- Soil pH

The soil physical properties were assessed through site assessment and chemical properties were based on knowledge of similar soil types encountered around the greater Hobart.

Sampling Quality Control Standards (AS4482): a – One (1) in twenty (20) inter laboratory duplicate samples

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#### 5 QUALITY CONTROL

All Field and laboratory Quality Assurance and Quality Control (QA/QC) details, outputs and reports are presented in Appendix 8.

# 5.1 Field

It is standard to expect up to 10% error in field duplication and up to 10% laboratory error. Therefore, in theory up to 20% error can be assumed on duplicate analysis. Some variation may exist in soil and groundwater because even though all efforts are made to split samples homogeneously of materials may bias samples in certain elements.

Relative Percentage Differences (RPDs) for the duplicate and triplicate samples where applicable are calculated using the method outlined below.

The acceptance criteria used for the RPDs depend on the levels of contaminants detected and the laboratory's Method Detection Limits (MDL). The closer the levels detected are to the MDL the greater the acceptable RPD. RPDs are calculated as follows:

- RPD <50% for low level results (<20 \* MDL)</li>
- RPD <30% for medium level results (20-100 \* MDL)</li>
- RPD <15% for high level results (>100 \* MDL)
- No limit applies at <2 \* MDL (Method Detection Limit)

Field QA/QC procedures and compliance are summarised in Table 6.

Table 6 Soil Field QA/QC procedures and Compliance

QA/QC Requirement	Compliance	Comments
Appropriate sampling strategy used, and representative samples collected	Yes	Sampling program was undertaken in accordance with AS4482.1-2005
Appropriate and well documented sample collection, handling, logging and transportation procedures.	Yes	Appropriate and well documented
Decontamination	Yes	Appropriate decontamination such as cleaning tools before sampling and between sample locations was undertaken
Chain-of-custody documentation completed	Yes	COC were completed in accordance with NEPM Schedule B2, Section 5.4.5 and transported under strict COC procedures. The signed COC documents are included in this report, which includes the condition report on arrival of samples to the Laboratory, cross checking of sample identification and paperwork and preservation method.
Required number of splits: Duplicate & inter-lab splits: 1 per 20 primary samples	Partially	A total of 16 Primary samples were selected for analysis; 1 duplicate sample was collected for analysis. 1 interlab split was not collected but would be preferred.
QA/QC samples reported method detection limits within indicated guidelines.	Acceptable	For Duplicate pairs, all analytes complied except 2 metals.
Trip blanks collected with no laboratory detections?	Acceptable	Trip blanks are required where volatile hydrocarbons may be detected. Site history suggested highly unlikely to be present
Required numbers of rinse blank samples collected with no laboratory detections?	Yes	Yes, plus Geopropbe sampling system with clean liners utilised between each sampling hole and sampling depth
Samples delivered to the laboratory within sample holding times and with correct preservative	Yes	All samples were sent to the laboratory within holding times and correct preservative.

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# 5.2 Laboratory

Soil laboratory QA/QC procedures and compliance are summarised in Table 7.

Table 7 Soil Laboratory QA/QC Procedures and Compliance

QA/QC Requirement	Compliance	Comments
All analyses NATA accredited	Yes	ALS Laboratories is NATA Accredited. Appropriate analytical methods used, in accordance with Schedule B(3) of the NEPM ASC 2013. Acceptable laboratory limits of reporting (LORs) adopted.
Method Blanks: zero to <practical limit<br="" quantitation="">(PQL)</practical>	Yes	There were no method blank value outliers in any of the QC1 reports.
Laboratory Control Samples: 70% to 130% recovery for soil.	Yes	There were no laboratory control outliers in any of the QC1 reports.
Matrix spikes: 70% to 130% recovery for organics or 80%-120% recovery for inorganics	Yes	There were no matrix spike outliers in any of the QC1 reports.
Duplicate Samples: 0% to <20% RPD.	Yes	There were no duplicate sample outliers.
Surrogates: 70% to 130% recovery	Yes	There were no surrogate recovery outliers in any of the QC1 reports.
Analysis holding time outliers	Yes	No hold-time outliners exist for any of the QC1 reports.
Quality Control Sample Frequency Outliers	Yes	No quality control sample frequency outliers in samples. Matrix Spike outliers present for Phenols and semi volatile TRH: NEPM 2013 B3 & ALS QC Standard.

#### 6 FIELD INVESTIGATION FINDINGS

# 6.1 Geological Interpretation

In general, the Mineral Resources Tasmania (MRT) geological mapping was consistent with the ground conditions encountered during the investigation. The profile of the boreholes drilled was generally asphalt or concrete slab over a thin layer of gravel fill (0.1m), sandy CLAYEY SILT (0.1m) below was dense silty CLAY dark brown and moist derived from Dolerite boulder deposits. For bore logs see Appendix 9.

#### 6.1.1 Grain Class Interpretation

Grain size classifications are applied to all soils at the site to determine threshold screening level concentrations for hydrocarbons to assess soil ecological and human health risks.

Grain class threshold values are determined based on either the:

- sample grain size (in the case of ecological screening levels or chromium limits); or
- average grain class overlying the sample point (when assessing petroleum vapour screening levels).

When assessing petroleum vapour intrusion screening levels, where soil is proposed to be excavated from the site, the excavated material is excluded from the grain class averaging. The corresponding depth class from which the sample is collected is also shallowed based on the renewed basement depth.

Table 8 provides a summary of the grain class averages for material overlying the sample.

Table 8 Summary of Grain Class Based on USCS Classification

	Red	_				Soil	Grain	Size	e Cla	iss A	vera	ging	Abo	ve S	oil Sa	mple					Att	enua	tion	HSL	
Sample	Footing Excavation Depth^- Fill Thickness^- Green	Sample PVI Depth (m) Rebtive to Sbb/Cut Depth	GW	GP	GM	GC	sw	SP	SM	sc	ML	CL	OL	мн	сн	он	а	Rock (R )	Existing Pavement (P)	Craw1Space Thickness (m)	Proposed CONCRETE (CH)	CrawlSpace	Biodegradation	Petroleum Vapour Intrusion Grain Class*	SAMPLE USCS
BH1 0.5-0.6	6.7	<																		NA	0.2	1.0	1.0	CLAY	СН
BH1 1.5-1.6	6.7	<														Ш				NA	0.2	1.0	1.0	CLAY	CL
BH1 2.5-2.6	6.7	<														Ш			Ш	NA	0.2	1.0	1.0	CLAY	CL
BH2 0.5-0.6	6.7	<														Ш				NA	0.2	1.0	1.0	CLAY	CH
BH2 1.5-1.6	6.7	<																		NA	0.2	1.0	1.0	CLAY	CL
BH3 0.5-0.6	6.7	<																		NA	0.2	1.0	1.0	CLAY	CH
BH3 1.5-1.6	6.7	<																		NA	0.2	1.0	1.0	CLAY	CL
BH4 0.5-0.6	6.7	<																		NA	0.2	1.0	1.0	CLAY	CH
BH4 1.5-1.6	6.7	<																		NA	0.2	1.0	1.0	CLAY	SC
BH5 0.5-0.6	6.7	<																		NA	0.2	1.0	1.0	CLAY	GW
BH5 1.5-1.6	6.7	<																		NA	0.2	1.0	1.0	CLAY	SC
BH6 0.5-0.6	6.7	<																		NA	0.2	1.0	1.0	CLAY	СН
BH6 1.5-1.6	6.7	<																		NA	0.2	1.0	1.0	CLAY	CL
BH7 0.5-0.6	6.7	<																		NA	0.2	1.0	1.0	CLAY	СН
BH7 1.5-1.6	6.7	<																		NA	0.2	1.0	1.0	CLAY	CL

# 6.1.2 Soil Contamination Observations

The soils on site appear to be largely natural clay soils derived from the underlying boulder deposits. Only shallow gravel base as present under the concrete or asphalt surface. A small amount of fill was noted in bore hole 7, which contained brick fragments and charcoal.

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#### 7 SOIL ECOLOGICAL IMPACT ASSESSMENT

#### 7.1 Protected Environmental Values

The requirement for protecting soil from contaminated activities in Tasmania is managed under the Environmental Management and Pollution Control Act 1994 (EMPCA) which states in Part 5A:

- (2) An area of land is a contaminated site if -
  - (a) there is in, on or under that area of land a pollutant in a concentration that -
    - (i) is above the background concentration; and
    - (ii) is causing or is likely to be causing serious or material environmental harm or environmental nuisance, or is likely to cause serious or material environmental harm or environmental nuisance in the future if not appropriately managed;

Potential soil impact at the site is assessed through application of the following environmental investigation guidelines.

### 7.2 NEPM ASC (2013) Guidelines

The following ecological investigation guidelines are to be addressed to assess acceptable levels of risk to terrestrial ecosystems:

- NEPM ASC (2013) Ecological Investigation Levels (EIL's) have been developed for selected
  metal and organic substances. EIL's depend on specific soil and physicochemical properties
  and land use scenarios and generally apply to the top two (2) metres of the soil profile (NEPM
  2013);
- NEPM ASC (2013) Ecological Screening Levels (ESL's) have been developed for selected
  petroleum hydrocarbon compounds and total petroleum hydrocarbon fractions. ESL's broadly
  apply to coarse- and fine-grained soils and various land use scenarios within the top two (2)
  metres of the soil profile (NEPM ASC 2013).

Soil analytical results are compared against Ecological Screening Levels (ESL's) and Ecological Investigation Levels (EIL's) limits presented in Table 9.

Table 9 Summary of Soil Investigation Limits Considered at the Site based in NEPM ASC (2013)

	Analytes Inv	estigated					
Investigation	Hydrocarbo	ns			Metals		
Levels (IL)	BTEX	TRH (F1 to F4)	Benzo(a) pyrene (PAH)	Naphthalene (PAH)	Zn, Cu, Cr(III), Ni & As	Lead	DDT
ESL's	Analysed	Analysed	Analysed	> <	> <	> <	$>\!\!<$
EIL's	$\geq <$	$\geq <$		Analysed	Analysed	Analysed	Not Analysed

#### 7.3 Guidelines

#### 7.3.1 Ecological Screening Levels

The following compounds were compared against NEPM (2013) Ecological Screening Levels (ESL's):

- BTEX;
- F1 to F4 TRH; and
- Benzo(a)pyrene

Selection of ESL threshold investigation limits are set out in the NEPM (2013) guidelines and require classification of the soil according to:

- Land use sensitivity:
  - Areas of ecological significance
  - Urban residential and public open space; and
- Dominant particle size passing through a 2 mm sieve into:
  - Coarse sand sizes and greater; and
  - Fine clay and silt sizes.

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Adopted NEPM (2013) soil and land use classifications are presented below.

#### 7.3.2 Ecological Investigation Levels

The following compounds were compared against Environmental Investigation Levels:

- Lead; and
- Naphthalene.

There was a requirement to classify the soil according to physicochemical properties given that the above listed compounds. Adopted physicochemical parameters are presented in the results tables.

Selection of EIL threshold investigation limits are set out in the NEPM ASC (2013) guidelines and require classification of the soil per specific soil and physicochemical properties which are presented in the results tables. The adopted land use scenario applied was Urban Residential/Public Open Space land use guidelines because it was the best fit for current and future land use of the site.

### 7.4 Findings

### 7.4.1 Ecological Screening Levels

Laboratory analytical results for soil are presented in Appendix 10. Table 10 summaries all soil analytical results against relevant ESLs guideline limits for urban residential / public open spaces land use. Concentrations which exceed laboratory limits of reporting (LOR) are highlighted in bold. ESL exceedances are highlighted with a coloured cell. Samples that have been excavated are marked with an X.

A single sample taken from soil at the site exceeds ESL limits for Benzo-a-pyrene (BaP). Therefore, if that soil is disturbed in that area it may pose a risk to ecological receptors if not managed.

Table 10 Summary of Soil Analytical Results Compared with Ecological Screening Level's for commercial / Industrial land use

					ВТ	EX		PAH		TRH	l	
X - Indicates Sar Colour Shading - >1 x, * 2-5 x, ** 5	· · Indicates ESI	_ Exce e d	lances:	Benzene	Toluene	Ethylbenzene	Xylenes	Benzo(a)pyrene	F1 (C6 - C10)	F2 (>C10 - C16)	F3 (>C16 - C34)	F4 (>C34 - C40)
QI.	Jate	: dass	se	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	Sample Date	Soil Texture Clas (fine /coarse)	Land Use	LOR 0.2	LOR 0.5	LOR 0.5	LOR 0.5	LOR 0.5	LOR 10	LOR 50	LOR 100	LOR 100
BH1 0.5-0.6 X	7/12/19	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH1 1.5-1.6 X	7/12/19	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH1 2.5-2.6 X	7/12/19	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH2 0.5-0.6 X	7/12/19	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH2 1.5-1.6 X	7/12/19	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH3 0.5-0.6 X	7/12/19	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH3 1.5-1.6 X	7/12/19	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH4 0.5-0.6 X	7/12/19	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH4 1.5-1.6 X	7/12/19	С	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH5 0.5-0.6 X	7/12/19	С	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH5 1.5-1.6 X	7/12/19	С	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH6 0.5-0.6 X	7/12/19	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH6 1.5-1.6 X	7/12/19	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH7 0.5-0.6 X	7/12/19	F	COM/IND	<0.2	<0.5	<0.5	<0.5		<10			$\perp$
BH7 1.5-1.6 X	7/12/19	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100

### 7.4.2 Ecological Investigation Levels

Laboratory analytical results are presented in Appendix 10. Table 11 compares all soil analytical results against relevant ecological investigation limits (EIL's) for urban residential / public open spaces land use. Concentrations which exceeded laboratory LOR are detailed in the table. EIL exceedances are highlighted with a coloured cell and samples that were excavated are marked with an X. There was a single EIL guideline exceedances for copper and a low risk to ecological receptors has been identified.

Table 11 Soil Analytical Results Compared Against Ecological Investigation Levels for commercial / industrial land use

industrial land	use												
X - Indicates Sa	mple With	iin Inform	d Evcay	ation									
	<u> </u>												
Colour Shading >1 x, * 2-5 x, **													
		ass	ŒC(amolc/kg)	^	cture Gass parse)	Copper (ŒC)	Copper (pH)	Nickel	Zinc	Chromium III	Lead	Arsenic	Naphthalene
Sample ID	Sample Date	EIL Land Use Sensitivity G	Soil Œ	Soil pH	Soil Texture C (fine /coarse)	mg/kg	mg/kg	mg/kg	Bq/Bш	mg/kg	mg/kg	mg/kg	mg/kg
BH1 0.5-0.6 X	7/12/19	COM/IND	45	4.5 (3)	F	30	30	11	11	8	6	<5	<1
BH1 1.5-1.6 X	7/12/19	COM/IND	35	4.5 (3)	F	36	36	54	49	14	8	<6	<1
BH1 2.5-2.6 X	7/12/19	COM/IND	35	4.5 (3)	F	37	37	39	49	12	8	<5	<1
BH2 0.5-0.6 X	7/12/19	COM/IND	45	4.5 (3)	F	66	66	30	50	39	5	<5	<1
BH2 1.5-1.6 X	7/12/19	COM/IND	35	4.5 (3)	F	101	101	21	51	5	<5	<5	<1
BH3 0.5-0.6 X	7/12/19	COM/IND	45	4.5 (3)	F	30	30	18	16	9	7	<5	<1
BH3 1.5-1.6 X	7/12/19	COM/IND	35	4.5 (3)	F	34	34	70	48	10	<5	<5	<1
BH4 0.5-0.6 X	7/12/19	COM/IND	45	4.5 (3)	F	29	29	10	16	11	9	<5	<1
BH4 1.5-1.6 X	7/12/19	COM/IND	20	4.5 (3)	С	18	18	21	32	8	6	<5	<1
BH5 0.5-0.6 X	7/12/19	COM/IND	10	4.5 (3)	O	56	56	25	25	21	6	<5	<1
BH5 1.5-1.6 X	7/12/19	COM/IND	20	4.5 (3)	С	57	57	29	33	8	<5	<5	<1
BH6 0.5-0.6 X	7/12/19	COM/IND	45	4.5 (3)	F	29	29	8	11	9	6	<5	<1
BH6 1.5-1.6 X	7/12/19	COM/IND	35	4.5 (3)	F	68	68	20	48	23	<5	<5	<1
BH7 0.5-0.6 X	7/12/19	COM/IND	45	4.5 (3)	F	77	77	10	133	6	90	34	<1
BH7 1.5-1.6 X	7/12/19	COM/IND	35	4.5 (3)	F	80	80	62	46	27	<6	<6	<1

### pH Designation:

<sup>1)</sup> Using 0.01M CaCl2 extract. Rayment, G.E. and Lyons, D.J. (2011). "Soil Chemical Methods – Australasia". 495+20 pp. CSIRO Publishing, Melbourne.

<sup>2)</sup> pHF (1:5). Adjusted by subtracting 0.75 with +/- 0.25 error to calibrate to the CaCl2 method (per comm. ALS Brisbane Acid Sulphate Soils Laboratory). Methods in accordance with Ahern, C.R., Stone Y., and Blunden B. (1998b). 'Acid Sulphate Soils Assessment Guidelines'. Acid Sulphate Soils Management Advisory Committee, Wollongbar, NSW, Australia.

<sup>3)</sup> Classified in accordance with parent material typical soil pH as per the Tasmanian soils database / or on-site testing

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#### 8 SOIL HUMAN HEALTH DIRECT CONTACT ASSESSMENT

#### 8.1 Guidelines

Guidelines presented herein are based on potential exposure of human receptors to soil impact which may include:

- Onsite excavation works which may include basement carpark and deep foundations. Receptors
  include onsite commercial contractors, offsite residential receptors as well as sensitive land use
  and recreational receptors;
- Proposed future onsite residential land users which may be exposed to potential shallow soil
  impact in non-paved areas of the site not likely given the entire site will be sealed by a concrete
  carpark;
- Trench workers repairing or building services (typically to 1 m bgs) as assessed against commercial worker guidelines for dermal contact and HIL's.

#### 8.1.1 Land Use Classification

The NEPM (2013) guidelines have been referenced to ensure that the correct land use and density category has been adopted for the site and the surrounding properties (where applicable). As per NEPM (2013) guidelines, the adopted land use class is dependent on the building density and the opportunity for soil access by site occupants (exposure to potentially impacted soil). Aspects needing to be considered include:

- Whether the site is of sensitive land use such as a childcare centre, preschool, primary school or aged care facility in which case land use Class A is applicable;
- The proportion of paved area to determine direct contact exposure risk and therefore classification as low or high density; and
- Classification based on residential, recreational or commercial/industrial setting.

#### 8.1.2 Adopted Land Use Classification

The adopted land use class is presented in Table 12.

Table 12 Summary of Land Use Spatial and Temporal Setting for Determining Exposure Risk

Soil Samples	Current/future use	Location	Land Use	Pathway*	Land Use Class
All	Current	Onsite	Commercial workers	ALL	D
			Trench workers	ALL	D & Standard
	Potential site redevelopment	Onsite	Trench workers	ALL	D & Standard
			Commercial contractors	ALL	D
	Future – post	Onsite	Commercial workers	ALL	D
	potential redevelopment		Trench workers	ALL	D & Standard
			Residents (upper floors no soil contact) for any maintenance excavations only	DI	D

<sup>\*</sup> Pathways:

#### 8.2 Findings

### 8.2.1 Dermal Contact - Petroleum Hydrocarbons

Laboratory analytical results are presented in Appendix 10. Table 13 presents soil hydrocarbon analytical results compared against CRC CARE (Friebel & Nadebaum, 2011) Health Screening Levels (HSL) guidelines for assessing dermal contact to commercial workers, potential future residents and Trench workers. Concentrations which exceeded laboratory LOR are highlighted in bold. HSL exceedances are highlighted with a coloured cell indicating the highest HSL land used class which is exceeded. There were no exceedances identified.

DC - Dermal Contact - HSL Trench Worker Guidelines (CRC CARE 2013)

DI - Dust Inhalation - HIL Guidelines (NEPM ASC 2013)

SI – Soil Ingestion - HIL Guidelines (NEPM ASC 2013)

ALL - All of above

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Table 13 Soil Analytical Results Compared Against CRC CARE Guidelines for Dermal Contact

	•		EP	080: BTE	KN			EP080/	071: TRH	
		Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	C6 - C10 Fraction	>C10 - C16 Fraction	>C16 - C34 Fraction	>34 - C40 Fraction
Units		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR		0.2	0.5	0.5	0.5	1	10	50	100	100
HSL D Comme	ercial/Industrial	430	99000	27000	81000	11000	26000	20000	27000	38000
Intrusive Mai	intenance Worker	1100	120000	85000	130000	29000	82000	62000	85000	120000
Date	Sample									
7/12/2019	BH1 0.5-0.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
7/12/2019	BH1 1.5-1.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
7/12/2019	BH1 2.5-2.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
7/12/2019	BH2 0.5-0.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
7/12/2019	BH2 1.5-1.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
7/12/2019	BH3 0.5-0.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
7/12/2019	BH3 1.5-1.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
7/12/2019	BH4 0.5-0.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
7/12/2019	BH4 1.5-1.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
7/12/2019	BH5 0.5-0.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
7/12/2019	BH5 1.5-1.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
7/12/2019	BH6 0.5-0.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
7/12/2019	BH6 1.5-1.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
7/12/2019	BH7 0.5-0.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10			
7/12/2019	BH7 1.5-1.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100

# 8.2.2 Dust Inhalation & Soil Ingestion

Laboratory analytical results are presented in Appendix 10. Table 14 presents the soil analytical results compared against combined dust inhalation and soil ingestion risk is assessed through the application of NEPM (2013) Health Investigation Levels (HILs) for exposure to soil contaminants. Concentrations which exceeded laboratory LOR would be presented in bold, metals are simply reported. HIL exceedances would be highlighted with a coloured cell indicating the highest HIL land used class which is exceeded. Samples that have been excavated are marked with an X.

There were no exceedances identified.

Table 14 Soil Analytical Results Compared Against NEPM (2013) Health Investigation Limit Guidelines

Table 14	Son Analytical	Kesuns	Сош	parec	u Aş	gamsi	NEI	IVI (	(2013	) nea	шт	nvesu	gam	)II L.I.	uiit y	Guide	imes																		
		EA055: Moisture Content	EG005T	: Total N	Metal:	s by ICP-#	AES										EG035T: Total Recoverable Mercury by FIMS	EP07	5(SIM	1)B: Pc	olynuc	lear A	roma	tic Hyc	drocar	bons									
1	es Sample Within Excavation Zone	Moisture Content	Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium Total	Cobalt	Copper	pean	Mangan ese	Nickel	Selenium	Vanadium	Zinc	Mercury	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benz(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyren e	Indeno(1.2.3.cd)pyrene	Dibenz(ah)anthracene	Benzo(g.h.i)perylene	PAHS	Benzo(a)pyreneTEQ (WHO)
Units		%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	в <sub>/</sub> /вш	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR		1	5	10	1	20	1	2	2	5	5	5	2	ın	5	5	0.1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
HIL D Comme	rial/Industrial	₩ HIL D	3000		500	300000	900		4000	240000	1500	60000	6000	10000		400000	730																	4000	40
Sample date:	Sample ID																										Ц_	$\perp$							
	BH1 0.5-0.6 X	22.3	<5		<1	<50	<1	8	13	30	6	32	11	<5	67	11	<0.1	_							_	-	-	-	-	<0.5	-	$\overline{}$	-	$\overline{}$	-
7/12/2019	BH1 1.5-1.6 X	17.7	<6	<60	<6	<60	<3	14	58	36	8	497	54	<6	95	49	<0.1	_		_	_	<0.5	-		_	_	-	_	<0.5	$\overline{}$	<0.5	<0.5	<0.5	<0.5	<0.5
7/12/2019	BH1 2.5-2.6 X	21.6	<5	<50	<5	<50	<2	12	13	37	8	303	39	<5	101	49	<0.1	_		_		<0.5	-		<0.5	-	-	-	-	-	<0.5	_	<0.5	<0.5	<0.5
7/12/2019	BH2 0.5-0.6 X	20	<5	340	<1	<50	<1	39	47	66	5	640	30	<5	98	50	<0.1	_		_	_	<0.5	-	<0.5	_	—	-	<0.5	-	$\vdash$	<0.5	<0.5	<0.5	<0.5	<0.5
7/12/2019	BH2 1.5-1.6 X	14.5	<5	140	<1	<50	<1	5	28	101	<5	263	21	<5	111	51	<0.1					<0.5			<0.5	_	-	-	$\longrightarrow$	-	<0.5		$\rightarrow$	<0.5	_
7/12/2019	BH3 0.5-0.6 X	21.6	<5	280	1	<50	<1	9	25	30	7	30	18	<5	70	16	<0.1					<0.5			<0.5	_	-	-	-	$\overline{}$	<0.5	$\rightarrow$	$\rightarrow$	<0.5	<0.5
7/12/2019	BH3 1.5-1.6 X	19.6	<5	280	7	<50	<2	10	291	34	<5	681	70	<5	83	48	<0.1														<0.5	_	$\overline{}$	<0.5	
7/12/2019	BH4 0.5-0.6 X	24.8	<5	170	<1	<50	<1	11	8	29	9	60	10	<5	75	16	<0.1	_		_		_	_		_	_	_	_	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
7/12/2019	BH4 1.5-1.6 X	22.5	<5	70	3	<50	<1	8	29	18	6	106	21	<5	32	32	<0.1					<0.5		_	<0.5	_	-	-	$\rightarrow$		<0.5	$\rightarrow$	$\rightarrow$	<0.5	<0.5
7/12/2019	BH5 0.5-0.6 X	19.8	<5	600	2	<50	<1	21	22	56	6	51	25	<5	105	25	<0.1	_		_	-	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
7/12/2019	BH5 1.5-1.6 X	18	<5	220	<1	<50	<1	8	33	57	<5	780	29	<5	88	33	<0.1					<0.5			<0.5	_	_	_			<0.5		_	<0.5	<0.5
7/12/2019	BH6 0.5-0.6 X	22.9	<5	250	<1	<50	<1	9	9	29	6	33	8	<5	68	11	<0.1	_				<0.5		<0.5	_	_	_	<0.5	$\overline{}$		<0.5	_		<0.5	
7/12/2019	BH6 1.5-1.6 X	13.2	<5	130	<1	<50	<1	23	18	68	<5	247	20	<5	110	48	<0.1	_				<0.5		<0.5	<0.5		_	_	_			-	_	<0.5	<0.5
7/12/2019	BH7 0.5-0.6 X	7.8	34	60	<1	<50	<1	6	15	77	90	348	10	<5	52	133	<0.1	_			-	_			_	_	-	-	-	24.3	$\overline{}$	$\rightarrow$	$\overline{}$		
7/12/2019	BH7 1.5-1.6 X	15.3	<6	660	<6	<60	<3	27	29	80	<6	3530	62	<6	95	46	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

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### 9 INDOOR INHABITANT PVI ASSESSMENT - HSL's

This PVI assessment has been conducted in accordance with relevant CRC CARE Technical Documentation and NEPM 2013 guidelines presented in references section of this report. The HSL assessment approach is generally the first (Tier 1) investigation phase adopted for assessing PVI risk at petroleum hydrocarbon (PHC) impacted sites. HSL guidelines have been applied for samples collected from the site to account for risks that may be associated with volatile hydrocarbon vapour intrusion into confined spaces where there may be an inhalation risk through longer term exposure. This does not constitute a full vapour risk assessment but provides additional information from which to further quantify any risk.

A detailed investigation (Tier 2 to 3) is recommended over an HSL assessment where an acute risk has been identified at the site (CRC CARE 2013) because of:

- · Migrating product on surface soils beneath buildings;
- · Strong PHC odours;
- · Flammable risk in confined spaces; and/or
- Health complaints from occupants.

Based on the site visits, none of the above conditions have been identified at the site. If the outcome of this Tier 1 assessment reveals HSL exceedances for hydrocarbon vapour intrusion, a more detailed (Tier 2) assessment will be required to further evaluate the human health risk.

PVI risk is initially interpreted through the development of HSL threshold limits from the following classifications:

- · The geology and or hydrogeology of the investigation point; and
- · Land use sensitivity:

The resulting HSL threshold limits are compared with laboratory analytical results.

### 9.1 Selected Media for Assessing PVI Risk

Table 15 presents a summary of the preferred HSL approach to assessing PVI risk. In this case, all soil investigated was within the excavation zone. Groundwater was eliminated as a source due to the documented depth (>18m) well in excess of the vertical exclusion depth (NEPM & CRC CARE).

Table 15 Preferred Methods for Determining Site PVI Risk

Media Analysed	Method	Limitations	Order of Preference
Soil Gas	Concentrations of a soil gas through a soil vapor probe	This approach provides the most reliable data in interpreting PVI risk, although direct modelling should be applied if concentrations exceed HSL threshold limits.	Primary
Groundwater	Concentrations of PHC in groundwater through deployment of monitoring wells	More robust and reliable that soil in determining onsite and in particular, offsite risks. Determining PVI risk based on groundwater is inherently conservative when interpreting vapour risk to account for not readily discernible preferential pathways. Reference may be drawn to alternative assessment approaches:  1) Application of site-specific conditions to the CRC CARE model for assessing PVI risk 2) Soil gas interpretation for areas where a PVI risk is identified from groundwater analysis.	Secondary
Soil	Concentrations of PHC in soil	Concentrations in soil may be subject variability due to soil moisture, organic content and oxygen ingress all which create significant bias in threshold values. Reliance is place on utilizing groundwater analysis over soil. Soil results provide localised information.	Tertiary

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#### 9.2 Land Use Class

For surrounding properties, the potential PVI risk is characterized through application of CRC CARE HSL's for each individual property based on their existing land use (NEPM 2013; Friebel & Nadebaum 2010). The CRC CARE guidelines have been referenced to ensure that the correct land use and density category has been adopted for surrounding land use to ensure health risks are consistent with the HSL models. Aspects considered include the:

- · Sensitivity of the existing or potential land use;
- · Percentage of paved area for defining potential vapour migration risk;
- Type of basement garage which may influence the confinement of PHC vapours;
- Presence of a slab or cavity for discerning vapour intrusion risk.

If hydrocarbon impacted soil is discerned at the site, consideration is given to downgradient receptors. Where applicable, land use class therefore considers:

- · Downgradient receptors where onsite HSL exceedances have been identified in soil; and
- Variations in land use for different parts of the proposed development.

The current and future land uses have been considered, including:

- HSL D for commercial workers at the site (current and future)
- HSL D for residents in upper level apartments above basement carparking (future use)

#### 9.3 Soil Assessment

Laboratory analytical results are presented in Appendix 10. Table 16 presents the results against a potential indoor vapour risk. Concentrations which exceeded laboratory LOR are highlighted in bold. HSL exceedances are highlighted with a coloured cell.

There were no exceedances identified.

Table 16 Soil Analytical Results Compared Against HSL D for Indoor Vapour Risk

EP080: BTEXN	EP080/0	071: TRH
n es es		
a le la		
Colour Shading - Indicates HSL Exceedances:		
Colour Shading - Indicates HST Exceedances: >1 x, * 2-5 x, ** 2-5 0 x, *** 5-20 x, ** 5-20	F1	F2
Sample ID Sample Date Depth Class Grain HSL mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	mg/kg	mg/kg
Class LOR 0.2 LOR 0.5 LOR 0.5 LOR 0.5	LOR 10	LOR 50
BH1 0.5-0.6 7/12/2019 >SLAB/CUT RL CLAY D <0.2 <0.5 <0.5 <0.5 <1	<10	<50
BH1 1.5-1.6 7/12/2019 >SLAB/CUT RL CLAY D <0.2 <0.5 <0.5 <0.5 <1	<10	<50
BH1 2.5-2.6 7/12/2019 >SLAB/CUT RL CLAY D <0.2 <0.5 <0.5 <0.5 <1	<10	<50
BH2 0.5-0.6 7/12/2019 >SLAB/CUT RL CLAY D <0.2 <0.5 <0.5 <0.5 <1	<10	<50
BH2 1.5-1.6 7/12/2019 >SLAB/CUT RL CLAY D <0.2 <0.5 <0.5 <0.5 <1	<10	<50
BH3 0.5-0.6 7/12/2019 >SLAB/CUT RL CLAY D <0.2 <0.5 <0.5 <0.5 <1	<10	<50
BH3 1.5-1.6 7/12/2019 >SLAB/CUT RL CLAY D <0.2 <0.5 <0.5 <0.5 <1	<10	<50
BH4 0.5-0.6 7/12/2019 >SLAB/CUT RL CLAY D <0.2 <0.5 <0.5 <0.5 <1	<10	<50
BH4 1.5-1.6 7/12/2019 >SLAB/CUT RL CLAY D <0.2 <0.5 <0.5 <0.5 <1	<10	<50
BH5 0.5-0.6 7/12/2019 >SLAB/CUT RL CLAY D <0.2 <0.5 <0.5 <0.5 <1	<10	<50
BH5 1.5-1.6 7/12/2019 >SLAB/CUT RL CLAY D <0.2 <0.5 <0.5 <0.5 <1	<10	<50
BH6 0.5-0.6 7/12/2019 >SLAB/CUT RL CLAY D <0.2 <0.5 <0.5 <0.5 <1	<10	<50
BH6 1.5-1.6 7/12/2019 >SLAB/CUT RL CLAY D <0.2 <0.5 <0.5 <0.5 <1	<10	<50
BH7 0.5-0.6 7/12/2019 >SLAB/CUT RL CLAY D <0.2 <0.5 <0.5 <0.5 <1	<10	
BH7 1.5-1.6 7/12/2019 >SLAB/CUT RL CLAY D <0.2 <0.5 <0.5 <0.5 <1	<10	<50

#### 10 TRENCH WORKER PVI ASSESSMENT - HSL's

#### 10.1 Classification

The following Health Screening Assessment is based on hydrocarbon vapour intrusion risk to subsurface excavation workers within excavations. This is assessed through analysis of vapours from soil and soil vapours. Groundwater is generally not used to assess risk as threshold limits for all depth and grain classes are non-limiting. Land use classes are not applicable when assessing vapour intrusion into trenches

Soil and soil vapour HSL's for assessing hydrocarbon risk to maintenance workers are based on CRC CARE Technical Report 10 guidelines (Friebel & Nadebaum 2011) and the following variables:

- Dominant grain size class of material at the soil sample depth or based on the dominant grain class of the backfill material based on US Agriculture Soil Classification System (SCS) and partitioning into either sand, silt or clay; and
- Classifying soil according to depth ranges: 0 to 2 m; 2 to 4 m; 4 to 8 m; and greater than 8 m;

### 10.2 Findings

Laboratory analytical results are presented in Appendix 10. Summary of Soil Analytical Results Compared against HSL's for Assessing PVI Risk to Trench Workers are presented in Table 17. Concentrations that exceeded laboratory LOR are highlighted in bold, and if there were any HSL exceedances they would be highlighted with a coloured cell. There were no exceedances identified.

Table 17 Summary of Soil Analytical Results Compared against HSL's for Assessing PVI Risk to Trench Workers

WUIKEIS										
CRC CARE Health Screer for PHC Inhalation Risk Soil Sample Analysis			n		EP	080: BTE	XN		EP080/	071: TRH
Bold - Indicates LOR Exc	eedances					ene	nes	ine	C10 Fraction	C16 Fraction
Dark Grey Shading - Ind	icates HSL Exc	eedances:		e e	ne u	oenz	Xyle	thal	101	
>1 x, * 2-5 x, ** 5-20 x, *	*** 20-50 x, **	** >50 x		Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	0-90	>C10
Sample ID	Sample Date	Depth	Grain	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sumple 15	odinpic bate	Class	Class	LOR 0.2	LOR 0.5	LOR 0.5	LOR 0.5	LOR 1	LOR 10	LOR 50
BH1 0.5-0.6	7/12/2019	4 to 8m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH1 1.5-1.6	7/12/2019	4 to 8m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH1 2.5-2.6	7/12/2019	4 to 8m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH2 0.5-0.6	7/12/2019	4 to 8m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH2 1.5-1.6	7/12/2019	4 to 8m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH3 0.5-0.6	7/12/2019	4 to 8m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH3 1.5-1.6	7/12/2019	4 to 8m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH4 0.5-0.6	7/12/2019	4 to 8m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH4 1.5-1.6	7/12/2019	4 to 8m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH5 0.5-0.6	7/12/2019	4 to 8m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH5 1.5-1.6	7/12/2019	4 to 8m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH6 0.5-0.6	7/12/2019	4 to 8m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH6 1.5-1.6	7/12/2019	4 to 8m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH7 0.5-0.6	7/12/2019	4 to 8m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	100
BH7 1.5-1.6	7/12/2019	4 to 8m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50

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### 11 SOIL DISPOSAL ASSESSMENT

#### 11.1 Guidelines

Soil which is excavated from the site for landfill disposal is to be assessed against Information Bulletin 105 (IB105) for Classification and Management of Contaminated Soil for Disposal. The Environmental Protection Authority (EPA) uses 4 categories to classify contaminated soil as per Table 18:

- (Level 1) Fill Material;
- (Level 2) Low Level Contaminated Soil;
- (Level 3) Contaminated Soil; and
- (Level 4) Contaminated Soil.

Fixed numerical values are presented for soil concentrations and leachable fraction concentrations.

Table 18 Summary of IB105 Classification Guidelines

	Classification (with reference to Table 2)	Controlled Waste <sup>1</sup>	Comments
Fill Material <sup>2</sup> (Level 1)	Soil that exhibits levels of contaminants below the limits defined under <i>Fill Material</i> in Table 2.	Unlikely	Soil classified as Fill Material can still be a 'pollutant' under the Environmental Management and Pollution Control Act 1994 and needs to be responsibly managed.
Low Level Contaminated Soil (Level 2)	Soil that exhibits levels of contaminants above the limits defined under <i>Fill Material</i> but below the limits defined under <i>Low Level Contaminated Soil</i> in Table 2.	Likely	Where leachable concentrations have not been prescribed, maximum total concentrations will be used to classify the soil.
Contaminated Soil (Level 3)	Soil that exhibits levels of contaminants above the limits defined under Low Level Contaminated Soil but below the limits defined under Contaminated Soil in Table 2.	Yes	Where leachable concentrations have not been prescribed, maximum total concentrations will be used to classify the soil.
Contaminated Soil for Remediation (Level 4)	Soil that exhibits levels of contaminants above the limits defined under Contaminated Soil in Table 2 (regardless of the maximum total concentrations) is generally not considered acceptable for offsite disposal without prior treatment.	Yes	Soil that contains contaminants that do not have criteria for leachable concentrations (e.g. petroleum hydrocarbons), and the levels of contaminants exceed the maximum total concentrations listed in Contaminated Soil, are generally classified as Contaminated Soil for Remediation.

<sup>&</sup>lt;sup>2</sup> Criteria for Fill Material are the limits set by the Director for the purposes of R.9(2)(a)(ii) in the Regulations.

# 11.2 Findings

The soil samples that were excavated and stockpiled were compared against IB105 guidelines for soil disposal, see Table 19. The soil was classified as a mix of Level 1, 2 and 3 Material due to the presence of various heavy metals. A single sample is identified as level 4 due to Benzo-a-pyrene (BaP), however leachate testing is likely to allow reclassification to a lower level (e.g. level 2). All soil excavated and to be removed from site must ensure adequate testing and appropriate transport to an approved facility.

Table 19 Soil Analytical Results Compared Against IB105 Investigation Limits for soil Disposal

Classificatio of Conta	tion Bulletin 105 n and Management minated Soil For Disposal	Arsenic	Barium	Beryllium	Cadmium	Chromium Total	Copper	Cobalt	Lead	Manganese	Mercury	Nickel	Selenium	Zinc	Benzo(a)pyrene	C6 - C9 Fraction	C10 - C36 Fraction (sum)	Sum of polycyclic aromatic hydrocarbons	Benzene	Toluene	Ethylbenzene	Total Xylenes
Unit		mg/kg			mg/kg									mg/kg		mg/kg	mg/kg	mg/kg				mg/kg
LOR	1	5	10	1	1	2	5	2	5	5	0.1	2	5	5	0.5	10	50	0.5	0.2	0.5	0.5	0.5
Investigation l	Level Selected																					
IB105 Level 1		<20	<300	<2	<3	<50	<100	<100	<300	<500	<1	<60	<10	<200	<0.08	<65	<1000	<20	<1	<1	<3	<14
IB105 Level 2		20	300	2	3	50	100	100	300	500	1	60	10	200	0.08	65	1000	20	1	1	3	14
IB105 Level 3		200	3000	40	40	500	2000	200	1200	5000	30	600	50	14000	2	650	5000	40	5	100	100	180
IB105 Level 4		750	30000	400	400	5000	7500	1000	3000	25000	110	3000	200	50000	20	1000	10000	200	50	1000	1080	1800
7/12/2019	BH1 0.5-0.6 X	<5	370	<1	<1	8	30	13	6	32	<0.1	11	<5	11	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
7/12/2019	BH1 1.5-1.6 X	<6	<60	<6	<3	14	36	58	8	497	<0.1	54	<6	49	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
7/12/2019	BH1 2.5-2.6 X	<5	<50	<5	<2	12	37	13	8	303	<0.1	39	<5	49	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
7/12/2019	BH2 0.5-0.6 X	<5	340	<1	<1	39	66	47	5	640	<0.1	30	<5	50	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
7/12/2019	BH2 1.5-1.6 X	<5	140	<1	<1	5	101	28	<5	263	<0.1	21	<5	51	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
7/12/2019	BH3 0.5-0.6 X	<5	280	1	<1	9	30	25	7	30	<0.1	18	<5	16	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
7/12/2019	BH3 1.5-1.6 X	<5	280	7	<2	10	34	291	<5	681	<0.1	70	<5	48	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
7/12/2019	BH4 0.5-0.6 X	<5	170	<1	<1	11	29	8	9	60	<0.1	10	<5	16	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
7/12/2019	BH4 1.5-1.6 X	<5	70	3	<1	8	18	29	6	106	<0.1	21	<5	32	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
7/12/2019	BH5 0.5-0.6 X	<5	600	2	<1	21	56	22	6	51	<0.1	25	<5	25	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
7/12/2019	BH5 1.5-1.6 X	<5	220	<1	<1	8	57	33	<5	780	<0.1	29	<5	33	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
7/12/2019	BH6 0.5-0.6 X	<5	250	<1	<1	9	29	9	6	33	<0.1	8	<5	11	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
7/12/2019	BH6 1.5-1.6 X	<5	130	<1	<1	23	68	18	<5	247	<0.1	20	<5	48	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
7/12/2019	BH7 0.5-0.6 X	34	60	<1	<1	6	77	15	90	348	<0.1	10	<5	133	24.3	<10	1880	268	<0.2	<0.5	<0.5	<0.5
7/12/2019	BH7 1.5-1.6 X	<6	660	<6	<3	27	80	29	<6	3530	<0.1	62	<6	46	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5

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#### 12 CONCEPTUAL SITE MODEL

The conceptual site model is based upon the current assessment results.

#### 12.1 Potential & Identified Sources of Contamination

#### 12.1.1 Potential Primary Onsite Contamination

The primary potential sources of contamination includes the following:

- · Fill material beneath the existing pavement; and
- · Any surface spillage of fluids from machinery/vehicles that have occupied the site

GES is not aware of any other potentially contaminating activities at the site.

#### 12.1.2 Potential Primary Offsite Contamination

Potential primary offsite contaminating activities may have occurred at the following locations:

- Potential oil/fluid leaks from workshops on upgradient sites at 120-128 Melville Street; and
- Potential oil/fluid leaks from workshops upgradient at 121 Melville Street & 152 Harrington Street;

#### 12.1.3 Potential Secondary Onsite Contamination

- · Soil and groundwater which may have been impacted by upgradient sources including:
  - Potential oil/fluid leaks from workshops on upgradient sites at 120-128 Melville Street;
  - o Potential oil/fluid leaks from workshops at 121 Melville Street & 152 Harrington Street;

#### 12.1.4 Identified Primary Sources

Although shallow fill has been noted on site no significant contamination from that source has been identified and no health criteria were exceeded. A single ESL exceedance was identified for assessing risk from PAH's (BaP from combustion by-products – appears to be charcoal in site fill) and a single EIL exceedance has been identified for copper. Based upon implementation of soil and waster management controls and the lack of proximal ecological receptors no transport pathway has been identified for potential receptors.

The use of machinery for cutting timber and forklifts trucks and other vehicles on the site may have been a primary source of contamination due to leakage of fuels, hydraulic fluids and oil, however no hydrocarbon contamination was detected. No potential health risk has been identified from identified primary sources.

#### 12.1.5 Identified Secondary Sources

No source of secondary contamination affecting the site was identified during the assessment. There are no registered groundwater bores near the site or groundwater extraction in the local area. Recent deep geotechnical drilling on nearby sites (100 & 103 Melville Street) has failed to intercept groundwater at depths of up to 18m, well below the required vertical separation distance of 9m (NEM HSL guidance documents) to eliminate a vapour intrusion risk to site occupants. Therefore, there is no identified pathway from potential off site groundwater contamination to on site receptors.

#### 12.1.6 Site model conclusion

No complete contaminant to receptor pathways were identified during the assessment and no further investigation or management is required.

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#### 13 CONCLUSIONS

#### 13.1 Desktop Assessment

The following conclusions were made from the desktop assessment:

- The site is inferred to be underlain with Tertiary aged boulder deposits of predominantly dolerite with possible shallow subsurface dolerite or Parmeener rock.
- The site is approximately 25m above sea level. Groundwater is inferred to be directed towards the site from the west.
- There are no registered groundwater bores in the central business area of Hobart and recent deep drilling at 103 Melville street by GES to depths of 18m failed to encounter groundwater.
- The Praxis Historical report confirmed that the site has been owned by Kemp & Denning since approximately 1910.
- Historical Aerial photographs of the site and the Praxis Historical report for the site showed the following: in the early 1900's the dwellings on site were demolished, and in the period between 1958 and 1990 there were two additional large sheds for timber storage on the site. The larger K&D site at 103 Melville Street hosted a range of sheds/warehouses prior to 1986, and soon after that time the existing K&D buildings were constructed. The adjacent site at 100 Melville Street was developed from former offices and warehouses to the current buildings in the period 2005-2013. At the adjacent down gradient property at 88 Melville Street vehicle servicing activities have been operational for over 70 years.
- The dangerous goods search (Worksafe Tasmania records) failed to find any records for the site but confirmed that the K&D Hardware Store at 103 Melville Street held LPG from October 1997 to March 2013.
- As determined in the site history report (Praxis) the site had been a timber yard for over 90 years
  and the entire site is an area of potential concern (AOPC). This investigation is based upon grid
  sampling on the site in natural materials until drilling refusal in the underlying natural boulder
  deposits
- The following contaminants of potential concern (COPC) are associated with demolition of former residential buildings and timber storage/vehicle parking: Total Petroleum/Recoverable Hydrocarbons (TPH/TRH); Mono Aromatic hydrocarbons: Benzene, Toluene, Ethylbenzene, Xylene (BTEX); Polycyclic Aromatic Hydrocarbons (PAH); Heavy Metals.

#### 13.2 Soil Assessment Findings

The following conclusions have been made from the soil investigation based on the sampling around AEC's and based on analysed COPC's and based on the nominated threshold limit criteria for assessing risks from proposed site development works and proposal:

### Human Health:

There were no human health guideline exceedances for dermal contact, dust inhalation, soil
ingestion assessment for Health Investigation Levels for commercial/industrial land use. There
were also no trench worker guideline limit or Health Screening Level (HSL) exceedances for soil
vapour.

#### Environment:

There were hydrocarbons (PAH) detections that exceeded guidelines limits in 1 of the 16 samples
taken from soil at the site. There was also a single Ecological Investigation Level guideline
exceedance for copper. Due to the urban environmental and local proximal receptors no risk from
contamination to ecological receptors was identified

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#### Excavated Soil Management:

• The soil samples were compared against IB105 guidelines for soil disposal. The soil was classified as a mix of Level 1, Level 2, and Level 3 Material due to the presence of various heavy metals and PAH (BaP). GES recommends that all soil excavated for the site is stockpiled, sampled by a suitably qualified and experienced environmental consultant and results compared against IB105 guideline limits for appropriate soil disposal. Where necessary, it is to be transported to an approved facility (Copping). A permit to transport the waste (obtained through the EPA) will be required.

#### 13.3 ESA Conclusions

The following are general conclusion about the site investigation:

- The findings from the current soil investigation can confirm that there is no evidence that the land
  is contaminated in terms of evaluated risks to human health or the environment.
- Therefore, providing the above recommendations are followed in relation to the environment, GES
  can confirm that the planned excavation works and change of use will not adversely impact human
  health or the environment.

#### 14 RECOMMENDATIONS

GES recommends the following:

- Although an ecological risk has not been identified, a soil and water management plan should be
  put in place for general sediment control to reduce loadings into the waterways.
- No additional contamination remediation or management measures will be required during the site redevelopment works.

Yours faithfully,

Sarah Joyce BSc (Hons)

Environmental Scientist

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Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

#### LIMITATIONS STATEMENT

This ESA Report has been prepared in accordance with the scope of services between Geo-Environmental Solutions Pty. Ltd. (GES) and Giameos Holdings Pty Ltd ('the Client'). To the best of GES's knowledge, the information presented herein represents the Client's requirements at the time of printing of the Report. However, the passage of time, manifestation of latent conditions or impacts of future events may result in findings differing from that described in this Report. In preparing this Report, GES has relied upon data, surveys, analyses, designs, plans and other information provided by the Client and other individuals and organisations referenced herein. Except as otherwise stated in this Report, GES has not verified the accuracy or completeness of such data, surveys, analyses, designs, plans and other information.

The scope of this study does not allow for the review of every possible soil and groundwater contaminant over the whole area of the site. Samples collected from the investigation area are assumed to be representative of the areas from where they were collected and indicative of the contamination status of the site at that point in time. The conclusions described within this report are based on these samples, the results of their analysis and an assessment of their contamination status.

This report does not purport to provide legal advice. Readers of the report should engage professional legal practitioners for this purpose as required.

No responsibility is accepted for use of any part of this report in any other context or for any other purpose by third party.

Note If the design of the proposed sewer pump station is altered than there may be a requirement to assess the soil results against alternative guidelines or conduct further site investigations.

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Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

#### Appendix 1 GES Staff

GES is a specialist geotechnical and environmental consultancy providing advice on all aspects of soils, geology, hydrology, and soil and groundwater contamination across a diverse range of industries.

Geo Environmental Solutions Pty Ltd:

- ACN 115 004 834
- ABN 24 115 004 834

#### GES STAFF - ENGAGED IN SITE INVESTIGATION WORKS

Dr John Paul Cumming B.Agr.Sc (Hons) Phd CPSS GAICD

- · Principle Author and Principle Environmental Consultant
- PhD in Environmental Soil Chemistry from the University of Tasmania in 2007
- 18 years' experience in environmental contamination assessment and site remediation.

Ms Sarah Joyce BSc (Hons)

- · Environmental Geologist
- Honours in Geography and Environmental Science at the University of Tasmania in 2003;
- Undergraduate Degree Double Major in Geology and Geography & Environmental Science
- 15 years professional work experience and 7 years contaminated site assessment

Mr Grant McDonald (Adv. cert. hort.)

- Soil Technician
- 10 years' experience in hydrocarbon and heavy metal contamination sampling of soils and groundwater.

#### GES STAFF – WITH CONTAMINATED SITES EXPERIENCE

Mr Aaron Plummer (Cert. IV)

- Soil Technician
- 5 years' experience in hydrocarbon and heavy metal contamination sampling of soils and groundwater.

Mr Kris Taylor Bsc (Hons)

- Senior Environmental & Engineering Geologist
- Honours in Environmental Geology at the University of Tasmania in 1998
- 20 years' experience in environmental contamination assessments and hydrogeology (including honours in mine site tailing pollution assessment). Including 15 years' experience in asbestos assessment.

Mr Mark Downie B.Agr.Sc (Hons)

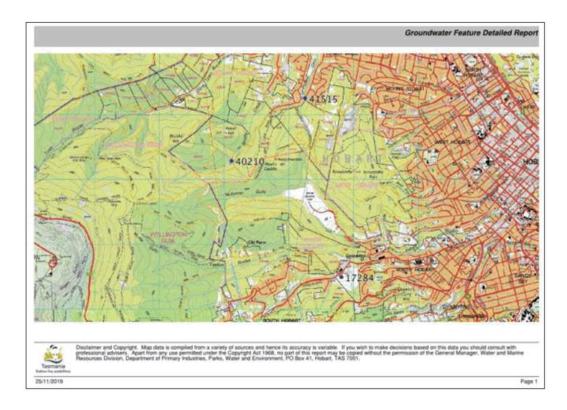
- Soil Scientist
- 8 Year experience in contamination assessment and reporting of soils and groundwater.

Ms Peri Lucas B.Agr.Sc (Hons)

- Soil Scientist
- 3Year experience in contamination assessment and reporting of soils and groundwater.

Appendix 1 GES Staff Page 40

### **Appendix 2 Surrounding Bore Data**



### **Appendix 3 Historical Site Photographs**



Plate 1 Historical Aerial Photograph the Site 2008

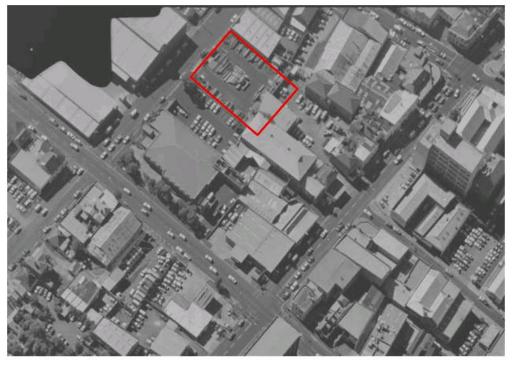


Plate 2 Historical Aerial Photograph the Site 1990



Plate 3 Historical Aerial Photograph the Site 1977

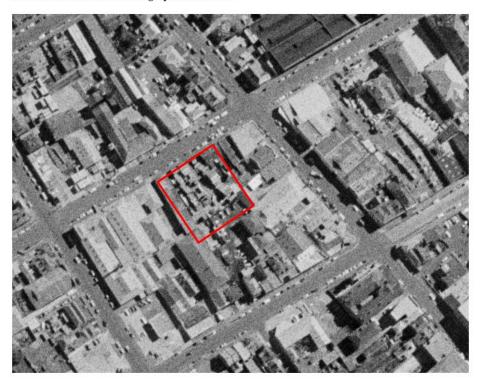


Plate 4 Historical Aerial Photograph 1958

### Appendix 4 Site Photographs





Appendix 4 Site Photographs





 ${\it Environmental Site Assessment: 90 Melville Street, Hobart. \, December \, 2019.}$ 

### **Appendix 5 PID Calibration Record**

imbro	Imbros Pty Ltd 1059 Cambridge Road Cambridge TAS 7170	Australia	info@imbros.com.au www.imbros.com.au	Ph:	29 009 525 053 (03) 6216 1500 (03) 6216 1555
	SERVICE /	REPAI	R REPORT		
Custom	ier:				3322
Cash	Sales		Job No:		4161
Aaron I 0400 8	Plummer		Cust ABN:		
1 7000000	ner@geosolutions.net.au		Date:		24/07/2019
			Service Engin	ieer:	Hills, Adrian
RAE SYSTEMS Serial Number:				jak	
Service and cali	NO AGENTA DE LA COMPANSIONA DEL COMPANSIONA DE LA COMPANSIONA DEL COMPANSIONA DE LA			of hother library	
Work Performe	d / Recommendation (if any):				
Incoming evalua	ation - no faults found.				
Calibration carrie Functionality tes	ed out successfully, t - passed.				
See calibration s	sheet for full details.				

Page 1 of 1

Technology for Laboratory and Marine Science

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

Phone (03) 6216 1500 Fax (03) 6216 1555 info@imbros.com.au

1059 Cambridge Road, Cambridge Tasmania Australia 7170

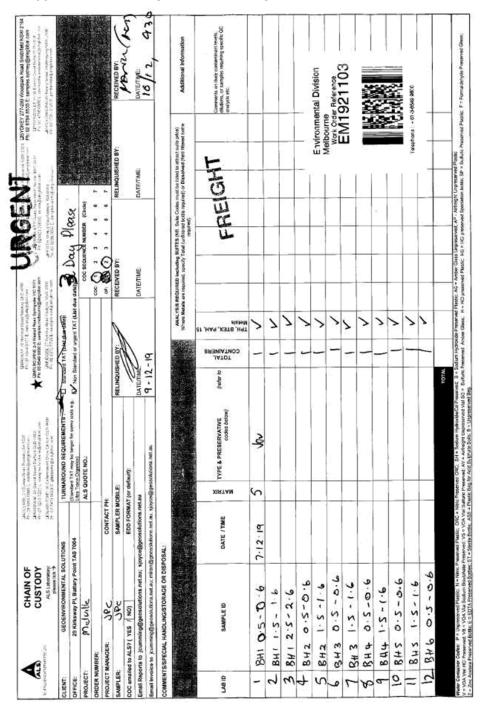
Imbros Pty Ltd ABN 29 009 525 053

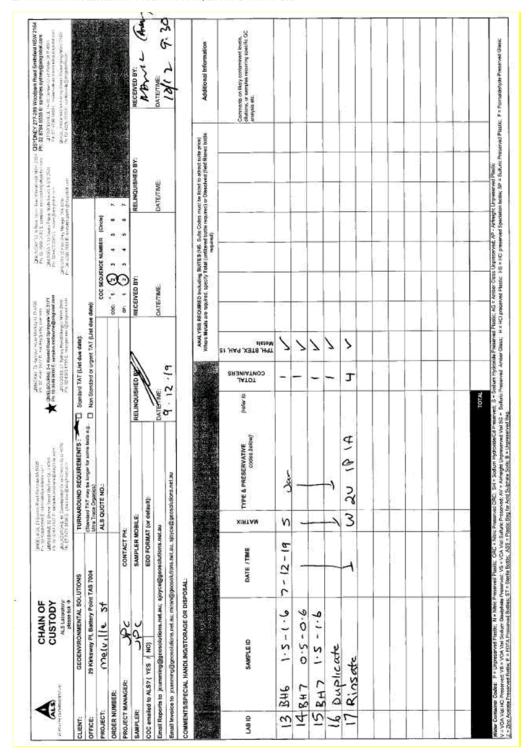
Calibration Test Certificate

Isobutelyne Pass 100.0 ppm 24/07/2020 Isobutelyne 100ppm 50ppm 50p
N/A er: Z309-002181 Dock Location: Inlet 1: Inlet 2: Inlet 3: Inlet 4.

Technology for Laboratory and Marine Science

#### **Appendix 6 Laboratory Chain of Custody**





#### Appendix 7 Laboratory Sample Receipt Notification



### SAMPLE RECEIPT NOTIFICATION (SRN)

	SAMPLE RECEIPT	NOTIFICATION (3	KIV)
Work Order	: EM1921103		
Client Contact Address	: GEO-ENVIRONMENTAL SOLUTIONS : DR JOHN PAUL CUMMING : 29 KIRKSWAY PLACE BATTERY POINT TASMANIA, AUSTRALIA 7004	Contact : Shirley L	nental Division Melbourne .eCornu II Rd Springvale VIC Australia
E-mail Telephone Faosimile	: jcumming@geosolutions.net.au : +61 03 6223 1839 : +61 03 6223 4539	E-mail : shirley.le Telephone : +613854 Facsimile : +61-3-85	
Project Order number C-O-C number Site Sampler	: Melville : : : JPC		GEOENVSOL0001 (EN/222) 013 B3 & ALS QC Standard
Dates Date Samples Receive Client Requested Due Date		Issue Date Scheduled Reporting Date	: 10-Dec-2019 : 13-Dec-2019
Delivery Details Mode of Delivery No. of coolers/boxes Receipt Detail	S : Carrier : 4	Security Seal Temperature No. of samples received / analyses	: Intact. : 5.2°C - loe present

#### General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- Please direct any queries related to sample condition / numbering / breakages to Client Services.
- Sample Disposal Aqueous (3 weeks), Solid (2 months) from receipt of samples.
- Analytical work for this work order will be conducted at ALS Springvale.
- Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

Appendix 7 SRN Page 50

Page 666 **ATTACHMENT B** 

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

: 10-Dec-2019

Issue Date Page Work Order Client 2 of 3 EM1921103 Amendment 0

GEO-ENVIRONMENTAL SOLUTIONS



### Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

No sample container / preservation non-compliance exists.

### Summary of Sample(s) and Requested Analysis

process necessal tasks. Packages as the determina tasks, that are inclu- if no sampling default 00:00 on the	ny for the execut may contain ad ation of moisture uded in the package, time is provided, the date of samplin sampling date wi displayed in bra	be part of a laboratory ion of client requested ditional analyses, such content and preparation the sampling time will be assumed by the ckets without a time   Client sample ID	SOIL - EA055-103 Motstare Content	SOIL - S-03 15 Metals (NE PM 2013 Sulte - Incl. Digestion)	SOIL - S-07 TRHBTE XWPAH (SIM)
ID	date / time	The state of the s	_	5.0	17/
EM1921103-001	07-Dec-2019 00:00	BH1 0.5-0.6	1	1	1
EM1921103-002	07-Dec-2019 00:00	BH1 1.5-1.6	1	1	1
EM1921103-003	07-Dec-2019 00:00	BH1 2.5-2.6	1	1	1
EM1921103-004	07-Dec-2019 00:00	BH2 0.5-0.6	1	1	1
EM1921103-005	07-Dec-2019 00:00	BH2 1.5-1.6	1	1	1
EM1921103-008	07-Dec-2019 00:00	BH3 0.5-0.6	1	1	1
EM1921103-007	07-Dec-2019 00:00	BH3 1.5-1.6	1	1	1
EM1921103-008	07-Dec-2019 00:00	BH4 0.5-0.6	1	1	1
EM1921103-009	07-Dec-2019 00:00	BH4 1.5-1.6	1	1	1
EM1921103-010	07-Dec-2019 00:00	BH5 0.5-0.6	1	1	1
EM1921103-011	07-Dec-2019 00:00	BH5 1.5-1.6	1	1	1
EM1921103-012	07-Dec-2019 00:00	BH6 0.5-0.6	1	1	1
EM1921103-013	07-Dec-2019 00:00	BH6 1.5-1.6	1	1	1
EM1921103-014	07-Dec-2019 00:00	BH7 0,5-0.6	1	1	1
EM1921103-015	07-Dec-2019 00:00	BH7 1.5-1.6	1	1	1
EM1921103-016	07-Dec-2019 00:00	Duplicate	1	1	¥.
Matrix: WATER Laboratory sample	Client sampling	Client sample ID	WATER - W.03T   5 Metals (Total) (NEPM)	WATER - W-07 IRMSTEXWPAH	

#### Proactive Holding Time Report

EM1921103-017 07-Dec-2019 00:00 Rinsate

Sample(s) have been received within the recommended holding times for the requested analysis.

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Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

Issue Date Page Work Order Client : 10-Dec-2019

: 3 of 3 : EM1921103 Amendment 0 : GEO-ENVIRONMENTAL SOLUTIONS



Requested Deliverables		
All Invoices	<b>5</b> 1	
- A4 - AU Tax Invoice (INV)	Email	smcintosh@geosolutions.net.au
JOHN PAUL CUMMING		
- "AU Certificate of Analysis - NATA (COA)	Email	jcumming@geosolutions.net.au
<ul> <li>"AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)</li> </ul>	Email	jcumming@geosolutions.net.au
<ul> <li>"AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)</li> </ul>	Email	jcumming@geosolutions.net.au
<ul> <li>A4 - AU Sample Receipt Notification - Environmental HT (SRN)</li> </ul>	Email	jcumming@geosolutions.net.au
- A4 - AU Tax Invoice (INV)	Email	jcumming@geosolutions.net.au
- Attachment - Report (SUBCO)	Email	jcumming@geosolutions.net.au
- Chain of Custody (CoC) (COC)	Email	jcumming@geosolutions.net.au
- EDI Format - ENMRG (ENMRG)	Email	jcumming@geosolutions.net.au
- EDI Format - XTab (XTAB)	Email	jcumming@geosolutions.net.au
MIRAN		
- A4 - AU Tax Invoice (INV)	Email	miran@geosolutions.net.au
SARAH JOYCE		
- "AU Certificate of Analysis - NATA (COA)	Email	sjoyoe@geosolutions.net.au
<ul> <li>AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)</li> </ul>	Email	sjoyce@geosolutions.net.au
<ul> <li>*AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)</li> </ul>	Email	sjoyce@geosolutions.net.au
<ul> <li>A4 - AU Sample Receipt Notification - Environmental HT (SRN)</li> </ul>	Email	sjoyce@geosolutions.net.au
- A4 - AU Tax Invoice (INV)	Email	sjoyce@geosolutions.net.au
- Attachment - Report (SUBCO)	Email	sjoyce@geosolutions.net.au
- Chain of Custody (CoC) (COC)	Email	sjoyce@geosolutions.net.au
- EDI Format - ENMRG (ENMRG)	Email	sjoyce@geosolutions.net.au
- EDI Format - XTab (XTAB)	Email	siovce@geosolutions.net.au

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Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

#### Appendix 8 Quality Assurance and Quality Control Documentation

#### Soil Duplicate

Duplicate Comparrison Sample	Artenic	Aratis		Berythan	Cadmiare	Chromaten Total	Connect	post of the same	Makansin	Nichel	Varadura	Ziec	Metary	Naphthalese	Acesquiblylese	Acceptablese	flame	Phenaethrene	Arthracuse	Buraithere	Pyme	Bess (a) arthraces	Orysene	Benothfluxanhere	Векоффиятовке	Benotalpyrene	ischno(1.23.cdpyrane	Dhesc(a3)aethracese	Besodg hi)penfese	Sun of polyoptic aromatic hybrid	Besac(a)pyrene HQ (MHO)	Betathi	Ethyboriese	meta- 8 para Yylene	ortho-Kpline	Sun of ITEX	Total Nytenes	Naphhiese	OS - CS Frantice	CID - CI4 Framion	CS - CS Fraction	CB - CB fraction	CID - CIR Fraction (furn)	06 - CID Fraction		ACID - CIS Fraction	ACIG - CM Fraction	-CM: CM fraction	ACID : CA) Fraction (surs)		Benzo(alpyrene 160 (salf LOR) Benzo(alpyrene 160 (LOR)	AND THE PERSON NAMED OF PERSON
Unit	mg	/kg mg	/kg mg	/Ng mg	/kg/mg	/kg/mg	/kg/mg	/kg/mg/	he me/	kg mg/	kg/mg/k	e me/ke	mg/kg	110/48	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg a	e/kg in	g/kg m	e/ke m	e/ke/me/	kg mg/k	mg/kg	mg/kgr	mg/kgr	ng/kg/m	e/kg/m	g/kg/mg	g/kg m	re/ke	ng/kg	mg/kg	mg/kg n	ng/kg	mg/kg	mg/kg n	e/se m	g/kg m	g/kg me	e/ke/me/	a
LOR		5 1	0	1	1	2		5 5	5	2	5	5	0.1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0,5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.2 0.5	5 0.5	0.5	0.5	0.2	0.5	1	10	50	100	100	50	10	10	50	100	100	50	50 0	2.5 0.5	4
7/12/2019 8H1 1.5-1	16 4	8 4	10	6 .	3 1	4 5	8 3	6 8	49	7 54	95	49	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	10.5	<0.5	<0.5	<0.5	<0.5	10.5	<0.5	0.5	0.5	0.5	0.2 <0	5 <0.5	40.5	10.5	<0.2	10.5	<1 ·	(10 <	50 <	100	<100	<50	<10	<10	<50	<100 4	100	50 4	50 0	1.6 1.2	1
7/12/2019 Duplicate	te <	8 4	10	15 4	3 1	0 3	7 3	3 4	5 32	0 42	74	44	40.1	<0.5	<0.5	40.5	40.5	<0.5	10.5	40.5	<0.5	<0.5	<0.5	40.5	40.5	<0.5	<0.5	<0.5	0.5	0.5	0.5	0.2 <0	5 <0.5	40.5	<0.5	<0.2	<0.5	<1 ×	<10 <	50 <	100	<100	<50	<10	<10	450	<100 4	100	50 4	50 0	0.6 1.2	4
Relative Percentage Difference (RPD) %	- N	A B	A	IA 1	(A 3	3.3 44	2 8	7 N	A 43	3 25	0 24.9	10.8	NA.	NA.	NA:	NA.	NA.	NA:	NA.	NA.	: NA	. NA	NA.	NA.	NA.	NA.	NA.	NA.	NA .	NA I	NA I	NA. N	A NA	NA.	NA.	NA.	NA .	NA .	NA I	NA.	NA.	NA:	NA.	NA.	NA.	NA.	NA.	NA I	NA .	NA 0	00 00	1
RPD Compliance Limit %	- N	A N	A I	IA 1	(A. 5	0 3	0 5	0 N	A 30	30	50	50	NA	NA	NA.	NA	NA.	NA.	NA:	NA.	NA	NA.	NA.	NA	NA	NA.	NA.	NA	NA .	NA :	NA I	NA N	A NA	NA	NA	NA	NA .	NA I	NA I	NA.	NA.	NA.	NA.	NA.	NA.	NA	NA .	NA I	NA I	NA N	NA 50	1
Method Detection Limit (MOL)	N	A B	A I	IA I	(A. 14	0 2	00 10	00 N	A 50	0 20	100	100	NA.	NA.	NA.	.NA	NA:	NA:	NA.	NA-	NA.	NA.	NA	NA	NA	NA.	NA .	NA .	NA :	NA	NA I	NA N	NA.	NA.	NA	NA.	NA.	NA I	NA. I	NA.	NA:	NA:	NA .	NA.	NA.	NA.	NA.	NA I	NA I	NA N	NA 10	1
MDL Class	NO	NE NO	NE NO	INE NO	INE LC	W M	ED LO	W NO	NE ME	D ME	D LOW	LOW	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE N	IONE N	ONE N	ONE N	ONE NO	NE NON	NONE	NONE	NONE	NONE	ONE N	ONE NO	ONE N	ONE	NONE	NONE	NONE	NONE	NONE	NONE IN	ONE N	ONE N	ONE NO	ONE LOV	7
RPD Compliance With MDL? 54/56 (96	6%) 71	ES Y	5 - Y	58. Y	15 7	IS N	0 4	15 15	5 N	F. 12	1985	785	765	183	725	983	783	715	227	725	YES 1	753	FES.	113	Y85	785	Y25	725	YES	YES- 1	105. 1	res ye	¥ 1955	YES.	319	773	YES	9850 1	125 7	TS - 1	YES -	115-	Yis o	Y25	YES	TES	715	YES	95	res y	TS TE	1

#### Rinsate Blanks

Quality Control Blanks	Arsenic	Beryllium	Barlum	Cadmium	Chromium	Cobalt	Copper	pear	Manganese	Nickel	Setenium	Zinc	Boron	Mercury	Benzene	Toluene Ethylbenzene	meta- & para-Xylene	ortho-Xylene Total Xylenes	Sum of BTEX	Naphthalene Ce. Ce Footlon	C10 - C14 Fraction	C15 - C28 Fraction	C29 - C36 Fraction	Co - C10 Fraction	C6 - C10 Fraction minus BTEX (F1)	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	>C10 - C40 Fraction (sum)	>C10 - C15 Fraction minus Naphthalene (F2) Naphthalene	Acenaohthulene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benz(a)anthracene	Chrysene	Benzo(b+j)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(1.2.3.cd)pyrene	Benzole hilberylene	Sum of polycyclic aromatic hydrocarbons	Benzolalpyrene TEQ (zero)	
Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L m	g/L mg/	L mg/L	mg/L	mg/L	ив/ц	g/L µg/1	ug/Lu	1g/Lµg/	Lug/Lu	ig/L jug	/L µg/L	µg/L	цд/L цц	/L µg/	L µg/L	µg/L	µg/L	ug/L u	g/L µ	z/L µg/	/L µg	/L µg/	L µg/l	L µg/L	ug/L	µg/L	ug/L	µg/L	µg/L	ug/L	µg/L µ	g/L µ	g/L µg	/L µg	/L µg	/L µg/	L
LOR	0.001	0.001	0.001	0.0001	0.001	0.001	0.001	0.001	0.001	0.001 0.	01 0.0	0.005	0.05	0.0001	1	2 2	2	2 2	1	5 2	0 50	100	50 5	0 20	20	100	100	100 1	00 1	00 1	1	1	1	1	1	1	1	1	1	1	1 (	0.5	1 1	1	0.	5 0.5	5
Date Sample																																															
7/12/2019 Rinsate	< 0.001	<0.001	< 0.001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001 < 0	01 < 0.0	1 < 0.005	< 0.05	< 0.0001	<1 <	2 <2	<2 <	2 <2	<1 <	5 <2	0 <50	<100	(50 <5	0 <20	<20	<100 <	<100 <	100 <1	00 <1	00 <1.0	0 <1	0 <1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0 <	1.0	<1.0 <0	0.5 <1	0 <1	0 <1.0	0 <0.	5 <0.5	5

Appendix 8 QA/QC Page 53



#### QA/QC Compliance Assessment to assist with Quality Review

Work Order	:EM1921103	Page	: 1 of 9
Client	: GEO-ENVIRONMENTAL SOLUTIONS	Laboratory	: Environmental Division Melbourne
Contact	: DR JOHN PAUL CUMMING	Telephone	: +6138549 9630
Project	: Melville	Date Samples Received	: 10-Dec-2019
Site	·	Issue Date	: 13-Dec-2019
Sampler	: JPC	No. of samples received	: 17
Order number	:	No. of samples analysed	: 17

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

#### **Summary of Outliers**

#### **Outliers: Quality Control Samples**

This report highlights outliers flagged in the Quality Control (QC) Report.

- NO Method Blank value outliers occur.
- NO Duplicate outliers occur.
- . NO Laboratory Control outliers occur.
- Matrix Spike outliers exist please see following pages for full details.
- For all regular sample matrices, NO surrogate recovery outliers occur.

#### **Outliers: Analysis Holding Time Compliance**

. NO Analysis Holding Time Outliers exist.

#### **Outliers : Frequency of Quality Control Samples**

• Quality Control Sample Frequency Outliers exist - please see following pages for full details.

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

Page : 2 of 9 Work Order : EM1921103

Client : GEO-ENVIRONMENTAL SOLUTIONS

Project : Melville

Outliers: Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

#### Matrix: SOIL

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
latrix Spike (MS) Recoveries							
EG005(ED093)T: Total Metals by ICP-AES	EM1921103007	BH3 1.5-1.6	Barium	7440-39-3	Not Determined		MS recovery not determined, background level greater than or equal to 4x spike level.
EG005(ED093)T: Total Metals by ICP-AES	EM1921103007	BH3 1.5-1.6	Manganese	7439-96-5	Not Determined	e demands	MS recovery not determined, background level greater than or equal to 4x spike level.

#### Outliers: Frequency of Quality Control Samples

#### Matrix: WATER

Method		ount	Rai	te (%)	Quality Control Specification
Metrod	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)					
PAH/Phenols (GC/MS - SIM)	0	1	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	1	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)					
PAH/Phenols (GC/MS - SIM)	0	1	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	1	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

#### Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for <u>VOC in soils</u> vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: SOIL					Evaluation	: x = Holding time	breach; < = With	in holding tim
Method	THE RESIDENCE OF THE PARTY OF T	Sample Date	E	straction / Preparation			Analysis	17530.0
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 10	5-110°C)							
Soil Glass Jar - Unpreserved (EA055)	C Supra subtress	0.000.000.000.000				0.0000-0000-0000		
BH1 0.5-0.6,	BH1 1.5-1.6,	07-Dec-2019	( <del></del> -			10-Dec-2019	21-Dec-2019	1
BH1 2.5-2.6,	BH2 0.5-0.6,							
BH2 1.5-1.6,	BH3 0.5-0.6,							
BH3 1.5-1.6,	BH4 0.5-0.6,							
BH4 1.5-1.6,	BH5 0.5-0.6,							
BH5 1.5-1.6,	BH6 0.5-0.6,							
BH6 1.5-1.6,	BH7 0.5-0.6,							
BH7 1.5-1.6,	Duplicate							

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Matrix: SOIL			4.		Evaluation	x = Holding time	breach ; < = Withi	n holding tir
Method		Sample Date	E	straction / Preparation			Analysis	
Container / Client Sample (D(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG005(ED093)T: Total Metals by ICP-A	ES CONTRACTOR OF THE CONTRACTO							
Soil Glass Jar - Unpreserved (EG005T)							1770	
BH1 0.5-0.6,	BH1 1.5-1.6,	07-Dec-2019	11-Dec-2019	04-Jun-2020	1	11-Dec-2019	04-Jun-2020	1
BH1 2.5-2.6,	BH2 0.5-0.6,							
BH2 1.5-1.6,	BH3 0.5-0.6,							
BH3 1.5-1.6,	BH4 0.5-0.6,							
BH4 1.5-1.6,	BH5 0.5-0.6,							
BH5 1.5-1.6,	BH6 0.5-0.6,							
BH6 1.5-1.6,	BH7 0.5-0.6,							
BH7 1.5-1.6,	Duplicate							
EG035T: Total Recoverable Mercury by	FIMS							
Soil Glass Jar - Unpreserved (EG035T)		2 ST-2-1 ST-2-1	NESS-1 100000	50070 or 255034	1 23	estates caratinos	25/001 0505tp:	- 20:
BH1 0.5-0.6,	BH1 1.5-1.6,	07-Dec-2019	11-Dec-2019	04-Jan-2020	1	11-Dec-2019	04-Jan-2020	1
BH1 2.5-2.6,	BH2 0.5-0.6,							
BH2 1.5-1.6,	BH3 0.5-0.6,							
BH3 1.5-1.6,	BH4 0.5-0.6,							
BH4 1.5-1.6,	BH5 0.5-0.6,							
BH5 1.5-1.6,	BH6 0.5-0.6,							
BH6 1.5-1.6,	BH7 0.5-0.6,							
BH7 1.5-1.6,	Duplicate							
EP075(SIM)B: Polynuclear Aromatic Hy	drocarbons							
Soil Glass Jar - Unpreserved (EP075(SIN		\$1950 et a 1940 et a	350-017-017-017-017-0			5 - 6 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 -		
BH1 0.5-0.6,	BH1 1.5-1.6,	07-Dec-2019	11-Dec-2019	21-Dec-2019	1	11-Dec-2019	20-Jan-2020	1
BH1 2.5-2.6,	BH2 0.5-0.6,							
BH2 1.5-1.6,	BH3 0.5-0.6,							
BH3 1.5-1.6,	BH4 0.5-0.6,							
BH4 1.5-1.6,	BH5 0.5-0.6,							
BH5 1.5-1.6,	BH6 0.5-0.6,							
BH6 1.5-1.6,	BH7 0.5-0.6,							
BH7 1.5-1.6.	Duplicate							

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Matrix: SOIL					Evaluation	Holding time	breach ; < = Withi	ri noiding tir
Method	THE RESERVE OF LABOUR.	Sample Date		traction / Preparation			Analysis	
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarb	ons				tir -		0	
Soil Glass Jar - Unpreserved (EP080)	42.000.000		40.5			40.0 0040		523
BH1 0.5-0.6,	BH1 1.5-1.6,	07-Dec-2019	10-Dec-2019	21-Dec-2019	1	12-Dec-2019	21-Dec-2019	1
BH1 2.5-2.6,	BH2 0.5-0.6,							
BH2 1.5-1.6,	BH3 0.5-0.6,							
BH3 1.5-1.6,	BH4 0.5-0.6,							
BH4 1.5-1.6,	BH5 0.5-0.6,							
BH5 1.5-1.6,	BH6 0.5-0.6,							
BH6 1.5-1.6,	BH7 0.5-0.6,							
BH7 1.5-1.6,	Duplicate					-		
Soil Glass Jar - Unpreserved (EP071)		7	i mmi	1111 11111		1111	-	
BH1 0.5-0.6,	BH1 1.5-1.6,	07-Dec-2019	11-Dec-2019	21-Dec-2019	1	11-Dec-2019	20-Jan-2020	1
BH1 2.5-2.6,	BH2 0.5-0.6,							
BH2 1.5-1.6,	BH3 0.5-0.6,							
BH3 1.5-1.6,	BH4 0.5-0.6,							
BH4 1.5-1.6,	BH5 0.5-0.6,							
BH5 1.5-1.6,	BH6 0.5-0.6,							
BH6 1.5-1.6,	BH7 0.5-0.6,							
BH7 1.5-1.6,	Duplicate							
EP080/071: Total Recoverable Hydroca	urbons - NEPM 2013 Fractions							,
Soil Glass Jar - Unpreserved (EP080)			1					
BH1 0.5-0.6,	BH1 1.5-1.6,	07-Dec-2019	10-Dec-2019	21-Dec-2019	1	12-Dec-2019	21-Dec-2019	1
BH1 2.5-2.6,	BH2 0.5-0.6,					_		
BH2 1.5-1.6,	BH3 0.5-0.8,							
BH3 1.5-1.6,	BH4 0.5-0.6,							
BH4 1.5-1.6,	BH5 0.5-0.6,							
BH5 1.5-1.6.	BH6 0.5-0.6.							
BH6 1.5-1.6.	BH7 0.5-0.6.							
BH7 1.5-1.6.	Duplicate							
Soil Glass Jar - Unpreserved (EP071)				7	<u> </u>	7	Taxana and A	
BH1 0.5-0.6,	BH1 1.5-1.8,	07-Dec-2019	11-Dec-2019	21-Dec-2019	1	11-Dec-2019	20-Jan-2020	1
BH1 2.5-2.6,	BH2 0.5-0.6,			1 5 50		1117 1		27
BH2 1.5-1.6,	BH3 0.5-0.6,							
BH3 1.5-1.8,	BH4 0.5-0.6,							
BH4 1.5-1.6.	BH5 0.5-0.6.							
BH5 1.5-1.6.	BH6 0.5-0.6.							
BH6 1.5-1.6.	BH7 0.5-0.6.							
BH7 1.5-1.6.	Duplicate							

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Matrix: SOIL					Evaluation	: * = Holding time	and the second second second	n nolding tin
Method		Sample Date	E)	traction / Preparation	/-	r or o	Analysis	
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080: BTEXN								
Soil Glass Jar - Unpreserved (EP080)			1.7	1 1 1		1	NITER!	
BH1 0.5-0.6,	BH1 1.5-1.6,	07-Dec-2019	10-Dec-2019	21-Dec-2019	1	12-Dec-2019	21-Dec-2019	1
BH1 2.5-2.6,	BH2 0.5-0.6,							
BH2 1.5-1.6,	BH3 0.5-0.6,							
BH3 1.5-1.6,	BH4 0.5-0.6,							
BH4 1.5-1.6,	BH5 0.5-0.6,							
BH5 1.5-1.8,	BH6 0.5-0.6,							
BH6 1.5-1.6.	BH7 0.5-0.6.							
BH7 1.5-1.6,	Duplicate							
Matrix: WATER					Evaluation	x = Holding time	breach ; ✓ = Withi	n holding tin
Method		Sample Date	Ex	traction / Preparation			Analysis	
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG020T: Total Metals by ICP-MS								
Clear Plastic Bottle - Unfiltered; Lab-	acidified (EG020A-T)	70027231 x 150075	0.0000000000000000000000000000000000000	23750 (700000)	1000	0.020200000000000	2000 100 V 000 00	F-9324
Rinsate	NAME AND A PART OF STATES	07-Dec-2019	11-Dec-2019	04-Jun-2020	1	11-Dec-2019	04-Jun-2020	1
EG035T: Total Recoverable Mercury								
Clear Plastic Bottle - Unfiltered; Lab-	acidified (EG035T)					The second second second		
Rinsate		07-Dec-2019				11-Dec-2019	04-Jan-2020	1
EP075(SIM)B: Polynuclear Aromatic								
Amber Glass Bottle - Unpreserved (E	P075(SIM))						1	
Rinsate		07-Dec-2019	10-Dec-2019	14-Dec-2019	1	11-Dec-2019	19-Jan-2020	1
EP080/071: Total Petroleum Hydroca					Evaluation I			
Amber Glass Bottle - Unpreserved (E	P071)	12221 233	2020 2000	14 D 20/2		5200 0000	40 1 0000	
Rinsate		07-Dec-2019	10-Dec-2019	14-Dec-2019	1	11-Dec-2019	19-Jan-2020	1
Amber VOC Vial - Sulfuric Acid (EP08	(0)			24.2	2014	40 D 0040	1000	
Rinsate		07-Dec-2019	10-Dec-2019	21-Dec-2019	-	12-Dec-2019	21-Dec-2019	1
EP080/071: Total Recoverable Hydro								
Amber Glass Bottle - Unpreserved (E	P071)	07.0	40 0 - 0015	14 Dec 2010		44.0	10 1 2022	134
Rinsate		07-Dec-2019	10-Dec-2019	14-Dec-2019	~	11-Dec-2019	19-Jan-2020	1
Amber VOC Vial - Sulfuric Acid (EP08	(0)	07-Dec-2019	10-Dec-2019	21-Dec-2019	1	12-Dec-2019	21-Dec-2019	-
Rinsate		07-DEC-2019	10-Dec-2019	21-Dec-2019	V	12-Dec-2019	21-060-2019	1
EP080: BTEXN								
Amber VOC Vial - Sulfuric Acid (EP08	00)	07 D - 2010	40 Day 2010	24 Dec 2010		42 D 2010	24 Dev 2010	100
Rinsate		07-Dec-2019	10-Dec-2019	21-Dec-2019	V	12-Dec-2019	21-Dec-2019	1

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ALS

#### Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Quality Control Sample Type		C	ount		Rate (%)	A.	Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	PROPERTY OF THE PROPERTY OF THE CONTRACT OF TH
Laboratory Duplicates (DUP)							
Moisture Content	EA055	3	23	13.04	10.00	1	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	16	12.50	10.00	1	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	4	36	11.11	10.00	1	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	4	37	10.81	10.00	1	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	16	12.50	10.00	1	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	17	11.76	10.00	V	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenois (SIM)	EP075(SIM)	1	16	6.25	5.00	1	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	36	5.56	5.00	1	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	37	5.41	5.00	1	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	16	6.25	5.00	1	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	17	5.88	5.00	1	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenois (SIM)	EP075(SIM)	1	16	6.25	5.00	1	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	36	5.56	5.00	1	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	37	5.41	5.00	1	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	16	6.25	5.00	1	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	17	5.88	5.00	1	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenois (SIM)	EP075(SIM)	1	18	6.25	5.00	1	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	36	5.56	5.00	1	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	37	5.41	5.00	1	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	16	6.25	5.00	1	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	17	5.88	5.00	1	NEPM 2013 B3 & ALS QC Standard
Matrix: WATER				Evaluation	on: x = Quality Co	introl frequency	not within specification : ✓ = Quality Control frequency within specificat
Quality Control Sample Type			ount		Rate (96)		Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	1	0.00	10.00	36	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	17	11.76	10.00	1	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	5	20.00	10.00	1	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	1	0.00	10.00	24	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	20	10.00	10.00	1	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)					4		The state of the s
PAH/Phenois (GC/MS - SiM)	EP075(SIM)	1	1	100.00	5.00	1	NEPM 2013 B3 & ALS QC Standard

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Matrix: WATER							not within specification; <= Quality Control frequency within specifi
Quality Control Sample Type			ount		Rate (%)		Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Control Samples (LCS) - Continued							
Total Mercury by FIMS	EG035T	1	17	5.88	5.00	1	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	5	20.00	5.00	1	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	1	100.00	5.00	1	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	V	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	1	100.00	5.00	1	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	17	5.88	5.00	1	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	5	20.00	5.00	1	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	1	100.00	5.00	1	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	1	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	.1	0.00	5.00	36	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	. 1	17	5.88	5.00	1	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	5	20.00	5.00	1	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	1	0.00	5.00	se	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	1	NEPM 2013 B3 & ALS QC Standard

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#### **Brief Method Summaries**

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM (2013) Schedule B(3) Section 6.1 and Table 1 (14 day holding time).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM (2013) Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015A. Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM amended 2013.
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270D. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 502 and 507)
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260B. Extracts are analysed by Purge and Trap, Capillary GC/MS.  Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM amended 2013.
Total Metals by ICP-MS - Suite A	EG020A-T	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Total Mercury by FIMS	EG035T	WATER	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS)  FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the unfiltered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
TRH - Semivolatile Fraction	EP071	WATER	In house: Referenced to USEPA SW 846 - 8015A. The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with the QC requirements of NEPM (2013) Schedule B(3)
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	WATER	In house: Referenced to USEPA SW 846 - 8270D Sample extracts are analysed by Capillary GC/MS in SIM Mode and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3)

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Analytical Methods	Method	Matrix	Method Descriptions
TRH Volatiles/BTEX	EP080	WATER	In house: Referenced to USEPA SW 846 - 8260B. Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve.  Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM (2013) Schedule B(3)
Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM (2013) Schedule B(3) (Method 202)
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
Digestion for Total Recoverable Metals	EN25	WATER	In house: Referenced to USEPA SW846-3005. Method 3005 is a Nitric/Hydrochloric acid digestion procedure used to prepare surface and ground water samples for analysis by ICPAES or ICPMS. This method is compliant with NEPM (2013) Schedule B(3)
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510B 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM (2013) Schedule B(3). ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for sparging.

### Appendix 9 Borehole Logs

	ENVIRONMENTAL OLUTIONS	90 Melville CLIENT: Jaws Archit							-	AST		G:	38	52	BH01 6372.8 52254.4	GDA9
OCATIO		7,700,700	DATE		7/12/20	19				LEV			900	26		m AH
	ACTOR: Geo-Environmental Sol	utions			GATION TYPE		SA		-	OTA			171	-7	7 102 Y 102	III.AN
100000000000000000000000000000000000000		utions	SAM			ore	.5/	\ <u></u>	Н					_	GM & JPC	
QUIPN	MENT/METHOD: Direct Push Core		SAM	T					_	oG	-			_	GIVI & JPC	
		6		Æ	8/	AMPL	_			Exc	Le	vel		33		
(metres)	MATERIAL DESCRIPTION	USCS	TINO	MOISTURE	Sample	Grain Class	HSL	Field PID (ppm)	Benzene	Toluene	Ethylbenz.	Ayrene	Yoperanceu	F2	MONITORING WELL	ELEVATION (metres)
0.0	FILL: Bitumen FILL: Concrete recovered as crushed material	P A P	FILL													
0.2-	Sandy SILTY CLAY: dark grey-brown, moist, firm, high plasticity															
0.4					, ,											
0.6-				5	BH1 0.5-0.6		D		×	×	×	()	()	×		
0.8		СН														
1.0-	Sandy SILTY CLAY yellow-brown, mo firm, high plasticity	pist,														
1.2																
1.4-	Silty SANDY CLAY: orange/yellow, slightly moist, stiff to very stiff, low plasticity, weathered material. Refusal		a	1												
1.6				3	BH1:1,5-1.6		D		×	×	×	()	()	×		
1.8-																
2.0		CL														

	ES	PROJECT: 90 Melville	Stre	et				20	ı	.00	j of		BH01	
	ENVIRONMENTAL	Jaws Archi	itants						5.1/4	STIN	20.00	_	6372.8	GDA94
Para estado e	D L U T I O N S	Jaws Alcili			7/40/00			_	v = 7 = 2		NG:		52254.4	GDA94
LOCATIO	pro- special contraction and a special contr	70 <b>4</b> 11- <b>44</b> 1-1-1-1-1	DATE	e de la companya de l	7/12/20				2000	VATIO	one.	26.	Name of the	m AHD
	ACTOR: Geo-Environmental S		-	0.177	SATION TYPE		SA	١.				H (m)		
EQUIPM	ENT/METHOD: Direct Push Core	e	SAM	PLIN	2000 1000 	ore			47.00		D BY		GM & JPC	
		≿		문	S	AMPL	ES:			Le				
DEPTH (metres)	MATERIAL DESCRIPTION	USCS	UNIT	MOISTURE	Sample	Grain Class	HSL	Field PID (ppm)			Napthalene		MONITORING WELL	ELEVATION (metres)
2.2					BH1 2 5-2.6	0	D D					××		
O F.	vices montal Caludians + CV/I UCI	EVOCED LUCE, V. E.	CO. 23 / 6 7	NO.E	Contract Allerta	11.00	200		20.0	- no		FAT	200 E 200 E20	O E00

GEO-		PROJECT:  90 Melville  CLIENT:	Stre	et					E	L		<b>g</b> (	2477	_	BH02 26353.2	GDA9
S	OLUTIONS	Jaws Archit	tects	3					N	OR	тн	INC	3:	52	52270.1	GDA9
LOCATIO	ON. Hobart CBD		DATE	E:	7/12/20	19			E	LEV	ATI	ON:		25	5	m AH
CONTRA	ACTOR: Geo-Environmental Solu	itions	INVE	STIC	GATION TYPE	E	ESA	4	т	ОТ	AL	DE	PT	Н (п	n): 1.6	
EQUIPM	MENT/METHOD: Direct Push Core		SAM	PLIN	ig: C	ore			ī	.00	GE	D	BY:		GM & JPC	1
	7	1		T.	s	AMPL	ES:		Н	ela		Scre		ing		
DEPTH (metres)	MATERIAL DESCRIPTION	USCS	TINO	MOISTURE	Sample	Grain Class	HSL	Field PID (ppm)	enzene		cee	dan	nce	s.	MONITORING WELL	ELEVATION (metres)
0.0	FILL: Bitumen FILL: Concrete recovered as crushed material	4Conc.4	FILL		7-1	0	1		180		ш	×	2 1			ш
0.2-	Sandy SILTY CLAY: dark grey-brown, moist, firm, high plasticity															
0.4-	Sandy SILTY CLAY: yellow-brown, mo firm, high plasticity	ist,														
0.6		СН			BH2 0.5-0.6		D	2	×	×	×	×	×	××	•	
0.8-			٥													
1.0	Silty SANDY CLAY: orange/yellow, slightly moist, stiff to very stiff, low plasticity, weathered material. Refusal															
1.2-		CL														
1.4							100									
1.6					BH2 1.5-1.6		D		×	×	×	×	×	××	(	
Seo-En	avironmental Solutions * PVI HSL EX	CEEDANCE: X: EX	CAVAT	ION	< II NI. A	1.21	B 2.	5 C 5	20	D.	20-	-50:	· F	- 50	-200 F: 200-500	G >5

GEO-	ENVIRONMENTAL	PROJECT: 90 Melville CLIENT:	Stre	et						L	O		2000	_	BH03 6362.3	GDA94
S	OLUTIONS	Jaws Archit	tects	3					1	VOR	тн	INC	3:	52	52248.6	GDA9
LOCATIO	ON Hobart CBD		DATE		7/12/20	19			1	ELEV	(ATI	ON:		26	.3	m AHC
CONTRA	ACTOR: Geo-Environmental So	lutions	INVE	STIC	GATION TYPE		ESA	4	7	ОТ	AL	DE	PTI	Н (т	): 1.6	
EQUIPM	MENT/METHOD: Direct Push Core		SAM	PLIN	NG: C	ore			1	LOC	GE	D	BY:		GM & JPC	K.
		>			s	AMPL	ES:		۲	lela		cre		ing		
DEPTH (metres)	MATERIAL DESCRIPTION	USCS	UNIT	MOISTURE	Sample	Grain Class	HSL	Fleid PID (ppm)	90200	Ex euenlo	hylbenz. a	lene dan	apthalene	F2	MONITORING WELL	ELEVATION (metres)
0.0	FILL; Bitumen	В		H		Ö	Ÿ		ď	12	ω̈.	8:	Ž	- 62		급
0.2-	FILL: Concrete recovered as crushed material		FILL													
0.4-	Sandy SILTY CLAY: yellow-brown, m firm, high plasticity															
0.6		СН			BH3 0.5-0.6		D	8	×	×	×	×	×	к×		
0.8-	Silty SANDY CLAY: orange/yellow, slightly moist, stiff to very stiff, low plasticity, weathered material. Refusa	al.														
1.0-		CL	a													
1.2-		G.														
1.4																
1.6					BH3 1.5-1.6		D		×	×	×	×	×	××		
Seo-En	nvironmental Solutions * PVI HSL E	XCEEDANCE: X: EX	CAVAT	ION	l, < IL; - NL; A	1-2,	B: 2-	5; C: 5-	20	, D:	20-	50;	E	: 50-	200; F: 200-500	G: >5

	ENVIRONMENTAL	CLIENT:								H	AS	TIN	IG:	_	52	BH04 26352	GDA9
SC	POLICE CONTROL OF A CONTROL OF	Jaws	Archit							٠		TH		_	503	252238.6	GDA9
LOCATIO		00000000000000000000000000000000000000		DATE		7/12/20					0000	/ATI		-1000	20.	3.7	m AHI
(4455.4) 17.556	CTOR: Geo-Environmental Sol	utions		10000	2000	GATION TYPE	22. 5	ESA	١	Т	ОТ	AL	DE	PTI	H (n	200	
EQUIPM	ENT/METHOD: Direct Push Core			SAM	PLIN	ig: C	ore			-	200		-	BY:	_	GM & JPC	
			>≿		ш	S	AMPL	ES:		ľ		Le	ve		ing		
DEPTH (metres)	MATERIAL DESCRIPTION		USCS	UNIT	MOISTURE	Sample	Grain Class	HSL	Field PID (ppm)	Benzene					5	MONITORING WELL	ELEVATION (metres)
0.0	FILL: Bitumen FILL: Concrete recovered as crushed		В					-		l w	Ĺ	Ü	î				ш
0.2-	material	1	Conc?	FILL													
d	Sandy SILTY CLAY: dark grey-brown moist, firm, high plasticity	100															
0.4-	noist, inn, right position,																
4						4 2		L									
2						BH4 0.5-0.6		D		×	×	×	×	×	××	c	
0.6	Sandy SILTY CLAY: yellow-brown, m firm, high plasticity	oist,	СН					200									
0.8																	
1.0-	Silty CLAYEY SAND: orange/yellow, slightly moist, dense, weathered mate Refusal	rial.		a													
1.2-			SC														
1.4																	
						BH4 1.5-1.6		D		×	×	×	×	×	××	•	

E Or	9	90 Melville Street								L		g (	of	_	BH05 86346.1	GDA9		
S O L U T I O N S Jaws Archite					ects							INC	3	_	52261.8	GDA9		
LOCATION: Hobart CBD				DATE: 7/12/2019							ELEVATION: 25.				USVV	m AHI		
CONTRACTOR: Geo-Environmental Solutions					INVESTIGATION TYPE: ESA						TOTAL DEPTH (m): 1,4							
EQUIPMENT/METHOD: Direct Push Core					SAMPLING: Core							LOGGED BY: GM & JPC						
	g tagan bulanan 1 milyan anatan san sami alahasu ya keni hayasawa a Siri a Yamida da an usi. T	1 1			SAMPLES:			Helath Screening Level			ing	1	12					
DEPTH (metres)	MATERIAL DESCRIPTION	USCS	TINO	MOISTURE	Sample	Grain Class	HSL	Field PID (ppm)	lenzene		cee	dan	nce	F2	MONITORING WELL	ELEVATION (metres)		
0.0	FILL: Bitumen FILL: Concrete recovered as crushed material  FILL: Clayey SANDY GRAVEL; grey/brown, slightly moist to dry, dense	P A P 4Conc A P A P			7-1		1		a.		w	^.						
0.2		0.0	FILL															
0.4		.cGW			BH5 0.5-0.6	2	D							××				
0.6	Sandy SILTY CLAY: dark grey-brown, moist, firm, high plasticity			2	BH3 0.3-0.0				1	^	^	^:						
0.8-		СН																
1.0	Silty CLAYEY SAND: orange/yellow, slightly moist, dense, weathered material. Refusal	ı	٥															
1.2-		SC																
1.4				J <sub>e</sub>	9 3		la s			L						J.		

tal Solution Core PTION	s Archit	DATE INVE	E: STIC	7/12/20 GATION TYPE NG: Co	E	ES#		TC	EVAT	2000	2	252245.5 7.3 n): 1.6	m AHI					
Core		SAM	STIC	GATION TYPE	E	ES <i>A</i>	١	тс	66.67.5	2000	2000	C	m AHI					
Core		SAM	0.000			SA	١		TAL	DEP	TH (r	n): 1.6						
PTION	USCS	Process.	PLIN	ig: Co	ore			1120			TOTAL DEPTH (m): 1.6							
W.17 40 17 6	USCS	н	П		SAMPLING: Core							LOGGED BY: GM & JPC						
0.077.0576	USCS	ь.	111	SAMPLES:			Helath Screening Level			9500,00								
crushed	10-00	TINO	MOISTURE	Sample	Grain Class	HSL	Field PID (ppm)			(ylene	es*	MONITORING WELL	ELEVATION (metres)					
	P A P	FILL					14	ω,										
y-brown,			8															
Sandy SILTY CLAY: yellow-brown, moist, firm, high plasticity	-																	
	СН			BH6 0.5-0.6		В		*	(X	××	X							
Silty SANDY CLAY: orange/yellow, slightly moist, stiff to very stiff, low plasticity, weathered material. Refusal																		
	CL																	
				BH6 1.5-1.6		D		×	ĸ ×	××	×	¢.						
	ellow,	ellow, low Refusal	ellow, , low . Refusal	ellow, low Refusal	CH  BH6 0.5-0.6  CH  Q  ellow, , low . Refusal	CH  CH  Q  ellow, low Refusal  CL	CH Q BH6 0.5-0.6 D	CH  CH  Q  ellow, , low . Refusal	CH  BH6 0.5-0.6  D  X3  ellow, , low . Refusal	CH  BH6 0.5-0.6  D  XXX  ellow, low Refusal  CL	CH  G  BH6 0.5-0.6  D  XXXXX  CH  CH  CH  CH  CH  CH  CH  CH	CH  BH6 0.5-0.6  D  XXXXXXX  Q  ellow, low Refusal  CL	CH  Q  ellow, low Refusal  CL					

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

	ENVIRONMENTAL	90 Melville  CLIENT:  Jaws Archit						20	H	AS	TIN	NG:	-	52	BH07 26338.7	GDA9
S	1000 1000 000 000 000 000 000 000 000 0	Jaws Alcilli	DATE		7/12/20	110			H	2-7-		liNe	-		252254.2	GDA9
		- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1							ELEVATION: 25.7					m AH		
	ACTOR: Geo-Environmental Solu	utions	INVESTIGATION TYPE: ESA					١	Т	OT	AL	DE	PT	Н (п	Sec. Sec.	_
EQUIPM	MENT/METHOD: Direct Push Core		SAMPLING: Core						LOGGED BY: GM & JPC					GM & JPC		
		≿		ш	S	AMPL	ES:		ľ		L	eve	4	ing		
(metres)	MATERIAL DESCRIPTION	USCS	UNIT	MOISTURE	Sample	Grain Class	HSI.	Field PID (ppm)	Senzene				lapthalene ou	F1	MONITORING WELL	ELEVATION (metres)
0.0	FILL: Bitumen FILL: Concrete recovered as crushed material	P A P	FILL		al a			A								2700, 00
0.2	Sandy SILTY CLAY: dark grey-brown, moist, firm, high plasticity															
0.4-																
0.6					BH7 0.5-0.6		D		×	×	×	×	×	××		
0.8-		CH														
1.0	Sandy SILTY CLAY: yellow-brown, mo firm, high plasticity	ist,	a													
1.2-																
1.4-	Silty SANDY CLAY: orange/yellow, slightly moist, stiff to very stiff, low plasticity, weathered material. Refusal				BH7 1.5-1.6		D		v	¥	¥	¥	×	××		
1.6-		CL						3			•					
1.8-																
2.0-		185					Ļ									Ţ

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

## **Appendix 10 Certificate of Analysis**



	CERTIFIC	ATE OF ANALYSIS	
Work Order	EM1921103	Page	: 1 of 18
Client	GEO-ENVIRONMENTAL SOLUTIONS	Laboratory	Environmental Division Melbourne
Contact	: DR JOHN PAUL CUMMING	Contact	: Shirley LeCornu
Address	29 KIRKSWAY PLACE	Address	: 4 Westall Rd Springvale VIC Australia 3171
	BATTERY POINT TASMANIA, AUSTRALIA 7004		
Telephone	: +61 03 6223 1839	Telephone	: +6138549 9630
Project	: Melville	Date Samples Received	10-Dec-2019 09:30
Order number	;	Date Analysis Commenced	: 10-Dec-2019
C-O-C number	2.22	Issue Date	: 13-Dec-2019 15:19
Sampler	: JPC		INATA NATA
Site			
Quote number	: EN/222		Accreditation No. 825
No. of samples received	: 17		Accreditation No. 825
No. of samples analysed	: 17		ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

#### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	rosilion	Accreditation Category
Dilani Fernando	Senior Inorganic Chemist	Melbourne Inorganics, Springvale, VIC
Nikki Stepniewski	Senior Inorganic Instrument Chemist	Melbourne Inorganics, Springvale, VIC
Xing Lin	Senior Organic Chemist	Melbourne Organics, Springvale, VIC

Environmental Site Assessment: 90 Melville Street, Hobart, December 2019.

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Client : GEO-ENVIRONMENTAL SOLUTIONS

Project - Melville



#### **General Comments**

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contact for details.

Key: CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

- A = This result is computed from individual analyte detections at or above the level of reporting
- ø = ALS is not NATA accredited for these tests.
- ~ = Indicates an estimated valu
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to
  Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.od)pyrene (0.1),
  Dibenz(a,h)anthracene (1.0), Benzo(g,h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benzo(a)nthracene (0.1), Chrysene (0.01), Benzo(b†) & Benzo(a)fuoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h.i)perylene (0.01). Less than LOR results for TEQ Zero' are treated as zero, for TEQ 1/2LOR' are treated as half the reported LOR, and for TEQ LOR' are treated as being equal to the reported LOR. Note: TEO 1/2LOR and TEQ LOR will calculate as 0.6mg/kg and 1.2mg/kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EG005T:EM1921103\_002, 003, 007,015 and 016 have been diluted prior to analysis for Arsenic, Barium, Beryllium, Boron , Cadmium, Lead and Selenium due to sample matrix. LORs have been raised accordingly.

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

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Client : GEO-ENVIRONMENTAL SOLUTIONS

Project : Melville



Inalytical Results								
Sub-Matrix: SOIL (Matrix: SOIL)		Clie	nt sample ID	BH1 0.5-0.6	BH1 1.5-1.6	BH1 2.5-2.6	BH2 0.5-0.6	BH2 1.5-1.6
1110	Clie	ent samplin	ng date / time	07-Dec-2019 00:00	07-Dec-2019 00:00	07-Dec-2019 00:00	07-Dec-2019 00:00	07-Dec-2019 00:0
Compound	CAS Number	LOR	Unit	EM1921103-001	EM1921103-002	EM1921103-003	EM1921103-004	EM1921103-005
	17.			Result	Result	Result	Result	Result
EA055: Moisture Content (Dried	@ 105-110°C)							
Moisture Content		1.0	96	22.3	17.7	21.6	20.0	14.5
EG005(ED093)T: Total Metals by	ICP-AES							
Arsenic	7440-38-2	5	mg/kg	<5	<6	<5	- <5	<5
Barium	7440-39-3	10	mg/kg	370	<80	<50	340	140
Beryllium	7440-41-7	- 1	mg/kg	<1	<6	<5	<1	<1
Boron	7440-42-8	50	mg/kg	<50	<80	<50	<50	<50
Cadmium	7440-43-9	1	mg/kg	<1	<3	<2	<1	<1
Chromium	7440-47-3	2	mg/kg	8	14	12	39	5
Cobalt	7440-48-4	2	mg/kg	13	58	13	47	28
Copper	7440-50-8	5	mg/kg	30	36	37	66	101
Lead	7439-92-1	5	mg/kg	6	8	8	5	<5
Manganese	7439-96-5	5	mg/kg	32	497	303	640	263
Nickel	7440-02-0	2	mg/kg	11	54	39	30	21
Selenium	7782-49-2	5	mg/kg	<5	<6	<5	<5	<5
Vanadium	7440-62-2	5	mg/kg	67	95	101	98	111
Zinc	7440-66-6	5	mg/kg	11	49	49	50	51
EG035T: Total Recoverable Mer							-	
Mercury	7439-97-8	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP075(SIM)B: Polynuclear Arom	AND DESCRIPTION OF THE PARTY OF							
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-98-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	208-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	205-99-2 205-82-3	0.5	mg/kg mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
		0.5	mg/kg mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene Indeno(1.2.3.cd)pyrene	50-32-8	0.5	mg/kg mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	193-39-5 53-70-3	0.5	mg/kg mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5

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Client GEO-ENVIRONMENTAL SOLUTIONS

Melville



#### Project Analytical Results Sub-Matrix: SOIL Client sample ID BH1 0.5-0.6 BH1 1.5-1.6 BH1 2.5-2.6 BH2 1.5-1.6 BH2 0.5-0.6 (Matrix: SOIL) 07-Dec-2019 00:00 07-Dec-2019 00:00 07-Dec-2019 00:00 07-Dec-2019 00:00 07-Dec-2019 00:00 Client sampling date / time EM1921103-001 EM1921103-002 EM1921103-003 EM1921103-004 EM1921103-005 CAS Number LOR Compound Result Result Result Result Result EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued < 0.5 <0.5 < 0.5 < 0.5 0.5 mg/kg < 0.5 Benzo(g.h.i)perylene 191-24-2 Sum of polycyclic aromatic hydrocarbons 0.5 mg/kg < 0.5 <0.5 < 0.5 < 0.5 < 0.5 A Benzo(a)pyrene TEQ (zero) 0.5 < 0.5 <0.5 < 0.5 <0.5 < 0.5 mg/kg 0.5 0.6 0.6 A Benzo(a)pyrene TEQ (half LOR) mg/kg 0.6 0.6 0.6 ^ Benzo(a)pyrene TEQ (LOR) 0.5 1.2 1.2 1.2 1.2 1.2 mg/kg EP080/071: Total Petroleum Hydrocarbons 10 <10 <10 <10 <10 C6 - C9 Fraction mg/kg <10 C10 - C14 Fraction 50 mg/kg <50 <50 <50 <50 <50 C15 - C28 Fraction 100 <100 <100 <100 <100 <100 mg/kg C29 - C36 Fraction <100 100 mg/kg <100 <100 <100 <100 mg/kg ^ C10 - C36 Fraction (sum) 50 <50 <50 <50 <50 <50 EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions C6 - C10 Fraction C6\_C10 10 mg/kg <10 <10 <10 <10 <10 ^ C6 - C10 Fraction minus BTEX C6\_C10-BTEX 10 mg/kg <10 <10 <10 <10 <10 >C10 - C16 Fraction 50 mg/kg <50 <50 <50 <50 <50 >C16 - C34 Fraction 100 mg/kg <100 <100 <100 <100 <100 <100 <100 <100 >C34 - C40 Fraction 100 <100 <100 mg/kg ^ >C10 - C40 Fraction (sum) 50 <50 <50 <50 <50 <50 mg/kg 50 mg/kg <50 <50 <50 <50 <50 ^ >C10 - C16 Fraction minus Naphthalene (F2) EP080: BTEXN Benzene 0.2 < 0.2 <0.2 < 0.2 < 0.2 < 0.2 71-43-2 mg/kg Toluene 0.5 < 0.5 <0.5 < 0.5 < 0.5 < 0.5 108-88-3 mg/kg < 0.5 Ethylbenzene 100-41-4 0.5 mg/kg < 0.5 < 0.5 <0.5 < 0.5 meta- & para-Xylene 108-38-3 106-42-3 0.5 < 0.5 <0.5 < 0.5 < 0.5 < 0.5 mg/kg 0.5 < 0.5 <0.5 < 0.5 < 0.5 < 0.5 mg/kg ortho-Xylene 95-47-8 < 0.2 <0.2 < 0.2 < 0.2 < 0.2 0.2 A Sum of BTEX mg/kg ^ Total Xylenes 0.5 mg/kg <0.5 <0.5 <0.5 <0.5 < 0.5 <1 Naphthalene 1 mg/kg <1 <1 <1 <1 91-20-3 EP075(SIM)S: Phenolic Compound Surrogates 0.5 96 104 Phenol-d6 13127-88-3 99.4 103 98.0 99.7 2-Chlorophenol-D4 93951-73-6 0.5 96 110 104 110 105 106 2.4.6-Tribromophenol 118-79-6 0.5 96 69.0 38.9 38.2 54.3 50.3

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#### Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)		Clie	nt sample ID	BH1 0.5-0.6	BH1 1.5-1.6	BH1 2.5-2.6	BH2 0.5-0.6	BH2 1.5-1.6
	Cli	ent samplin	ig date / time	07-Dec-2019 00:00				
Compound	CAS Number	LOR	Unit	EM1921103-001	EM1921103-002	EM1921103-003	EM1921103-004	EM1921103-005
				Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	96	113	96.4	101	97.5	99.1
Anthracene-d10	1719-06-8	0.5	96	115	117	123	121	120
4-Terphenyl-d14	1718-51-0	0.5	96	105	100	110	103	103
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	96	76.7	74.4	77.1	78.7	85.3
Toluene-D8	2037-26-5	0.2	96	82.5	81.1	84.9	85.4	92.5
4-Bromofluorobenzene	460-00-4	0.2	96	95.8	96.3	97.2	105	108

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#### Analytical Results Client sample ID Sub-Matrix: SOIL BH3 0.5-0.6 BH3 1.5-1.6 BH4 0.5-0.6 BH4 1.5-1.6 BH5 0.5-0.6 (Matrix: SOIL) Client sampling date / time 07-Dec-2019 00:00 07-Dec-2019 00:00 07-Dec-2019 00:00 07-Dec-2019 00:00 07-Dec-2019 00:00 EM1921103-006 EM1921103-007 EM1921103-008 EM1921103-009 EM1921103-010 Compound CAS Number Result Result Result Result Result EA055: Moisture Content (Dried @ 105-110°C) 1.0 Moisture Content 96 21.6 19.6 24.8 22.5 19.8 EG005(ED093)T: Total Metals by ICP-AES 7440-38-2 5 <5 <5 <5 <5 <5 mg/kg mg/kg Barium 7440-39-3 10 280 280 170 70 600 Beryllium <1 3 2 mg/kg 1 7 7440-41-7 50 mg/kg <50 <50 <50 <50 <50 Boron 7440-42-8 <1 <2 <1 <1 <1 Cadmium 7440-43-9 mg/kg 9 10 11 21 Chromium 7440-47-3 mg/kg 25 Cobalt 7440-48-4 mg/kg 291 8 29 22 30 34 29 18 56 Copper 7440-50-8 5 mg/kg Lead 5 mg/kg 7 <5 9 6 6 7439-92-1 Manganese 7439-96-5 5 mg/kg 30 681 60 106 51 Nickel 7440-02-0 2 18 70 10 21 25 mg/kg <5 <5 <5 Selenium 7782-49-2 5 mg/kg <5 <5 70 83 Vanadium 7440-62-2 5 mg/kg 75 32 105 Zinc 7440-66-6 16 48 16 32 25 5 mg/kg EG035T: Total Recoverable Mercury by FIMS Mercury 7439-97-6 0.1 < 0.1 <0.1 < 0.1 < 0.1 < 0.1 mg/kg EP075(SIM)B: Polynuclear Aromatic Hydrocarbons 0.5 < 0.5 <0.5 < 0.5 <0.5 Naphthalene 91-20-3 mg/kg < 0.5 <0.5 <0.5 Acenaphthylene 0.5 mg/kg < 0.5 <0.5 < 0.5 208-96-8 Acenaphthene 0.5 mg/kg < 0.5 <0.5 <0.5 < 0.5 <0.5 83-32-9 Fluorene 0.5 mg/kg < 0.5 <0.5 <0.5 < 0.5 <0.5 86-73-7 Phenanthrene 0.5 < 0.5 <0.5 < 0.5 < 0.5 < 0.5 85-01-8 mg/kg < 0.5 <0.5 < 0.5 < 0.5 <0.5 Anthracene 120-12-7 0.5 mg/kg <0.5 <0.5 < 0.5 <0.5 <0.5 Fluoranthene 206-44-0 0.5 mg/kg < 0.5 <0.5 < 0.5 < 0.5 < 0.5 Pyrene 0.5 mg/kg 129-00-0 < 0.5 <0.5 <0.5 <0.5 <0.5 Benz(a)anthracene 0.5 mg/kg 56-55-3 0.5 < 0.5 <0.5 < 0.5 < 0.5 < 0.5 Chrysene 218-01-9 mg/kg 205-99-2 205-82-3 < 0.5 <0.5 < 0.5 < 0.5 < 0.5 mg/kg < 0.5 <0.5 < 0.5 < 0.5 <0.5 Benzo(k)fluoranthene 207-08-9 0.5 mg/kg < 0.5 <0.5 < 0.5 < 0.5 < 0.5 Benzo(a)pyrene 50-32-8 0.5 mg/kg < 0.5 Indeno(1.2.3.cd)pyrene 193-39-5 0.5 mg/kg <0.5 < 0.5 < 0.5 < 0.5 0.5 < 0.5 <0.5 <0.5 < 0.5 <0.5 Dibenz(a.h)anthracene 53-70-3 mg/kg

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#### Project Melville Analytical Results Client sample ID Sub-Matrix: SOIL BH3 0.5-0.6 BH3 1.5-1.6 BH4 0.5-0.6 BH4 1.5-1.6 BH5 0.5-0.6 (Matrix: SOIL) 07-Dec-2019 00:00 07-Dec-2019 00:00 07-Dec-2019 00:00 07-Dec-2019 00:00 07-Dec-2019 00:00 Client sampling date / time Compound CAS Number LOR EM1921103-006 EM1921103-007 EM1921103-008 EM1921103-009 EM1921103-010 Result Result Result Result Result EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued Benzo(g.h.i)perylene 191-24-2 0.5 mg/kg < 0.5 <0.5 < 0.5 < 0.5 < 0.5 Sum of polycyclic aromatic hydrocarbons 0.5 <0.5 <0.5 < 0.5 <0.5 < 0.5 mg/kg A Benzo(a)pyrene TEQ (zero) 0.5 <0.5 <0.5 < 0.5 < 0.5 < 0.5 mg/kg ^ Benzo(a)pyrene TEQ (half LOR) 0.5 mg/kg 0.6 0.6 0.6 0.6 0.6 Benzo(a)pyrene TEQ (LOR) 0.5 mg/kg 1.2 1.2 1.2 1.2 1.2 ---EP080/071: Total Petroleum Hydrocarbons <10 <10 <10 <10 <10 C6 - C9 Fraction 10 mg/kg C10 - C14 Fraction 50 mg/kg <50 <50 <50 <50 <50 C15 - C28 Fraction 100 mg/kg <100 <100 <100 <100 <100 C29 - C36 Fraction 100 mg/kg <100 <100 <100 <100 <100 ---^ C10 - C36 Fraction (sum) 50 mg/kg <50 <50 <50 <50 <50 EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fraction C6 - C10 Fraction C6\_C10 10 mg/kg <10 <10 <10 <10 <10 10 <10 <10 <10 <10 <10 A C6 - C10 Fraction minus BTEX C6\_C10-BTEX mg/kg (F1) >C10 - C16 Fraction <50 <50 <50 <50 <50 50 mg/kg >C16 - C34 Fraction <100 <100 <100 <100 100 <100 mg/kg >C34 - C40 Fraction 100 mg/kg <100 <100 <100 <100 <100 ^ >C10 - C40 Fraction (sum) 50 mg/kg <50 <50 <50 <50 <50 >C10 - C16 Fraction minus Naphthalene 50 <50 <50 <50 <50 <50 mg/kg (F2) **EP080: BTEXN** 71-43-2 0.2 Benzene mg/kg < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 Toluene 108-88-3 0.5 mg/kg < 0.5 <0.5 < 0.5 < 0.5 < 0.5 Ethylbenzene 100-41-4 0.5 mg/kg < 0.5 <0.5 <0.5 < 0.5 <0.5 meta- & para-Xylene 0.5 < 0.5 <0.5 < 0.5 < 0.5 < 0.5 108-38-3 106-42-3 mg/kg ortho-Xylene 95-47-8 0.5 mg/kg < 0.5 <0.5 < 0.5 < 0.5 < 0.5 Sum of BTEX 0.2 mg/kg < 0.2 <0.2 < 0.2 < 0.2 < 0.2 ^ Total Xylenes 0.5 < 0.5 <0.5 < 0.5 <0.5 < 0.5 mg/kg Naphthalene <1 <1 <1 <1 <1 91-20-3 1 mg/kg EP075(SIM)S: Phenolic Compound Surrogates Phenol-d6 13127-88-3 0.5 96 99.8 102 95.7 99.3 101 0.5 96 106 110 102 106 2-Chlorophenol-D4 93951-73-6 108 96 51.9 52.3 53.1 53.6 51.5 2.4.6-Tribromophenol 118-79-6 0.5

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## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)	Client sample ID			BH3 0.5-0.6	BH3 1.5-1.6	BH4 0.5-0.6	BH4 1.5-1.6	BH5 0.5-0.6	
	Cli	ent samplin	ng date / time	07-Dec-2019 00:00					
Compound	CAS Number	LOR	Unit	EM1921103-006	EM1921103-007	EM1921103-008	EM1921103-009	EM1921103-010	
				Result	Result	Result	Result	Result	
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-80-8	0.5	96	99.4	102	95.4	99.5	99.4	
Anthracene-d10	1719-06-8	0.5	96	123	127	116	122	124	
4-Terphenyl-d14	1718-51-0	0.5	96	104	106	98.9	104	102	
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	96	87.7	74.0	84.5	83.1	68.0	
Toluene-D8	2037-26-5	0.2	96	94.8	80.3	91.5	88.6	65.5	
4-Bromofluorobenzene	460-00-4	0.2	96	108	93.2	103	103	87.4	

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#### Analytical Results Client sample ID BH5 1.5-1.6 BH6 1.5-1.6 BH7 1.5-1.6 Sub-Matrix: SOIL BH6 0.5-0.6 BH7 0.5-0.6 (Matrix: SOIL) 07-Dec-2019 00:00 Client sampling date / time 07-Dec-2019 00:00 07-Dec-2019 00:00 07-Dec-2019 00:00 07-Dec-2019 00:00 EM1921103-011 EM1921103-012 EM1921103-013 EM1921103-014 EM1921103-015 Compound CAS Number Result Result Result Result Result EA055: Moisture Content (Dried @ 105-110°C) 1.0 Moisture Content 96 18.0 22.9 132 7.8 15.3 EG005(ED093)T: Total Metals by ICP-AES <5 <5 34 7440-38-2 5 mg/kg <5 <8 Barium 7440-39-3 10 mg/kg 220 250 130 60 660 Beryllium mg/kg <1 <1 <1 <1 <8 7440-41-7 <50 <50 <50 <50 <80 Boron 7440-42-8 50 mg/kg Cadmium mg/kg <1 <1 <1 <1 3 7440-43-9 Chromium 7440-47-3 2 8 9 23 6 27 mg/kg 33 18 Cobalt 2 15 29 7440-48-4 mg/kg Copper 7440-50-8 57 29 68 77 80 mg/kg <5 <5 90 <8 Lead 7439-92-1 5 mg/kg Manganese 7439-96-5 5 mg/kg 780 33 247 348 3530 Nickel 7440-02-0 mg/kg 29 8 20 10 62 <5 Selenium <5 <5 <5 <8 7782-49-2 mg/kg Vanadium 7440-62-2 88 68 110 52 95 mg/kg Zinc 7440-66-6 mg/kg 33 11 48 133 46 EG035T: Total Recoverable Mercury by FIMS 7439-97-8 0.1 mg/kg < 0.1 <0.1 < 0.1 < 0.1 < 0.1 Mercury EP075(SIM)B: Polynuclear Aromatic Hydrocarbons Naphthalene 0.5 mg/kg <0.5 <0.5 < 0.5 8.0 < 0.5 91-20-3 Acenaphthylene 0.5 <0.5 <0.5 < 0.5 3.2 < 0.5 208-96-8 mg/kg Acenaphthene 83-32-9 0.5 mg/kg < 0.5 <0.5 < 0.5 1.3 < 0.5 < 0.5 <0.5 <0.5 <0.5 Fluorene 86-73-7 0.5 mg/kg 2.8 Phenanthrene 85-01-8 0.5 mg/kg < 0.5 <0.5 < 0.5 39.7 < 0.5 Anthracene 120-12-7 0.5 < 0.5 <0.5 < 0.5 8.7 < 0.5 mg/kg Fluoranthene 206-44-0 0.5 < 0.5 <0.5 <0.5 42.9 <0.5 mg/kg Pyrene 0.5 < 0.5 <0.5 < 0.5 43.0 < 0.5 129-00-0 mg/kg Benz(a)anthracene 0.5 mg/kg < 0.5 <0.5 < 0.5 19.5 < 0.5 56-55-3 < 0.5 <0.5 <0.5 < 0.5 Chrysene 0.5 mg/kg 19.3 218-01-9 Benzo(b+j)fluoranthene 205-99-2 205-82-3 0.5 mg/kg < 0.5 <0.5 < 0.5 18.2 < 0.5 Benzo(k)fluoranthene 207-08-9 0.5 <0.5 <0.5 < 0.5 15.8 < 0.5 mg/kg < 0.5 <0.5 < 0.5 24.3 < 0.5 Benzo(a)pyrene 50-32-8 0.5 mg/kg Indeno(1.2.3.cd)pyrene < 0.5 <0.5 < 0.5 11.1 < 0.5 193-39-5 0.5 mg/kg Dibenz(a.h)anthracene 53-70-3 0.5 mg/kg < 0.5 <0.5 <0.5 4.8 <0.5

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#### Analytical Results Client sample ID BH6 1.5-1.6 Sub-Matrix: SOIL BH5 1.5-1.6 BH6 0.5-0.6 BH7 0.5-0.6 BH7 1.5-1.6 (Matrix: SOIL) Client sampling date / time 07-Dec-2019 00:00 07-Dec-2019 00:00 07-Dec-2019 00:00 07-Dec-2019 00:00 07-Dec-2019 00:00 EM1921103-011 EM1921103-012 EM1921103-013 EM1921103-014 EM1921103-015 Compound CAS Number LOR Result Result Result Result Result EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued <0.5 Benzo(g.h.i)perylene 191-24-2 0.5 mg/kg < 0.5 <0.5 < 0.5 12.9 A Sum of polycyclic aromatic hydrocarbons 0.5 < 0.5 <0.5 <0.5 268 < 0.5 mg/kg A Benzo(a)pyrene TEQ (zero) 0.5 < 0.5 <0.5 <0.5 35.9 <0.5 mg/kg ^ Benzo(a)pyrene TEQ (half LOR) 0.5 mg/kg 0.6 0.6 0.6 35.9 0.6 Benzo(a)pyrene TEQ (LOR) 0.5 mg/kg 1.2 1.2 1.2 35.9 1.2 ----EP080/071: Total Petroleum Hydrocarbons C6 - C9 Fraction 10 mg/kg <10 <10 <10 <10 <10 C10 - C14 Fraction 50 mg/kg <50 <50 <50 <50 <50 C15 - C28 Fraction 100 mg/kg <100 <100 <100 1280 <100 -C29 - C36 Fraction <100 <100 <100 <100 100 mg/kg 600 <50 <50 <50 ^ C10 - C36 Fraction (sum) 50 mg/kg <50 1880 EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions C6 - C10 Fraction 10 <10 <10 <10 <10 <10 C6\_C10 mg/kg 10 <10 <10 <10 <10 <10 <sup>^</sup> C6 - C10 Fraction minus BTEX C6\_C10-BTEX mg/kg >C10 - C16 Fraction 50 mg/kg <50 <50 <50 100 <50 >C16 - C34 Fraction 100 mg/kg <100 <100 <100 1640 <100 >C34 - C40 Fraction 100 <100 <100 <100 340 <100 mg/kg <50 ^ >C10 - C40 Fraction (sum) 50 mg/kg <50 <50 2080 <50 ^ >C10 - C16 Fraction minus Naphthalene 50 mg/kg <50 <50 <50 100 <50 (F2) EP080: BTEXN 71-43-2 0.2 mg/kg < 0.2 < 0.2 < 0.2 < 0.2 < 0.2 Benzene Toluene 108-88-3 0.5 < 0.5 <0.5 < 0.5 < 0.5 < 0.5 mg/kg < 0.5 <0.5 < 0.5 < 0.5 < 0.5 Ethylbenzene 100-41-4 0.5 mg/kg < 0.5 <0.5 <0.5 < 0.5 <0.5 meta- & para-Xylene 108-38-3 108-42-3 0.5 mg/kg < 0.5 <0.5 < 0.5 < 0.5 < 0.5 ortho-Xylene 0.5 mg/kg 95-47-6 0.2 < 0.2 <0.2 < 0.2 < 0.2 < 0.2 Sum of BTEX mg/kg <sup>^</sup> Total Xylenes <0.5 <0.5 < 0.5 < 0.5 <0.5 0.5 mg/kg Naphthalene 91-20-3 <1 <1 <1 <1 <1 mg/kg EP075(SIM)S: Phenolic Compound Surrogates Phenol-d6 13127-88-3 0.5 96 102 99.4 100 103 100 96 108 2-Chlorophenol-D4 93951-73-6 0.5 105 107 107 106 118-79-6 52.9 2.4.6-Tribromophenol 0.5 96 52.8 50.5 81.1 66.1

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### Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)	Client sample ID			BH5 1.5-1.6	BH6 0.5-0.6	BH6 1.5-1.6	BH7 0.5-0.6	BH7 1.5-1.6
	Cli	ent samplin	g date / time	07-Dec-2019 00:00				
Compound	CAS Number	LOR	Unit	EM1921103-011	EM1921103-012	EM1921103-013	EM1921103-014	EM1921103-015
				Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	96	111	99.6	101	108	110
Anthracene-d10	1719-06-8	0.5	96	127	112	129	98.5	119
4-Terphenyl-d14	1718-51-0	0.5	96	107	102	106	91.0	107
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	96	89.9	83.6	80.3	82.6	77.9
Toluene-D8	2037-26-5	0.2	96	99.7	90.9	89.3	92.7	85.7
4-Bromofluorobenzene	460-00-4	0.2	96	115	108	100	104	99.6

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roject : Melville	11111111	15.11						(AL
nalytical Results								
ub-Matrix: SOIL Matrix: SOIL)		Clie	ent sample ID	Duplicate	8		****	1500
	Cli	ent samplii	ng date / time	07-Dec-2019 00:00				1 <del></del> 1.
Compound	CAS Number	LOR	Unit	EM1921103-016				
The state of the s	2000 1000 00000000000000000000000000000		1	Result				
A055: Moisture Content (Drie	d @ 105-110°C)							
Moisture Content		1.0	96	17.1	500.0	2 <u></u> 2	C-12	3 <u>44.0</u> 2
G005(ED093)T: Total Metals b	y ICP-AES							
Arsenic	7440-38-2	- 5	mg/kg	<8	-			1
Barium	7440-39-3	10	mg/kg	<80	-	1 ( 1 <del>177</del> /	·	1 0000
Beryllium	7440-41-7	1	mg/kg	<8		· / : : : : : : : : : : : : : : : : : :	·	1 5 <del>770</del> 2
Boron	7440-42-8	50	mg/kg	<60	77.57%		·	
Cadmium	7440-43-9	1	mg/kg	<3	77,500	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		, <del>, , , , , , , , , , , , , , , , , , </del>
Chromium	7440-47-3	2	mg/kg	10	7007	A ALEXAN	·	( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )
Cobalt	7440-48-4	2	mg/kg	37		1 1 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	6 <del></del>	1 s <del>ees</del> a
Copper	7440-50-8	5	mg/kg	33	7000	i i s <del>au</del> s	0 <del>707</del> 4	N 1000
Lead	7439-92-1	5	mg/kg	<8	7007	1 10 10 10 10 10 10 10 10 10 10 10 10 10	( <del>177</del> 4)	1 10 10 10 10 10 10 10 10 10 10 10 10 10
Manganese	7439-96-5	5	mg/kg	320	-	( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	i i a
Nickel	7440-02-0	2	mg/kg	42		( S <del>SS</del> 2	30 <del>000</del> 1	0 <del></del>
Selenium	7782-49-2	5	mg/kg	<6		( <del>)</del>	8 <del>100</del> 8	1 <del>-11</del> 5
Vanadium	7440-62-2	5	mg/kg	74	<del>,,,,,</del> ,	( <del>( ( )</del> 4	8 <del>100</del> 0	1 <del></del>
Zinc	7440-86-8	5	mg/kg	44	·	( <del>550)</del> e	S <del>tor</del> e	1 <del></del>
G035T: Total Recoverable Me	ercury by FIMS							
Mercury	7439-97-6	0.1	mg/kg	<0.1	<u>(((()</u>	1000	9 <del>20</del> 0	( <u>10.110</u> )
P075(SIM)B: Polynuclear Aro	matic Hydrocarbons							
Naphthalene	91-20-3	0.5	mg/kg	<0.5	2022	U 1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5			· · · · · · · · · · · · · · · · · · ·	_
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	-	1	2000	
Fluorene	86-73-7	0.5	mg/kg	<0.5	-		·	·
Phenanthrene	85-01-8	0.5	mg/kg	<0.5			9. 3 <del></del>	
Anthracene	120-12-7	0.5	mg/kg	<0.5		1 <del>777</del> 2	1. Table 1	1777
Fluoranthene	206-44-0	0.5	mg/kg	<0.5		-		
Pyrene	129-00-0	0.5	mg/kg	<0.5	<del></del>	1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		( <del>277</del> )
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	-	1 3,1	• 0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Chrysene	218-01-9	0.5	mg/kg	<0.5		1.5	0 <del></del>	1
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	77.77			
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	7277	1 1000	9 0 <del>111</del> 0 1	1 10 <del>000</del> 0
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5		3,000	6 <del>777</del> -2	1 10000
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	70.75		6777	T seema
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5		1 (	10 mm	1 3.000

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#### Analytical Results Client sample ID Sub-Matrix: SOIL Duplicate (Matrix: SOIL) 07-Dec-2019 00:00 Client sampling date / time Compound CAS Number EM1921103-016 Result EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued Benzo(g.h.i)perylene 191-24-2 0.5 mg/kg < 0.5 0.5 < 0.5 Sum of polycyclic aromatic hydrocarbons mg/kg 0.5 < 0.5 ^ Benzo(a)pyrene TEQ (zero) mg/kg ^ Benzo(a)pyrene TEQ (half LOR) 0.5 mg/kg 0.6 ^ Benzo(a)pyrene TEQ (LOR) 0.5 mg/kg 1.2 200 EP080/071: Total Petroleum Hydrocarbons 10 <10 C6 - C9 Fraction mg/kg ---C10 - C14 Fraction 50 mg/kg <50 C15 - C28 Fraction 100 mg/kg <100 C29 - C36 Fraction 100 <100 mg/kg ^ C10 - C36 Fraction (sum) <50 50 mg/kg -\_ \_ -EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions C6 - C10 Fraction C6\_C10 10 mg/kg <10 <sup>^</sup> C6 - C10 Fraction minus BTEX C6\_C10-BTEX 10 mg/kg <10 >C10 - C16 Fraction 50 <50 mg/kg >C16 - C34 Fraction 100 <100 mg/kg <100 >C34 - C40 Fraction 100 mg/kg -------<50 ^ >C10 - C40 Fraction (sum) 50 mg/kg 50 <50 ^ >C10 - C16 Fraction minus Naphthalene mg/kg (F2) **EP080: BTEXN** Benzene 71-43-2 0.2 < 0.2 mg/kg ---< 0.5 Toluene 108-88-3 0.5 mg/kg Ethylbenzene 100-41-4 0.5 mg/kg < 0.5 meta- & para-Xylene 0.5 < 0.5 108-38-3 106-42-3 mg/kg 0.5 < 0.5 mg/kg ortho-Xylene 95-47-6 < 0.2 0.2 A Sum of BTEX mg/kg ^ Total Xylenes 0.5 mg/kg < 0.5 Naphthalene <1 91-20-3 1 mg/kg \_ EP075(SIM)S: Phenolic Compound Surrogates Phenol-d6 0.5 % 90.6 13127-88-3 2-Chlorophenol-D4 0.5 96 98.8 93951-73-6 2.4.6-Tribromophenol 118-79-6 0.5 96 60.9

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#### Analytical Results Sub-Matrix: SOIL Client sample ID Duplicate (Matrix: SOIL) Client sampling date / time 07-Dec-2019 00:00 EM1921103-016 Compound CAS Number LOR Result EP075(SIM)T: PAH Surrogates % 0.5 93.8 321-60-8 Anthracene-d10 0.5 96 122 1719-06-8 4-Terphenyl-d14 96 100 1718-51-0 0.5 \_ \_ EP080S: TPH(V)/BTEX Surrogates 1.2-Dichloroethane-D4 0.2 96 78.1 17060-07-0 -2037-26-5 0.2 96 85.3 96 4-Bromofluorobenzene 460-00-4 99.8

Environmental Site Assessment: 90 Melville Street, Hobart, December 2019.

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#### Analytical Results Client sample ID Sub-Matrix: WATER Rinsate (Matrix: WATER) 07-Dec-2019 00:00 Client sampling date / time Compound CAS Number EM1921103-017 Result EG020T: Total Metals by ICP-MS Arsenic 7440-38-2 0.001 mg/L <0.001 Boron 7440-42-8 0.05 mg/L <0.05 <0.001 **Barium** 7440-39-3 0.001 mg/L <0.001 Beryllium 7440-41-7 0.001 mg/L 7440-43-9 0.0001 mg/L <0.0001 0.001 mg/L <0.001 Cobalt 7440-48-4 ----\_\_\_ <0.001 0.001 mg/L Chromium 7440-47-3 Copper 7440-50-8 0.001 mg/L < 0.001 Manganese 7439-96-5 0.001 mg/L <0.001 Nickel 0.001 <0.001 7440-02-0 mg/L <0.001 Lead 7439-92-1 0.001 mg/L Selenium 7782-49-2 0.01 mg/L < 0.01 Vanadium 7440-62-2 0.01 < 0.01 mg/L ----Zinc 7440-66-6 0.005 mg/L <0.005 EG035T: Total Recoverable Mercury by FIMS 7439-97-6 0.0001 mg/L < 0.0001 EP075(SIM)B: Polynuclear Aromatic Hydrocarbons Naphthalene 1.0 µg/L <1.0 91-20-3 Acenaphthylene 1.0 <1.0 208-96-8 µg/L Acenaphthene 1.0 <1.0 83-32-9 µg/L Fluorene 86-73-7 1.0 µg/L <1.0 Phenanthrene 1.0 <1.0 85-01-8 µg/L 1.0 <1.0 Anthracene µg/L 120-12-7 ----<1.0 Fluoranthene 206-44-0 1.0 µg/L Pyrene 129-00-0 1.0 µg/L <1.0 <1.0 Benz(a)anthracene 56-55-3 1.0 µg/L Chrysene <1.0 218-01-9 1.0 µg/L <1.0 Benzo(b+j)fluoranthene 205-99-2 205-82-3 1.0 µg/L Benzo(k)fluoranthene 1.0 µg/L <1.0 207-08-9 \_\_\_ Benzo(a)pyrene < 0.5 0.5 50-32-8 µg/L ----\_\_\_ Indeno(1.2.3.cd)pyrene 193-39-5 1.0 µg/L <1.0 Dibenz(a.h)anthracene 53-70-3 1.0 µg/L <1.0 Benzo(g.h.i)perylene 1.0 <1.0 191-24-2 µg/L 0.5 <0.5 µg/L ^ Sum of polycyclic aromatic hydrocarbons

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#### Analytical Results Sub-Matrix: WATER Client sample ID Rinsate (Matrix: WATER) 07-Dec-2019 00:00 Client sampling date / time ----CAS Number LOR EM1921103-017 Compound Result EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued --- 0.5 <0.5 \* Benzo(a)pyrene TEQ (zero) µg/L \_\_\_ \_ EP080/071: Total Petroleum Hydrocarbons C6 - C9 Fraction 20 <20 µg/L C10 - C14 Fraction 50 µg/L <50 C15 - C28 Fraction 100 µg/L <100 50 <50 C29 - C36 Fraction µg/L 50 <50 ^ C10 - C36 Fraction (sum) µg/L EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions C6 - C10 Fraction C8\_C10 20 µg/L <20 <20 <sup>^</sup> C6 - C10 Fraction minus BTEX C6\_C10-BTEX 20 µg/L (F1) >C10 - C16 Fraction 100 µg/L <100 >C16 - C34 Fraction 100 µg/L <100 100 <100 >C34 - C40 Fraction µg/L ^ >C10 - C40 Fraction (sum) 100 µg/L <100 100 <100 ^ >C10 - C16 Fraction minus Naphthalene µg/L (F2) EP080: BTEXN Benzene 71-43-2 1. µg/L <1 <2 Toluene 108-88-3 µg/L Ethylbenzene 100-41-4 µg/L <2 <2 meta- & para-Xylene 108-38-3 106-42-3 2 µg/L <2 ortho-Xylene 95-47-6 2 µg/L A Total Xylenes 2 µg/L <2 A Sum of BTEX <1 µg/L Naphthalene <5 5 µg/L 91-20-3 EP075(SIM)S: Phenolic Compound Surrogates Phenol-d6 13127-88-3 1.0 96 45.0 2-Chlorophenol-D4 96 87.7 93951-73-6 1.0 2.4.6-Tribromophenol 118-79-6 1.0 96 92.7 EP075(SIM)T: PAH Surrogates 2-Fluorobiphenyl 321-60-8 1.0 96 114 Anthracene-d10 1719-06-8 1.0 96 100 % 94.5 4-Terphenyl-d14 1718-51-0 1.0

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### Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Clie	ent sample ID	Rinsate	 	 
	Client sampling date / time			07-Dec-2019 00:00	 	 
Compound	CAS Number	LOR	Unit	EM1921103-017	 	 
				Result	 	 
EP080S: TPH(V)/BTEX Surrogates						
1.2-Dichloroethane-D4	17060-07-0	2	%	93.7	 	 
Toluene-D8	2037-26-5	2	%	75.4	 	 
4-Bromofluorobenzene	460-00-4	2	%	86.4	 	 

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#### Surrogate Control Limits

Sub-Matrix: SOIL		Recovery	Limits (%)		
Compound	CAS Number	Low	High		
EP075(SIM)S: Phenolic Compound	Surrogates				
Phenol-d6	13127-88-3	54	125		
2-Chlorophenol-D4	93951-73-6	65	123		
2.4.6-Tribromophenol	118-79-6	34	122		
EP075(SIM)T: PAH Surrogates					
2-Fluorobiphenyl	321-60-8	61	125		
Anthracene-d10	1719-06-8	62	130		
4-Terphenyl-d14	1718-51-0	67	133		
EP080S: TPH(V)/BTEX Surrogates					
1.2-Dichloroethane-D4	17060-07-0	51	125		
Toluene-D8	2037-26-5	55	125		
4-Bromofluorobenzene	460-00-4	56	124		
Sub-Matrix: WATER		Recovery Lin			
Compound	CAS Number	Low	High		
EP075(SIM)S: Phenolic Compound	Surrogates				
Phenol-d6	13127-88-3	10	46		
2-Chlorophenol-D4	93951-73-6	23	104		
2.4.6-Tribromophenol	118-79-6	28	130		
EP075(SIM)T: PAH Surrogates					
2-Fluorobiphenyl	321-60-8	36	114		
Anthracene-d10	1719-06-8	51	119		
4-Terphenyl-d14	1718-51-0	49	127		
EP080S: TPH(V)/BTEX Surrogates					
1.2-Dichloroethane-D4	17060-07-0	73	129		
Toluene-D8	2037-26-5	70	125		
4-Bromofluorobenzene	460-00-4	71	129		



Statement of Historical Archaeological Potential

Archaeological Impact Assessment &

Archaeological Method Statement

heritage

planning

archaeology

po box 338 north hobart tasmania 7002

0418 303 184 info@prax.com.au 90 Melville Street HOBART TASMANIA

Brad Williams Historical Archaeologist

November 2019

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This document was written by Brad Williams (BA.Hons Archaeology, G.Dip Maritime Archaeology, MA Cultural Heritage Management, G.Dip Environmental Planning) Historical Archaeologist, Heritage Consultant and Director of Praxis Environment. Praxis Environment is a division of Praxis Synergy Pty. Ltd. Supporting historical research was provided by Alan Townsend.

Unless otherwise stated, all photographs were taken by Brad Williams, December 2019.

Unless otherwise stated, the north point (or approximate) of maps and plans is to the top of the page.

Cadastral information depicted in this document must not be relied upon without verification by a Surveyor.

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Item No. 7.1.2 Agenda (Open Portion)
City Planning Committee Meeting - 19/9/2022

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1. Introduction

1.1. Introduction and brief

This report has been commissioned by JAWS Architects, on behalf of Giameos Holdings Pty. Ltd. in order to accompany an application to the Hobart City Council for a proposed redevelopment of the place known as 90 Melville Street, Hobart.

The subject site is on the south-eastern side of Melville Street, between Murray and Harrington Streets, Hobart, PID 7408842, and comprising of Certificate of Title 245771/1.

The site is not listed on the Tasmanian Heritage Register, nor is a Heritage Place on Table E.13.1 of the Hobart Interim Planning Scheme 2015 - although it is within the Places of Archaeological Sensitivity as defined by Figure E.13.1 of the Hobart Interim Planning Scheme 2015, therefore the provisions of Part E.13.10 of the planning scheme is applicable. Accordingly, the brief for this project was to develop a **statement of historical archaeological potential** as the basis for archaeological planning in any future development of the subject site.

If archaeological potential is predicted, then this is to inform the design of the proposed development, and if archaeological impact considered possible, then an **archaeological impact assessment** is to be undertaken and if such impact is deemed unavoidable, then an **archaeological method statement** is to be formulated to industry standard.

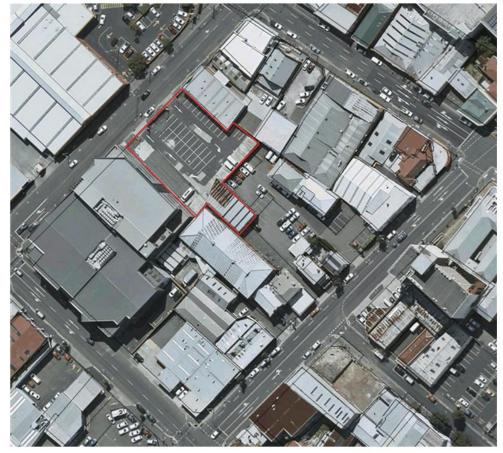
Although not listed on the Tasmanian heritage Register, the archaeological approach in this document has been developed with regard to the Tasmanian Heritage Council's Practice Note 2 – *Managing Historical Archaeological Significance in the Works Application Process* <sup>1</sup>, and the Tasmanian Heritage Council's *Guidelines for Historical Archaeological Research on Registered Places* <sup>2</sup> as a means of demonstrating a sound and best-practice approach.

<sup>1</sup> http://www.heritage.tas.gov.au/media/pdf/2%20Practice%20note%20-%20Archaeology.pdf

 $^2\,http://www.heritage.tas.gov.au/media/pdf/Archae\%20ResGlines\%20\%20FINAL\%20-\%20June\%202009.pdf$ 

**Praxis Environment 2019** 

1



 $\label{thm:continuous} \mbox{Figure 1.1-A recent aerial image of the area-the subject site depicted in red. } \underline{\mbox{www.thelist.tas.gov.au}}$ 



 $\label{eq:figure 1.2-Detail of a recent aerial image of the area-the subject site depicted in red. \ \underline{www.thelist.tas.gov.au}$ 



Figure 1.3 – Cadastral parcels surrounding the subject site (depicted in red) and surrounds (www.thelist.tas.gov.au).

### 1.2. Limitations

This document has the following stated limitations:

- This document is largely a predictive analysis (i.e. non-invasive) of the possible archaeological resource and might be subject to further on ground testing to verify findings if deemed necessary by any stakeholder.
- All depictions of the location of site features are approximate. A surveyor should be engaged if any party requires exact confirmation of locations.
- The depiction of expected archaeological features in this report largely relies on the accuracy of historical surveys and data no guarantee of the accuracy of this historical data is given.
- The scope of this project only included historic heritage values. Consideration of Aboriginal heritage values is outside the scope.
- Any implications of the location of underground services may only be approximate. Confirmation
  where necessary must be sought from professional underground asset locators.

## 2. Statutory heritage requirements

This report has been commissioned to consider the historical archaeological potential of the subject site arising from any applicable statutory listings. The following statutory heritage responsibilities that relate to historical archaeology are to be met in any development of the subject site:

### 2.1 Hobart Interim Planning Scheme 2015

The place is within the area defined in Figure E13.1 of the Hobart Interim Planning Scheme 2015 (the *scheme*) as a *Place of Archaeological Potential*, therefore the provisions of Part E13.10 are applicable.

Part E13.10 of the scheme details the *Development Standards for Places of Archaeological Potential*, with the following *Objectives*:

13.10.1: Building, Works and Demolition: To ensure that building, works and demolition at a place of archaeological potential is planned and implemented in a manner that seeks to understand, retain, protect, preserve and otherwise appropriately manage significant archaeological evidence.

13.10.2: Subdivision: To ensure that subdivision does not increase the likelihood of adverse impact on a place of archaeological potential.

The scheme prescribes *Performance Criteria* for each of these *Objectives* and pursuant to Part E.13.5 of the scheme, the Planning Authority may require the following to accompany any application for development of a place of archaeological potential in order to assess the proposal against the performance criteria:

- (f) a statement of archaeological potential;
- (g) an archaeological impact assessment;
- (h) an archaeological method statement;

Under the definitions of the scheme:

(f) means:

a report prepared by a suitably qualified person that includes all of the following:

a. a written and illustrated site history;

- b. overlay plans depicting the main historical phases of site development and land use on a modern base layer;
- c. a disturbance history.
- d. a written statement of archaeological significance and potential accompanied by an archaeological sensitivity overlay plan depicting the likely surviving extent of important archaeological evidence (taking into consideration key significant phases of site development and land use, and the impacts of disturbance).

### (g) means:

a report prepared by a suitably qualified person that includes a design review and describes the impact of proposed works upon archaeological sensitivity (as defined in a statement of archaeological potential).

### (h) means:

a report prepared by a suitably qualified person that includes the following where relevant to the matter under consideration:

- a. strategies to identify, protect and/or mitigate impacts to known and/or potential archaeological values (typically as described in a Statement of Archaeological Potential);
- b. collections management specifications including proposed storage and curatorial arrangements;
- c. identification of measures aimed at achieving a public benefit;
- d. details of methods and procedures to be followed in implementing and achieving (a), (b) and (c) above
- e. expertise to be employed in achieving (d) above;
- f. reporting standards including format/s and content, instructions for dissemination and archiving protocols.

	Acceptable Solution	Performance Criteria	
	A1. Building and works do not involve excavation or	P1. Buildings, works and demolition must not unnecessarily impact on archaeological resources at places of archaeological	
	ground disturbance.		
ion		potential, having regard to:	
olit		a) the nature of the archaeological evidence, either	
Dem		known or predicted;	
an I		b) measures proposed to investigate the	
r		archaeological evidence to confirm predictive	
the		statements of potential;	
ks c		c) strategies to avoid, minimise and/or control impacts	
Nor		arising from building, works and demolition;	
l pu		d) where it is demonstrated there is no prudent and	
ga		feasible alternative to impacts arising from building,	
ildir		works and demolition, measures proposed to realise	
Bu.		both the research potential in the archaeological	
.1-		evidence and a meaningful public benefit from any	
E.13.10.1 – Building and Works other than Demolition		archaeological investigation;	
E. 1		(a) measures proposed to preserve significant	
		archaeological evidence 'in situ'.	
uo	A1. Subdivision provides for building restriction envelopes	P1. Subdivision must not impact on archaeological resources	
visi	on titles over land defined as the Place of Archaeological	at Places of Archaeological Potential through demonstrating	
E. 13. 10.2 – Subdivision	Potential in Table E13.4.	either of the following:	
- 51		(a) that are much analogical anidomorphism as the land.	
0.2		(a) that no archaeological evidence exists on the land;	
13.1		(b) that there is no significant impact upon	
E.		archaeological potential.	

The current document aims to fulfil those points in a consolidated manner in the assessment of the proposed development to assist the planning authority to make an informed assessment against the performance criteria of the scheme.

## 2.2. Tasmanian Heritage Register

The subject site is not listed on the Tasmanian Heritage Register therefore is not subject to the provisions of the *Historic Cultural Heritage Act 1995*. Nonetheless, the archaeological approach in this document has been developed with regard to the Tasmanian Heritage Council's Practice Note 2 – *Managing Historical* 

Archaeological Significance in the Works Application Process<sup>3</sup>, and the Tasmanian Heritage Council's Guidelines for Historical Archaeological Research on Registered Places<sup>4</sup> as a means of demonstrating a sound and best-practice approach.

#### 2.3. Other statutory heritage registers/lists

The subject site is not listed on any of the following statutory registers:

- The National Heritage List
- The Commonwealth Heritage List
- The World Heritage List

Nor is it included in any buffer zones arising from those lists, therefore is not subject to the historic heritage provisions of the respective Acts which enable statutory input into development of places on those lists.

#### 2.4. Aboriginal Heritage Act 1975 (amended 2017)

An assessment of any possible Aboriginal heritage values is not part of the brief for this report; nonetheless the provisions of the Aboriginal Heritage Act 1975 are applicable to the place. A search of the Tasmanian Aboriginal Heritage sites register (Job # 18704152) did not identify any registered Aboriginal relics or apparent risk of impacting Aboriginal relics (search valid until 6/6/2020). The Tasmanian Government Unanticipated Discovery Plan - Procedure for the management of unanticipated discoveries of Aboriginal relics in Tasmania must be implemented in the event that any Aboriginal heritage items are discovered during the course of any works.

<sup>&</sup>lt;sup>3</sup> http://www.heritage.tas.gov.au/media/pdf/2%20Practice%20note%20-%20Archaeology.pdf

 $<sup>^{4}\,\</sup>underline{\text{http://www.heritage.tas.gov.au/media/pdf/Archae\%20ResGlines\%20\%20FINAL\%20-\%20June\%202009.pdf}$ 

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## 3. Archaeological Methodology

This statement of archaeological potential is derived from a process which identifies the potential of the site to yield archaeological remains, the significance of any remains, and their potential to yield meaningful information about the site, and which might contribute to relevant key archaeological and historical themes. The following briefly outlines the methodology followed:

<u>Determining general archaeological potential:</u> Through a desktop analysis of historical data and secondary sources, as well as non-invasive site observations, an understanding of the evolution of the site has been gained which has allowed an assessment of the archaeological potential (however significant) of any part of the site - resulting in substantiated predictions of the likelihood of finding *something* upon any particular part of the site.

This has been done by analysing primary source material, summarizing the developmental history of the site and developing a chronological narrative detailing an overview of the history of all known features to have ever existed on the site. Where possible, developmental overlays have been developed from historic maps, plans, photographs and other visual documentation. This overlay has been supported by other observations providing supplementary information, and also includes processes such as demolition and disturbance which may have removed or destroyed potential remains – and may have diminished the archaeological potential.

Assessing the significance and potential of any likely archaeological resources to yield meaningful information: Upon understanding the archaeological potential through desktop and site analysis, the next step was to understand its relationship to any aspect of the identified significance of the place – e.g. do the remains have the potential to demonstrate an aspect of the significance of the site or related key historic theme? The potential for any of the archaeological remains to demonstrate important aspects of the history of the site, whether in a state, regional or thematic context, is to be considered.

<u>Understanding possible impact of development and formulation of management strategies</u>: Based on any identified archaeological potential and significance of the site, consideration will be given as to whether the proposed development will impact upon any likely archaeological remains and if necessary broad management strategies will be proposed to manage any impact.

Table 1 (below) demonstrates the steps of this assessment:

Methodology for formulation of the statement of archaeological potential			
	If 'no'	If 'yes'	
1. Archaeological potential.			
Are you likely to find something if you dig here? (i.e. a <u>Statement of Archaeological</u> <u>Potential</u> ).	Further action may not be required, although a contingency plan may be required for unexpected finds.		
Significance.  Could anything you find here greatly contribute to our understanding of the site or related significant theme?	Further action may not be required.	The likely integrity of the archaeological remains should be investigated.	
3. Integrity.  Are any archaeological remains likely to be intact?	Further action may not be required, although a contingency plan is required for unexpected integrity.	The likelihood of significant archaeological remains is confirmed.	
4. Impact Will proposed works impact upon the significant archaeological remains? i.e. an Archaeological Impact Assessment.	Further action may not be required, although a contingency plan may be required for unexpected impacts.		

## 4. Historical background of the subject site

### 4.1. Research methodology

For this initial assessment of archaeological potential, the depiction of the physical history of the site will be the main consideration – with other aspects of site history (i.e. social histories, economic history, associations *et. al.*) likely to be more useful in any post-investigation analysis of findings (i.e. artifact assessment), therefore beyond the scope of the current document. Similarly, the history of other townscape developments is beyond the scope of the current document however may be useful in further detailed analysis of future archaeological findings.

The following overview of the known physical development history of the site aims to aid in the prediction of the likely archaeological remains. This does not represent a comprehensive site history, and has been limited to a history of the physical development of the site as relevant to the archaeological resource.

#### **Primary sources**

Broadly, the primary sources consulted in the development of the statement of archaeological potential include:

- Hobart City Council building files (AE417 series, Tasmanian Archive and Heritage Office).
- Historic maps, photographs (NS and PH series) Tasmanian Archive and Heritage Office.
- Department of Primary Industry, Parks, Water and Environment (DPIPWE) aerial photo collection (Service Tasmania).
- DPIPWE Land Data Branch, historic map collection (basement)
- DPIPWE Land Data Branch, titles.
- Historic newspapers, via the National Library of Australia's Newspapers Online portal.

## Secondary sources

No secondary source documents are known to exist which are of particular relevance to the history or archaeology of the subject site.

In order to gain an overview of what once existed on the site, as the basis for predicting archaeological remains, the following is a brief overview of the historical development of the site based on primary source documents (the subject site depicted in red) as well as overviews drawn from the secondary sources as detailed above. Note that this is a brief historical overview, concentrating solely on physical development, sufficient only for

basic archaeological planning. As per above, further historical research is required in order to refine a detailed archaeological research design, which is provided here in Section 5. Such detail is also required to supplement the interpretation of archaeological findings – requiring an iterative process of the assessment of findings against further historical and comparative research from both primary and secondary sources, which should be provided in an archaeological method statement and post-excavation analysis.

#### 4.2. Historical overview

### Pre-European settlement

The land was the home of the Mouheneener people for tens of thousands of years, prior to displacement by European settlers in 1804.

### Original land grants

The subject area comprises the whole of two colonial era land grants; for the sake of simplicity, this background history considers each grant separately.



Figure 4.1 – Original land grants in the subject area (from  $\underline{www.thelist.tas.gov.au}$ )

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The Johnston grant (31 perches – the portion of land closest to Murray Street)

Thomas Johnston was granted a 31 perch allotment in Melville Street in July 1839<sup>5</sup>. This grant resulted from a Caveat Board application, the original of which has not survived, thus, it is unclear what land tenure arrangements may have been in place before July 1839. The 1839 Frankland survey first depicts a building on this site (see Figure 4.3) and Sprent's 1845 survey (see Figure 4.4) denotes a timber structure on the site.

Valuation roll data from 1861 into the early 20<sup>th</sup> century simply lists the property as a house.

In July 1839 (at the same time the land was granted), Thomas Johnston married Isabella Gunning<sup>6</sup>. Johnston then conveyed the land to Thomas Jackson and Archibald Johnston as trustees for Isabella. Under the terms of the conveyance, Isabella was to have possession of the property for her lifetime, with the trustees being

empowered to sell the property after her death for the benefit of her children.<sup>7</sup>

In April 1881, trustee Archibald Johnston applied to be recognized as owner of the 31 perch grant<sup>8</sup>. No transfer document for this land under Archibald Johnson has been discovered, however a survey from 1892 (see below) clearly shows that by this time, Johnston's grant was owned by Richard Cloak (see below).

The Moon / Cloak grant (37 perches – the portion of land closest to Harrington Street)

This allotment was originally located to a Mr. Moon in February 1823. From evidence given many years later, it appears that Moon was first mate on a ship in which Dr Robert Espie was surgeon. Also aboard was Ann Kevill, who was 'put in possession' of the property in October 1823. Moon himself left the colony shortly afterwards, leaving his affairs in the hands of William Wilson, to whom he was indebted for an unknown

amount of money.

Wilson later gave evidence that "Benjamin Symes and Carey built the cottage for Dr Espie's brother" in 1820. This is the cottage first seen on the c1832 survey (Figure 4.2). Ann Kevill was given the keys in 1823, and retained possession until 1842, when Wilson sold the property to a John Morgan. Then, in 1857, Ann Kevill and her husband Michael applied successfully to the Caveat Board for title to the property, arguing that Ann was the rightful owner and that Wilson had no title to sell. The Caveat Board decided in her favour.<sup>9</sup>

<sup>5</sup> The Tasmanian 26 July 1839 p.7

<sup>6</sup> TAHO RGD37/1/1 No 234

<sup>7</sup> DPIPWE The LIST Mem 2/2719

8 The Mercury 7 April 1881

<sup>9</sup> Colonial Times 11 June 1857 p3

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Figure 4.2 – Excerpt from a c1832 map of Hobart and surrounds. DPIPWE Map Hobart H5.

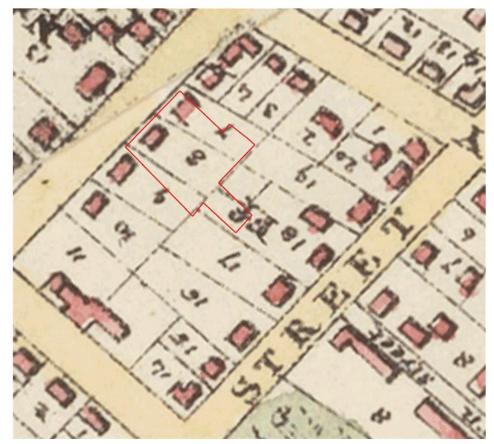


Figure 4.3 – Excerpt from Frankland's 1839 map of Hobart and surrounds. Libraries Tasmania Allport Stack 912.94661MAP.

Reference to the Sprent survey shows that at least until 1845, this weatherboard house was the only structure on the grant. Later sale notices indicate that it was a five roomed weatherboarded cottage <sup>10</sup>. Between February 1858 and March 1859, Ann Kevil executed a series of conveyances which transferred all of the grant to John Boys, owner of the neighboring property in Melville Street. The grant was split into three portions (see below). The first, which included the "messuage or dwelling house and other buildings thereon", was conveyed to Boys as trustee for Ann, who stated that she would be sharing the property with her daughter Eliza and son-in-law Richard Cloak. Under the terms of the conveyance, the property would revert to Ann if

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Richard Cloak did not provide her with food, medicine, clothing and accommodation<sup>11</sup>. The remainder of the grant was split into two portions, both of which were conveyed to Boys without condition<sup>12</sup>.

In December 1873, Richard Cloak applied for title to the whole 37 perch grant. As can be seen above, he would have gained possession to the first third of the grant through his relation to Ann Kevill's daughter. It is not clear how he gained possession of the remaining two portions. Whatever the case may have been, Cloak was granted the entire 37 perch allotment in December 1873<sup>13</sup>. It is likely that Cloak substantially developed the land in the 1870s-80s, with an additional dwelling built on the rear (see Figures 4.10-11) and the two earlier cottages fronting Melville Street appear to have been replaced with similarly sized and placed buildings – note that the western building appears in a different location between the Sprent and MDB surveys (and also note the title plans below which suggest that two different buildings have been in this location) and the eastern building appears as a different shape between the Sprent and MDB surveys (noting that these surveys are known to have a very high degree of accuracy).

<sup>&</sup>lt;sup>11</sup> DPIPWE The LIST Mem 4/7015

<sup>12</sup> DPIPWE The LIST Mem 4/6544 and 4/5389

<sup>&</sup>lt;sup>13</sup> The Mercury 24 Decmber 1873 p4

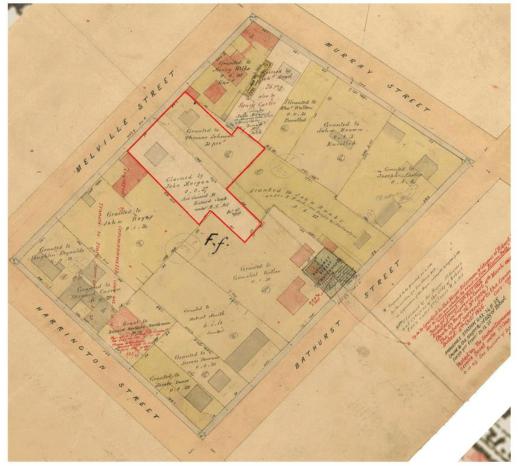


Figure 4.4 - Excerpt from Sprent's c1845 map of Hobart and surrounds. www.thelist.tas.gov.au).

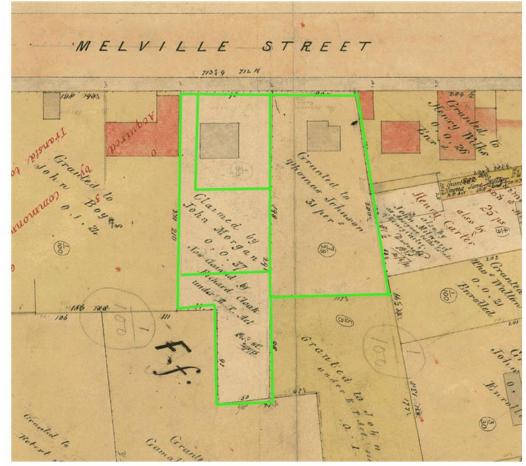


Figure 4.5 - Excerpt from Sprent's c1845 map of Hobart and surrounds showing the 1858 title configuration as divided by Ann Kevill (green lines). <a href="https://www.thelist.tas.gov.au">www.thelist.tas.gov.au</a>).

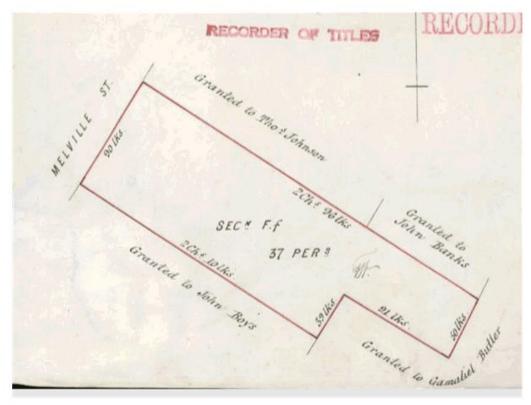


Figure 4.6 - Detail from DPIPWE Purchase Grant 222/119 showing the title as issued to Richard Cloak in 1873. Note that the allotment has reverted back to its original outline as shown in the Sprent survey.



Figure 4.7 – A c1870s photograph across Hobart showing a small cottage (with no veranda) on the Cloak allotment (red arrow). Libraries Tasmania LPIC147\_3\_124



Figure 4.8 – Excerpt from the 'Hobart Birds Eye' view, The Town and Country Journal Nov 17 1894 pp26-7 showing two buildings on the Melville Street frontage of the lot.

As has been noted above, by 1892 Cloak had also obtained the Johnson grant, creating a total holding which reflects the modern title. Richard Cloak died in May 1885<sup>14</sup>, leaving a will which gave very specific instructions as to how the enlarged allotment was to be divided up amongst his heirs. This division is shown in the 1892 Survey Diagram (see below). By the terms of Cloak's will, the allotment was divided into four portions, each of which was created as a separate title under the Real Property Act.<sup>15</sup> The beneficiaries of Cloak were Ellen Matilda Jackson, Kitty Anne Tapping, Eliza Purden and John Cloak (children of Richard Cloak). Note that as per Figure 4.9, this depicts a house in a different location to that of the c1820 building, suggesting that during Cloak's ownership that earlier house was replaced (noting also that the Kevill subdivision of 1858 could not include a house in that location, as also depicted on the 1907 Metropolitan Drainage Board survey due to the laneway to the rear lot.

<sup>&</sup>lt;sup>14</sup> TAHO RGD35/1/10 Number 2377

<sup>&</sup>lt;sup>15</sup> See DPIIPWE 90062: Survey Diagram Hobart 7-11

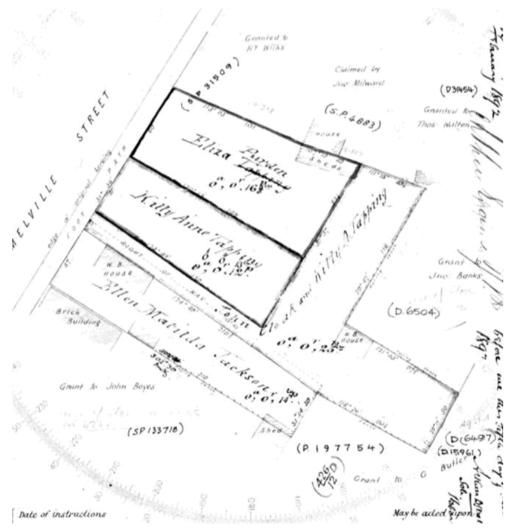


Figure 4.9 - Detail from DPIPWE 90062 / Hobart 7-11 showing 1892 title configuration.

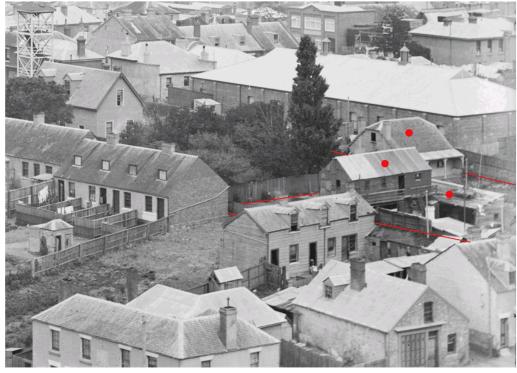


Figure 4.10 - A c1910 excerpt from a panorama of Hobart facing south. The red dots denote buildings within the subject site and the lines denote the boundaries as visible in this image. Tasmanian Archive and Heritage Officer NS392-1-736.



Figure 4.11 – 1907 Metropolitan Drainage Board survey showing the subject site and surrounds. (Hobart Sheet 16)

Between November and December 1911, Andrew Garrington Kemp and Victor Ernest Denning bought all four of the Cloak titles which comprise the present title <sup>16</sup>. In November 1917, the amalgamated title was transferred from Kemp and Denning as individuals to the company Kemp & Denning Pty Ltd. The buildings were presumably cleared shortly thereafter for the establishment of a timber yard and joinery workshop. Kemp and Denning had established themselves with a sawmill in Harrington Street as early as 1902 (within the block currently now commonly known as the K&D site). The subject site heralding an expansion of their CBD activities ahead of their further acquisition of practically all the block bounded by Brisbane, Harrington, Murray and Melville Streets from the late 1910s onwards.

The next depiction of the site is from the 1946 aerial run of Hobart (Figure 4.12) which shows much of the site stacked with timber and a shed running along the western edge. By 1968 a further two sheds had been built (one of which remains at the rear of the site).



Figure 4.12 - The subject site taken from the 1946 aerial run of Hobart (Run 1, 10894).



Figure 4.13 – Excerpt from the 1958 aerial run of Hobart. Hobart Run 5-T332-12 (March 1958).



Figure 4.14 - Excerpt from the 1968 aerial photograph of Hobart. Hobart Run 6-153, February 1968.

The subject site has a very simple development history that can be summarised as the following:

- A timber dwelling had been built on the western corner of the land (near the street frontage) as early as 1820.
- A second timber dwelling was built on the eastern corner (near the street frontage) around 1839.
- A third dwelling (brick) had been built at the rear of the land by the 1880s.
- It is possible that both of the earlier dwellings were replaced with similar sized and located dwellings later in the c19th.
- These three buildings had minor outbuildings associated.

- The site was cleared in the 1910s for the establishment of a timber yard, which has been the purpose
  of the land until recently.
- Buildings associated with the timber yard have generally been ephemeral sheds.

The following figures depict the evolution of the buildings on the site as per the historical sources above:



Figure 4.15 – Overlay of the of pre-c1832 depiction of the buildings within the subject site (blue). Note that the accuracy of this survey is known to be low – merely depicting the *presence* of buildings, rather than necessarily an accurate location.



Figure 4.16 – Overlay of the of pre-1839 depiction of the buildings within the subject site (green). Note that the accuracy of this survey is known to be low – merely depicting the *presence* of buildings, rather than necessarily an accurate location.



Figure 4.17 – Overlay of the of the mid-1840s depiction of the buildings on the subject site as per the Sprent survey (green) in relation to the subject site (red). This survey is known to have a very high degree of accuracy.



Figure 4.18 – Overlay of the of the pre-1907 depiction of the buildings on the subject site (purple) based on the Metropolitan Drainage Board survey, in relation to the subject site (red). This survey is known to have a very high accuracy.



Figure 4.19 – Composite overlay of the footprint of all most-accurate known pre-1907 buildings and site features (colours as per coding above) in relation to the subject site (red).



Figure 4.20 – Overlay of the of the 1946 timber yard shed (light blue) based on the 1946 aerial photograph, in relation to the subject site (red).



Figure 4.21 – Overlay of the of the 1968 timber yard sheds (orange) based on the 1968 aerial photograph, in relation to the subject site (red).

# 5. The likely significance and research potential of archaeological remains

As depicted above, the subject site has a reasonably simple development history, with the two 1820s-30s dwellings and the later (c1880s) cottage – with a likelihood that the two earlier cottages were redeveloped c1870s-80s, before the whole site was cleared in the 1910s. The portion of the subject site which was subject to that c19th development was wholly residential and appears to have remained as such until the 1910s.

Given the demolition of the buildings and formation of a generally ephemeral (i.e. open shed) type buildings and carpark over any remains in the 1910s, it is likely that there may be substantial subsurface remains of this earlier occupation of the site. Any such remains would be limited to low-level structure (i.e. foundations, possible lower courses of the buildings) and any subsurface features such as basements, wells, cesspits etc. – although no such structures have been determined through historical research (i.e. no such structures are described in early accounts of the buildings, or from living memory), although are considered possible. There is also the possibility of artefactual remains relating to the habitation and use of the buildings as per the thematic discussion below.

The site may also yield information on site formation processes which have acted upon the site, both pre and during construction (e.g. alteration of the natural landform, construction rubble), use (e.g. occupation deposits), demolition (e.g. demolition rubble) and post-demolition use (e.g. fill and disturbance).

Remains associated with the residences, particularly those dating back to the 1830s, and their domestic occupation are considered to be of high archaeological potential due to their earliness and have the potential to demonstrate 19<sup>th</sup> century domestic life in the area (and wider Tasmania for that matter). These represent a small contiguous section of an inner-city Hobart community from the 1830s onwards. Such investigations include those undertaken as part of the Menzies Centre (Liverpool/Campbell Streets) excavations, which investigated several prominent 1820s-onwards inner city residences, including Crowther's (Godden Mackay Logan/Arctas). Similarly, investigations at Peter Degraves house in Collins Street (Hadleys Hotel development, Godden Mackay Logan) and preliminary investigations at the original Hobart Port Officer's residence at 100 Salamanca Place (Praxis Environment) have investigated early inner-city residential sites. Forthcoming reports on excavations on other Hobart domestic sites such as Kemp's house (36 Argyle Street), Judge Pedder's house (173 Macquarie Street), Crowther's house/surgery (177 Macquarie Street) will also act to build upon knowledge and provide comparative datasets of early and substantial Hobart residences.

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There have been few examples of archaeological investigations into wider communities around the Hobart

CBD, i.e. investigations which cover a wide number of adjacent sites representing different functions (such as

the Whale Fishery Inn and adjacent housing). Notable examples however are the range of Wapping

investigations (e.g. Austral Archaeology 1996, 1998, 2002, 2009) and the forthcoming report on the

Montpelier Retreat excavations undertaken by Austral Tasmania in 2015.

From a wider regional perspective, archaeological data and remains yielded from the subject site, whether

coupled with other Hobart/Tasmanian data, has the potential to strengthen a comparative dataset for

research into intra-colonial society through comparison with mainland (and indeed inter-colonial society on

an international level). For example early inner-city working-class communities such as Broadway,

Cumberland/Gloucester Streets and the Rocks (Sydney) and Little Lonsdale Street (Melbourne) and portside working-class areas such as Port Adelaide, all of which have had substantial archaeological works undertaken

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which include early inner-city housing and would provide useful datasets for the inter-colonial analysis of any

Tasmanian data which would in-turn add to the depth and scope of the analysis of those collections on the

range of themes as outlined above (and others).

From a temporal perspective, any remains from the investigation of such colonial communities represent a

formative period of the settlement of Hobart and are likely to be of significance when considering their

research potential.

It is considered unlikely that any archaeological significance nor research potential would derive form the

1910-onwards use of the site as a timber/joinery yard.

Consistent with the 'Tiered research question' approach outlined in the Tasmanian Heritage Council's Guidelines

for Historical Archaeological Research on Registered Places<sup>17</sup>, the following questions could be investigated in

the archaeological remains expected to be present within the subject site:

Tier 1 Questions: These questions outline the essential knowledge base needed for any site research or

significance evaluations. Such questions are often empirical in nature, and straightforward answers can be

<sup>17</sup> http://www.heritage.tas.gov.au/media/pdf/Archae%20ResGlines%20%20FINAL%20-%20June%202009.pdf

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sought and often identified – generally limited to a physical knowledge of that particular place. Questions relevant to the subject site may include:

- · How closely did the buildings and site features conform to the historic plans?
- What construction methods were used in the buildings and other infrastructure?
- What evidence of alteration of the natural landscape and cultural interventions to the site is
  archaeologically determinable (e.g. filling of the site, demolition events, site formation
  processes etc.).
- Are the distinct use/development phases of the buildings distinguishable?
- Can the layout and function of the buildings, and indeed individual rooms or yard spaces be ascertained?
- How thoroughly were the buildings demolished?

Answers to these questions provide a foundation of information about the structure, type, use and duration of site occupation which enables the researcher to consider a second tier of questions.

**Tier 2 Questions:** Conclusions that can be drawn about a site that connect the material remains found on a site to specific behavior. For instance, do artifacts relate to the lifeways of the households that lived and/or worked on the site? For instance, do any artifacts represent class, gender, taste and health/hygiene of those living/working on the site? Particularly if artifacts can be specifically dated, and with supplementary historical research, artifact assemblages from this site may contribute knowledge and provide tangible connectedness to known inhabitants etc. and how they lived.

**Tier 3 Questions:** These questions represent the highest level of inquiry. Such questions associate the activities and behavior at individual sites with broad social, technological and cultural developments – which can be of interest on local, national or global lines of enquiry. Whilst these questions posed for a single site may not reach conclusions in the short term (as Tier 1 and 2 questions might) – the collection of data can contribute to future research by the provision of a comparable dataset. The goal of such research is to develop increasingly refined and tested understandings of human cultures within broader theoretical or comparative contexts. Lines of wider enquiry that findings from within the subject site may contribute to are:

• Do any activities archaeologically apparent on the site (e.g. drinking, food, hygiene, entertainment) provide meaningful comparisons on aspects of those themes with other contemporary residential

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Hobart enclaves or wider Hobart/Tasmania or for that matter Australian or international 1820s+ residential sites?

- Do the conclusions on gender, class, economic and social status of the inhabitants of the residences and associated buildings conform to the 'normal' early-mid Victorian households?
- Are there class or status differences evident in the material culture of the inhabitants of this area (subject to further historical research) when compared to, say, other early residential enclaves or sites in contemporary rural areas and/or other cities?
- Did any changes in material culture through time in the residences coincide with wider Tasmanian or local events or technology (e.g. urbanisation/development of Hobart, railway/port upgrades, start of rubbish collection etc.)?

## 6. Current site observations and assessment of prior disturbance

As per the methodology outlined in Section 2.1, Section 3.3 has formed a desktop assessment of the factors which have influenced the development of the possible archaeological resource within the subject site over a 180+ year period.

However, it is critical to understand other factors, in particular site disturbance, which may have impacted upon the archaeological potential of the site and its ability to provide meaningful archaeological remains which answer research questions such as those above.

This section will review site observations and likely scenarios which would have resulted in disturbance, in order to assist in understanding the likelihood of the survival of archaeological remains.

#### 6.1. General site observations

Little insight into the archaeological potential of the site can be gained from site observations as no historic structure is evident and the entire ground surface is covered with asphalt and concrete. Of importance is the gentle rise in elevation of the carpark area which suggests that there has been no extensive bulking-out or terracing of the site and this gentle rise is consistent with what is expected to be historic ground level in this area. There appears to have been some filling near Melville Street and the existing pre-1968 building is clearspan on concrete pad footings which is indicative of the types of later buildings on that site requiring minimal excavation therefore less likely to have caused impact upon earlier archaeological remains.



Figure 6.1 – Overview of the site from Melville Street.

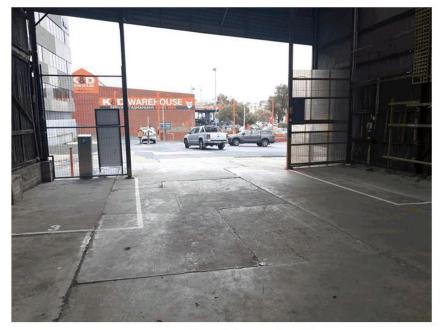


Figure 6.2 – Overview of the site looking towards Melville Street.

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#### 6.2. Likely specific disturbance events

Whilst the observations above give little real detail on possible disturbance, a disturbance history can also be built from a desktop assessment - i.e. known events which are likely to have impacted upon archaeological remains. Section 3.3 has detailed the evolution of the site from the historical information which is available.

The possible impact upon archaeological remains deriving from each of these events will be detailed below:

#### Demolition of the 1820s-30s buildings

It is probable that the early buildings on the subject site were all demolished in the later c19th and replaced with similarly scaled and sited residential buildings. It is not known how thoroughly these earlier buildings were demolished, however knowing that this was pre-mechanical excavation is it unlikely that mass excavation was associated with that demolition. Later, all residential buildings and outbuildings were cleared for the establishment of the Kemp and Denning timber yard (c1910s). No archival details of these demolitions were found, and it is not known how thoroughly they were demolished (i.e. were they demolished only to ground level? Were foundations removed? Was the site bulked out after?). As per the observations above, and the nature of the later buildings as discussed below, it is likely that given that the current topography of the site appears to be near what is expected to be the natural topography of the land, and that the later buildings were all very ephemeral sheds, it is likely that there would have been a desire to deeply remove past occupation layers for subsequent development.

#### Construction of subsequent buildings

The later timber yard buildings are likely to have been somewhat ephemeral sheds, merely serving the purpose of providing undercover areas for timber processing and sales. These are likely to have been relatively clearspan and open and are unlikely to have required extensive earthworks as would have been required for more robust buildings. A search of Hobart City Council building application files only revealed detail of applications for 1986 signage and carpark<sup>18</sup> which give no indication of any associated earthworks.

As per above, it is not known how the earlier buildings were demolished. It is also not known whether these buildings had basements, and it is possible that demolition rubble was used to fill the site, which would result

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<sup>18</sup> Tasmanian Archive and Heritage Office AE417/9/756 and AE417/9/917).

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in extensive archaeological remains of that fill and in-situ structure which appears unlikely to have been impacted by subsequent development.

#### Subsequent service trenches etc.

A search of public underground asset registers via the 1100.com.au system does not reveal any major public underground assets running through the site (with the exception of a NBN connection in the western corner of the site from Melville Street). <sup>19</sup> Note that this does not necessarily indicate any privately-owned underground assets nor any redundant services which may have caused some localised/linear impact. However, it does appear that the site has not been subject to any extensive/major disturbance from such trenches.

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<sup>&</sup>lt;sup>19</sup> Note that this search is indicative only and must not be relied upon for the location of services in any construction/excavation process. Professional service locators must be engaged to inform any future excavations.

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7. Archaeological zoning plan and policies

As per the methodology outlined in Section 3, this section has built a chronology of site development which has detailed the physical evolution of the site and events/processes which would have acted to build the archaeological record. Section 5 has discussed the likely significance of those archaeological remains and what they may yield in terms of research potential alongside key historic, regional, thematic and temporal lines of enquiry. Section 6 has provided an assessment of the later events which may impacted upon the integrity of

those archaeological remains.

From the above, it is therefore plausible to propose that due to the site being the location of early development, which has probably not been subject to substantial disturbance, it may yield archaeological remains which have the potential to contribute to a knowledge of important Tasmanian heritage themes as

per the research framework in Section 5.

The site may yield physical remains of those buildings, as well as artifacts relating to the occupation and use of those buildings, which may yield information which is not readily available (or available at all) from historical

sources.

Note that the overlay plans of known early building footprints as depicted in Figures 4.15-4.21 do not cover the entire subject site (i.e. are concentrated towards the front and rear of the site) it is feasible to propose that parts of the subject site have different abilities to yield building remains and remains of concentrated habitation. This is not to imply that archaeological remains are only found within building footprints, but the concentration of such remains is likely to be less the further away from building footprints (noting that there

may still be remains of ancillary features and other occupational debris outside building footprints).

Based on the known and likely early building footprints, the following archaeological zoning plan is proposed for the subject site:

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Figure 7.1 – Archaeological zoning plan for the subject site. Red denoting areas of high archaeological potential, orange depicting areas of medium archaeological potential and green depicting areas of low archaeological potential.

The following table considers the archaeological remains which may be found within each specific area.

Area	Likely remains	Likely integrity	Significance/potential
Red	Structural remains of c18202s-30s residential	Likely to be largely intact owing to the lack of	Of high archaeological potential and historical interest
	buildings, probably overlain with c1870s-1880s	substantial development post demolition.	in demonstrating the establishment and evolution of the
	residential development. Artifactual remains arising		site, the layout and construction of the early buildings
	from deposition associated with c90 years of domestic		and the material culture of those using/inhabiting the
	occupation from colonial times through to the 1910s.		buildings throughout the colonial period into the early
			c20th.
Orange	This area is likely to yield remains of ancillary	Likely to be largely intact owing to the lack of	Of medium archaeological potential and historical
	structures and features associated with all phases of	substantial development post demolition.	interest in demonstrating the later evolution of the site,
	development on the site (i.e. from c1830s onwards)		the layout and construction of the later and ancillary
	e.g. outbuildings, drains, cesspits, paths etc.		buildings/features on the site.
Green	Unlikely to be any significant nor substantial		Of low or no archaeological potential.
	archaeological remains due to a lack of known		
	development in these areas and also being areas		
	where any substantial ancillary infrastructure is likely.		

#### Accordingly, the following archaeological management policies are recommended:

- Any excavation proposed in areas of high archaeological potential must be preceded by an archaeological impact assessment, and if necessary, an archaeological method statement, which details measures to be taken to avoid or mitigate impact upon the archaeological resource. That method statement must be in accordance with industry standard (e.g. the Tasmanian Heritage Council's Practice Note 2 Managing Historical Archaeological Significance in the Works Application Process) and implemented in the works process.
- 2. Any excavation in areas of medium archaeological potential, are to be monitored by a historical archaeologist in order to confirm any possible presence of archaeological remains. If it becomes apparent that no such remains exist, then archaeological input may cease. If significant remains are confirmed, then this area is to be managed in accordance with industry standard (e.g. the Tasmanian Heritage Council's Practice Note 2 Managing Historical Archaeological Significance in the Works Application Process) and implemented in the works process. Note that any remains in this area need not be wholly investigated and that an indicative sample of such remains may be investigated at the discretion of the archaeologist sufficient to yield answers to research questions.
- 3. No archaeological input is required for excavation in areas of low archaeological potential; however any unexpected finds must be reported to a qualified historical archaeologist who is to assess their significance and deal with any significant finds as per (1) and (2) above.

## 8. The proposed development and archaeological impact

A development has been proposed for a mixed-use development on the site, which will include:

- Entire coverage of the site
- Three levels of basement parking (and access)
- Ground floor commercial tenancies
- 10 levels of apartments (56 apartments in total)
- Rooftop terraces at various levels

The proposed development is shown on JAWS Architects, 90 Melville Street, Project No. 19066, Drawings SD01 to SD14 (preliminary sketch design set used in the current assessment, dated 21/11/2019).

The project design is supported by the architect's design statement (supplied as part of the development application package). The pertinent points drawn from the architect's statement in the rationale for bulk excavation of the site are:

- On-site car parking is required for both practical and commercial reasons. Each residential and commercial unit requires a parking space to alleviate reliance on the restricted public parking available in the CBD, and to provide convenience and amenity to residents and tenants;
- Each unit also requires storage.
- The provision of car parking and storage at ground or above ground level (i.e. without excavation) is not an efficient or effective use of the site from town planning, design and commercial perspectives, and will add to the height and bulk of the proposed development. Given the constraints on overall height that prevail within the Hobart Interim Planning Scheme 2015, it is essential that the above-ground development is the most productive portion, and equally provides the greatest amenity, and contributes responsibly to both the streetscape and townscape.
- The levels provided for parking and storage are utilitarian in nature and consequent design. They do
  not contribute to the aesthetics of the building and are detrimental to the desired streetscape
  amenity. They also would have the potential to displace commercial elements from street level, thus
  preventing activation of the street frontage, and the proposed connecting laneway to Bathurst Street.
- The solution to provide these facilities below ground level, is a commonly accepted practice, particularly where there is a natural grade to the site, as is the case here.

The scheme would necessitate the removal of all archaeological remains from the site.

The retention of archaeological remains in-situ with no/minimal disturbance would not allow a feasible or viable subterranean parking area and the above objectives would be compromised – and the advantages in undergrounding parking are clear from the architect's statement from a design, urban form, traffic and public interface context. Whilst not downplaying the importance of archaeology, it is considered critical that other wider public-benefit initiatives must be considered within the context of archaeological significance to provide a balanced development which can also act as a conduit to the realisation of archaeological research potential.

As per the likely significance of archaeological remains in Section 5, although the site does have archaeological potential in its ability to demonstrate early domestic life in Hobart, as per the research framework in that section, it is not considered necessary to retain those remains in-situ, and in this instance it is considered to provide an appropriate offset benefit that any development that the archaeological research potential of the site be yielded ahead of the development and that interpretation of those values be included in that development. It is noted that although these remains represent 1820s-onwards residential development in Hobart, there are numerous still-standing examples of such and the archaeological remains, although these are able to yield archaeological information, they do not represent any fabric that should essentially be retained as a remarkable example. It is considered in this instance that yielding the archaeological potential provides a more widespread benefit than retention, subject to a rigorous archaeological methodology which will be detailed in Section 9.

## 9. Archaeological method statement

Given the archaeological impacts likely to arise from the proposed development as described in Section 8, this section will propose a mitigation strategy in accordance with the Tasmanian Heritage Council's *Practice Note* 2 – *Managing Historical Archaeological Significance in the Works Application Process* which is considered to be a sound industry standard for the approach to archaeology in this instance.

#### 9.1. Distinct areas, methodology and sequencing.

Based on the likely impacts, the construction plan, desire to 'test' and ground-truth archaeological theories, as well as a range of logistics, the approach to archaeology is proposed to follow the sequence in the table below, as per the areas of archaeological zoning plan on Figure 9.1:



Figure 9.1 – Areas proposed for archaeological investigations, to be read in conjunction with the table below

Area	Location	Types of remains and archaeological Rationale	Proposed archaeological methodology
1	Site of the c1820 timber It is likely that any foundations of these buildings are shallow and		It is proposed that these works be undertaken ahead of the works
	dwelling, probably	substantial – of either brick, or more likely stone. It is unknown	program (post site-establishment). This area will be excavated under
	replaced by another	what impact the later residential redevelopment may have had on	archaeological control as per the methodology below.
	dwelling c1870s-80s.	these earlier buildings and the excavations will seek to understand	
		this development interface. These excavations will reveal the	
		entire building footprints and allow the documentation of any	
2	Site of the c1839 timber	structural remains of the buildings, evolution of these	
	dwelling, probably	buildings/site and the yield of any artifacts as well as information	
	replaced by another	on site formation processes on the site which may further guide	
	dwelling c1870s-80s.	the archaeological program. As these areas are likely to yield	
		valuable archaeological information, the most stringent	
		methodology will be employed here.	
3	Central and rear portions	Given the lower significance of these remains, only a cursory	It is proposed that this will be undertaken as an archaeological
	of the site, sites of	mapping exercise and artifact salvaging will be undertaken – as	monitoring exercise concurrent with the works program, as this area will
	outbuildings associated	these remains are more of historical interest than archaeological	not require as stringent detail-excavation and recording as the higher
	with later c19th	potential (this may assist in interpretation initiatives). Whilst it is	significance areas.
	occupation of the site.	known that there were outbuildings from a variety of periods in	
		this area, these are likely to have been more ephemeral and may	
		not have left as substantial archaeological trace.	

Remainder of the site	Whilst the remainder of the site has not been the location of any	No archaeological monitoring is proposed for this area, however it is to
	known major development there may be archaeological remains	be managed with call-in provisions for any unexpected finds as per the
	of significance/interest across the site that were ancillary to other	methodology below.
	uses (e.g. drains, cesspits etc.). Whilst these are unlikely to be	
	individually significant, the basic investigation and recording of	
	such structures, or salvage of artifacts may assist in a wider site	
	understanding and/or have interpretive potential.	

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9.2. Implementation timeframe

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As per the table above, it is proposed that the archaeological investigation of the 1820s-30s building sites (i.e. the red zones) be undertaken ahead of the works program and/or during the early works program, so as to allow the full and detailed implementation of the archaeological program without the risk of disrupting the

critical timepaths of the works program.

Monitoring of the orange areas will be undertaken concurrently with works. The archaeology and site supervisors will need to liaise closely so as to allow the works to proceed with minimal disruption, but allow the necessary archaeological investigation and recording of the likely remains (noting that this will involve a

more basic recording and artifact salvage than those more significant 'red' zones).

9.3. Approach to works

Demolition and removal of non-significant overburden

Demolition of the existing building and the mechanical excavation of any non-significant and clearly modern overburden/structure (e.g. slabs of existing buildings and carpark surfaces) may be undertaken without archaeological supervision.

Following demolition, the archaeological crew will direct their own excavator operator in areas of high potential (i.e. red areas) to clear any overburden which is not readily apparent as modern until such time as in-situ structure and/or in-situ artifact yielding deposits are encountered then mechanical excavation will cease until an understanding of the nature of the remains is ascertained and the provisions for significant remains (below) can be implemented. In medium archaeological potential areas (i.e. orange) either the archaeologist will direct an inducted operator from the works crew (as this is intended to be a works monitoring exercise, rather than a standalone archaeological approach).

If no significant archaeological remains are encountered (to a depth of sterile ground level) then the provisions of 'cessation of archaeological input' (below) will be implemented.

Where significant archaeological remains are encountered in high sensitivity areas (red)

In areas where significant archaeological remains are encountered, those areas will be gridded to the expected horizontal extent of the remains (generally as a liner grid for strip footings), and excavation will continue by

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hand (as per methodology below), to expose the remains in order to gain further understanding of their

nature, and to thoroughly record them (as per methodology below). Mechanical excavation in those areas will only continue if the archaeologist is satisfied that this can occur without detriment, that required

outcomes can be achieved and that excavation by hand is not necessary.

The general approach to excavation will be by gridding the area in units which are responsive to the nature of the remains (e.g. in horizontal control units no greater than 1000x1000mm, or the width of the linear trench, in areas where remains appear to be complex or concentrated, or in larger control units where remains are not as complex or concentrated) and removal of each contextual unit or spit (in depths as deemed appropriate by the archaeologist, according to the nature of the strata and/or remains). Apart from non-significant overburden, all spoil will be sieved through mesh of a gauge no greater than 12mm and any significant artifacts

managed as per below.

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It is expected that in areas of high archaeological potential the stratigraphic sequence will be relatively simple, that of post demolition (possibly including some disturbance), demolition, occupation (which may include several distinct phases including habitation and construction and that of pre-construction (specifically noting that there appears to have been two development phases of similarly scaled residential development). Excavation of remains within the defined contexts in reverse order of deposition will occur and each unit/context thoroughly recorded (as per below) prior to removal to facilitate the development

It is proposed that all depositional strata be removed initially, as per above, with the aim of exposing and retaining any/all structural remains in-situ for holistic recording, prior to their removal ahead of the works excavation program. Any salvageable building materials will be retained for use elsewhere at the discretion of the site owner (possibly in interpretive installations or contemporary recycled features).

Where remains of historical/archaeological interest are encountered in medium sensitivity areas (orange)

In areas of medium sensitivity, a similar methodology to the above will be implemented, however this will be a more broadscale approach without as tight horizontal control – in that the footprints of buildings will be exposed in a less constrained manner and most likely be undertaken via mechanical excavation and horizontal control will be achieved using site features (e.g. building, backyard etc.) rather than as a tight grid. Vertical strata will still be controlled and artifacts yielded from such will be assigned to those contexts. Unless deemed necessary in-field, spoil will not be sieved and only a representative sample of artifacts retained.

It is possible that the any basements of the buildings might be encountered and if present there is a high likelihood that these may contain demolition rubble or fill in a secondary context. Depending on the nature of the fill and whether any significant depositional arrangement is evident, this will be removed by a means deemed pragmatic by the archaeologist in order to expose significant remains and yield as much information as is considered necessary from that fill.

#### 9.4. Call-in provisions – areas of low archaeological potential

The green areas on Figure 9.1 are areas where there is considered to be a low (or no) likelihood of significant archaeological remains present – generally areas of no major development, usually yard spaces, circulation areas etc. Note that this does not necessarily preclude archaeological remains such as occupational debris, unknown minor buildings, ancillary features such as paths, drains etc. It is also possible that more complex/significant features may be found, such as cesspits, wells, etc. – in which case these will be redesignated as areas of high archaeological potential and dealt with as per the provisions above.

Whilst archaeological monitoring of these areas is not considered necessary, the possibility of unforeseen archaeological remains in these areas requires a stringent call-in protocol to be put into place, which will require site excavation crews to immediately call-in an archaeologist should any substantial structure or dense artifact deposits be encountered. This will require a thorough briefing of the works crew by an archaeologist at the outset of works — which will include an overview of the site history, discussion on the possibility of the above described possible remains, as well as the process for stop-work and call-in. An archaeologist is to be engaged to periodically 'audit' the site during excavations in areas of low archaeological potential in order to ensure that those protocols will be implemented.

#### 9.5. Cessation of archaeological input

Archaeological input will cease only when the archaeologist is satisfied that all significant remains have been investigated and thoroughly recorded, as per this method statement and any conditions of statutory approvals, or if sterile ground is encountered, and that adequate consultation has been undertaken with Hobart City Council's Heritage Officer to verify that all on-site archaeological requirements have been met (and archaeological conditions satisfied).

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9.6. Recording

Any structure or significant cultural deposit encountered in the 'red' areas will be thoroughly recorded (both photographically (from ground level and via drone) and sketched at a scale of no smaller than 1:20 and plotted on the site plan at a scale of a scale no smaller than 1:200). Any structure encountered in the 'orange' areas will be recorded photographically (from ground level and via drone).

9.7. Artifacts

Any significant artifacts found during excavations will be retained and have the required in-field conservation treatments and packaging undertaken. Artifacts will be bagged and tagged with spatial identification and removed from the site (to a secure location) daily. Trench-notes will further detail the context and initial interpretation of artifacts.

Basic post-field curation of artifacts will be undertaken. Glass and ceramic items will be washed, whilst any organics or metals will be dry-brushed. Artifacts will be packaged in acid-free archive bags, tagged with appropriate tags, and boxed in archival quality boxes (with appropriate padding if required). Should any urgent conservation treatment be required, a professional Conservator will be consulted at the earliest possible instance. A detailed catalogue of artifacts will be included in the final report on works.

After any required analysis, these will be archived (with a copy of relevant reports) on-site of the new development (upon completion) – however at the owner's discretion and with the approval of Hobart City Council's Heritage Officer, alternative arrangements for storage and longer-term curation/display may be made with an appropriate repository.

9.8. Reporting requirements

Excavations and monitoring must be recorded to appropriate professional standards (for example Section 4.2 of the Tasmanian Heritage Council's Practice Note 2). A final report must include (at a minimum):

• An executive summary of findings

Details of the methodology employed

- Detailed interpretations of findings
- · Relevant annotated photographs (including drone photographs)
- Site plans at a scale of no less than 1:200
- Trench plans at a scale of no less than 1:50
- Feature plans/sketches at a scale of no less than 1:20
- · Overlay plans of structure encountered in relation to historical sources
- Photograph log

A copy of the final report, and project archive, will be deposited with Hobart City Council (and any other appropriate repositories) within 6 months of completion of the excavations.

#### 9.9. Public benefit

Subject to the exact nature and findings of the archaeological program, the following public benefit program will be considered by the proponents of the development:

- An interpretation plan which would consider options for the interpretation of the heritage values of
  the site in the new development (e.g. static/multimedia installations, curated objects, recycling of
  materials in contemporary installations etc.).
- The project report will be made publicly available, through appropriate repositories such as Hobart
  City Council, Heritage Tasmania, the State Library of Tasmania and the National Library of Australia
  (Trove).
- If archaeological results warrant, an academic publication may be produced (not at the proponent's
  expense). In any case, archaeological results will be made freely available for future archaeological
  research.

It is not considered feasible to have any on-site public benefit events during the works program – given that this will be a private works site.

#### 9.10. Aboriginal heritage

This document deals primarily with the management of historic cultural heritage and has only briefly considered in-situ Aboriginal cultural heritage insofar as a search of Aboriginal Heritage Tasmania's register

was undertaken, which has confirmed that no known Aboriginal heritage remains are within the subject site and that there is a low risk of such. There is the possibility of encountering Aboriginal heritage in a secondary context (e.g. fill). Archaeological monitoring should be mindful of this possibility, and follow the Tasmanian Government's *Unanticipated Discovery Plan – Procedure for the management of unanticipated discoveries of Aboriginal relics in Tasmania* 

#### 9.11. Site contamination

It is the responsibility of the proponent of the development to investigate the possibility of site contaminants, and to either verify that no site contaminants are present, or to take required measures to deal with any known or likely contaminants during excavation works (noting that any necessary decontamination works may require archaeological input).



#### Mr Tim Lucas

TSL Property Directions

Via email: tim@tslpropertydirections.com.au

7<sup>th</sup> July 2022

Dear Tim

Thank you for the instruction to provide commentary on the archaeological potential of the near perimeter of 90 Melville Street, Hobart, as a means of addressing the City of Hobart request for further information dated 7<sup>th</sup> June 2022 HER Fi.

As I understand, the construction of the development at that address requires temporary shoring during the construction of basements, which require a series of ground anchors to be installed to the perimeter of the site, as detailed in the AGD Engineers memo dated 12<sup>th</sup> May 2022 (Project no. 24468). Further to that documentation, and by way of your further explanation, I understand that these anchors are proposed to:

- Comprise of four rows of anchors (vertically) starting at 1.5m below current ground level then each spaced 1500mm below the above anchor.
- Each row spaced approximately 1.5m apart.
- To be drilled on a 30-degree downwards angle to a maximum of 10 metres into adjoining sites.
- The drill diameter for each anchor will be approximately 15mm diameter with 2-4 strands per anchor. I will therefore adopt an assumption of a 70mm path of disturbance for each anchor.

For the purpose of this assessment I will consider an site environs 'study area' of 10 metres around the site.

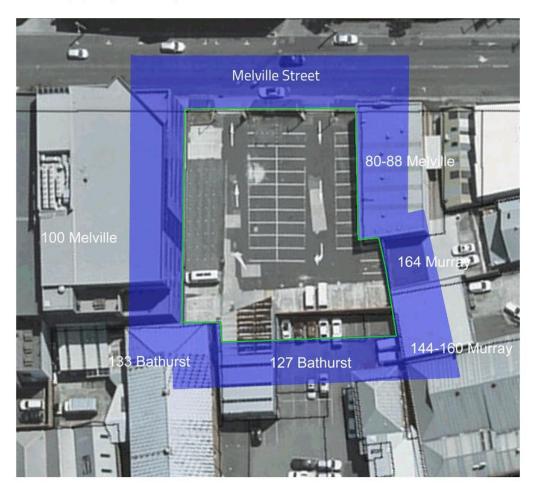
To address the RFI, there are two key questions:

- 1. Does that 10m site perimeter have any archaeological potential? And if so, at what depth?
- 2. Will the disturbance for the ground anchors have any archaeological impact?
- 3. Are any mitigation strategies required?

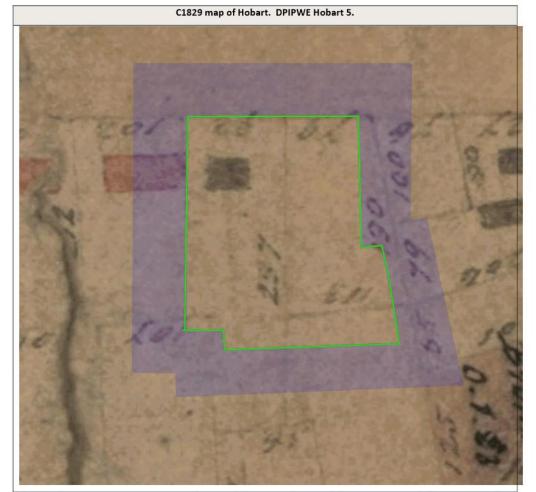
This commentary is to be read in conjunction with the document *Statement of Historical Archaeological Potential, Archaeological Impact Assessment & Archaeological Method Statement, 90 Melville Street, Hobart Tasmania* (Praxis Environment November 2019). That document provides the historical background of the site, statutory archaeological requirements, assessment methodology and recommendations for the site.

It is also to be read in conjunction with the document *Report on Archaeological Investigations, 90 Melville Street Hobart Tasmania* (Praxis Environment January 2022).

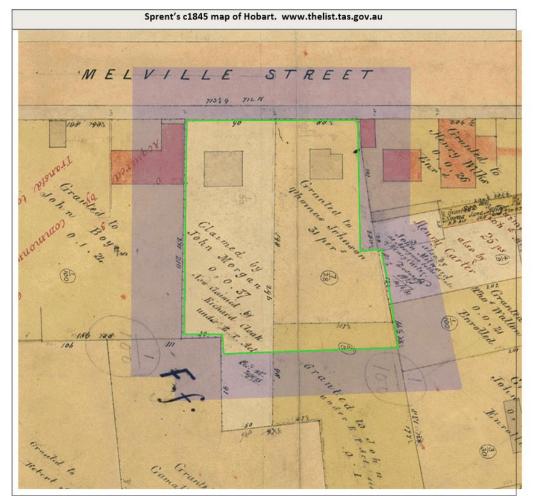
The following figure depicts the 'study area' considered here.



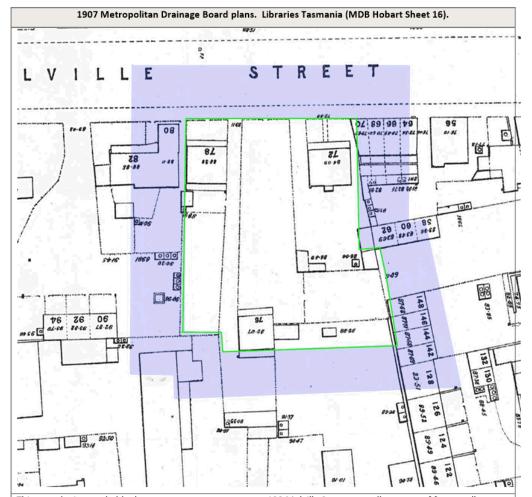
The following amended historical overview is drawn from the 2019 Praxis report and shows the historical evolution of the site and environs:



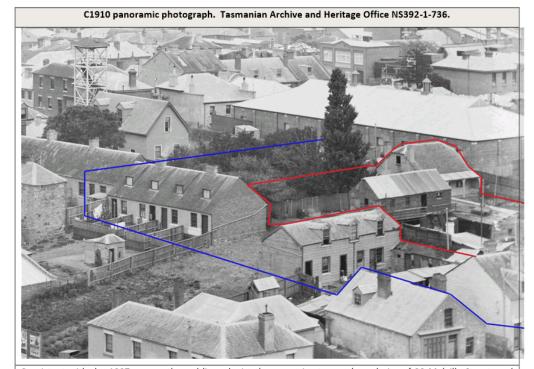
This map depicts a masonry structure to the west of the site, on the site of what is now 100 Melville Street. No other development is shown within the study area.



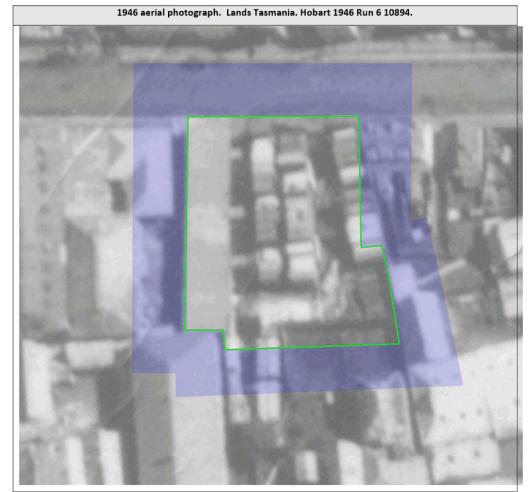
This map depicts probably the same (extended?) masonry structure on 100 Melville Street, as well as a complex of masonry structures (plus a long timber structure) on what is now 80-88 Melville Street to the east. No other development is shown within the study area.



This map depicts probably the same masonry structure on 100 Melville Street, as well as a row of four small terrace houses fronting Melville Street on what is now 80-88 Melville Street. Three small terrace houses are also at the rear of that site. There are another four small terrace houses on the rear of 164 Murray Street and another on what is now 144-160 Murray Street. The large theatre building (still standing) on what is now 133 Bathurst Street had not yet been built – a long building appears on that site. The southern edge of the study area appears generally devoid of development.



Consistent with the 1907 survey, the red lines depict the approximate rear boundaries of 90 Melville Street, and those buildings with the blue line within the study area. This shows the small terrace houses as depicted on the 1907 survey. This also shows the still-standing theatre building at 133 Bathurst Street and open area to the south of the site (garden area denoted by large tree).



The 1946 aerial photograph shows that the area of 80-88 Melville Street had been converted to a timber yard, with the seven terrace houses having been demolished. The three terrace houses on the rear of 144-160 Murray Street had survived. The building to the west had been replaced by a building of a similar size.

The above sources show that the immediate environs of the site was the location of about a dozen c19th residential dwellings, comprising largely of small-scale terrace houses along the eastern edge of the site, and a larger building (probably also residential) to the west. The following figure depicts their footprints (orange lines):



A detailed disturbance history of the surrounding sites is probably not warranted (given further commentary below), however I expect that the construction of 100 Melville Street would have removed all archaeological traces of the former building to the west. Similarly, the early 1900s development of 133 Bathurst Street would probably have impacted the earlier remains on that site.

The results of the January 2022 archaeological excavations on 90 Melville Street failed to find any substantive archaeological remains representing the 3+ main building known to have existed on that site – with the conclusion that the site has been previously highly disturbed, probably as a means of flattening what previously was a somewhat 'mounded' site. It is likely that this disturbance occurred as part of the 1920s timber yard establishment. Although a detailed disturbance history of 80-88 Melville Street has not been undertaken, it is possible that that site also had the same disturbance in the expansion of the timber yard that previously included that site (noting that site is now reasonably flat). It is not known what disturbance may have occurred to the terrace house sites at the rear of 144-160 Murray Street.

In the absence of a detailed statement of historical archaeological potential for the surrounds of 90 Melville Street, it would appear that:

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- There is no archaeological potential along the western and southern sides.
- It is possible that the eastern side has some archaeological potential, relating to small-scale inner-city terrace houses of the c19th. It is likely that at least some of this area is highly disturbed.
- The presence of any archaeological remains in the road reserve is not known, although in this instance there is no reason to suspect any significant archaeological remains in this area.

In any case, the question of whether the proposed ground anchors would impact any significant archaeological remains, if these exist, particularly along the eastern side of the site.

As per the brief points above, the anchors would leave the subject site at a depth of approximately 1500mm, downwards on a 30-degree angle. Given that the above historical overview indicates that the only likely archaeological potential in the immediate environs of the site are those relating to small-scale terrace houses, it is considered very unlikely that any associated archaeological remains would be deep – it is considered highly unlikely that disturbance deeper than 1.5 metres would encounter any archaeological remains.

Further, the small diameter of the drilling for the anchors (~70mm) would not result in widespread archaeological impact in any case – noting however that such impact is unlikely in any case given the proposed depth.

In considering what mitigation strategies may be appropriate, firstly it is not considered necessary to consider mitigation – as it is concluded here that it is unlikely that significant archaeological remains will be encountered. If a mitigation strategy was required, it is not considered feasible to implement such – given that the footprint of all possible archaeological remains are obscured by buildings which are not part of the development site, and that the act of excavation would cause more damage to archaeological remains than the very limited scope of drilling required for the ground anchors – then mitigation strategies would not be feasible – even if necessary.

Accordingly, I conclude that the ground anchors <u>are unlikely to have any archaeological impact.</u> Further I recommend that <u>no further archaeological input is required</u> for their installation.

I propose that submission of this addendum to Hobart City Council will fulfill the requirement of the RFI as per above.

p

Please contact me if you have any further queries or require any clarification.

Regards

(FR)

Brad Williams BA. (Hons.) Archaeology, MA Cultural Heritage Management, G.Dip. Environmental Planning.

#### Director - Praxis Environment

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# 7.1.3 UNIT 2, 6 NELSON ROAD, SANDY BAY AND COMMON LAND OF PARENT TITLE - CHANGE OF USE TO VISITOR ACCOMMODATION PLN-22-520 - FILE REF: F22/94025

Address: Unit 2, 6 Nelson Road, Sandy Bay and Common

Land of Parent Title

Proposal: Change of Use to Visitor Accommodation

Expiry Date: 2 November 2022

Extension of Time:

Author: Mark O'Brien

#### RECOMMENDATION

That pursuant to the *Hobart Interim Planning Scheme 2015*, the City Planning Committee, in accordance with the delegations contained in its terms of reference, approve the application for change of use to visitor accommodation at Unit 2/6 Nelson Road, Sandy Bay 7005 for the reasons outlined in the officer's report and a permit containing the following conditions be issued:

#### GEN

The use and/or development must be substantially in accordance with the documents and drawings that comprise PLN-22-520 - UNIT 2/6 NELSON ROAD SANDY BAY TAS 7005 - Final Planning Documents, except where modified below.

Reason for condition

To clarify the scope of the permit.

#### **PLN 18**

Prior to the commencement of the approved use, a management plan for the operation of the visitor accommodation must be implemented.

The management plan must include measures to limit, manage and mitigate unreasonable impacts upon the amenity of long term residents. These measures must include, but are not limited to, the following requirements:

- 1. To limit, manage, and mitigate noise generated as a result of the visitor accommodation.
- 2. To limit, manage, and mitigate behaviour issues caused as a result of the visitor accommodation.
- 3. To maintain the security of the building where the visitor accommodation would be located, including managing and/or limiting access to shared areas and facilities.
- 4. To specify the maximum permitted occupancy of the visitor accommodation.
- 5. To specify that guests must utilise the site for the parking of vehicles, and detail the location and number of vehicles to be parked on the site. Additionally, at the booking stage, guests should be discouraged from bringing more than 1 vehicle and the parking of any additional vehicles in nearby streets should also be discouraged.
- To provide a name and contact phone number of a person who will respond to any complaints regarding behaviour of guests. If the property is sold the management plan must be updated with new contact details.

The management plan must be implemented prior to the commencement of the approved use and must be maintained for as long as the visitor accommodation is in operation.

The management plan must be provided to adjacent property owners and occupiers prior to the commencement of use. If the property is sold, the updated management plan (in accordance with 6. above) must be provided to adjacent property owners and occupiers within 10 business days of settlement.

#### Reason for condition

To ensure that visitor accommodation does not cause an unreasonable loss of residential amenity.

#### ADVICE

The following advice is provided to you to assist in the implementation of the planning permit that has been issued subject to the conditions above. The advice is not exhaustive and you must inform yourself of any other legislation, by-laws, regulations, codes or standards that will apply to your development under which you may need to obtain an

approval. Visit the Council's website for further information.

Prior to any commencement of work on the site or commencement of use the following additional permits/approval may be required from the Hobart City Council.

#### NOISE REGULATIONS

Click here for information with respect to noise nuisances in residential areas.

#### VISITOR ACCOMMODATION

More information on visitor accommodation, including when building approval is required, can be found here.

In all cases, check with your insurance company that you have adequate cover.

If you are in a bushfire prone area there may be a need to create/review the Bushfire Management Hazard Plan for your property.

If you have a spa or a pool at your property then you are required to test for microbiological quality and chemical parameters on a monthly basis, under the *Public Health Act 1997*. If you have any questions about this then please call our Environmental Health team on 6238 2711.

If you are providing food for consumption on the property, you may require a food business registration in accordance with the *Food Act* 2003. Click here for more information, or call our Environmental Health team on 6238 2711.

Visitor accommodation is also considered to be a commercial use and also not eligible to residential parking permits. Under the current policy for the issuing of residential parking permits, the proposed change of use to visitor accommodation would not entitle the property to a residential parking permit, or a transferable "bed and breakfast" parking permit.

Attachment A: PLN-22-520 - Unit 2 6 NELSON ROAD SANDY

BAY TAS 7005 - Planning Committee or Delegated

Attachment B: PLN-22-520 - Unit 2 6 NELSON ROAD SANDY

BAY TAS 7005 - CPC Agenda Documents I



#### **APPLICATION UNDER HOBART INTERIM PLANNING SCHEME 2015**

Type of Report: Committee

Council: 26 September 2022
Expiry Date: 2 November 2022
Application No: PLN-22-520

Address: UNIT 2 6 NELSON ROAD, SANDY BAY

COMMON LAND OF PARENT TITLE

Applicant: Laura Gallacher

Unit 2 6 Nelson Road

Proposal: Change of Use to Visitor Accommodation

Representations: Zero.

Performance criteria: Planning Directive No.6 - visitor accommodation in strata scheme

#### 1. Executive Summary

- 1.1 Planning approval is sought for Change of Use to Visitor Accommodation at Unit 2/6 Nelson Road, Sandy Bay.
- 1.2 More specifically the proposal includes:
  - · change of use from residential to visitor accommodation.
  - change of use for a three bedroom dwelling with a gross floor area of approximately 90m<sup>2</sup>.
  - change of use for a dwelling in a strata scheme containing another dwelling at Unit 1.
  - · one onsite car parking space.
- 1.3 The proposal relies on performance criteria to satisfy the following standards and codes:
  - 1.3.1 Planning Directive No.6 Visitor Accommodation in strata scheme
- 1.4 No representations were received during the statutory advertising period between 19 August 2022 and 2 September 2022.
- 1.5 The proposal is recommended for approval subject to conditions.

1.6 The final decision is delegated to the Council, because it is of a category of development 'called in' by an elected member.

#### 2. Site Detail

2.1 The site is at Unit 2/6 Nelson Road, Sandy Bay. The site contains a two storey, three bedroom dwelling and is in a strata scheme containing two dwellings. Access to the site is via a shared access strip to Nelson Road. The site is adjoining a school along the northwestern boundary, and lots dwellings on all other boundaries.



Figure 1: Aerial image of site (blue outline) and strata scheme (orange outline) (source: LISTmap, accessed 16 August 2022)

#### 3. Proposal

- 3.1 Planning approval is sought for Change of Use to Visitor Accommodation at Unit 2/6 Nelson Road, Sandy Bay.
- 3.2 More specifically the proposal is for:
  - · change of use from residential to visitor accommodation.
  - change of use for a two storey, three bedroom dwelling with a gross floor area of approximately 90m<sup>2</sup>.
  - change of use for a dwelling in a strata scheme containing another dwelling at Unit 1.
  - one onsite car parking space.

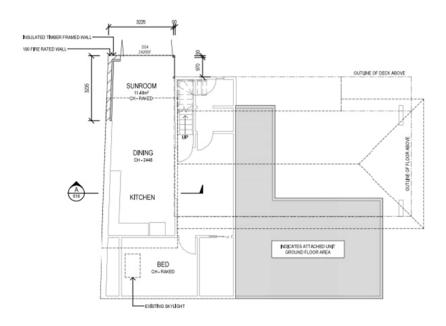


Figure 2: Ground Floor Plan (source: applicant)

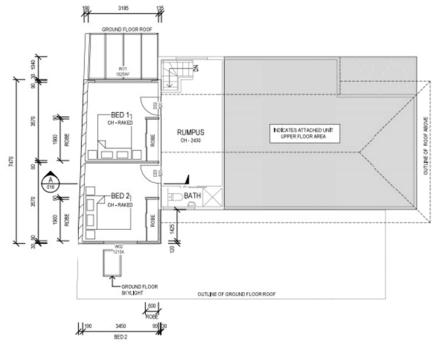


Figure 3: First Floor Plan (source: applicant

#### 4. Background

4.1 The applicant was provided advice from Council's Duty Planning Officer to lodge this planning permit application. Despite the applicant's intention of only renting out the unit for visitor accommodation during a period of extended overseas vacation, this was determined to not meet the exemption test at clause 3.1(b) of Planning Directive No. - Exemption and Standards for Visitor Accommodation in Planning Schemes.

#### 5. Concerns raised by representors

5.1 No representations were received during the statutory advertising period between 19 August and 2 September 2022.

#### 6. Assessment

- 6.1 The Hobart Interim Planning Scheme 2015 is a performance based planning scheme. To meet an applicable standard, a proposal must demonstrate compliance with either an acceptable solution or a performance criterion. Where a proposal complies with a standard by relying on one or more performance criteria, the Council may approve or refuse the proposal on that basis. The ability to approve or refuse the proposal relates only to the performance criteria relied on.
- The site is located within the General Residential Zone of the *Hobart Interim Planning Scheme 2015*.
- The existing use is residential for multiple dwellings. The proposed use is visitor accommodation. The existing and proposed use are permitted in the zone.
- 6.4 The proposal has been assessed against:
  - 6.4.1 Part D 10 General Residential Zone / Planning Directive No.6 Exemption and Standards for Visitor Accommodation in Planing Schemes
  - 6.4.2 E3.0 Landslide Code
  - 6.4.3 E6.0 Parking and Access Code
- 6.5 The proposal relies on the following performance criteria to comply with the

applicable standards:

6.5.1 Planning Directive No.6 Exemption and Standards for Visitor Accommodation in Planing Schemes:

Visitor accommodation in strata scheme – 3.1(e) P2

- 6.6 Each performance criterion is assessed below.
- 6.7 Visitor accommodation in strata scheme 3.1(e) P2
  - 6.7.1 The acceptable solution at clause 3.1(e) A2 requires there to be no other lots in the strata scheme used for a residential use.
  - 6.7.2 The proposal includes change of use in a strata scheme where other lots are used for residential use.
  - 6.7.3 The proposal does not comply with the acceptable solution; therefore, assessment against the performance criterion is relied on.
  - 6.7.4 The performance criterion at clause 3.1(e) P2 provides as follows:

Visitor Accommodation within a strata scheme must not cause an unreasonable loss of residential amenity to long term residents occupying other lots within the strata scheme, having regard to:

- (a) the privacy of residents;
- (b) any likely increase in noise;
- (c) the residential function of the strata scheme;
- (d) the location and layout of the lots;
- (e) the extent and nature of any other nonresidential uses; and
- (f) any impact on shared access and common property.
- 6.7.5 The site that is the subject of this change of use application contains a dwelling that is located in a strata scheme of two dwellings. Many uses exist inside a 200m radius of the site, including residential, visitor accommodation, recreation, education and hotel industry. Although land immediately adjoining the site is predominantly residential, the

surrounding area can, therefore, be broadly characterised as a mixed use neighbourhood exhibiting development in equally variable built forms.

The objectives of the visitor accommodation provisions are to ensure that visitor accommodation is compatible with the character and use of the area, that it does not cause an unreasonable loss of residential amenity, and that it does not impact on the safety and efficiency of local roads or rights of way. The performance criterion at P2 is also a specific test against the impacts of the proposed change of use on the residential amenity of the other dwelling in the strata scheme.

#### Compatibility

With respect to compatibility with the character and use in the area, compatibility exists if the proposal is in harmony or broad correspondence with the existing uses that characterise the area. As there is a variety of use in the area, including visitor accommodation and hotel industry use, and given that the nature of visitor accommodation use is not dissimilar to that of the residential use immediately surrounding the site, the proposed use is considered to be compatible with the character and use of the area.

#### Residential amenity

With respect to loss of residential amenity, it is not only important to consider the broad nature of visitor accommodation use, but that which is specific to the site. That is, the site is a three bedroom unit with a private off-street parking space and a shared access driveway. Other than the driveway, there are no shared common facilities with the other unit in the strata scheme. To assess whether the proposed change of use would generate an unreasonable loss of residential amenity to the other lot in the strata scheme, regard has been given to the following:

#### a) Privacy.

The privacy of the remaining dwelling in the strata scheme will be maintained. Other than the driveway crossover, there are no shared common facilities. Furthermore, the dwellings are arranged on the lots so that no overlooking occurs.

#### b) Noise.

The amount of noise generated from a small scale visitor accommodation

use such (90m<sup>2</sup> floor area) is not dissimilar to noise levels generated from a residential use. In addition, a condition is recommended for the implementation of a visitor accommodation management plan, which will ensure that excessive noise is managed appropriately.

#### c) Residential function.

The proposal does not introduce any impediments to the residential function of the remaining residential lot in the strata scheme. Moreover, the owners of the remaining residential lot in the strata scheme are supportive of the proposal, as demonstrated by a signed letter of support submitted with the application documents.

#### d) Layout.

As described above, the dwellings are arranged on lots in a way that privacy is maintained, which in turn retains the amenity of the remaining residential lot in the strata scheme.

#### e) Other use.

There are no other non-residential uses in this strata scheme.

#### f) Shared access.

The presence of several large hedges will screen most of the shared driveway from the remaining residential lot in the strata scheme. In addition, the frequency of use for the driveway will be comparatively similar between the existing residential use and proposed visitor accommodation use.

Overall, the amenity of the remaining residential lot in the strata scheme will not be unreasonably impacted from the proposal, noting that the current owners of the remaining residential lot in the strata scheme have expressed written support. In addition, a condition is recommended to ensure that the use is subject to implementation of a visitor accommodation management plan regulating noise, behaviour, parking and visitor numbers.

#### Local road network

With respect to impacts on the safety and efficiency of the local road network, the single on-site parking space available to guests is provided

in accordance with the acceptable solution requirements of the Parking and Access Code. This is less parking demand than the existing residential use on the site. As such, the proposal will not have an adverse impact on the safety and efficiency of the local road network.

#### Housing

Whilst it is acknowledged housing affordability and housing supply shortages are an important issue, these concerns cannot be considered as part of this planning assessment as Planning Directive No.6 does not include these matters as a relevant assessment criteria.

6.7.6 The proposal complies with the performance criterion.

#### 7. Discussion

- 7.1 Planning approval is sought for Change of Use to Visitor Accommodation at Unit 2/6 Nelson Road, Sandy Bay.
- 7.2 The application was advertised and no representations were received.
- 7.3 The proposal has been assessed against the relevant provisions of the planning scheme/planning directive and is considered to perform well.
- 7.4 The proposal is recommended for approval.

#### 8. Conclusion

8.1 The proposed Change of Use to Visitor Accommodation at Unit 2/6 Nelson Road, Sandy Bay, satisfies the relevant provisions of the *Hobart Interim Planning Scheme 2015*, and as such is recommended for approval.

#### 9. Recommendations

That:

Pursuant to the *Hobart Interim Planning Scheme 2015*, the City Planning Committee, in accordance with the delegations contained in its terms of reference, approve the application for Change of Use to Visitor Accommodation at Unit 2/6 Nelson Road, Sandy Bay, for the reasons outlined in the officer's report and a permit containing the following conditions be issued:

#### GEN

The use and/or development must be substantially in accordance with the documents and drawings that comprise PLN-22-520 - UNIT 2/6 NELSON ROAD SANDY BAY TAS 7005 - Final Planning Documents, except where modified below.

Reason for condition

To clarify the scope of the permit.

#### **PLN 18**

Prior to the commencement of the approved use, a management plan for the operation of the visitor accommodation must be implemented.

The management plan must include measures to limit, manage and mitigate unreasonable impacts upon the amenity of long term residents. These measures must include, but are not limited to, the following requirements:

- To limit, manage, and mitigate noise generated as a result of the visitor accommodation.
- 2. To limit, manage, and mitigate behaviour issues caused as a result of the visitor accommodation.
- To maintain the security of the building where the visitor accommodation would be located, including managing and/or limiting access to shared areas and facilities.
- 4. To specify the maximum permitted occupancy of the visitor accommodation.
- 5. To specify that guests must utilise the site for the parking of vehicles, and detail the location and number of vehicles to be parked on the site. Additionally, at the booking stage, guests should be discouraged from bringing more than 1 vehicle and the parking of any additional vehicles in nearby streets should also be discouraged.

To provide a name and contact phone number of a person who will
respond to any complaints regarding behaviour of guests. If the
property is sold the management plan must be updated with new
contact details.

The management plan must be implemented prior to the commencement of the approved use and must be maintained for as long as the visitor accommodation is in operation.

The management plan must be provided to adjacent property owners and occupiers prior to the commencement of use. If the property is sold, the updated management plan (in accordance with 6. above) must be provided to adjacent property owners and occupiers within 10 business days of settlement.

Reason for condition

To ensure that visitor accommodation does not cause an unreasonable loss of residential amenity.

#### **ADVICE**

The following advice is provided to you to assist in the implementation of the planning permit that has been issued subject to the conditions above. The advice is not exhaustive and you must inform yourself of any other legislation, by-laws, regulations, codes or standards that will apply to your development under which you may need to obtain an approval. Visit the Council's website for further information.

Prior to any commencement of work on the site or commencement of use the following additional permits/approval may be required from the Hobart City Council.

#### **NOISE REGULATIONS**

Click here for information with respect to noise nuisances in residential areas.

#### VISITOR ACCOMMODATION

More information on visitor accommodation, including when building approval is required, can be found here.

In all cases, check with your insurance company that you have adequate cover.

If you are in a bushfire prone area there may be a need to create/review the Bushfire

Management Hazard Plan for your property.

If you have a spa or a pool at your property then you are required to test for microbiological quality and chemical parameters on a monthly basis, under the *Public Health Act 1997*. If you have any questions about this then please call our Environmental Health team on 6238 2711.

If you are providing food for consumption on the property, you may require a food business registration in accordance with the *Food Act 2003*. Click here for more information, or call our Environmental Health team on 6238 2711.

Visitor accommodation is also considered to be a commercial use and also not eligible to residential parking permits. Under the current policy for the issuing of residential parking permits, the proposed change of use to visitor accommodation would not entitle the property to a residential parking permit, or a transferable "bed and breakfast" parking permit.

Item No. 7.1.3

## Agenda (Open Portion) City Planning Committee Meeting - 19/9/2022

(Mark O'Brien)

As signatory to this report, I certify that, pursuant to Section 55(1) of the Local Government Act 1993, I hold no interest, as referred to in Section 49 of the Local Government Act 1993, in matters contained in this report.

(Ben Ikin)

**Senior Statutory Planner** 

As signatory to this report, I certify that, pursuant to Section 55(1) of the Local Government Act 1993, I hold no interest, as referred to in Section 49 of the Local Government Act 1993, in matters contained in this report.

Date of Report: 6 September 2022

#### Attachment(s):

Attachment B - CPC Agenda Documents

Laura Gallacher Unit 2, 6 Nelson Road Sandy Bay TAS 7005

7 August 2022

### Submission of Planning Application for Visitor Accommodation Permit – Unit 2, 6 Nelson Road, Sandy Bay

I am submitting a planning application to Hobart City Council for a permit to change the use for Unit 2, 6 Nelson Road, Sandy Bay TAS 7005 to visitor accommodation. This property is currently my primary place of residence, and will remain so. However, my family and I plan to travel overseas extensively in the next two years and would like to rent our home as visitor accommodation while we are temporarily away. I have been advised by the Planning Office that this situation would require a permit.

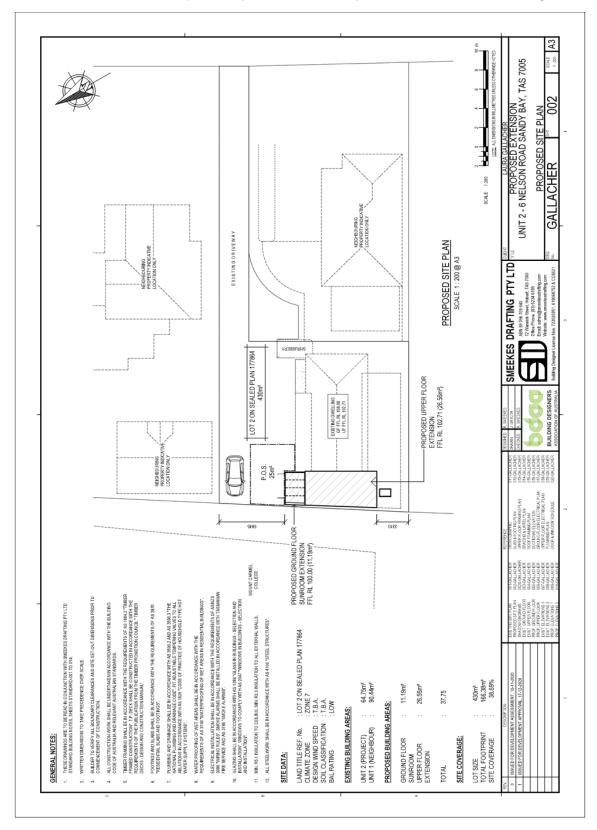
As the property is a strata title, I have attached a copy of a letter I sent to the other strata title owners (owners of Unit 1, 6 Nelson Road) notifying them of my intention to submit this planning application. I have also attached a copy of the response from the owners of Unit 1, who have no objection to the lodgement of the application and are in support of the proposal.

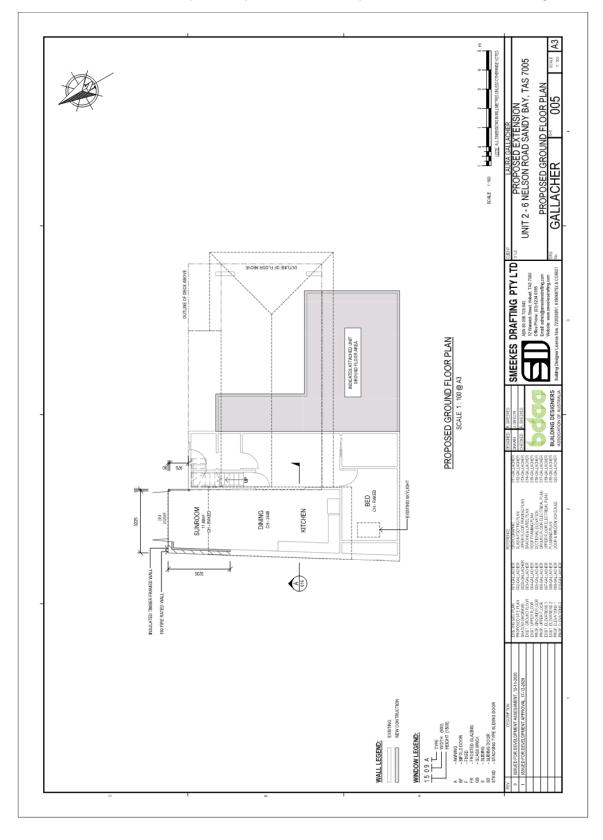
Please let me know if you have any questions or require any additional information.

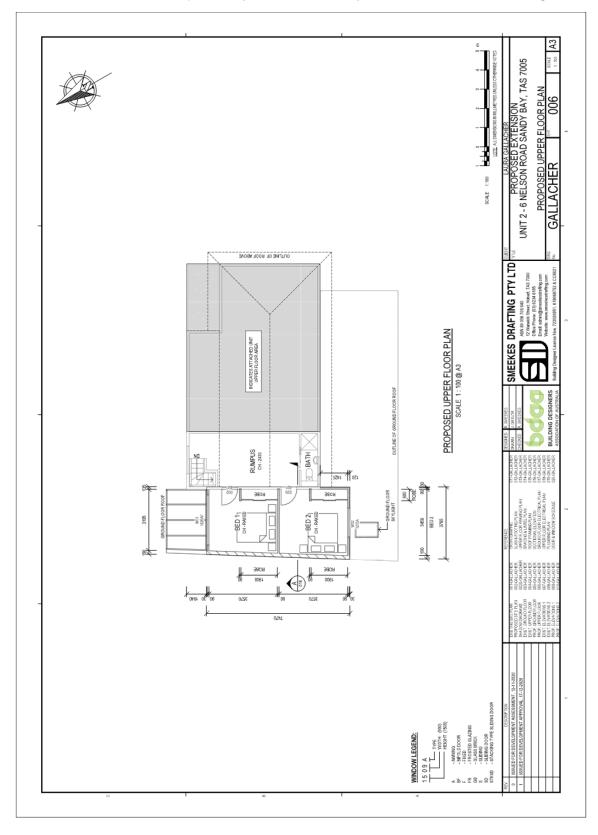
Thank you and best regards,

2 adlache

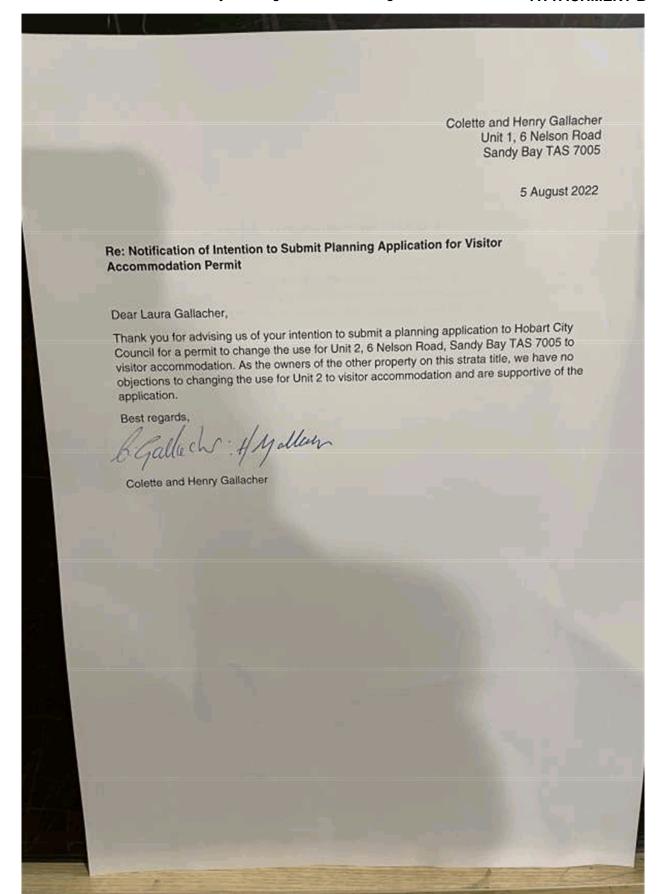
Laura Gallacher











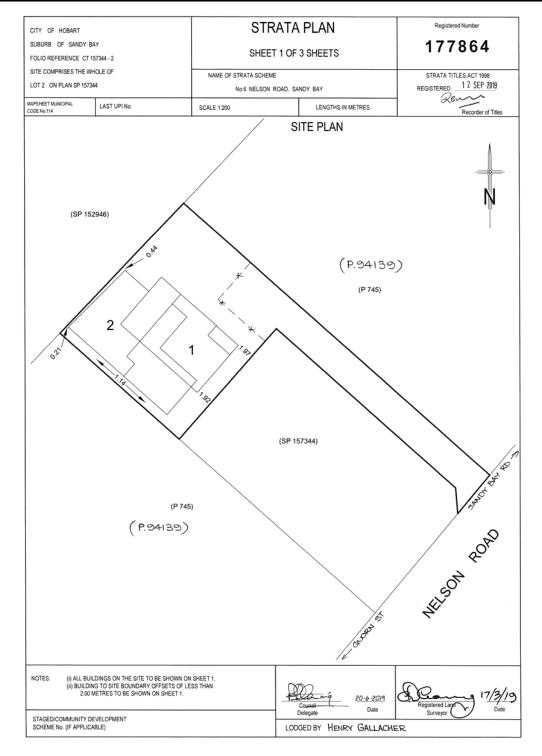


# **FOLIO PLAN**

RECORDER OF TITLES



Issued Pursuant to the Land Titles Act 1980



Search Date: 09 Aug 2022

Search Time: 11:47 PM

Volume Number: 177864

Revision Number: 01

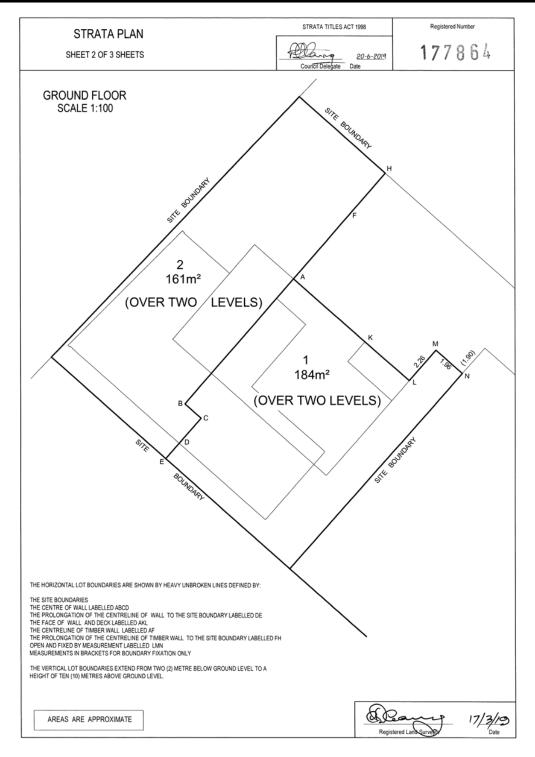


# **FOLIO PLAN**

RECORDER OF TITLES







Search Date: 09 Aug 2022

Search Time: 11:47 PM

Volume Number: 177864

Revision Number: 01

Page 2 of 3



# **FOLIO PLAN**

RECORDER OF TITLES





STF	RATA PLAN	A.		Registered Number			
	3 OF 3 SHEETS		STRATA TITLES ACT 1998	177864			
NAME OF BODY CO	NAME OF BODY CORPORATE: STRATA CORPORATION No. 1778-64, 6 NELSON ROAD, SANDY BAY						
ADDRESS FOR THE	SERVICE OF NOTICES: No 6 NEI	LSON ROAD, SANDY BAY,	TAS 7005				
	SURVEYORS CERTIFICATE		COUNCIL CERTIFICATE				
INOEL DENNIS LEARY ofHOBART			I certify that theHOBART CITYCouncil has:  (a) approved the lots shown in this plan and  (b) issued this certificate of approval in accordance with section  31 of the Strata Titles Act 1998				
10825   Registered Land Surveyor			Council Delegate	20-6-2019 30155155 \$_STR-19-13 Date Ref No.			
	GENERAL L	JNIT ENTITLEME	ENTS				
LOT	UNIT ENTITLEMENT						
1	1						
2	1						
TOTAL	2						

# Page 799 ATTACHMENT B



# **RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



#### SEARCH OF TORRENS TITLE

VOLUME	FOLIO
177864	0
EDITION	DATE OF ISSUE
1	12-Sep-2019

SEARCH DATE : 09-Aug-2022 SEARCH TIME : 11.44 PM

# DESCRIPTION OF LAND

City of HOBART
The Common Property for Strata Scheme 177864
Derivation: Part of 52A-2R-0P Gtd. to D. Lord & Part of 0R-1R-9P Gtd. to O. Lord
Prior CT 157344/2

## SCHEDULE 1

STRATA CORPORATION NUMBER 177864, 6 NELSON ROAD, SANDY BAY

## SCHEDULE 2

Reservations and conditions in the Crown Grant if any SP157344 EASEMENTS in Schedule of Easements SP157344 FENCING PROVISION in Schedule of Easements

## UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

# Page 800 ATTACHMENT B



# **RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



#### SEARCH OF TORRENS TITLE

VOLUME 177864	FOLIO 2
EDITION	DATE OF ISSUE
3	22-Mar-2022

SEARCH DATE : 09-Aug-2022 SEARCH TIME : 11.44 PM

## DESCRIPTION OF LAND

City of HOBART

Lot 2 on Strata Plan 177864 and a general unit entitlement operating for all purposes of the Strata Scheme being a 1 undivided 1/2 interest Derived from Strata Plan 177864

Derivation: Part of 52A-2R-0P Gtd. to D. Lord & Part of

OR-1R-9P Gtd. to O. Lord

#### SCHEDULE 1

M788621 TRANSFER to LAURA GERALDINE GALLACHER Registered 06-Dec-2019 at 12.01 PM

#### SCHEDULE 2

Reservations and conditions in the Crown Grant if any
The registered proprietor holds the lot and unit entitlement
subject to any interest noted on common property
Folio of the Register volume 177864 folio 0
SP157344 EASEMENTS in Schedule of Easements
SP157344 FENCING PROVISION in Schedule of Easements

### UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

Planning: #260902	
Property	
•	
2/6 NELSON ROAD SANDY BAY TAS 7005	
eople e	
Applicant *	
	Laura Gallacher
	Unit 2 6 Nelson Road SANDY BAY TAS 7005
	0408 509 230
	lauragallacher9@gmail.com
Owner *	Leura Cellecher
	Laura Gallacher Unit 2 6 Nelson Road
	SANDY BAY TAS 7005
	0408 509 230 lauragallacher9@gmail.com
Entered By	LAURA GERALDINE GALLACHER
Littered by	0408 509 230
	lauragallacher9@gmail.com
Jse	
Visitor accomodation	
Petails	
Have you obtained pre application advice?	
⊚ No	
3 140	
If YES please provide the pre application advice	e number eg PAE-17-xx
	odation as defined by the State Government Visitor Accommodation
Standards? Click on help information button fo	r definition. "
Is the application for SIGNAGE ONLY? If ves. pl	lease enter \$0 in the cost of development, and you must enter the
number of signs under Other Details below.	
⊚ No	
Makin annihadian t	- the state of the
If this application is related to an enforcement	action please enter Enforcement Number

Details							
What is the current approvement approvemen	ed use of the I	and / building(s)? *					
Please provide a full descr	iption of the p	roposed use or devel	opmen	t (i.e. demolition a	nd new dwe	lling, swim	ming
Short term visitor accom	modation whi	ile we are away from	our ho	me. The home will	remain our	primary pla	ace of
Estimated cost of developm	nent *						
0.00							
Existing floor area (m2)		Proposed floor area	a (m2)				
Site area (m2)		]					
Carparking on Site		1					
Total parking spaces	Existin	g parking spaces	:	N/A		7	
1	1			Other (no selection chosen)			
Other Details							
Daniel de la constitución de la	d						
Does the application include  No	ie signage?						
How many signs, please en	nter 0 if there	are none involved in					
this application? *							
0							
Tasmania Heritage Reg Is this property on the Tasi	-	ge Register?					
_		, o respective					
Documents							
Required Documents							
Title (Folio text and Plan and Schedule of Easements) *	certificate of tit	le nelson road.jpg					
Title (Folio text and Plan and Schedule of Easements) *	FolioText-1778	64-2 9.8.22.pdf					
Title (Folio text and Plan and Schedule of Easements) *	FolioTextComm	monLot-177864-2 9.8.22	2.pdf				
Title (Folio text and Plan and Schedule of Easements) *	FolioPlan-1778	864-2 9.8.22.pdf					
Plans (proposed, existing) *	Site plan with p	parking space.pdf					
Plans (proposed, existing) *	Scaled floor pla	an.pdf					
Covering Letter	cover letter pla	nning permit.pdf					
Notification sent to strata owners	letter to strata	owners.jpg					
Confirmation of no objection from strata owners	letter of no obje	ection from strata owne	rs.jpg				

# 7.1.4 11 SCOTT STREET, GLEBE - CHANGE OF USE TO VISITOR ACCOMMODATION

PLN-22-452 - FILE REF: F22/94073

Address: 11 Scott Street, Glebe

Proposal: Change of Use to Visitor Accommodation

Expiry Date: 1 November 2022

Extension of Time:

Author: Victoria Maxwell

### RECOMMENDATION

That pursuant to the *Hobart Interim Planning Scheme 2015*, the Council approve the application for a change of use to visitor accommodation at 11 Scott Street Glebe TAS 7000 for the reasons outlined in the officer's report and a permit containing the following conditions be issued:

## **GEN**

The use and/or development must be substantially in accordance with the documents and drawings that comprise PLN-22-452 11 SCOTT STREET GLEBE TAS 7000 - Final Planning Documents except where modified below.

Reason for condition

To clarify the scope of the permit.

THC

The use and/or development must comply with the requirements of the Tasmanian Heritage Council as detailed in the Notice of Heritage Decision, THC Works Ref: 7956 dated 31 August 2022, as attached to the permit.

Reason for condition

To clarify the scope of the permit.

**PLN 18** 

Prior to the commencement of the approved use, a management plan for the operation of the visitor accommodation must be submitted and

approved as a Condition Endorsement, to the satisfaction of the Council's Director City Life. The management plan must include measures to limit, manage and mitigate unreasonable impacts upon the amenity of long term residents. These measures must include, but are not limited to, the following requirements:

- 1. To limit, manage, and mitigate noise generated as a result of the visitor accommodation.
- 2. To limit, manage, and mitigate behaviour issues caused as a result of the visitor accommodation.
- 3. To maintain the security of the building where the visitor accommodation would be located, including managing and/or limiting access to shared areas and facilities.
- 4. To specify the maximum permitted occupancy of the visitor accommodation.
- 5. To specify that guests are aware that there is no parking on site. Additionally, at the booking stage, guests should be aware that should they bring a vehicle that on street parking for no more than one (1) vehicle should be anticipated. Parking of any additional vehicles in nearby streets should be discouraged.
- 6. To provide a name and contact phone number of a person who will respond to any complaints regarding behaviour of guests. If the property is sold the Visitor Accommodation Management Plan (VAMP) must be updated with new contact details.

Once approved, the management plan must be implemented prior to the commencement of the approved use and must be maintained for as long as the visitor accommodation is in operation. The VAMP must be provided to adjacent property owners and occupiers within 14 days of being approved. If the property is sold, the updated VAMP (in accordance with 6. above) must be provided to adjacent property owners and occupiers within 10 business days of settlement.

### Advice:

This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

## Reason for condition

To ensure that visitor accommodation does not cause an unreasonable loss of residential amenity.

#### ADVICE

The following advice is provided to you to assist in the implementation of the planning permit that has been issued subject to the conditions above. The advice is not exhaustive and you must inform yourself of any other legislation, by-laws, regulations, codes or standards that will apply to your development under which you may need to obtain an approval. Visit the Council's website for further information.

Prior to any commencement of work on the site or commencement of use the following additional permits/approval may be required from the Hobart City Council.

## CONDITION ENDORSEMENT

If any condition requires that further documents are submitted and approved, you will need to submit the relevant documentation to satisfy the condition via the Condition Endorsement Submission on Council's online services e-planning portal. Detailed instructions can be found here.

A fee of 2% of the value of the works for new public assets (stormwater infrastructure, roads and related assets) will apply for the condition endorsement application.

Once approved, the Council will respond to you via email that the condition has been endorsed (satisfied).

Where building approval is also required, it is recommended that documentation for condition endorsement be submitted well before submitting documentation for building approval. Failure to address condition endorsement requirements prior to submitting for building approval may result in unexpected delays.

### **BUILDING PERMIT**

You may need building approval in accordance with the *Building Act* 2016. Click here for more information.

This is a Discretionary Planning Permit issued in accordance with section 57 of the Land Use Planning and Approvals Act 1993.

#### PLUMBING PERMIT

You may need plumbing approval in accordance with the *Building Act* 2016, *Building Regulations* 2016 and the National Construction Code. Click here for more information.

## **NOISE REGULATIONS**

Click here for information with respect to noise nuisances in residential areas.

#### FEES AND CHARGES

Click here for information on the Council's fees and charges.

### DIAL BEFORE YOU DIG

Click here for dial before you dig information.

## VISITOR ACCOMMODATION

More information on visitor accommodation, including when building approval is required, can be found here.

In all cases, check with your insurance company that you have adequate cover.

If you are in a bushfire prone area there may be a need to create/review the Bushfire Management Hazard Plan for your property.

If you have a spa or a pool at your property then you are required to test for microbiological quality and chemical parameters on a monthly basis, under the *Public Health Act 1997*. If you have any questions about this then please call our Environmental Health team on 6238 2711.

If you are providing food for consumption on the property, you may require a food business registration in accordance with the *Food Act* 2003. Click here for more information, or call our Environmental Health team on 6238 2711.

Visitor accommodation is also considered to be a commercial use and also not eligible to residential parking permits. Under the current policy for the issuing of residential parking permits, the proposed change of use to visitor accommodation would not entitle the property to a residential parking permit, or a transferable "bed and breakfast" parking permit.

Attachment A: PLN-22-452 - 11 SCOTT STREET GLEBE TAS

7000 - Planning Committee or Delegated Report !



Attachment B:



Applicant:

### **APPLICATION UNDER HOBART INTERIM PLANNING SCHEME 2015**

Type of Report: Committee

Council: 26 September 2022 Expiry Date: 1 November 2022

Application No: PLN-22-452

Address: 11 SCOTT STREET, GLEBE

CATHERINE KERR 11 SCOTT STREET GLEBE TAS 7000

Proposal: Change of Use to Visitor Accommodation

Representations: One

Performance criteria: Planning Directive No. 6 Exemption and Standards for Visitor

Accommodation in Planning Schemes, Parking and Access Code

#### 1. Executive Summary

- 1.1 Planning approval is sought for a Change of Use to Visitor Accommodation at 11 SCOTT STREET GLEBE TAS 7000.
- 1.2 More specifically the proposal includes:
  - change of use to Visitor Accommodation for a whole dwelling within a strata scheme;
  - · no off street parking is provided;
  - minor works to raise the accommodation to be suitable for Visitor Accommodation, however being a heritage place, these works required (and have received) THC approval.
- 1.3 The proposal relies on performance criteria to satisfy the following standards and codes:
  - 1.3.1 Planning Directive No. 6 Exemption and Standards for Visitor Accommodation in Planning Schemes Strata Scheme
  - 1.3.2 Parking and Access Code Number of Parking Spaces
- 1.4 One (1) representation objecting to the proposal was received within the statutory advertising period between 16th and 30th August 2022.

- 1.5 The proposal is recommended for approval subject to conditions.
- 1.6 The final decision is delegated to the Council, because it is an application of a category that has been called in by an Elected Member.

## 2. Site Detail

2.1 The site is located on the northern side of Scott St, just west of the intersection with Service St in the Glebe. Surrounding uses are residential in nature. The site is part of a strata scheme with the conjoined neighbour 9 Scott St, which is a residence.



Figure 1: Site plan (Geo Cortex, 2022)

2.2 The site contains a heritage, weatherboard and iron, two storey conjoined dwelling. The dwelling is built close to the frontage, with a north facing rear garden, containing a deck off the living space and lawn beyond.

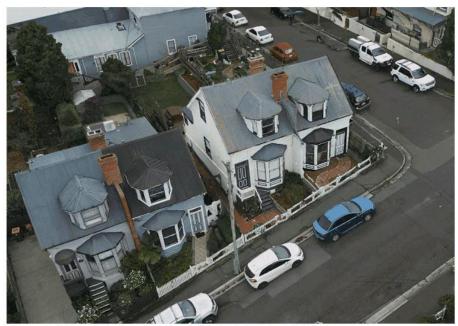


Figure 2: 3D Aerial view - North (HCC Digital Twin, 2022)

2.3 The site slopes down to the west and north. The grounds are low maintenance, with paving around the house and lawn in the northern portion of the lot. The site does not have any off street parking.



Figure 3: 3D Aerial view - South (HCC Digital Twin, 20220

# 3. Proposal

- 3.1 Planning approval is sought for a Change of Use to Visitor Accommodation at 11 SCOTT STREET GLEBE TAS 7000.
- 3.2 More specifically the proposal includes:
  - change of use to Visitor Accommodation for a whole dwelling within a strata scheme;
  - no off street parking is provided;
  - minor works to raise the accommodation to be suitable for Visitor Accommodation, however being a heritage place, these works required (and have received) THC approval.

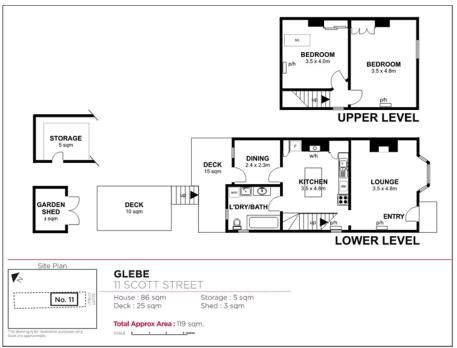


Figure 4: Floor plan (www.realestate.com.au, 2021)

#### 4. Background

4.1 The site was strata titled with 9 Scott St in the early 1990s.

The site was provisionally listed on the Tasmanian Heritage Register in January 2000 and appears to have been permanently registered in 2007.

## 5. Concerns raised by representors

- 5.1 One (1) representation objecting to the proposal was received within the statutory advertising period between 16th to 30th August 2022.
- 5.2 The following table outlines the concerns raised in the representations received.

  Those concerns which relate to a discretion invoked by the proposal are addressed in Section 6 of this report.

As a long-term resident I wish to object to the change of use to Visitor Accommodation for the following reasons;

Lack of parking - parking is an ongoing issue for Glebe residents. There is a lot of illegal parking, which is increased during visitor high season. Residents often cannot find parking even though they have resident parking permits. It is noted that the subject site does not have off street parking.

The Glebe is designated a residential and heritage area, but is quickly becoming a visitor accommodation area. There are already a number of Air BnBs and this impacts on the quality of life for residents in terms of noise, parking and transient population.

As the owner does not live here, how will these issues be addressed when/if they arise?

11 Scott St is one of the few remaining Listed properties on the Tas Heritage list.

Obstruction to the rental market - as present 9 Scott St is rented to a person who lives and works here and is part of the local community. The planning application outs out that once the lease is over, the property will be changed to short term accommodation. how does this help the current rental and housing problems besetting Hobart?

Liviability - The more visitor accommodation we have in the suburb, the move it deteriorates in terms of livability. Issues of security, safety and community arise. There is no benefit to the Hobart residents in granting this application, except for higher rates to Council.

For all residents, whether renters or home owners, this is not a fair exchange.

#### 6. Assessment

- 6.1 The Hobart Interim Planning Scheme 2015 is a performance based planning scheme. To meet an applicable standard, a proposal must demonstrate compliance with either an acceptable solution or a performance criterion. Where a proposal complies with a standard by relying on one or more performance criteria, the Council may approve or refuse the proposal on that basis. The ability to approve or refuse the proposal relates only to the performance criteria relied on.
- The site is located within the Inner Residential zone of the *Hobart Interim Planning Scheme 2015*.
- 6.3 The existing use is a Dwelling. The proposed use is Visitor Accommodation. The existing use is a Permitted use in the zone. The proposed use is a Permitted use in

the zone.

- 6.4 The proposal has been assessed against:
  - 6.4.1 Planning Directive No. 6 Exemption and Standards for Visitor Accommodation in Planning Schemes
  - 6.4.2 E6.0 Parking and Access Code
  - 6.4.3 E13.0 Historic Heritage Code
- The proposal relies on the following performance criteria to comply with the applicable standards:
  - 6.5.1 Planning Directive No. 6 Exemption and Standards for Visitor Accommodation in Planning Schemes

Part of a strata scheme including residential uses - 3.1 (e) P2

6.5.2 Parking and Access Code:

Number of Parking Spaces - E6.6.1 P1

- 6.6 Each performance criterion is assessed below.
- 6.7 Planning Directive 6 Clause 3.1 (e) Strata Scheme P2
  - 6.7.1 The acceptable solution at clause 3.1 (e) A2 requires Visitor Accommodation not be part of a strata scheme that also contains residential uses.
  - 6.7.2 The proposal is part of a strata scheme with 9 Scott Street, which is a residence.
  - 6.7.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
  - 6.7.4 The performance criterion at clause 3.1 (e) P2 of the Planning Directive No. 6 Exemption and Standards for Visitor Accommodation in Planning Schemes provides as follows:

Visitor Accommodation within a strata scheme must not cause an unreasonable loss of residential amenity to long term residents

occupying other lots within the strata scheme, having regard to:

- (a) the privacy of residents;
- (b) any likely increase in noise;
- (c) the residential function of the strata scheme;
- (d) the location and layout of the lots;
- (e) the extent and nature of any other nonresidential uses; and
- (f) any impact on shared access and common property
- 6.7.5 The previous Strata scheme for 9 and 11 Scott Street allowed the separation of two existing heritage dwellings that share a party wall, but were built and have been used as two independent townhouses. There is no shared Common Land in the Strata scheme and each dwelling will continue to rely on its individual entrance, private open space and facilities.

A survey of land uses within 200m of the subject site takes in land on the western side of the Brooker highway as well as much of the Glebe. The character and land use on the western side of the Brooker Highway has a greater diversity of uses being a mix of commercial, light industrial and residential. Given the very different character of that land, it is logical to remove land west of the Brooker Highway from consideration and restrict an assessment of compatibility to the Glebe only.

The Planning Directive relevant Performance Criteria are considered as follows;

## a) Privacy

The change of use will not impact on the privacy of 9 Scott Street or other adjacent properties. There is a rear deck off the ground floor living space, which is more than 1 metres above ground level. However a shared high brick garden wall between the two strata lot gardens screens the outdoor space of each. As well, the subject site is lower, being down the hill; further preventing a loss of privacy to 9 Scott St. The deck also looks onto a blank side wall of 13 Scott St. As well, there is a ground level outdoor dining deck, again with a 1.8m high fence on the western boundary with 13 Scott St. Given the above, it is considered that the Impact on privacy will be no greater than already exists.

#### b) Noise

There is potential for noise when guests use the outdoor space. A representation ground raised concerns over the impact of noise by transient population. As well, because the owner does not live in Hobart, how would such interruptions be addressed. Generally such concerns

can be managed with the proper operation of a Visitor Accommodation Management Plan (VAMP). A condition requiring such will be included in the permit. Within the Visitor Accommodation Management Plan, the applicant must set out how they will manage noise. Generally this consists of on their webpage prohibiting parties and setting out guest behavioural expectations, providing the accommodation manager's contact details to adjacent land owners, so that they can be contacted should any inappropriate guest behaviour occur.

## c) Residential function

There is no external change to the structure to allow greater accommodation on site than currently could be achieved as a single dwelling. A condition to declare and limit the number of guests will be required in the Visitor Accommodation Management Plan. With the aforementioned VAMP, the existing residence within the strata scheme will remain unchanged.

#### d) Lavout

The subject site does not share any space with another property; having its own front door and path along the side of the building. There is no Common land or shared driveway. Therefore privacy and the amenity of the neighours should be ensured.

#### e) Non residential uses

Analysing Council records, there have been ten (10) changes of use to Visitor Accommodation issued within the Glebe since 2004. Given the Census data indicates that in 2016 there were 273 dwellings in that suburb, the percentage of visitor accommodation within the suburb is approximately 3.5%. From this, the addition of this change of use to visitor accommodation is unlikely to unreasonably impact the character of the area. One (1) representation was received which raised concerns over the intrusion of Visitor Accommodation into the residential designation of the Glebe. The greater than 96% residential use suggests that the representation ground is not supported.

#### f) Shared access

There is no change to the layout of lots. The two strata lots are located side by side, fronting the street with separate accesses. There is no shared access or common property.

### Local road network

Whilst no parking is provided on site, the parking demand is reduced to only one 91) parking space, as opposed to a single dwelling which

requires two (2) spaces. As Visitor Accommodation is not entitled to Resident Parking Permits, the actual amount of parking should increase for permanent residents. Scott Street connects Aberdeen Street and the Brooker Highway. It is a local road within the road hierarchy. The proposal should not have an adverse impact on the safety and efficiency of the local road network.

#### Housing

A number of grounds of representation raised concerns over the impact on the rental market and loss of residential properties for long term occupation and the value that visitor Accommodation provides to renters and home owners. The shortage of housing and increasing unaffordability of such is a significant planning concern. However, they are not considered in the assessment of Visitor Accommodation under the Planning Directive and as such there is no head of power to address these matters within the Planning Directive. Consequently the representation grounds cannot be supported as well.

- 6.7.6 The proposal complies with the performance criterion.
- 6.8 Parking and Access Number of Parking spaces E6.6.1 P1
  - 6.8.1 The acceptable solution at clause E6.6.1 requires compliance with the parking requirements of Table 6.1. That table sets out one (1) parking space for a visitor accommodation unit.
  - 6.8.2 The proposal does not provide any parking on site.
  - 6.8.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
  - 6.8.4 The performance criterion at clause E6.6.1 P1 provides as follows:

The number of on-site car parking spaces must be sufficient to meet the reasonable needs of users, having regard to all of the following:

- (a) car parking demand;
- (b) the availability of on-street and public car parking in the locality;
- (c) the availability and frequency of public transport within a 400m walking distance of the site;
- (d) the availability and likely use of other modes of transport;
- (e) the availability and suitability of alternative arrangements for car parking provision;

- (f) any reduction in car parking demand due to the sharing of car parking spaces by multiple uses, either because of variation of car parking demand over time or because of efficiencies gained from the consolidation of shared car parking spaces;
- (g) any car parking deficiency or surplus associated with the existing use of the land:
- (h) any credit which should be allowed for a car parking demand deemed to have been provided in association with a use which existed before the change of parking requirement, except in the case of substantial redevelopment of a site;
- (i) the appropriateness of a financial contribution in lieu of parking towards the cost of parking facilities or other transport facilities, where such facilities exist or are planned in the vicinity;
- (j) any verified prior payment of a financial contribution in lieu of parking for the land;
- (k) any relevant parking plan for the area adopted by Council;
- (I) the impact on the historic cultural heritage significance of the site if subject to the Local Heritage Code;
- (m) whether the provision of the parking would result in the loss, directly or indirectly, of one or more significant trees listed in the Significant Trees Code.
- 6.8.5 The application was referred to Council's Development Engineer, who advised the following;

The parking number assessment must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).

Documentation submitted to date does not satisfy the Acceptable Solution for clause E6.6.1 (a) and as such, shall be assessed under Performance Criteria.

### Acceptable solution - A1: -

The number of on-site car parking spaces must be:

(a) no less than and no greater than the number specified in Table E6.1;

#### Assessment:

- Submitted documentation does not satisfy this requirement, a deficiency of one (1) car parking space proposed.
- No car parking is possible on-site

- Previous use would have required two (2x) car parking spaces = 2x space deficiency
- Proposed use requires one (1x) car parking spaces = 1x space deficiency
- It may be argued that the proposed use may generate less parking demand as not all patrons may utilise a motor vehicle

#### Performance Criteria - P1:

The number of on-site car parking spaces must be sufficient to meet the reasonable needs of users, having regard to all of the following:

#### (a) car parking demand;

Assessment: The empirical parking assessment indicates that on street car parking will sufficiently meet the likely demands associated with the development.

- (b) the availability of on-street and public car parking in the locality; Assessment: There is a reasonable supply of on-street parking in the surrounding road network. Much of the available parking is in the form of time-restricted parking, with authorised residents excepted. Advice that residential parking permits are not provided for visitor accommodation will be included
- (c) the availability and frequency of public transport within a 400m walking distance of the site;

Assessment: Metro Tasmania operate regular bus services within 400 metres of the subject site.

- (d) the availability and likely use of other modes of transport; Assessment: The site is located a convenient walking distance from shops, schools and services.
- (e) the availability and suitability of alternative arrangements for car parking provision:

Assessment: No alternative parking provision is available or considered necessary.

- (f) any reduction in car parking demand due to the sharing of car parking spaces by multiple uses, either because of variation of car parking demand over time or because of efficiencies gained from the consolidation of shared car parking spaces;
- Not applicable.

- (g) any car parking deficiency or surplus associated with the existing use of the land;
- Not applicable.
- (h) any credit which should be allowed for a car parking demand deemed to have been provided in association with a use which existed before the change of parking requirement, except in the case of substantial redevelopment of a site;
- Not applicable.
- (i) the appropriateness of a financial contribution in lieu of parking towards the cost of parking facilities or other transport facilities, where such facilities exist or are planned in the vicinity;
- Not applicable.
- (j) any verified prior payment of a financial contribution in lieu of parking for the land;
- Not applicable.
- (k) any relevant parking plan for the area adopted by Council;
- Not applicable.
- (I) the impact on the historic cultural heritage significance of the site if subject to the Local Heritage Code;
- -This is a heritage listed property with the Council and Heritage Tasmania.
- (m) whether the provision of the parking would result in the loss, directly or indirectly, of one or more significant trees listed in the Significant Trees Code.
- No impact.

### Representations:

A representation has been submitted regarding the lack of on-site parking and the impact of parking in the street.

The submitted documentation does not satisfy the number of on-site car parking spaces required by Table E6.1 of the Parking and Access code. No car parking is possible on-site. Previous use as a dwelling would have required two (2x) on-site car parking spaces therefore there is currently a deficiency of two (2x) on-site car parking spaces. The proposed use as visitor accommodation requires one (1x) on-site car parking space, therefore the proposed use will result in an on-site car parking deficiency

of one car parking space. The demand for car parking will be reduced and it may be argued that the proposed use may generate even less parking demand as not all patrons may utilise a motor vehicle resulting in a reduction in demand for parking in the street.

Based on the above assessment and given the submitted documentation, the parking provision may be accepted under Performance Criteria P1:E6.6.1 of the Planning Scheme. This is particularly due to the actual parking demands that will be generated by the development. In a council related engineering context, the proposal can be supported in principal subject to the following conditions and advice.

6.8.6 The proposal complies with the performance criterion.

#### 7. Discussion

- 7.1 Planning approval is sought for a Change of Use to Visitor Accommodation 11 SCOTT STREET GLEBE TAS 7000.
- 7.2 The application was advertised and received one (1) representation. The representation raised concerns including lack of parking, change in Character for Glebe suburb, management of the Visitor Accommodation and inappropriate loss of permanent accommodation and benefit for the Hobart community. These matters have been addressed above in section 6 of the report.

The proposal includes some minor internal works to bring the dwelling to a standard acceptable for Visitor Accommodation. The application was referred to Tas Heritage Council (THC) because there were proposed works within a Listed Building. THC have approved the proposal. The proposal was also referred to Council Cultural Heritage Officer, who advised the following;

This application is for a change of use. Use is not considered under Clause E13.2.2 of the Historic Heritage Code of the Scheme.

The works are minor and include painting, gardening, minor repairs to the existing kitchen and bathroom fit-out. This work is exempt from the Historic Heritage Code under clause E13.4.1 (a) (i), (ii).

7.3 The proposal has been assessed against the relevant provisions of the planning scheme and is considered to perform well.

- 7.4 The proposal has been assessed by other Council officers, including the Council's Development Engineer and Cultural Heritage Officer. The officers have raised no objection to the proposal, subject to conditions.
- 7.5 The proposal is recommended for approval.

# 8. Conclusion

The proposed Change of Use to Visitor Accommodation at 11 SCOTT STREET GLEBE TAS 7000 satisfies the relevant provisions of the *Hobart Interim Planning Scheme 2015*, and as such is recommended for approval.

#### 9. Recommendations

That:

Pursuant to the *Hobart Interim Planning Scheme 2015*, the Council approve the application for a Change of Use to Visitor Accommodation at 11 SCOTT STREET GLEBE TAS 7000 for the reasons outlined in the officer's report and a permit containing the following conditions be issued:

#### **GEN**

The use and/or development must be substantially in accordance with the documents and drawings that comprise PLN-22-452 11 SCOTT STREET GLEBE TAS 7000 - Final Planning Documents except where modified below.

Reason for condition

To clarify the scope of the permit.

#### THC

The use and/or development must comply with the requirements of the Tasmanian Heritage Council as detailed in the Notice of Heritage Decision, THC Works Ref: 7956 dated 31 August 2022, as attached to the permit.

Reason for condition

To clarify the scope of the permit.

## **PLN 18**

Prior to the commencement of the approved use, a management plan for the operation of the visitor accommodation must be submitted and approved as a Condition Endorsement, to the satisfaction of the Council's Director City Life. The management plan must include measures to limit, manage and mitigate unreasonable impacts upon the amenity of long term residents. These measures must include, but are not limited to, the following requirements:

- To limit, manage, and mitigate noise generated as a result of the visitor accommodation.
- 2. To limit, manage, and mitigate behaviour issues caused as a result of the visitor accommodation.
- To maintain the security of the building where the visitor accommodation would be located, including managing and/or limiting

- access to shared areas and facilities.
- To specify the maximum permitted occupancy of the visitor accommodation.
- 5. To specify that guests are aware that there is no parking on site. Additionally, at the booking stage, guests should be aware that should they bring a vehicle that on street parking for no more than one (1) vehicle should be anticipated. Parking of any additional vehicles in nearby streets should be discouraged.
- To provide a name and contact phone number of a person who will
  respond to any complaints regarding behaviour of guests. If the
  property is sold the Visitor Accommodation Management Plan (VAMP)
  must be updated with new contact details.

Once approved, the management plan must be implemented prior to the commencement of the approved use and must be maintained for as long as the visitor accommodation is in operation. The VAMP must be provided to adjacent property owners and occupiers within 14 days of being approved. If the property is sold, the updated VAMP (in accordance with 6. above) must be provided to adjacent property owners and occupiers within 10 business days of settlement.

#### Advice:

This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

### Reason for condition

To ensure that visitor accommodation does not cause an unreasonable loss of residential amenity.

#### **ADVICE**

The following advice is provided to you to assist in the implementation of the planning permit that has been issued subject to the conditions above. The advice is not exhaustive and you must inform yourself of any other legislation, by-laws, regulations, codes or standards that will apply to your development under which you may need to obtain an approval. Visit the Council's website for further information.

Prior to any commencement of work on the site or commencement of use the following additional permits/approval may be required from the Hobart City Council.

### **CONDITION ENDORSEMENT**

If any condition requires that further documents are submitted and approved, you will need to submit the relevant documentation to satisfy the condition via the Condition Endorsement Submission on Council's online services e-planning portal. Detailed instructions can be found here.

A fee of 2% of the value of the works for new public assets (stormwater infrastructure, roads and related assets) will apply for the condition endorsement application.

Once approved, the Council will respond to you via email that the condition has been endorsed (satisfied).

Where building approval is also required, it is recommended that documentation for condition endorsement be submitted well before submitting documentation for building approval. Failure to address condition endorsement requirements prior to submitting for building approval may result in unexpected delays.

#### **BUILDING PERMIT**

You may need building approval in accordance with the *Building Act 2016*. Click here for more information.

This is a Discretionary Planning Permit issued in accordance with section 57 of the *Land Use Planning and Approvals Act 1993*.

#### PLUMBING PERMIT

You may need plumbing approval in accordance with the *Building Act 2016*, *Building Regulations 2016* and the National Construction Code. Click here for more information.

# **NOISE REGULATIONS**

Click here for information with respect to noise nuisances in residential areas.

# **FEES AND CHARGES**

Click here for information on the Council's fees and charges.

### **DIAL BEFORE YOU DIG**

Click here for dial before you dig information.

## **VISITOR ACCOMMODATION**

More information on visitor accommodation, including when building approval is required, can be found here.

In all cases, check with your insurance company that you have adequate cover.

If you are in a bushfire prone area there may be a need to create/review the Bushfire Management Hazard Plan for your property.

If you have a spa or a pool at your property then you are required to test for microbiological quality and chemical parameters on a monthly basis, under the *Public Health Act 1997*. If you have any questions about this then please call our Environmental Health team on 6238 2711.

If you are providing food for consumption on the property, you may require a food business registration in accordance with the *Food Act 2003*. Click here for more information, or call our Environmental Health team on 6238 2711.

Visitor accommodation is also considered to be a commercial use and also not eligible to residential parking permits. Under the current policy for the issuing of residential parking permits, the proposed change of use to visitor accommodation would not entitle the property to a residential parking permit, or a transferable "bed and breakfast" parking permit.

Item No. 7.1.4

## Agenda (Open Portion) City Planning Committee Meeting - 19/9/2022



(Victoria Maxwell)

As signatory to this report, I certify that, pursuant to Section 55(1) of the Local Government Act 1993, I hold no interest, as referred to in Section 49 of the Local Government Act 1993, in matters contained in this report.

(Ben Ikin)

**Senior Statutory Planner** 

As signatory to this report, I certify that, pursuant to Section 55(1) of the Local Government Act 1993, I hold no interest, as referred to in Section 49 of the Local Government Act 1993, in matters contained in this report.

Date of Report: 6 September 2022

# Attachment(s):

Attachment B - CPC Agenda Documents



Tasmanian Heritage Council GPO Box 618 Hobart Tasmania 7000 Tel: 1300 850 332 enquiries@heritage.tas.gov.au www.heritage.tas.gov.au

PLANNING REF: PLN-22-452
THC WORKS REF: 7956
REGISTERED PLACE NO: 7476
APRILICANT: Catherine K

APPLICANT: Catherine Kerr DATE: 31 August 2022

### NOTICE OF HERITAGE DECISION

(Historic Cultural Heritage Act 1995)

The Place: Conjoined House, 11 Scott St, Glebe.
Proposed Works: Change of use to visitor accommodation.

Under section 39(6)(a) of the Historic Cultural Heritage Act 1995, the Heritage Council gives notice that it consents to the discretionary permit being granted in accordance with the documentation submitted with Development Application PLN-22-452, advertised on 16/08/2022.

Should you require clarification of any matters contained in this notice, please contact Russell Dobie on  $1300\,850\,332$ .

Ian Boersma

Works Manager - Heritage Tasmania
Under delegation of the Tasmanian Heritage Council

Planning: #260262	
Property	
11 SCOTT STREET GLEBE TAS 7000	
People	
Applicant *  Catherine Kerr  1A Paradise Avenue  Avalon Beach NSW 2107  0411 859 162  catherine@podfim.com.au	
Owner *  Catherine Kerr 1A Paradise Avenue Avalon Beach NSW 2107 0411 859 162 catherine@podfilm.com.au	
Entered By  CATHERINE KERR  11 SCOTT STREET  GLEBE TAS 7000  0411 859 162  catherine@podfilm.com.au	
Jse	
Visitor accomodation	
Visitor accomodation	
Details	
Have you obtained pre application advice?	
⊚ No	
If YES please provide the pre application advice number eg PAE-17-xx	
Are you applying for permitted visitor accommodation as defined by the State Government Visitor Standards? Click on help information button for definition.	Accommodation
⊚ Yes	
Is the application for SIGNAGE ONLY? If yes, please enter \$0 in the cost of development, and you number of signs under Other Details below. •	must enter the
⊚ No	
If this application is related to an enforcement action please enter Enforcement Number	

I				
Details				
What is the current approv	ed use of the I	and / building(s)? *		
Dwelling				
Please provide a full descr	iption of the p	roposed use or develo	pme	nt (i.e. demolition and new dwelling, swimming
Short term holiday renta	I and for use a	s private dwelling for	owne	ers half of the year
Estimated cost of developr	ment *			
4000.00				
Existing floor area (m2)		Proposed floor area	(m2)	
74.00				
Site area (m2)		_		
182				
		1		
Carparking on Site				
Total parking spaces	Existin	g parking spaces		N/A
0				Other (no selection chosen)
				cnosen)
Other Details				
Does the application inclu	de signage? *			
No				
How many signs, please e	nter 0 if there	are none involved in		
this application? *				
0				
Tasmania Heritage Re		ge Register?		
Is this property on the Tas	manian Heritag	ge Register?		
Documents				
Required Documents				
Title (Folio text and Plan and Schedule of Easements) *	FolioText-5672	2-2.pdf		
Plans (proposed, existing) *	Floorplan GLE	BE 11 Scott Street.pdf		
GM or Crown consent	FolioPlan-5672	2-2.pdf		
Covering Letter	application cov	ering letter.pdf		
Building self assessment Form permitted visitor accommodation	Visitor-Accomr	nodation-Standard-Appli	cation	n-Package-1-August-2018.pdf
Supporting Documents				
Photos or Montages	FolioTextComr	nonLot-56722-2.pdf		

Catherine Kerr 1A Paradise Ave Avalon Beach 2107. catherine@podfilm.com.au

March 30, 2022

To
Planning Department
Hobart City Council
16 Elizabeth Street
Hobart.

To whom it may Concern

Please find attached our application for a permit for visitor accommodation of our house in 11 Scott Street Glebe.

My I have all my family in Hobart, and I have my mother now in care at St Anns Hobart with dementia and my husband and wish to spend part of the year in Hobart to be close to the family.

Our plan is to also have the facility to short term rent the house for visitor accommodation to help pay our fees, rates etc. and to inhabit it ourselves the remainder of the year.

We recently bought it so it is good condition and we will just do repairs and paint and ensure all the codes re fire etc are current.

I have attached all the relevant files that the form has asked for but please don't hesitate to contact me on 0411859162 if I have missed anything I trust that this will not be a problem.

Kind regards.

Catherine Kerr Owner.

Item No. 7.1.4

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ATTACHMENT B

July 28, 2022

Catherine Kerr / Owner Catherine@podfilm.com.au

Ben Ikin Senior Statutory Planner City Life City Of Hobart Council

RE: 11 SCOTT STREET, GLEBE CHANGE OF USE TO VISITOR ACCOMMODATION APPLICATION NO. PLN22452

Further application material required is supplied as follows: -

- 1 As we purchased this house early this year and it is currently rented for 12 months, we had planned to do the following as cosmetic touch ups and repairs when the tenant moves out.
  - Repaint interior same colour as is.
  - Garden clean up and planting
  - Replace taps in kitchen and bathroom sinks
  - Replace cupboard handles in kitchen
  - Replace vanity and mirror in bathroom and perhaps toilet
  - Build shelves either side of fireplace in loungeroom Repair fireplace chimney
  - Repair fans in bathroom
  - New carpet in bedrooms
- 4. We understand that as the above is only cosmetic and we are replacing paint colour for like and doing essential repairs as outlined that these are exempted by the Tasmanian Heritage Council.

Please find attached the site plan marked up from Google Maps and the floor plan of the building.

I will contact your office and pay for the advertising as you directed.

Yours Faithfully

Catherine Kerr / Owner.

Item No. 7.1.4

Page 835
ATTACHMENT B

Office Use Only
[insert council branding and contact details]
Application no
Date received:
Fee:
Paid:

### **Guidance Information**

# Visitor Accommodation Use in Existing Habitable Buildings Standard Application Package

The Standard Application Package has been approved by the Minister for Planning to provide a simple pathway for seeking approval for the use of existing homes or habitable buildings for Visitor Accommodation as prescribed below. It comprises an Application for Planning Permit and a building self-assessment Form.

Completed forms must be lodged with the relevant planning/permit authority.

### **Application for Planning Permit**

The Application for Planning Permit form relates to *Planning Directive No.6 – Exemption and Standards for Visitor Accommodation in Planning Schemes*, issued by the Minister for Planning under former sections 13(1)(a) and (4) of the *Land Use Planning and Approvals Act 1993*, and effective from 1 July 2018 and as modified on 1 August 2018.

The Application for Planning Permit form applies to the change of use of an existing habitable building where it is 'Permitted' under Planning Directive No. 6, as set out below:

Planning Scheme	Requirements
Interim planning	Change of use to Visitor Accommodation if:
schemes	located within the General Residential Zone; Inner Residential Zone, Low Density Residential Zone, Rural Living Zone, Environmental Living Zone, or Village Zone;
	not located within the Battery Point Heritage Precinct (BP1);
	guests are accommodated within existing habitable buildings;
	the use occupies not more than 200m² gross floor area per lot;
	the use is not within a strata scheme <sup>1</sup> that includes another lot, as defined in section 3 of the <i>Strata Titles Act 1998</i> , that is used for Residential use; and
	all other requirements in the planning scheme are met that are necessary for a 'Permitted' use.
Sullivans Cove	Change of use to Bed and Breakfast Establishment or Visitor Accommodation if:
Planning Scheme 1997	located within Activity Area 1.0 Inner City Residential (Wapping);
	guests are accommodated within existing habitable buildings;
	the use occupies not more than 200m² floor area per lot; and
	all other requirements in the planning scheme are met that are necessary for a 'Permitted' use.

<sup>&</sup>lt;sup>1</sup> Strata scheme is defined in section 3 of the Strata Titles Act 1998.

İ

The Application for Planning Permit form does not apply if:

the use is exempt from requiring a planning permit under Planning Directive No.6, as set out below:

Planning Scheme	Exempt Qualification	
Interim planning schemes	Visitor Accommodation use in a dwelling (including an ancillary dwelling) if	it is used by the owner or occupier as their main place of residence, and only let while the owner or occupier is on
Flinders Planning Scheme 2000	Visitor Accommodation use in a House, House and Ancillary Apartment or Grouped House if	vacation or temporarily absent; or it is used by the owner or
Sullivans Cove Planning Scheme 1996	Bed and Breakfast Establishment or Visitor Accommodation uses in a dwelling if	occupier as their main place of residence, and visitors are accommodated in not more than 4 bedrooms.

the use requires a 'Discretionary' planning permit under the planning scheme. For example, a change of use to Visitor Accommodation that does meet the requirements for a 'Permitted' use under Planning Directive No. 6, or other provisions in the planning scheme apply requiring discretionary assessment, such as off-street parking, bushfire planning, heritage, or non-residential use standards in zones (e.g. external lighting requirements).

Applicants should use the standard Council planning application form.

other uses or if any development (not otherwise exempt) is proposed, in addition to the change of use to Visitor Accommodation.

Applicants should use the standard Council planning application form.

#### **Building self-assessment form**

The building self-assessment form is mandated under the *Director's Determination – Short or Medium Term Visitor Accommodation*, issued by the Director of Building Control under section 20(1)(e) of the *Building Act 2016*, and effective from 1 July 2018.

This Determination applies only to existing dwellings or residential premises where a fee is being charged for the use of short or medium term visitor accommodation.

The building self-assessment form must be completed in the following situations where the property is used or intended to be used as visitor accommodation:

- > owner occupiers of residential premises of more than four bookable rooms, or
- investment properties or shacks (not occupied by the owner) that have a gross floor area of not more than 200m² used for visitor accommodation.

The building self-assessment form requires the owner or occupier to declare that the property meets the minimum building standards with respect to an occupancy permit, plumbing, and essential building services.

The Determination and the building self-assessment form apply, irrespective of the planning requirements. The planning and building requirements are mutually exclusive. If any premises intended to be let for short-term visitor accommodation is a lot in a strata title scheme, and any other premises in that scheme are occupied as a residence by long term residents, the proponent is not permitted to use the building self-assessment process, unless the premises is located within Activity Area 1.0 Inner City Residential (Wapping) under the Sullivans Cove Planning Scheme 1997.

# APPLICATION FOR PLANNING PERMIT CHANGE OF USE TO VISITOR ACCOMMODATION

### Section 58 of Land Use Planning and Approvals Act 1993

To: [		Planning Authority
The Propo	sal:	
(Must tick one)		



#### Interim Planning Schemes:

Change of use to Visitor Accommodation if:

- guests are accommodated in existing habitable buildings;
- the use has a gross floor area of not more than 200m<sup>2</sup> per lot;
- the use is not within a strata scheme<sup>2</sup> that includes another lot, as defined in section 3 of the Strata Titles Act 1998, that is used for Residential use; and
- · the land is within one of the following zones:
  - General Residential;
  - Inner Residential, excluding land within the Battery Point Heritage Precinct 1 (BP1):
  - Low Density Residential;
  - Rural Living;
  - o Environmental Living;
  - Village.

_		
_		

#### Sullivans Cove Planning Scheme 1997:

Change of use to Bed and Breakfast Establishment or Visitor Accommodation, where guests are accommodated in existing habitable buildings and the use has a floor area of not more than 200m<sup>2</sup> per lot, and the land is within the Activity Area 1.0 Inner City Residential (Wapping).

### Description:

Brief description of the proposed change of use, including whether the whole or part of the building(s) are to be used:

This is a small 2 bedroom residential house in Glebe and we are buying it to live in half the year to be near a mother in care and other family now that we are retired, and wish to rent it short term for down periods whilst we are not there so we can afford the rates etc. So we wish to short term rent for half a year and rent whole of house.

Applicant: Who	o is making the application?		
Applicant Name:	Catherine Kerr		
Business / Company Name:			
Postal Address:	1A Paradise Ave	Phone No:	0411859162
	Avalon Beach 2107		
Email address:	catherine@podfilm.com.au		

Application for Planning Permit for Change of Use to Visitor Accommodation

1 of 3

Form approved pursuant to section 51(1AA) of the Land Use Planning and Approvals Act 1993

 $<sup>^2</sup>$  Strata scheme means the complex of lots and common property (together with the system of administration and management) created on the registered strata plan.

The Land: Deta the proposed o	ail address and title particulars of change of use	the land for		
Street Address:	11 Scott Street			
	Glebe 70	000		
Certificate of Title Reference No.	56722/2			
Describe the way the	he land is used now:			
The land is a sim our ownership.	nple garden with a lemon tree and sh	nrubs. This wi	ll stay this	way under
The Owner: Ow applicant's own	wner's name and address, if land i nership	is not in		
(If more than one owner,	all names and addresses must be provided)			
Owner Name:	Catherine Kerr			
Business / Company Name:				
Postal Address:	1A Paradise Ave		Phone No: 0411	859162
	Avalon Beach 21	107		
Email address:	catherine@podfilm.com.au			
The Annlies no	le the applicant the assumer of the	land?		
(Must tick one)  Yes - plea	ase complete Section A below.  se complete Section B below, and if relevant		i D.	
Section A: Own	ner's Verification			
I/we am/are the own	ner(s) of the land.			
0 ()	Name: [print]	Signed		Date
Owner(s): Cath	erine Kerr/Graham Stuart			30/3/2022
Section B: Appl	licant's Verification			
I/we, the applicant d to make this applica	declare that the owner /each of the owners of ation.	of the land have b	oeen notified	of the intention
Applicant:	Name: [print]	Signed		Date
	e application involves land owned or adr	ministered by a	a a u mail	
				14
The	Name: [print]	ents to the making Signed	or this perm	Date
General Manager:	Name: Ipiniq	Signed		Dute

#### Section D: If the application involves land owned or administered by the Crown

The application must be signed by the Minister or relevant delegate responsible for the land and accompanied with written permission.

#### Declaration (to be completed for all applications)

I declare that the information I have given in this permit application to be true and correct to the best of my knowledge.

 Name: [print]
 Signed
 Date

 Applicant:
 Catherine Kerr
 30/3/2022

#### **Personal Information Protection Statement**

As required under the Personal Information Protection Act 2004

- Personal information is managed in accordance with the Personal Information Protection Act 2004 and may be accessed by the individual to whom it relates, on request to the relevant planning authority.
- Information can be used for other purposes permitted by the Local Government Act 1993 and regulations made by or under that Act, and, if necessary, may be disclosed to other public sector bodies, agents or contractors of the relevant planning authority.

#### **Planning Application Checklist**

The Planning Authority requires the following to assess this Planning Application, with all documentation provided as required by the planning authority:

- (a) Completed Planning Application Form all relevant sections filled in and signed by land owner (if required) and applicant.
- (b) A copy of the current certificate of title for all land to which the permit sought is to relate (available from Service Tasmania or from <a href="www.thelist.tas.gov.au">www.thelist.tas.gov.au</a>).
- (c) Either:
  - a basic floor plan of the existing habitable building(s) to scale, including identification of the gross floor area for the proposed change of use to visitor accommodation, or
  - (ii) a signed declaration by the applicant confirming the area of the existing habitable building(s) for the proposed change of use to visitor accommodation has a gross floor area<sup>3</sup> of not more than 200m<sup>2</sup>
- (d) Payment of the prescribed fee (up to \$250.00).

Failure to provide the required information may result in your application not being able to be accepted or processed

Application for Planning Permit for Change of Use to Visitor Accommodation

<sup>3</sup> Or floor area in the case of the Sullivans Cove Planning Scheme 1997.

#### **BUILDING SELF-ASSESSMENT FORM**

# Director's Determination – Short or Medium Term Visitor Accommodation Section 20(1)(e) of *Building Act 2016*

This building self-assessment form must be completed in the following situations where the property is used or intended to be used for visitor accommodation, and a fee is being charged for such use:

- > owner occupiers of residential premises of more than four bookable rooms, or
- investment properties or shacks (not occupied by the owner) that have a gross floor area of not more than 200m² per lot used for visitor accommodation.

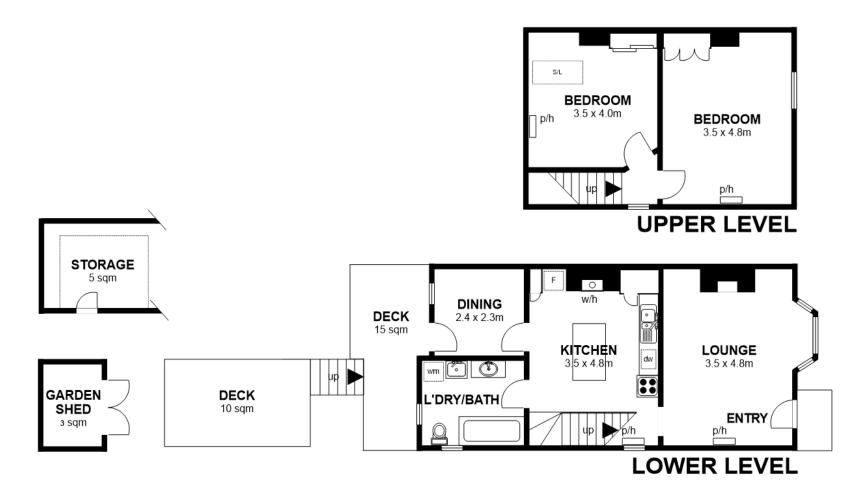
The completed form must be lodged with the relevant Permit Authority.

If any premises intended to be let for short-term visitor accommodation is a lot in a strata title scheme, and any other premises in that scheme are occupied as a residence by long term residents, the proponent is not permitted to use the building self-assessment process, unless the premises is located within Activity Area 1.0 Inner City Residential (Wapping) under the Sullivans Cove Planning Scheme 1997

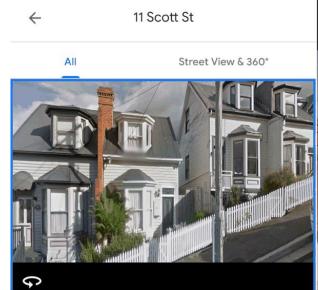
1997.						
To:			Perm	it Authority	/	
			Addre	ess		
			Subu	rb/postcod	le	
Owner / Occupi	er details:					
Only an owner or occupie	r may complete this form)					
Owner / Occupier: (Delete one not applicable)	Catherine Kerr					
Postal Address:	1A Paradise Ave			Phone No:	04118	859162
	Avalon Beach	2107				
Email address:	catherine@podfilm.com.au					
Address of Prop Accommodation	perty used or intended to be n:	used for V	isitor			
Street Address:	11 Scott Street					
	Glebe	7000				
Certificate of Title Reference No.						
Owner / Occupi	er Declaration:					
	occupier of the property, declare	that the pro	perty	meets t	he follo	owing minimu
	Name: [print]		Signed			Date
Owner/Occupier: (Delete one not applicable)	Catherine Kerr					30/3/22
Building Self-assessm	ent Form					1 of 3

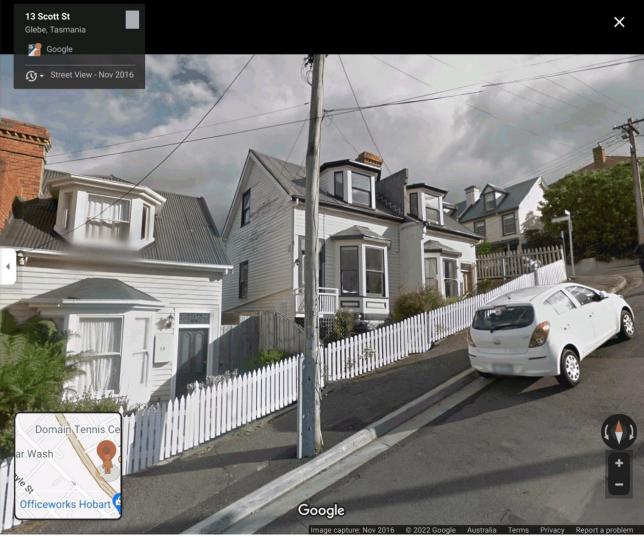
Occupar	ncy Permit:
(Must tick one)	
The owner of	or occupier is to declare that –
(a)	if an occupancy permit has been issued, the premises is fit for occupation consistent wit that permit, and the maximum number of occupants stated on the permit will not be exceeded;
OR	
□ (b)	an occupancy permit or occupancy certificate was not required (as the premises was constructed / altered before 1994).
Plumbin	g:
	or (b) and (c) or (d))
The owner of	or occupier is to declare that –
(a) OR	the premises is connected to a reticulated sewerage system;
	the premises is connected to an on-site wastewater management system that:
	<ul> <li>is in good working order and will be maintained to perform to the same standard as it was designed; and</li> </ul>
	<ul> <li>has a land application distribution area designed, installed and in good serviceable condition; and</li> </ul>
	<ul> <li>the maximum number of occupants of the premises the system is designed for is no exceeded; and</li> </ul>
	there is a maintenance contract in place for the servicing of the system.
(c)	the premises is connected to a reticulated drinking water supply system;
OR	
(d)	a private drinking water supply (including from a tank, well, dam, etc.) is provided for the premises that meets the requirements of the <i>Public Health Act 1997</i> .
Essentia	l Building Services:
(Must tick one)	
The owner of	or occupier is to declare that –
(a)	regarding Essential Building Services, the premises has an approved schedule of maintenance, and fire safety features are maintained in accordance with Part 7 (regulations 72 to 78) of the <i>Building Regulations 2016</i> and the Director's Maintenance of Prescribed Essential Building Services Determination;
OR	
(b)	the premises is not required to have an approved essential maintenance schedule, but the following fire safety features are installed and maintained in accordance with manufacturer's instructions:
	<ul> <li>a smoke alarm with a 10-year non-removable lithium battery, or</li> <li>a hard wired smoke alarm (and are interconnected where there is more than one alarm fitted);</li> </ul>
	<ul> <li>(a) if any storey of the premises contains a bedroom –</li> <li>(i) installed in every corridor, or hallway, situated in the storey, that is associated with a bedroom; and</li> </ul>

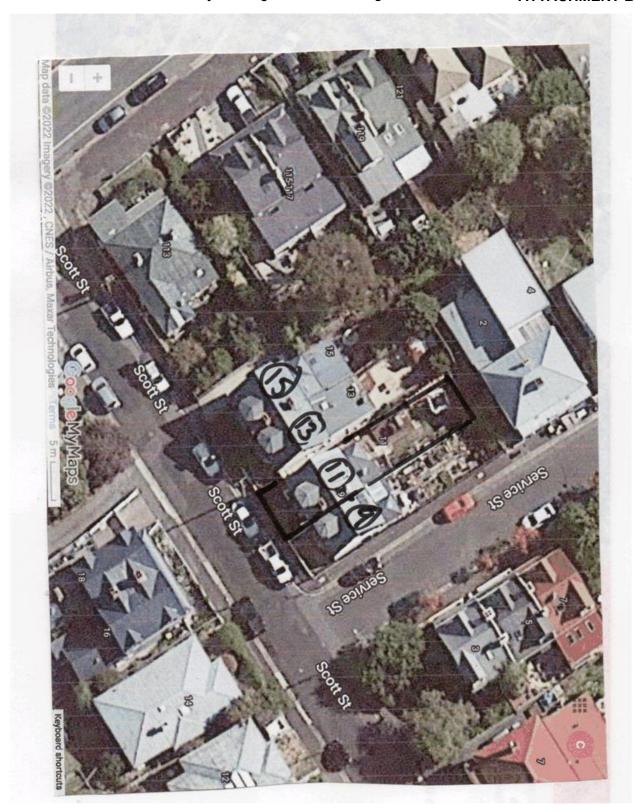
- (ii) if there is no corridor, or hallway, situated in the storey, that is associated with a bedroom, between that part of the premises containing the bedroom and the remainder of the premises; and
- (b) in any other storey of the premises that does not contain a bedroom.
- If multistorey premises are let for visitor accommodation:
  - i. emergency evacuation lighting is provided; and
  - ii. exits are provided that are clearly marked and mapped for the visitor.













### **RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



#### SEARCH OF TORRENS TITLE

VOLUME	FOLIO
56722	2
EDITION	DATE OF ISSUE
10	05-May-2022

SEARCH DATE : 11-Jul-2022 SEARCH TIME : 10.08 PM

### DESCRIPTION OF LAND

City of HOBART

Lot 2 on Strata Plan 56722 (formerly being STR2942) and a general unit entitlement operating for all purposes of the Strata Scheme being a 1 undivided 1/2 interest Derived from Strata Plan 56722 Derivation: Part of 10 Acres Gtd. to J. Whyte and Anor. Prior CT 4661/19

#### SCHEDULE 1

M957402 TRANSFER to GRAHAM BERRY STUART and CATHERINE MARY KERR Registered 05-May-2022 at 12.01 PM

#### SCHEDULE 2

Reservations and conditions in the Crown Grant if any
The registered proprietor holds the lot and unit entitlement
subject to any interest noted on common property
Folio of the Register volume 56722 folio 0

### UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations



### **RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



#### SEARCH OF TORRENS TITLE

VOLUME	FOLIO
56722	0
EDITION	DATE OF ISSUE
3	08-Sep-1999

SEARCH DATE : 11-Jul-2022 SEARCH TIME : 10.08 PM

### DESCRIPTION OF LAND

City of HOBART

The Common Property for Strata Scheme 56722 (formerly being

STR2942)

Derivation: Part of 10 Acres Gtd. to J. Whyte and Anor.

Prior CT 4327/2

### SCHEDULE 1

STRATA CORPORATION NO. 56722, 9 & 11 SCOTT STREET, HOBART

### SCHEDULE 2

Reservations and conditions in the Crown Grant if any

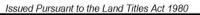
### UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations



## **FOLIO PLAN**

RECORDER OF TITLES





OLDER S		Conveyancing and Law of Property Act 1884		
	LES S	STRATUM PLAN	No. 2942	
MAN	With "		Sheet 1 of 4. Sheets	
	City or Town HOBAR1		REGISTERED NUMBER	
	Locality GLEBE		56722	
	Reference to Title 4327-2			
	Site comprises the whole portion of Lot	on Plan Diagram No.	43570 in the	
	Lands Titles Office			
_	The name of the building is	9 & 11 SCOTT STREET, HOBAR	RT	
	N SITE PLAN SCALE 1: 200 MEASUREMENTS IN METRES			
External surface boundaries of the site and the location of the building	( D. GAOA)	SERVICE		
in relation thereto to be delineated in this space		lova Z	RECY	
		ned to the second		
	(D. 1574G)	(not supply supp	SRE!	
	REGISTERED this	15 day of MA.	Muhl D2 90, No. 2942	
	This plan is lodged for registratio		Muhilohan	

Search Date: 11 Jul 2022

Search Time: 10:09 PM

CLERK WALKER & STOPS.

Volume Number: 56722

Revision Number: 01

Recorder of Titles

Page 1 of 4

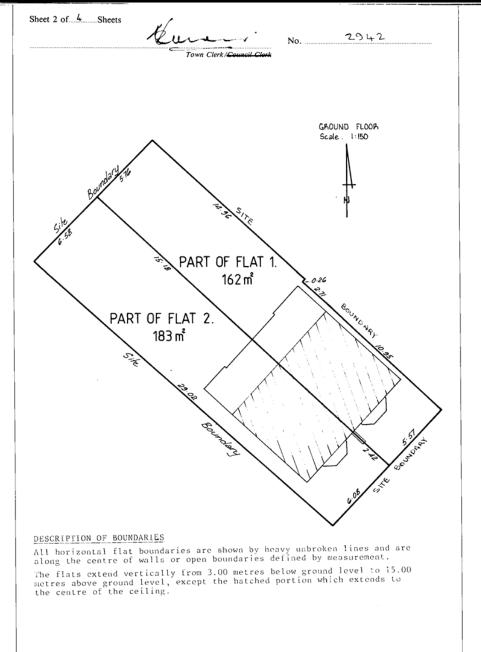


### **FOLIO PLAN**

RECORDER OF TITLES







Search Date: 11 Jul 2022

Search Time: 10:09 PM

Volume Number: 56722

Revision Number: 01

Page 2 of 4



### **FOLIO PLAN**

RECORDER OF TITLES

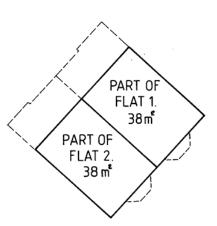
Issued Pursuant to the Land Titles Act 1980



If further sheets are required to illustrate the flats, the sheets should be pinned here. Further sheets must be of paper supplied for the purpose Recorder of Titles and bearing his seal, and be numbered consecutively, commencing from sheet 4. No. 2942 Sheet 3 of 4 Sheets

FIRST FLOOR.

Scale. 1:150.



#### DESCRIPTION OF BOUNDARIES

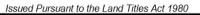
All borizontal flat boundaries are shown by heavy unbroken lines and are along the centre of walls.

The flats extend vertically from the centre of the floor to  $15.00\,\mathrm{metres}$  above ground level.



## **FOLIO PLAN**

RECORDER OF TITLES





	4	Bure	No291+2
		Town Clerk   Council Clerk	
The address for service of notices on the company is:—		service of notices on the	SURVEYOR'S CERTIFICATE
9/11 SCOTT STREET  GLEBE. 7000			I, John Leonard Cerulty  of Rosny Parh.  a surveyor registered under the Land Surveyor's  Act 1909, hereby certify that the building erected on the site described and delineated on
UNIT ENTITLEMENTS			sheet 1 of this plan is within the external boundaries of the title stated on sheet 1.
		FOR OFFICE USE ONLY	Dated this 4th day of Acces: 19 87.
			1
1	11	4661 - 18	office sulty Registered Surveyor
2	1	" - 19	COUNCIL CLERK'S CERTIFICATE
			I certify that the subdivision shown in this plan
			has been approved by the
			HOBART CITY Council
			Dated this 20th day of MARCH 1990
			Town Clerk (Council Clerk)
			For Office Use Only
			•
TOTAL	2		

# 7.1.5 11 AND 17 SMITHURST AVENUE, SOUTH HOBART - SUBDIVISION (BOUNDARY ADJUSTMENT)

PLN-21-716 - FILE REF: F22/94165

Address: 11 and 17 Smithurst Avenue, South Hobart

Proposal: Subdivision (Boundary Adjustment)

Expiry Date: 28 September 2022

Extension of Time:

Author: Richard Bacon

### RECOMMENDATION

That pursuant to the *Hobart Interim Planning Scheme 2015*, the Council refuse the application for a subdivision (boundary adjustment) at 11 and 17 Smithurst Avenue South Hobart TAS 7004 for the following reasons:

 The proposal does not meet the acceptable solution or the performance criteria with respect to Clause 10.6.1 A1 and P1 under the *Hobart Interim Planning Scheme 2015* because Lot 1 exceeds the maximum lot size and no site constraints have been demonstrated.

Attachment A: PLN-21-716 - 11 SMITHURST AVENUE SOUTH

HOBART TAS 7004 - Planning Committee or

Delegated Report !

Attachment B: PLN-21-716 - 11 AND 17 SMITHURST AVENUE

SOUTH HOBART TAS 7004 - CPC Agenda

Documents &

Attachment C: PLN-21-716 - 11 & 17 Smithurst Avenue, South

Hobart - Bushfire Assessment Report I Table 1



#### **APPLICATION UNDER HOBART INTERIM PLANNING SCHEME 2015**

Type of Report: Committee

Council: 26 September 2022 Expiry Date: 28 September 2022

Application No: PLN-21-716

Address: 11 SMITHURST AVENUE, SOUTH HOBART

17 SMITHURST AVENUE, SOUTH HOBART

Applicant: (Rogerson & Birch Surveyors)

Unit 1, 2 Kennedy Drive

Proposal: Subdivision (Boundary Adjustment)

Representations: NIL

Performance criteria: General Residential Zone Subdivision Standards

### 1. Executive Summary

- 1.1 Planning approval is sought for a subdivision (boundary adjustment) at 11 and 17 Smithurst Avenue South Hobart TAS 7004.
- 1.2 More specifically the proposal includes:
  - the subdivision of land, taking 3,954 square metres from the lot at No.11
     Smithurst Avenue, and adding it to No.17 Smithurst Avenue;
  - No.11 Smithurst Avenue would have a lot size of 43,990 square metres (4.399HA);
  - No.17 Smithurst Avenue would have a lot size of 16,970 square metres (1.697HA).
- 1.3 The proposal relies on performance criteria to satisfy the following standards and codes:
  - 1.3.1 General Residential Zone Subdivision Lot Size
- 1.4 No representations were received during the statutory advertising period between the 16th and 30th March 2022.
- 1.5 The proposal is recommended for refusal.

1.6 The final decision is delegated to the Council, because of the officer recommendation of refusal.

### 2. Site Detail

- 2.1 The site is within the General Residential Zone.
- 2.2 The site was visited dated the 22nd March 2022.

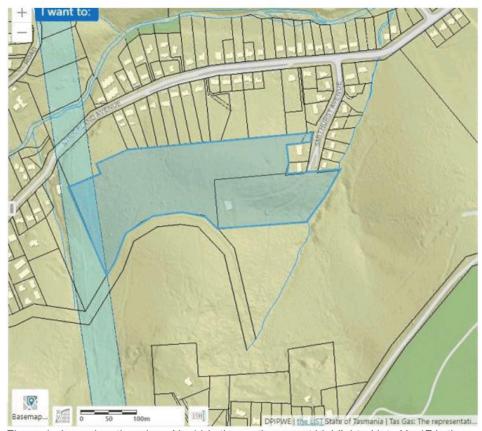


Figure 1 above: location plan. No.11 is the northernmost highlighted lot. No.17 is the southernmost highlighted lot.

The electricity transmission corridor is to the western end of No.11 Smithurst Avenue.



Figure 2 above: aerial photograph with 2 metre contours.

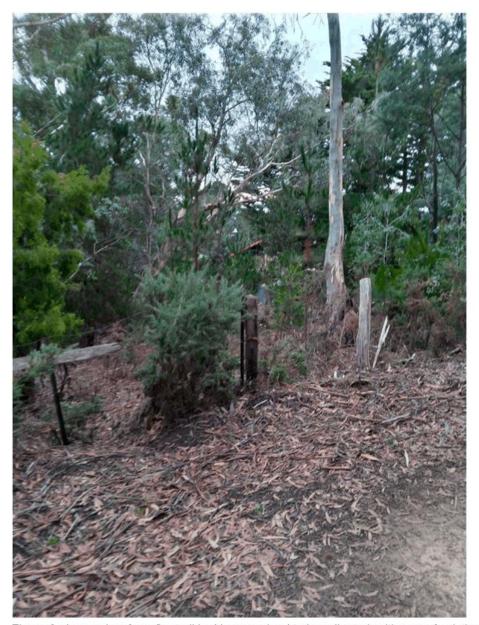


Figure 3 above: view from fire trail looking over land to be adjusted, with rear of existing dwelling at No.17 Smithurst Avenue barely visible to the eastern background.

## 3. Proposal

3.1 Planning approval is sought for a subdivision (boundary adjustment) at 11 and 17 Smithurst Avenue South Hobart TAS 7004.

- 3.2 More specifically the proposal is for:
  - the subdivision of land, taking 3,954 square metres from the lot at No.11 Smithurst Avenue, and adding it to No.17 Smithurst Avenue;
  - No.11 Smithurst Avenue would have a lot size of 43,990 square metres (4.399HA);
  - No.17 Smithurst Avenue would have a lot size of 16,970 square metres (1.697HA).

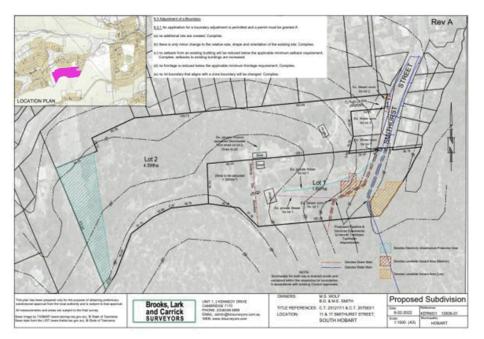


Figure 4 above: submitted plan.

## 4. Background

4.1 There appears no recent background under Council's records (Trim).

### 5. Concerns raised by representors

5.1 No representations were received during the statutory advertising period between the 16th and 30th March 2022.

#### 6. Assessment

- The Hobart Interim Planning Scheme 2015 is a performance based planning scheme. To meet an applicable standard, a proposal must demonstrate compliance with either an acceptable solution or a performance criterion. Where a proposal complies with a standard by relying on one or more performance criteria, the Council may approve or refuse the proposal on that basis. The ability to approve or refuse the proposal relates only to the performance criteria relied on.
- The site is located within the General Residential Zone of the *Hobart Interim Planning Scheme 2015*.
- The existing and proposed use is dwellings. The existing use is a permitted use in the zone. The proposed use is a permitted use in the zone.
- 6.4 The proposal has been assessed against:
  - 6.4.1 Part D 10 General Residential Zone
  - 6.4.2 E7.0 Stormwater Management Code
  - 6.4.3 E1.0 Bushfire Prone Areas Code
  - 6.4.4 E3.0 Landslide Code
  - 6.4.5 E10.0 Biodiversity Code
  - 6.4.6 E11.0 Waterway and Coastal Protection Code
  - 6.4.7 E8.0 Electricity Transmission Infrastructure Protection Code
- The proposal relies on the following performance criteria to comply with the applicable standards:
  - 6.5.1 General Residential Zone:

Subdivision Lot Size - Part D 10.6.1 P1

- 6.6 Each performance criterion is assessed below.
- 6.7 Subdivision Lot Size Part D 10.6.1 P1
  - 6.7.1 The acceptable solution at clause 10.6.1 A1 requires as follows.

The size of each lot must comply with the minimum and maximum lot

sizes specified in Table 10.1, except if for public open space, a riparian or littoral reserve or utilities.

Table 10.1 requires a minimum lot size of 450 square metres and a maximum lot size of 1,000 square metres, not including any balance lot. The balance lot is regarded as the lot being subtracted from, in this case being Lot 2, 11 Smithurst Avenue, with a lot size of 43,990 square metres. Lot 1 measures 13,016 square metres as existing, and would increase by 3,954 square metres to a proposed size of 16,970 square metres (1.697 HA). Discretion is required for Lot 1.

- 6.7.2 The proposal includes a lot, not being a balance lot, in excess of 1,000 square metres in area.
- 6.7.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
- 6.7.4 The performance criterion at clause 10.6.1 P1 provides as follows:

The size of each lot must satisfy all of the following:

- (a) variance above the maximum lot size in Table 10.1 only to the extent necessary due to demonstrated site constraints;
- (b) be consistent with any applicable Local Area Objectives or Desired Future Character Statements for the area.
- 6.7.5 Assessment of the performance criterion follows.

The existing lot at No.11 Smithurst Avenue would increase by 30.4% from 13,016 square metres to 16,970 square metres (1.697 HA). The existing lot at No.17 Smithurst Avenue would decrease by 8.2% from 47,944 square metres to 43,990 square metres (4.399 HA).

The above Performance Criteria only allows variance above the maximum permitted lot size under (a) to the extent necessary due to demonstrated site constraints. The applicant does not put forward any reason for the variance although it is acknowledged that in a bushfire prone area, the westerly addition to Lot 1 would provide for a substantially increased buffer for the existing dwelling which is positioned to the far western end of that lot.

With regard to Performance Criteria (b), there are no Local Area Objectives or Desired Future Character Statements for the Zone.

The Zone Purpose Statements include as follows.

#### 10 1 1 1

To provide for residential use or development that accommodates a range of dwelling types at suburban densities, where full infrastructure services are available or can be provided.

#### 10.1.1.3

To provide for the efficient utilisation of services.

#### 10.1.1.4

To encourage residential development that respects the neighbourhood character.

#### 10.1.1.5

To provide a high standard of residential amenity.

It is acknowledged that both the properties are existing and longstanding, and in excess of the maximum lot size allowed in this zone.

It is also noted that under the Planning Scheme, Part C Special Provisions Clause 9.3.1 relates to minor boundary adjustments, and states as follows.

An application for a boundary adjustment is permitted and a permit must be granted if:

- (a) no additional lots are created;
- (b) there is only minor change to the relative size, shape and orientation of the existing lots;
- (c) no setback from an existing building will be reduced below the applicable minimum setback requirement;
- (d) no frontage is reduced below the applicable minimum frontage requirement; and
- (e) no lot boundary that aligns with a zone boundary will be changed.

No new lots would be created.

The proposed boundary adjustment while large at 3,954 square metres (0.3954 HA) would remain relatively minor given the resulting lot sizes of 11 Smithurst Avenue at 43,990 square metres (4.399HA) and 17 Smithurst Avenue at 16,970 square metres (1.697HA).

The boundary adjustment would allow for an expanded garden buffer to the western rear of the existing dwelling at No.17 Smithurst Avenue There is considered to be a significant change to the size, shape and

orientation of the two existing lots due to the size of the boundary adjustment which would be over 30% of the size of Lot 1 (please see below).

The altered boundary would not be adjacent to any existing buildings on site.

There would be no change to existing frontages.

No boundary that aligns with a lot zone boundary would be changed.

The total land area involved is 60,960 square metres or 6.096 HA. The existing lot at No.11 Smithurst Avenue is 47,944 square metres or 4.7944 HA.

The existing lot at No.17 Smithurst Avenue is 13,016 square metres or 1.3016 HA.

The boundary adjustment would measure 3,954 square metres or 0.3954 of a HA.

The boundary adjustment would measure under 6.5% of the total land area of the site.

As stated, there is considered to be a significant change to the size, shape and orientation of the two existing lots due to the size of the boundary adjustment which would be over 30% of the size of Lot 1.

The application amounts to the redistribution of a sizeable parcel of land between two large bushland lots. The lots are at present relatively isolated from road frontages and built up residential development. On the other hand, the zoning of General Residential requires a built up residential density of development in terms of approval of lot sizes.

In this case, the proposal is not considered likely to prejudice any future development of the land for General Residential purposes and densities. The practical outcome of the proposal is not considered to be a negative one. As stated, there may be some benefits in a bushfire prone area to having an enhanced buffer of land around the existing dwelling at No.17 Smithurst Avenue, which at present is to the far western end of that lot. The fact however remains that the proposal exceeds the maximum lot size for the Zone. As a consequence, the proposal cannot be recommended for approval.

Refusal is recommended on the following ground.

The proposal does not meet the acceptable solution or the performance criteria with respect to Clause 10.6.1 A1 and P1 under the Hobart Interim Planning Scheme 2015 because the size of Lot 1 exceeds the maximum lot size and no site constraints have been demonstrated.

6.7.6 The proposal does not comply with the performance criterion.

### 7. Discussion

- 7.1 Planning approval is sought for a subdivision (boundary adjustment) at 11 and 17 Smithurst Avenue South Hobart TAS 7004.
- 7.2 The application was advertised and no representations were received.
- 7.3 The proposal has been assessed against the relevant provisions of the planning scheme and is considered unacceptable in terms of the subdivision performance criteria.

7.4 The proposal has been assessed by other Council officers, including the Council's Development Engineer, Stormwater Services Engineer and Environmental Development Planner. The engineering officers have raised no objection to the proposal, subject to conditions.

The Environmental Development Planner recommends conditional approval, based on the Bushfire Assessment Report lodged on the 23rd August 2022.

The Environmental Development Planner comment is below.

#### Bushfire-Prone Areas Code

The Code applies because subdivision is proposed within a bushfire-prone area.

No exemptions apply (this is not considered adjustment of a boundary in accordance with clause 9.3).

The relevant standards are under clause E1.6 of the Code. With regard to E1.6.1 (hazard management areas), the application complies with acceptable solution A1(b). Both existing dwellings either have, or can be provided with, hazard management areas sufficient for BAL-19 separation. A small amount of vegetation clearing will be required for the HMA for the dwelling on Lot 1 (17 Smithurst Avenue). The proposed HMAs are contained on the subject land.

With regard to E1.6.2 (roads and driveways), the application complies with acceptable solution A1(a) because an accredited person has certified that there is insufficient increase in risk to warrant any specific additional access measures.

With regard to E1.6.3, A1/P1 is not applicable as the water main is more than 120m from all parts of the existing dwellings. The application complies with acceptable solution A2(b) as the BHMP requires new static water supplies for both dwellings in accordance with Table E5.

The BHMP requires the HMAs to be established, and the static water supplies installed, prior to sealing the new titles. A Part 5 Agreement is required to ensure continual maintenance of the HMAs can be enforced once the new titles have been issued.

7.5 Clause 9.3 Adjustment of Boundary under Part C Special Provisions under the Planning Scheme states as follows.

#### 9.3.1

An application for a boundary adjustment is permitted and a permit must be granted if:

- (a) no additional lots are created;
- (b) there is only minor change to the relative size, shape and orientation of the existing lots;
- (c) no setback from an existing building will be reduced below the applicable minimum setback requirement;
- (d) no frontage is reduced below the applicable minimum frontage requirement; and
- (e) no lot boundary that aligns with a zone boundary will be changed.

No new lots would be created.

The proposed boundary adjustment while large at 3,954 square metres (0.3954 HA) would remain relatively minor given the resulting lot sizes of 11 Smithurst Avenue at 43,990 square metres (4.399HA) and 17 Smithurst Avenue at 16,970 square metres (1.697HA).

The boundary adjustment would allow for an expanded garden buffer to the western side of the existing dwelling at No.17 Smithurst Avenue

There is considered to be a significant change to the size, shape and orientation of the two existing lots due to the size of the boundary adjustment which would be over 30% of the size of Lot 1 (please see below).

The altered boundary would not be adjacent to any existing buildings on site.

There would be no change to existing frontages.

No boundary that aligns with a lot zone boundary would be changed.

The existing lot at No.11 Smithurst Avenue would increase by 30.4% from 13,016 square metres to 16,970 square metres (1.697 HA).

The existing lot at No.17 Smithurst Avenue would decrease by 8.2% from 47,944 square metres to 43,990 square metres (4.399 HA).

The total land area involved is 60,960 square metres or 6.096 HA.

The existing lot at No.11 Smithurst Avenue is 47,944 square metres or 4.7944 HA. The existing lot at No.17 Smithurst Avenue is 13,016 square metres or 1.3016 HA. The boundary adjustment would measure 3,954 square metres or 0.3954 of a HA. The boundary adjustment would measure under 6.5% of the total land area of the site.

In conclusion, there is considered to be a significant change to the size, shape and orientation of the two existing lots due to the size of the boundary adjustment which would be over 30% of the size of Lot 1.

7.6 The westernmost edge of No.17 Smithurst Avenue is subject to an Electricity Transmission Corridor (ETC) Overlay. The easternmost edge of the corridor is some 150 metres from the alignment of the proposed boundary adjustment. The proposal is not considered to raise any concern or requirement for action with regard to provisions under E8.0 Electricity Transmission Infrastructure Protection Code under the Scheme.

Clause E8.5.2 requires the following:

In the case of development within the electricity transmission corridor, but outside the inner protection area, the applicant must demonstrate, to the satisfaction of the planning authority that, prior to submission of its application, it has notified, in writing, the electricity transmission entity of the substance and extent of its proposed use or development.

The applicant has provided a declaration that it has notified the electricity transmission entity dated the 8th February 2022 and received dated the 9th February 2022.

The application is therefore 'VALID' as of the 9th February 2022.

7.7 The applicant has granted extensions of time to allow Council consideration of the proposal.

The applicant dated 7th April 2022 requested the application be put on hold pending the submission of further bushfire information (to be informally lodged). As stated the Bushfire Assessment Report was lodged dated the 23rd August 2022.

The applicant has consented to a number of extensions of time, taking the expiry date to the 28th September 2022.

7.8 The proposal is recommended for refusal.

## 8. Conclusion

8.1 The proposed subdivision (boundary adjustment) at 11 and 17 Smithurst Avenue South Hobart TAS 7004 does not satisfy the relevant provisions of the *Hobart Interim Planning Scheme 2015*, and as such is recommended for refusal.

#### 9. Recommendations

That: Pursuant to the *Hobart Interim Planning Scheme 2015*, the Council refuse the application for a subdivision (boundary adjustment) at 11 and 17 Smithurst Avenue South Hobart TAS 7004 for the following reasons:

The proposal does not meet the acceptable solution or the performance criteria with respect to Clause 10.6.1 A1 and P1 under the Hobart Interim Planning Scheme 2015 because Lot 1 exceeds the maximum lot size and no site constraints have been demonstrated.



As signatory to this report, I certify that, pursuant to Section 55(1) of the Local Government Act 1993, I hold no interest, as referred to in Section 49 of the Local Government Act 1993, in matters contained in this report.

(Ben Ikin)

**Senior Statutory Planner** 

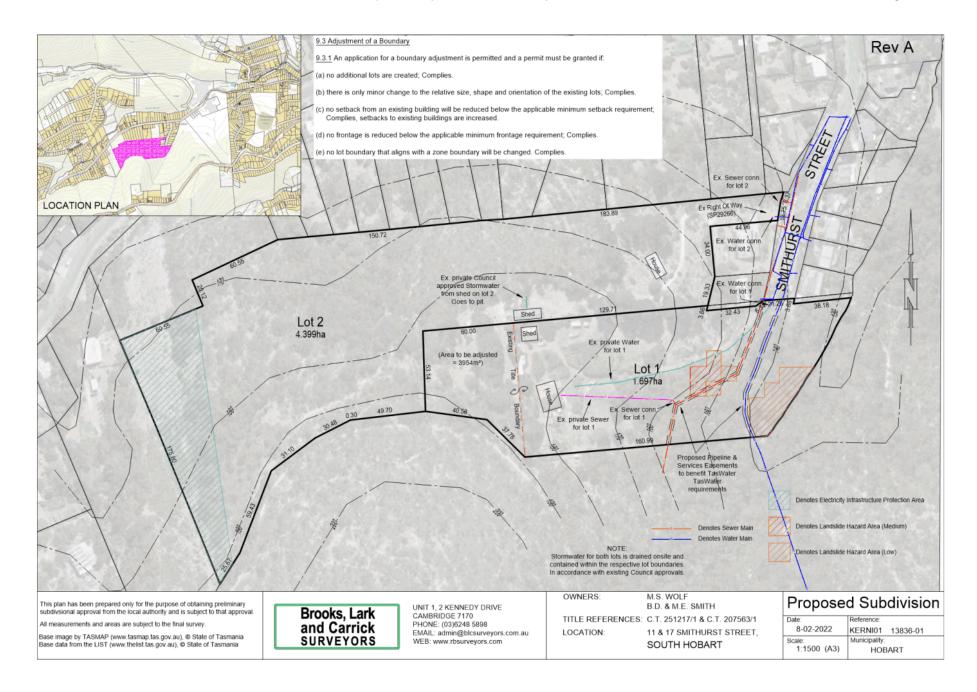
As signatory to this report, I certify that, pursuant to Section 55(1) of the Local Government Act 1993, I hold no interest, as referred to in Section 49 of the Local Government Act 1993, in matters contained in this report.

Date of Report: 1 September 2022

### Attachment(s):

Attachment B - CPC Agenda Documents

Attachment C - Bushfire Assessment Report lodged 23rd August 2022.



# Page 871 ATTACHMENT B

**Brooks, Lark and Carrick** 

ABN 65 117 559 029

LAND & ENGINEERING SURVEYORS

DAVID B. MILLER (B. Surv.) REGISTERED LAND SURVEYOR (DIRECTOR) UNIT 1, 2 KENNEDY DRIVE CAMBRIDGE TAS 7170 TELEPHONE: (03) 6248 5898

"THE STRIDES BUILDING", 3-5 WILMOT ROAD, HUONVILLE TELEPHONE: (03) 6264 1722 (Thursdays)

SORELL TELEPHONE: (03) 6265 2208

KERNIO I / DM

8 February, 2022

Hobart City Council GPO Box 503 HOBART TAS 7001

Dear Sir/Madam

RE: PROPOSED SUBDIVISION (BOUNDARY ADJUSTMENT) – 11 & 17 SMITHURST STREET, SOUTH HOBART – PLN-21-716

Further to Council correspondence requiring further information dated 2/12/2021 we advise the following in relation to Council's dot points;

- We do not appear to have received the request from TasWater. However we have shown existing TasWater infrastructure within the site on our amended Plan of Subdivision labelled "Rev A" and dated 8/2/2022. We also include on the plan proposed easements over that infrastructure to TasWater requirements.
- See attached Plan of Subdivision labelled "Rev A" and dated 8/2/2022 which includes details on public and private servicing.
- We confirm that no native vegetation is proposed to be removed. In reference to the Waterway and Coastal Protection Code we confirm that no vegetation clearing or earthworks are proposed within the Waterway Protection Area.

Additionally, we advise that we have notified TasNetworks concerning this application in accordance with E8.5.2 of the scheme and enclose a copy of that correspondence here.

Please contact if you have any queries.

Yours Faithfully

David Miller

Item No. 7.1.5

## Agenda (Open Portion) City Planning Committee Meeting - 19/9/2022

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ATTACHMENT B

**Brooks, Lark and Carrick** 

ABN 65 117 559 029

LAND & ENGINEERING SURVEYORS

DAVID B. MILLER (B. Surv.) REGISTERED LAND SURVEYOR (DIRECTOR) UNIT 1, 2 KENNEDY DRIVE CAMBRIDGE TAS 7170 TELEPHONE: (03) 6248 5898

"THE STRIDES BUILDING", 3-5 WILMOT ROAD, HUONVILLE TELEPHONE: (03) 6264 1722 (Thursdays)

SORELL TELEPHONE: (03) 6265 2208

E-mail: admin@blcsurveyors.com.au

KERNI01/DM

8 February, 2022

TasNetworks PO Box 606 MOONAH TAS 7009

Dear Sir/Madam

RE: PROPOSED SUBDIVISION (BOUNDARY ADJUSTMENT) – 11 & 17 SMITHURST STREET, SOUTH HOBART – PLN-21-716

We advise we are lodging a planning application with the Hobart City Council for a boundary adjustment of No.11 and 17 Smithurst Avenue South Hobart. We have enclosed our plan showing the proposed adjustment here.

The Council have advised us of the following;

"Under the Hobart Interim Planning Scheme 2015, the Electricity Transmission Infrastructure Protection Code Clause E8.5.2 requires that: In the case of development within the electricity transmission corridor, but outside the inner protection area, the applicant must demonstrate, to the satisfaction of the planning authority that, prior to submission of its application, it has notified, in writing, the electricity transmission entity of the substance and extent of its proposed use or development."

This letter serves as notification in accordance with that clause.

Please note that no works are proposed within the Electricity Transmission Corridor with the application. Please also note that there is no change of use proposed with this application. The application proposes to adjust boundaries between the properties some 150m distant from the corridor.

Please contact if you have any queries.

Yours Faithfully

- David Miller

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ATTACHMENT B

**Brooks, Lark and Carrick** 

ABN 65 117 559 029

LAND & ENGINEERING SURVEYORS

DAVID B. MILLER (B. Surv.)
REGISTERED LAND SURVEYOR
(DIRECTOR)

UNIT 1, 2 KENNEDY DRIVE CAMBRIDGE TAS 7170 TELEPHONE: (03) 6248 5898

"THE STRIDES BUILDING", 3-5 WILMOT ROAD, HUONVILLE TELEPHONE: (03) 6264 1722 (Thursdays)

SORELL TELEPHONE: (03) 6265 2208

E-mail: admin@blcsurveyors.com.au Our Reference: KERNI01 20th October 2021 / seh

Hobart City Council Town Hall, Macquarie Street GPO Box 503 HOBART TAS 7001

Dear Sir/Madam

## RE: PROPOSED BOUNDARY ADJUSTMENT - 11 & 17 SMITHURST AVENUE, SOUTH HOBART.

Further to our clients' instructions, please find attached:

- 1. A copy of the above-named proposed subdivision plan.
- 2. A copy of the relevant titles.

Your advice in relation to necessary Council fees is requested.

We advise that on receipt of Council's invoice, we will forward same to our client for payment.

The intent of the application is to adjust the boundaries between No. 11 and No.17 Smithurst Avenue as shown on the enclosed plan. We consider that the application can be dealt with under clause 9.3.1 of the scheme.

Should you have any queries or require any further information, please do not hesitate to contact our office.

We now await your further advice.

Yours Faithfully

Inutton David Miller



## RESULT OF SEARCH

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



### SEARCH OF TORRENS TITLE

VOLUME	FOLIO
251217	1
EDITION 2	DATE OF ISSUE 15-Jan-2016

SEARCH DATE : 22-Oct-2021 SEARCH TIME : 10.11 AM

## DESCRIPTION OF LAND

City of HOBART Lot 1 on Plan 251217 Derivation : Part of 200 Acres and of 2,000 Acres Gtd. to P. Degraves. Prior CT 4285/36

## SCHEDULE 1

E27035 ASSENT to MILAN STEPHEN WOLF Registered 15-Jan-2016 at 12.01 PM  $\,$ 

### SCHEDULE 2

Reservations and conditions in the Crown Grant if any BURDENING EASEMENT: Right of Carriageway [appurtenant to Lot 1 on Sealed Plan No. 29266) over the Right of Way passing through the said land within described.

### UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

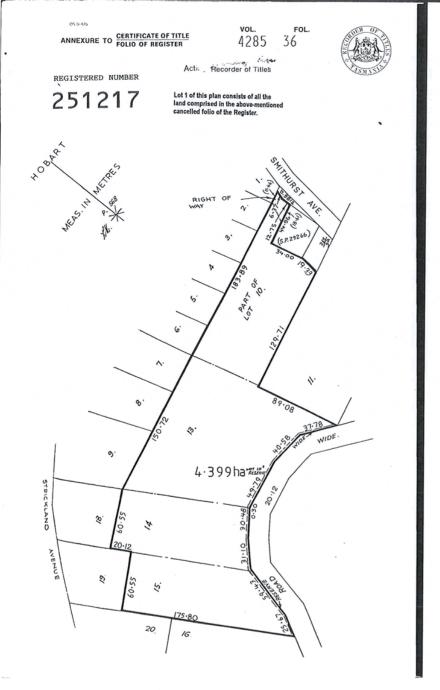


## **FOLIO PLAN**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980





Search Date: 22 Oct 2021

Search Time: 10:12 AM

Volume Number: 251217

Revision Number: 01

Page 1 of 1



## RESULT OF SEARCH

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



#### SEARCH OF TORRENS TITLE

VOLUME	FOLIO
207563	1
EDITION 2	DATE OF ISSUE 19-Aug-2019

SEARCH DATE : 22-Oct-2021 SEARCH TIME : 10.12 AM

## DESCRIPTION OF LAND

City of HOBART Lot 1 on Plan 207563 Derivation : Part of 20,000 Acres (Sec. B.) Gtd. to P. Degraves Prior CT 2368/84

#### SCHEDULE 1

M770198 TRANSFER to BENJAMIN DANIEL SMITH and MICHELLE ELIZABETH SMITH Registered 19-Aug-2019 at noon

## SCHEDULE 2

Reservations and conditions in the Crown Grant if any E189173 MORTGAGE to National Australia Bank Limited Registered 19-Aug-2019 at 12.01 PM

### UNREGISTERED DEALINGS AND NOTATIONS

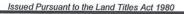
No unregistered dealings or other notations



R.P. 1470

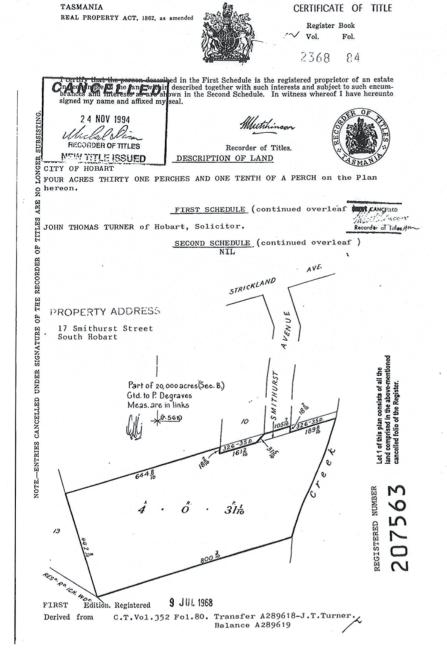
#### **FOLIO PLAN**

RECORDER OF TITLES



ORIGINAL - NOT TO BE REMOVED FROM TITLES OFFICE





Search Date: 22 Oct 2021

Search Time: 10:12 AM

Volume Number: 207563

Revision Number: 02

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ATTACHMENT B

Planning: #243914	
Property	
11 SMITHURST AVENUE SOUTH 1	HOBART TAS 7004
People	
Applicant	
Rogerson & Surveyors	
Unit 1, 2 Kennedy Drive	
CAMBRIDGE TAS 7170	
6248 5898 admin@rbsurveyors.com	
Owner *	
Michelle Smith	
17 Smithurst Avenue	
SOUTH HOBART TAS 7004 0438 652 682	
michelle_kem78@hotmail.com	
Owner	
*	
Benjamin Smith	
17 Smithurst Avenue	
SOUTH HOBART TAS 7004 0456 760 964	
999bensmith999@gmail.com	
Owner	
*	
Milan Wolf	
11 Smithurst Avenue SOUTH HOBART TAS 7004	
0432 685 583	
milanwolf68@gmail.com	
Entered By	
ROGERSON & BIRCH SURVEYORS 0362485898	
admin@rbsurveyors.com	
Use	
Other	

# Page 879 ATTACHMENT B

## Details

Have you obtained pre app	plication advice?	
• <sub>n</sub> No		
If YES please provide the p	pre application advice numbe	er eg PAE-17-xx
Accommodation Standards	s? Click on help information b	s defined by the State Government Visitor utton for definition. If you are not the owner of the e owner that they are aware of this application.
• "No		
ls the application for SIGNA number of signs under Oth *		ter \$0 in the cost of development, and you must enter the
• No		
If this application is related	to an enforcement action ple	ase enter Enforcement Number
Details		
What is the current approve	ed use of the land / building(s	)?
residential		
Please provide a full descr swimming pool and garage		development (i.e. demolition and new dwelling,
The intent of the application	on is to adjust the boundaries b	petween No 11 & No. 17 Smithurst Avenue.
Estimated cost of developr *	ment	
0.00		
Existing floor area (m2)	Proposed floor area	a (m2) Site area (m2)
Carparking on Site		
		N/A
Total parking spaces	Existing parking spaces	Other (no selection chosen)
Other Details		
Does the application include	de signage?	
*		
No		
How many signs, please en involved in this application?		
0		
Tasmania Heritage Re	egister	
Is this property on the Tasr Register?		
Documents		
Required Documents	3	
Title (Folio text and Plan and * C.T 251217-1.pdf	Schedule of Easements)	
Title (Folio text and Plan and	Schedule of Fasements)	

Item No. 7.1.5

# Agenda (Open Portion) City Planning Committee Meeting - 19/9/2022

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ATTACHMENT B

*
C.T 207563-1.pdf
Plans (proposed, existing) *
Proposed Subdivision Plan - 17 Smithurst Avenue, South Hobart.pdf
Covering Letter
Correspondence - 11 & 17 Smithurst Avenue, South Hobart, pdf

Hobart City Council 16 Elizabeth Street, Hobart 7000

## Tax Invoice Official Receipt

ABN: 39 055 343 428

25/10/2021

Receipt No: 376840

Rogerson & Birch Surveyors
To: Unit 1, 2 Kennedy Drive
CAMBRIDGE TAS 7170

Description Reference \$ 300.00 \$ 400.00 Planning Permit Fee Planning Permit Advertising Fee\*

\$ 700.00  $\mathbf{Transaction} \; \mathbf{Total}^{\star} \mathbf{:}$ Includes GST of: \$ 36.36

Cheque payments subject to bank clearance

Enquiries to: City Planning Phone: (03) 6238 2715

Email: coh@hobartcity.com.au

## PAYMENT SUMMARY

ABN: 39 055 343 428

**PLEASE NOTE:** Payments can **only** be made via Council's online development portal payment gateway or by calling Customer Services on (03) 6238 2190.

25/10/2021

YOUR REFERENCE ONLY: KERNI01

Rogerson & Birch Surveyors
To: Unit 1, 2 Kennedy Drive
CAMBRIDGE TAS 7170

Planning Permit Fee \$300.00
Planning Permit Advertising Fee\* \$400.00

Total\*: \$700.00
Includes GST of: \$36.36

Tax Receipt will be issued on payment.



## **Submission to Planning Authority Notice**

					-	
Council Planning Permit No.	PLN-21-716		Cou	ncil notice date	26/10/2021	
TasWater details						
TasWater Reference No.	TWDA 2021/01842-HCC		Date of response		17/02/2022	
TasWater Contact	Timothy Carr	Timothy Carr Phone No.		0419 306 130		
Response issued to						
Council name	CITY OF HOBART					
Contact details	coh@hobartcity.com.au					
Development deta	Development details					
Address	11 SMITHURST AVE, SOUTH HOBART			Prop	perty ID (PID)	7519788
Description of development  Subdivision and boundary adjustment						
Schedule of drawings/documents						
Prepared by Drawing/document No.				Revision No.	Date of Issue	
Brooks, Lark and Carrick Surveyors Proposed Subdivision			division		-	08/02/2022
Conditions						

Pursuant to the *Water and Sewerage Industry Act* 2008 (TAS) Section 56P(1) TasWater imposes the following conditions on the permit for this application:

In the event that any changes need to be made to the existing water and sewerage property connections, conditions 1-3 will apply.

#### CONNECTIONS, METERING & BACKFLOW

- A suitably sized water supply with metered connections and sewerage system and connections to the development must be designed and constructed to TasWater's satisfaction and be in accordance with any other conditions in this permit.
- Any removal/supply and installation of water meters and/or the removal of redundant and/or
  installation of new and modified property service connections must be carried out by TasWater at
  the developer's cost.
- Prior to commencing construction of the subdivision/use of the development, any water connection
  utilised for construction/the development must have a backflow prevention device and water meter
  installed, to the satisfaction of TasWater.

#### FINAL PLANS, EASEMENTS & ENDORSEMENTS

- Prior to the Sealing of the Final Plan of Survey, a Consent to Register a Legal Document must be
  obtained from TasWater as evidence of compliance with these conditions when application for
  sealing is made.
  - <u>Advice</u>; Council will refer the Final Plan of Survey to TasWater requesting Consent to Register a Legal Document be issued directly to them on behalf of the applicant.
- Pipeline easements to TasWater's satisfaction, must be created over any existing or proposed TasWater infrastructure and be in accordance with TasWater's standard pipeline easement conditions.
  - Advice; The easement over the DN300mm water main must be minimum of 6.0m.
- 6. Prior to the issue of a TasWater Consent to Register a Legal Document, the applicant must submit a



.dwg file, prepared by a suitably qualified person to TasWater's satisfaction, showing:

- a. the exact location of the existing water and sewerage infrastructure and including water and sewer property connections;
- b. the easement protecting that infrastructure.

The developer must locate the existing TasWater infrastructure and clearly show it on the .dwg file. Existing TasWater infrastructure may be located by a surveyor and/or a private contractor engaged at the developers cost.

#### **DEVELOPMENT ASSESSMENT FEES**

7. The applicant or landowner as the case may be, must pay a development assessment fee of \$219.04 and a Consent to Register a Legal Document fee of \$154.42 to TasWater, as approved by the Economic Regulator and the fees will be indexed, until the date paid to TasWater.

The payment is required within 30 days of the issue of an invoice by TasWater.

#### Advice

#### General

For information on TasWater development standards, please visit <a href="https://www.taswater.com.au/building-and-development/technical-standards">https://www.taswater.com.au/building-and-development/technical-standards</a>

For application forms please visit <a href="https://www.taswater.com.au/building-and-development/development-application-form">https://www.taswater.com.au/building-and-development/development-application-form</a>

#### Service Locations

Please note that the developer is responsible for arranging to locate the existing TasWater infrastructure and clearly showing it on the drawings. Existing TasWater infrastructure may be located by a surveyor and/or a private contractor engaged at the developers cost to locate the infrastructure.

The location of this infrastructure as shown on the GIS is indicative only.

- (a) A permit is required to work within TasWater's easements or in the vicinity of its infrastructure. Further information can be obtained from TasWater
- (b) TasWater has listed a number of service providers who can provide asset detection and location services should you require it. Visit <a href="https://www.taswater.com.au/Development/Service-location">www.taswater.com.au/Development/Service-location</a> for a list of companies
- (c) TasWater will locate residential water stop taps free of charge
- (d) Sewer drainage plans or Inspection Openings (IO) for residential properties are available from your local council.
- (a) proposed finished surface levels over the pipe;
- (b) The line of influence from the base of the footing must pass below the invert of the pipe and be clear of the pipe trench and:
- (c) A note on the plan indicating how the pipe location and depth were ascertained.
- (d) The location of the property service connection and sewer inspection opening (IO).

#### Declaration

The drawings/documents and conditions stated above constitute TasWater's Submission to Planning Authority Notice.

### Authorised by



Jason Taylor

Development Assessment Manager

TasWater Contact Details						
Phone	Phone 13 6992 Email development@taswater.com.au					
Mail	GPO Box 1393 Hobart TAS 7001	Web	www.taswater.com.au			

Brooks, Lark and Carrick SURVEYORS

## **BUSHFIRE ASSESSMENT**

Proposed Boundary Adjustment

Address: 11 and 17 Smithurst Avenue, South Hobart

Title Reference: C.T.251217/1 (#11) & C.T.207563/1 (#17)



Prepared by James Rogerson, Bushfire Hazard Practitioner (BFP-161)

VERSION – 02 Date: 08/08/2022

11 and 17 Smithurst Avenue 08/08/2022 v02 Page 1 | 29

Brooks, Lark and Carrick SURVEYORS

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Disclaimer: The information contained within this report is based on the instructions of AS 3959-2018 the standard states that "Aithough this Standard is designed to improve the performance of building when subjected to bushfire attach in a designated bushfire-prone area there can be no guarantee that a building will survive a bushfire event of every occasion. This is substantially due to the degree of vegetation management, the unpredictable nature and behaviour of fire and extreme weather conditions." (Standards Australia Limited, 2011)

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## 1 INTRODUCTION

## 1.1 Background

This Bushfire Hazard Report and associated Bushfire Hazard Management Plan (BHMP) has been prepared by James Rogerson of Brooks, Lark and Carrick Surveyors on behalf of the proponent to form part of supporting documentation for the proposed boundary adjustment of 11 and 17 Smithurst Avenue, South Hobart.

Under the Hobart Interim Planning Scheme 2015, E1.0 Bushfire-Prone Areas Code it is a requirement that a subdivision application within a bushfire-prone area must accomplish a minimum Bushfire Attack Level (BAL) rating of BAL-19 for all future dwellings on newly formed allotments. This report also includes an associated BHMP which is also a requirement under E1.0. Noting that a boundary adjustment is considered to be a subdivision even if it would not create additional lots.

The proposed development is within a Bushfire-Prone Area overlay and there is bushfire-prone vegetation within the site and 100m from the site. Therefore, this site is within a bushfire-prone area.

## 1.2 Scope

This Bushfire Report offers an investigation and assessment of the bushfire risk to establish the level of bushfire threat and vulnerability on the land for the purpose of subdivision. This report includes the following:

- A description of the land and adjacent land, and description of the use or development that may be at threat by a bushfire on the subject site;
- Calculates the level of a bushfire threat and offers opinions for bushfire mitigation measures that are consistent with AS3959:2018 and E1.0.
- Subdivision Proposal Plan (Appendix B)
- Bushfire Hazard Management Plan (Appendix C)
- Planning Certificate (Appendix D)

## 1.3 Scope of BFP Accreditation

I, James Rogerson am an accredited Bushfire Practitioner (BFP-161) to assess bushfire hazard and endorse BHMP's under the the *Chief Officers Scheme for the Accreditation of Bushfire Hazard Practitioners*. I have successfully completed the *Planning for Bushfire Prone Areas Short Course* at University of Technology Sydney.

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## 1.4 Limitations

The site assessment has been conducted and report written on the understanding that:

- The report only deals with the potential bushfire risk, all other statutory assessments are outside the scope of this report;
- The report only classifies the size, volume and status of the vegetation at the time the site assessment was conducted;
- Impacts on future development and vegetation growth have not been considered in this
  report. No action or reliance is to be placed on this report, other than which it was
  commissioned.

## 1.5 Proposal

The proposal is boundary adjustment of current title C.T.207563/1 (#17) taking approximately 3954m<sup>2</sup> off current title C.T.251217/1 (#11). See proposal plan (Appendix B).

## **2 PRE-FIELD ASSESSMENT**

## 2.1 Site Details

Table 1

Table 1	
Owner Name(s)	M. S. Wolf, B. D. & M. E. Smith
Location	11 and 17 Smithurst Avenue, South Hobart
Title Reference	C.T.251217/1 and C.T.207563/1
Property ID	7519788 5590089
Municipality	Hobart
Zoning	10.0 General Residential
Planning Overlays	116.FRE – Bushfire-Prone Areas, 116.LDS –
	Landslide Hazard Areas
Water Supply for Firefighting	Both properties are serviced by reticulated
	water.
Public Access	Access to the development is off Smithurst
	Avenue, via Strickland Avenue
Fire History	Recorded fires within and surrounding the
	site in 1966/67
Existing Development	Both properties have class1a dwellings,
	class10a sheds & concrete/bitumen
	driveways.

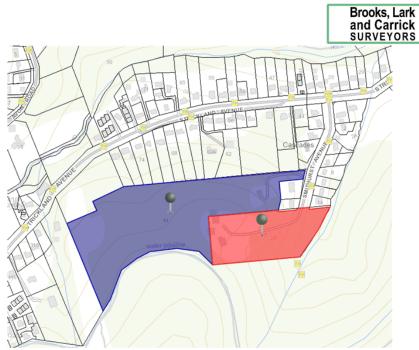


Figure 1 Location of subject site. Source: The LIST,  $\ensuremath{\mathbb{C}}$  State of Tasmania



Figure 2 Planning Scheme Zoning of site and surrounding properties. Source: The LIST, © State of Tasmania

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## 2.2 TasVeg 4.0

There are 1 classified vegetation community on the subject site, and 3 additional communities on the surrounding land and parcels. Figure 3 below shows the classified vegetation from TASVEG4.0 (Source: The LIST).

Please note that TASVEG4.0 classification does not necessarily reflect ground conditions.



Figure 3 TASVEG4.0 communities on subject site and surrounding land. FUR – Urban areas, DOB – Eucalyptus obliua dry forest, DTO – Eucalyptus tenuiramis forest and woodland on sediments, FAG – Agricultural land

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## **3 SITE ASSESSMENT**

The site assessment was conducted by James Rogerson (BFP-161) on the 16<sup>th</sup> of June 2022.

## 3.1 Bushfire Hazard Assessment

E1.0 Bushfire Prone Areas Code defines Bushfire-prone areas as follows;

- a) Land that is within the boundary of a bushfire-prone area shown on an overlay on a planning scheme map; or
- b) Where there is no overlay on a planning scheme map, or where the land is outside the boundary of a bushfire-prone area shown on such map, land that is within 100m of an area of bushfire –prone vegetation equal or greater than 1ha.

The subject site is within a bushfire-prone areas overlay for the Hobart Interim Planning Scheme 2015 and the subject site is within 100m of an area of bushfire-prone vegetation equal or greater than 1ha. Therefore, this proposed subdivision is within a bushfire-prone area as per the Hobart Interim Planning Scheme 2015.

For the purposes of the BAL Assessment, vegetation within 100m of the proposed subdivision site were assessed and classified in accordance with AS3959:2018 Simplified Procedure (Method 1) (relevant fire danger index: 50-which applies across Tasmania).

#### **BUSHFIRE THREAT DIRECTION**

Bushfire threat to this development is from the **FOREST** and **WOODLAND FUELS** within and surrounding the site.

**Prevailing Winds:** The prevailing winds for this site are primarily westerly, north westerly.

## 3.2 Vegetation and Effective Slope

Vegetation and relevant effective slopes within 100m of the proposed subdivision have been inspected and classified in accordance with AS 3959:2018. Effective Slope refers to the slope of the land underneath the classified bushfire-prone vegetation relative to the building site and not the slope between the vegetation and the building site. The effective slope affects a fires rate of spread and flame length and is an acute aspect of bushfire behaviour.

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#### WITHIN THE SITE & SITE DESCRIPTION

#### C.T.251217/1 No. 11

This property is a large developed General Residential zoned block. The site is located at the western side of South Hobart, southwest of the Cascades, north of the Waterworks Reserve and adjacent to the Pipeline Track. Terrain within is slopes in a north, northeasterly aspect and various grades.

This property is consisting of a class1a dwelling, various class10a sheds and a concrete driveway. The land surrounding the dwelling and in the access strip from the road is used as private open space and is also managed by regular mowing, cultivated gardens and noncombustible materials and is therefore classed as MANAGED LAND or LOW THREAT VEGETATION per Clause 2.2.3.2 (e)(f) of AS3959:2018. The land around the larger shed close to the boundary adjustment area and adjacent to No. 17 is also managed due to the same factors as above and is also classed as MANAGED LAND or LOW THREAT VEGETATION per Clause 2.2.3.2 (e)(f). The remainder of the property was covered with vegetation that various, with most of the vegetation being <10m high, 30% or less foliage cover with a clearly grassy or rocky understory and is classed as GROUP B WOODLAD per Table 2.3 of AS3959:2018. In the north, northwest of the property the vegetation is denser with some trees >10m high, foliage cover >30% and small scrubs and trees in the understory and is therefore classed as GROUP A FOREST per Table 2.3 of AS3959:2018. There is a small patch of unmanaged grass in the northwest corner pf the property. Due to this grass being unmanaged it's classed as GROUP G GRASSLAND per Table 2.3 of AS3959:2018.

#### C.T.207563/1 No. 17

This property is a large (but smaller than no. 11) developed General Residential zoned block. The terrain within the site generally slopes in an easterly aspect towards Smithurst Avenue, but also has some slope in a southerly aspect towards a gully.

This property is consisting of a class1a dwelling, various class10a sheds and a bitumen driveway. The land surrounding the dwelling is used as private open space and is also managed by regular mowing, cultivated gardens and non-combustible materials and is therefore classed as MANAGED LAND or LOW THREAT VEGETATION per Clause 2.2.3.2 (e)(f) of AS3959:2018. There is a patch of grass north of driveway that's adjacent to Lot 2 that appeared managed. However, there is potential for the fuel load to increase and is therefore classed as GROUP G GRASSLAND per Table 2.3 of AS3959:2018. The southeastern part of the site downslope >10°-15° is densely vegetated with trees that are >30m high and has a foliage cover of >30% and small scrubs and trees in the understory and is therefore classed as GROUP A FOREST per Table 2.3 of AS3959:2018. The area being adjusted which is upslope from the existing dwelling is less dense than the southeast portion. This area was vegetated with trees 10m or less in heigh, <30% foliage cover with a grassy/rocky understory and is therefore classed as GRIUP B WOODLAND per Table 2.3 of AS3959:2018.

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#### NORTH OF THE SITE

To the north of the existing dwelling with No. 11 within the 100m assessment zone is land that has been described above within No. 17.

To the north of the existing dwelling within N0. 17 within the 100m assessment zone is developed medium sized General Residential zoned lots 48, 62 and 62A Strickland Avenue. These three properties are consisting of class1a dwellings, class10a sheds/carports and a concrete driveway (for 62 and 62A). 48 does not have a driveway access. The land surrounding the dwellings is used as private open space and is also managed by regular mowing, cultivated gardens and non-combustible materials and is therefore classed as MANAGED LAND or LOW THREAT VEGETATION per Clause 2.2.3.2 (e)(f) of AS3959:2018. The remainder of these lots all at the rear and adjacent to No. 11 of the subject site, the land is vegetated with trees 10m or less in heigh, <30% foliage cover with a grassy understory and is therefore classed as GRIUP B WOODLAND per Table 2.3 of AS3959:2018.

#### **EAST OF THE SITE**

To the east of the main part of No. 11 downslope >10°-15° is two small developed General Residential blocks 13 and 15 Smithurst Avenue. Both properties are consisting of class1a dwellings, class10 sheds and a concrete driveway for No. 13 (off the access for No. 11). No. 15 does not have access off the road. Due to the small size of these properties, the whole sites are used as private open space and are therefore classed as MANAGED LAND or LOW THREAT VEGETATION per Clause 2.2.3.2 (e)(f) of AS3959:2018. And, per Bushfire Hazard Advisory Note No 1 (BHAN-01) version 3 08/11/2017. (BHAN-01) from the Tasmanian Fire Service (TFS) website.

BHAN-01 states that vegetation may be assumed low threat vegetation if located on land that meets the following criteria:

- a) The land is zoned Inner Residential, General Residential or Village;
- b) The land within any given title has a maximum area of 1,500m<sup>2</sup>; or
- c) The vegetation is on land that is shown on a bushfire prone areas map, endorsed by the TFS, as not being within a bushfire prone area.

As these properties meets a and b of the above it is justified that the site is classed as LOW THREAT VEGETATION or MANAGED LAND.

Further east of No. 11 across Smithurst Avenue downslope >5°-10° is more small developed General Residential properties 8-14 Smithurst Avenue. These properties are consisting of class1a dwellings, class10 sheds and all-weather and bitumen driveways. Due to the small size of these properties, the whole sites are used as private open space and are therefore classed as MANAGED LAND or LOW THREAT VEGETATION per Clause 2.2.3.2 (e)(f) of AS3959:2018. And, per BHAN-01.

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East of No. 17 downslope >10°-15° is No. 2 Strickland Avenue, which is part of land owned by the *Cascade Brewery Company*. The land in this part of the property is still zoned General Residential. However, it's undeveloped and is vegetated with dense trees and low scrub. The trees are predominately >10m high, with the foliage cover >30% with the understory consisting of low scrub and shrubs and is therefore classed as GROUP A FOREST per Table 2.3 of AS3959:2018. Noting that is land is >100m from the existing dwelling within No. 17.

#### **SOUTH OF THE SITE**

To the south of No. 11 within the 100m assessment zone is land within No. 17 has been previously described as per above.

South of No. 17 across slope and upslope is the same property a above (2 Strickland Avenue). This part of the property, however, is zoned as Environmental Living. It's also undeveloped and undeveloped and is vegetated with dense trees and low scrub. The trees are predominately >10m high, with the foliage cover >30% with the understory consisting of low scrub and shrubs and is therefore classed as GROUP A FOREST per Table 2.3 of AS3959:2018.

#### **WEST OF THE SITE**

To the west of the dwellings within No. 11 and No. 17 within the 100m assessment zone is land has been previously described that is within No. 11 and No. 17.

To the west of the site >100m from the dwellings is developed General Residential zoned properties 106, 114 and 114A Strickland Avenue. The land surrounding the dwellings is used as private open space and is also managed by regular mowing, cultivated gardens and non-combustible materials and is therefore classed as MANAGED LAND or LOW THREAT VEGETATION per Clause 2.2.3.2 (e)(f) of AS3959:2018. The remainder of these lots the land is vegetated with trees 10m or less in heigh, <30% foliage cover with a grassy understory and is therefore classed as GRIUP B WOODLAND per Table 2.3 of AS3959:2018

## **SOUTHWEST OF THE SITE**

Southwest of the site across slope and upslope is again land per of 2 Strickland Avenue. The Pipeline Track is passing through this piece of land also. The land here is within the Environmental Living zone and is undeveloped. The land is vegetated with trees 10m or less in heigh, <30% foliage cover with a grassy understory and is therefore classed as GRIUP B WOODLAND per Table 2.3 of AS3959:2018.

Figure 4 below shows the relationship between the subject site and the surrounding vegetation.

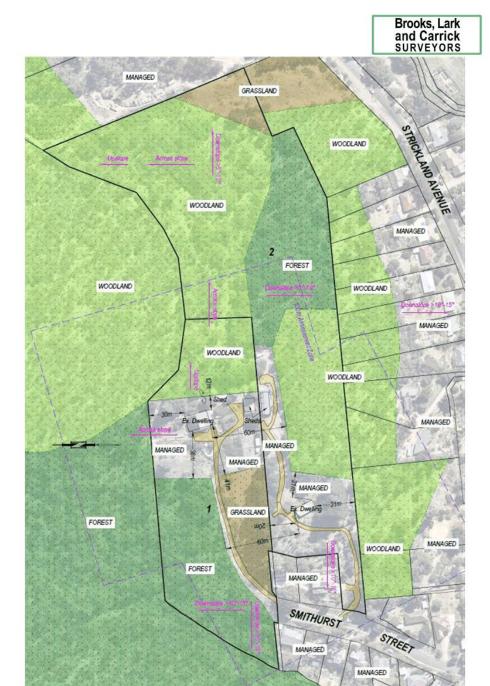


Figure 4 classified vegetation (within 100m of site) and existing separation from bushfire-prone vegetation (not to scale)

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## 3.3 Bushfire Attack Level (BAL)

Table 2 BAL rating for each lot and required separation distances

LOT 1 – EXISTING DWELLING						
DIRECTION OF SLOPE	N, NW	, NW E, NE S, SE		w, sw		
Vegetation Classification	MANAGED WOODLAND	MANAGED GRASSLAND FOREST	MANAGED FOREST WOODLAND	MANAGED WOODLAND		
Existing Horizontal distance to classified vegetation	60m-100m (B)	41m-100m (G) 38m-100m (A)	30m-50m (B) 50m-100m (A)	12mm-100m (B)		
Effective Slope under vegetation	Across slope, downslope >5°-10° & >10°-15°	Downslope >5°- 10° & >10°-15°	Across and upslope	Upslope & Across slope		
Exemption						
Current BAL value for each side of the site	BAL-12.5	BAL-29	BAL-19	BAL-29		
Separation distances to achieve BAL-19	28m	41m	23m	15m		
Separation distances to achieve BAL-12.5	40m	56m	32m	22m		

LOT 2 – EXISTING DWELLING						
DIRECTION OF SLOPE	N, NW	E, NE	S, SE	W, SE		
Vegetation Classification	MANAGED WOODLAND	MANAGED	MANAGED GRASSLAND FOREST	MANAGED WOODLAND		
Existing Horizontal distance to classified vegetation	30m-95m (G)	N/A	20m-54m (G) 60m-100m (A)	21m-100m (B)		
Effective Slope under vegetation	Downslope >10°-15°	Downslope >10°-15°	Across slope, Downslope >0°-5° (G). downslope >5°- 10° & >10°-15°	Upslope		
Exemption		(a)(e)(f)				
Current BAL value for each side of the site	BAL-19	BAL-LOW	BAL-12.5	BAL-19		
Separation distances to achieve BAL-19	28m	N/A	41m	15m		
Separation distances to achieve BAL-12.5	40m	N/A	56m	22m		

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## 3.4 Definition of BAL-LOW

Bushfire Attack Level shall be classified BAL-LOW per Section 2.2.3.2 of AS3959:2018 where the vegetation is one or a combination of any of the following Exemptions:

- a) Vegetation of any type that is more than 100m from the site.
- b) Single areas of vegetation less than 1 hectare in area and not within 100m of other areas of vegetation being classified.
- c) Multiple areas of vegetation less than 0.25 ha in area and not within 20m of the site, or each other.
- d) Strips of vegetation less than 20m in width (measured perpendicular to the elevation exposed to the strip of vegetation) regardless of length and not within 20m of the site or each other, or other areas of vegetation being classified.
- e) Non-vegetated areas, including waterways, roads, footpaths, buildings and rocky outcrops.
- f) Low threat vegetation, including grassland managed in a minimal fuel condition, maintained lawns, golf courses, maintained public reserves and parklands, vineyards, orchards, cultivated gardens, commercial nurseries, nature strips and windbreaks.

NOTE: Minimal fuel condition means there is insufficient fuel available to significantly increase the severity of the bushfire attack (recognizable as short-cropped grass for example, to a nominal height of 100mm).

The BAL level will also be classified as BAL-LOW if Grassland fuel is >50m from the site for any effective slope per Table 2.6 of AS3959:2018.

The greatest threat for BAL setbacks has been shown in the table above. (Steepest slope and forest fuel where applicable).

BAL ratings are as stated below:

BAL LOW	BAL 12.5	BAL 19	BAL 29	BAL 40	BAL FZ
There is insufficient	Ember	Increasing	Increasing	Increasing	Direct
risk to warrant any	attack	ember attack	ember attack	ember attack	Exposure to
specific construction	and radiant	and windborne	and windborne	and windborne	flames,
requirements, but	heat below	debris, radiant	debris, radiant	debris, radiant	radiant
there is still some	12.5 kW/m <sup>2</sup>	heat between	heat between	heat between	heat and
risk		12.5 kW/m <sup>2</sup>	19kW/m² and	29 kW/m² and	embers from
		and 19 kW/m2	29 kW/m2	40 kW/m².	the fire front
				Exposure to	
				flames from	
				fire front likely	

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## **4 BUSHFIRE PROTECTION MEASURES**

## 4.1 Hazard Management Areas (HMA)

Hazard Management Area as described in the Code "maintained in a minimal fuel condition and in which there are no other hazards present which will significantly contribute to the spread of a bushfire". Also as described from Note 1 of AS3959:2018 Clause 2.2.3.2 "Minimal fuel condition means there is insufficient fuel available to significantly increase the severity of the bushfire attack (recognizable as short-cropped grass for example, to a nominal height of 100 mm)".

#### Compliance

The building areas within the lots require a Bushfire Hazard Management Area to be established and maintained between the bushfire vegetation and the area at a distance equal to, or greater than specified for the Bushfire Attack Level in Table 2.6 of AS3959:2018.

Some requisite fuel removal is required for lot 1 to achieve BAL-19 compliance in east and west aspects.

Separation to the S, SE for lot 2 can't be achieved within the title boundary, it can be achieved however, through the combination of the HMA within the title boundary and the grassland fuel within lot 1.

The HMA's for both lots 1 and 2 need to be established prior to sealing of titles.

Due to existing developed land, some separation distances are already achieved for BAL-19.

Minimum separation distances for each lot are stated below.

LOT 1 – Separation Distances (Existing Dwelling)						
Aspect	N, NW	E, NE	S, SE	W, SW		
BAL-19	28m	41m	23m	15m		
BAL-12.5	40m	56m	32m	22m		

LOT 2 – Separation Distances (Existing Dwelling)						
Aspect	N, NW	E, NE	S, SE	W, SW		
BAL-19	28m	N/A	41m	15m		
BAL-12.5	40m	N/A	56m	22m		

The Tasmanian Fire Service provides the following advice regarding the implementation and maintenance of Hazard management areas:

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- · Removing of fallen limbs, sticks, leaf and bark litter
- · Maintaining grass at less than a 100mm height
- · Removing pine bark and other flammable mulch (especially from against buildings)
- Thinning out understory vegetation to provide horizontal separation between fuels
- Pruning low-hanging tree branches (<2m from the ground) to provide vertical separation between fuel layers
- Pruning larger trees to maintain horizontal separation between canopies
- Minimize the storage of flammable materials such as firewood
- · Maintaining vegetation clearance around vehicular access and water supply points
- Use of low-flammability species for landscaping purposes where appropriate
- Clearing out any accumulated leaf and other debris from roof gutters.

Additional site-specific fuel reduction or management may be required. An effective hazard management area does not require removal of all vegetation. Rather, vegetation must be designed and maintained in a way that limits opportunity for vertical and horizontal fire spread in the vicinity of the building being protected. Retaining some established trees can even be beneficial in terms of protecting the building from wind and ember attack

## 4.2 Public and Fire Fighting Access

#### **Public Access**

The proposed development fronts Smithurst Avenue, via Strickland Avenue, which are bitumen sealed public roads maintained by the Hobart Council. The approximate carriageway width of Smithurst Avenue is 7m and 10m for Strickland Avenue. No upgrades required to the public roads and therefore they comply with public access road requirements.

### **Property Access**

### **Current Conditions:**

Existing access to the dwelling within lot 1 (No. 17) is a bitumen driveway, which is fairly straight, with a slight curve at the commencement of the access. The driveway slopes up the site before flattening out adjacent to the dwelling in a parking and turning area. The approximate width of the carriageway is 3.5m-4m, with mainly clear verges for an approximate length of 140m before the parking and turning areas. After the 140m length of concrete, the access changes to all-weather to the large shed further to the west. This portion of access is variant to 2.5m to 4m wide in sections. This portion terminates behind the shed with a turning area that is sufficient for a fire appliance as its current parameters are approximately 11.5m x 5.5m.

The existing access to the dwelling within lot 2 (No. 11) is a concrete driveway, which curves its way up the site and goes past the dwelling, before changing to an all-weather access to reach the large shed. The approximate width of the carriage way is 3m, with clear verges with an approximate length (to the rear of the dwellings turning area) of 135m. The turning area in front of the dwelling is sufficient for a fire appliance to turn as its current parameters are approximately 19m x 7m.





Figure 5 – Part of existing access within lot 2

Figure 6 – Part of existing within lot 1



Figure 5a – Turning area within lot 2



Figure 6a – Turning area within lot 1

### Compliance:

It is deemed that there is insufficient increase in risk from bushfire to warrant specific measures for public access in the subdivision for the purposes of fire fighting.

As the existing driveways are well established and have cleared verges. Both lots have existing turning areas that have sufficient parameters for fire appliances to turn that are consistent with the Acceptable Solution, as both turning areas are greater than the minimum 8m x 4m per the Acceptable Solution.

### 4.3 Water Supply for Fire Fighting

### **Current Conditions:**

Site assessment confirmed the property is serviced by reticulated water. However, the hose lay from the hydrant to both dwellings exceeds the 120m (hose lay) length.  $^{\sim}160$ m for lot 2 and  $^{\sim}235$ m for lot 1.

### Compliance:

Both lots <u>must</u> be provided with a firefighting water supply that meet the requirements for Acceptable Solution A2 of section E1.6.3 and Table E5. Firefighting water supply requirements for both lots <u>must</u> be provided prior to sealing of titles. Static water supply requirements are outlined in Table 4 below which is per E1.6.3 and Table E5.

#### Table 4 - Requirements for Static Water Supply E1.6.3 and Table E5

- A. Distance between building area to be protected and water supply
  - a) the building area to be protected must be located within 90m of the fire fighting water point of a static water supply; and
  - b) the distance must be measured as a hose lay, between the fire fighting water point and the furthest part of the building area
- B. Static Water supplies
  - a) may have a remotely located offtake connected to the static water supply;
  - may be a supply for combined use (fire fighting and other uses) but the specified minimum quantity of fire fighting water must be available at all times;
  - must be a minimum of 10,000L per building area to be protected. This volume of water must not be used for any other purpose including fire fighting sprinkler or spray systems;
  - d) must be metal, concrete or lagged by non-combustible materials if above ground; and
  - e) If a tank can be located so it is shielded in all directions in compliance with section 3.5 of Australian Standard AS 3959-2009 Construction of buildings in bushfire-prone areas, the tank may be constructed of any material provided that the lowest 400mm of the tank exterior is protected by:
    - (i) metal;
    - (ii) non-combustible material; or
    - (iii) fibre-cement a minimum of 6mm thickness.
- Fittings, pipework and accessories (including stands and tank supports)
   Fittings and pipework associated with a fire fighting water point for a static water supply must:
  - (a) have a minimum nominal internal diameter of 50mm;
  - (b) be fitted with a valve with a minimum nominal internal diameter of 50mm;
  - (c) be metal or lagged by non-combustible materials if above ground;
  - (d) if buried, have a minimum depth of 300mm [S1];

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- (e) provide a DIN or NEN standard forged Storz 65mm coupling fitted with a suction washer for connection to fire fighting equipment;
- (f) ensure the coupling is accessible and available for connection at all times;
- (g) ensure the coupling is fitted with a blank cap and securing chain (minimum 220mm length);
- (h) ensure underground tanks have either an opening at the top of not less than 250mm diameter or a coupling compliant with this Table; and
- (i) if a remote offtake is installed, ensure the offtake is in a position that is:
  - (i) visible;
  - (ii) accessible to allow connection by fire fighting equipment;
  - (iii) at a working height of 450 600mm above ground level; and
  - (iv) protected from possible damage, including damage by vehicles.

### D. Signage for static water connections

The fire fighting water point for a static water supply must be identified by a sign permanently fixed to the exterior of the assembly in a visible location. The sign must:

- a) comply with water tank signage requirements within Australian Standard AS 2304-2011
   Water storage tanks for fire protection systems; or
- comply with the Tasmania Fire Service Water Supply Guideline published by the Tasmania Fire Service.

#### E. Hardstand

A hardstand area for fire appliances must be:

- a) no more than 3m from the fire fighting water point, measured as a hose lay (including the minimum water level in dams, swimming pools and the like);
- b) no closer than 6m from the building area to be protected;
- c) a minimum width of 3m constructed to the same standard as the carriageway; and
- d) connected to the property access by a carriageway equivalent to the standard of the property access.

### 4.4 Construction Standards

All future habitable buildings within the specified building areas on each lot must be designed and constructed to the minimum BAL ratings specified in the Bushfire Hazard Management Plan (Appendix C) and to BAL construction standards in accordance with AS3959:2018 or subsequent edition as applicable at the time of building approval.

The BAL-19 building setback lines on the BHMP defines the minimum setbacks for habitable buildings.

Future Class 10a buildings within 6m of the Class 1a dwelling must be constructed to the same BAL as the dwelling or provide fire separation in accordance with Clause 3.2.3 of AS3959:2018.

### **5 STATUTORY COMPLIANCE**

The applicable bushfire requirements are specified in State Planning Provisions E1.0 Bushfire-Prone Areas Code.

Clause	Compliance	
E1.4 Use or development exempt from this code	N/A	
E1.5.5 Use Standards		
E1.5.1 Vulnerable Uses	N/A	
E1.5.2 Hazardous Uses	N/A	
E1.6 Development Standards	s for Subdivision	
E1.6.1 Provision of Hazard Management Areas.	To comply with the Acceptable Solution A1, the proposed plan of subdivision must;  • Show building areas for each lot; and • Show hazard management areas between these building areas and that of the bushfire vegetation with the separation distances required for BAL 19 in Table 2.6 of Australian Standard AS 3959:2018 Construction of buildings in bushfire-prone areas.  The BHMP demonstrates that both lots can accommodate a BAL rating of BAL-19 with on-site vegetation managing/clearing for both lots. The HMA's for both lots need to be established prior to sealing of titles.  Subject to the compliance with the BHMP the proposal will satisfy the Acceptable Solution E1.6.1(A1)	
E1.6.2 Public and firefighting access; A1	The BHMP (through reference to section 4 of this report) specifies that there is insufficient increase in risk from bushfire to warrant specific measures for public access in the subdivision for the purpose of fire fighting.  Subject to the compliance with the BHMP the proposal satisfies the Acceptable Solution E1.6.2(A1).	
E1.6.3 A2 Provision of water supply for firefighting purposes.	Static water supply is required for all lots per E1.6.3 A2. Firefighting water supply requirements for both lots <u>must</u> be provided prior to sealing of titles.  Subject to the compliance with the BHMP the proposal satisfies the Acceptable Solution E1.6.3	

### 6 CONCLUSION & RECOMMENDATIONS

The proposed subdivision is endorsed that each lot can meet the requirements of Hobart Interim Planning Scheme 2015 and E1.0 Bushfire-prone Areas Code for a maximum BAL rating of BAL-19 for both lots. Providing compliance with measures outlined in the BHMP (Appendix C) and sections 4 & 5 of this report.

#### Recommendations:

- The HMA's within the subdivision be applied in accordance with section 4.1 of this report and the BHMP (Appendix C).
- Static water supply for both lots needs to be installed prior to sealing of titles.
- Hobart Council condition the planning approval on the compliance with the BHMP (as per Appendix C).

### **7 REFERENCES**

Department of Primary Industries and Water, The LIST, viewed July/August 2022, <a href="https://www.thelist.tas.gov.au">www.thelist.tas.gov.au</a>

Standards Australia, 2018, AS 3959:2018 – Construction of buildings in bushfire-prone areas, Standards Australia, Sydney.

Tasmanian Planning Commission, 2015, Sorell Interim Planning Scheme viewed July/August 2022, www.iplan.tas.gov.au

Building Act 2016. The State of Tasmania Department of Premier and Cabinet. https://www.legislation.tas.gov.au/view/html/inforce/current/act-2016-025

Building Regulations 2016. The State of Tasmania Department of Premier and Cabinet. https://www.legislation.tas.gov.au/view/html/inforce/current/sr-2016-110

### **8 APPENDIX A – SITE PHOTOS**



Figure 7 – Woodland fuel within area being adjusted, view facing  $\ensuremath{W}$ 



Figure 8 – Woodland fuel north of the dwelling in lot 2



Figure 9 – Forest fuel west of the dwelling in lot 2



Figure 10 – Managed land within lot 2 and woodland (left)



Figure 11 – Managed land and existing dwelling within lot 2, view facing NE  $\,$ 



Figure 12 – Managed land (foreground) and forest fuel (background) east of the site



Figure 13 – Forest fuel within lot 1, view facing south



Figure 14 – Low threat veg and managed land within lot 1, view facing SW

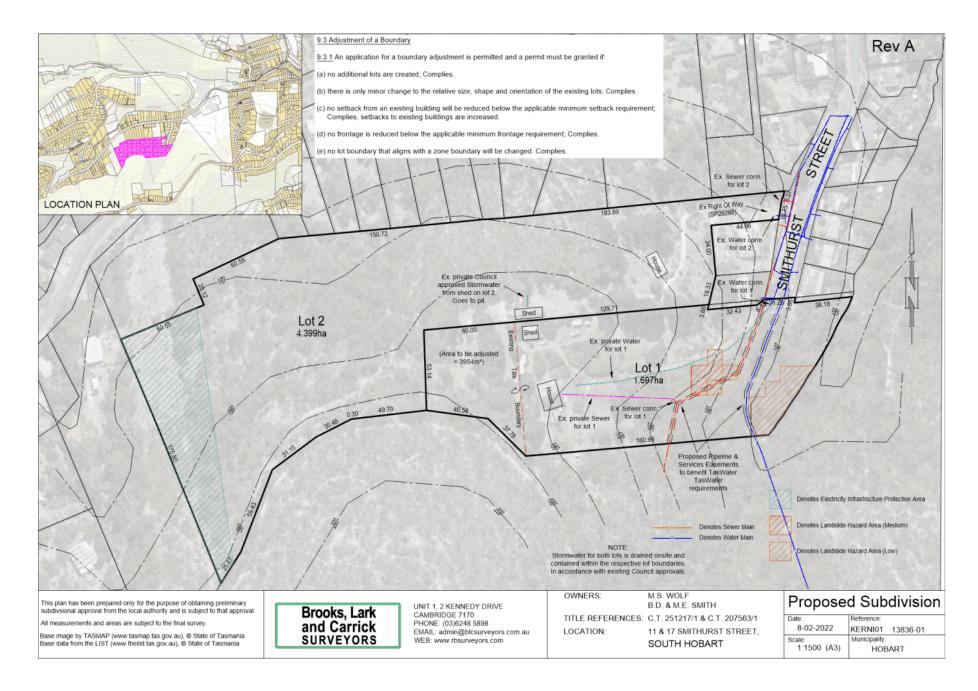


Figure 15 – Existing dwelling and managed land within lot 1, view facing SW

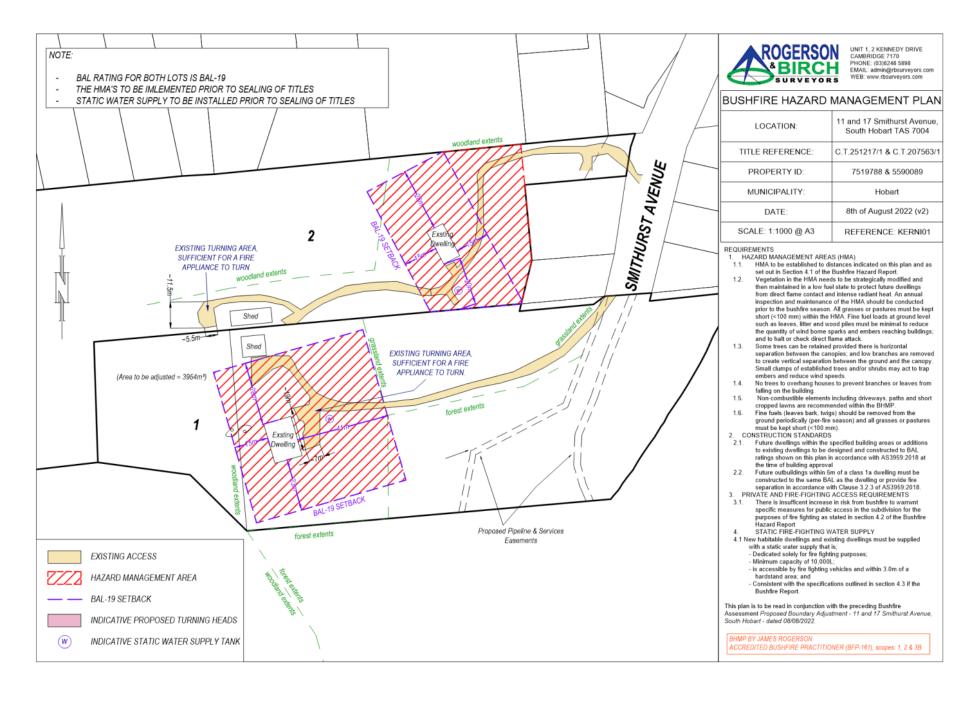


Figure 16 – Managed land within lot 1, view facing east

9 APPENDIX B - SUBDIVISION PROPOSAL PLAN



10 APPENDIX C - BUSHFIRE HAZARD MANAGEMENT PLAN



11 APPENDIX D - PLANNING CERTIFICATE

### **BUSHFIRE-PRONE AREAS CODE**

## CERTIFICATE<sup>1</sup> UNDER S51(2)(d) LAND USE PLANNING AND APPROVALS ACT 1993

### 1. Land to which certificate applies

The subject site includes property that is proposed for use and development and includes all properties upon which works are proposed for bushfire protection purposes.

Street address:

11 & 17 Smithurst Avenue, South Hobart TAS 7004

Certificate of Title / PID:

C.T.251217/1 & C.T.207563/1 7519788 5590089

### 2. Proposed Use or Development

Description of proposed Use and Development:

**BOUNDARY ADJUSTMENT BETWEEN C.T.251217/1 &** 

C.T.207563/1

Applicable Planning Scheme:

**Hobart Interim Planning Scheme 2015** 

### 3. Documents relied upon

This certificate relates to the following documents:

Title	Author	Date	Version
SUBDIVISION PROPOSAL PLAN	BROOKS, LARK & CARRICK SURVEYORS	08/02/2022	01
BUSHFIRE ASSESSMENT REPORT – 11 & 17 SMITHURST AVENUE, SOUTH HOBART	JAMES ROGERSON – BROOKS, LARK & CARRICK SURVEYORS	08/08/2022	02
BUSHFIRE HAZARD MANGAEMENT PLAN- 11 & 17 SMITHURST AVENUE, SOUTH HOBART	JAMES ROGERSON – BROOKS, LARK & CARRICK SURVEYORS	08/08/2022	02

<sup>&</sup>lt;sup>1</sup> This document is the approved form of certification for this purpose and must not be altered from its original form.

	4. Nature of Certificate			
Γhe	following requirements are applicab	ole to the proposed use and development:		
	E1.4 / C13.4 – Use or develop	ment exempt from this Code		
	Compliance test	Compliance Requirement		
	E1.4(a) / C13.4.1(a)			
	E1.5.1 / C13.5.1 – Vulnerable	Uses		
	Acceptable Solution	Compliance Requirement		
	E1.5.1 P1 / C13.5.1 P1	Planning authority discretion required. A proposal cannot be certified as compliant with P1.		
	E1.5.1 A2 / C13.5.1 A2			
	E1.5.1 A3 / C13.5.1 A2			
	E1.5.2 / C13.5.2 – Hazardous	Uses		
	Acceptable Solution	Compliance Requirement		
	E1.5.2 P1 / C13.5.2 P1	Planning authority discretion required. A proposal cannot be certified as compliant with P1.		
	E1.5.2 A2 / C13.5.2 A2			
	E1.5.2 A3 / C13.5.2 A3			
	E1.6.1 / C13.6.1 Subdivision:	Provision of hazard management areas		
	Acceptable Solution	Compliance Requirement		
	E1.6.1 P1 / C13.6.1 P1	Planning authority discretion required. A proposal cannot be certified as compliant with P1.		
	E1.6.1 A1 (a) / C13.6.1 A1(a)			
$\boxtimes$	E1.6.1 A1 (b) / C13.6.1 A1(b)	Provides BAL-19 for all lots (including any lot designated as 'balance')		

	E1.6.1 A1(c) / C13.6.1 A1(c)					
	E1.6.2 / C13.6.2 Subdivision: Public and fire fighting access					
	Acceptable Solution	Compliance Requirement				
	E1.6.2 P1 / C13.6.2 P1					
$\boxtimes$	E1.6.2 A1 (a) / C13.6.2 A1 (a)	Insufficient increase in risk				
	E1.6.2 A1 (b) / C13.6.2 A1 (b)					
	E1 6 3 / C13 1 6 3 Subdivision: D	rovision of water supply for fire fighting				
	E1.6.3 / C13.1.6.3 Subdivision: Provision of water supply for fire fighting purposes					
	Acceptable Solution	Compliance Requirement				
		Compilation reduit enterior				
	E1.6.3 A1 (a) / C13.6.3 A1 (a)	Compliance requirement				
	-					
	E1.6.3 A1 (a) / C13.6.3 A1 (a)	· ·				
	E1.6.3 A1 (a) / C13.6.3 A1 (a) E1.6.3 A1 (b) / C13.6.3 A1 (b)	· ·				
	E1.6.3 A1 (a) / C13.6.3 A1 (a) E1.6.3 A1 (b) / C13.6.3 A1 (b) E1.6.3 A1 (c) / C13.6.3 A1 (c)	Static water supply complies with relevant Table				

5. Bushfire Hazard Practitioner					
Name:	JAMES	ROGERSON		Phone No:	0488372283
Postal Address:	UNIT 1-2 KENNEDY DRIVE, CAMBRIDGE PARK			Email Address:	JR.BUSHFIREASSESSMENTS@GMAIL.CO
Accredita	tion No:	BFP - 161		Scope:	1, 2, 3B
6. C	ertificati	on			
I certify the	nat in acc	ordance with the authority osed use and developmen		Part 4A of	the Fire Service Act
1919 1110	tile prop	osed use and developmen	ι.		. ",
	Is exempt from the requirement Bushfire-Prone Areas Code because, having regard to the objective of all applicable standards in the Code, there is considered to be an insufficient increase in risk to the use or development from bushfire to warrant any specific bushfire protection measures, or				
	The Bushfire Hazard Management Plan/s identified in Section 3 of this certificate is/are in accordance with the Chief Officer's requirements and compliant with the relevant <b>Acceptable Solutions</b> identified in Section 4 of this Certificate.				
Signed: certifier		Diger			
Name:		JAMES ROGERSON	Date:	10/08	(2022
			Certificate Number:	1/1	
				oner Use on	ly)

# 7.1.6 66 BURNETT STREET, NORTH HOBART - PARTIAL CHANGE OF USE TO VISITOR ACCOMMODATION PLN-22-493 - FILE REF: F22/94195

Address: 66 Burnett Street, North Hobart

Proposal: Partial Change of Use to Visitor Accommodation

Expiry Date: 28 September 2022

Extension of Time:

Author: Adam Smee

### RECOMMENDATION

That pursuant to the *Hobart Interim Planning Scheme 2015*, the City Planning Committee, in accordance with the delegations contained in its terms of reference, approve the application for Partial Change of Use to Visitor Accommodation at 66 Burnett Street, Hobart, for the reasons outlined in the officer's report and a permit containing the following conditions be issued:

### **GEN**

The use and/or development must be substantially in accordance with the documents and drawings that comprise PLN-22-493 - 66 BURNETT STREET NORTH HOBART TAS 7000 - Final Planning Documents.

Reason for condition

To clarify the scope of the permit.

### **ADVICE**

The following advice is provided to you to assist in the implementation of the planning permit that has been issued subject to the conditions above. The advice is not exhaustive and you must inform yourself of any other legislation, by-laws, regulations, codes or standards that will apply to your development under which you may need to obtain an approval. Visit the Council's website for further information.

Prior to any commencement of work on the site or commencement of use the following additional permits/approval may be required from the Hobart City Council.

### **BUILDING PERMIT**

You may need building approval in accordance with the *Building Act* 2016. Click here for more information.

This is a Discretionary Planning Permit issued in accordance with section 57 of the Land Use Planning and Approvals Act 1993.

### **FEES AND CHARGES**

Click here for information on the Council's fees and charges.

### VISITOR ACCOMMODATION

More information on visitor accommodation, including when building approval is required, can be found here.

In all cases, check with your insurance company that you have adequate cover.

If you are providing food for consumption on the property, you may require a food business registration in accordance with the *Food Act 2003*. Click here for more information, or call our Environmental Health team on 6238 2711.

You are encouraged to have in place a management plan for the operation of the visitor accommodation. The management plan should include measures to limit, manage and mitigate unreasonable impacts upon the amenity of permanent residents, including addressing issues like noise, waste management, customer behaviour, security, and maximum occupancy.

Visitor accommodation is also considered to be a commercial use and also not eligible to residential parking permits. Under the current policy for the issuing of residential parking permits, the proposed change of use to visitor accommodation would not entitle the property to a residential parking permit, or a transferable "bed and

breakfast" parking permit.

Attachment A: PLN-22-493 - 66 BURNETT STREET NORTH

HOBART TAS 7000 - Planning Committee or

Delegated Report !

Attachment B: PLN-22-493 - 66 BURNETT STREET NORTH

HOBART TAS 7000 - Attachment B - CPC Agenda

Documents J 🖫

Attachment C: PLN-22-493 - 66 BURNETT STREET NORTH

HOBART TAS 7000 - Attachment C - Planning Referral Officer Report - Development Engineering

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### **APPLICATION UNDER HOBART INTERIM PLANNING SCHEME 2015**

City of HOBART

Type of Report: Committee

Committee: 19 September 2022 Expiry Date: 28 September 2022

Application No: PLN-22-493

Address: 66 BURNETT STREET, NORTH HOBART

Applicant: (Hobart Properties & Securities P/L by agent Ireneinc Planning & Urban

Design)

49 Tasma Street

Proposal: Partial Change of Use to Visitor Accommodation

Representations: Three representations.

Performance criteria: Use, Parking and Access Code - Number of Car Parking Spaces

### 1. Executive Summary

- 1.1 Planning approval is sought for Partial Change of Use to Visitor Accommodation at 66 Burnett Street, Hobart.
- 1.2 More specifically the proposal includes:
  - The approved development comprises 64 residential dwellings and 15 visitor accommodation serviced apartments. The building is currently under construction.
  - The proposal is to change the following 11 residential apartments into visitor accommodation, resulting in 53 residential dwellings and 26 visitor accommodation serviced apartments:

Level 2 - Unit 1,

Level 3 - Units 15, 16 & 17,

Level 5 - Units 55, 56, 57, 58 & 59,

Level 6 - Units 62 & 64.

- No physical alterations, either internal or external, are proposed.
- 1.3 The proposal relies on performance criteria to satisfy the following standards and codes:
  - 1.3.1 Clause 8.10.2 Use
  - 1.3.2 E6.0 Parking and Access Code E6.6 Use Standards

- 1.4 Three (3) representations objecting to the proposal were received within the statutory advertising period between 22 August and 5 September 2022.
- 1.5 The proposal is recommended for approval subject to conditions.
- 1.6 The final decision is delegated to the City Planning Committee, because Council received more than two (but not more than four) representations regarding the proposal.

### 2. Site Detail

- 2.1 The site is within the North Hobart area, adjacent to the shopping and restaurant precinct on the nearby section of Elizabeth Street. The property is irregular in shape and has an area of 3014m². The property is an internal lot with access strips off Burnett Street, to the northwest, and Elizabeth Street to the southwest. The property is mostly within the Commercial Zone but the part taken up by the laneway off Elizabeth Street is within the Urban Mixed Use Zone. Construction on the site of a previously approved apartment building was substantially complete at the time of writing. The land slopes gradually downward from its frontage with Burnett Street to its southeastern boundary.
- There are commercial buildings on the adjoining properties to the northeast of the site. These buildings are generally single storey warehouse/storage buildings. There is a mix of commercial and residential development in the remaining directions. There are residences and offices to the north of the site, between it and Burnett Street. These buildings include two storey buildings incorporating ground floor shop fronts on the Burnett Street frontage. Further commercial development occurs on the opposite side of this street. The Republic Bar and Café is to the west of the site, on the corner of Burnett Street and Elizabeth Street. There is a mixed use development at 285 Elizabeth Street, generally to the southwest of the site, which includes food services uses on its ground floor and residential apartments on its upper level. The other commercial and residential development on this section of Elizabeth Street is also two storey. The uses to the southeast of the site on properties with frontage to Tasma Street (notably numbers 43, 45 and 47 which are all adjacent to the site's south eastern boundary) include offices and residences.



Figure 1: aerial view of site (outlined in blue) and surrounding area.

### 3. Proposal

- 3.1 Planning approval is sought for Partial Change of Use to Visitor Accommodation at 66 Burnett Street, Hobart.
- 3.2 More specifically the proposal includes:
  - The approved development comprises 64 residential dwellings and 15 visitor accommodation serviced apartments. The building is currently under construction.
  - The proposal is to change the following 11 residential apartments into visitor accommodation, resulting in 53 residential dwellings and 26 visitor accommodation serviced apartments:

Level 2 - Unit 1

Level 3 - Units 15, 16 & 17

Level 5 - Units 55, 56, 57, 58 & 59

Level 6 - Units 62 & 64

• No physical alterations, either internal or external, are proposed.

### 4. Background

- 4.1 PLN-17-1066 Planning Permit granted on 4 February 2019 for "Demolition and New Building for 57 Multiple Dwellings, 13 Visitor Accommodation Units, Food Services and Signage".
- 4.2 PLN-18-474 Planning Permit granted on 10 September 2018 for "Demolition and Associated Works".
- 4.3 PLN-19-227 Planning Permit granted on 17 June 2019 for "Alterations to Previously Approved Development for Two Additional Visitor Accommodation Units and Alterations to Parking".
- PLN-21-475 Planning Permit granted on 11 October 2021 for "Extension to Previously Approved Development Including Eight Additional Multiple Dwellings". This permit granted approval for the construction of eight (8) additional dwellings three (3) additional dwellings on level 5, and an additional level (level 6) on the north-western end of the building which would contain five (5) dwellings. The proposal was assessed as an extension to the development approved via PLN-17-1066. The number of additional dwellings approved via this proposal was later reduced to seven (7) dwellings under PAM-22-11, by combining units 64 and 65 on the top level into one larger apartment.
- The current approved use of the property is therefore for 15 visitor accommodation serviced apartments and 64 residential dwellings.

### 5. Concerns raised by representors

- 5.1 Council received three (3) representations objecting to the proposal within the statutory advertising period.
- 5.2 The following table outlines the concerns raised in the representations received. Those concerns which relate to a discretion invoked by the proposal are addressed in Section 6 of this report.

"Use of short term accommodation eg Air BNB is contrary to the best interests of the city where there is a critical shortage of long term secure rental. Further; an undertaking given to me by the developer Mr lan Roberts when he visited to canvass his development was that he was committed to the long term use of his property and not the exploitation of living space and the adverse impact on communities as seen around the worlds premier tourist destinations".

"The proposal... creates a level of concentration of short stay accommodation in the development to 33% of the total units - up from 19%. This level of concentration is at odds with the original argument accepted by the Planning Committee that the development would contribute to the stock of residential accommodation thereby contributing also to easing the housing deficit in Hobart. Such a concentration is also at odds with recent commentary by representatives of the Hobart City Council on curbing the growth of short stay accommodation in and around the central Hobart area.

"9 of the proposed additional visitor accommodation units are one bedroom apartments, a type of residential accommodation in very short supply in Hobart either for purchase or for rent".

"It would be preferable that these units remained available for long term residents rather than add to the hollowing out of inner city Hobart in terms of its long term residential profile".

"Unfortunately this current application is another attempt by the same developer, in relation to the same development, to change the decisions and limits made in relation to the original application, or even to introduce new matters which would have been rejected had they been considered originally as part of a whole".

"Regarding this application for Partial Change of Use, I am hopeful Council has heeded the concerns of communities across the world, about the impact of a disproportionate rate of visitor accommodation (and airBNB) in neighbourhood community - and will bring to bear a well consulted and published policy when making their decision!".

### 6. Assessment

6.1 The Hobart Interim Planning Scheme 2015 is a performance based planning

scheme. To meet an applicable standard, a proposal must demonstrate compliance with either an acceptable solution or a performance criterion. Where a proposal complies with a standard by relying on one or more performance criteria, the Council may approve or refuse the proposal on that basis. The ability to approve or refuse the proposal relates only to the performance criteria relied on.

- 6.2 The site is located within the Commercial Zone of the *Hobart Interim Planning Scheme 2015.*
- 6.3 The existing use of the 11 apartments, which are the subject of this application, is residential. The proposed use of these 11 apartments is visitor accommodation. The existing use is a permitted use in the zone, above ground floor level. The proposed use is a discretionary use in the zone.

Clause 8.10.2 of the planning scheme states that:

In determining an application for a permit for a discretionary use the planning authority must, in addition to the matters referred to in subclause 8.10.1, have regard to:

- (a) the purpose of the applicable zone;
- (b) any relevant local area objective or desired future character statement for the applicable zone;
- (c) the purpose of any applicable code; and
- (d) the purpose of any applicable specific area plan,

but only insofar as each such purpose, local area objective or desired future character statement is relevant to the particular discretion being exercised.

Therefore, the visitor accommodation use proposed within the Commercial Zone must be considered against the matters referred to in clause 8.10.2. This proposed use is considered to be consistent with the zone purpose statements for the Commercial Zone. Specifically, this aspect of the proposal is considered to be consistent with statement 23.1.1.3, as it would be for a nonresidential use in a transition area between the Central Business Zone and an inner residential area. There are no Local Area Objectives nor Desired Future Character Statements for the Commercial Zone. The proposed visitor accommodation is considered to meet with the purpose for the applicable code, i.e. the Parking and Access Code, as enough parking would be provided for the proposed use to meet the reasonable requirements of users. There is no applicable specific area plan.

- 6.4 The proposal has been assessed against:
  - 6.4.1 Part D 23.0 Commercial Zone

- 6.4.2 Part E 6.0 Parking and Access Code
- The proposal relies on the following performance criteria to comply with the applicable standards:
  - 6.5.1 E6.0 Parking and Access Code:
    - E6.6.1 Number of Car Parking Spaces
- 6.6 The relevant performance criterion is assessed below.
- 6.7 E6.6.1 Number of Car Parking Spaces
  - 6.7.1 The acceptable solution at clause *E6.6.1* requires that the number of onsite car parking spaces must be no less than and no greater than the number specified in Table E6.1.
  - The proposal includes less than the number of on-site car parking spaces specified in Table E6.1.
  - 6.7.3 As the proposal does not comply with the above acceptable solution it therefore relies upon assessment against the below performance criterion.
  - 6.7.4 The performance criterion at clause *E6.6.1* provides as follows:

The number of on-site car parking spaces must be sufficient to meet the reasonable needs of users, having regard to all of the following:

- (a) car parking demand;
- (b) the availability of on-street and public car parking in the locality;
- (c) the availability and frequency of public transport within a 400m walking distance of the site;
- (d) the availability and likely use of other modes of transport;
- (e) the availability and suitability of alternative arrangements for car parking provision;
- (f) any reduction in car parking demand due to the sharing of car parking spaces by multiple uses, either because of variation of car parking demand over time or because of efficiencies gained from the consolidation of shared car parking spaces;
- (g) any car parking deficiency or surplus associated with the existing use of the land:

- (h) any credit which should be allowed for a car parking demand deemed to have been provided in association with a use which existed before the change of parking requirement, except in the case of substantial redevelopment of a site;
- (i) the appropriateness of a financial contribution in lieu of parking towards the cost of parking facilities or other transport facilities, where such facilities exist or are planned in the vicinity;
- (j) any verified prior payment of a financial contribution in lieu of parking for the land;
- (k) any relevant parking plan for the area adopted by Council;
- (I) the impact on the historic cultural heritage significance of the site if subject to the Local Heritage Code;
- (m) whether the provision of the parking would result in the loss, directly or indirectly, of one or more significant trees listed in the Significant Trees Code.
- 6.7.5 Council's Development Engineer has assessed the proposed car parking arrangements and provided the following comments:
  - "As advised by successive CoH traffic engineers the empirical parking assessment (on-street) indicates that use will operate at an inadequate level of service to meet likely demands associated with the development. The customers utilising the visitor accommodation will need to compete for available car parking spaces on the public road or for any limited allocated car parking spaces within the development site. Any visitors to the site will need to compete for available car parking spaces on the public road. There is limited survey data to indicate the percentage of persons utilising visitor accommodation dwellings that utilise vehicles as a mode of transport".
  - "Virtually all of the on-street car parking is in the form of metered, restricted and time-restricted parking. Observations indicate that there is an very high demand for these parking spaces especially during peak periods that would not meet the potential demands of visitor and overflow parking".
  - "Metro Tasmania operates a bus services along Elizabeth Street".
  - "PLN-21-475 required via planning permit condition (ENG 6) to provide a minimum forty two (42x) bicycle parking spaces to be provided. Also condition ENG s1 requiring the increased bicycle parking must meet the requirements of the Australian Standard to the satisfaction of the Director City Planning".
  - "No alternative parking provision is available or considered necessary".
  - "Council's position is that no car parking provisions exists for the

ability to obtain a financial contribution (from developers) in lieu of parking to go towards the cost of parking facilities or other transport facilities".

"The current development application is proposing a reduction in parking demand of five (5x) parking spaces. On two previous occasions the officers' recommendations for refusal citing the use will operate at an inadequate level of service to meet likely demands associated with the development was overturned at Full Council and was approved with a significant car parking deficiency. Council's assessing officers feel compelled to accept the parking provision under Performance Criteria P1, *E6.6.1* of the Planning Scheme given the reduction in car parking demand from what was previously approved".

A copy of the full assessment report is at Attachment C to this report.

6.7.6 The proposal complies with the above performance criterion.

### 7. Discussion

- 7.1 Planning approval is sought for Partial Change of Use to Visitor Accommodation at 66 Burnett Street, Hobart.
- 7.2 The application was advertised and received three (3) representations. The representations raised concerns regarding the proposed change of use from multiple dwellings to visitor accommodation. While the latter is a discretionary use on the site, the proposal is considered to be consistent with the relevant Zone Objectives and the purpose of the relevant code.
- 7.3 The proposal has been assessed against the relevant provisions of the planning scheme and is considered to comply.
- 7.4 The proposal has been assessed by other Council officers, including the Council's Development Engineer. The officers have raised no objection to the proposal.
- 7.5 The proposal is recommended for approval.

### 8. Conclusion

8.1 The proposed Partial Change of Use to Visitor Accommodation at 66 Burnett Street, Hobart, satisfies the relevant provisions of the *Hobart Interim Planning Scheme 2015* and is recommended for approval.

### 9. Recommendations

That:

Pursuant to the *Hobart Interim Planning Scheme 2015*, the City Planning Committee, in accordance with the delegations contained in its terms of reference, approve the application for Partial Change of Use to Visitor Accommodation at 66 Burnett Street, Hobart, for the reasons outlined in the officer's report and a permit containing the following conditions be issued:

### GEN

The use and/or development must be substantially in accordance with the documents and drawings that comprise PLN-22-493 - 66 BURNETT STREET NORTH HOBART TAS 7000 - Final Planning Documents.

Reason for condition

To clarify the scope of the permit.

### **ADVICE**

The following advice is provided to you to assist in the implementation of the planning permit that has been issued subject to the conditions above. The advice is not exhaustive and you must inform yourself of any other legislation, by-laws, regulations, codes or standards that will apply to your development under which you may need to obtain an approval. Visit the Council's website for further information.

Prior to any commencement of work on the site or commencement of use the following additional permits/approval may be required from the Hobart City Council.

### **BUILDING PERMIT**

You may need building approval in accordance with the *Building Act 2016*. Click here for more information.

This is a Discretionary Planning Permit issued in accordance with section 57 of the Land Use Planning and Approvals Act 1993.

### **FEES AND CHARGES**

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### **VISITOR ACCOMMODATION**

More information on visitor accommodation, including when building approval is required, can be found here.

In all cases, check with your insurance company that you have adequate cover.

If you are providing food for consumption on the property, you may require a food business registration in accordance with the *Food Act 2003*. Click here for more information, or call our Environmental Health team on 6238 2711.

You are encouraged to have in place a management plan for the operation of the visitor accommodation. The management plan should include measures to limit, manage and mitigate unreasonable impacts upon the amenity of permanent residents, including addressing issues like noise, waste management, customer behaviour, security, and maximum occupancy.

Visitor accommodation is also considered to be a commercial use and also not eligible to residential parking permits. Under the current policy for the issuing of residential parking permits, the proposed change of use to visitor accommodation would not entitle the property to a residential parking permit, or a transferable "bed and breakfast" parking permit.

Item No. 7.1.6

# Agenda (Open Portion) City Planning Committee Meeting - 19/9/2022

(Adam Smee)

**Development Appraisal Planner** 

As signatory to this report, I certify that, pursuant to Section 55(1) of the Local Government Act 1993, I hold no interest, as referred to in Section 49 of the Local Government Act 1993, in matters contained in this report.

(Ben Ikin)

Senior Statutory Planner

As signatory to this report, I certify that, pursuant to Section 55(1) of the Local Government Act 1993, I hold no interest, as referred to in Section 49 of the Local Government Act 1993, in matters contained in this report.

Date of Report: 13 September 2022

Attachment(s):

Attachment B - CPC Agenda Documents

Attachment C - Planning Referral Officer Report - Development Engineering

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ATTACHMENT B

PLN-22-493 - 66 BURNETT STREET Application Information Application Details PLN-22-493 Partial Change of Use to Visitor Accommodation 📝 Submitted on: 27/07/2022 Accepted as Valid on: 27/07/2022 Target Time Frame: 42 Days. Elapsed Time: 21 Days Expiry date: 07/09/2022 Officer: Adam Smee Have you obtained pre application advice? If YES please provide the pre application advice number eg PAE-17-xx Are you applying for permitted visitor accommodation as defined by the State Government Visitor Accommodation Standards? Click on help information button for definition. No Is the application for SIGNAGE ONLY? If yes, please enter \$0 in the cost of development, and you must enter the number of signs under No If this application is related to an enforcement action please enter Enforcement Number Details What is the current approved use of the land / building(s)? \* Residential and visitor accommodation apartments Please provide a full description of the proposed use or development (i.e. demolition and new dwelling, swimming pool and garage) ' Partial change of use Estimated cost of development 0.00 Existing floor area (m2) Proposed floor area (m2) Site area (m2)

### Carparking on Site

Total parking spaces	Existing parking spaces	N/A
		★ Other (no selection chosen)

Other Details

Item No. 7.1.6

# Agenda (Open Portion) City Planning Committee Meeting - 19/9/2022

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ATTACHMENT B

Does the application include signage? *	No     No	
How many signs, please enter 0 if there are none invol this application? *	red in	
0		
Tasmania Heritage Register		
	No     No	_
Tasmania Heritage Register Is this property on the Tasmanian Heritage Register?	○ No	

# Page 940 ATTACHMENT B



### **RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



### SEARCH OF TORRENS TITLE

VOLUME	FOLIO
26099	4
EDITION	DATE OF ISSUE
3	14-Feb-2018

SEARCH DATE : 15-Jul-2021 SEARCH TIME : 12.42 PM

### DESCRIPTION OF LAND

City of HOBART
Lot 4 on Sealed Plan 26099
(Formerly Lots 1 & 2 on Sealed Plan 26099)
Derivation: Part of Location to James, Part of 2R-30Ps. Gtd.
to R Frost, Part of 1R-25Ps. Gtd. to A M Chandler, Part of
1R-14Ps. Gtd. to J Brown and Part of 2R-34Ps. Gtd. to A
Rheuben (Section L.2.)
Prior CT 4188/53

### SCHEDULE 1

M664594 TRANSFER to HOBART PROPERTIES & SECURITIES PTY LTD Registered 14-Feb-2018 at 12.01~PM

### SCHEDULE 2

Reservations and conditions in the Crown Grant if any SP 26099 EASEMENTS in Schedule of Easements E122020 MORTGAGE to Westpac Banking Corporation Registered 14-Feb-2018 at 12.02 PM

### UNREGISTERED DEALINGS AND NOTATIONS

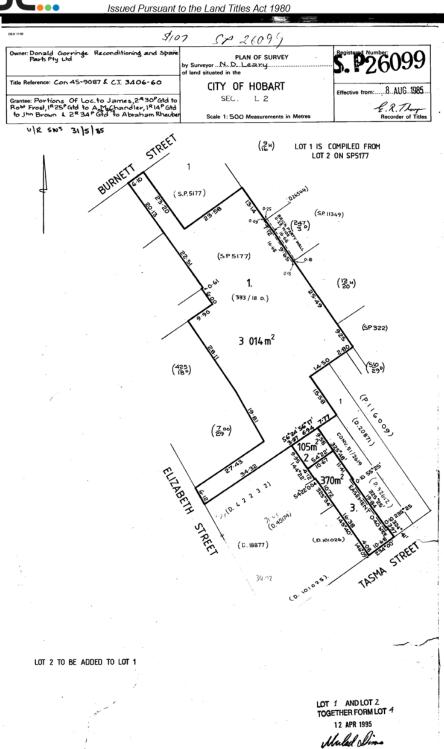
No unregistered dealings or other notations



### **FOLIO PLAN**

RECORDER OF TITLES





Search Date: 15 Jul 2021

Search Time: 12:42 PM

Volume Number: 26099

Revision Number: 01

Page 1 of 1

34 FWD. 31 /5/85



### SCHEDULE OF EASEMENTS

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980





### SCHEDULE OF EASEMENTS

PLAN NO. Note:-The Town Clerk or Council Clerk must sign the certificate on the back page for the purpose identification.

The Schedule must be signed by the owners and mortgagees of the land affected. Signatures should be attested.

### EASEMENTS AND PROFFES COPY SCHEDULE CONSISTS OF.....

Each lot on the plan is together with:-

- (1) such rights of drainage over the drainage easements shewn on the plan (if any) as may be necessary to drain the stormwater and other surplus water from such
- (2) any easements or profits à prendre described hereunder.

Each lot on the plan is subject to:---

- (1) such rights of drainage over the drainage easements shewn on the plan (if any) as passing through such lot as may be necessary to drain the stormwater and other surplus water from any other lot on the plan; and
- (2) any easements or profits à prendre described hereunder.

The direction of the flow of water through the drainage easements shewn on the plan is indicated by arrows.

The wall shown on the plan as "Brick Farty Wall 0.28 wide" is a party wall as defined by Scotion 34B of the Conveyancing and Law of Froperty Act 1884 and Lot 1 and Certificate of Title Volume 3187 Folio 51 are affected by easements and rights as mentioned in that

PENCING COVENANT:

The owner of Lot 3 hereby covenants with the Vendor Donald Gorringe Reconditioning & Spare Parts Pty. Limited that the Vendor shall not be required to fence.

EASEMENTS:

Lot 3 is subject to a right of projecting eaves and spouting and for a stormwater drain and other pipes as the same now exist over the Easement 0.40 metres wide shown on the plan appurtenant to the land described in Conveyance Registered Number 51/2619. as created by Conveyance No. No. 15/5482.

THE COMMON SEAL of DONALD CORRINGE RECONDITIONING & SPARE PARTS PTY. LIMITED was hereunto affixed in the presence of:



Search Date: 15 Jul 2021

Search Time: 12:42 PM

Volume Number: 26099

Revision Number: 01

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ATTACHMENT B



### **SCHEDULE OF EASEMENTS**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



This is the schedule of easements attached to the pla	in of PONALA GORFAINGE RECONDITIONING (Insert Subdivider's Full Name)
4 CPRAK PART PTY LTD.	affecting land in
(Insert Title	e Reference)
Sealed by HODDET CATY COUNCIL	on 24th MAY, 1985
Solicitor's Reference	
05±3134	Council Clorb Town Clerk

Search Date: 15 Jul 2021

Search Time: 12:42 PM

Volume Number: 26099

Revision Number: 01

Page 2 of 2



25 July 2022



# 66 BURNETT STREET, NORTH HOBART - PARTIAL CHANGE OF USE RESIDENTIAL TO VISITOR ACCOMMODATION

This submission forms part of a planning application related a change of use to the approved and under construction development at 66 Burnett Street, North Hobart. No physical alterations either internally or externally are proposed.

Current planning permits include 15 visitor accommodation serviced apartments, with the remaining apartments approved as residential. The approved visitor apartments are:

- Level 1 U101, U102, U103 & U104
- Level 2 U105, U106, U107, U108, U109, U110, U111, U112 & U113
- Level 2 U114 & U115 (Elizabeth St)

It is proposed to change the use of a further 11 residential apartments for further visitor accommodation serviced apartments, being numbers:

- Level 2 U1
- Level 3 U15, U16 & U17
- Level 5 U55, U56, U57, U58 & U59
- Level 6 U62 & U64

The total number of serviced apartments will therefore be 26, while the remaining number of residential apartments will be 53. The arrangement of the approved and proposed serviced apartments is described in Attachment 1.

The part of the site which contains the subject apartments is within the Commercial Zone. The Visitor Accommodation Use Class is discretionary in the zone. There are no applicable standards of the zone which are relevant for consideration of the proposed change of use.

The Parking and Access Code is also relevant for consideration in relation to the application. The applicable standards are considered below:

### E6.6 Use Standards

### E6.6.1 Number of Car Parking Spaces

A1	P1
	The number of on-site car parking spaces must be sufficient to meet the reasonable needs of users, having regard to

smithstreetstudio

ireneinc

49 Tasma St, North Hobart, TAS 7000 Tel (03) 6234 9281 Fax (03) 6231 4727 Mob 0418 346 283 Email planning@ireneinc.com.au ABN 78 114 905 074

### RESPONSE

The parking generated by the development by the application, in accordance with Table E6.1 will be as follows:

Apartment Ref	Residential parking requirement	Visitor Accommodation requirement	Net parking requirement change
1 Bedrooms L2 - U1 L3 - U15, U16, U17 L5 - U55, U56, U57, U58 U59	9 (9 x 1)	9 (9x1)	0
L 6 - U62, U64	4 (2 x 2)	2 (2 x 1)	-2
Visitor parking required	3	0	-3
Total net parking general	tion		-5

The application therefore meets the acceptable solution given the net reduction in generation proposed through the change of use.

If you have any further queries in relation to the above, please contact me on 03 6234 9281.

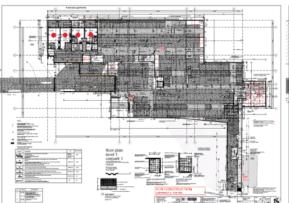
Yours sincerely

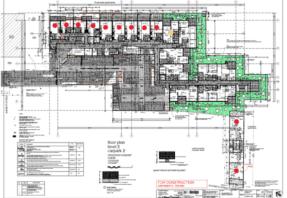
Jacqui Blowfield Senior Planner

IRENEINC PLANNING & URBAN DESIGN

#### ATTACHMENT 1: VISITOR ACCOMMODATION LOCATION

The following diagrams indicate the location of previously approved serviced apartments (red dots) and the proposed additional serviced apartments (yellow dots).



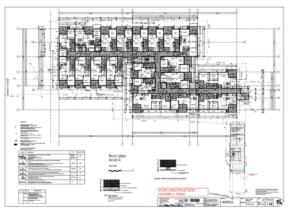




Level 1: Existing 4 serviced apartments

Level 2: Existing 11 serviced apartments & 1 additional proposed

Level 3: Proposed 3 serviced apartments







Level 4: Residential apartments only

Level 5: Proposed 5 serviced apartments

Level 6: Proposed 2 serviced apartments

PROPOSED RESIDENTIAL UNIT DEVELOPMENT

66 BURNETT ST NORTH HOBART FOR HOBART PROPERTIES & SECURITIES PTY LTD



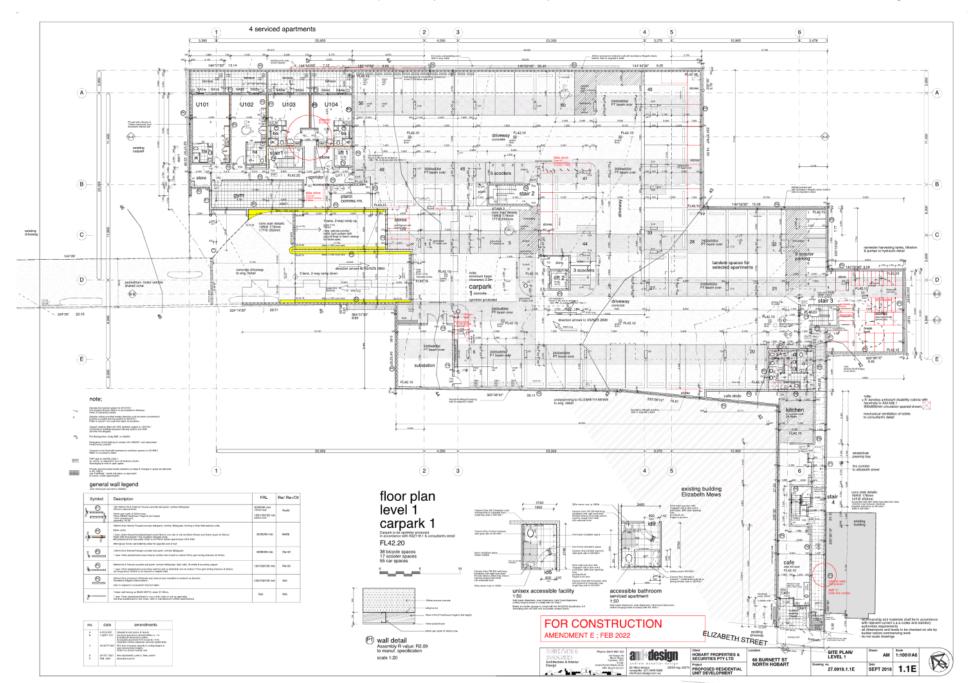
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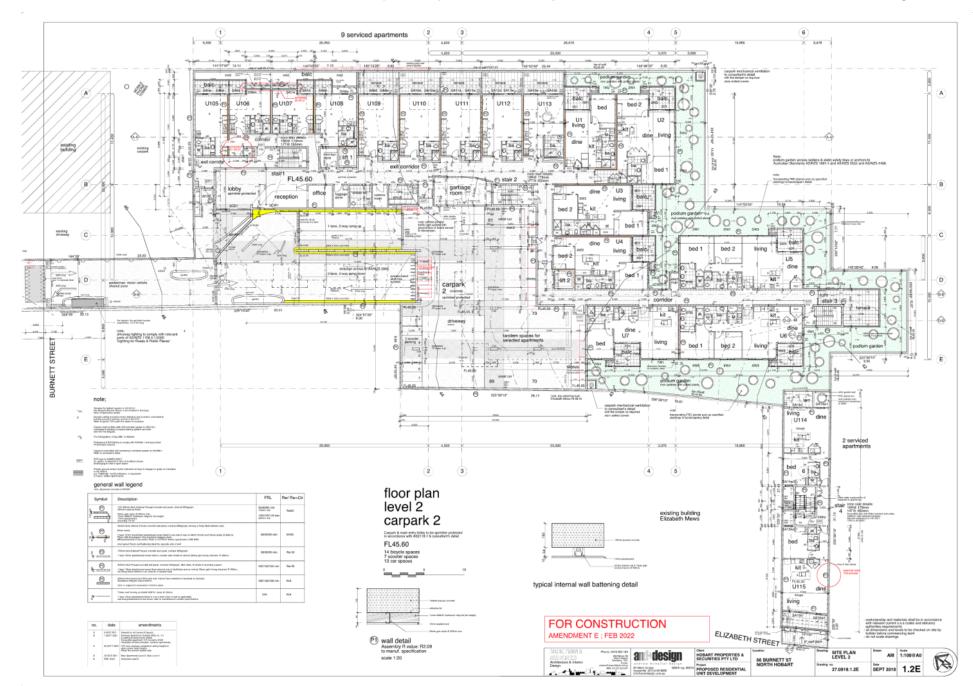
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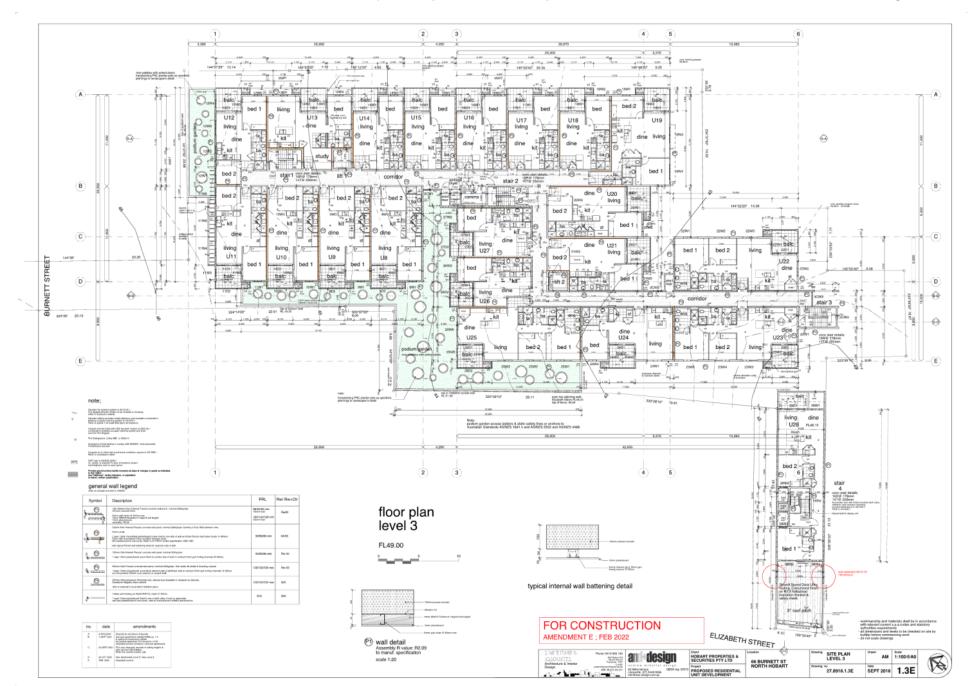


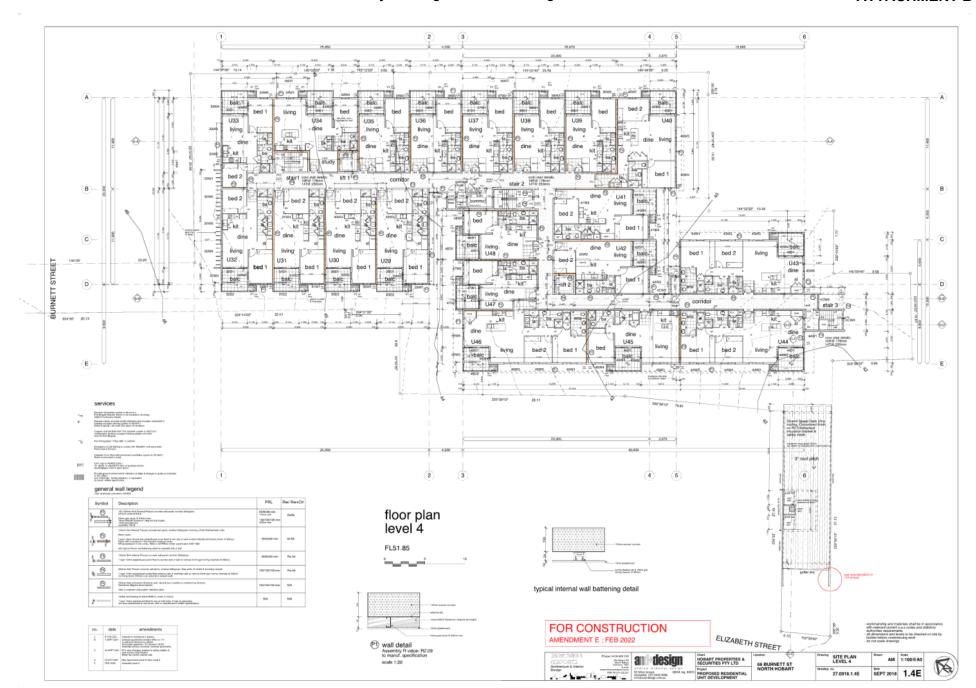


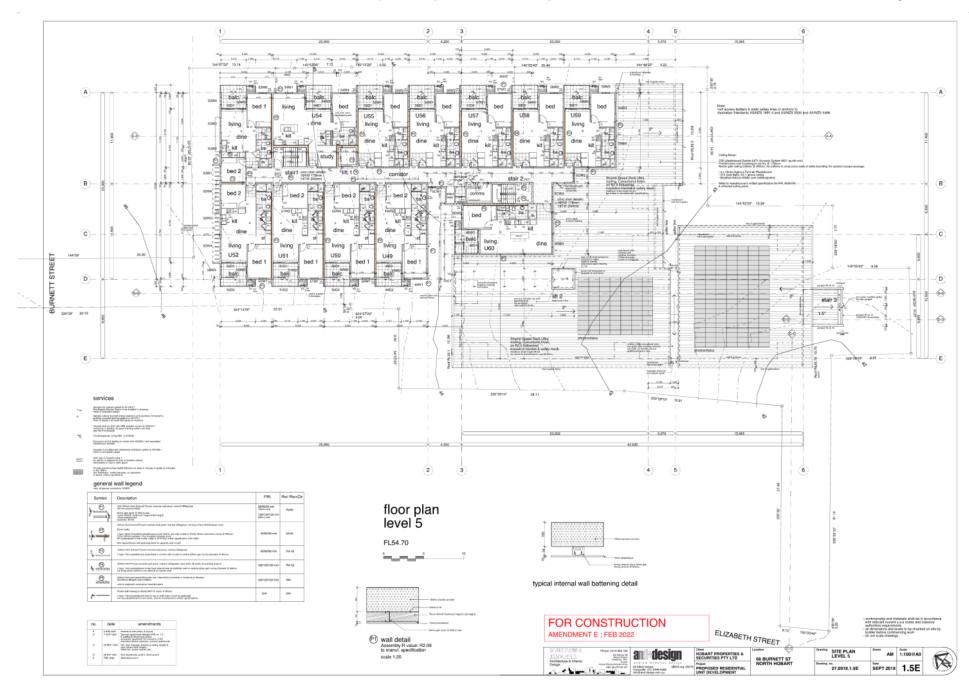


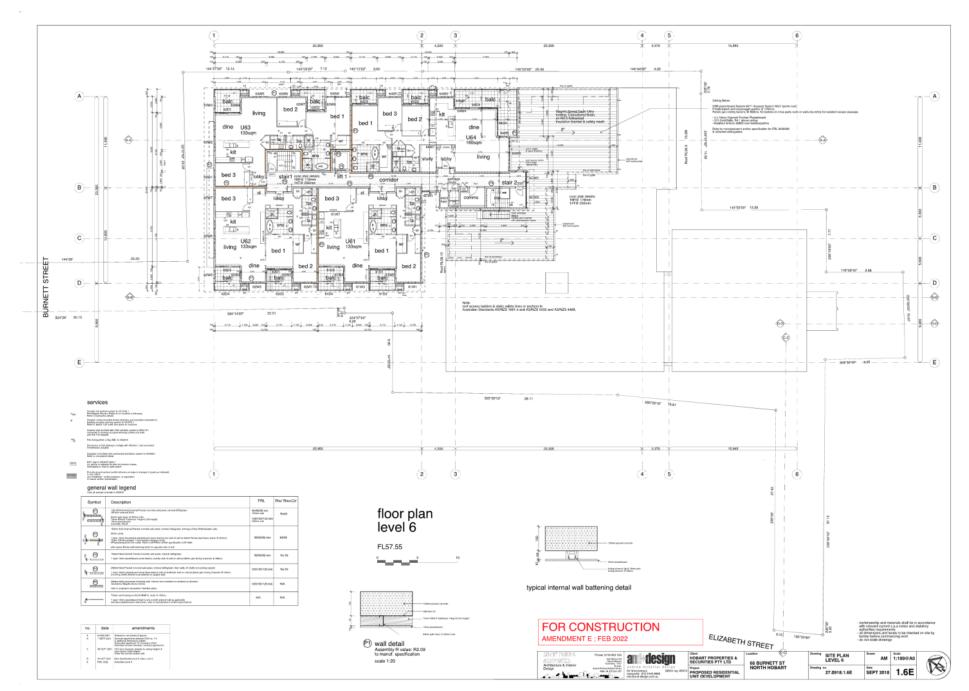


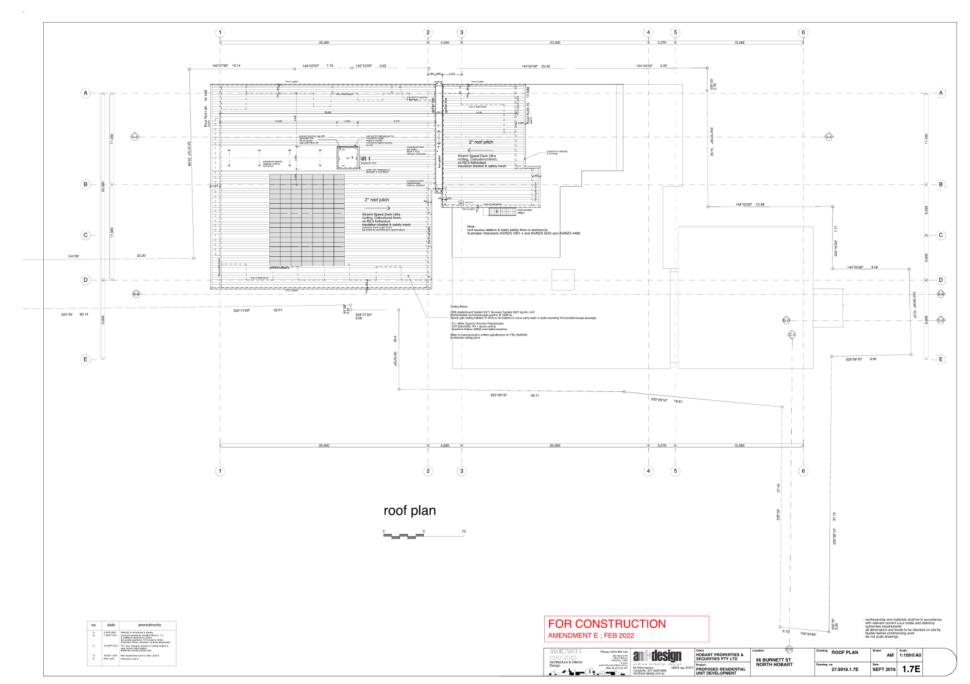


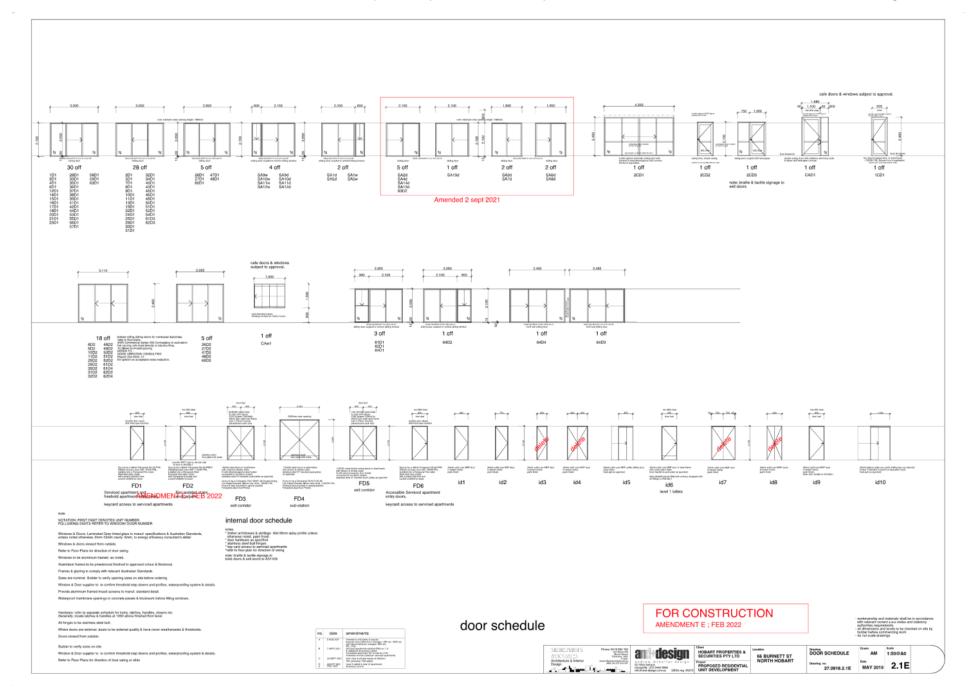


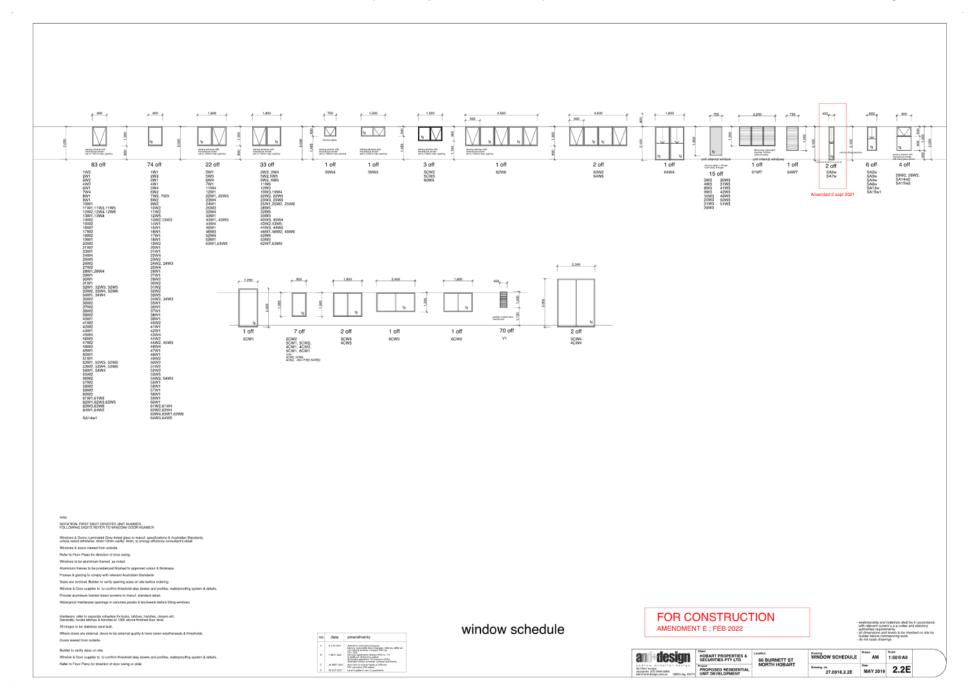


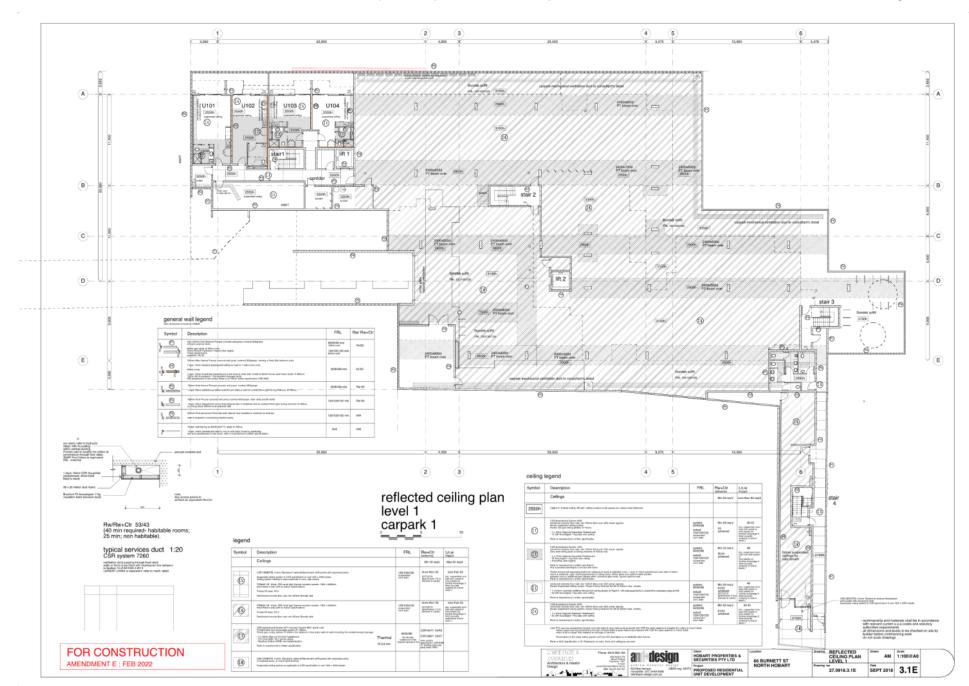


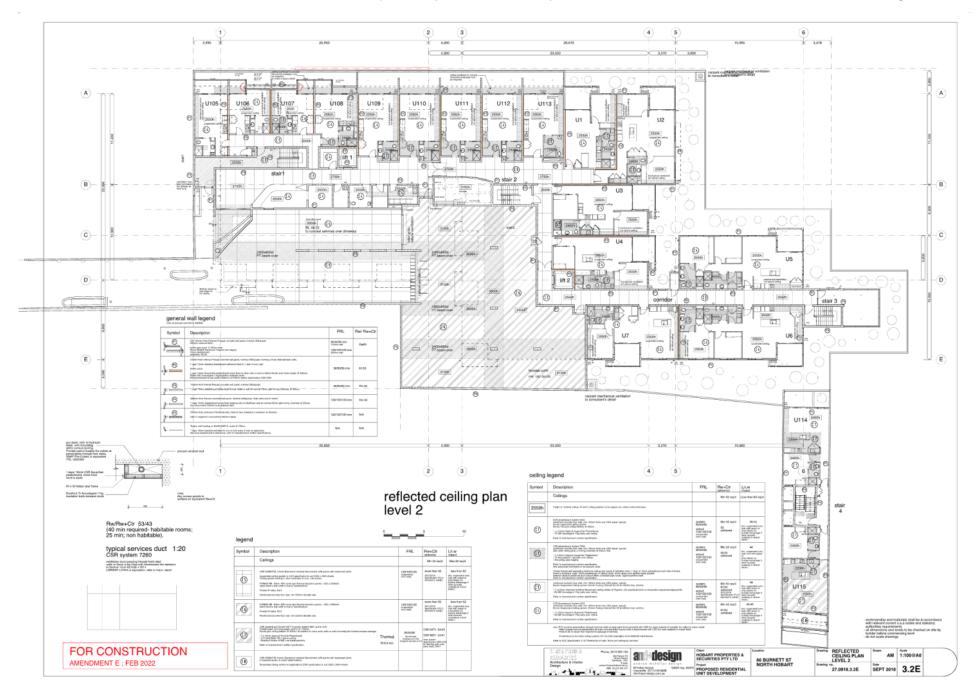






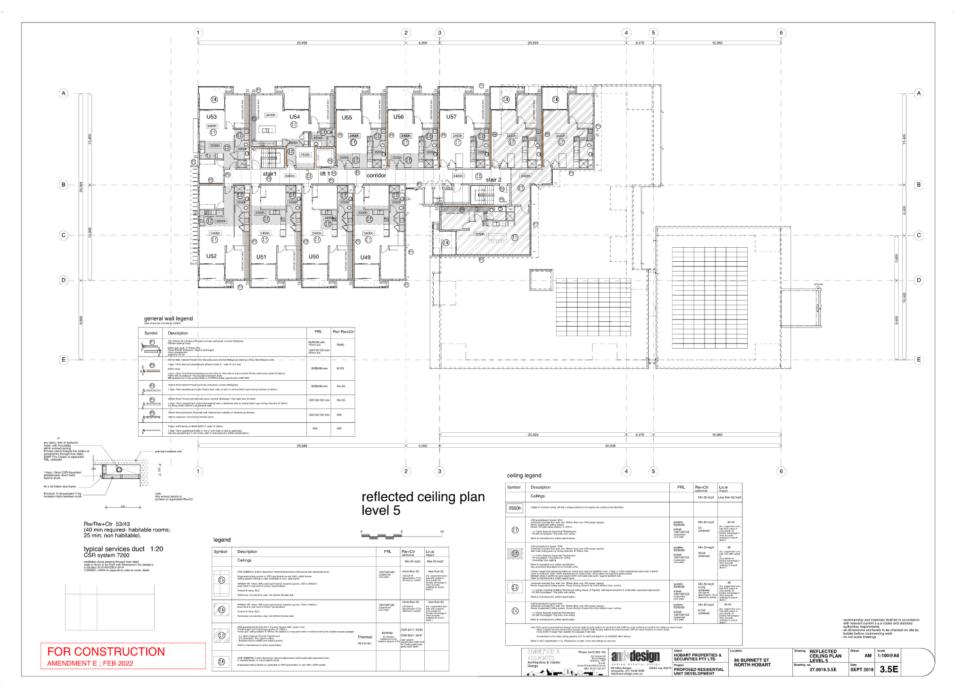


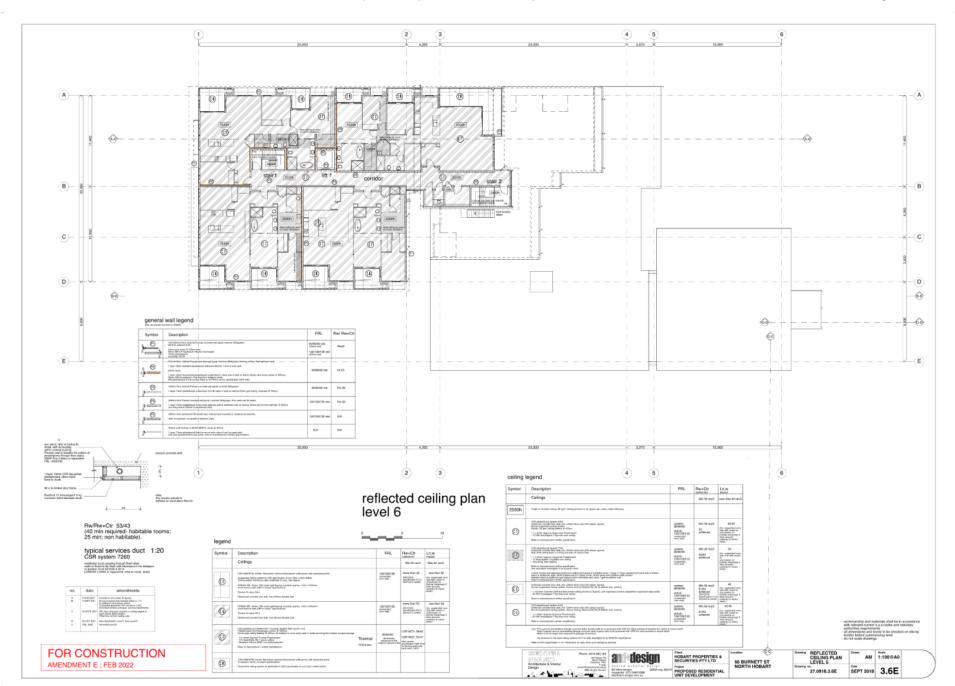


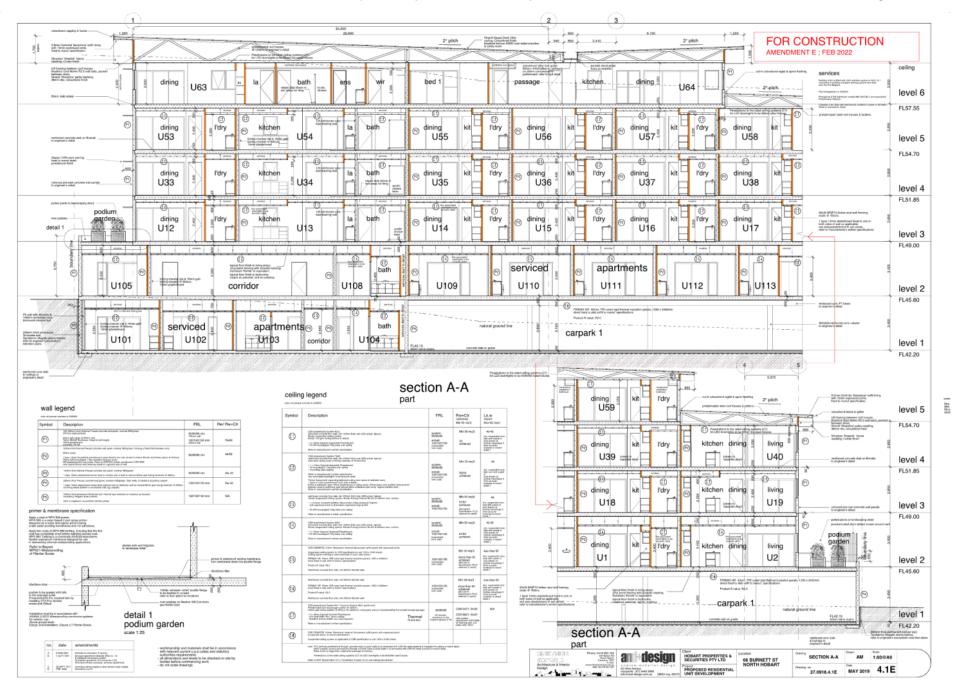


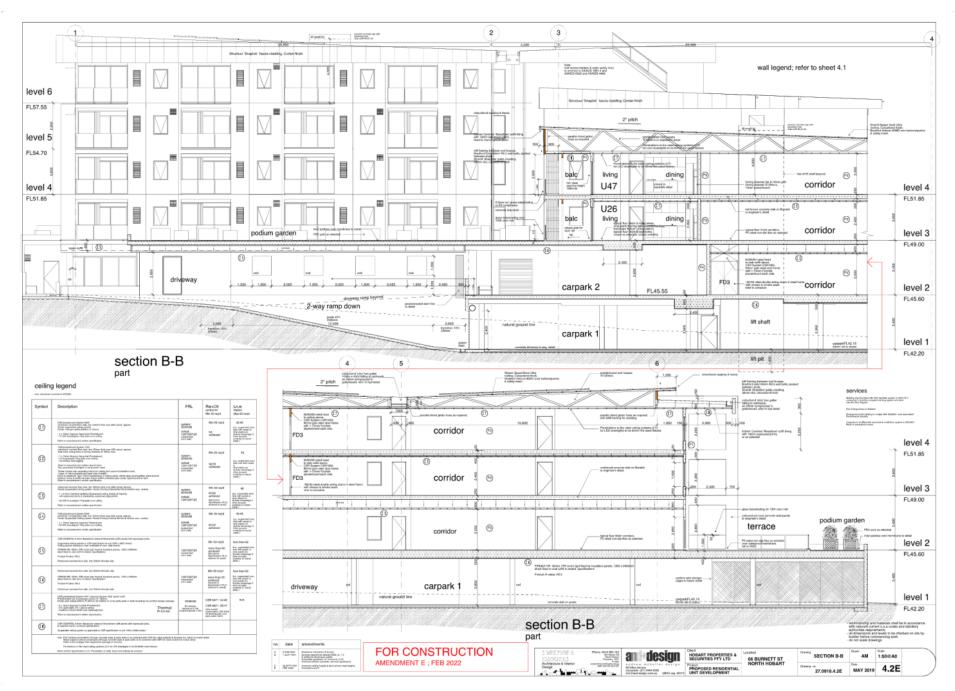


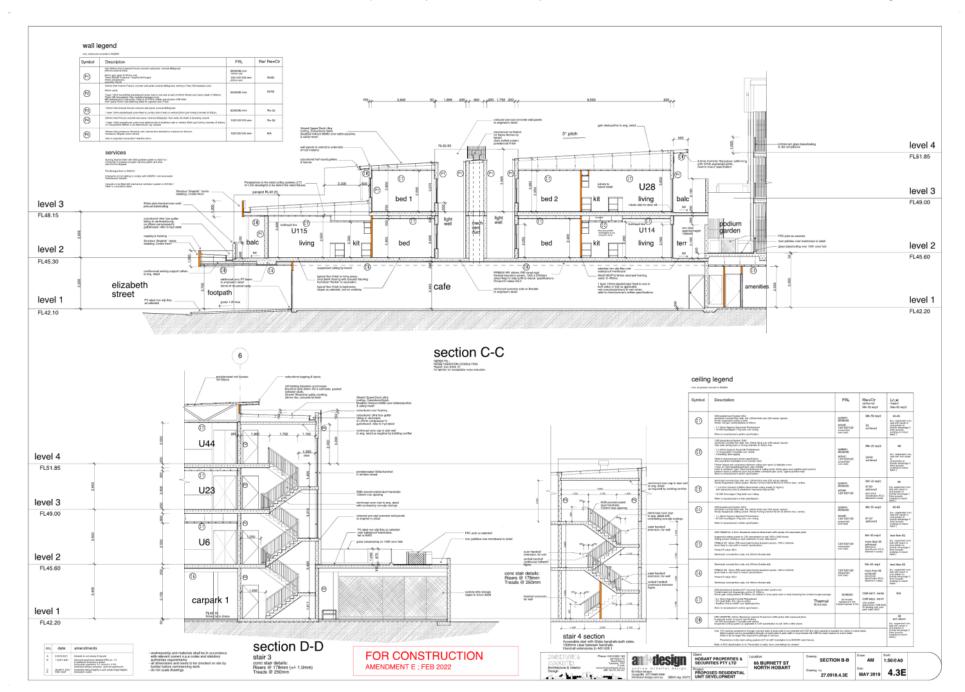


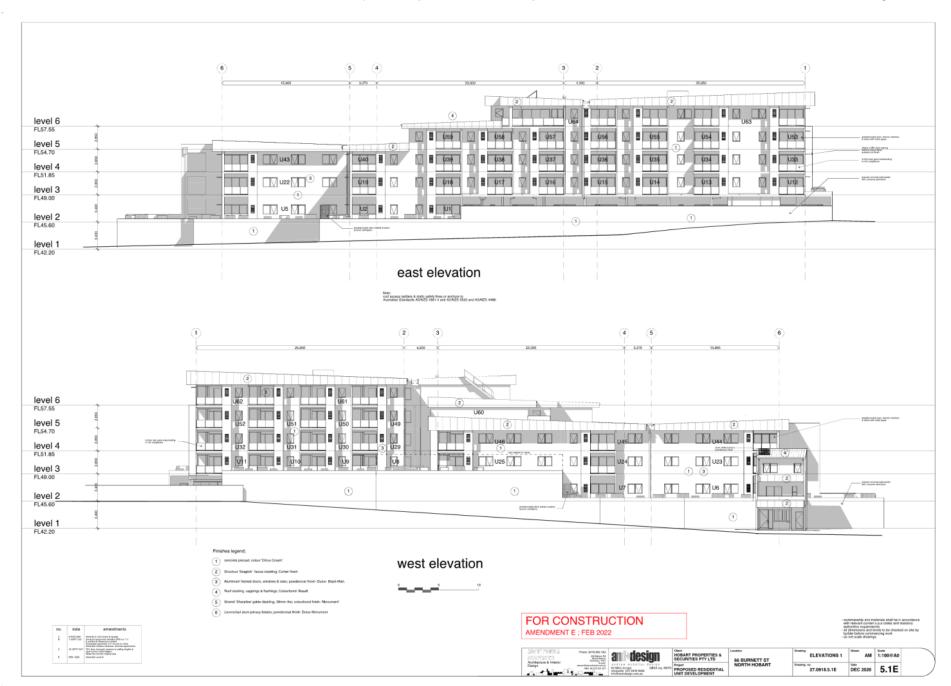


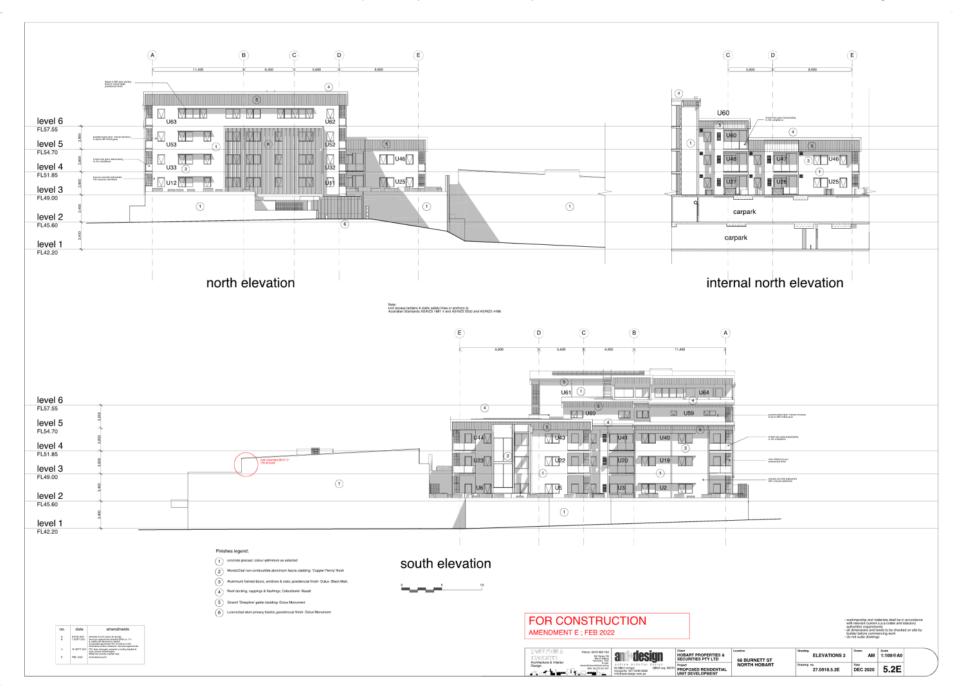


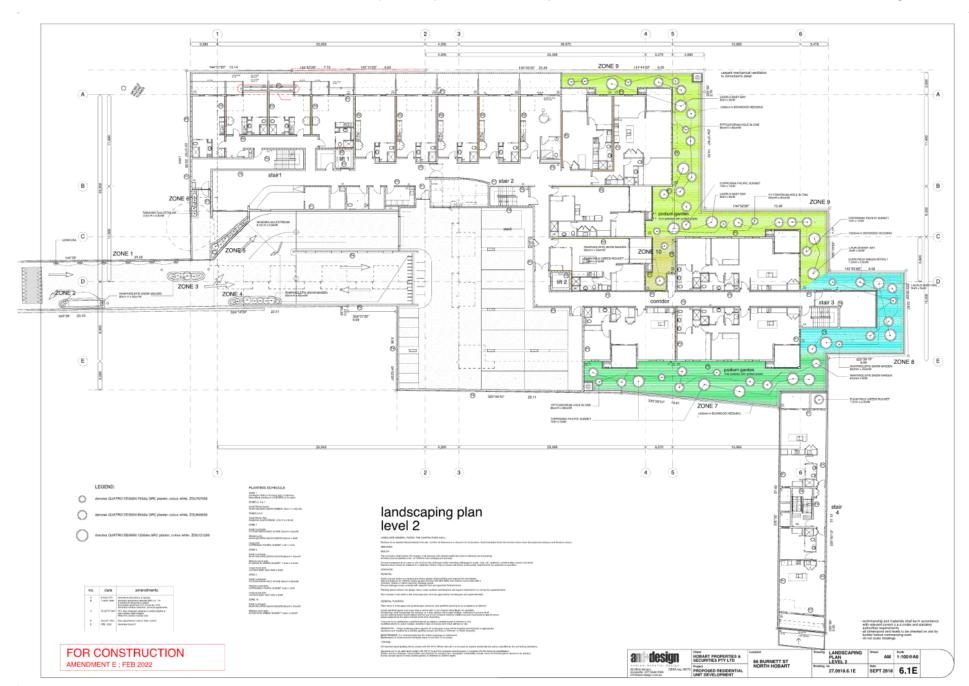


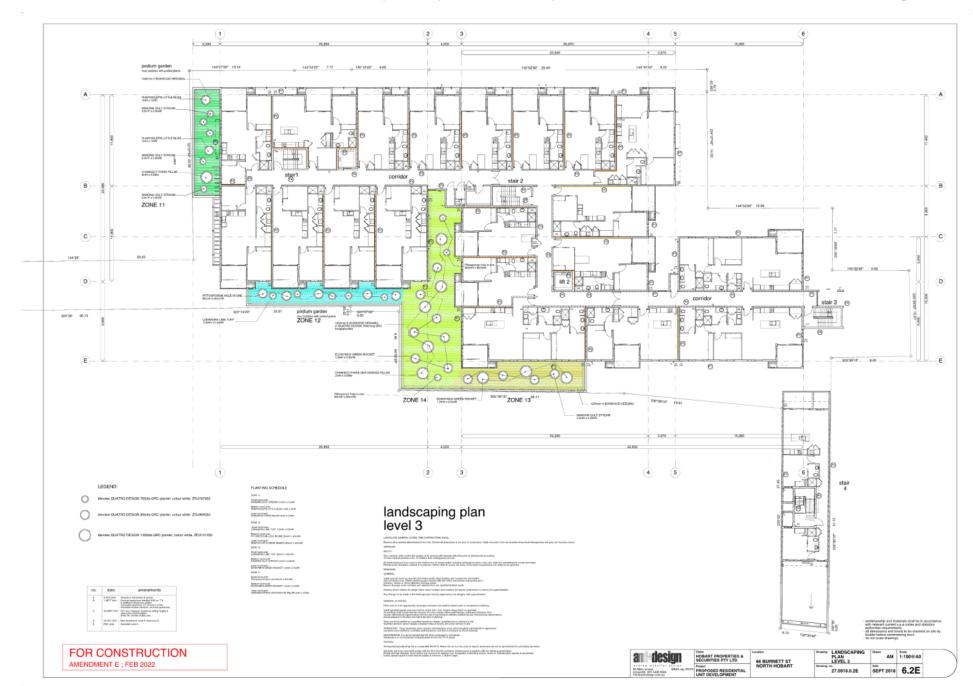












# Application Referral Development Engineering - Response

From:	Stefan Gebka - Development Engineering	
Recommendation:	Proposal is acceptable subject to conditions.	
Date Completed:		
Address:	66 BURNETT STREET, NORTH HOBART	
Proposal:	Partial Change of Use to Visitor Accommodation	
Application No:	PLN-22-493	
Assessment Officer:	Adam Smee,	

### Referral Officer comments:

### **OVERVIEW:**

Planning approval is sought for Partial Change of Use to Visitor Accommodation at 66 Burnett Street, Hobart.

More specifically the proposal includes:

- The approved development comprises 64 residential dwellings and 15 visitor accommodation serviced apartments. The building is currently under construction.
- The proposal is to change the following 11 residential apartments into visitor accommodation, resulting in 53 residential dwellings and 26 visitor accommodation serviced apartments:

Level 2 - Unit 1,

Level 3 - Units 15, 16 & 17,

Level 5 - Units 55, 56, 57, 58 & 59,

Level 6 - Units 62 & 64.

- No physical alterations, either internal or external, are proposed.
- The current development application is proposing a reduction in parking demand of five (5x) parking spaces (for the development site). On two previous occasions the officers' recommendations for refusal citing the use will operate at an inadequate level of service to meet likely demands associated with the development was overturned at Full Council and the development was approved with a significant car parking deficiency. Council's assessing officers now feel compelled to accept the parking provision under Performance Criteria P1:E6.6.1 of the Planning Scheme given the reduction in car parking demand from what was previously approved at Full Council.
- This development application will see the overall car parking deficiency (shortfall) reduced from a previously approved shortfall of eighty two (82x) spaces to a deficiency of seventy seven (77x), a reduction in five (5x) parking space demand.
- As advised by successive CoH traffic engineers the empirical parking assessment (onstreet) indicates that use will operate at an inadequate level of service to meet likely demands associated with the development. The customers utilising the visitor accommodation will need to compete for available car parking spaces on the public road or compete for any available / limited allocated car parking spaces within the development site. Any visitors to the site will

need to compete for available car parking spaces on the public road.

There is limited survey data to indicate the percentage of persons utilising visitor accommodation dwellings that utilise vehicles as a mode of transport.

- Serious concerns were raised when applications PLN-19-227 and PLN-21-475 were being assessed regarding the on-site car parking deficiency. The former Manager of Traffic Engineering, Angela Moore and former CoH Traffic Engineer Alon Coutinho, reinforced these concerns (shortfall of parking within the North Hobart Area) and recommended refusal of PLN-19-227 and PLN-21-475 however, on both occasions the officers' recommendations were overturned at Full Council and the development was approved resulting in an overall car parking deficiency (shortfall) of eighty two (82x) spaces.

### ASSESSMENT SUMMARY:

- E5.0 Road and railway access code DOES NOT APPLY
- Clause E5.5.1 Existing road accesses and junctions Not Applicable
- Clause E5.5.2: Existing level crossings Not Applicable
- Clause E5.6.1: Development adjacent to roads and railways Not Applicable
- Clause E5.6.2: Road accesses and junctions Not Applicable
- Clause E5.6.3: New level crossings Not Applicable
- Clause E5.6.4: Sight distance at accesses, junctions and level crossings Not Applicable
- E6.0 Parking and Access Code DOES APPLY
- Clause(s) E6.6's: Are all to do with parking number assessment Performance Criteria Acceptable solution A1: NON COMPLIANT

The number of on-site car parking spaces must be:

- (a) no less than and no greater than the number specified in Table E6.1;
- Development Engineering was advised by the assessing planner that the development does not have the required number of parking spaces for the proposed visitor accommodation. Although the parking space requirement is 5 spaces less than under PLN-21-475, there is still a deficiency that needs to be assessed against P1. Development Engineering proceeded assessment on that basis.
- This development application will see the overall car parking deficiency (shortfall) reduced from a previously approved shortfall of eighty two (82x) spaces to a deficiency of seventy seven (77x), a reduction in five (5x) parking space demand from what previously approved.
- Parking spaces provided on-site = 71 car parking spaces (including 6x small spaces) and not including 2 access parking spaces (mandatory requirement) Previously approved (PLN-21-475)
- (Applicant's planner report publicly advertised) Previously approved under PLN-17-1066. "The smaller 1-bedroom apartments, not allocated a car space, will be allocated a scooter and bicycle space". This results in the twenty four (24x) apartments (one bedroom) not having any dedicated car parking allocation(s) for the change of use from residential to visitor accommodation.

Use Class: Visitor accommodation for each serviced apartment unit requires one (1x) parking space

Use Class: Residential Single dwelling containing 1 bedroom or studio (capable of

being used as a bedroom) requires one (1x) space Use Class: Residential Single dwelling containing 2 or more bedrooms (including all rooms capable of being used as a bedroom) requires two (2x) spaces

Total number of serviced apartments = 26 Total number of residential apartments = 53

- One bedroom dwellings = 42, (24x are visitor accommodation), requiring 42 spaces
- Two bedroom dwellings = 33, requiring 66 spaces
- Three bedroom dwellings = 4, (2x are visitor accommodation), requiring 6 spaces
- Visitor parking = 18, requiring 18 spaces
- Cafe = 16, requiring 16 spaces
- Total parking spaces required for the development under HIPS 2015 = 148 spaces
- Parking spaces provided on-site = 71 car parking spaces (including 6x small spaces) and not including 2 access parking spaces (mandatory requirement).
- The car parking breakdown analysis indicates when the jockey parking spaces are taken into account there are 53 car parking spaces available for 79 dwellings resulting in no car parking available for 17 dwellings.
- Submitted documentation does not satisfy the Acceptable Solution therefore, the application will be assessed under the Performance Criterion as a deficiency of seventy seven (77x) car parking spaces in now proposed.
- Clause E6.7.1: Number of vehicle accesses Not Applicable
- Clause E6.7.2: Design of vehicle accesses Not Applicable
- Clause E6.7.3: Vehicle passing area along an access Not Applicable
- Clause E6.7.4: On-site turning Not Applicable
- Clause E6.7.5: Layout of parking areas Not Applicable
- Clause E6.7.6: Surface treatment of parking areas Not Applicable
- Clause E6.7.7: Lighting of parking areas Not Applicable
- Clause E6.7.8: Landscaping of parking areas Not Applicable
- Clause E6.7.9: Design of motorcycle parking areas Not Applicable
- Clause E6.7.10: Design of bicycle parking areas Not Applicable
- Clause E6.7.11: Bicycle end trip facilities (Planner assessment) Not Applicable
- Clause E6.7.12: Siting of car parking (Planner assessment based on DE no.'s) Not Applicable
- Clause E6.7.13: Facilities for commercial vehicles Not Applicable
- Clause E6.7.14: Access to a road Not Applicable
- Clause E6.7.15: Access to Niree Lane Sandy Bay Not Applicable

### • E7.0 Stormwater - DOES NOT APPLY

- Clause E7.7.1 1: Stormwater drainage and disposal Not Applicable
- Clause E7.7.1 2: Stormwater drainage and disposal Not Applicable
- Clause E7.7.1 3: Stormwater drainage and disposal Not Applicable
- Clause E7.7.1 4: Stormwater drainage and disposal Not Applicable

### COMMENTS:

In a council related engineering context, the proposal can be supported in principal subject to the following conditions and advice however, due to the scope of the proposal, the application was discussed with the delegated officers' of Council's City Mobility Unit.

#### **GENERAL CONDITIONS:**

Ni

#### ADVICE:

- Fee and charges
- Visitor Accommodation
- Multiple dwelling use is not eligible to residential parking permits. Under the current
  policy for the issuing of residential parking permits, the proposed use would not entitle
  the property to a residential parking permit

#### REPRESENTATIONS:

Three (3x) representations were received however, only one (1x) referenced parking concerns.

"The approval also responded to some, but not many, of the concerns expressed by the community at the time, including having a development which didn't over-look; had sufficient parking so as not to further crowd the local streets, ..."

- Serious concerns were also raised when applications PLN-19-227 and PLN-21-475 were being assessed regarding the on-site car parking deficiency. The former Manager of Traffic Engineering, Angela Moore and former CoH Traffic Engineer Alon Coutinho, reinforced these concerns (shortfall of parking within the North Hobart Area) and recommended refusal of PLN-19-227 and PLN-21-475 however, on both occasions the officers' recommendations were overturned at Full Council and the development was approved resulting in an overall car parking deficiency (shortfall) of eighty two (82x) spaces.
- As advised by successive CoH traffic engineers the empirical parking assessment (on-street) indicates that use will operate at an adequate level of service to meet likely demands associated with the development. The customers utilising the visitor accommodation will need to compete for available car parking spaces on the public road or compete for any available / limited allocated car parking spaces within the development site. Any visitors to the site will need to compete for available car parking spaces on the public road.

There is limited survey data to indicate the percentage of persons utilising visitor accommodation dwellings that utilise vehicles as a mode of transport.

- This development application will see the overall car parking deficiency (shortfall) reduced from a previously approved shortfall of eighty two (82x) spaces to a deficiency of seventy seven (77x).
- The current development application is proposing a reduction in parking demand of five (5x) parking spaces. On two previous occasions the officers' recommendations for refusal citing the use will operate at an inadequate level of service to meet likely demands associated with the development was overturned at Full Council and the development was approved with a significant car parking deficiency. Council's assessing officers feel compelled to accept the parking provision under Performance Criteria P1:E6.6.1 of the Planning Scheme given the reduction in car parking demand from what was previously approved by Full Council.

DETAILED ASSESSMENT:

E5.0 Road and railway access code

E5.1 Purpose			E5.1.1
			The purpose of this provision is to:
			(a) protect the safety and efficiency of the road and railway networks; and
			(b) reduce conflicts between sensitive uses and major roads and the rail network.
E5.2 Application of this	YES	NO	
Code			
	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		This Code applies to use or development of land:
	Yes	No	(a) that will require a new vehicle crossing, junction or level crossing; or
	Voc	No	(b) that intensifies the use of an existing access; or
			(c) that involves a sensitive use, a building, works or subdivision within 50m metres of a Utilities zone that is part of:
	Yes	No	(i) a rail network;
			(ii) a category 1 - Trunk Road or a category 2 - Regiona Freight Road, that is subject to a speed limit of more the 60km/h kilometres per hour.
Clause for Assessment			Comments / Discussion (in bold)
Clause E5.5.1: Existing road accesses and iunctions			Documentation submitted to date appears not to invoke clause E5.5.1.
NOT APPLICABLE			No intensification of existing road accesses and/or junctions proposed.
Clause E5.5.2: Existing			Documentation submitted to date appears not to
level crossings			invoke clause E5.5.2.
NOT APPLICABLE			No intensification of an existing level crossings proposed.
Clause E5.6.1:			Documentation submitted to date appears not to
Development adjacent to roads and railways			invoke clause E5.6.1.
NOT APPLICABLE			No development adjacent to category 1 or categor 2 road proposed.
Clause E5.6.2: Road			Documentation submitted to date appears not to
accesses and junctions			invoke clause E5.6.2.
	1	1	I and the second

Clause E5.6.3: New level crossings		Documentation submitted to date appears not to invoke clause E5.6.3.
NOT APPLICABLE		No new level crossings proposed.
Clause E5.6.4: Sight distance at accesses, junctions and level crossings		Documentation submitted to date appears not to invoke clause E5.6.4.  No new accesses (road) and/or junctions proposed.
NOT APPLICABLE		

E 6.0 Parking and Access Code

E6.1 Purpose			E6.1.1
to.1 Purpose			E0.1.1
			The purpose of this provision is to:
	Yes	N/A	(a) ensure safe and efficient access to the road network for all users, including drivers, passengers, pedestrians and cyclists;
	Yes	<del>N/A</del>	(b) ensure enough parking is provided for a use or development to meet the reasonable requirements of users, including people with disabilities;
	Yes	N/A	<ul> <li>(c) ensure sufficient parking is provided on site to minimise on-street parking and maximise the efficiency of the road network;</li> </ul>
	Yes	N/A	(d) ensure parking areas are designed and located in conformity with recognised standards to enable safe, easy and efficient use and contribute to the creation of vibrant and liveable places;
	Yes	N/A	(e) ensure access and parking areas are designed and located to be safe for users by minimising the potential for conflicts involving pedestrians, cyclists and vehicles; and by reducing opportunities for crime or anti-social behaviour;
	Yes	N/A	<ul> <li>(f) ensure that vehicle access and parking areas do not adversely impact on amenity, site characteristics or hazards;</li> </ul>
	Yes	N/A	(g) recognise the complementary use and benefit of public transport and non-motorised modes of transport such as bicycles and walking;
	Yes	N/A	(h) provide for safe servicing of use or development by commercial vehicles.
E6.2 Application of this	YES	_	This code applies to all use and development.
Clause for Assessment			Comments / Discussion (in bold)
Clause(s) 6.6's are all to			The parking number assessment must satisfy either
do with parking number			Acceptable Solutions or Performance Criteria for each
assessment. These will be			clause of the Hobart Interim Planning Scheme 2015

assessed by planner based on DE assessment of the following relevant clauses.

#### PERFORMANCE CRITERIA

(HIPS 2015).

Documentation submitted to date does not satisfy the Acceptable Solution for clause E6.6.1 (a) and as such, shall be assessed under Performance Criteria.

Acceptable solution - A1: - NON COMPLIANT
The number of on-site car parking spaces must be:
(a) no less than and no greater than the number specified in Table E6.1:

- Development Engineering was advised by the assessing planner that the development does not have the required number of parking spaces for the proposed visitor accommodation. Although the parking space requirement is 5 spaces less than under PLN-21-475, there is still a deficiency that needs to be assessed against P1. Development Engineering proceeded assessment on that basis.
- This development application will see the overall car parking deficiency (shortfall) reduced from a previously approved shortfall of eighty two (82x) spaces to a deficiency of seventy seven (77x), a reduction in five (5x) parking space demand from what previously approved.
- Parking spaces provided on-site = 71 car parking spaces (including 6x small spaces) and not including 2 access parking spaces (mandatory requirement) - Previously approved (PLN-21-475)
- (Applicant's planner report publicly advertised) Previously approved under PLN-17-1066. "The smaller 1-bedroom apartments, not allocated a car space, will be allocated a scooter and bicycle space". This results in the twenty four (24x) apartments (one bedroom) not having any dedicated car parking allocation(s) for the change of use from residential to visitor accommodation.
- "The allocation of the parking spaces to residents and visitor in the apartments on a needs basis, rather than have spaces permanently assigned to apartments whose residents don't have a need for such parking. This also allows for a greater level of affordability within the development as the smaller apartments will not all come with a car park. Although the lease arrangements retained for residents will allow flexibility in the parking allocated within the development over time, along with the scooter and bicycle parking options available through the overall parking strategy. Allocation to some individual parts of the development, but the retention of a pool of parking which will be available through lease arrangements to allow greater flexibility for ongoing management within the development than if all were

separately purchased. This arrangement will result in future residents understanding what parking arrangement is able to be purchased along with flexibility in to the future for occupancy changes over time."

"The parking spaces are proposed to be allocated and managed as follows:

- The parking allocation proposed to some of the serviced apartments and to the larger residential apartments to be available for purchase.
- Some remaining parking and any additional not taken up by allocated apartments will be available to purchase through a ballot system.
- An additional pool of spaces is proposed to be retained so that they can be managed in a more flexible arrangement through leasing or for the accommodation (rather than purchase).
- The smaller 1-bedroom apartments, not allocated a car space, will be allocated a scooter and bicycle space." - Previously approved (PLN-17-1066)

#### The submitted planning report stated;

"Visitor parking required = - 3"
"Total net parking generation = - 5"
"The application therefore meets the acceptable solution given the net reduction in generation proposed through the change of use."

Use Class: Visitor accommodation for each serviced apartment unit requires one (1x) parking space

Use Class: Residential Single dwelling containing 1 bedroom or studio (capable of being used as a bedroom) requires one (1x)space Use Class: Residential Single dwelling containing 2 or more bedrooms (including all rooms capable of being used as a bedroom) requires two (2x) spaces

Total number of serviced apartments = 26 Total number of residential apartments = 53

- One bedroom dwellings = 42, 24x are visitor accommodation, requiring 42 spaces
- Two bedroom dwellings = 33, requiring 66 spaces
- Three bedroom dwellings = 4, 2x are visitor accommodation, requiring 6 spaces
- Visitor parking = 53 / 3 (if on an internal lot, 1 dedicated space per 3 dwellings (rounded up to the nearest whole number), requiring 18 spaces
- Cafe = 16, requiring 16 spaces

- Total parking spaces required for the development under HIPS 2015 = 148 spaces
- Parking spaces provided on-site = 71 car parking spaces (including 6x small spaces) and not including 2 access parking spaces (mandatory requirement).
- The car parking breakdown analysis indicates when the jockey parking spaces are taken into account there are 53 car parking spaces available for 79 dwellings resulting in no car parking available for 17 dwellings.
- Submitted documentation does not satisfy the Acceptable Solution therefore, the application will be assessed under the Performance Criterion as a deficiency of seventy seven (77x) car parking spaces in now proposed.

Development Engineering summary;

PLN-17-1066 - 57 Multiple Dwellings, 13 Visitor Accommodation Units = 70 dwellings PLN-19-227 - Two Additional Visitor Accommodation Units = 72 dwellings PLN-21-475 - Eight Additional Multiple Dwellings = 80 dwellings

PAM-22-11 for PLN-21-475 Reduce the number of dwellings within the approved building by combining two of the apartments (U64 and U65) on top floor into one = 79 dwellings

- Serious concerns were also raised when applications PLN-19-227 and PLN-21-475 were being assessed regarding the on-site car parking deficiency. The former Manager of Traffic Engineering, Angela Moore and former CoH Traffic Engineer Alon Coutinho, reinforced these concerns (shortfall of parking within the North Hobart Area) and recommended refusal of PLN-19-227 and PLN-21-475 however, on both occasions the officers' recommendations were overturned at Full Council and the development was approved with an overall car parking deficiency (shortfall) of eighty two (82x) spaces.

"PLN-21-475, worsens these issues by increasing the already severe on-site parking deficiency in an area where on-street parking is at a premium. As noted earlier, the severe deficiency of off-street parking should not have been approved in 2017. Since this approval, the demand for parking in North Hobart as increased significantly, making the deficiencies in this proposal difficult to support. It should also be noted that

since 2017, parking spaces in North Hobart have been line marked to Australian Standards, reducing the supply of on-street spaces.

As it stands, this application cannot be supported." - Alon Coutinho - Traffic Engineer

#### PLN-19-227

"As this revised application currently stands I would find it difficult to support the reduced overall parking provision – particularly given that the bicycle parking was required (in the Dec 2018 TIA) to support the residential development and is being eroded to allow for additional visitor accommodation." - Angela Moore | Manager Traffic Engineering | City Planning

## The submitted planner's report stated the following;

"Current planning permits include 15 visitor accommodation serviced apartments, with the remaining apartments approved as residential. The approved visitor apartments are:

- Level 1 U101, U102, U103 & U104
- Level 2 U105, U106, U107, U108, U109, U110, U111, U112 & U113
- Level 2 U114 & U115 (Elizabeth St)

It is proposed to change the use of a further 11 residential apartments for further visitor accommodation serviced apartments, being numbers:

- Level 2 U1
- Level 3 U15, U16 & U17
- Level 5 U55, U56, U57, U58 & U59
- Level 6 U62 & U64

The total number of serviced apartments will therefore be 26, while the remaining number of residential apartments will be 53. The arrangement of the approved and proposed serviced apartments is described in Attachment 1."

#### Performance Criteria - P1:

The number of on-site car parking spaces must be sufficient to meet the reasonable needs of users, having regard to all of the following:

- (a) car parking demand;
- As advised by successive CoH traffic engineers the empirical parking assessment (on-street) indicates that use will operate at an inadequate level of service to meet likely demands associated with the development. The customers utilising the visitor accommodation will need to compete for

available car parking spaces on the public road or for any limited allocated car parking spaces within the development site. Any visitors to the site will need to compete for available car parking spaces on the public road.

There is limited survey data to indicate the percentage of persons utilising visitor accommodation dwellings that utilise vehicles as a mode of transport.

- (b) the availability of on-street and public car parking in the locality:
- Virtually all of the on-street car parking is in the form of metered, restricted and time-restricted parking. Observations indicate that there is an very high demand for these parking spaces especially during peak periods that would not meet the potential demands of visitor and overflow parking.
- (c) the availability and frequency of public transport within a 400m walking distance of the site;
- Metro Tasmania operates a bus services along Elizabeth Street.
- (d) the availability and likely use of other modes of transport:
- PLN-21-475 required via planning permit condition (ENG 6) to provide a minimum forty two (42x) bicycle parking spaces to be provided. Also condition ENG s1 requiring the increased bicycle parking must meet the requirements of the Australian Standard to the satisfaction of the Director City Planning.
- (e) the availability and suitability of alternative arrangements for car parking provision;
- No alternative parking provision is available or considered necessary.
- (f) any reduction in car parking demand due to the sharing of car parking spaces by multiple uses, either because of variation of car parking demand over time or because of efficiencies gained from the consolidation of shared car parking spaces;
- Not applicable.
- (g) any car parking deficiency or surplus associated with the existing use of the land;
- Not applicable.
- (h) any credit which should be allowed for a car parking demand deemed to have been provided in association with a use which existed before the change of parking requirement, except in the case of substantial redevelopment of a site;

	- Not applicable.
	(i) the appropriateness of a financial contribution in li of parking towards the cost of parking facilities or oth transport facilities, where such facilities exist or are planned in the vicinity; - Not applicable.
	<ul> <li>Council's position is that no car parking provisions exists for the ability to obtain a finan contribution (from developers) in lieu of parking go towards the cost of parking facilities or othe transport facilities.</li> </ul>
	<ul><li>(j) any verified prior payment of a financial contribution</li><li>lieu of parking for the land;</li><li>Not applicable.</li></ul>
	(k) any relevant parking plan for the area adopted by Council; - Not applicable.
	(I) the impact on the historic cultural heritage signification of the site if subject to the Local Heritage Code; and - Not applicable.
	(m) whether the provision of the parking would result the loss, directly or indirectly, of one or more significatives listed in the Significant Trees Code.  - No impact.
	The current development application is proposition a reduction in parking demand of five (5x) parking spaces. On two previous occasions the officer recommendations for refusal citing the use will operate at an inadequate level of service to meet likely demands associated with the development was overturned at Full Council and was approving with a significant car parking deficiency. Council assessing officers feel compelled to accept the parking provision under Performance Criteria P1:E6.6.1 of the Planning Scheme given the reduction in car parking demand from what was previously approved.
Clause E6.7.1: Number of vehicle accesses	The design of the vehicle access must satisfy either Acceptable Solutions or Performance Criteria for eaclause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).
NOT APPLICABLE	(HIPS 2015).  Documentation submitted to date appears not to invoke clause E6.7.1.
	Submitted documentation appears to indicate n changes proposed to the number of vehicle accesses.

Clause E6.7.2: Design of vehicle accesses  NOT APPLICABLE	The design of the vehicle access must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).  Documentation submitted to date appears not to invoke clause E6.7.2.  Submitted documentation appears to indicate no changes proposed to the existing vehicle access.
Clause E6.7.3: Vehicle passing area along an access	Vehicle passing must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).  Documentation submitted to date appears not to invoke clause E6.7.4.  Submitted documentation appears to indicate
	no changes proposed to the existing to vehicle passing.  Acceptable solution - A1: Vehicular passing areas must: (a) be provided if any of the following applies to an access: (i) it serves more than 5 car parking spaces; - Yes (ii) is more than 30 m long; - Yes (iii) it meets a road serving more than 6000 vehicles pe day; - No (b) be 6 m long, 5.5 m wide, and taper to the width of the driveway; - No (c) have the first passing area constructed at the kerb; - N/A (d) be at intervals of no more than 30 m along the access N/A

Clause E6.7.4: On-site turning			On-site turning must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).
NOT APPLICABLE			Documentation submitted to date appears not to invoke clause E6.7.4.
			Acceptable solution - A1:  On-site turning must be provided to enable vehicles to exit a site in a forward direction, except where the access complies with any of the following:  (a) it serves no more than two dwelling units; - Previously approved under PLN-19-227  (b) it meets a road carrying less than 6000 vehicles per day Previously approved under PLN-19-227
			Submitted documentation appears to indicate no changes proposed to the existing facility / requirement for on-site turning.
Clause E6.7.5: Layout of parking areas			The layout of the parking area must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015
NOT APPLICABLE			(HIPS 2015).  Documentation submitted to date appears not to invoke clause 6.7.5.
			Submitted documentation appears to indicate no changes proposed to existing parking area(s).
Clause E6.7.6: Surface			The surface treatment must satisfy either Acceptable
reatment of parking areas			Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).
NOT APPLICABLE			Documentation submitted to date appears not to invoke clause E6.7.6.
			Submitted documentation appears to indicate no changes proposed to the existing surface treatment within a car parking area.
Clause E6.7.7: Lighting of parking areas (Planner and health unit to assess)	_	-	Planner to assess
Clause E6.7.8: Landscaping of parking areas	_	-	Planner to assess
(Planner to assess)			

Clause E6.7.9: Design of motorcycle parking areas  NOT APPLICABLE		The motor bike parking must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).  Documentation submitted to date appears not to invoke clause E6.7.9.
		Acceptable Solution A1 (E6.6.3): The number of on-site motorcycle parking spaces provided must be at a rate of 1 space to each 20 car parking spaces after the first 19 car parking spaces except if bulky goods sales, (rounded to the nearest whole number). Where an existing use or development is extended or intensified, the additional number of motorcycle parking spaces provided must be calculated on the amount of extension or intensification, provided the existing number of motorcycle parking spaces is not reduced.
		Submitted documentation appears to indicate no changes proposed to the existing existing motorcycle parking spaces.

Clause E6.7.10: Design of bicycle parking areas	The bicycle parking must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).
NOT APPLICABLE	Documentation submitted to date appears not to invoke clause E6.7.10.
	Acceptable Solution A1: The number of on-site bicycle parking spaces provided must be no less than the number specified in Table E6.2.
	Acceptable Solution A2: The design of bicycle parking spaces must be to the class specified in table 1.1 of AS2890.3-1993 Parking facilities Part 3: Bicycle parking facilities in compliance with section 2 "Design of Parking Facilities" and clause 3.1 "Security" and 3.3 "Ease of Use" of the same Standard.
	User Class: Visitor Accommodation
	Table E6.2 sets out the number of bicycle parking spaces required. The requirement for spaces for a use or development listed in the first column of the table is set out in the second and forth columns of the table with the corresponding class set out in the third and fifth columns. If the result is not a whole number, the required number of (spaces) is the nearest whole number. If the fraction is one-half, the requirement is the next whole number.
	NO REQUIREMENT - No new bicycle parking spaces are required to be provided for a change of use in an existing building where there is no increase in the floor area of the building and floor area used is less than 500m2.
Clause E6.7.11: Bicycle — end trip facilities (Planner to assess)	— Planner to assess
Clause 6.7.12: Siting of car parking (Planner to assess) based on DE assessment of Clause 6.7.5 layout of parking area)	— Planner to assess

Clause E6.7.13: Facilities for commercial vehicles  NOT APPLICABLE	The facilities for commercial vehicles must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).  Documentation submitted to date appears not to invoke clause E6.7.13.  Submitted documentation appears to indicate no changes to the existing commercial vehicles loading, unloading or manoeuvring.
Clause E6.7.14: Access to a road  NOT APPLICABLE	The access to a road must satisfy the Acceptable Solutions of the Hobart Interim Planning Scheme 2015 (HIPS 2015).  Documentation submitted to date appears not to invoke clause E6.7.14.  Submitted documentation appears to indicate no changes proposed to the existing access to a road.
Clause E6.7.15: Access to Niree Lane Sandy Bay NOT APPLICABLE	The access to Niree Lane must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).  Documentation submitted to date appears not to invoke clause E6.7.15.  No development proposed within Niree Lane.

## E 7.0 Stormwater

E7.1.1 Purpose			E7.1.1
			The purpose of this provision is to ensure that stormwater disposal is managed in a way that furthers the objectives of the State Stormwater Strategy.
E7.2 Application of this Code	YES	N/A	This code applies to development requiring management of stormwater. This code does not apply to use.
Clause for Assessment			Comments / Discussion (in bold)

Clause E7.7.1: Stormwater drainage and disposal  NOT APPLICABLE - A1	The stormwater drainage and disposal must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).  Documentation submitted to date appears not to invoke clause E7.7.1 (A1).  Submitted documentation appears to indicate no new impervious surfaces.
Clause E7.7.1: Stormwater drainage and disposal NOT APPLICABLE - A2	The stormwater drainage and disposal must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).  Documentation submitted to date appears not to invoke clause E7.7.1 (A2).
	Acceptable Solution A2: A stormwater system for a new development must incorporate water sensitive urban design principles R1 for the treatment and disposal of stormwater if any of the following apply: (a) the size of new impervious area is more than 600 m2; - Existing (b) new car parking is provided for more than 6 cars; - Existing (c) a subdivision is for more than 5 lots - N/A  Submitted documentation appears to indicate no changes proposed to existing stormwater treatment.
Clause E7.7.1: Stormwater drainage and disposal NOT APPLICABLE - A3	The stormwater drainage and disposal must satisfy the Acceptable Solutions of the Hobart Interim Planning Scheme 2015 (HIPS 2015).  Documentation submitted to date appears not to invoke clause E7.7.1 (A3).  Submitted documentation appears to indicate no changes proposed to the existing minor stormwater system.
Clause E7.7.1: Stormwater drainage and disposal NOT APPLICABLE - A4	The stormwater drainage and disposal must satisfy the Acceptable Solution of the Hobart Interim Planning Scheme 2015 (HIPS 2015).  Documentation submitted to date appears not to invoke clause E7.7.1 (A4).  Submitted documentation does not appear to show any proposal for construction of major stormwater drainage.

## PROTECTION OF COUNCIL INFRASTRUCTURE

Council infrastructure at risk	Why?
Stormwater pipes	Not required
Council road network	Not required
	·

7.1.7 175, 177, 179, 169-173 CAMPBELL STREET AND ADJACENT ROAD RESERVE - PARTIAL DEMOLITION, ALTERATIONS, NEW BUILDING FO 31 MULTIPLE DWELLINGS, FOOD SERVICES, BUSINESS AND PROFESSIONAL SERVICES, GENERAL RETAIL AND HIRE, SUBDIVISION (LOT CONSOLIDATION), AND ASSOCIATED WORKS IN THE ROAD RESERVE INCLUDING TREE REMOVAL

PLN-21-471 - FILE REF: F22/94540

Address: 175, 177, 179, 169, 173 Campbell Street and

Adjacent Road Reserve

Proposal: Partial Demolition, Alterations, New Building for

31 Multiple Dwellings, Food Services, Business and Professional Services, General Retail and Hire, Subdivision (Lot Consolidation) and

Associated Works in the Road Reserve including

Tree Removal

Expiry Date: 29 September 2022

Extension of Time:

Author: Helen Ayers

### RECOMMENDATION

That pursuant to the *Hobart Interim Planning Scheme 2015*, the Council refuse the application for Partial Demolition, Alterations, New Building for 31 Multiple Dwellings, Food Services, Business and Professional Services, General Retail and Hire, Subdivision (Lot Consolidation), and Associated Works in the Road Reserve including Tree Removal, at 169-173, 175, 177, and 179 Campbell Street, and the Adjacent Road Reservation for the following reasons:

- The proposal does not meet the acceptable solution or the performance criterion with respect to clause 15.4.1 A1 and P1 of the *Hobart Interim Planning Scheme 2015* because the proposed building height is not compatible with the scale of nearby buildings, and fails to provide stepping between itself and adjoining buildings.
- The proposal does not meet the acceptable solution and there is no performance criterion with respect to clause E7.7.1 A4 and P4 of the *Hobart Interim Planning Scheme 2015* because it

includes a major stormwater drainage system that has not been designed to accommodate a storm with an ARI of 100 years.

- 3 The proposal does not meet the acceptable solution or the performance criterion with respect to clause E15.7.4 A1 and P1 of the Hobart Interim Planning Scheme 2015 because the car park floor level is not 300mm above the 1% AEP flood extent, and its proposed floor level does not satisfy: (a) that risk to users of the site, adjoining or nearby land is acceptable; (b) that risk to adjoining or nearby property or public infrastructure is acceptable; (c) that risk to buildings and other works arising from riverine flooding is adequately mitigated through siting, structural or design methods; and (d) that the need for future remediation works is minimised.
- 4 The proposal does not meet the acceptable solution or the performance criterion with respect to clause E15.7.5 A1 and P1 of the Hobart Interim Planning Scheme 2015 because it includes a new wall that is greater than 5m in length and it will not satisfy the following: (a) that there is no adverse affect on flood flow over other property through displacement of overland flows; and (b) that the rate of stormwater discharge from the property will not increase.

Attachment A: PLN-21-471 - 175 CAMPBELL STREET HOBART

TAS 7000 - Planning Committee or Delegated

Report  $\mathbb{I}$ 

Attachment B: PLN-21-471 - 175 CAMPBELL STREET HOBART

TAS 7000 - CPC AGENDA DOCUMENTS 🏻 ื

PLN-21-471 - 175 CAMPBELL STREET HOBART Attachment C:

TAS 7000 - Attachment C - CPC Supporting

Documents (Supporting information)

PLN-21-471 - 175 CAMPBELL STREET HOBART Attachment D:

TAS 7000 - Attachment D - Stormwater and

Flooding Consultant Engineer's Report I

Attachment E: PLN-21-471 - 175 CAMPBELL STREET HOBART

TAS 7000 - Attachment E - UDAP Report 🎚 🖺



#### **APPLICATION UNDER HOBART INTERIM PLANNING SCHEME 2015**

City of HOBART

Type of Report: Committee

Council: 22 August 2022

Expiry Date: 29 September 2022

Application No: PLN-21-471

Address: 175 CAMPBELL STREET, HOBART

177 CAMPBELL STREET , HOBART 179 CAMPBELL STREET , HOBART 169 - 173 CAMPBELL STREET , HOBART

ADJACENT ROAD RESERVE

Applicant: (JMG Engineers and Planners obo BUILDING GROUP APPRENTICESHIF

SCHEME LTD)

117 Harrington Street

Proposal: Partial Demolition, Alterations, New Building for 31 Multiple Dwellings, Foo

Services, Business and Professional Services, General Retail and Hire, Subdivision (Lot Consolidation), and Associated Works in the Road

Reserve including Tree Removal

Representations: Fourteen (14)

Performance criteria: Urban Mixed Use Zone Use and Development Standards, Potentially

Contaminated Land Code, Road and Railway Assets Code, Parking and Access Code, Stormwater Code, Attenuation Code, Historic Heritage

Code, Inundation Prone Ares Code, Signs Code

## 1. Executive Summary

1.1 Planning approval is sought for Partial Demolition, Alterations, New Building for 31 Multiple Dwellings, Food Services, Business and Professional Services, General Retail and Hire, Subdivision (Lot Consolidation), and Associated Works in the Road Reserve including Tree Removal, at 169-173, 175, 177, and 179 Campbell Street, and the Adjacent Road Reservation.

- 1.2 More specifically the proposal includes:
  - Consolidation of all lots comprising 175, 177, and 179 Campbell Street, Hobart
  - Demolition of the rear lean to additions to the dwellings at 177 and 179
     Campbell Street.
  - · Demolition of all outbuildings on 177 and 179 Campbell Street.
  - Demolition of all buildings on 175 Campbell Street.
  - External alterations to the dwellings at 177 and 179 Campbell Street to facilitate a connection between the two buildings, and level access.
  - Internal demolition and alterations within the dwellings at 177 and 179
     Campbell Street to facilitate their change of use to a food premises and consulting rooms.
  - Construction of a new 6 storey building at 175 Campbell Street which contains two ground floor commercial tenancies, basement carparking, and 31 new multiple dwellings.
  - The multiple dwellings will include 6 one bedroom, 14 two bedroom, and 11 three bedroom dwellings.
  - The proposal relies upon the ongoing use, and upgrading of the shared right of way between 175 and 169-173 Campbell Street.
  - Upgrades to public infrastructure are proposed to facilitate the proposed development.
- 1.3 The proposal relies on performance criteria to satisfy the following standards and codes:
  - 1.3.1 Urban Mixed Use Zone Use, Height, Setback, Design, Passive Surveillance, Landscaping, Fencing, Residential Amenity
  - 1.3.2 Potentially Contaminated Land Code Excavation
  - 1.3.3 Road and Railway Assets Code Existing Road Accesses and Junctions, Sight Distance at Accesses, Junctions and Level Crossings
  - 1.3.4 Parking and Access Code Number of Parking Spaces, Design of Vehicle Accesses, Layout of Parking Areas, Design of Bicycle Parking Areas, Facilities for Commercial Vehicles
  - 1.3.5 Stormwater Code Stormwater Drainage and Disposal
  - 1.3.6 Attenuation Code Development for Sensitive Use in Proximity to Use with Potential to Cause Environmental Harm
  - 1.3.7 Historic Heritage Code Development Standards for Heritage Places,
    Development Standards for Places of Archaeological Potential
  - 1.3.8 Inundation Prone Areas Code Riverine Inundation Hazard Areas
  - 1.3.9 Signs Code Standards for Signs, Standards for Signs on Heritage Places subject to the Heritage Code

- 1.4 Fourteen (14) representations objecting to the proposal were received within the statutory advertising period between 12 and 26 July 2022.
- 1.5 The proposal is recommended for refusal.
- 1.6 The final decision is delegated to the Council, because more than five objections were received, the proposal is a major application, and the officer recommendation is for refusal.

### 2. Site Detail

2.1 The application site is comprised of five separate titles, one of which (163-173 Campbell Street) is relied upon for right of way access to the site only, and has no actual development proposed. The works are to occur on 175, 177 and 179 Campbell Street, with infrastructure works spilling on the road reserve either side. The site is surrounded by a mixture of commercial, retail, bulky goods sales, residential, business and professional services, and educational uses. The site is slightly below the level of Campbell Street, but is generally flat back toward the Brooker Highway. There are two heritage listed dwellings on 177 and 179 Campbell Street, with a carpark behind associated with the commercial use of 175 Campbell Street.



Figure 1: The location of the application site is highlighted in orange



Figure 2: The location of the area where works are to occur is highlighted in orange

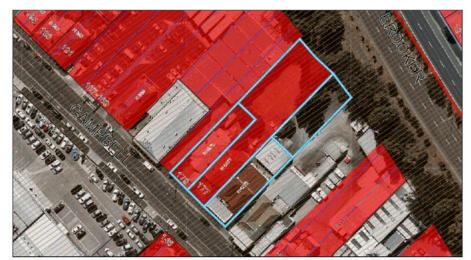


Figure 3: Showing the heritage listings for the site. The red denotes individual heritage listing under the planning scheme. The brown hatching indicates the area of archaeological potential. Source: Council GIS.



Figure 4: The site is flood prone (purple hatching). Source: Council GIS.

## 3. Proposal

3.1 Planning approval is sought for Partial Demolition, Alterations, New Building for 31 Multiple Dwellings, Food Services, Business and Professional Services, General Retail and Hire, Subdivision (Lot Consolidation), and Associated Works in the Road Reserve including Tree Removal, at 169-173, 175, 177, and 179 Campbell Street, and the Adjacent Road Reservation.

#### 3.2 More specifically the proposal is for:

- Consolidation of all lots comprising 175, 177, and 179 Campbell Street, Hobart
- Demolition of the rear lean to additions to the dwellings at 177 and 179
   Campbell Street.
- Demolition of all outbuildings on 177 and 179 Campbell Street.
- Demolition of all buildings on 175 Campbell Street.
- External alterations to the dwellings at 177 and 179 Campbell Street to facilitate a connection between the two buildings, and level access.
- Internal demolition and alterations within the dwellings at 177 and 179
   Campbell Street to facilitate their change of use to a food premises and consulting rooms.
- Construction of a new 6 storey building at 175 Campbell Street which contains two ground floor commercial tenancies, basement carparking, and 31 new multiple dwellings.
- The multiple dwellings will include 6 one bedroom, 14 two bedroom, and 11 three bedroom dwellings.
- The proposal relies upon the ongoing use, and upgrading of the shared right of way between 175 and 169-173 Campbell Street.
- Upgrades to public infrastructure are proposed to facilitate the proposed development.



Figure 5: Rendering of the proposal's front elevation. Source: Cumulus.

#### 4. Background

- 4.1 Several pre-application meetings occurred between the applicant and Council Officers.
- 4.2 The application was considered by the Urban Design Advisory Panel at its meetings of 28 April 2021 and 7 September 2021 in a pre-application review of the proposed development. The minutes of both meetings are provided as attachments to this report. In the context of the provisions on which they were asked to comment, the Panel was broadly not supportive of the proposal. The Applicant has advised that the Panel's comments were incorporated in the final design through a number of design changes to the proposed building(s) including:
- 4.3 The proposal considered by the Panel at its 28 April 2021 meeting was at a very early stage, and was largely a massing exercise. Refer figure 6 below.

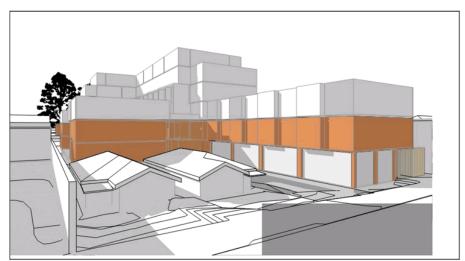


Figure 6: Campbell Street Model of the original design taken to UDAP on 28 April 2021

4.4 At its 7 September 2021 meeting, the Panel considered the proposal at the early stages of the planning application, will it was still invalid awaiting General Manager's Consent. The applicant provided the Panel with two iterations of the design - the original version and a reduced height version. Refer Figures 7 and 8 below.



Figure 7: Front and rear elevations of the original proposal submitted in the planning application. Ultimately this iteration of the design was not pursued. Source: Cumulus.



Figure 8: Front and rear elevations of the reduced height proposal provided to the Panel for comment. Ultimately this iteration of the design was not pursued. Source: Cumulus.

- 4.6 In response to the Panel's comments, the applicant made a number of changes to the design, most notably:
  - Reduced overall height and number of apartments
  - · Reduced roof height over circulation space to south
  - Simplification of building form behind heritage cottages
  - Relocation of plant equipment on the street so that heritage cottages are not concealed.
- 4.7 The third iteration of the design incorporating the above changes is what was publicly advertised, and is before the Council for consideration. It is depicted in Figure 9 below.



Figure 9: Front and rear elevations of the current iteration of the design, currently before the Council for determination. Source: Cumulus.

4.8 Throughout the assessment process, the applicant has been advised that it would be difficult for Council Officers to recommend support for the proposed height of the building, or for the proposed response to the Planning Provisions surrounding flood safety and mitigation. Following advertising the applicant had this reiterated to them and was asked if they wished to progress the application to City Planning Committee and Council Meetings. The applicant acknowledged officer concerns and requested that the application progress regardless.

#### 5. Concerns raised by representors

- 5.1 Thirteen (14) representations objecting to the proposal were received within the statutory advertising period between 12 and 26 July 2022
- 5.2 The following table outlines the concerns raised in the representations received. Those concerns which relate to a discretion invoked by the proposal are addressed in Section 6 of this report.

#### Height:

Several representors are concerned that the height of the proposed new building is not consistent with the surrounding area, and will detract from the streetscape and heritage values of the site.

Several representors have suggested that the proposed height will dominate surrounding buildings and is therefore not appropriate.

Representors are concerned that the application relies on examples of buildings that are not nearby the development site to justify the proposed building height.

Representors suggest that the height of nearby buildings is only 1-2 stories on average, and as such the proposed height does not satisfy the performance criteria.

Representors have indicated their view that the proposed building does not provide any transition of height between it and adjoining buildings.

#### Views:

Several representors have expressed concern that the proposed building will obstruct views of Mount Wellington and the Historic buildings (including the Holy Trinity Church) in Church Street, Paternoster Row, and the surrounding area, from the Glebe. The representors suggest that this compromises the historic connection between the two areas.

### Sunlight / Overshadowing:

Representors have expressed concern that the proposed new building will result in an unreasonable amount of overshadowing of adjoining properties, reducing the amenity and enjoyment of the current use of the sites, as well as compromising future development potential.

Representors have expressed concern that the proposed new building will result in an unreasonable amount of overshadowing and loss of sunlight to the footpath and road in Campbell Street to the front of the site. They suggest that the impact on the public area is unacceptable and that the proposal should not be supported.

#### Amenity:

Several representors are concerned that the proposed new building being constructed to the footpath will not provide opportunity for landscaping, and will negatively impact the amenity of the surrounding area.

Representors have noted that he trees that are to remain on the Brooker Highway are deciduous, and as such will offer little screening for residents of the Glebe during the winter months, thus making the appearance of the building at this street front facade of concern.

Tree Removal:

Several representors are concerned that the application will result directly in the removal of trees on the Brooker Highway road reservation, and potentially indirectly in the need to remove more as a result of potential construction damage. The representors have suggested that the trees are a significant streetscape element and as such that they should be preserved and not compromised through this proposed development.

### Adjacent Site Access:

One representor is concerned that access to the adjacent property that shares the right of way will be impacted during construction, and may be impacted into the future as a result of the increased volume of users. The representor has requested that construction not impact site access for the adjoining property, and that there be no ongoing impacts on access from the use of the proposed new development.

#### Construction Impacts:

Several representors were concerned about the potential footpath and road closures that could occur from the construction of this proposed development. They have indicated that the ongoing impacts of other developments in the street create unreasonable impacts when traversing the street already and that they do not feel it appropriate to compound this with more partial road and footpath closures.

Representors are concerned that there will be unreasonable dust and noise from the construction of the proposed new building for a protracted amount of time.

One representor was concerned that there may be structural impacts for adjoining buildings during construction given the proximity of the proposed new building to the site boundaries.

## Parking:

Several representors have suggested that there is insufficient parking proposed for the use of the site.

Several representors have suggested that there is too much parking for the use on site given the location, proximity to services, and availability of alternate means of transport in this location.

Representors are concerned that the lack of parking provided on site will result in vehicles from the site occupying long term car parking in the surrounding area, which the representors say is already highly sought after.

One representor has suggested that the Australian Standard relied upon for the car parking design is outdated and reflects a time when vehicles were generally smaller, and as such should not be relied upon for a modern development.

#### Traffic / Access:

Representors are concerned that there may be a loss of access to nearby and adjacent sites during construction, and have expressed the desire for this not to occur.

One representor has suggested that building to the footpath will make use of the driveway to exit the site difficult.

One representor has suggested that the access will be unsafe for pedestrians walking down Campbell Street. They have suggested that there is already difficulty given the existing use of the driveway, so adding extra vehicles will likely exacerbate the concern.

One representor is concerned that the design fails to provide access for high vehicles.

## Trade Interruptions:

Representors are concerned that workers vehicles, potential footpath or partial road closures, and general difficulty in accessing the area will result in customers seeking alternate routes, resulting in loss of casual trade, and in other customers not being able to park nearby, or thinking that nearby businesses are closed, so not visiting retain premises nearby. They are concerned that this will have a negative impact on their trade during construction.

One representor has suggested that surrounding businesses should be compensated for any loss in trade during the construction of the proposed new building.

### Bike Parking:

Several representors are concerned that the proposed bicycle parking is both insufficient and poorly designed. The representors suggest that the location of the site is ideal for alternate means of transport, such as bicycles, and as such suggests that all the residences should be provided with secure on-site bicycle parking to help facilitate this option. The representors go so far as to say that the bicycle parking could be included at the cost of car parks to encourage this means of transport.

#### Scale / Bulk / Intensity:

Representors have suggested that the proposed development is too large for the site, and will unreasonably intensify the use of the site and surrounds, negatively impacting the area.

One representor has suggested that the vertical articulation of the building design further exacerbated the appearance of building height and bulk.

#### Design:

Representors have suggested that the design of the building should include stepping of the frontage, and introduce balconies with landscaping to soften the facade and make it more sympathetic to its surrounds.

Representors have questioned the efficacy of replicating other saw-tooth roof structures on commercial buildings in the area as a means of reducing the visual bulk of the building. The representors have suggested that the building referenced by this design is likely to be replaced with housing in the medium to long term future, and that this will result in a roof form which is out of character with the surrounding area.

Representors have suggested that the proportion of the site dedicated to impervious surface is a poor design outcome. They have suggested that for future climate change risks it would be better to have more plantings and water pervious surfaces.

One representor has suggested that the failure to angle all roofs in the same direction means that the design fails to reflect the sawtooth roofs that they are suggested to replicate.

One representor has suggested that he proposed finished are neither reflective of the surrounding materials, nor of sufficient distinction to warrant their use. They have suggested that the materials are a cheap option that denigrates the heritage values of the surrounding area.

## Heritage:

Representors are concerned that the proposed new building is not consistent with the heritage streetscape of Campbell Street.

Representors suggest that the proposed new building is not subservient or complimentary to the heritage buildings and sites.

Representors have suggested that the design of the new building is not sympathetic to that of the two exiting heritage listed dwellings on site. One representor suggest that the proposed demolition within the heritage listed buildings is not necessary or appropriate.

#### Neighbourhood Character:

Several representors have suggested that the scale and design of the proposed new building is out of character with the surrounding neighbourhood.

#### Flood Risk:

Representors are concerned that the site is prone to flooding in significant weather events, the carparking area will be under a significant amount of water, and therefore unsafe for residents.

#### Precedent:

Several representors are concerned that the proposed height and form of this development will set a precedent for other similar such developments in the area.

One representor was concerned that the approval of this development will set a precedent for incremental increases in the height of buildings in the area, paving the way for further inconsistent development by similar degrees to that which they perceived from this development.

#### Noise:

Several representors are concerned that the residents will be subjected to unreasonable amounts of noise due to the proximity of the dwellings to the Brooker Highway.

Representors have expressed concern that there is no noise attenuation proposed for users of the rooftop garden or courtyard, and that he likely impost of Highway noise will result in limited use of these facilities

#### 6. Assessment

- 6.1 The Hobart Interim Planning Scheme 2015 is a performance based planning scheme. To meet an applicable standard, a proposal must demonstrate compliance with either an acceptable solution or a performance criterion. Where a proposal complies with a standard by relying on one or more performance criteria, the Council may approve or refuse the proposal on that basis. The ability to approve or refuse the proposal relates only to the performance criteria relied on.
- 6.2 The site is located within the Urban Mixed Use Zone of the Hobart Interim Planning

Scheme 2015.

- The existing use is Residential and Business and Professional Services. The proposed use is Partial Demolition, Alterations, New Building for 31 Multiple Dwellings, Food Services, Business and Professional Services, General Retail and Hire, Subdivision (Lot Consolidation), and Associated Works in the Road Reserve including Tree Removal. The existing uses are permitted uses in the zone. The proposed uses are permitted and discretionary uses in the zone.
- 6.4 The proposal has been assessed against:
  - 6.4.1 Part D 15.0 Urban Mixed Use Zone
  - 6.4.2 Part E E2.0 Potentially Contaminated Land Code
  - 6.4.3 Part E E5.0 Road and Railway Assets Code
  - 6.4.4 Part E E6.0 Parking and Access Code
  - 6.4.5 Part E E7.0 Stormwater Management Code
  - 6.4.6 Part E E9.0 Attenuation Code
  - 6.4.7 Part E E13.0 Historic Heritage Code
  - 6.4.8 Part E E15.0 Inundation Prone Areas Code
  - 8.4.9 Part E E17.0 Signs Code
- The proposal relies on the following performance criteria to comply with the applicable standards:
  - 6.5.1 Urban Mixed Use Zone:

Zone Use Table - Part D - 15.3.1

Height - Part D 15.4.1 P1

Setback - Part D 15.4.2 P1

Design - Part D - 15.4.3 P1

Passive Surveillance - Part D 15.4.4 P1

Landscaping - Part D 15.4.5 P1

Fencing - Part D 15.4.7 P1

Residential Amenity - Part D 15.4.8 P1, P3

## 6.5.2 Potentially Contaminated Land Code:

Excavation - Part E E2.6.2 P1

### 6.5.3 Road and Railway Assets Code:

Existing Road Accesses and Junctions - Part E E5.5.1 P3
Sight Distance at Accesses, Junctions and Level Crossings - Part E
E5.6.4 P1

#### 6.5.4 Parking and Access Code:

Number of Parking Spaces - Part E E6.6.1 P1
Design of Vehicle Accesses - Part E E6.7.2 P1
Layout of Parking Areas - Part E E6.7.5 P1
Design of Bicycle Parking Areas - Part E E6.7.10 P1 and P2
Facilities for Commercial Vehicles - Part E E6.7.13 P1

#### 6.5.5 Stormwater Code:

Stormwater Drainage and Disposal - Part E E7.7.1 P2 and A4

#### 6.5.6 Attenuation Code:

Development for Sensitive Use in Proximity to Use with Potential to Cause Environmental Harm - Part E E 9.7.2 P1

## 6.5.7 Historic Heritage Code:

Development Standards for Heritage Places - Part E E13.7.1 P1 and E13.7.2 P1, P2, P3, P4, P5, and P6, and E13.7.3 P1
Development Standards for Places of Archaeological Potential - Part E E13.10.1 P1 and E13.10.2 P1

## 6.5.8 Inundation Prone Areas Code:

Riverine Inundation Hazard Areas - Part E E15.7.4 P1
Riverine, Coastal Investigation Area, Low, Medium, High Inundation
Hazard Areas - Part E E15.7.5 P1

## 6.5.9 Signs Code:

Standards for Signs - Part E E17.7.1 P1

Standards for Signs on Heritage Places subject to the Heritage Code -Part E E17.7.2 P1

- 6.6 Each performance criterion is assessed below.
- 6.7 Zone Use Table Part D 15.3.1
  - 6.7.1 The Zone Use Table provides for the status of all uses within the Urban Mixed Use Zone.
  - 6.7.2 General Retail and Hire is a discretionary use in the Zone Use Table.
  - 6.7.3 Clause 8.10.1 and 8.10.2 require that a use satisfy the relevant zone use standards, along with the Zone Purpose Statement, Local Area Objectives, and Desired Future Character Statements of the relevant zone.
  - 6.7.4 The proposed use satisfies the relevant Use Standards for the Zone.
  - 6.7.5 The relevant Zone Purpose Statements for the Urban Mixed Use Zone are as Follows:
    - 15.1.1.1 To provide for integration of residential, retail, community services and commercial activities in urban locations.

The mixed use proposed for the site combines residential, commercial, consulting rooms. and food services in an urban area

15.1.1.2 To encourage use and development at street level that generates activity and pedestrian movement through the area.

The development includes food services, consulting rooms, and commercial tenancies facing the street, with residential above. This will encourage activity in the street.

15.1.1.3 To provide for design that maximises the amenity at street level including considerations of microclimate, lighting, safety, and pedestrian connectivity.

The proposed works retain the existing building setbacks, albeit that the southern building is replaced with a taller structure. This ensures minimal impact on the microclimate of the street. Lighting will remain largely unchanged at the street as the courtyard for the

development is internal and therefore the majority of the lighting (excluding security and pedestrian walkway lighting) will be shielded from the street. Public pedestrian connectivity is not provided through the site, however, this is not desirable as there is no destination on the Brooker Highway side of the site that does not have adequate alternative access.

15.1.1.4 To ensure that commercial use are consistent with the activity centre hierarchy.

N/A

15.1.1.5 To ensure development is accessible by public transport, walking and cycling.

The site is on a bus route, and a bicycle path, and is close enough to the city, and to supermarkets, schools, and other business and professional services that walking and cycling are options for residents.

15.1.1.6 To provide for a diversity of uses at densities responsive to the character of streetscapes, historic areas and buildings and which do not compromise the amenity of surrounding residential areas.

The diversity of use introduced to the surrounding area by the proposed development will compliment the existing use. The existing area is capable of supporting the residential density proposed without any compromise of the existing residential amenity. Council's Cultural Heritage Officers have assessed the proposed works and have determined that they are acceptable in the context of the heritage surrounds.

15.1.1.7 To encourage the retention of existing residential uses and the greater use of underutilised sites as well as the reuse and adaptation of existing buildings for uses with a scale appropriate to the site and area.

Whilst the residential function of the two existing dwellings on the site is displaced, this is offset by the introduction of much higher density residential in the new building(s) on site which are designed to modern construction standards for enhanced residential amenity. The existing dwellings are re-purposed to commercial uses which

require a lower amenity standard, but retain the character and aesthetic of the site.

15.1.1.8 To ensure that the proportions, materials, openings and decoration of building facades contribute positively to the streetscape and reinforce the built environment of the area in which the site is situated.

The works to the heritage buildings achieve this. The proposed new building does not achieve this, and is discussed in detail at paragraph 6.8 below.

15.1.1.9 To maintain an appropriate level of amenity for residential uses without unreasonable restriction or constraint on the nature and hours of commercial activities.

The proposal will introduce new residential use to the site with current construction standards. This will result in residential development that protects its own amenity from potential commercial activity in the area, thus conserving the ability to maintain a diverse pattern of use of the wider area.

15.1.1.10 To ensure that retail shopping strips do not develop along major arterial roads within the zone.

No new retail strip will result from the proposed development.

- 6.7.6 There are no Local Area Objectives for the Urban Mixed Use Zone.
- 6.7.7 There are no Desired Future Character Statements for the Urban Mixed Use Zone.
- 6.7.8 The proposal complies with the Planning Scheme requirements for discretionary use for the site.
- 6.8 Height Part D 15.4.1 P1
  - 6.8.1 The acceptable solution at clause 15.4.1 A1 requires buildings to have a maximum height of 10m.
  - 6.8.2 The proposal includes a new building with a maximum height above natural ground level of 23.6m.

- 6.8.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
- 6.8.4 The performance criterion at clause 15.4.1 P1 provides as follows:

Building height must satisfy all of the following:

- (a) be consistent with any Desired Future Character Statements provided for the area;
- (b) be compatible with the scale of nearby buildings;
- (c) not unreasonably overshadow adjacent public space;
- (d) allow for a transition in height between adjoining buildings, where appropriate:
- 6.8.5 In relation to (a), there are no Desired Future Character Statements for the Urban Mixed Use Zone.
- 6.8.6 In relation to (c), the sun shadow diagrams submitted with the application show that the footpath in Campbell Street will be overshadowed by the proposed development for much of the day at the winter solstice. However, the plans also show that the adjacent buildings will also overshadow the footpath for much of the same time. As such, it can reasonably be extrapolated that a much smaller building, possibly even complying with the permitted building height, would have a similar impact on the footpath in terms of overshadowing. As there are no other public spaces affected by overshadowing or loss of sunlight from this development, this is considered acceptable.
- 6.8.7 In relation to (b) and (d), the Tribunal has held that 'compatibility' means:

To be compatible is to be consistent or congruous with that which comparison is required to be made. The Tribunal holds that to be "compatible" requires that the building height be capable of co-existing with the scale of nearby buildings. 'Compatible' [means] "not necessarily the same... but at least similar to, or in harmony or broad correspondence with the surrounding area". [Compatible] requires an outcome which is in harmony or broad correspondence with the surrounding area.

The Tribunal has held that 'scale' means:

The Tribunal holds that "scale" in this Clause [clause 15.4.1 – building height in the Urban Mixed Use zone] should be read in the context of P1; the term takes its colour from that context. The terms of P1 relate to building height. Accordingly, the reference to scale in this part is an inference to height and requires compatibility in that respect. Such matters cannot ignore altogether the form of the building, since height generates mass ... but the intent is that building height must be compatible with the scale (height) of "nearby" buildings.

The Tribunal has held that 'nearby' means "close to" the subject development.

The Tribunal has held that 'transition' means:

Transitions between adjoining buildings are common provisions in town planning controls. Obviously, the intent of such controls is to avoid discordant differences in building heights by requiring the design of higher buildings to have regard for, and a recognition of, lower buildings. Stepped buildings are one way to achieve a transition.

The Tribunal has held that 'adjoining' means:

The Tribunal prefers a wider interpretation of this concept. 'Adjoining' should be construed to mean 'next to', without a requirement for physical connection between structures.

The height of the proposed building is between 4 and 6 storeys, and a maximum of 23.6m above the existing ground level. Buildings that are 'close to' the subject development, including those that are adjoining, are between one and two stories in height and have a significantly lower maximum height in relation to the existing ground level.







Figure 10: Showing the height of nearby and adjoining buildings. 175 Campbell St is highlighted blue. Note the site also includes 177 and 179 Campbell Street. Source: HCC Digital Twin.

The lack of higher buildings adjoining and nearby the subject site is a significant constraint on the development potential of the site, given the wording of the performance criteria. It is acknowledged that this proposal has some positive elements, and hypothetically, if there was higher development already existing in close proximity to the site, a more favourable assessment against the performance criteria could potentially be made However, as a 'first mover', this development has to comply with the above performance criteria in the context of the development which currently exists.

While it is noted that towards the city there are higher buildings, these are too far afield to be considered nearby, and therefore cannot be relied on for the purposes of this clause.

As a consequence, the proposal cannot be said to be compatible with the height of nearby buildings.

While (d) includes the words 'as appropriate' in requiring a transition in height to adjoining buildings, with a permitted maximum height of only 10m, the maximum height of almost 24m makes it very hard to argue that appropriate transitioning is being provided, either to current existing development, or possible future permitted development. Further, while it is noted that the 'tower' of the building is located at the centre of the site, behind the two heritage buildings, and is lower than the remaining new building(s), the proposed new buildings are designed with full height to all boundaries, with no discernable stepping of the facade to respond to adjacent properties. It is acknowledged that the application site is restricted in the extent that stepping can be effectively achieved given the two significant frontages, and the number and location of the heritage listed structures, both on site and in the surrounding area. Notwithstanding this limitation, it is considered that the lack of stepping is unacceptable as it fails to assist the proposed new building(s) in sitting comfortably within the surrounds. It is considered that some form of stepping to help soften the appearance of the building in its surrounds is considered necessary in this location.

6.8.8 In relation to height, the UDAP commented as follows at its 7 September 2021 meeting:

The Panel note the proposal substantially exceeds the current Scheme's height requirements, and if required to comment on height in a formal Development Application review, the Panel would recommend refusal on the height of the proposal.

The Panel appreciated the proponents reason for introducing a varied roofline, to reflect the industrial buildings' roof-lights nearby, though felt they were being used as an architectural expression and could have assisted more in reducing the height adjacent to neighbours to allow more sunlight on adjoining properties.

The panel noted that while the proposal needs to be compatible with nearby buildings, it does not need to match.

The Panel noted that the proposal did seem to be addressing the Campbell Street streetscape by reducing the height. The Panel felt that the street frontage could maintain the form in the higher of the two versions shown, given the relationship to the existing buildings on the opposite side of Campbell Street. However, the Panel were also of the opinion that massing impacts are more significant to the neighbouring properties than tinkering with the streetscape. The panel raised the issue

of bulk not just height, noting that height should be an outcome of location and form.

On a strict interpretation of the planning scheme provisions for height, the Panel concluded that the proposal does not comply. While there are meritorious elements of the proposal, overall they are not yet so significant as to warrant supporting the proposal, notwithstanding the non-compliance with the scheme.

- 6.8.9 The proposal does not comply with the performance criterion.
- 6.9 Setback Part D 15.4.2 P1
  - 6.9.1 The acceptable solution at clause 15.4.2 A1 requires buildings and works to be set back from the front boundary within 1m of the median setback within 100m on the same side of the street. An assessment of the setbacks within 100m of the site on the Campbell Street frontage has determined that this is between 0.2m and 2.2m from the front boundary. An assessment of the setbacks within 100m of the site on the Brooker Highway frontage has determined that this is between 0.7m and 2.7m from the front boundary.
  - 6.9.2 The proposal includes a new building with a 0m setback from the front boundary to both Campbell Street and the Brooker Highway.
  - 6.9.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
  - 6.9.4 The performance criterion at clause 15.4.2 P1 provides as follows:

Building setback from frontage must satisfy all of the following:

- (a) be consistent with any Desired Future Character Statements provided for the area;
- (b) be compatible with the setback of adjoining buildings, generally maintaining a continuous building line if evident in the streetscape;
- (c) enhance the characteristics of the site, adjoining lots and the streetscape;
- (d) provide for small variations in building alignment only where

appropriate to break up long building facades, provided that no potential concealment or entrapment opportunity is created;

- (e) provide for large variations in building alignment only where appropriate to provide for a forecourt for space for public use, such as outdoor dining or landscaping, provided the that no potential concealment or entrapment opportunity is created and the forecourt is afforded very good passive surveillance.
- 6.9.5 There are sufficient buildings built tot he front boundary in the nearby streetscape, and the extent to which the building does not comply with the front setback is small enough, that the proposed setback will not be out of character with the majority of the surrounds. The exception to this are the existing dwellings on the application site, but they are also significantly outside or the median range of front setbacks. As such, the proposed new building is more in keeping with the streetscape than the existing dwellings are.
- 6.9.6 The proposed setback to the Brooker Highway is consistent with that of buildings on adjacent properties. There is sufficient setback from the road carriageway, and sufficient detail in the building facade above ground level that it will not detract from the streetscape in this location.
- 6.9.7 The proposal complies with the performance criterion.
- 6.10 Design Part D 15.4.3 P1
  - 6.10.1 The acceptable solution at clause 15.4.3 A1 requires that blank walls occupy no more than 30% of the surface area of the ground floor level facade.
  - 6.10.2 The proposal includes 51% of the Campbell Street front facade as blank wall
  - 6.10.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
  - 6.10.4 The performance criterion at clause 15.4.3 P1 provides as follows:

Building design must enhance the streetscape by satisfying all of the following:

(a) provide the main access to the building in a way that addresses

the street or other public space boundary;

- (b) provide windows in the front façade in a way that enhances the streetscape and provides for passive surveillance of public spaces;
- (c) treat large expanses of blank wall in the front façade and facing other public space boundaries with architectural detail or public art so as to contribute positively to the streetscape and public space;
- (d) ensure the visual impact of mechanical plant and miscellaneous equipment, such as heat pumps, air conditioning units, switchboards, hot water units or similar, is insignificant when viewed from the street;
- (e) ensure roof-top service infrastructure, including service plants and lift structures, is screened so as to have insignificant visual impact;
- (f) not provide awnings over the public footpath only if there is no benefit to the streetscape or pedestrian amenity or if not possible due to physical constraints;
- (g) only provide shutters where essential for the security of the premises and other alternatives for ensuring security are not feasible;
- (h) be consistent with any Desired Future Character Statements provided for the area.
- 6.10.5 Half of the ground floor facade of the new building is proposed to be shop front window and door. This will provide opportunity for mutual passive surveillance between the business and the street.
- 6.10.6 The large expanse of blank wall is at ground floor only. As there is no signage proposed for the site it is anticipated that this would be the location for business signage at a later date. Should this not occur, the limited detailing of the doors for the fire hydrant and booster assembly that are understood to be accessed from this location can be conditioned to add sufficient detail so as not to detract from the streetscape..
- 6.10.7 The proposal complies with the performance criterion, subject to the condition regarding the detailing of the access to the fire hydrant and booster assembly.

- 6.11 Passive Surveillance Part D 15.4.4 P1
  - 6.11.1 The acceptable solution at clause 15.4.4 A1 requires that blank walls occupy no more than 30% of the surface area of the ground floor level facade.
  - 6.11.2 The proposal includes 51% of the Campbell Street front facade as blank wall.
  - 6.11.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
  - 6.11.4 The performance criterion at clause 15.4.4 P1 provides as follows:

Building design must provide for passive surveillance of public spaces by satisfying all of the following:

- (a) provide the main entrance or entrances to a building so that they are clearly visible from nearby buildings and public spaces;
- (b) locate windows to adequately overlook the street and adjoining public spaces;
- (c) incorporate shop front windows and doors for ground floor shops and offices, so that pedestrians can see into the building and vice versa;
- (d) locate external lighting to illuminate any entrapment spaces around the building site;
- (e) provide external lighting to illuminate car parking areas and pathways;
- (f) design and locate public access to provide high visibility for users and provide clear sight lines between the entrance and adjacent properties and public spaces;
- (g) provide for sight lines to other buildings and public spaces.
- 6.11.5 Half of the ground floor facade of the new building is proposed to be shop front window and door. This will provide opportunity for mutual passive surveillance between the business and the street.

- 6.11.6 The proposal complies with the performance criterion.
- 6.12 Landscaping Part D 15.4.5 P1
  - 6.12.1 There is no acceptable solution at clause 15.4.5 A1 for circumstances where a building is set back more than 1m from the front boundary.
  - 6.12.2 The proposal includes alterations and additions to buildings that are set back 9.7m from the front boundary.
  - 6.12.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
  - 6.12.4 The performance criterion at clause 15.4.5 P1 provides as follows:

Landscaping must be provided to satisfy all of the following:

- (a) enhance the appearance of the development;
- (b) provide a range of plant height and forms to create diversity, interest and amenity;
- (c) not create concealed entrapment spaces;
- (d) be consistent with any Desired Future Character Statements provided for the area.
- 6.12.5 Landscaping of the front garden of the whole of the site is proposed. The landscaping is to be sympathetic to the era of the original buildings, whilst ensuring that mutual passive surveillance is retained between the site and the street.
- 6.12.6 The proposal complies with the performance criterion.
- 6.13 Fencing Part D 15.4.7 P1
  - 6.13.1 The acceptable solution at clause 15.4.7 A1 requires walls, fences and gates within 4.5m of the front boundary to have a maximum height of 1.5m, and to be at least 50% transparent above 1.2m.
  - 6.13.2 The proposal includes fencing above a retaining wall within 4.5m of the frontage that has a combined maximum height of approximately 3.2m above the existing ground line.

- 6.13.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
- 6.13.4 The performance criterion at clause 15.4.7 P1 provides as follows:

Fencing must contribute positively to the streetscape and not have an unreasonable adverse impact upon the amenity of land in the General Residential Zone or Inner Residential Zone which lies opposite or shares a common boundary with a site, having regard to all of the following:

- (a) the height of the fence;
- (b) the degree of transparency of the fence;
- (c) the location and extent of the fence;
- (d) the design of the fence;
- (e) the fence materials and construction;
- (f) the nature of the use;
- (g) the characteristics of the site, the streetscape and the locality, including fences;
- (h) any Desired Future Character Statements provided for the area.
- 6.13.5 There is insufficient detail of the fence at the top of the retaining wall, and at the side of the pedestrian ramp to have understanding of the transparency or height. It appears, however, that these un-specified fences will be of the same design as the front fence for the two heritage buildings. Given the height and transparency of the boundary fence, it is considered that this would provide for mutual passive surveillance, and be in keeping with the site and surrounds, so long as the material, transparency and height in relation to AHD match those of the proposed front boundary fence. As such a condition requiring this is recommended.
- 6.13.6 The proposal complies with the performance criterion.
- 6.14 Residential Amenity Part D 15.4.8 P1

- 6.14.1 The acceptable solution at clause 15.4.8 A1 requires that all dwellings have one window facing between 30 degrees of east west alignment.
- 6.14.2 The proposal includes all dwellings with windows facing 45 degrees east and west of north.
- 6.14.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
- 6.14.4 The performance criterion at clause 15.4.8 P1 provides as follows:

A dwelling must be sited and designed to optimise sunlight to at least one habitable room (other than a bedroom).

- 6.14.5 The orientation of all dwellings is such that they will receive sunlight to the habitable rooms for large parts of the day.
- 6.14.6 The proposal complies with the performance criterion.
- 6.15 Residential Amenity Part D 15.4.8 P3
  - 6.15.1 The acceptable solution at clause 15.4.8 A3 requires dwellings to have a minimum 10m² private open space, with a minimum 2m dimension.
  - 6.15.2 The proposal includes two dwellings (G09 and 107) which have less than 10m² private open space with a minimum 2m dimension.
  - 6.15.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
  - 6.51.4 The performance criterion at clause 15.4.8 P3 provides as follows:

Outdoor living space must be provided for a dwelling with dimensions sufficient for the projected requirements of the occupants.

6.15.5 These two dwellings have sufficient private open space for outdoor dining, and to extend the living area of the dwelling to the outside. This is augmented by a large, communal rooftop garden, as well as courtyards within the site to facilitate larger gatherings. As such, the performance criteria is considered to have been satisfied.

- 6.15.6 The proposal complies with the performance criterion.
- 6.16 Excavation Part E E2.6.2 P1
  - 6.16.1 There is no acceptable solution for E2.6.2 A1.
  - 6.16.2 The proposal includes (insert what the proposal includes, so far as relevant to the acceptable solution).
  - 6.16.3 There is no acceptable solution; therefore assessment against the performance criterion is relied on.
  - 6.16.4 The performance criterion at clause E2.6.2 P1 provides as follows:

Excavation does not adversely impact on health and the environment, having regard to:

- (a) an environmental site assessment that demonstrates there is no evidence the land is contaminated; or
- (b) a plan to manage contamination and associated risk to human health and the environment that includes:
- (i) an environmental site assessment;
- (ii) any specific remediation and protection measures required to be implemented before excavation commences; and
- (iii) a statement that the excavation does not adversely impact on human health or the environment.
- 6.16.5 The application has been reviewed by Council's Environmental Health Officer, who has provided the following comment:
  - E2.6.2 Excavation is the section of the Potentially Contaminated Land Code that applies to this development. As there is no acceptable solution, the applicants are relying on meeting P1 (b), which contains three components:
  - (i) An Environmental Site Assessment (ESA) dated November 2021 this was submitted.
  - (ii) Any specific remediation and protection measures required to be implemented before excavation commences - see below.
  - (iii) A statement that the excavation does not adversely impact on human health or the environment - this was included in Section 13.4 'Conclusions Summary' of the ESA (Environmental Site Assessment).

Regarding (ii), the ESA states that a 'Contamination Management Plan' and 'Soil and Water Management Plan' are required to be completed for the site. This has been included as a recommended condition on the planning permit for the development.

- 6.16.6 The proposal complies with the performance criterion, subject to the above mentioned condition.
- 6.17 Existing Road Accesses and Junctions Part E E5.5.1 P3
  - 6.17.1 The acceptable solution at clause E5.5.1 A3 requires use and development not to result in an increase of more than 20% or 40 vehicle movements per day to and from a site, whichever is the greater.
  - 6.17.2 The proposal includes a traffic impact assessment stating that the increase in vehicle movements to and from the site will exceed this.
  - 6.17.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
  - 6.17.4 The performance criterion at clause E5.5.1 P3 provides as follows:

Any increase in vehicle traffic at an existing access or junction in an area subject to a speed limit of 60km/h or less, must be safe and not unreasonably impact on the efficiency of the road, having regard to:

- (a) the increase in traffic caused by the use;
- (b) the nature of the traffic generated by the use;
- (c) the nature and efficiency of the access or the junction;
- (d) the nature and category of the road;
- (e) the speed limit and traffic flow of the road;
- (f) any alternative access to a road;
- (g) the need for the use;
- (h) any traffic impact assessment; and

- (i) any written advice received from the road authority.
- 6.17.5 The application has been reviewed by Council's Development Engineer, who has provided the following assessment:

The existing road access must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).

Documentation submitted to date does not satisfy the Acceptable Solution for clause E5.5.1 (A3) and as such, shall be assessed under Performance Criteria.

Acceptable Solution A3: - NON COMPLIANT
The annual average daily traffic (AADT) of vehicle movements, to
and from a site, using an existing access or junction, in an area
subject to a speed limit of 60km/h or less, must not increase by
more than 20% or 40 vehicle movements per day, whichever is the
greater.

#### Performance Criteria - P3:

Any increase in vehicle traffic at an existing access or junction in an area subject to a speed limit of 60km/h or less, must be safe and not unreasonably impact on the efficiency of the road, having regard to:

"The TIA indicated that the currently AADT of vehicle movements will be increased by more than 40 vehicle movements per day (182 vmpd), therefore, P3 must be considered." - Page 21, JMG Planning Report, dated January 2022

- (a) the increase in traffic caused by the use:
- "When fully occupied based on the medium density residential, office and commercial and restaurant will generate approximately 182 vehicle movements per day. The residential building is expected to generate 94 vehicle movements per day (base on the RTA Traffic Generating Guidelines). The business and professional services will generate 22 vehicle movements per day. The food service will generate 66 vehicle movements per day. Additionally, 18 vehicle movements were generated within the weekday peak hour surrounding the road network. Thus the fully occupied vehicle movement number will be 200 per day. This number of vehicle movements is low for an Urban Mixed Use area

of this size, given much of the zone area is used for multiple purposes." - Page 21, JMG Planning Report, dated January 2022

- (b) the nature of the traffic generated by the use;
- "The proposed development is likely to be offset by the inner-city location and will encourage the uptake of other modes of transport." Page 21, JMG Planning Report, dated January 2022
- (c) the nature and efficiency of the access or the junction;
- "The proposed development is located in a section of Campbell Street which already provides a high level of accessibility to local businesses in area." - Page 21, JMG Planning Report, dated January 2022
- (d) the nature and category of the road;
- "Campbell Street has sufficient capacity as a collector road for the additional traffic movements." - Page 21, JMG Planning Report, dated January 2022
- (e) the speed limit and traffic flow of the road;
- "The Campbell Street signalised intersection with Warwick Street effectively creates gaps in the traffic flow for this section of the road for safe entry/exit into properties and parking but not so long that traffic flow is restricted." Page 21, JMG Planning Report, dated January 2022
- (f) any alternative access to a road;
- "There is no alternative access." Page 21, JMG Planning Report, dated January 2022
- (g) the need for the use;
- "The existing site access has operated safely and efficiently to date and will be upgraded as part of the proposed development." -Page 21, JMG Planning Report, dated January 2022
- (h) any traffic impact assessment; and
- "A minor crash history exists for the area but there is no evidence of significant road safety issues in the study area." - Page 21, JMG Planning Report, dated January 2022
- (i) any written advice received from the road authority.
- "No advice was received from the road authority." Page 21, JMG Planning Report, dated January 2022

"Based on the above the proposal is considered to satisfy Performance Criteria P3." - Page 21, JMG Planning Report, dated January 2022

The minor access intensification identified (182 vmpd) may be accepted as a performance based solution by the City, based on the applicant's responses for each of the relevant performance criteria.

- 6.17.6 The proposal complies with the performance criterion.
- 6.18 Sight Distance at Accesses, Junctions and Level Crossings Part E E5.6.4 P1
  - 6.18.1 The acceptable solution at clause E5.6.4 A1 requires site distances at accesses to be provided in accordance with Table E5.1.
  - 6.18.2 The proposal includes site distances at the site access that do not comply with Table E5.1.
  - 6.18.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
  - 6.18.4 The performance criterion at clause E5.6.4 P1 provides as follows:

The design, layout and location of an access, junction or rail level crossing must provide adequate sight distances to ensure the safe movement of vehicles, having regard to:

- (a) the nature and frequency of the traffic generated by the use;
- (b) the frequency of use of the road or rail network;
- (c) any alternative access;
- (d) the need for the access, junction or level crossing;
- (e) any traffic impact assessment;
- (f) any measures to improve or maintain sight distance; and
- (g) any written advice received from the road or rail authority.
- 6.18.5 The application has been reviewed by Council's Development Engineer,

who has provided the following assessment:

The sight distance at access and junctions must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).

Documentation submitted to date does not satisfy the Acceptable Solution for clause E5.6.4 and as such, shall be assessed under Performance Criteria.

Acceptable solution - A1: - NON COMPLIANT Sight distances at:

- (a) an access or junction must comply with the Safe Intersection Sight Distance shown in Table E5.1; and
- (b) rail level crossings must comply with AS1742.7 Manual of uniform traffic control devices - Railway crossings, Standards Association of Australia. - N/A

#### Performance Criteria – P1:

The design, layout and location of an access, junction or rail level crossing must provide adequate sight distances to ensure the safe movement of vehicles, having regard to:

"An acceptable solution is partially met as safe intersection sight distance to the right of the site access is deficient and on-street parking restricts sight distance to the left of the site access. E5.6.4 has been assessed in the TIA against the Performance Criteria. It is deemed acceptable on the following grounds:" - Page 22, JMG Planning Report, dated January 2022

- (a) the nature and frequency of the traffic generated by the use;
   "Sight distance to the right of the site access meets the minimum safe sight distance requirement stated in Figure 3.2 of AS/NZS 2890.1 for exiting an access driveway other than domestic property. Use of the site access to enter/exit the off-street car park is less frequent due to the largely residential nature of the development." Page 22, JMG Planning Report, dated January 2022
- (b) the frequency of use of the road or rail network;
- "Sight distance to the right of the site access meets the minimum safe sight distance requirement stated in Figure 3.2 of AS/NZS 2890.1 for exiting an access driveway other than domestic

property. Use of the site access to enter/exit the off-street car park is less frequent due to the largely residential nature of the development." - Page 22, JMG Planning Report, dated January 2022

- (c) any alternative access:
- "The site access arrangements are consistent with those around it hence the proposal does not introduce any new elements." -Page 22, JMG Planning Report, dated January 2022
- (d) the need for the access, junction or level crossing;
   "In addition to being a collector road, Campbell Street plays a local access role hence it is challenging to satisfy the SISD requirement for all access points along this road when on-street parking is present." Page 23, JMG Planning Report, dated January 2022
- (e) any traffic impact assessment;
- "A minor crash history exists for the area but there is no evidence of significant road safety issues in the study area." - Page 23, JMG Planning Report, dated January 2022
- (f) any measures to improve or maintain sight distance; and
   "It is acknowledged on-street parking is commonplace in urban
  streets thus it is normal for sight distance to be partly obstructed at
  site accesses. Drivers generally observe gaps between parked
  vehicles. Whilst the site access will be upgraded, the existing site
  access has operated safely and efficiently to date. There is
  sufficient capacity in Campbell Street for the additional traffic
  movements from the proposed development." Page 23, JMG
  Planning Report, dated January 2022
- (g) any written advice received from the road or rail authority.

   "No advice was received from the road authority." Page 23,
  JMG Planning Report, dated January 2022

"Therefore, the proposed development is consistent with E5.6.4 P1." - Page 23, JMG Planning Report, dated January 2022

The available S.I.S.D may be accepted under a performance based solution by the City, based on the applicant's responses for each the relevant performance criteria.

- 6.18.6 The proposal complies with the performance criterion.
- 6.19 Number of Parking Spaces Part E E6.6.1 P1
  - 6.19.1 The acceptable solution at clause E6.6.1 A1 requires 101 car parking spaces to be provided on site for the proposed uses.
  - 6.19.2 The proposal includes 34 car parking spaces on site.
  - 6.19.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
  - 6.19.4 The performance criterion at clause E6.6.1 P1 provides as follows:

The number of on-site car parking spaces must be sufficient to meet the reasonable needs of users, having regard to all of the following:

- (a) car parking demand;
- (b) the availability of on-street and public car parking in the locality;
- (c) the availability and frequency of public transport within a 400m walking distance of the site;
- (d) the availability and likely use of other modes of transport;
- (e) the availability and suitability of alternative arrangements for car parking provision;
- (f) any reduction in car parking demand due to the sharing of car parking spaces by multiple uses, either because of variation of car parking demand over time or because of efficiencies gained from the consolidation of shared car parking spaces;
- (g) any car parking deficiency or surplus associated with the existing use of the land;
- (h) any credit which should be allowed for a car parking demand deemed to have been provided in association with a use which existed before the change of parking requirement, except in the case of substantial redevelopment of a site;

- (i) the appropriateness of a financial contribution in lieu of parking towards the cost of parking facilities or other transport facilities, where such facilities exist or are planned in the vicinity;
- (j) any verified prior payment of a financial contribution in lieu of parking for the land;
- (k) any relevant parking plan for the area adopted by Council;
- (I) the impact on the historic cultural heritage significance of the site if subject to the Local Heritage Code;
- (m) whether the provision of the parking would result in the loss, directly or indirectly, of one or more significant trees listed in the Significant Trees Code.
- 6.19.5 The application has been reviewed by Council's Development Engineer, who has provided the following assessment:

The parking number assessment must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).

Documentation submitted to date does not satisfy the Acceptable Solution for clause E6.6.1 (a) and as such, shall be assessed under Performance Criteria.

Acceptable solution - A1: - NON COMPLIANT
The number of on-site car parking spaces must be:

(a) no less than and no greater than the number specified in Table E6.1;

Performance Criteria - P1:

The number of on-site car parking spaces must be sufficient to meet the reasonable needs of users, having regard to all of the following:

"The proposed development has 31 dwellings comprising 2 bedrooms and 3 bedrooms apartments, townhouses and 2 commercial dwellings. The proposed car parking space contains 34 car parking spaces. Table E6.1 stipulated the number of vehicle parking spaces are 101 (Refer to Appendix G Traffic

Impact Assessment – Table 7 Parking Requirements). Therefore, it cannot meet the A1 thus P1 must be considered." - Page 24, JMG Planning Report, dated January 2022

- (a) car parking demand;
- "The residential component of the proposed development is sited in a location that reduces the need for a personal vehicle due to the high level of accessibility to local services and community activities." - Page 24, JMG Planning Report, dated January 2022
- (b) the availability of on-street and public car parking in the locality;
- "There is a considerable range of on-street parking around the subject site to cater for visitors to the building and business employees." Page 24, JMG Planning Report, dated January 2022
- (c) the availability and frequency of public transport within a 400m walking distance of the site;
- "Campbell Street is a Metro route and a bus stop is located less than 50 m from the proposed development." - Page 24, JMG Planning Report, dated January 2022
- (d) the availability and likely use of other modes of transport;
   "Close proximity to the Hobart CBD and North Hobart with the option to use transport modes such as walking, cycling or bus. The café is likely to attract people in the local area as there are very few other similar food services, and it is likely customers will walk or ride rather than drive." Page 24, JMG Planning Report, dated January 2022
- (e) the availability and suitability of alternative arrangements for car parking provision;
- "Close proximity to the Hobart CBD and North Hobart with the option to use transport modes such as walking, cycling or bus. The café is likely to attract people in the local area as there are very few other similar food services, and it is likely customers will walk or ride rather than drive." Page 24, JMG Planning Report, dated January 2022
- (f) any reduction in car parking demand due to the sharing of car parking spaces by multiple uses, either because of variation of car parking demand over time or because of efficiencies gained from

the consolidation of shared car parking spaces;

- "Car parking demand in this section of Campbell Street is likely to vary considerably across the day with a turnover of timerestricted on-street parking regularly making spaces available for short-term use." - Page 24, JMG Planning Report, dated January 2022
- (g) any car parking deficiency or surplus associated with the existing use of the land;
- "Car parking demand in this section of Campbell Street is likely to vary considerably across the day with a turnover of timerestricted on-street parking regularly making spaces available for short-term use." - Page 24, JMG Planning Report, dated January 2022
- (h) any credit which should be allowed for a car parking demand deemed to have been provided in association with a use which existed before the change of parking requirement, except in the case of substantial redevelopment of a site;
- "There is no car parking credit as a result of previous use of the site, therefore sub-clause." - Page 24, JMG Planning Report, dated January 2022
- (i) the appropriateness of a financial contribution in lieu of parking towards the cost of parking facilities or other transport facilities, where such facilities exist or are planned in the vicinity;
- "Private off-street parking is provided extensively for various purposes in this area taking pressure off on-street parking availability." - Page 24, JMG Planning Report, dated January 2022
- (j) any verified prior payment of a financial contribution in lieu of parking for the land;
- Not applicable.
- (k) any relevant parking plan for the area adopted by Council;
- "There is no relevant parking plan for the area adopted by Council, therefore sub-clause (k) is not applicable." - Page 24, JMG Planning Report, dated January 2022
- (I) the impact on the historic cultural heritage significance of the site if subject to the Local Heritage Code; and
- "The heritage building has been retained and protected, thus

there is no significant impact on the listed items. The Heritage Assessment is enclosed with the report to demonstrate details regarding the Local Heritage Code." - Page 24, JMG Planning Report, dated January 2022

(m) whether the provision of the parking would result in the loss, directly or indirectly, of one or more significant trees listed in the Significant Trees Code.

- "The site is not in proximity to any significant trees listed in the Significant Trees Code; therefore, sub-clause (m) is not applicable." - Page 24, JMG Planning Report, dated January 2022

"Based on the above, the proposed development is considered to satisfy the applicable E6.6.1 P1." - Page 24, JMG Planning Report, dated January 2022

Within the Residents Car Park, submitted plans show 35 car parking spaces, 4 of which are configured in tandem (i.e., 2 'jockey' for 2 out of 4 Skyhomes) and 1 DDA (car parking bay 4), hence 33 private provisions appear to have been proposed.

Based on the applicant's responses for each relevant performance criteria, and given the submitted design documentation (including reports), the car parking quantities proposed may be accepted as a performance based solution by the City.

This is particularly due to the practical consideration for residential amenity demonstrated, as the total proposed provisions ensure at least one (1) car parking space per residence, see CUMULUS DWG J20823-A-100 Rev DA06 dated 13/1/22.

- 6.19.6 The proposal complies with the performance criterion.
- 6.20 Design of Vehicle Accesses Part E E6.7.2 P1
  - 6.20.1 The acceptable solution at clause E6.7.2 A1 requires vehicle accesses to be designed in accordance with the relevant Australian Standard.
  - 6.20.2 The proposal includes a vehicle accesses that has not been designed in accordance with the relevant Australian Standard.
  - 6.20.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.

6.20.4 The performance criterion at clause E6.7.2 P1 provides as follows:

Design of vehicle access points must be safe, efficient and convenient, having regard to all of the following:

- (a) avoidance of conflicts between users including vehicles, cyclists and pedestrians;
- (b) avoidance of unreasonable interference with the flow of traffic on adjoining roads;
- (c) suitability for the type and volume of traffic likely to be generated by the use or development;
- (d) ease of accessibility and recognition for users.
- 6.20.5 The application has been reviewed by Council's Development Engineer, who has provided the following assessment:

The design of the vehicle access must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).

Documentation submitted to date does not satisfy the Acceptable Solution for clause E6.7.2 (a) and as such, shall be assessed under Performance Criteria.

Acceptable Solution - A1: - NON COMPLIANT

Design of vehicle access points must comply with all of the following:

(a) in the case of non-commercial vehicle access; the location, sight distance, width and gradient of an access must be designed and constructed to comply with section 3 – "Access Facilities to Off-street Parking Areas and Queuing Areas" of AS/NZS 2890.1:2004 Parking Facilities Part 1: Off-street car parking.

Performance Criteria - P1: - COMPLIANT

Design of vehicle access points must be safe, efficient and convenient, having regard to all of the following:

"The existing access will be utilised which satisfies the location requirements of Section 3.2.3 of AS/NZS 2890.1:2004 and entry

width of 5.5 m wide (Combined for Category 1 access as defined in Tables 3.1 and 3.2 – Based on User Class 1A; local road frontage, <100 car spaces)." - Page 26, JMG Planning Report, dated January 2022

"The minimum entering sight distance to the right is acceptable despite SISD not being achieved however this is not considered an issue for the reasons given in Section 4.4. The minimum sightlines for pedestrian safety appear to be met (as required in Figure 3.3 of AS/NZS 2890.1:2004) however this should be checked at the site access detailed design stage. The gradient of the access driveway does not comply however modification of the grade will be incorporated into the site access driveway design to achieve the standard as far as reasonably practicable." - Page 27, JMG Planning Report, dated January 2022

- (a) avoidance of conflicts between users including vehicles, cyclists and pedestrians;
- Submitted documentation appears to satisfy this requirement given the statements provided by the applicant
- (b) avoidance of unreasonable interference with the flow of traffic on adjoining roads;
- Submitted documentation appears to satisfy this requirement given the statements provided by the applicant
- (c) suitability for the type and volume of traffic likely to be generated by the use or development; and
- Submitted documentation appears to satisfy this requirement given the statements provided by the applicant
- (d) ease of accessibility and recognition for users.
- Submitted documentation appears to satisfy this requirement given the statements provided by the applicant

"The proposed development is consistent with E6.7.2 A1." - Page 27, JMG Planning Report, dated January 2022

The design of the access driveway (including vehicular access) appears to meet the relevant parameters of a performance based solution, and therefore may be accepted by the City.

It has been noted the engineering modifications proposed, to

widen the existing vehicular access to 6m, are typical in the context of works proposed. It has also been noted, in addition to passenger vehicles (Class 2) the Category 2 (as per AS2890.1) access will also serve in a commercial vehicle capacity. Therefore, the access design evidently needed to also consider the largest likely vehicle (HRV) to use the facility.

See JMG Basement Carpark Layout and Proposed Surface Levels DWG P02 Rev DA3 dated 18/2/22, approved under GMC-21-81.

- 6.20.6 The proposal complies with the performance criterion.
- 6.21 Layout of Parking Areas Part E E6.7.5 P1
  - 6.21.1 The acceptable solution at clause E6.7.5 A1 requires parking areas to be layed out in accordance with the relevant Australian Standard.
  - 6.21.2 The proposal includes a car parking area that has not been layed out in accordance with the relevant Australian Standard..
  - 6.21.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
  - 6.21.4 The performance criterion at clause E6.7.5 P1 provides as follows:

The layout of car parking spaces, access aisles, circulation roadways and ramps must be safe and must ensure ease of access, egress and manoeuvring on-site.

6.21.5 The application has been reviewed by Council's Development Engineer, who has provided the following assessment:

The layout of the parking area must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).

Documentation submitted to date does not satisfy the Acceptable Solution for clause E6.7.5 and as such, shall be assessed under Performance Criteria.

Acceptable Solution A1: - NON COMPLIANT
The layout of car parking spaces, access aisles, circulation

roadways and ramps must be designed and constructed to comply with section 2 "Design of Parking Modules, Circulation Roadways and Ramps" of AS/NZS 2890.1:2004 Parking Facilities Part 1: Offstreet car parking and must have sufficient headroom to comply with clause 5.3 "Headroom" of the same Standard.

Performance Criteria - P1: - COMPLIANT
The layout of car parking spaces, access aisles, circulation roadways and ramps must be safe and must ensure ease of access, egress and manoeuvring on-site.

- Car Parking Space Dimensions (AS2890.1 Fig 2.2 = 2.5x5.4m Class 2):
- Submitted documentation appears able to satisfy this requirement, 2.5mx5.4m (31) bays detailed
- Car Parking Space Design Envelope (AS2890.1 Fig 5.2 300mm clearance on side):
- Submitted documentation appears able to satisfy this requirement, structural clearances (300mm) and design envelope detailed (bay 11) detailed
- Headroom: (AS2890.1 Fig 5.3 = 2.2m clearance):
- Submitted documentation appears able to satisfy this requirement,
- Parking Space Gradient (5%):
- Submitted documentation appears able to satisfy this requirement, <5% based on detailed RL(s)</li>
- Aisle Width (AS2890.1 Fig 2.2 = 5.8m Class 2):
- Submitted documentation appears able to satisfy this requirement, > min. aisle widths detailed
- Garage Door Width & Apron (AS2890.1 Fig 5.4 = 2.4m wide = >7m wide apron):
- Submitted documentation appears able to satisfy this requirement, dimensions appear to satisfy their linear relationship's min. requirements
- Parking Module Gradient (5% Acceptable):
- Submitted documentation appears able to satisfy this requirement, <5% based on detailed RL(s)

- Driveway Gradient & Width (AS2890.1 Section 2.6 = 25% and 3m):
- Submitted documentation appears able to satisfy these requirements, longitudinal section detailed
- Transitions (AS2890.1 Section 2.5.3 = 12.5% summit, 15% sag = >2m transition):
- Submitted documentation appears able to satisfy this requirement, longitudinal section detailed
- Vehicular Barriers (AS2890.1 Section 2.4.5.3 = 600mm drop, 1:4 slope):
- N/A
- Blind Aisle End Widening (AS2890.1 Fig 2.3 = 1m extra):
- Submitted documentation appears able to satisfy this requirement, clearance detailed with additional widening shown
- Tandem Configuration "Jockey Parking" (Performance Assessment):
- Submitted documentation appears able to satisfy internal requirements, 2 (2.6mx5.4m) provisions detailed in accordance

The design documentation assessed appears to meet the relevant parameters of a performance based solution, and therefore may be accepted by the City.

See CUMULUS DWG J20823-A-100 Rev DA06 dated 13/1/22.

- 6.21.6 The proposal complies with the performance criterion.
- 6.22 Design of Bicycle Parking Areas Part E E6.7.10 P1 and P2
  - 6.22.1 The acceptable solutions at clauses E6.7.10 A1 and A2 require bicycle facilities to be provided within 30m of the main entrance, and as specified in Table E6.2, as well as being designed in accordance with the relevant Australian Standard..
  - 6.22.2 The proposal does not include the specified bicycle facilities.
  - 6.22.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.

- 6.22.4 The performance criterion at clauses E6.7.10 P1 and P2 provide as follows:
  - P1 The design of bicycle parking facilities must provide safe, obvious and easy access for cyclists, having regard to all of the following:
  - (a) minimising the distance from the street to the bicycle parking area:
  - (c) providing clear sightlines from the building or the public road to provide adequate passive surveillance of the parking facility and the route from the parking facility to the building;
  - (d) avoiding creation of concealment points to minimise the risk.
  - P2 The design of bicycle parking spaces must be sufficient to conveniently, efficiently and safely serve users without conflicting with vehicular or pedestrian movements or the safety of building occupants.
- 6.22.5 The application has been reviewed by Council's Development Engineer, who has provided the following assessment:

The bicycle parking must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).

Documentation submitted to date does not satisfy the Acceptable Solution for clause E6.7.10 and as such, shall be assessed under Performance Criteria.

Acceptable Solution A1: - NON COMPLIANT
The number of on-site bicycle parking spaces provided must be no less than the number specified in Table E6.2.

Acceptable Solution A2: - NON COMPLIANT
The design of bicycle parking spaces must be to the class
specified in table 1.1 of AS2890.3-1993 Parking facilities Part 3:
Bicycle parking facilities in compliance with section 2 "Design of
Parking Facilities" and clauses 3.1 "Security" and 3.3 "Ease of
Use" of the same Standard.

Table E6.2 sets out the number of bicycle parking spaces required. The requirement for spaces for a use or development listed in the first column of the table is set out in the second and forth columns of the table with the corresponding class set out in the third and fifth columns. If the result is not a whole number, the required number of (spaces) is the nearest whole number. If the fraction is one-half, the requirement is the next whole number.

#### Performance Criteria - P1:

The design of bicycle parking facilities must provide safe, obvious and easy access for cyclists, having regard to all of the following:

"This requirement is not applicable for residential dwellings but is applicable for the proposed commercial and food activities based on floor area. The proposed commercial and food activities individually cover small floor areas hence the requirements are not considered proportionate. It has been calculated that perhaps 2-3 bicycle parking spaces may be appropriate. Bicycle hoops are provided at the entry to the retail tenancies basement storage lockers (suitable for bicycle storage) and vertical hangers for 12 bicycles are provided in the basement car parking area." - Page 25, JMG Planning Report, dated January 2022

- (a) minimising the distance from the street to the bicycle parking area;
- N/A
- (c) providing clear sightlines from the building or the public road to provide adequate passive surveillance of the parking facility and the route from the parking facility to the building; and
- Acceptable, submitted documentation appears to satisfy this requirement
- (d) avoiding creation of concealment points to minimise the risk.
- Acceptable, submitted documentation appears to satisfy this requirement

#### Performance Criteria - P2:

The design of bicycle parking spaces must be sufficient to conveniently, efficiently and safely serve users without conflicting with vehicular or pedestrian movements or the safety of building occupants.

12 vertical wall mounted (basement/private) bicycle storage hangers, and 8 private bicycle parking racks in 'entry secured' (resident's) courtyard.

Based on the applicant's statement, and given the submitted design documentation (including reports), the bicycle parking quantities proposed may be accepted as a performance based solution by the City.

This is particularly due to the quantity being proposed being practically reasoned, see CUMULUS DWG, J20823-A-100 J20823-A-101 Rev DA06 dated 13/1/22, and J20823-A-101 Rev DA07 dated 10/2/22.

- 6.2.6 The proposal complies with the performance criterion.
- 6.23 Facilities for Commercial Vehicles Part E E6.7.13 P1
  - 6.23.1 The acceptable solution at clause E6.7.13 A1 requires commercial vehicle facilities to be provided in accordance with the relevant Australian Standard.
  - 6.23.2 The proposal does not include commercial vehicle facilities that have been designed in accordance with the relevant Australian Standard.
  - 6.23.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
  - 6.23.4 The performance criterion at clause E6.7.13 P1 provides as follows:

Commercial vehicle arrangements for loading, unloading or manoeuvring must not compromise the safety and convenience of vehicular traffic, cyclists, pedestrians and other road users.

6.23.5 The application has been reviewed by Council's Development Engineer, who has provided the following assessment:

The facilities for commercial vehicles must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).

Documentation submitted to date does not satisfy the Acceptable Solution for clause E6.7.13 and as such, shall be assessed under

Performance Criteria.

Acceptable Solution A1: - NON COMPLIANT
Commercial vehicle facilities for loading, unloading or
manoeuvring must be provided on-site in accordance with
Australian Standard for Off-street Parking, Part 2: Commercial.
Vehicle Facilities AS 2890.2:2002, unless:

- (a) the delivery of all inward bound goods is by a single person from a vehicle parked in a dedicated loading zone within 50 m of the site; and
- (b) the use is not primarily dependent on outward delivery of goods from the site.

Performance Criteria - P1: - COMPLIANT

Commercial vehicle arrangements for loading, unloading or manoeuvring must not compromise the safety and convenience of vehicular traffic, cyclists, pedestrians and other road users.

The largest likely commercial vehicle expected to use the facilities is a Heavy Rigid Vehicle (HRV), albeit such a vehicle is likely to provide Occasional Service (as per AS2890.2).

With respect to the proposed development, the commercial vehicle facilities detailed have been designed to enable on-site waste collection using a private contractor 'Rear Lift Truck', the dimensions of which closely resemble a Small Rigid Vehicle (SRV). The specifications for this vehicle are;

Overall length, width (including mirrors), max. height: 7.54m, 2.84m, 2.6m

Wheel base (from centre of front and rear axle): 4.2m

See JMG New Carpark Entry Profile & Service Vehicle Clearances DWG P05 Rev DA1 dated 19/11/21, approved under GMC-21-81.

Despite the lack of a dedicated service area as required for Regular Service (as per AS2890.2), the access driveway and circulation roadway detailed designs;

Demonstrate operational vehicle clearances are available,

Show on-site turning can be achieved by the atypical SRV (swept paths detailed),

Detail roadway and ramp grades (including appropriate rates of change), and

Sight distance requirements.

Based on the above assessment and given the submitted documentation, the facilities for commercial vehicles may be accepted under a performance based solution by the City.

- 6.23.6 The proposal complies with the performance criterion.
- 6.24 Stormwater Drainage and Disposal Part E E7.7.1 P2
  - 6.24.1 The acceptable solution at clause E7.7.1 A2 requires development to incorporate water sensitive urban design.
  - 6.24.2 The proposal does not incorporate water sensitive urban design.
  - 6.24.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
  - 6.24.4 The performance criterion at clause E7.7.1 P2 provides as follows:

A stormwater system for a new development must incorporate a stormwater drainage system of a size and design sufficient to achieve the stormwater quality and quantity targets in accordance with the State Stormwater Strategy 2010, as detailed in Table E7.1 unless it is not feasible to do so.

6.24.5 The application has been reviewed by Council's External Consultant Engineer, who has provided the following assessment:

The planning response detailed on page 13 of the engineering reports states the development meets the acceptable solution A2. Although, the assessment provided responds to P2. The most reasonable approach for a development of this size is to assess the site against P2 which has been done.

There are inconsistencies with how the water quality assessment is presented. Under the response to planning criteria on Page 13, a table of treatment train effectiveness is presented, along with a model schematic (Figure 1). There is no further information provided on how these model results were obtained

On page 60 of the engineering reports, a different water quality assessment is presented with a different model schematic and different results (Figure 2). This assessment does provide sufficient information to assess water quality compliance.

The information provided from Page 59 to Page 62 of the engineering reports provides sufficient detail for council to accept.

It should be noted the model results presented in the planning response to P2 do not have any technical background. A reasonable approach has been undertaken for this part of the assessment as an assessment has been provided that demonstrates compliance. It is recommended that council condition that an appropriate water quality management system be implemented meeting the Stormwater Quality Targets.

- 6.24.6 The proposal complies with the performance criterion.
- 6.25 Stormwater Drainage and Disposal Part E E7.7.1 A4
  - 6.25.1 The acceptable solution at clause E7.7.1 A1 provides as follows:

A major stormwater drainage system must be designed to accommodate a storm with an ARI of 100 years.

- 6.25.2 The proposal include a major stormwater drainage system that does not accommodate a storm with an ARI of 100 years.
- 6.25.3 There is no performance criteria; therefore compliance with the acceptable solution is required.
- 6.25.5 The application has been reviewed by Council's External Consultant Engineer, who has provided the following assessment:

The proposed development is located within a flood affected area. A major overland flow path exists at the rear of the property. The proposed development footprint is within this area.

A design to accommodate this flow path has not been provided. The flood modelling undertaken has classified the flood hazard as predominantly H5 and some areas of H6.

A major stormwater drainage system is required a system to

provide safe conveyance of stormwater runoff and a specific level of flood mitigation. The flood hazard category estimated and proposed use in the major stormwater drainage path does not constitute safe conveyance of floodwater.

The physical design of the development has not appropriately considered the overland flow path and relied upon administrative measures to attempt to manage the risk. The proposed solution accepts there will be damage to property (cars).

The response to A4 provided on Page 14 state all habitable floors are located more than 300mm above the calculated 1% AEP flood level. It is noted that the HIPS defines a habitable building as a building of Class 1

- 9 of the Building Code of Australia. The National Construction Code defines carparks as a class 7a building. As such the not all habitable floor areas are above the 1% AEP flood level.

Based on the information provided, the development does not comply with A4.

- 6.25.6 The proposal does not comply with the acceptable solution, and there is no corresponding performance criterion.
- 6.26 Development for Sensitive Use in Proximity to Use with Potential to Cause Environmental Harm Part E E9.7.2 P1
  - 6.26.1 There is no acceptable solution for E9.7.2 A1.
  - 6.26.2 The proposal includes a sensitive use (residential) adjacent to butcher and smallgoods manufacturer, within the attenuation area for the existing
  - 6.26.3 There is no acceptable solution; therefore assessment against the performance criterion is relied on.
  - 6.26.4 The performance criterion at clause E9.7.2 P1 provides as follows:

Development for sensitive use, including subdivision of lots within a sensitive zone, must not result in potential to be impacted by environmental harm from use with potential to cause environmental harm, having regard to all of the following:

- (a) the nature of the use with potential to cause environmental harm; including:
- (i) operational characteristics;
- (ii) scale and intensity;
- (iii) degree of hazard or pollution that may emitted from the activity;
- (b) the degree of encroachment by the sensitive use into the Attenuation Area or the attenuation distance;
- (c) measures in the design, layout and construction of the development for the sensitive use to eliminate, mitigate or manage effects of emissions
- 6.26.5 The application has been reviewed by Council's Environmental Development Planner, who has provided the following assessment:

Approval is sought for a multiple dwelling development at 175-179 Campbell Street, Hobart.

Attenuation Code

The Code applies because development for sensitive use is proposed within the attenuation distance of an activity listed in Table E9.1. The site is adjacent a butcher that includes smallgoods manufacturing at 169-173 Campbell Street.

Smallgoods are processed, ready-to-eat meat products or meat products that are heat treated and undergo a cooling process (e.g. ham, salami, bacon, saveloys). Table E9.1 lists odours as the likely environmental impact of smallgoods manufacturing.

No exemptions apply.

The relevant standards are under clause E9.7.2. There is no acceptable solution for A1. Performance criterion P1 states the following:

Use with potential to cause environmental harm and which is set back less than the distance prescribed in A1 must not have an unacceptable adverse affect on existing or likely future sensitive use, having regard to all of the following:

- (a) operational characteristics;
- (b) scale and intensity;
- (c) degree of hazard or pollution that may be emitted from the activity;
- (d) hours of operation;
- (e) nature of amenity impacts from likely light, noise, odour, particulate, radiation, vibration or waste emissions;
- (f) existing ambient background levels of light, noise, odour, particulate, radiation, vibration or waste emissions in the locality;
- (g) measures to eliminate, mitigate or manage emissions.

The application includes the following information about the butcher:

Tasmanian Meat Wholesalers are located at 169-173 Campbell Street and sell approximately 52 tonnes of sausages, red meat, poultry and smallgoods a month;

The site currently operates a variety of small-scale equipment, including mincers, dicers, sausage fillers, bandsaws, and a smokehouse (which is used for a short period, mainly around Christmas):

The retail shop is currently open:

- o 7:30 18:00, Monday Friday
- o 7:30 14:00, Saturday
- o Closed Sunday and public holidays

The commercial/wholesale currently operates:

- o 6:00 18:00, Monday Friday
- o Closed Sunday and public holidays

Deliveries currently comprise 4/5 LRV vehicles which enter and leave the site for deliveries multiple times a day, and approximately 3-5 third party deliveries per day, with suppliers operating a variety of HRV trucks that enter the site for loading/unloading (deliveries occurring from approximately 5:00 am – close of business, Monday – Saturday);

The site operates an LPG forklift which operates within the service yard areas and buildings approximately 12 hours a day (6:00 – 18:00, Monday – Friday);

All equipment is housed with the existing buildings, which minimises any potential noise impacts. The site has limited odour emissions due to the containment of operations within the existing buildings. In addition, the potential sources of odours are mainly smokehouse and grease traps. In relation to the smokehouse, the emissions are discharged above the roofline through a flue, and

the smoker is used for a very short period during December. The grease traps are maintained and cleaned approximately every three months to manage odour emission.

Noise nuisance is not considered a significant risk as the area is subject to high levels of traffic noise.

A review of Council records found no complaints relating to the operation.

Given the scale and nature of the use, and the lack of any compliant history, the smallgoods manufacturing activities are not expected to have an unreasonable impact upon future residents of the proposed development and the exercise of discretion is recommended.

- 6.26.6 The proposal complies with the performance criterion.
- 6.27 Demolition Part E E13.7.1 P1
  - 6.27.1 There is no acceptable solution for E13.7.1 A1.
  - 6.27.2 The proposal includes demolition of the rear lean-to additions to the heritage dwellings, as well as internal and external alterations to the two dwellings..
  - 6.27.3 There is no acceptable solution; therefore assessment against the performance criterion is relied on.
  - 6.27.4 The performance criterion at clause E13.7.1 P1 provides as follows:

Demolition must not result in the loss of significant fabric, form, items, outbuildings or landscape elements that contribute to the historic cultural heritage significance of the place unless all of the following are satisfied;

- (a) there are, environmental, social, economic or safety reasons of greater value to the community than the historic cultural heritage values of the place;
- (b) there are no prudent and feasible alternatives;
- (c) important structural or façade elements that can feasibly be

retained and reused in a new structure, are to be retained;

- (d) significant fabric is documented before demolition.
- 6.27.5 The application has been reviewed by Council's Cultural Heritage Officer, who has provided the following assessment:

The buildings have been proposed for adaptation to commercial uses (consulting rooms). To facilitate this new use a number of elements are proposed for demolition.

Internally demolition is as follows:

- Original doors in both residences
- Original windows in both residences
- A number of internal wall openings are proposed

#### Externally demolition is as follows:

- Roof galvanised short sheeting is to be removed and replaced
- Rear infilled verandahs / skillion structures at the rear of both residences are to be demolished
- External sections of walls are to be removed to allow for the proposed link-way between the two buildings
- Removal of existing front fencing
- Removal of carport structure in front of 179 Campbell Street
- Removal of existing front garden landscaping elements

A number of the proposed internal works can satisfy the demolition provisions of Performance Criteria 1 via permit conditions. Some elements proposed for demolition e.g original windows is viewed as unnecessary, and the proposed design can still be achieved without these removals. Internal wall demolition has been conditioned to retain bulkheads beneath picture rails and nibs where appropriate. The internal site visit for 177 Campbell Street has indicated that the existing floorplan submitted does not show the decorative hallway arch with plaster work mouldings (see fig.3). This element is significant heritage fabric and must be retained, a condition enforcing this has been applied.

In regards to external demolition both residences currently have painted short sheet galvanised iron roofs (see fig.4 below). Plans indicate this roof sheeting is to be repaired or made good, in the instance that the roof sheeting is to be replaced galvanised iron is considered the appropriate replacement and a condition has been

applied to reflect this.

It is noted that the submitted plans for 177 Campbell Street does not adequately show the entrance porch. The entrance porches and tessellated tiles of both properties must be retained and protected during construction.

The proposed demolition in regards to the carport removal, fencing, and landscaping to the frontage of the properties are considered acceptable. The front gardens do not contain significant plantings or landscape features, and whilst the ironwork fencing at 179 Campbell Street appears to date to the Inter-War period it is not considered to be of high significance and its removal and replacement will not result in detriment to the listed place.

Subject to the aforementioned conditions the proposed demolition components of the proposal are considered to satisfy Performance Criteria 1 of E13.7.1.

- 6.27.6 The proposal complies with the performance criterion.
- 6.28 Works Other Than Demolition Part E E13.7.2 P1, P2, P3, P4, P5, and P6
  - 6.28.1 There are no acceptable solutions for E13.7.2 A1, A2, A3, A4, A5, or A6.
  - 6.28.2 The proposal includes Alterations and additions to the existing dwellings.
  - 6.28.3 There are no acceptable solutions; therefore assessment against the performance criterion is relied on.
  - 6.28.4 The performance criterion at clauses E13.7.2 P1, P2, P3, P4, P5, and P6 provide as follows:
    - P1 Development must not result in any of the following:
    - (a) loss of historic cultural heritage significance to the place through incompatible design, including in height, scale, bulk, form, fenestration, siting, materials, colours and finishes;
    - (b) substantial diminution of the historic cultural heritage significance of the place through loss of significant streetscape elements including plants, trees, fences, walls, paths, outbuildings

and other items that contribute to the significance of the place.

- P2 Development must be designed to be subservient and complementary to the place through characteristics including:
- (a) scale and bulk, materials, built form and fenestration;
- (b) setback from frontage;
- (c) siting with respect to buildings, structures and listed elements;
- (d) using less dominant materials and colours.
- P3 Materials, built form and fenestration must respond to the dominant heritage characteristics of the place, but any new fabric should be readily identifiable as such.
- P4 Extensions to existing buildings must not detract from the historic cultural heritage significance of the place.
- P5 New front fences and gates must be sympathetic in design, (including height, form, scale and materials), to the style, period and characteristics of the building to which they belong.
- P6 The removal of areas of landscaping between a dwelling and the street must not result in the loss of elements of landscaping that contribute to the historic cultural significance of the place.
- 6.28.5 The application has been reviewed by Council's Cultural Heritage Officer, who has provided the following assessment:

#### Performance Criteria 1

Development must not result in any of the following:

- (a) loss of historic cultural heritage significance to the place through incompatible design, including in height, scale, bulk, form, fenestration, siting, materials, colours and finishes;
- (b) substantial diminution of the historic cultural heritage significance of the place through loss of significant streetscape elements including plants, trees, fences, walls, paths, outbuildings and other items that contribute to the significance of the place.

The proposed new development at the rear of the listed properties will not have a detrimental impact upon the heritage significance

of the places. The proposed new buildings are considered to be clearly detached from the c1914 dwellings, and are interpreted physically and visually as a separate freestanding development within the rear of the sites.

A mixture of mono pitched, and flat roof forms have been proposed for the new development whilst the pitched roofs likely add some additional height, the roof forms are considered appropriate and compatible with the surrounding heritage roof forms. Performance Criteria 1 of E13.7.2 is considered satisfied.

#### Performance Criteria 2

Development must be designed to be subservient and complementary to the place through characteristics including:

- (a) scale and bulk, materials, built form and fenestration;
- (b) setback from frontage;
- (c) siting with respect to buildings, structures and listed elements;
- (d) using less dominant materials and colours.

In regards to the new development behind the listed residences, the proposal should be considered in its proximity to the residences and the objectives of performance criteria of being subservient and sympathetic to the historic cultural heritage values of these listed residences. The proposed development is sited to offer open space to the rear of the dwellings, this provides an appropriate degree of physical separation between the residences and new development. This separation also allows for a full and complete view of the residences rather than enclosing or obscuring the listed places.

The height of the proposed apartment buildings on the listed site are set back from Campbell Street with the height (see fig 5) stepping back from the listed residences and increasing in scale towards the Brooker Highway frontage, and the adjacent 175 Campbell Street lot.

It should be noted that a number of representations refer to the portion of development taking place at 175 Campbell Street to the right of the residences in the image below (see fig 3) under the Heritage Code of Planning Scheme (HIPS 2015), this site is assessable against the Archaeology provisions only, and the bulk, scale, setback, and sitting of this part of the development cannot be assessed under the Heritage Code.

Performance Criteria 2 of E13.7.2 is considered satisfied.

#### Performance Criteria 3

Materials, built form and fenestration must respond to the dominant heritage characteristics of the place, but any new fabric should be readily identifiable as such.

The proposed materials, colours and built form of the development is described by the architects as providing a "backdrop" to the listed residences. This is true in that recessive colours, and a relatively flat façade treatment allows for a more muted and simplified visual appearance behind the residences, whilst being readily identifiable as a modern structure. Performance Criteria 3 is considered satisfied.

#### Performance Criteria 4

Extensions to existing buildings must not detract from the historic cultural heritage significance of the place.

The proposed covered link-way extension between the two residences will have a standing seam basalt clad roof with a flat profile (2 degree pitch). The link-way will be recessed back from the front building line, and is considered to be subservient to the heritage significance and characteristics of the listed places. Performance Criteria 4 of E13.7.2 is considered satisfied.

#### Performance Criteria 5

New front fences and gates must be sympathetic in design, (including height, form, scale and materials), to the style, period and characteristics of the building to which they belong.

The proposed fencing is of a simple but traditional style, it is low scale, and uses appropriate materials that complement the characteristics of the listed residences. Performance Criteria 5 of E13.7.2 is considered satisfied.

#### Performance Criteria 6

The removal of areas of landscaping between a dwelling and the street must not result in the loss of elements of landscaping that contribute to the historic cultural significance of the place.

The landscape design proposes two small terrace gardens at the frontage of the residences, an element of the design incorporates

an access ramp to the side boundary of number 177. The landscape works are understood to enhance the residences presentation within the streetscape. There is no loss of cultural heritage significance to the places through these proposed landscaping works. E13.7.2 Performance Criteria 6 is considered satisfied.

In relation to heritage, the UDAP commented:

The Panel noted the heritage constraints of the site and appreciate the Council's heritage officer's assessment is based on the Scheme's requirement for new development to be "subservient" to the heritage properties. The Panel also felt that the treatment of the heritage buildings on site likely impacted the design in a detrimental way, leaving a building behind that was trying not to be tall. The Panel questioned whether the amended plans neither provided a "subservient" relationship to the heritage buildings, nor provided a rationale for a considered design solution in respect of the Scheme's requirement for a subservient relationship. The Panel felt there is more opportunity in addressing the relationship between the heritage buildings set down low from the street, and their relationship to the original landform including the former rivulet along its Brooker Highway edge, the subsequent pattern of development through infill of the Brooker Highway, and more recent and likely future development in the precinct.

On a strict interpretation of the planning scheme provisions for heritage, the Panel concluded that the proposal does not comply. While there are meritorious elements of the proposal, overall they are not yet so significant as to warrant supporting the proposal, notwithstanding the non-compliance with the scheme.

Notwithstanding these comments, Council's Cultural Heritage Officers are satisfied that the proposal complies with the heritage provisions of the scheme, as set out above. In addition, it is noted that the proposal is not in a heritage precinct as alluded to by UDAP, the heritage buildings on the site have little presence from the Brooker and while the proposal is taller than the existing heritage buildings, the preceding heritage assessment concludes that it is an acceptable relationship.

6.28.6 The proposal complies with the performance criterion.

6.29 Subdivision - Part E E 13.7.3 P1

- 6.29.1 There is no acceptable solution for E13.7.3 A1.
- 6.29.2 The proposal includes the consolidation of all lots subject to works within the application.
- 6.29.3 There is no acceptable solution; therefore assessment against the performance criterion is relied on.
- 6.29.4 The performance criterion at clause E13.7.3 P1 provides as follows:

A proposed plan of subdivision must show that historic cultural heritage significance is adequately protected by complying with all of the following:

- (a) ensuring that sufficient curtilage and contributory heritage items (such as outbuildings or significant plantings) are retained as part of any title containing heritage values;
- (b) ensuring a sympathetic pattern of subdivision;
- (c) providing a lot size, pattern and configuration with building areas or other development controls that will prevent unsympathetic development on lots adjoining any titles containing heritage values, if required.
- 6.29.5 The application has been reviewed by Council's Cultural Heritage Officer, who has provided the following assessment:

Lot consolidation of the various titles is required. The proposed adhesion is technically a subdivision and will create a large single lot. The lot boundaries shown on 1913 council records have been previously altered in the 1970s, meaning the existing lot boundaries do not reflect the original lot size or subdivision pattern. The proposed consolidation will not result in detriment to the listed places of 177, and 179 Campbell Street. Performance Criteria 1 of E13.7.3 is considered satisfied.

- 6.29.6 The proposal complies with the performance criterion.
- 6.30 Development Standards for Places of Archaeological Potential Part E E13.10.1 P1
  - 6.30.1 The acceptable solution at clause E13.10.1 A1 requires that demolition

include no excavation.

- 6.30.2 The proposal includes excavation to facilitate the use and development.
- 6.30.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
- 6.30.4 The performance criterion at clause E13.10.1 P1 provides as follows:

Buildings, works and demolition must not unnecessarily impact on archaeological resources at places of archaeological potential, having regard to:

- (a) the nature of the archaeological evidence, either known or predicted;
- (b) measures proposed to investigate the archaeological evidence to confirm predictive statements of potential;
- (c) strategies to avoid, minimise and/or control impacts arising from building, works and demolition;
- (d) where it is demonstrated there is no prudent and feasible alternative to impacts arising from building, works and demolition, measures proposed to realise both the research potential in the archaeological evidence and a meaningful public benefit from any archaeological investigation;
- (e) measures proposed to preserve significant archaeological evidence 'in situ'.
- 6.30.5 The application has been reviewed by Council's Cultural Heritage Officer, who has provided the following assessment:

Building and works of the proposed development will involve excavation and ground disturbance as a basement level will be created for a car parking. The statement of archaeological potential provided indicates that there is likely minimal historical archaeological potential across the sites. A condition has been applied to the permit in the case that unanticipated significant archaeological evidence is uncovered. Performance Criteria 1 of E13.10.1 is considered satisfied.

- 6.30.6 The proposal complies with the performance criterion.
- 6.31 Development Standards for Places of Archaeological Potential Part E E13.10.2 P1
  - 6.31.1 The acceptable solution at clause E13.10.2 A1 requires building envelopes to be placed on the titles for places of archaeological potential.
  - 6.31.2 The proposal includes lot consolidation, not division, and no building envelopes are proposed.
  - 6.31.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
  - 6.31.4 The performance criterion at clause E13.10.2 P1 provides as follows:

Subdivision must not impact on archaeological resources at Places of Archaeological Potential through demonstrating either of the following:

- (a) that no archaeological evidence exists on the land;
- (b) that there is no significant impact upon archaeological potential.
- 6.31.5 The application has been reviewed by Council's Cultural Heritage Officer, who has provided the following assessment:

The statement of archaeological potential provided indicates that there is likely minimal historical archaeological potential across the sites. It is also noted that the lots although proposed to be consolidated will remain within the archaeological potential zoning that covers this part of Campbell Street. Performance Criteria 1 of E13.10.2 is considered satisfied.

- 6.31.6 The proposal complies with the performance criterion.
- 6.32 Riverine Inundation Hazard Areas Part E E15.7.4 P1
  - 6.32.1 The acceptable solution at clause E15.7.4 A1 requires new habitable building to have a floor level no lower than the 1% AEP (100 yr ARI) storm event plus 300mm.

- 6.32.2 The proposal includes a habitable building with a floor level that does not meet the acceptable solution.
- 6.32.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
- 6.32.4 The performance criterion at clause E15.7.4 P1 provides as follows:

A new habitable building must have a floor level that satisfies all of the following:

- (a) risk to users of the site, adjoining or nearby land is acceptable;
- (b) risk to adjoining or nearby property or public infrastructure is acceptable;
- (c) risk to buildings and other works arising from riverine flooding is adequately mitigated through siting, structural or design methods;
- (d) need for future remediation works is minimised;
- (e) provision of any developer contribution required pursuant to policy adopted by Council for riverine flooding protection works.
- 6.32.5 The application has been reviewed by Council's External Consultant Engineer, who has provided the following assessment:

As the carpark is a Class 7a building, the carpark is considered to be a habitable building. As the proposed car park floor level is 15.70m AHD, and the 1% AEP + CC flood level is estimated to be 18.015m AHD, A1 is not achieved and the performance criteria must be responded to.

A specific response to P1 has not been provided. The review of the compliance against P1 has been undertaken based on the information presented in the engineering reports.

(a) Risks to users of the site, adjoining or nearby land is acceptable.

Page 80 of the engineering reports presents flood hazard maps for both the existing and developed case for the 1% AEP + climate change event. The maps show an increase in flood hazard category on the site through the lowering of the ground level to facilitate the design of the car park. The flood hazard is predominantly H5 with some areas of H6. The flood hazard category H5 means unsafe for vehicles and people. All buildings vulnerable to structural damage. Some less robust building types vulnerable to failure. H6 means unsafe for vehicles and people. All building types considered vulnerable to failure. The level of flood risk within the carpark is considered to be unacceptable. It is noted the flood hazard rating on the site has increased when compared to the existing condition.

The proposed approach to manage risk is to implement a Flood Emergency Management Plan (FEMP). There is no discussion regarding alternate options for managing flood risk. The following comments are provided on the proposed FEMP:

- The engineering report states, depth in the car park rises from an initial noticeable depth of 50mm to maximum in a period of around 9.5 minutes (engineering reports, Page 13 JMG). It is noted the maximum depth is approximately 2.2m. This is the time it takes to reach peak depth, but no comment has been provided on the time it takes to which flow becomes hazardous to people and infrastructure. This will be shorter and hence further reduces the time available to vacate affected areas.
- An understanding of how the flood hazard changes with time is required. The assumption of adopting a FEMP based on the time to peak depth is not appropriate. The documentation provided to support a FEMP as being possible is lacking adequate detail.
- The time for noticeable overland flow to hazardous flooding is too short for a flood emergency management plan to be appropriately implemented. It appears the approach relied upon will be for people to notice flood water and will make a decision to remove themselves from the area. There is no time for instruction or intervention from a flood warden. The emergency response system relies on automated measures as warning devices, although it is likely they may only provide minutes of warning.
- Figure 3 shows an exert from the Australian Disaster Resilience Manual 20 and presents an example evacuation timeline. For this example, only the first four steps are relevant. For a FEMP to work, the time between the first indication of flooding and the prediction of inundation height, plus the response initiation time must be less than the time where flood water first becomes hazardous (noting this is less than 9.5 minutes). There has been no discussion in the

material provided on evacuation timeline.

- A risk assessment is documented in Appendix A of the report (Page 88 of engineering reports). Risk Ref No. D2 recognises there is a risk to personal safety within the car park and waste room. The assessment nominates a consequence of moderate for a risk that could result in serious injury or death. This does not appear to be correct.
- The risk assessment states that with implementation of the flood emergency management plan that the consequence, reduces from moderate to minor. The consequence will not change with the implementation of administrative risk reduction measures. There is still the consequence of serious injury and death.
- The JMG report accepts that cars may become damaged and have suggested the body corporate insurance may be able to recover losses. This still means people will be without a car for a period of time. Insurance should not need to be relied upon if the risk is known prior to the development be constructed; and
- The flood hazard categorisation is predominantly H5 and some H6 and represents hazards typically found in defined river and creek channels. Areas that contain this level of hazard would normally be left clear of development. It is not recommended to place infrastructure or provide incentive for people to access areas like this.

The proposed design exposes users to an unacceptable level of risk with a mitigation option that cannot guarantee the safety of people and accepts the damage to property will occur. The proposed approach does not meet P1 (a)

(b) Risk to adjoining or nearby property or public infrastructure is acceptable.

Section 2.4.1 of the Flussig Report states there will be no displacement of overland flow over other property. A graph is provided in Figure 7, although, this only demonstrates a change at a single point. A comparison between the flood maps provided in Appendix B, Pre-Development 1% AEP + CC and Post-Development 1% AEP + CC, do show an increase in flood depth downstream, a minor decrease in flood extent onto Campbell Street, an increase in the flood extent within the Brooker Avenue Road Reserve and a minor increase in flood extent behind Woolworths.

A high level review of the flood hazard maps suggests the extent of

H6 hazard increases downstream.

Furthermore, figure 6 (page 75 of the engineering reports) shows an increase in peak flow rate of approximately 13% within the Brooker Avenue Road reserve.

To appropriately quantify the change in flood behaviour, a water level difference / flood afflux map or suitably detailed equivalent information is required. This has not been provided and hence there isn't enough information provided to adequately address P1 (b). This is information that should have been provided at this stage of the development assessment. As such it cannot be conditioned.

(c) Risk to buildings and other works arising from riverine flooding is adequately mitigated through siting, structural or design methods

With regard to mitigation options relating to structural design of the development, the engineering report has recommended the building be designed to resist flood forces. A review of the structural design is beyond the scope of this assessment although this item can be conditioned.

#### (d) Need for future remediation works is minimised

By allowing the overland flow path to pass through the car park introduces a problem for the development to deal with in the future. Damage to cars and building utilities are likely which will impose burden on those living at the proposed development site.

(e) Provision of any developer contribution required pursuant to policy adopted by Council for riverine flooding protection works

Developer contribution not applicable for this development.

- 6.32.6 The proposal does not comply with the performance criterion.
- 6.33 Riverine, Coastal Investigation Area, Low, Medium, High Inundation Hazard Areas Part E E15.7.5 P1
  - 6.33.1 There is no acceptable solution for E15.7.5 A1.
  - 6.33.2 The proposal includes solid walls greater than 5m in length and 0.5m high.

- 6.33.3 There is no acceptable solution; therefore assessment against the performance criterion is relied on.
- 6.33.4 The performance criterion at clause E15.7.5 P1 provides as follows:

Landfill, or solid walls greater than 5 m in length and 0.5 m in height, must satisfy all of the following:

- (a) no adverse affect on flood flow over other property through displacement of overland flows;
- (b) the rate of stormwater discharge from the property must not increase:
- (c) stormwater quality must not be reduced from pre-development levels.
- 6.33.5 The application has been reviewed by Council's External Consultant Engineer, who has provided the following assessment:

As the proposed development introduces a new structure into the development site that is greater than 5m, A1 cannot be achieved and the performance criteria (P1) must be addressed.

(a) no adverse affect on flood flow over other property through displacement of overland flows;

Section 2.4.1 of the Flussig Report states there will be no displacement of overland flow over other property. A graph is provided in Figure 7, although, this only demonstrates a change at a single point. A comparison between the flood maps provided in Appendix B, Pre-Development 1% AEP + CC and Post-Development 1% AEP + CC, do show an increase in flood depth downstream, a minor decrease in flood extent onto Campbell Street, an increase in the flood extent within the Brooker Avenue Road Reserve and a minor increase in flood extent behind Woolworths.

A high level review of the flood hazard maps suggests the extent of H6 hazard increases downstream.

To appropriately quantify the change in flood behaviour, a water level difference / flood afflux map or suitably detailed equivalent

information is required. This has not been provided and hence there isn't enough information provided to adequately address P1 (b). The review of flood maps provided suggests there is a change, but it is not possible to ascertain the impact. This is information that should have been provided at this stage of the development assessment. As such it cannot be conditioned.

(b) the rate of stormwater discharge from the property must not increase

Figure 6 (page 75 of the engineering reports) shows an increase in peak flow rate of approximately 13% within the Brooker Avenue Road reserve. The statement provided in the response to planning criteria (page 82 of the engineering reports) states no change. The response is inconsistent with the detail provided in the report. P1 (b) has not been achieved. Information should have been provided at this stage. It is not recommended to condition for this.

(c) stormwater quality must not be reduced from pre-development levels

The response stated on page 82 of the engineering reports suggest there is no evidence that stormwater quality will be reduced. Based on the review of the site this is reasonable and can be accepted.

- 6.33.6 The proposal does not comply with the performance criterion.
- 6.34.1 Standards for Signs and Standards for Signs on Heritage Places subject to the Heritage Code Part E E17.7.1 P1 and E17.7.2 P1
  - 6.34.1 The acceptable solution at clause E17.7.1 P1 requires signs to be of the dimension and type specified in the nominated tables.
  - 6.34.1 There is no acceptable solution for E17.7.2 P1.
  - 6.34.2 The proposal includes a wall or possibly ground based panel sign, however the sign was not replicated on all plans, and insufficient detail was provided for the sign to confirm this.
  - 6.34.3 The proposal does not comply with, or there is no acceptable solution; therefore assessment against the performance criterion is relied on.

6.34.4 The performance criterion at clauses E17.7.1 P1 and E17.7.2 P1 provide as follows:

#### E17.7.1

- P1 A sign not complying with the standards in Table E17.2 or has discretionary status in Table E17.3 must satisfy all of the following:
- (a) be integrated into the design of the premises and streetscape so as to be attractive and informative without dominating the building or streetscape;
- (b) be of appropriate dimensions so as not to dominate the streetscape or premises on which it is located;
- (c) be constructed of materials which are able to be maintained in a satisfactory manner at all times;
- (d) not result in loss of amenity to neighbouring properties;
- (e) not involve the repetition of messages or information on the same street frontage;
- (f) not contribute to or exacerbate visual clutter;
- (g) not cause a safety hazard.

#### E17.7.2

- P1 A sign on a Heritage Place listed in the Historic Heritage Code or within a Heritage Precinct or Cultural Landscape Precinct must satisfy all of the following:
- (a) be located in a manner that minimises impact on cultural heritage significance of the place or precinct;
- (b) be placed so as to allow the architectural details of the building to remain prominent;
- (c) be of a size and design that will not substantially diminish the cultural heritage significance of the place or precinct;
- (d) be placed in a location on the building that would traditionally have been used as an advertising area if possible;

- (e) not dominate or obscure any historic signs forming an integral part of a building's architectural detailing or cultural heritage values;
- (f) have fixtures that do not damage historic building fabric, including but not restricted to attachments to masonry and wood, such as to using non-corrosive fixings inserted in mortar joints;
- (g) not project above an historic parapet or roof line if such a projection impacts on the cultural heritage significance of the building;
- (h) be of a graphic design that minimises modern trademark or proprietary logos not sympathetic to heritage character;
- (i) not use internal illumination in a sign on a Heritage Place unless it is demonstrated that such illumination will not detract from the character and cultural heritage values of the building.
- 6.34.5 There are insufficient details of the signs provided in the application documentation. The applicant was contacted regarding this, and has agreed that the reference to the sign was left on some of the plans in error, and that there is no intention to apply for signage at this time. As such, it is recommended that a condition be included in any permit requiring the removal of any reference to any signage, and advising that signage for the site will need to be the subject of further application at a later time.
- 6.34.6 The proposal does not comply with the performance criterion, however a condition removing all reference to the signage from the scope of works, is considered appropriate.

#### 7. Discussion

7.1 Planning approval is sought for Partial Demolition, Alterations, New Building for 31 Multiple Dwellings, Food Services, Business and Professional Services, General Retail and Hire, Subdivision (Lot Consolidation), and Associated Works in the Road Reserve including Tree Removal, at 169-173, 175, 177, and 179 Campbell Street, and the Adjacent Road Reservation.

- 7.2 The application was advertised and received fourteen (14) representations. The representations raised concerns including Height, Views, Sunlight / Overshadowing, Amenity, Tree Removal, Adjacent Site Access, Construction Impacts, Parking, Traffic / Access, Trade Interruptions, Bike Parking, Scale / Bulk / Intensity, Design, Heritage, Neighbourhood Character, Flood Risk, Precedent, and Noise.
- 7.3 The proposal has been assessed against the relevant provisions of the planning scheme and is considered to not perform well, in terms of building height and inundation.
- 7.4 The proposal has been assessed by other Council officers, including the Council's Development Engineer, Cultural Heritage Officer, Environmental Development Planner, Environmental Health Officer, Open Space Planner, Roads Engineer, and Traffic Engineer. Given the flood characteristics of the site, the application was reviewed by an external hydraulic engineer. That external engineer has assessed the proposal as being non-compliant with the requirements of the Stormwater Code and the Inundation Prone Areas Code. The external engineer concludes as follows:

The proposed development is located in an area affect by extremely hazardous flood water in a 1% AEP + Climate Change flood event. The primary issue is part of the development exposes users to an unacceptable level of risk, which is in conflict with the purpose of the code, and in particular E15.7.4/P1. It is our opinion that the management measure proposed (emergency management plan) is not appropriate for this situation. Even if a detailed flood emergency plan could be developed, there would be a problem enacting the plan as the time required to enact the

plan would be far longer than the flood response time.

It is reasonable to assume a person could be located within the basement carpark at the onset of flooding. They could be exposed the highly hazardous flooding (as defined by Australian Rainfall & Runoff Flood Hazard Categorisation- Book 6 – Chapter 7) and hence we do not believe the development in its current form meets the requirements of the [planning scheme].

7.5 The application was considered by the Urban Design Advisory Panel twice in a pre-application capacity at its meetings of 28 April 2021 and 7 September 2021. The Panel's comments are provided in full as an attachment to this report, and have also been set out above in section 6 of this report where relevant. In the context of the provisions on which they were asked to comment, the Panel was broadly not supportive of the designs they saw prior to refinement and lodgement. The following additional comments of the Panel are worth noting:

A previous early stage of the development, essentially a massing version, came before the Panel for pre-application advice at its meeting on the 28 April 2021. The Panel was broadly not supportive of that proposal, especially with regards to the impact on adjacent properties and the pattern this development would establish in exceeding the current Scheme requirements.

The Panel acknowledge the precinct warrants a review of Scheme requirements and an increased density, especially for housing, is appropriate. Consistent with previous advice (April 2021), the Panel seek urban analysis on the appropriateness of exceeding the current Scheme requirements and the pattern this establishes for future development.

The Panel remain concerned by the precedent established by the pattern which would be as a result of 'first in, best dressed' rather than as a proposal addressing amenity issues influenced by a precinct plan. The Panel is concerned that the width of the lots in the area would generate a typology that, if developed to similar height and bulk, will progressively overshadow each neighbouring lot.

In response, this site forms part of the Central Hobart Precincts Plan, which, once implemented, will provide more clarity on what may be an acceptable development on this site. The exact timing of when the Precinct Plan will form part of the planning scheme is not known, and it is not expected to be in the short term.

7.5 The proposal is recommended for refusal.

#### 8. Conclusion

The proposed Partial Demolition, Alterations, New Building for 31 Multiple Dwellings, Food Services, Business and Professional Services, General Retail and Hire, Subdivision (Lot Consolidation), and Associated Works in the Road Reserve including Tree Removal, at 169-173, 175, 177, and 179 Campbell Street, and the Adjacent Road Reservation does not satisfy the relevant provisions of the Hobart Interim Planning Scheme 2015, and as such is recommended for refusal.

#### 9. Recommendations

That: Pursuant to the *Hobart Interim Planning Scheme 2015*, the Council refuse the application for Partial Demolition, Alterations, New Building for 31 Multiple Dwellings, Food Services, Business and Professional Services, General Retail and Hire, Subdivision (Lot Consolidation), and Associated Works in the Road Reserve including Tree Removal, at 169-173, 175, 177, and 179 Campbell Street, and the Adjacent Road Reservation for the following reasons:

- The proposal does not meet the acceptable solution or the performance criterion with respect to clause 15.4.1 A1 and P1 of the *Hobart Interim Planning Scheme 2015* because the proposed building height is not compatible with the scale of nearby buildings, and fails to provide stepping between itself and adjoining buildings.
- The proposal does not meet the acceptable solution and there is no performance criterion with respect to clause E7.7.1 A4 and P4 of the Hobart Interim Planning Scheme 2015 because it includes a major stormwater drainage system that has not been designed to accommodate a storm with an ARI of 100 years.
- The proposal does not meet the acceptable solution or the performance criterion with respect to clause E15.7.4 A1 and P1 of the *Hobart Interim Planning Scheme 2015* because the car park floor level is not 300mm above the 1% AEP flood extent, and its proposed floor level does not satisfy: (a) that risk to users of the site, adjoining or nearby land is acceptable; (b) that risk to adjoining or nearby property or public infrastructure is acceptable; (c) that risk to buildings and other works arising from riverine flooding is adequately mitigated through siting, structural or design methods; and (d) that the need for future remediation works is minimised.
- The proposal does not meet the acceptable solution or the performance criterion with respect to clause E15.7.5 A1 and P1 of the *Hobart Interim Planning Scheme 2015* because it includes a new wall that is greater than 5m in length and it will not satisfy the following: (a) that there is no adverse affect on flood flow over other property through displacement of overland flows; and (b) that the rate of stormwater discharge from the property will not increase.



#### **Development Appraisal Planner**

As signatory to this report, I certify that, pursuant to Section 55(1) of the Local Government Act 1993, I hold no interest, as referred to in Section 49 of the Local Government Act 1993, in matters contained in this report.

(Ben Ikin)

#### **Senior Statutory Planner**

As signatory to this report, I certify that, pursuant to Section 55(1) of the Local Government Act 1993, I hold no interest, as referred to in Section 49 of the Local Government Act 1993, in matters contained in this report.

Date of Report: 8 September 2022

#### Attachment(s):

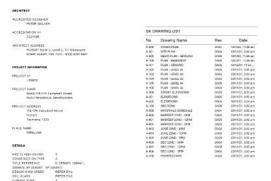
Attachment B - CPC Agenda Documents

Attachment C - Supporting Documents

Attachment D - Stormwater and Flooding Consultant Engineer's Report

Attachment E - Urban Design Advisory Panel Report (28 April 2021 and 7 September 2021)

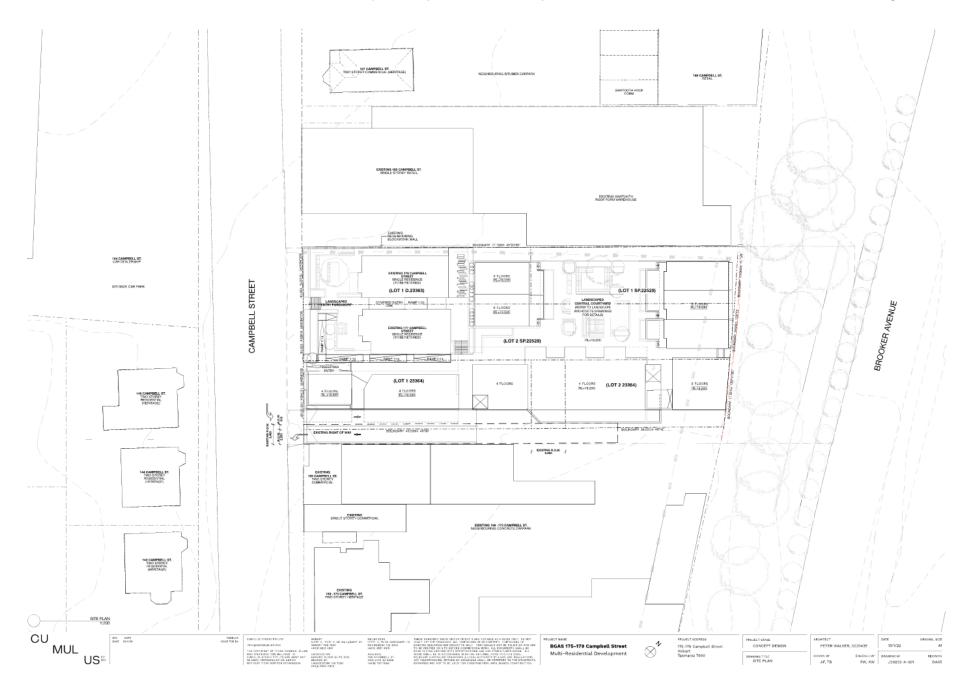
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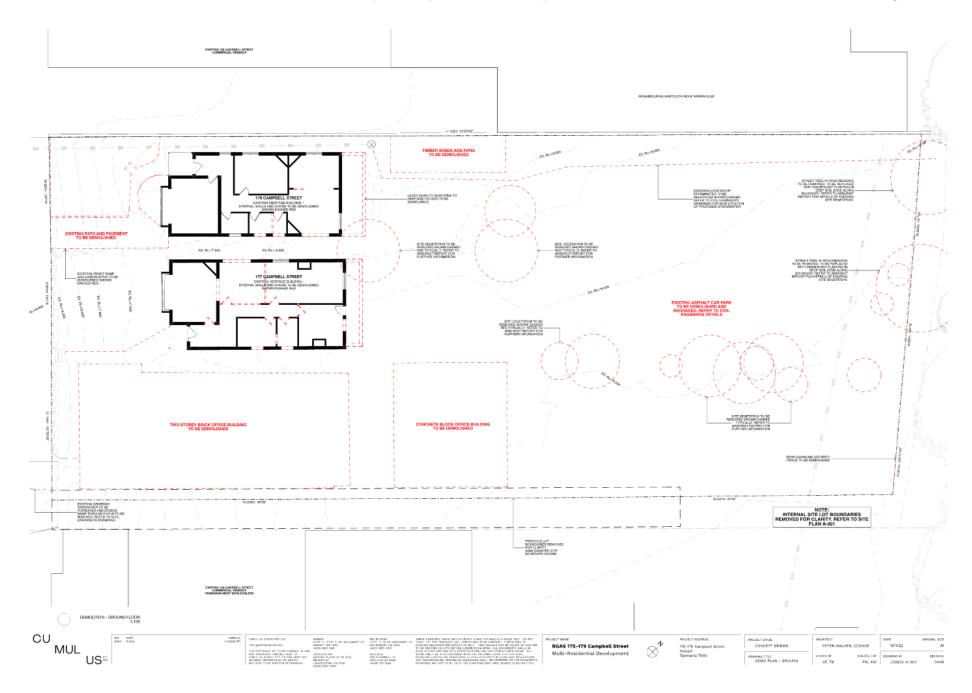


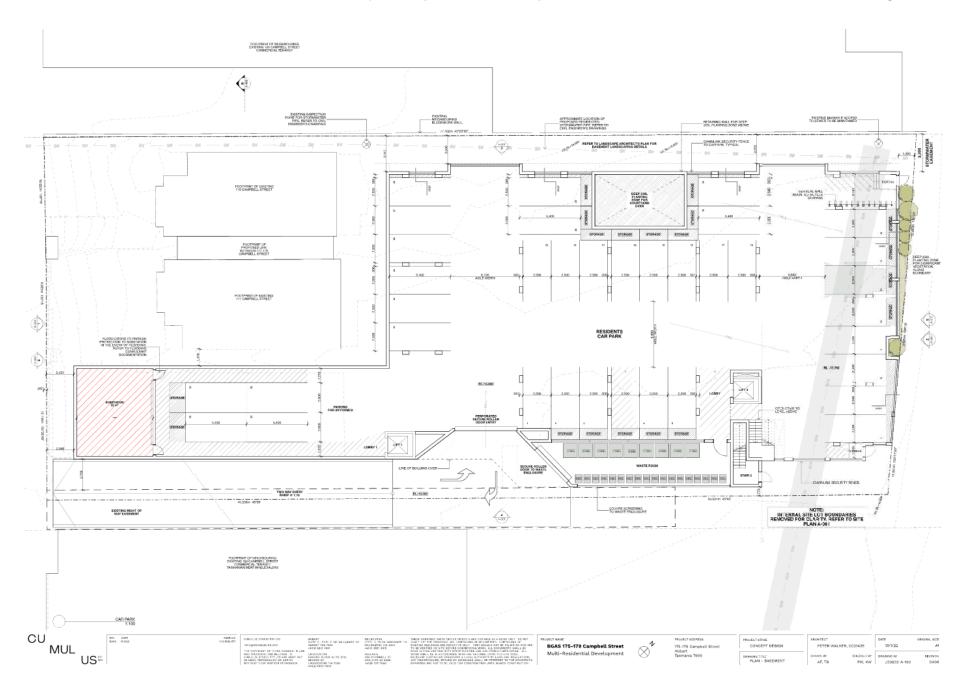
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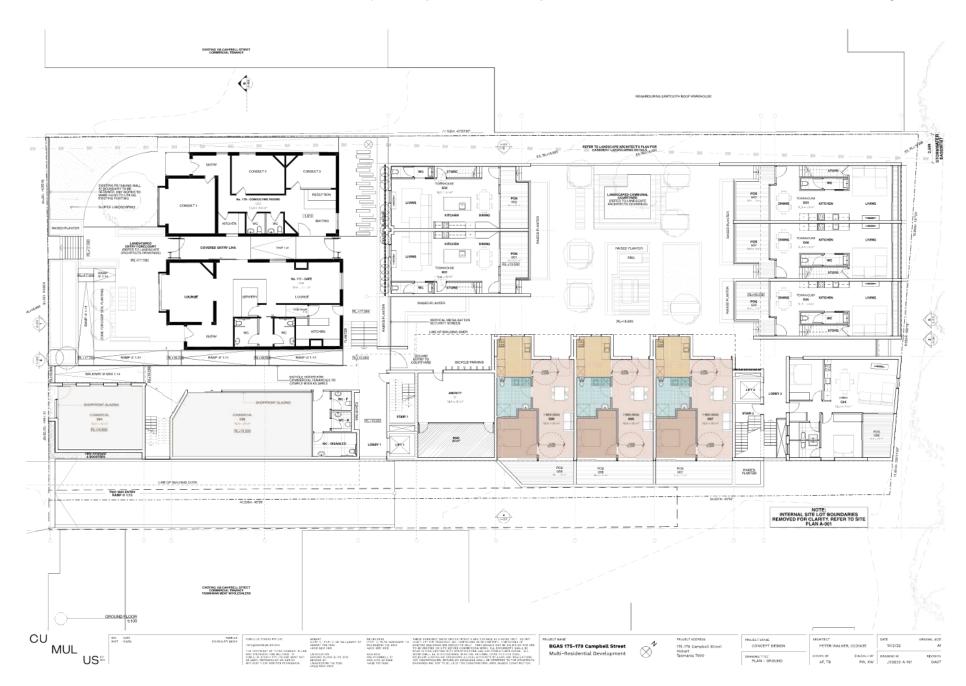
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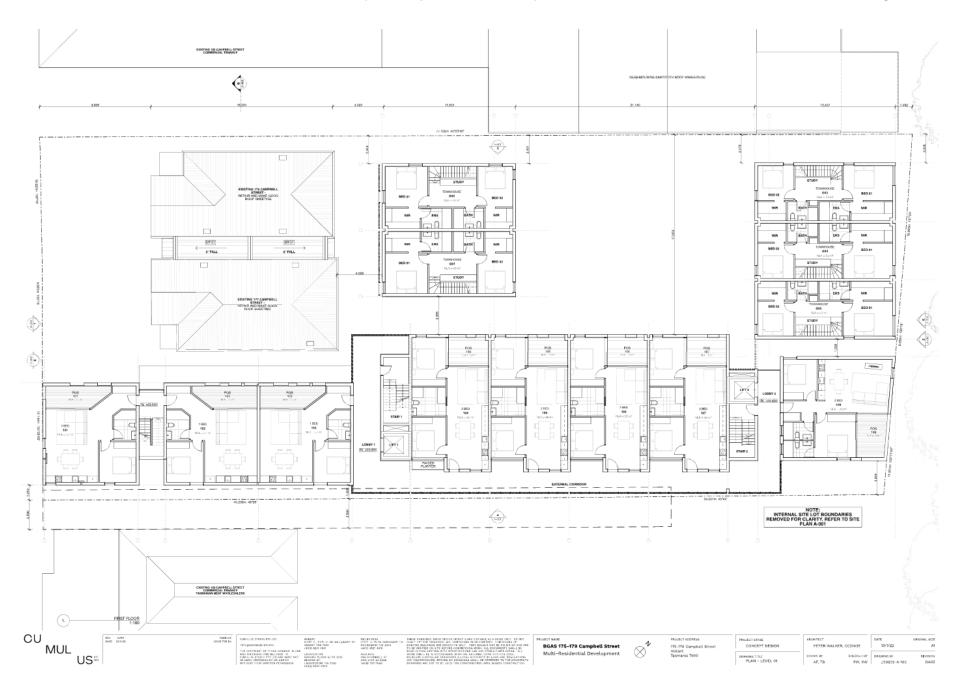
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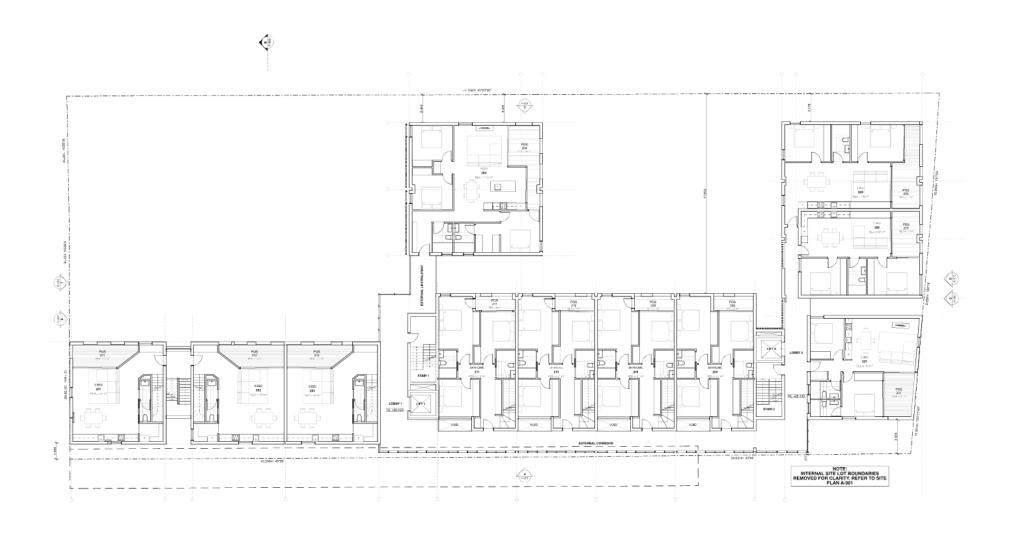




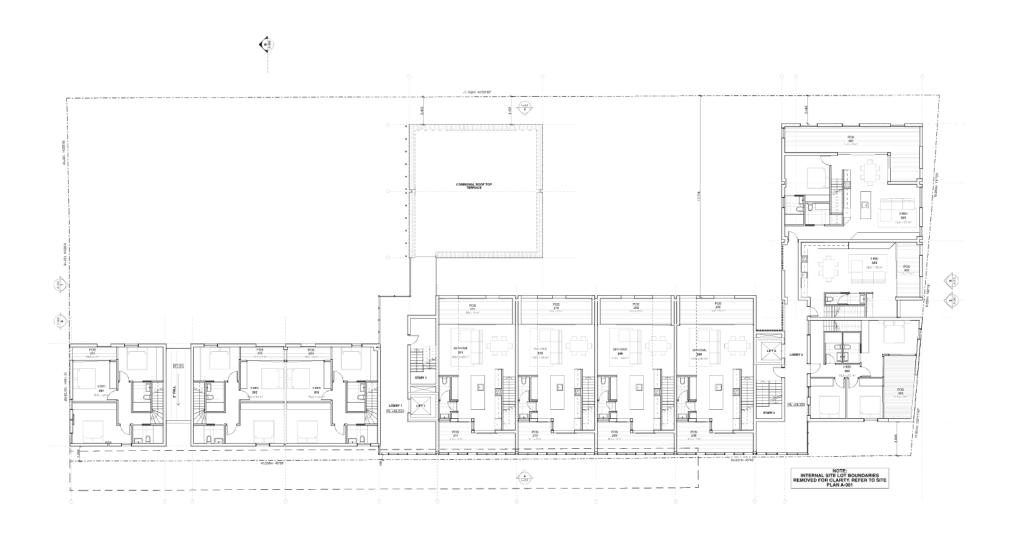




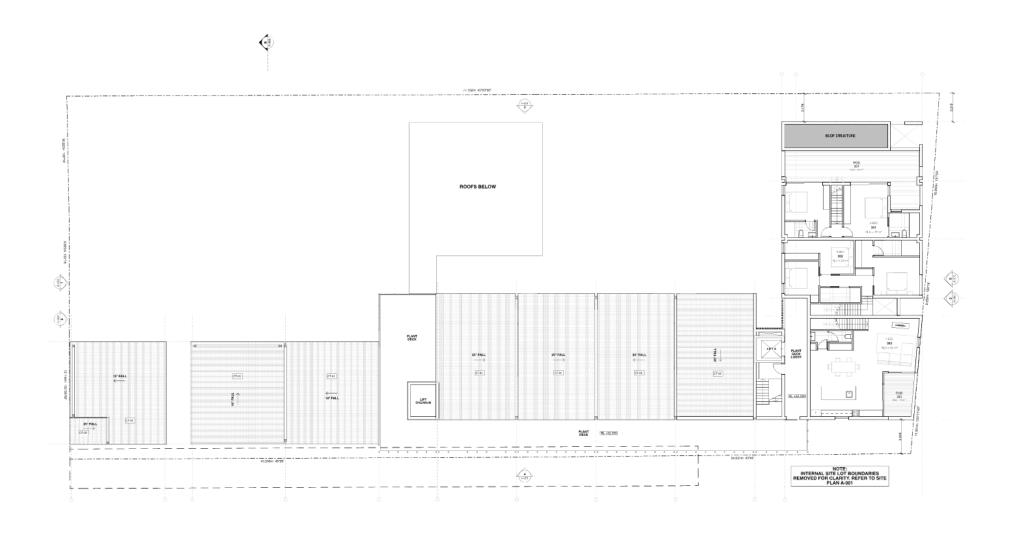




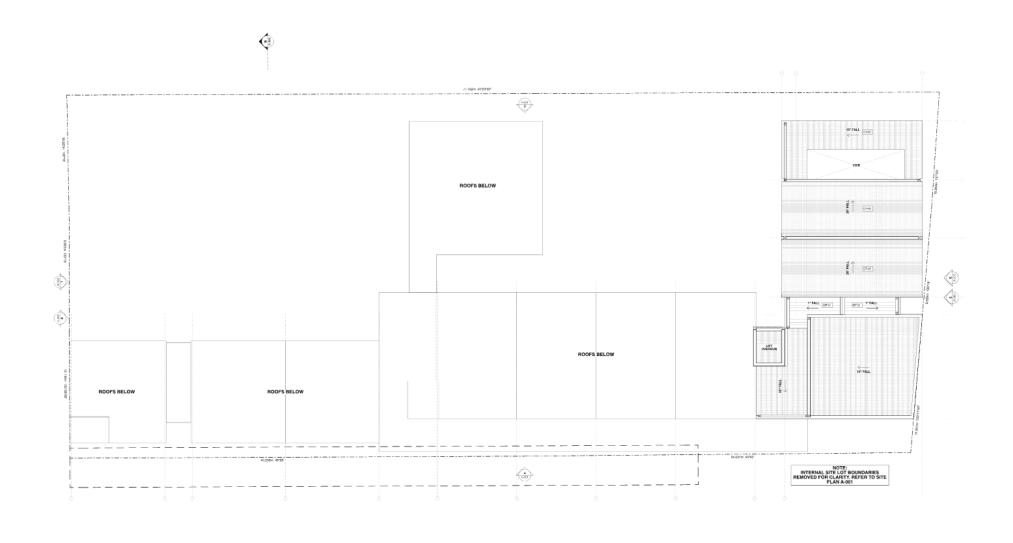




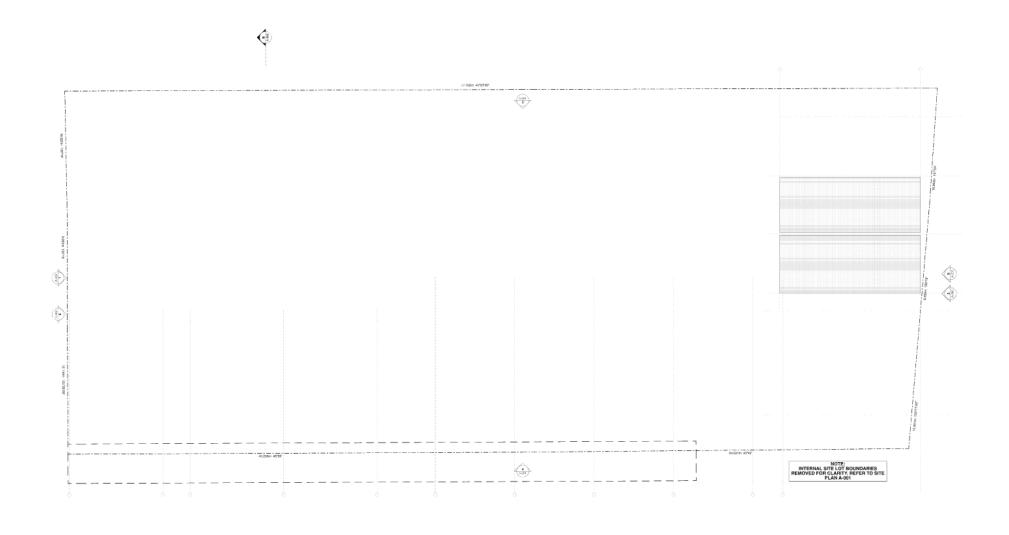














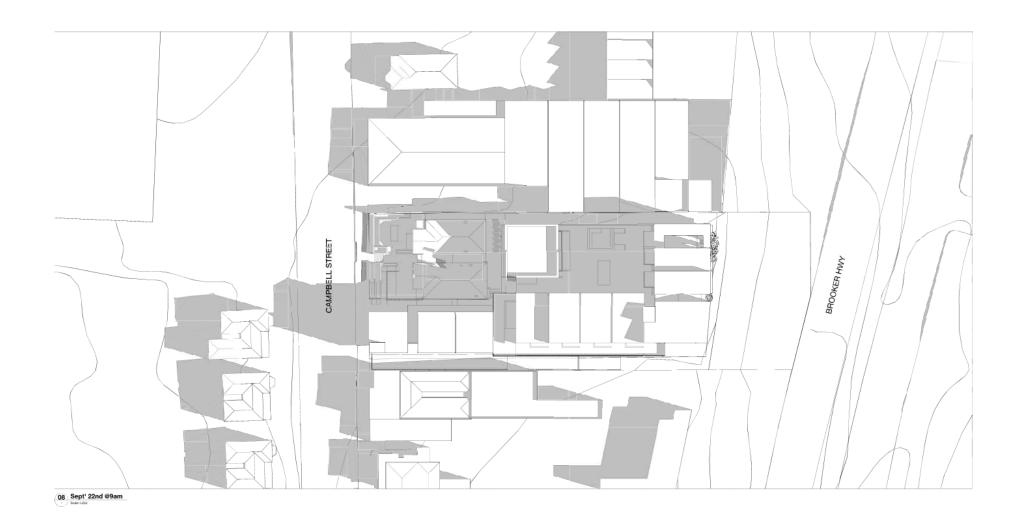
Page 1082 ATTACHMENT B Item No. 7.1.7

Agenda (Open Portion)
City Planning Committee Meeting - 19/9/2022

Page 1083 ATTACHMENT B Item No. 7.1.7

Agenda (Open Portion)
City Planning Committee Meeting - 19/9/2022

Page 1085 ATTACHMENT B



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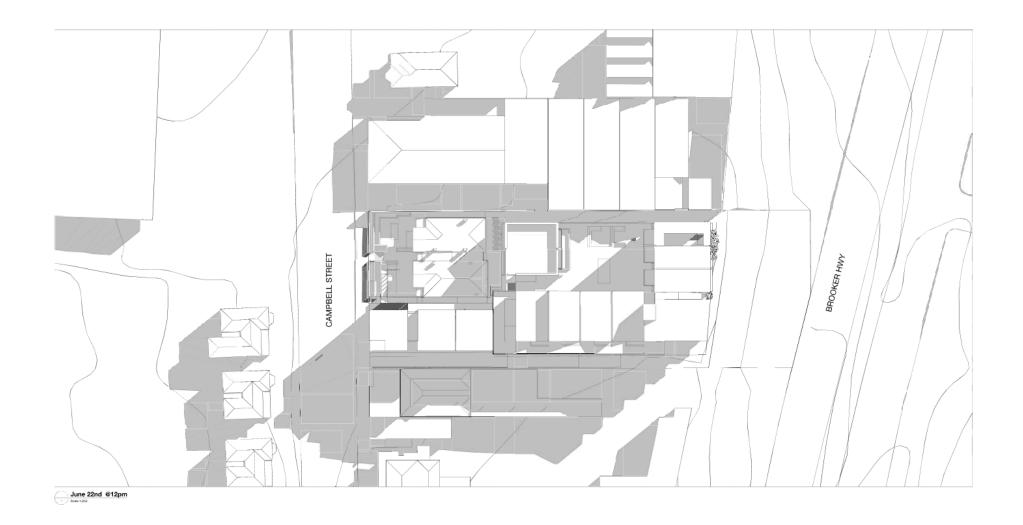
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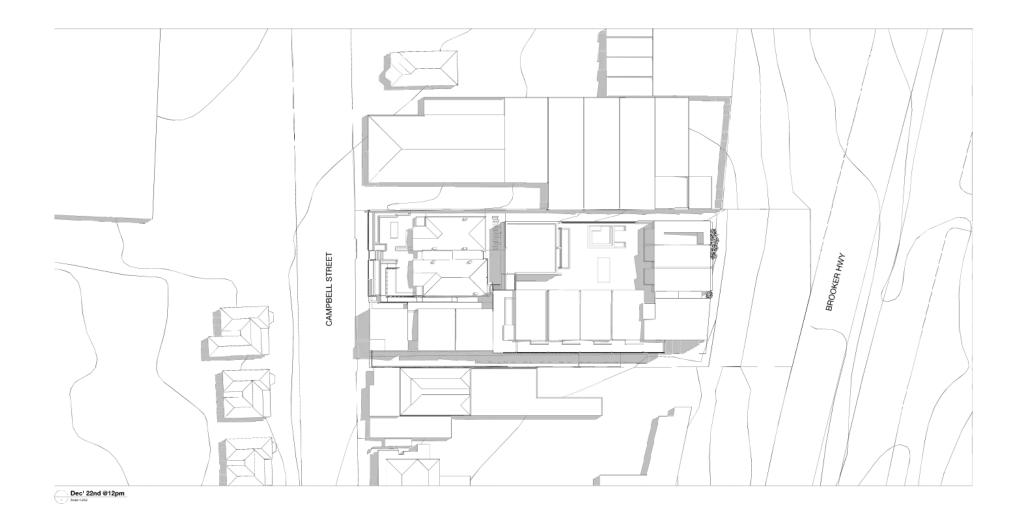
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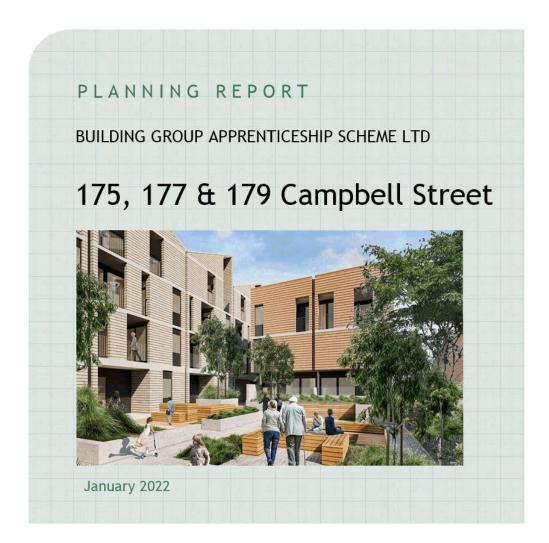
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- ESTIMATES

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# **Executive Summary**

SolutionsWon Group on behalf of The Building Group Apprenticeship Scheme Ltd seeks to develop land located at 175, 177 and 179 Campbell Street.

The proposed development is for:

- Demolition of the following:
  - the commercial building and concrete block office building to the rear at 175 Campbell Street:
  - the 'lean-to' additions, the timber shed and patio to the rear of the residential dwelling at 179 Campbell Street;
  - the existing front ramp and landscaping in the front of 177 and 179 Campbell
- Adhesion of four lots to create a single development site area of 2420m<sup>2</sup>;
- Refurbishment of the existing residential dwellings at 177 and 179 Campbell Street;
- Development of a 6-storey mixed-use building with basement car parking below the natural ground level:
  - A basement level containing:
    - 35 car parking spaces (including two tandem spaces);
  - Ground floor area centred around a pedestrian circulation spine (including a central courtyard) off which access is provided to:
    - 4 x commercial buildings, three of which front onto Campbell Street (two existing heritage buildings);
    - 1 x amenity room;
    - 1 x two-bedroom apartment
    - 5 x two-storey townhouses;
    - 3 x one-bedroom apartments;
  - The Second floor contains:
    - 3 x one-bedroom apartments;
    - 5 x two-bedroom apartments;
    - The third floor contains:
      - 3 x two-bedroom apartments
      - 4 x three bedroom sky home apartments;
      - 4 x three bedroom apartments;
  - The fourth floor contains:
    - 3 x three bedroom apartments;
    - 1 x communal rooftop terrace
- The fifth floor contains:
  - the second storey for sky home apartments and three-bedroom apartments.

The total number of dwellings is 31.

The development is located on land within the Urban Mixed Use Zone and the proposed development generates the following discretions under the Hobart Interim Planning Scheme 2015 (the Scheme):

- 15.4 Development Standards for Buildings and Works
  - o 15.4.1 Building Height P1
  - o 15.4.5 Landscaping P1
- E2.0 Potentially Contaminated Land Code
  - E2.6.2 Excavation P1
- E5.0 Road and Railway Assets Code
  - E5.5.1 Existing road accesses and junctions P3
  - E5.6.4 Sight distance at accesses, junctions and level crossings P1
- E6.0 Parking and Access Code
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- o E9.7.1 Development for Use with Potential to Cause Environmental Harm P1
- E13.0 Historic Heritage Code
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  - o E13.7.2 Building and Work other than Demolition P4
  - o E13.7.2 Building and Work other than Demolition P6
  - o E13.10.1 Building, Works and Demolition P1

The proposal has been assessed against all relevant Scheme criteria and is found to either comply with Acceptable Solutions or satisfy relevant Performance Criteria. The application is considered to be acceptable with respect to the Scheme requirements and therefore ought to be supported by the Planning Authority.



# 1. Introduction

JMG Engineers and Planners have been engaged by SolutionsWon Group to prepare a planning permit application for a mixed-use development at 175, 177 and 179 Campbell Street, Hobart. The proposal involves the demolition of some existing buildings, changing the use of remaining existing buildings and new mix-use multiple dwelling development.

This report serves to provide an assessment of the proposed development and works against the provisions of the *Hobart Interim Planning Scheme 2015* ('the Scheme').

A number of expert reports are provided in support of the planning permit application including a Traffic Impact Assessment, Concept Services Report, Heritage Assessment, Environmental Site Assessment, Flood Modelling Report and an Architectural Design Statement. These reports are provided in the Appendices to this planning report and are referenced as appropriate throughout the document.



# 2. Site Location & Context

The subject site is located just under 450m from north of the Hobart Central Business zone. The landowner is the Tasmanian Building Group Apprenticeship Scheme Ltd. The proposed development will require works on multiple titles (listed in Table 1) with copies provided in Appendix A. Copies of the landowner notification letters and Council consent as required by section 52 of the Land Use Planning and Approvals Act 1993 are provided in Appendix D.

Table 1 - Summary of existing titles involved in the proposed development.

Title Reference	Street Number	Comments re existing/proposed	Owner Advice/Consent
CT 23364/1	175 Campbell Street (front lot)	Containing an existing commercial building and shed to the rear, with an area of approximately 483m <sup>2</sup> . All structures to be demolished and a new mixed-use building to be developed.	Landowner notification (section 52(1) Land Use Planning and Approvals Act 1993)
CT 23364/2	175 Campbell Street (rear lot)	Containing an existing car parking and vehicle circulation space, with an area of approximately 423m <sup>2</sup> . A new mixed-use building is to be developed over this area of the site.	Landowner notification (section 52(1) Land Use Planning and Approvals Act 1993)
CT 22529/3	177 Campbell Street	Containing an existing building with car parking at the rear, used for residential purposes, with an area of approximately 1116m <sup>2</sup> . The existing residential building is to be retained, the front courtyard space to be redeveloped, and the rear area of the Title developed with the new mixed-use building.	Landowner notification (section 52(1) Land Use Planning and Approvals Act 1993)
CT 23363/1	179 Campbell Street	Containing an existing building and outbuildings, used for residential purposes, with an area of approximately 413m <sup>2</sup> . The existing residential building is to be retained, the front courtyard space to be redeveloped, and demolition of some structures at the rear of the Title.	Landowner notification (section 52(1) Land Use Planning and Approvals Act 1993)
CT 140732/1	169-173 Campbell Street	Containing Tasmanian Meat Wholesalers - utilising access right of way.	Landowner notification (section 52(1) Land Use Planning and Approvals Act 1993)
CT 121292/1	181-189 Campbell Street	'Woolworths' – the potential underpinning of an existing warehouse wall.	Landowner notification (section 52(1) Land Use Planning and Approvals Act 1993)

The (four) titles [CT 23364/1, CT 23364/2, CT 22529/3, and CT 23363/1] will need to be adhered to and rights of way widths adjusted to ensure CT 140732/1 (Tasmanian Meat Wholesalers) have full access over the new access ramp.

Existing buildings within 100m of the development site are generally single or double-storey displaying a mix of styles including:

- Commercial buildings adjoining the development site to the north-west and south-east, as well as on the southern side of Campbell Street; and
- Residential style buildings to the north-west of the development site and on the southern side of Campbell Street.

There are 3 Metro Bus stops within a 200m radius of the site, associated with a number of services to the northern suburbs as well as southern and eastern suburbs via the Elizabeth Street bus interchange facilities.



# 3. Proposed Use & Development

The proposed development is for:

- Demolition of the following:
  - the commercial building and concrete block office building to the rear at 175 Campbell Street;
  - the 'lean-to' additions, the timber shed and patio to the rear of the residential dwelling at 179 Campbell Street;
  - the existing crossovers, driveways and landscaping in the front of 177 and 179 Campbell Street;
- Adhesion of four lots to create a single development site area of 2420m<sup>2</sup>;
- Refurbishment of the existing residential dwellings at 177 and 179 Campbell Street;
- Development of a 6-storey mixed-use building with basement car parking below the natural ground level:
  - A basement level containing:
    - 35 car parking spaces;
    - Ground floor area centred around a pedestrian circulation spine (including a central courtyard) off which access is provided to:
      - 4 x commercial buildings, three buildings fronting Campbell Street comprising two existing heritage buildings;
      - 1 x amenity room;
      - 1 x two-bedroom apartment
      - 5 x two-storey townhouses;
      - 3 x one-bedroom apartments;
  - The Second floor contains:
    - 3 x one-bedroom apartments;
    - 5 x two-bedroom apartments;
  - The third floor contains:
    - 3 x two-bedroom apartments
    - 4 x three bedroom sky home apartments;
    - 4 x three bedroom apartments;
  - o The fourth floor contains:
    - 3 x three bedroom apartments;
    - 1 x communal rooftop terrace
  - o The fifth floor contains:
    - the second storey for sky home apartments and three-bedroom apartments.

The basement contains 35 car parking spaces with 22 storage areas and a 58m² waste room. The vehicle access will partially use the subject site at 175 Campbell Street and the right of way from 169-173 Campbell Street (Tasmanian Meat Wholesalers).

There are four commercial tenancies on the ground floor. An amenity room, a master switchboard room and fire three bathrooms (one for disability) are also provided with the development.

Details plans of the proposed development (Proposal Plan) are shown in Appendix C and details of the demolition are outlined in a Demolition Plan in Appendix E.



# Development Assessment

The proposed development comprises the title adhesion, demolition and change of use, the relating special provisions need to be assessed as follow.

# 4.1 Special Provisions

### 9.3 Adjustment of a Boundary (Title Adhesion)

The proposed development will involve merging four lots (CT 23364/1, CT 23364/2, CT 22529/3 and CT 23363/1) to create one new lot of 2420m<sup>2</sup>. This aspect of the proposed development has been considered against criteria for Adjustment of a Boundary (Clause 9.3.1) under the Scheme and an assessment is as follows:

9.3	Adjustment of a Boundary	Compliance of Proposed Development
(a)	No additional lots are created;	Complies - the proposed boundary adjustment will convert 4 existing lots into 1 lot.
(b)	There is only a minor change to the relative size, shape and orientation of the existing lots;	Not compliant - there will be more than a minor change to the existing 4 lots that comprise the development site.
(c)	No setback from an existing building will be reduced below the applicable minimum setback requirement;	Complies - the setback of the proposed building parallel to the frontage and is not more than 1m as 15.4.2 Setback requested.
(d)	No frontage is reduced below the applicable minimum frontage requirement; and	Complies - the frontage of the proposed building is not reduced /there is no minimum frontage required for residential within the Urban Mixed Use Zone.
(e)	No lot boundary that aligns with a zone boundary will be changed.	Complies - it will not change the boundary which aligns with a zone boundary

As the proposed development does not satisfy clause 9.3.1 (b) and is not considered a subdivision, it will be treated as an adhesion under Section 110 of the *Local Government (Building and Miscellaneous Provisions) Act 1993*, which is thought to be satisfactorily addressed through permit conditions prescribing an adhesion order.

## 9.4 Demolition

The proposed development consists of the demolition of buildings.

The two-storey brick office building and concrete block office building at 175 Campbell Street (CT 23364/1) is to be demolished. The timber sheds and patio to the rear of the residential dwelling at 179 Campbell Street (CT 23363/1) are also to be demolished. The internal walls and doors of the existing two heritage buildings at 177 and 179 Campbell Street (22529/3)(CT 23363/1) will be demolished. This is as shown in the demolition plan (Appendix E).

The proposed demolition forms part of a permissible development application within the Urban Mixed Use Zone and it is considered that Clause 9.4 Demolition has been satisfied.

# 4.2 Zones

The subject site is zoned 'Urban Mixed Use', the north and south of the subject site with the same zone. The land immediately to the southwest and northeast is zoned 'Utilities' (containing



the Campbell Street and Brooker Avenue Road Reserves). The land on the southern side of the Campbell Street Road Reserve is zoned 'Commercial' (18m from the subject site), and land on the northeast side of the Brooker Avenue Road Reserve is zoned 'Inner Residential' (50m from the subject site). The zoning of the Subject Site is shown below in Figure 1.



Figure 1 - Zoning of the Subject Site and surrounding area (source: List Map).

The Subject Site is also subject to the Royal Hobart Hospital Helipad Airspace Specific Area Plan overlay as shown in Figure 2.

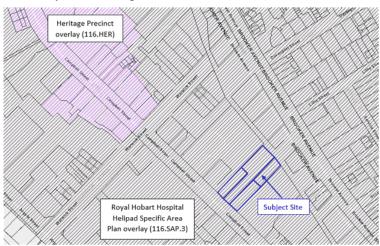


Figure 2 - 'Royal Hobart Helipad Airspace Specific Area Plan' and 'Heritage Precinct' overlays (source: List Map).

15.0 Urban Mixed Use Zone

15.1 Zone Purpose



#### 15.1.1 Zone Purpose Statements

15.1.1.1

To provide for integration of residential, retail, community services and commercial activities in urban locations. 15.1.1.2

To encourage use and development at street level that generates activity and pedestrian movement through the area.

15.1.1.3

To provide for design that maximises the amenity at street level including considerations of microclimate, lighting, safety, and pedestrian connectivity.

15.1.1.4

To ensure that commercial use are consistent with the activity centre hierarchy.

15.1.1.:

To ensure development is accessible by public transport, walking and cycling

15.1.1.6

To provide for a diversity of uses at densities responsive to the character of streetscapes, historic areas and buildings and which do not compromise the amenity of surrounding residential areas.

15.1.1.

To encourage the retention of existing residential uses and the greater use of underutilised sites as well as the reuse and adaptation of existing buildings for uses with a scale appropriate to the site and area. 15.1.1.8

To ensure that the proportions, materials, openings and decoration of building facades contribute positively to the streetscape and reinforce the built environment of the area in which the site is situated.

15.1.1.9

To maintain an appropriate level of amenity for residential uses without unreasonable restriction or constraint on the nature and hours of commercial activities.

15.1.1.10

To ensure that retail shopping strips do not develop along major arterial roads within the zone.

The proposed development is comprised of residential dwellings and commercial uses to provide integration in urban locations (15.1.1.1).

The street level contains a landscaped courtyard (utilised by the proposed food services use) and a retail space which will create an active street frontage (15.1.1.2).

The proposed development includes a garden area to the streetscape and will provide sufficient lighting to enhance the amenity at street level. The massing of the buildings towards the Brooker Highway will decrease overshadowing onto Campbell Street (15.1.1.3).

The proposed commercial uses are for 'Food Service' and 'General Retail and Hire', the proposed use of the shops will increase the diversity of the commercial uses within the Urban Mixed Use Zone (15.1.1.4).

The proposed development is accessible for walking and cycling. The proposed buildings are facing Campbell Street which has public transport within 30m (15.1.1.5).

The proposal retains the existing heritage buildings on the site and includes a diversity of uses. The primary impact in terms of residential areas is on the Glebe area north of the site. Whilst there will be increased bulk adjoining the Brooker Highway, the building sits behind substantial trees in the road reserve which is of a similar height to the proposal. Further, the façade is detailed to break up the masing of this façade (refer to the Architects Design Statement in Appendix K) (15.1.1.6).

The rear area of the proposed site is comprised of a large parking space that is underutilised. The existing heritage building will be renovated and utilised to service the residential complex (15.1.1.7).

The façade of the proposed building is of a modern style that will make a positive contribution to the streetscape and enhance the environment of the area (15.1.1.8).

The proposed building is for 'Residential' use. Other uses such as 'Food Service' and 'General Retail and Hire' with specific operation hours is consistent with relevant sub-clause under the Scheme (15.1.1.9).

Campbell Street is not a major arterial road (15.1.1.10).



### 15.3 Use Standards

The proposed uses are Residential, Food services (restaurant - No.177), Business and Professional Services (Consulting Rooms - No.179) and General Retail and Hire (Shops C-01 and C-02). The Residential and Food Services uses are permitted uses, and the remaining uses are discretionary.

#### 15.3.1 Non-Residential Use

Objective:	
To ensure that non-residential use does not unreasonably impact residential amen	ity.
Acceptable Solutions	Performance Criteria
A1	P1
Hours of operation must be within:  (a) 7.00 am to 9.00 pm Mondays to Fridays inclusive;  (b) 8.00 am to 6.00 pm Saturdays;  (c) 9.00 am to 5.00 pm Sundays and Public Holidays.  except for office and administrative tasks or visitor accommodation.	944

The operation hours of the proposed restaurant, consulting rooms and shop are 7 am to 9 pm weekdays, 8 am to 6 pm Saturdays and 9 am to 5 pm Sundays. The proposal will comply with 15.3.1 A1.

P2
Hours of operation must not have an unreasonable impact upon the residential amenity through commercial vehicle movements, noise or other emissions that are unreasonable in their timing, duration or extent.

A noise assessment has not been undertaken for the proposed development, so A1 cannot be demonstrated. Given the proposed uses are unlikely to generate significant noise and the hours of operation are compliant with A2, the non-residential uses are unlikely to cause environmental harm meeting P2.

A3	P3
External lighting must comply with all of the following:     (a) be turned off between 10:00 pm and 6:00 am, except for security lighting;     (b) security lighting must be baffled to ensure they do not cause emission of light into adjoining private land.	***

The external lighting will only be for security lighting (a) and the security lights will be baffled (b). The proposed development thus complies with 15.3.1 A3.

A4	P4
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Commercial vehicle movements, (including loading and unloading and garbage removal) to or from a site must be limited to within the hours of: 7.00 am to 5.00 pm Mondays to Fridays inclusive; 8.00 am to 5.00 pm Saturdays; 9.00 am to 12 noon Sundays and Public Holidays. (c)

Commercial vehicle movements (including waste disposal) will be limited to 7 am to 5 pm weekdays, 8 am to 5 pm Saturdays and 9 am to 12 noon Sundays, thus the Acceptable Solution P4 is met.

#### 15.4 Development Standards for Buildings and Works

#### 15.4.1 Building Height

	netive:  Insure that building height contributes positively to the streetscape and does not result in unreasonable and one increased in the General Residential Zone or Inner Residential Zone.	
Acceptable Solutions	Performance Criteria	
A1	P1	
Building height must be no more than: 10m	Building height must satisfy all of the following:  (a) be consistent with any Desired Future Character Statements provided for the area;  (b) be compatible with the scale of nearby buildings;  (c) not unreasonably overshadow adjacent public space;  (d) allow for a transition in height between adjoining buildings, where appropriate;	

The height of the building is 23.3m in height and thus cannot meet the Acceptable Solution. It has therefore been considered against the Performance Criteria P1 as follows:

There are no Desired Future Character Statements for the Urban Mixed Use Zone, therefore subclause (a) is not applicable.

Whilst the immediately surrounding buildings are only of single or double-storey height, there are buildings in the area nearby which are of similar scales such as the 5 storey/17.9m 87-91 Campbell Street (Housing Tasmania), 19 Bathurst (Tafe Tasmanian Campus) - 7 storeys/26.64m and 65-69 Letitia Street (old Hobart High School) - 4 storeys, which similarly abut the Brooker Highway. It is also relevant that whilst the roofing form design results in increased height (as opposed to a flat-roofed concept) it adds visual interest to the form. In terms of the floor plate, 152-170 Campbell Street, 116-138 Campbell Street and 181-189 Campbell Street (Woolworths) all have a substantially larger floor plate than the proposal. As the objective is to require building scale to contribute positively to the streetscape, the proposed design meets this objective as the building steps to the rear of the site where the scale is less visible from Campbell Street (b).

The higher parts of the proposed development would be setback from the site frontage with Campbell Street and stepped in such a way to reduce overshadowing of adjacent public spaces. The shadow diagrams demonstrate that in mid-winter Campbell Street will not be overshadowed at 9 am or 3 pm but would be subject to some overshadowing at 12 midday. However, given the footpath on the same side of the street would be already overshadowed at midday and that footpath on the other side would not be overshadowed by the proposed development, the proposal is not considered to have an unreasonable overshadowing impact upon adjacent public

In terms of transition between adjoining buildings, the design mimics the industrial warehousing that is prevalent on 181-189 Campbell Street (Woolworths) and other sites within the area. The scale of the element that meets Campbell Street has been kept at 4 storeys to maintain consistency with the 2-3 storey building line present on 181-189 Campbell Street (Woolworths) site (particularly the State listed townhouse in the centre of the car park), 185 Campbell Street (Antique Store) and 169-173 Campbell Street (Tasmanian Meat Wholesalers). The proposed design breaks the massing up with differently cladding elements and modulated surfaces. The two



landscaped courtyards and connecting spaces give permeability to the design as well as provide deep soil zones and opportunity for significant planting to soften the harder urban forms in the proposal.

Given the above assessment, the Performance Criteria is considered to have been met.

As no part of the building is within 10m of a residential zone, A2 is not applicable.

### 15.4.2 Setback

Objective:  To ensure that building setback contributes positively to the streetscape and does impact on residential amenity of land in a residential zone.	not result in unreasonable
Acceptable Solutions	Performance Criteria
A1	P1
Building setback from frontage must be parallel to the frontage and must be no more than:	***
1m from the median street setback of all existing buildings on the same side of the street within 100m of the site.	

The proposed building setback is nil and parallel to the frontage compliant with A1.

As the Subject Site is not in close proximity to a General Residential Zone or Inner Residential Zone A2 is not applicable.

#### 15.4.3 Design

Acceptable Solutions	Performance Criteria
A1	P1
Building design for non-residential use must comply with all of the following:  (a) provide the main pedestrian entrance to the building so that it is clearly visible from the road or publicly accessible areas on the site;  (b) for new building or alterations to an existing facade provide windows and door openings at ground floor level in the front façade no less than 40% of the surface area of the ground floor level facade;  (c) for new building or alterations to an existing facade ensure any single expanse of blank wall in the ground level front façade and facades facing other public spaces is not greater than 30% of the length of the facade;  (d) screen mechanical plant and miscellaneous equipment such as heat pumps, air conditioning units, switchboards, hot water units or similar from view from the street and other public spaces;  (e) incorporate roof-top service infrastructure, including service plants and lift structures, within the design of the roof;  (f) provide awnings over the public footpath if existing on the site or on adjoining lots;  (g) not include security shutters over windows or doors with a frontage to a street or public place.	9.60

The proposed shop, consulting rooms and café entry forecourt make a positive contribution to the streetscape by providing a shopfront and two landscaped courtyards fronting Campbell Street. The compliance for non-residential use is as follows:

The main pedestrian entrances off of Campbell Street are easily visible and accessible (a).



The façade of two existing commercial use heritage buildings will remain as is. The proposed building has approximately 50 % of the building's front façade as glass/window on the ground floor, allowing for a visual connection between the building and streetscape (b)(c).

No mechanical plant or miscellaneous equipment is visible from the street, as provision for this has been made in the basement car park of the building (d).

The proposed lift overrun is within the roof structure (e).

The proposal includes an awning over the shopfront, although these are not provided on adjoining lots (f).

No security shutters are proposed (g).

Based on the above, the proposed development is considered to satisfy Clause 15.4.3 A1.

Acceptable Solutions	Performance Criteria
A2	P2
Walls of a building facing the General Residential Zone or Inner Residential Zone must be coloured using colours with a light reflectance value not greater than 40 percent.	No performance criteria.

The northeast elevation faces the General Residential zone of the Glebe at a distance of approximately 50m. The surfaces are brick and will thus have a low reflective value, however, the substantial row of trees in the Brooker Highway reserve will largely block views of the building from this perspective. Thus A2 is achieved.

#### 15.4.4 Passive Surveillance

Acceptable Solutions	Performance Criteria	
A1	P1	
Building design must comply with all of the following:  (a) provide the main pedestrian entrance to the building so that it is clearly visible from the road or publicly accessible areas on the site;  (b) for new buildings or alterations to an existing facade provide windows and door openings at ground floor level in the front façade which amount to no less than 40% of the surface area of the ground floor level facade;  (c) for new buildings or alterations to an existing facade provide windows and door openings at ground floor level in the façade of any wall which faces a public space or a car park which amount to no less than 30% of the surface area of the ground floor level facade;  (d) avoid creating entrapment spaces around the building site, such as concealed alcoves near public spaces;  (e) provide external lighting to illuminate car parking areas and pathways;  (f) provide well-lit public access at the ground floor level from any external car park.	***	

The main pedestrian entrances to the building from Campbell Street are easily visible and accessible (a).

Approximately 50% of the building's ground floor, front façade is for window openings or glass doors, allowing for a visual connection between the building and streetscape (b)(c).

The entryway to the building is open to the northern side and offers passive surveillance of the two shopfronts, whilst the inner courtyard area has passive surveillance of the units. The access through the northern side of the site has the passive surveillance of the alfresco area and the circulation/court area (d).



External lighting to public areas will be implemented as per relevant Australian Standards as well as lighting for the underground car parking area (e).

There is no external car park, thus (f) is not applicable.

Accordingly, the proposal is considered compliant with 15.4.4 A1.

### 15.4.5 Landscaping

To ensure that a safe and attractive landscaping treatment enhances the appearance of the site and if relevant provides a visual break from land in a residential zone.		
Acceptable Solutions	Performance Criteria	
Landscaping along the frontage of a site is not required if all of the following apply:  (a) the building extends across the width of the frontage, (except for vehicular access ways);  (b) the building has a setback from the frontage of no more than 1m.	P1 Landscaping must be provided to satisfy all of the following: (a) enhance the appearance of the development; (b) provide a range of plant height and forms to create diversity, interest and amenity; (c) not create concealed entrapment spaces; (d) be consistent with any Desired Future Character Statements provided for the area.	

The building does not extend along the width of the frontage (due to the existing heritage items) thus landscaping along the frontage is required and as such A1 cannot be met and P1 must be considered.

The proposed development contains a landscaped area in front of the heritage buildings and a central courtyard area (refer to the Landscape Architectural Report in Appendix M) which enhances the appearance of the proposal (a).

A range of shrubs and large trees are utilised (b).

As discussed above, entrapment spaces are not created and landscaping along the street edge is low thus providing passive surveillance of the site from Campbell Street (c).

There is no Desired Future Character Statement thus (d) is not applicable. Therefore, it complies with  $15.4.5\ P1$ .

As no part of the site of the proposed development is adjacent to a residential zone, A2 is not applicable

As no outdoor storage is proposed for the non-residential uses (on the site) 15.4.6 is considered not applicable.

# 15.4.7 Fencing

To ensure that fencing does not detract from the appearance of the site or the locality and provides for pa surveillance.	
Acceptable Solutions Performan	
A1	P1
encing must comply with all of the following:	***
a) fences, walls and gates of greater height than 1.5 m must not be erected within 0 m of the frontage:	
(b) fences along a frontage must be at least 50% transparent above a height of 1.2	
(c) height of fences along a common boundary with land in a residential zone must be no more than 2.1 m and must not contain barbed wire.	



The proposed steel and brick fence on the Campbell Street frontage is 20m long with a maximum of 2.3m in height and has more than 50% transparency above a height of 0.8m, therefore, it complies with sub-clause A1(a) and (b). As the proposed development is not adjoining with the residential zone sub-clause (c) is not applicable.

### 15.4.8 Residential Amenity

Objective:	
To ensure that buildings for residential use provide reasonable levels of residential amenity and safety.	
Acceptable Solutions	Performance Criteria
A1	P1
A dwelling must have at least one habitable room window (other than a bedroom) facing between 30 degrees west of north and 30 degrees east of north.	***

The proposed development contains 31 apartments, the living room windows are facing 30 degrees west of north and 30 degrees east of north. Therefore, the proposal satisfies 15.4.8 A1.

A2	P2
The potential for direct overlooking from windows of habitable rooms with a finished surface or floor level more than 1m above natural ground level on one lot to the windows of habitable rooms, balconies, decks and roof gardens on adjacent lots must be avoided or minimised by complying with any of the following:  (a) have a side boundary setback no less than 3 m;  (b) be offset no less than 1.5 m from the windows of habitable rooms on adjacent lots where on the same horizontal lane;  (c) have a window seal height no less than 1.5 m.	***

There are no habitable room windows on adjoining lots thus compliance with A2 (b) is achieved.

A3	P3
Outdoor living space must be provided for a dwelling that complies with all of the	***
following: (a) be no less than 10m²;	
(b) have a width no less than 2 m.	

All dwellings have a single deck space of 10 m<sup>2</sup> with a minimum width of 2m compliant with A3.

A4	P4
Habitable rooms of dwellings adjacent to streets carrying more than 6000 vehicle per day must be designed to achieve internal noise levels no more than 45 dBa in accordance with relevant Australian Standards for acoustics control, (including AS3671 - Road Traffic, and AS2107 - Habitable Rooms).	***

There will be noise impacts on the units given the proximity to the Brooker Highway and to a lesser degree Campbell Street. As such, the façade/glazing treatments will comply with AS2107 compliant with A4.



# 4.3 Codes

### E 2.0 Potentially Contaminated Land Code

Hobart City Council has advised that the site is a potentially contaminated site due to the historic use of adjacent land. Therefore, an Environmental Site Assessment has been prepared by Geo-Environmental Solutions (GES) (Appendix F).

The Assessment identified there is a low risk for contaminated soil or groundwater on site.

The Scheme defines 'Potentially Contaminated Land' as follows:

Land that is, or adjoins, land that the applicant or the planning authority:

- (a) knows to have been used for a potentially contaminating activity by reference to:
  - (i) a notice issued in accordance with Part 5A of the Environmental Management and Pollution Control Act 1994; or
  - (ii) a previous permit; or
- (b) ought reasonably to have known was used for a potentially contaminating activity.

The proposed development is a mixed-use proposal and as development is on potentially contaminated land, the Code needs to be considered as per Clause 2.2 (Application of this Code).

An assessment of the proposal against the applicable Code provisions follows.

#### E2.5 Use Standards

Objective:		
To ensure that potentially contaminated land is suitable for the intended use		
Acceptable Solution	Performance Criteria	
A1	P1	
The Director, or a person approved by the Director for the purpose of this Code: (a) certifies that the land is suitable for the intended use; or (b) approves a plan to manage contamination and associated risk to human health or the environment that will ensure the land is suitable for the intended use.	Land is suitable for the intended use, having regard to: (a) an environmental site assessment that demonstrates there is no evidence the land is contaminated; or (b) an environmental site assessment that demonstrates that the level of contamination does not present a risk to human health or the environment; or (c) a plan to manage contamination and associated risk to human health or the environment that includes: (i) an environmental site assessment; (ii) any specific remediation and protection measures required to be implemented before any use commences; and (iii) a statement that the land is suitable for the intended use.	

There is no approval from the Director of the EPA for this proposal thus A1 cannot be achieved. The Environmental Site Assessment (Appendix F) identifies "there is low risk for contaminated soil or groundwater on site" from underground fuel tanks on the adjacent 181-189 Campbell Street site.

The assessment recommends a further "environmental site assessment be completed to test for contamination on the site prior to any site excavation and development works".

Therefore, it is consistent with E2.5 P1 (b).

## E2.6 Development Standards

#### E2.6.1 Subdivision

As the proposed development does not involve subdivision, this provision is not considered applicable.



#### E2.6.2 Excavation

Objective:	
To ensure that works involving excavation of potentially contaminated land does not adversely impact on	
human health or the enviro	onment.
Acceptable Solution	Performance Criteria
A1	P1
No acceptable solution.	Excavation does not adversely impact on health and the environment, having regard to:
	(a) an environmental site assessment that demonstrates there is no evidence the land is contaminated; or
	(b) a plan to manage contamination and associated risk to human health and the environment that includes:
	(i) an environmental site assessment;
	(ii) any specific remediation and protection measures required to be implemented before excavation commences; and
	<ul><li>(iii) a statement that the excavation does not adversely impact on human health or the environment.</li></ul>

Significant excavation will occur on-site for the car park level. There is no Acceptable Solution under A1 thus P1 must be considered. The Environmental Site Assessment (Appendix F) identifies "there is low risk for contaminated soil or groundwater on-site" from underground fuel tanks on the adjacent 181-189 Campbell Street site. The assessment recommends a further "environmental site assessment be completed to test for contamination on the site prior to any site excavation and development works" (b). On this basis, E2.6.2 P1 (b) is satisfied.

# E 5.0 Road and Railway Assets Code

The proposed development will utilise an existing vehicle crossing and two other existing vehicle crossings will be removed.

#### E5.5 Use Standards

#### E5.5.1 Existing road accesses and junctions

Acceptable Solution	Performance Criteria
A1	P1
The annual average daily traffic (AADT) of vehicle movements, to and from a site, onto a category 1 or category 2 road, in an area subject to a speed limit of more than 60km/h, must not increase by more than 10% or 10 vehicle movements per day, whichever is the greater.	***

Vehicle movements from the site will only be onto Campbell Street which is not a category 1 or category 2 road and has a speed limit of 50km/h. Accordingly, A1 is considered not applicable.

A2	P2
The annual average daily traffic (AADT) of vehicle movements, to and from a site, using an existing access or junction, in an area subject to a speed limit of 60km/h or less, must not increase by more than 10% or 10 vehicle movements per day, whichever is the greater.	***

The speed limit along Campbell Street is 50km/h, accordingly, A2 is considered not applicable.

Γ	A3	P3
-		



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The annual average daily traffic (AADT) of vehicle movements, to and from a site, using an existing access or junction, in an area subject to a speed limit of 60km/h or less, must not increase by more than 20% or 40 vehicle movements per day, whichever is the greater.

Any increase in vehicle traffic at an existing access or junction in an area subject to a speed limit of 60km/h or less, must be safe and not unreasonably impact on the efficiency of the road, having regard to:
(a) the increase in traffic caused by the use;

- (b) the nature of the traffic generated by the use; (c) the nature and efficiency of the access or the junction;
- (d) the nature and category of the road;
- (e) the speed limit and traffic flow of the road:
- (f) any alternative access to a road;
- (g) the need for the use;
- (h) any traffic impact assessment; and
- (i) any written advice received from the road authority.

The TIA indicated that the currently AADT of vehicle movements will be increased by more than 40 vehicle movements per day (182 vmpd), therefore, P3 must be considered.

When fully occupied based on the medium density residential, office and commercial and restaurant will generate approximately 182 vehicle movements per day. The residential building is expected to generate 94 vehicle movements per day (base on the RTA Traffic Generating Guidelines). The business and professional services will generate 22 vehicle movements per day. The food service will generate 66 vehicle movements per day. Additionally, 18 vehicle movements were generated within the weekday peak hour surrounding the road network. Thus the fully occupied vehicle movement number will be 200 per day. This number of vehicle movements is low for an Urban Mixed Use area of this size, given much of the zone area is used for multiple purposes (a).

The proposed development is likely to be offset by the inner-city location and will encourage the uptake of other modes of transport (b).

The proposed development is located in a section of Campbell Street which already provides a high level of accessibility to local businesses in area (c).

Campbell Street has sufficient capacity as a collector road for the additional traffic movements

The Campbell Street signalised intersection with Warwick Street effectively creates gaps in the traffic flow for this section of the road for safe entry/exit into properties and parking but not so long that traffic flow is restricted (e).

There is no alternative access (f)

The existing site access has operated safely and efficiently to date and will be upgraded as part of the proposed development (g).

A minor crash history exists for the area but there is no evidence of significant road safety issues in the study area (h).

No advice was received from the road authority (i).

Based on the above the proposal is considered to satisfy Performance Criteria P3.

## E5.5.2 Exiting level crossings - Not Applicable

The proposed development does not impact any existing Level Crossings. Accordingly, this provision is considered not applicable.

#### E5.6 Development Standards

# E5.6.1 Development adjacent to road and railways

As the site of the proposed development is not adjacent to a Category 1 or Category 2 road or rail network, Clause E5.6.1 is not applicable.



#### E5.6.2 Road accesses and junctions

Acceptable Solution	Performance Criteria
A1	P1
No new access or junction to roads in an area subject to a speed limit of more than 60km/h.	***

The speed limit along Campbell Street is  $50\ km/hr$  and accordingly, A1 is not considered applicable.

Acceptable Solution	Performance Criteria
A2	P2
No more than one access providing both entry and exit, or two accesses providing separate entry and exit, to roads in an area subject to a speed limit of 60km/h or less.	***

One existing access will provide both entry/exit and no new accesses are proposed as part of the development. Therefore, the proposal is compliant with the E5.6.2 A2.

#### E5.6.3 New level crossings

As the site is not in proximity to any rail network, Clause E5.6.3 is not considered applicable.

#### E5.6.4 Sight distance at accesses, junctions and level crossings

To ensure that accesses, junctions, and level crossings provide sufficient sight distance between vehicles and between vehicles and trains to enable safe movement of traffic.	
Acceptable Solution	Performance Criteria
A1	P1
Sight distances at:	The design, layout and location of an access, junction or rail level crossing must provide adequate sight distances to
(a) an access or junction must comply with the Safe	ensure the safe movement of vehicles, having regard to:
Intersection Sight Distance shown in Table E5.1; and	(a) the nature and frequency of the traffic generated by the use;
(b) rail level crossings must comply with AS1742.7	(b) the frequency of use of the road or rail network;
Manual of uniform traffic control devices - Railway	(c) any alternative access;
crossings, Standards Association of Australia.	(d) the need for the access, junction, or level crossing; (e) any traffic impact assessment;
	(f) any measures to improve or maintain sight distance; and (g) any written advice received from the road or rail authority.

An acceptable solution is partially met as safe intersection sight distance to the right of the site access is deficient and on-street parking restricts sight distance to the left of the site access.

 ${\sf E5.6.4}$  has been assessed in the TIA against the Performance Criteria. It is deemed acceptable on the following grounds:

Sight distance to the right of the site access meets the minimum safe sight distance requirement stated in Figure 3.2 of AS/NZS 2890.1 for exiting an access driveway other than domestic property. Use of the site access to enter/exit the off-street car park is less frequent due to the largely residential nature of the development. (a) (b).

The site access arrangements are consistent with those around it hence the proposal does not introduce any new elements (c).



In addition to being a collector road, Campbell Street plays a local access role hence it is challenging to satisfy the SISD requirement for all access points along this road when on-street parking is present (d).

A minor crash history exists for the area but there is no evidence of significant road safety issues in the study area (e).

It is acknowledged on-street parking is commonplace in urban streets thus it is normal for sight distance to be partly obstructed at site accesses. Drivers generally observe gaps between parked vehicles. Whilst the site access will be upgraded, the existing site access has operated safely and efficiently to date. There is sufficient capacity in Campbell Street for the additional traffic movements from the proposed development (f).

No advice was received from the road authority (g).

Therefore, the proposed development is consistent with E5.6.4 P1.

### E 6.0 Parking and Access Code

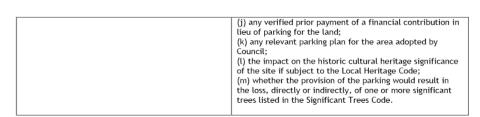
No use or development is exempt from this code as per Clause E6.4.1. The proposal has been assessed against the relevant provisions of the code.

#### E 6.6 Use Standards

#### E6.6.1 Number of Car Parking Spaces

Objective:	
To ensure that:	
(a) there is enough car parking to meet the reasonab	le needs of all users of a use or development, taking into
	of the land and the access afforded by other modes of
transport.	
(b) a use or development does not detract from the amenity of users or the locality by:	
(i) preventing regular parking overspill;	
(ii) minimising the impact of car parking on heritage and local character.  Acceptable Solution Performance Criteria	
A1	P1
A1	11
The number of on-site car parking spaces must be:	The number of on-site car parking spaces must be sufficient
,	to meet the reasonable needs of users, having regard to all
(a) no less than and no greater than the number	of the following:
specified in Table E6.1;	(a) car parking demand;
	(b) the availability of on-street and public car parking in
except if:	the locality;
	(c) the availability and frequency of public transport within
<ul><li>(i) the site is subject to a parking plan for the</li></ul>	a 400m walking distance of the site;
area adopted by Council, in which case parking	(d) the availability and likely use of other modes of
provision (spaces or cash-in-lieu) must be in	transport;
accordance with that plan;	(e) the availability and suitability of alternative
	arrangements for car parking provision;
(ii) the site is subject to clauses E6.6.5, E6.6.6,	(f) any reduction in car parking demand due to the sharing
E6.6.7, E6.6.8, E6.6.9 or E6.6.10 of this planning scheme.	of car parking spaces by multiple uses, either because of
scneme.	variation of car parking demand over time or because of
	efficiencies gained from the consolidation of shared car parking spaces;
	(g) any car parking deficiency or surplus associated with
	the existing use of the land;
	(h) any credit which should be allowed for a car parking
	demand deemed to have been provided in association with
	a use which existed before the change of parking
	requirement, except in the case of substantial
	redevelopment of a site;
	(i) the appropriateness of a financial contribution in lieu of
	parking towards the cost of parking facilities or other
	transport facilities, where such facilities exist or are
	planned in the vicinity;





The proposed development has 31 dwellings comprising 2 bedrooms and 3 bedrooms apartments, townhouses and 2 commercial dwellings. The proposed car parking space contains 34 car parking spaces. Table E6.1 stipulated the number of vehicle parking spaces are 101 (Refer to Appendix G Traffic Impact Assessment - Table 7 Parking Requirements). Therefore, it cannot meet the A1 thus P1 must be considered.

The residential component of the proposed development is sited in a location that reduces the need for a personal vehicle due to the high level of accessibility to local services and community activities (a);

There is a considerable range of on-street parking around the subject site to cater for visitors to the building and business employees (b);

Campbell Street is a Metro route and a bus stop is located less than 50 m from the proposed development (c)

Close proximity to the Hobart CBD and North Hobart with the option to use transport modes such as walking, cycling or bus. The café is likely to attract people in the local area as there are very few other similar food services, and it is likely customers will walk or ride rather than drive. (d) (e):

Car parking demand in this section of Campbell Street is likely to vary considerably across the day with a turnover of time-restricted on-street parking regularly making spaces available for short-term use (f) (g);

There is no car parking credit as a result of previous use of the site, therefore sub-clause (h) is not considered applicable;

Private off-street parking is provided extensively for various purposes in this area taking pressure off on-street parking availability (i);

There is no relevant parking plan for the area adopted by Council, therefore sub-clause (k) is not applicable;

The heritage building has been retained and protected, thus there is no significant impact on the listed items. The Heritage Assessment is enclosed with the report to demonstrate details regarding the Local Heritage Code (l);

The site is not in proximity to any significant trees listed in the Significant Trees Code; therefore, sub-clause (m) is not applicable.

Based on the above, the proposed development is considered to satisfy the applicable E6.6.1 P1.

#### E6.6.2 Number of Accessible Car Parking Spaces for People with a Disability

To ensure that a use or development provides sufficient accessible car parking for people with a disability.	
Acceptable Solution	Performance Criteria
A1	P1
Car parking spaces provided for people with a disability must:  (a) satisfy the relevant provisions of the Building Code of Australia;  (b) be incorporated into the overall car park design;  (c) be located as close as practicable to the building entrance.	No Performance Criteria.



The proposed development building is classified by the Building Code of Australia as a mix of classes. The classes and number of accessible car spaces required include:

- Class 2 (two or more sole occupancy units) Not required
- Class 5 (office/commercial) 1 space for every 100 car parking spaces or part thereof
- Class 6 (café) 1 space for every 50 car parking spaces or part thereof

D3.5 Accessible car parking of the BCA states that accessible car parking spaces need not be provided in a car parking area where direct access to any of the car parking spaces is not available to the public. This is the case for the proposed development where the car park provided is for the residential apartments with no public access.

On-street car parking in this section of Campbell Street is likely to provide suitable alternatives in most cases for accessible parking, particularly given the wide, level carriageway and time-restricted parking available along the front of the proposed development.

Therefore, the proposed development complies with A1.

#### E6.6.3 Number of Motorcycle Parking Spaces

To ensure enough motorcycle parking is provided to meet the needs of likely users of a use or development	
Acceptable Solution	Performance Criteria
A1	P1
The number of on-site motorcycle parking spaces provided must be at a rate of 1 space to each 20 car parking spaces after the first 19 car parking spaces except if bulky goods sales, (rounded to the nearest whole number). Where an existing use or development is extended or intensified, the additional number of motorcycle parking spaces provided must be calculated on the amount of extension or intensification, provided the existing number of motorcycle parking spaces is not reduced.	***

Not considered applicable to this development however it is noted on-street motorcycle parking is provided in the next block just after the Brisbane Street intersection.

#### E6.6.4 Number of Bicycle Parking Spaces

trips. Acceptable Solution	Performance Criteria
A2	
AZ	P2
	***
The number of on-site bicycle parking spaces provided must be no less than the	

This requirement is not applicable for residential dwellings but is applicable for the proposed commercial and food activities based on floor area.

The proposed commercial and food activities individually cover small floor areas hence the requirements are not considered proportionate.

It has been calculated that perhaps 2-3 bicycle parking spaces may be appropriate. Bicycle hoops are provided at the entry to the retail tenancies basement storage lockers (suitable for bicycle storage) and vertical hangers for 12 bicycles are provided in the basement car parking area.



### E 6.7 Development Standards

#### E6.7.1 Number of Vehicular Accesses

Objective:	
To ensure that:	
<ul> <li>(a) safe and efficient access is provided to all road network users, including, but passengers, pedestrians, and cyclists, by minimising:         <ul> <li>(i) the number of vehicle access points; and</li> <li>(ii) loss of on-street car parking spaces;</li> </ul> </li> </ul>	not limited to: drivers,
(b) vehicle access points do not unreasonably detract from the amenity of adjoin	aing land uses:
(c) vehicle access points do not unreasonably detract from the amenity of adjoint (c) vehicle access points do not have a dominating impact on local streetscape a	
	Parformance Critoria
•	Performance Criteria
Acceptable Solution A1	P1 P1

The proposed development will use the existing access from Campbell Street. It complies with  $E6.7.1\ A1.$ 

Acceptable Solution	Performance Criteria
A2	P2
In the Central Business Zone and Particular Purpose Zone 10 (Royal Hobart Hospital) no new vehicular access is provided unless an existing access point is removed.	***

The site of the proposal is not located within the Central Business Zone or the Particular Purpose Zone 10 (Royal Hobart Hospital). Accordingly, this provision is not applicable.

Acceptable Solution	Performance Criteria
A3	P3
In Particular Purpose Zone 4 - Calvary Healthcare Hospital Campus access to the site is to be provided according to the location of approved access points off Augusta Road and Honara Avenue shown on the endorsed plans associated with permit PLN-14-00428-01. The other access points noted are to be utilised for emergency access only.	No performance criteria.

The proposal is not located in Particular Purpose Zone 4. Accordingly, this provision is not applicable.

### E6.7.2 Design of Vehicular Accesses

acceptable Solution	Performance Criteria
.1	P1
design of vehicle access points must comply with all of the following:  a) In the case of non-commercial vehicle access; the location, sight distance, width and gradient of an access must be designed and constructed to comply with section 3 - "Access Facilities to Off-street Parking Areas and Queuing Areas" of AS/NZS 2890.1:2004 Parking Facilities Part 1: Off-street car parking:  In the case of commercial vehicle access; the location, sight distance, geomet and gradient of an access must be designed and constructed to comply with all access driveway provisions in section 3 "Access Driveways and Circulation Roadways" of AS2890.2 - 2002 Parking facilities Part 2: Off-street commercial vehicle facilities.	у

The existing access will be utilised which satisfies the location requirements of Section 3.2.3 of



AS/NZS 2890.1:2004 and entry width of 5.5 m wide (Combined for Category 1 access as defined in Tables 3.1 and 3.2 - Based on User Class 1A; local road frontage, <100 car spaces).

The minimum entering sight distance to the right is acceptable despite SISD not being achieved however this is not considered an issue for the reasons given in Section 4.4.

The minimum sightlines for pedestrian safety appear to be met (as required in Figure 3.3 of AS/NZS 2890.1:2004) however this should be checked at the site access detailed design stage.

The gradient of the access driveway does not comply however modification of the grade will be incorporated into the site access driveway design to achieve the standard as far as reasonably practicable.

The proposed development is consistent with E6.7.2 A1.

#### E6.7.3 Vehicular Passing Areas along an Access

Objective:	
To ensure that:	
(a) the design and location of access and parking areas creates a safe enviro	nment for users by minimising the
potential for conflicts involving vehicles, pedestrians, and cyclists;	
(b) use or development does not adversely impact on the safety or efficienc	y of the road network as a result o
delayed turning movements into a site.	
Acceptable Solution	Performance Criteria
A1	P1
Vehicular passing areas must:	***
(a) be provided if any of the following applies to an access:	
(i) it serves more than 5 car parking spaces;	
(ii) is more than 30 m long;	
(iii) it meets a road serving more than 6000 vehicles per day;	
(b) be 6 m long, 5.5 m wide, and taper to the width of the driveway;	
(c) have the first passing area constructed at the kerb;	
(d) be at intervals of no more than 30 m along the access.	

The existing access meets a road serving more than 6,000 vehicles per day. The width of the access at the kerb will be 5.5 m and will continue at this width for the length of the 40 m driveway up to the car park entry. The driveway then tapers to a 3m width over a 10 m distance providing an area to reverse into if required.

The proposal is considered to comply with  $E6.7.3 \ A1.$ 

### E 6.7.4 On-Site Turning

To ensure safe, efficient and convenient access for all users, including drivers, passengers, pedestrians and cyclists, by generally requiring vehicles to enter and exit in a forward direction.	
Acceptable Solution	Performance Criteria
A1	P1
n-site turning must be provided to enable vehicles to exit a site in a forward irection, except where the access complies with any of the following:  a) it serves no more than two dwelling units;  b) it meets a road carrying less than 6000 vehicles per day.	***

The off-street car park enables vehicles to exit in a forward direction.

It is noted waste management contractors will require access to the proposed development hence a turning path assessment has been completed (refer to Appendix A).

A typical waste collection vehicle utilised for these types of premises is able to manoeuvre and exit in a forward direction, however, any larger commercial vehicles will not be able to access the car park due to entry clearance height (discussed in E6.7.5).



#### E 6.7.5 Layout of Parking Areas

To ensure that parking areas for cars (including assessable parking spaces), motorcycles and bicycles are located, designed and constructed to enable safe, easy and efficient use.	
11	P1
The layout of car parking spaces, access aisles, circulation roadways and ramps must be designed and constructed to comply with section 2 "Design of Parking Modules, Circulation Roadways and Ramps" of AS/NZS 2890.1:2004 Parking Facilities Part 1: Dff-street car parking and must have sufficient headroom to comply with clause 5.3 "Headroom" of the same Standard.	***

The acceptable solution is met as the off-street car park concept design complies with AS/NZS 2890.1:2004. Entry into the proposed development car park will have a clearance height of approximately 2.71 m (refer to Appendix A). This satisfies Clause 5.3 Headroom - a general requirement of a minimum of 2.2 m. However, this height requires the use of a Low Clearance sign as it is less than the required 3 m for cars/light vans and 4.6 m for all other cases. Level 1 of the building will horizontally overhang the access driveway by 2 m which at the start of the site access from Campbell Street will be a vertical distance of 4.05 m (i.e. ground level up to the Level 1 overhand) hence a Low Clearance sign will be required. On this basis, the proposed development is consistent with E6.7.5 A1.

#### E6.7.6 Surface Treatment of Parking Areas

Objective:	
To ensure that parking spaces and vehicle circulation roadways do not detract from the amenity of users, adjoining occupiers or the environment by preventing dust, mud and sediment transport.	
A1	P1
Parking spaces and vehicle circulation roadways must be in accordance with all of the following;	***
(a) paved or treated with a durable all-weather pavement where within 75m of a property boundary or a sealed roadway;	
(b) drained to an approved stormwater system, provided that the standard of paving and drainage complies with the adopted	
standards of the Council.	

The proposed off-street parking and vehicle circulation roadways will be concrete and drained to an approved stormwater system, including a new stormwater discharge to the kerb, as shown in the Concept Services plan in Appendix H therefore the proposal is consistent with E6.7.6 A1.

### E6.7.7 Lighting of Parking Areas

Objective:	
To ensure parking and vehicle circulation roadways and pedestrian paths used outs provided with lighting to a standard which:  (a) enables easy and efficient use;  (b) promotes the safety of users;	ide daylight hours are
(c) minimises opportunities for crime or anti-social behaviour; and (d) prevents unreasonable light overspill impacts.	
Acceptable Solution	Performance Criteria
A1	P1
Parking and vehicle circulation roadways and pedestrian paths serving 5 or more car parking spaces, used outside daylight hours, must be provided with lighting in accordance with clause 3.1 "Basis of Design" and clause 3.6 "Car Parks" in AS/NZS 1158.3.1:2005 Lighting for roads and public spaces Part 3.1: Pedestrian area (Category P) lighting.	***



Lighting to public areas will be implemented as per Australian Standards, it is considered appropriate that permit conditions requiring more detailed plans prior to works commencing be incorporated into any planning permit issued.

On this basis, the proposed development is considered able to comply with E6.7.7  ${\rm A1.}$ 

### E6.7.8 Landscaping of Parking Areas

Objective:	
To ensure that large parking and circulation areas are landscaped to:	
(a) relieve the visual impact on the streetscape of large expanses of hard surfaces; (b) screen the boundary of car parking areas to soften the amenity impact on neighbouring properties;	
(d) reduce opportunities for crime or anti-social behaviour by maintaining clear sightlines.	
Acceptable Solution	Performance Criteria
A1	P1
Landscaping of parking and circulation areas must be provided where more than 5	***
car parking spaces are proposed. This landscaping must be no less than 5 percent of	
the area of the car park, except in the Central Business Zone where no landscaping is	
required.	

As the proposed car parking is in the basement E6.7.8 is not considered applicable.

#### E6.7.9 Design of Motorcycle Parking Areas

Objective:  To ensure that motorcycle parking areas are located, designed and constructed to enable safe, easy and efficient use.	
Acceptable Solution Performance C	
A1	P1
The design of motorcycle parking areas must comply with all of the following:  (a) be located, designed and constructed to comply with section 2.4.7 "Provision for Motorcycles" of AS/NZS 2890.1:2004 Parking Facilities Part 1: Off-street car parking;  (b) be located within 30 m of the main entrance to the building.	***

As no motorcycle parking areas are included in the proposal, Clause E6.7.9 is not applicable.

#### E6.7.10 Design of Bicycle Parking Facilities

Objective:  To encourage cycling as a healthy and environmentally friendly mode of transport for commuter, shopping and recreational trips by providing secure, accessible and convenient bicycle parking spaces.	
Acceptable Solution	Performance Criteria
A1	P1
The design of bicycle parking facilities must comply with all the following; (a) be provided in accordance with the requirements of Table E6.2; (b) be located within 30 m of the main entrance to the building.	***

Bicycle parking compliant with AS2890.3 is shown at the entry to the retail facilities compliant with A1.

#### E6.7.11 Bicycle End of Trip Facilities

Not applicable - please see the above statement under E6.7.10.



#### E6.7.12 Siting of Car Parking

To ensure that the streetscape, amenity and character of urban areas is not adversely affected by siting of vehicle parking and access facilities.	
Acceptable Solution	Performance Criteria
A1	P1
Parking spaces and vehicle turning areas, including garages or covered parking areas in the Inner Residential Zone, Urban Mixed Use Zone, Village Zone, Local Business Zone and General Business Zone must be located behind the building line of buildings located or proposed on a site except if a parking area is already provided in front of the building line of a shopping centre.	***

The Subject Site is zoned 'Urban Mixed Use' and all car parking areas are located on the basement level at the rear of the site, well behind the building lines of both existing heritage buildings.

The proposal complies with E6.7.12 A1.

#### E6.7.13 Facilities for Commercial Vehicles

Acceptable Solution	Performance Criteria
A1	P1
Commercial vehicle facilities for loading, unloading or manoeuvring must be provided on-site in accordance with Australian Standard for Off-street Parking, Part 2: Commercial. Vehicle Facilities AS 2890.2:2002, unless: (a) the delivery of all inward bound goods is by a single person from a vehicle parke n a dedicated loading zone within 50 m of the site;	***
(b) the use is not primarily dependent on outward delivery of goods from the site.	

Commercial vehicle facilities for loading, unloading or manoeuvring have not been provided onsite, there is not a dedicated loading zone within 50 m of the site, and the use is not primarily dependent on outward delivery of goods from the site.

Therefore, E6.7.13 is not considered applicable.

## E6.7.14 Access to a Road

Objective: To ensure that access to the road network is provided appropriately.	
A1	P1
Access to a road must be in accordance with the requirements of the road authority.	No Performance Criteria.

The existing access will be increase to 6.2m in width, it is sufficient to accommodate the two-way traffic movement.

The TIA confirms that the dimensions of the access are compliant with relevant Australian Standards thus satisfying the requirements of the road authority.

The proposal is considered compliant with Acceptable Solution (A1).



#### E 7.0 Stormwater Management Code

This code applies to development requiring the management of Stormwater (Clause E7.2.1) and no development is exempt from this code as per Clause E7.4.1. The proposal has been assessed against the relevant provisions of the code.

#### E7.7 Development Standards

Flood Modelling Report for the following clauses is contained in Appendix I.

#### E7.7.1 Stormwater Drainage and Disposal

Objective:	
To ensure that stormwater quality and quantity is managed appropriately.	
Acceptable Solution	Performance Criteria
A1	P1
Stormwater from new impervious surfaces must be disposed of by gravity to public stormwater infrastructure.	***

The site will drain by gravity via a new internal stormwater network and connect to the existing DN1800 park Street rivulet culvert. Refer to the Concept Services report for further information. The development is compliant with the E7.7.1 A1.

Acceptable Solution	Performance Criteria
A2	P2
A stormwater system for a new development must incorporate water sensitive urban design principles R1 for the treatment and disposal of stormwater if any of the following apply:  (b) the size of new impervious area is more than 600 m²;  (b) new car parking is provided for more than 6 cars;  (c) A subdivision is for more than 5 lots.	###

The stormwater system incorporates a proprietary SQID within the basement car park to treat stormwater run-off from the site. The development is compliant with the E7.7.1 A2.

Acceptable Solution	Performance Criteria
A3	P3
A minor stormwater drainage system must be designed to comply with all of the following:  (a) Be able to accommodate a storm with an ARI of 20 years in the case of non-industrial zoned land and ARI of 50 years in the case of industrial zoned land, when the land serviced by the system is fully developed;  (b) stormwater runoff will be no greater than pre-existing runoff or any increase can be accommodated within existing or upgraded public stormwater infrastructure.	No Performance Criteria.

The minor stormwater drainage system has been designed to accommodate a storm with an ARI of 20 years. Stormwater detention for any increase inflows can be incorporated in the oversizing of the new private stormwater pipework under the basement car park upstream of the SQID and property connection.

Please Refer to Concept Services (Appendix H).

Given the above assessment the proposal, therefore, meets E7.7.1 A3.



Acceptable Solution	Performance Criteria
A4	P4
A major stormwater drainage system must be designed to accommodate a storm with an ARI of 100 years.	No Performance Criteria.

The assessment of the development in relation to overland, major, drainage systems across the site is included in the Flood hazard Report, Flussig, July 2021 included in Appendix I. This report demonstrates the site can safely be developed to accommodate a 1% AEP (ARI 100 yrs) event complying with acceptable solution A4.

### E8.0 Electricity Transmission Infrastructure Protection Code

The proposed development is not within:

- an electricity transmission corridor;
- · 55m of a communications station; or
- 65 m of a substation.

The TasNetworks substation at 222 Campbell Street, North Hobart is approximately 320m northwest of the development site. Accordingly, an assessment against the code is not triggered by the proposal.

#### E9.0 Attenuation Code

The proposed development comprises uses that are 'sensitive' ('Residential').

The proposed development on land within 100m from 'Smallgoods Manufacture' (Tasmanian Meat Wholesalers) which listed in Table E9.1, but not on land within an Attenuation Area shown on the planning scheme maps. Therefore the code must be considered.

#### E9.7.2 Development for Sensitive Use in Proximity to Use with Potential to Cause Environmental Harm

Objective:  To ensure that new sensitive use does not conflict with, interfere with or constrain uses with potential to cause environmental harm.		
Acceptable Solution	Performance Criteria	
A1	P1	
No Acceptable Solution.	Development for sensitive use, including subdivision of lots within a sensitive zone, must not result in potential to be impacted by environmental harm from use with potential to cause environmental harm, having regard to all of the following:  (a) The nature of the use with potential to cause environmental harm; including:  i) Operational characteristics;  ii) Scale and intensity;  iii) Degree of hazard or pollution that may emitted from the activity;  (b) The degree of encroachment by the sensitive use into the Attenuation Area or th attenuation distance;  (c) Measures in the design, layout and construction of the development for the sensitive use to eliminate, mitigate or manage effects of emissions.	

As there is no acceptable solution for the above clause, thus E9.7.2 P1 is addressed as follows:

The Tasmanian Meat Wholesalers operation is unlikely to cause environmental harm given its small scale and its regulation under the *Meat Hygiene Act 1985* (a).



The proposed sensitive uses are well within the 100m attenuation distance, but this is not considered significant given the scale and intensity of the manufacturer of the small goods (b).

The façade immediately opposite Tasmanian Meat Wholesalers is the access to the car park only with a 4.3m high wall (c).

Based on the above the proposal is considered to satisfy applicable elements of E9.7.2 P1.

### E13.0 Historic Heritage Code

The subject site is not listed on the Tasmanian Heritage Register. However, two of the residential dwellings located on titles within the Subject Site are listed as heritage places within Table E13.1 of the Hobart Interim Planning Scheme 2015 ('Heritage Places by Street Name - Hobart'). These are located at 177 and 179 Campbell Street respectively (CT 22529/3 and CT 23363/1). Furthermore, Titles immediately adjoining the northwest and southeast boundaries of the Subject Site also contain buildings permanently registered on the Tasmanian Heritage Register (refer to Appendix J). All heritage items on or within immediate proximity to the Subject Site are listed below in Table 2.

Table 2 - Heritage Places by Street Name - Hobart (Cameron to Cross)

Ref. No.	Street No.	Street/Location	C.T.	General Description
514	169	Campbell Street	140732/1	Now part of 169-173 Campbell Street - that part of the address previously known as 169 Campbell Street only
517	177	Campbell Street	22529/3	House
518	179	Campbell Street	23363/1	House
520	187	Campbell Street	121292/1	Listed as 181-189 Campbell Street on the List Map

A heritage consultant has prepared a heritage assessment which can be found in Appendix J. The proposal has also been assessed against Part E13.7 of the Planning Scheme, 'Development Standards for Heritage Places', as outlined below.

#### E13.7 Development Standards for Heritage Places

#### E13.7.1 Demolition

Objective:  To ensure that building, works and demolition at a place of archaeological potential is planned and implemented in a manner that seeks to understand, retain, protect, preserve and otherwise appropriately manage significant archaeological evidence.			
Acceptable Solution	Performance Criteria		
A1	P1		
No acceptable solution	Demolition must not result in the loss of significant fabric, form, items, outbuildings or landscape elements that contribute to the historic cultural heritage significance of the place unless all of the following are satisfied:  (a) there are environmental, social, economic or safety reasons of greater value to the community than the historic cultural heritage values of the place;  (b) there are no prudent and feasible alternatives;  (c) important structural or façade elements that can feasibly be retained and reused in a new structure, are to be retained;  (d) significant fabric is documented before demolition.		

As there is no Acceptable Solution under A1 thus P1 must be considered.

Some of the internal walls and doors of the existing heritage buildings and 'Lean-On' walls at the rear of houses will be demolished. The existing front access ramp, landscaping in the front of the house and the timber shed at the rear of 179 Campbell Street will be demolished. However, all of the significant fabric, forms and items will be protected and maintained.



The heritage consultant concluded that the existing heritage buildings have a low level of historic cultural heritage values and are limited to the architectural qualities in terms of the buildings themselves. The proposed new fence and landscape in front of the heritages would contribute a positive visual impact compared to the existing wire fence and landscape. The heritage buildings will change the residential use to commercial use, which provide greater value to the community (a).

The renovation is a feasible approach to maintain and enhance the value of the existing heritage buildings (b).

The façade and significant structure will be retained and re-used with the new structure (c).

As no significant fabric will be demolished, therefore sub-clause (d) is not applicable.

Based on the above, the proposal satisfies the E13.7.1 P1.

#### E13.7.2 Buildings and Works other than Demolition

Objective:  To ensure that development at a heritage place is:  (a) undertaken in a sympathetic manner which does not cause loss of historic cultural heritage significance; and  (b) designed to be subservient to the historic cultural heritage values of the place and responsive to its dominant characteristics.	
Acceptable Solution	Performance Criteria
A1  No Acceptable Solution.	P1  Development must not result in any of the following: (a) loss of historic cultural heritage significance to the place through incompatible design, including in height, scale, bulk, form, fenestration, siting, materials, colours and finishes; (b) substantial diminution of the historic cultural heritage significance of the place through loss of significant streetscape elements including plants, trees, fences, walls, paths, outbuildings and other items that contribute to the significance of the place.

As there is no Acceptable Solution under A2 thus P2 must be considered.

The scale of the new building around the heritage items has been carefully considered to ensure it appropriately steps away from the heritage item such as not to dominate them. Further, the building has been designed to respond to the scale of the heritage items by breaking up the form into smaller discrete elements and utilising some of the finishes common with the heritage item. The architectural design statement includes more detail on this matter (a).

The existing heritage buildings are retained intact and their relationship with the street enhances through the proposed forecourt garden. The low retaining wall and fence presented to Campbell Street is of residential scale and maintains view lines into the former front yards of the heritage items (refer to the landscape plan in the Proposal Plan, Appendix C). Therefore, sub-clause (b) is considered not applicable.

Based on the above, the proposal complies with E13.7.2 P1.

A2	P2
No Acceptable Solution.	Development must be designed to be subservient and complementary to the place through characteristics including:  (a) scale and bulk, materials, built form and fenestration;  (b) setback from frontage;  (c) siting with respect to buildings, structures and listed elements;  (d) using less dominant materials and colours.



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There is no Acceptable Solution under A2 thus P2 must be considered.

As stated above, the new buildings are set back and designed to complement the heritage items albeit in a changed context. The stepping form of the new building, granular design and common material selections do not diminish the importance of the heritage items (a).

The frontage setback is not altered in front of the heritage buildings themselves, but the new building does wrap around them and creates a frontage with the street (which is consistent in the area. The relationship between the heritage items and the street is enhanced by the re-use of the front garden area into a useable garden space for the commercial premises (b)(c). The materials used are both borrowed from but are less dominant than the heritage items (refer to the architectural design statement in Appendix K). The proposed development is therefore consistent with E13.7.2 P2.

A3	P3
No Acceptable Solution.	Materials, built form and fenestration must respond to the dominant heritage characteristics of the place, but any new fabric should be readily identifiable as such.

As there is no Acceptable Solution under A3 thus P3 must be considered.

The proposed materials, form and detailing respond to the industrial nature of the area and the small scale of the heritage items. The new building is a contemporary design but borrows from surrounding elements in terms of form and materiality (refer to the architectural design statement in Appendix K). Therefore, the proposal complies with E13.7.2 P3.

A4	P4
No Acceptable Solution.	Extensions to existing buildings must not detract from the historic cultural heritage significance of the place.

As there is no Acceptable Solution under A4 thus P4 must be considered.

As there are no extensions proposed to existing buildings, this E13.7.2 P4 is not considered applicable.

A5	P5
New front fences and gates must accord with original design, based on photographic, archaeological or other historical evidence.	New front fences and gates must be sympathetic in design, (including height, form, scale and materials), to the style, period and characteristics of the building to which they belong.

The proposed front fence is a steel brick fence that has a similar style to the existing heritage building. Therefore, it complies with E13.7.2 A5.

A6	P6
Areas of landscaping between a dwelling and the street must be retained.	The removal of areas of landscaping between a dwelling and the street must not result in the loss of elements of landscaping that contribute to the historic cultural significance of the place.



Areas of landscaping to be removed and replaced with new landscaping between the heritage dwellings (177 and 179 Campbell Street) and the Campbell Street Road Reserve are the low steel fencing, trees and shrubbery. Therefore, it cannot meet the Acceptable Solution A6 and has therefore been considered against the Performance Criteria P6. There are no specific elements of the landscaping that contribute to the historic cultural significance of the place, however, the area between the heritage items and the street have been re-landscaped and utilised as open space for commercial activities.

#### E13.7.3 Subdivision

As the proposed development contains no subdivision, this provision is not considered applicable.

#### E13.8 Development Standards for Heritage Precincts

As no part of the proposed development is within a Heritage Precinct, no provisions within this Clause are considered applicable.

#### E13.9 Development Standards for Cultural Landscape Precincts

As no part of the proposed development is within a Cultural Landscape Precinct, no provisions within this Clause are considered applicable.

#### E13.10 Development Standards for Places of Archaeological Potential

The site is located within a place of Archaeological Potential (namely, that of Central Hobart as shown in Figure E13.4.1, Table 13.4).

### E13.0 Development Standards for Places of Archaeological Potential

#### E13.10.1 Building, Works and Demolition

To ensure that building, works and demolition at a place of archaeological potential is planned and implemented in a manner that seeks to understand, retain, protect, preserve and otherwise appropriately manage significant archaeological evidence.		
Acceptable Solution	Performance Criteria	
A1	P1	
Building and works do not involve excavation or ground disturbance.	Buildings, works and demolition must not unnecessarily impact on archaeological resources at places of archaeological potential, having regard to:  (a) the nature of the archaeological evidence, either known or predicted;  (b) measures proposed to investigate the archaeological evidence to confirm predictive statements of potential;  (c) strategies to avoid, minimise and/or control impacts arising from building, works and demolition;  (d) where it is demonstrated there is no prudent and feasible alternative to impacts arising from building, works and demolition, measures proposed to realise both the research potential in the archaeological evidence and a meaningful public benefit from any archaeological investigation;  (e) measures proposed to preserve significant archaeological evidence 'in situ'.	

Building and works of the proposed development will involve excavation and ground disturbance



as a basement level will be created, containing a car park. The proposal, therefore, does not comply with A1 and has instead been considered against P2 as follows:

The ArcTas Statement of Archaeological Potential Report (Appendix L) indicated that the site does not have archaeological potential, therefore compliance with E13.10.1 P1 is achieved.

#### E13.10.2 Subdivision

As the proposed development does not involve subdivision, this provision is considered not applicable.

## 4.4 Specific Area Plans

#### F4.0 Royal Hobart Hospital Helipad Airspace Specific Area Plan

The proposed development is within the area of the Royal Hobart Hospital Helipad Airspace Specific Area Plan. The purpose of this Specific Area Plan is to ensure that the development of land does not obstruct safe air navigation of aircraft approaching and departing the Royal Hobart Hospital helipad.

#### E13.0 Development Standards for Buildings and Works

#### F4.3.1 Building Height

Objective:  To ensure that buildings do not interfere with safe aircraft operations in the vicinity of the Royal Hobart Hospital helipad.	
Acceptable Solution	Performance Criteria
A1	P1
Building height including minor protrusions, masts or aerials within the areas shown on Figure F4.1 must be no more than:  (a) 64.5m AHD if within the Inner Area; (b) 100m AHD if within the Outer Area.	Buildings that exceed the specified height must not create an obstruction or hazard for the operation of aircraft, having regard to any advice from the Civil Aviation Safety Authority, the Department of Health and Human Services and the helipad operator.

Building and works of the proposed development are within the Inner Area of the Specific Area Plan, the highest building is 25.4m less than 64.5m. Therefore, it complies with F4.3.1 A1 (a).



## 5. Impact Assessment

### 5.1 Visual Impact

The assessment of visual impact considers short, medium and long-distance perspectives. Relevant short distance perspectives are:

- The Glebe:
- · The Brooker Highway; and
- On Campbell Street;

Relevant medium distance perspectives are:

- The Aberdeen Street Playground and the upper parts of the Glebe;
- Residential areas to the south-west in the Paternoster and Church Street area; and
- Residential areas to the east in the Warwick Street/Tasma Street area.

Longer distance views are largely blocked by the Church Street ridge from the west and the Queens Domain from the east. Views north and south are generally obstructed by intervening buildings.

An Architects Design Statement (Appendix K) supports the visual assessment.

#### The Glebe

The proposed building will be clearly visible from houses that are on the lower part of the Glebe, particularly between Scott and Lillie Street directly across from the site at a distance of 60m at the closest point. These residences will view the site through a line of well-established poplar and other trees on the western side of Brooker Highway. Further, there is also a row of paperbark trees in the median strip of the Brooker Highway which in time will add further screening to these houses. It is recognised these trees are deciduous and thus the building will be more obvious in winter and that two trees will be removed. However, significant screening of the building remains and the proposal includes a deep soil zone on the eastern side of the building which will accommodate some larger trees in case those in the highway reserve fail at some time in the future. The building is designed to be lower than the existing trees and thus given the extent of existing and future screening from eastern views, the impact is considered to be reasonable.





Photo 1 - Lillie Street looking west

#### The Brooker Highway

The proposed building will be visible both north and southbound on Brooker Highway. Both these viewpoints view the building to some extent through the large trees on the western side of the highway. From the north, the northern elevation is visible above the Woolworths site, but does reflect the same roof design as the building on this site and thus is read as part of this architecture. The building is designed to appear as a conglomerate of separate elements, which will assist the building in forming an expected part of the townscape. From the south, the same applies, but as the vegetation is more prominent from this angle



Photo 2 - Brooker Highway looking north



#### Campbell Street

The proposal will be clearly visible from Campbell Street, particularly as the southern part of the building is built to the frontage. The existing houses will retain their relationship with the street, but the newer parts of the built form will reinforce the street edge as do other buildings in the area. The building mass is concentrated at the rear of the site and is broken into a series of discrete elements that will read as a series of interrelated parts rather than a monolithic form. The views from the street will largely be of the four-storey element meeting the street frontage and the existing houses (and the green spaces in front of them). Given the mass is concentrated to the rear of the site and it does not dominate the streetscape, the visual impact is considered reasonable.



Photomontage 1 - View south down Campbell Street

#### Aberdeen Street Playground and the upper parts of the Glebe

The views from the upper parts of the Glebe and Aberdeen Street Playground will also view the eastern elevation behind a line of significant trees but from a higher and more distant perspective. Whilst from this elevation the coverage of the existing trees will not be as great, the viewer is more likely to look over the site. For these reasons, the visual impact is considered reasonable.





Photo 3 - View west down Lillie Street

#### Residential areas to the south-west in the Paternoster and Church Street area

Views down to the site from the Church Street ridge are at a distance of 250-300m. Due to the intervening townscape, only the upper parts of the building will be visible from these perspectives. The building will appear as a series of individual roofs which will be read against the housing in the Glebe. As such, the visual impact is considered reasonable.



Photo 4 - View east from Paternoster Row

### Residential areas to the east in the Warwick Street/Tasma Street area

Due to the intervening townscape, only the upper parts of the building will be visible from these perspectives. This area does not have great elevation, as such more of the proposed building will be hidden by the existing townscape. The visual impact from this perspective is considered reasonable.





Photo 5 - Warwick Street looking east

## 5.2 Traffic and Transport Networks

A Traffic Impact Assessment(TIA) has been undertaken (refer to Appendix G). The report considers the potential increase in traffic from the proposed uses and development, safety implications as well as compliance with elements of the Planning Scheme and relevant Australian Standards. The report concludes that the proposed development does not significantly increase the number of vehicle movements on the local road network during peak periods and is unlikely to impact existing parking facilities therefore should not adversely impact traffic efficiency and road safety in the area. In addition, the Metro bus stops are located within a 200m radius of the subject site. The site is also within easy walking distance of local shops and a college. Future residents and users of the proposed development will be provided with a number of active transport options contributing to better health outcomes. Based on the TIA, the proposed development is supported on traffic grounds.

## 5.4 Economic Impacts

Beyond the economic stimulus from the construction activity, the future residents and visitors to the site will provide ongoing positive contributions. There will be increased patronage to existing businesses in the Hobart CBD. The proximity of working and studying opportunities is likely to appeal to residents, thereby reducing the need for increased road infrastructure.



## Conclusion & Recommendations

The proposal seeks to develop Mixed-Use Development predominantly at 175, 177 and 179 Campbell Street (CT 23364/1, CT 23364/2, CT 22529/3, and CT 23363/1 respectively) for residential use with several commercial tenancies and publicly accessible open space areas.

The proposal is for demolition of the existing building at 175 Campbell Street; the adhesion of four lots to create a single development site area; and the development of a 6-storey mixed-use building.

The mixed-use building will comprise a basement car park which is below the ground; 5 floors of residential development with a total of 31 multiple dwellings.

The proposed development will use the existing access to enable vehicle movements. The proposed development generates the following discretions under the *Hobart Interim Planning Scheme 2015* (the Scheme):

- 15.4 Development Standards for Buildings and Works
  - o 15.4.1 Building Height P1
  - o 15.4.5 Landscaping P1
- E2.0 Potentially Contaminated Land Code
  - E2.6.2 Excavation P1
- E5.0 Road and Railway Assets Code
  - E5.5.1 Existing road accesses and junctions P3
  - E5.6.4 Sight distance at accesses, junctions and level crossings P1
- E6.0 Parking and Access Code
  - o E6.6.1 Number of Car Parking Spaces P1
- E9.0 Attenuation Code
  - o E9.7.1 Development for Use with Potential to Cause Environmental Harm P1
- E13.0 Historic Heritage Code
  - o E13.7.1 Demolition P1
  - o E13.7.2 Building and Work other than Demolition P1
  - o E13.7.2 Building and Work other than Demolition P2
  - o E13.7.2 Building and Work other than Demolition P3
  - E13.7.2 Building and Work other than Demolition P4
  - E13.7.2 Building and Work other than Demolition P6
     E13.10.1 Building, Works and Demolition P1

The proposal has been assessed against all relevant performance criteria and found to either comply with Acceptable Solutions or be able to satisfy applicable Performance Criteria.

In conclusion, the application is considered to be acceptable with respect to the Planning Scheme requirements and therefore ought to be supported by the Planning Authority.



# APPENDIX A

Title Information



# **APPENDIX B**

Survey Plan



# **APPENDIX C**

Proposal Plans



# APPENDIX D

**Notification Letters** 



# **APPENDIX E**

**Demolition Plan** 



# **APPENDIX F**

**Environmental Site Assessment** 



# **APPENDIX G**

Traffic Impact Assessment



# **APPENDIX H**

**Concept Services Report** 



# **APPENDIX I**

Flood Modelling Report



# **APPENDIX J**

Heritage Assessment



# APPENDIX K

Architectural Design Statement



# APPENDIX L

Arctas Statement of Archaeological Potential



# **APPENDIX M**

Landscape Architecture Report



# APPENDIX N

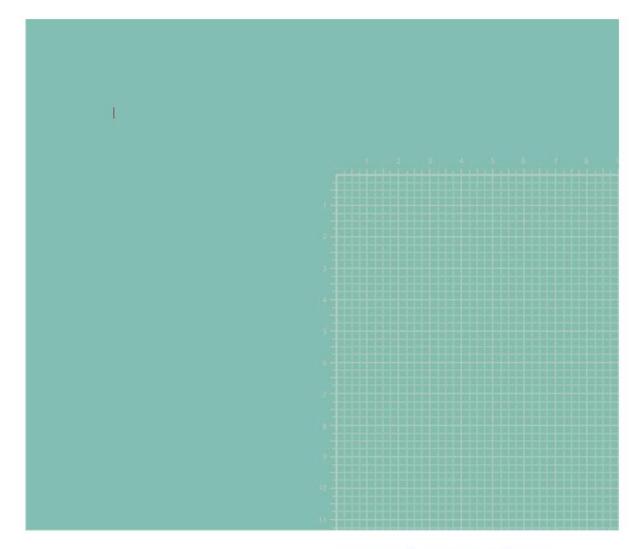
**Arborist Assessment** 



## **APPENDIX O**

Waste Management Plan





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CONTENTS

01 LOCATION02 CONTEXT03 DESIGN

Cumulus respectfully acknowledges the First Peoples of Australia, their Elders past and present, who were and are the keepers of their cultural and knowledge and traditions, and the traditional owners of the land on which we live and work.

Revision #	Issue Date
Draft	01.07.2021
Revision A	06.07.2021
Revision B	17:11.2021
Revision C	17.01.2022

175-179 CAMPBELL ST / DA - ARCHITECTURAL REPORT / 02

CU MUL REV C / JANUARY 17, 2022 US

#### PROJECT INTRODUCTION



Hobart's high appeal as both a tourism destination and beautiful place to live has also brought with it an increase demand for housing. Unlike other larger Australian cities, Hobart is relatively undeveloped and provides high level of access to the city, social amenities and recreational areas, all of which make it ideal for higher density development inner city living.

Surrounded by residential and commercial uses, the design's form draws inspiration both from the surrounding industrial warehouse buildings as well as neighbouring historic residences.

#### NOTE

This report has been updated to reflect a revised proposal based on extensive discussion with the HCC Urban Design Advisory Panel. Design changes include:

- › Reduced overall height and no of apartments
- › Reduced roof height over circulation space to south
- › Simplification of building form behind heritage cottages
- Relocation of plant equipment on the street so that heritage cottages are not concealed.





View of Original Proposal from Campbell S

175-179 CAMPBELL ST / DA - ARCHITECTURAL REPORT / 03

CU MUL REV C / JANUARY 17, 2022 US 01 / LOCATION

Located between the CBD and the Queens Domain, the site is ideally located for inner city living.

## SITE LOCATION



## RECREATIONAL AREAS



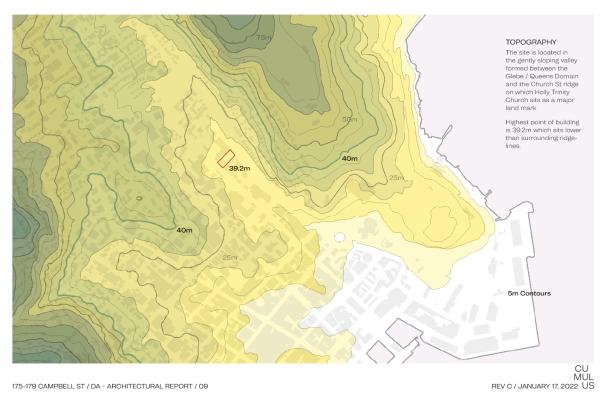
## SPORTS FACILITIES



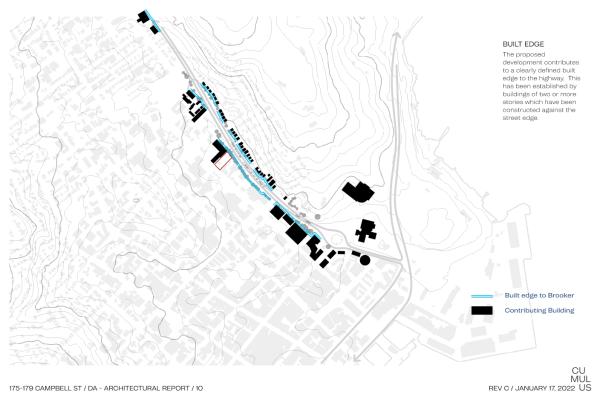
#### ROAD NETWORK



#### SITE TERRAIN



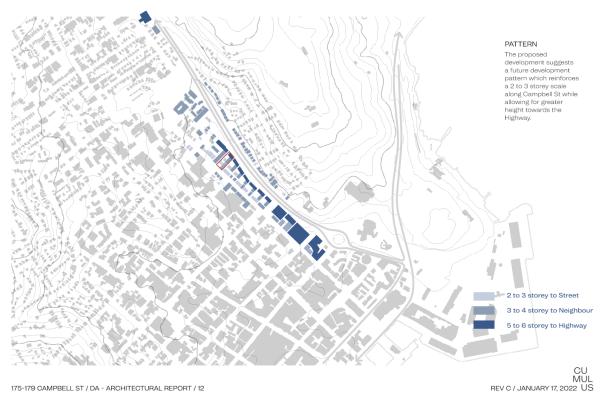
#### HIGHWAY EDGE



#### HIGHWAY EDGE



## FUTURE PATTERN

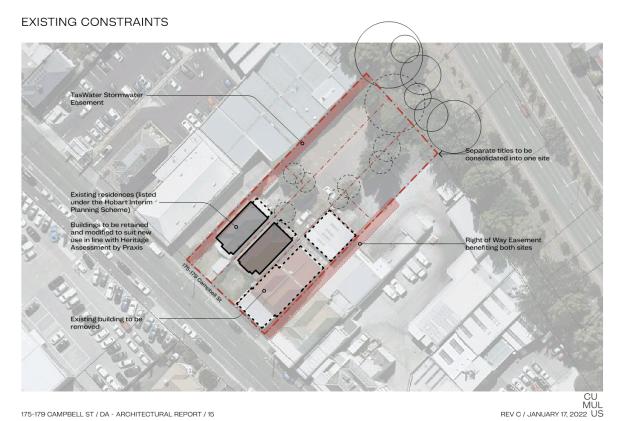


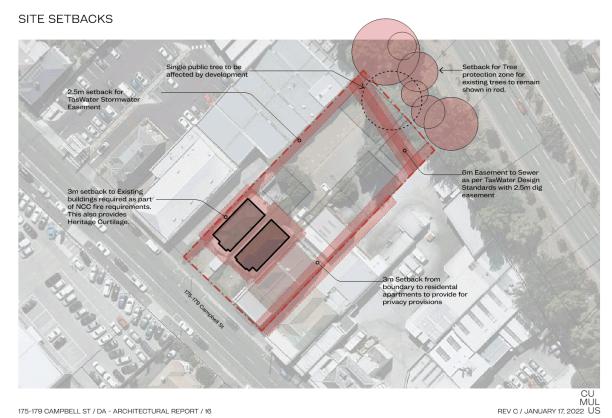
02 / CONTEXT

The design has evolved through understanding the site, its constraints and the surrounding context.

#### IMMEDIATE CONTEXT



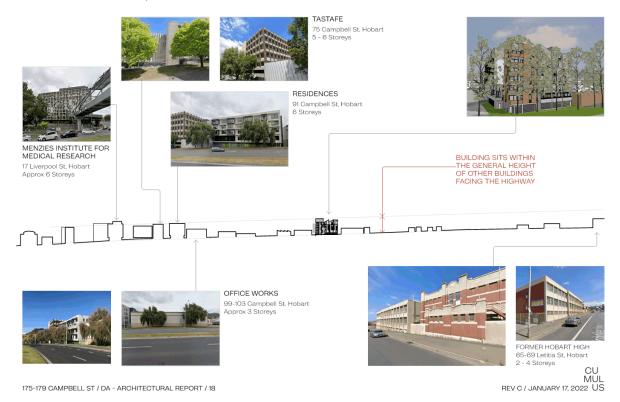




### **BUILT CONTEXT**

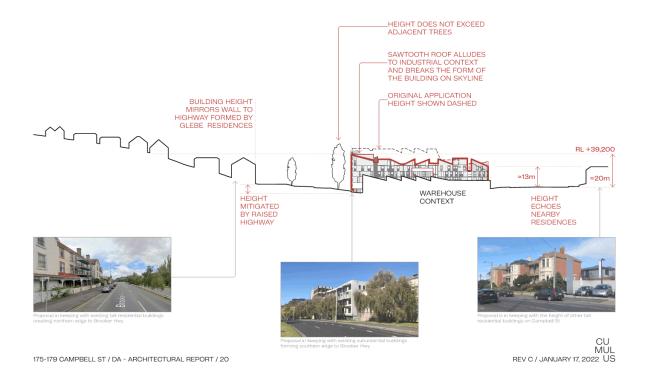


#### ALONG THE VALLEY / SECTION A





#### HIGHWAY EDGE / DETAILED SECTION B



### HIGHWAY ELEVATION & TREE HEIGHTS



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#### CONTEXT PHOTOMONTAGES

The following photomontages show the proposed building in the wider city context.

Five views have been supplied by Hobart City Council - taken from points of interest - using the HCC City Model to show scale, massing and form.

Below each of these, we have provided a rendered photomontage that demonstrates the reduced impact made by material & colour choice as well as the pattern of the openings in the facade of the building.

Note: height of building in photomontage shown as best estimate using data images supplied by HCC











175-179 CAMPBELL ST / DA - ARCHITECTURAL REPORT / 22

rtage - Revised Proposal) CU MUL REV C / JANUARY 17, 2022 US

03 / DESIGN

Design seeks to respect the local context, drawing from its scale, material and formal characteristics.

#### **DESIGN STATEMENT**

The proposed development at 175-179 Campbell St aspires to be a respectful insertion into the inner city fabric of Hobart. Drawing design inspiration from the surrounding building typologies the building is both contemporary yet contextually appropriate.

The following design moves are particular motivated by a consideration of the local context:

#### HERITAGE

The two existing oottages that are listed in the Heritage Schedule HIPS15 of the Hobart Planning Scheme (177 & 179 Campbell St) have been retained. Noted in the Praxis heritage assessment as "Imerely demonstrative] representative of a class of place" rather than of importance to the wider local context, the buildings have been proposed for adaptation to commercial uses.

A new glazed link is proposed between the buildings to provide new access compliant entry to both of the cottages. The new structure will sit under the eaves line of the existing buildings and recessed so that it is subservient to the form of the cottages. Important stylistic features of the buildings will be retained with only minor alterations to the existing fabric to facilitate access and greater connection to the site - the most substantial of which is the removal of poorly constructed lean-to additions to the rear.

Although not required by the Praxis report, the new apartment building has been arranged to provide appropriate ourtilage to the heritage buildings. Where the new building forms a backdrop cottages, the form is simplified and scale has been decreased to reduce its presence. A mesh screen with growing vines adds greenery to the scene, reminiscent of its ourrent vegetated backdrop.

The landscape design proposes two small terrace gardens at the street opening the cottages' facades to the street and forming an active edge to the site. The proposed fenoing draws inspiration from the existing simple metal balustrade.

Heritage Curtilage

Curtilage

Separate titles

Existing Cottages

Respectful Massing

Lower massing & simpler form



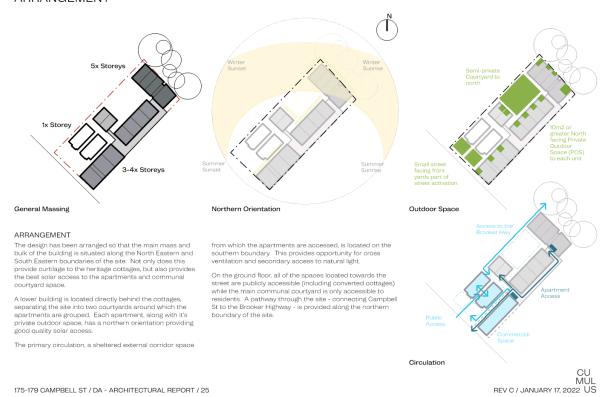




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#### **ARRANGEMENT**



#### **BUILDING FORM**







Proposal's roof mimics warehouse roofs of surrounding Industrial uses

FORM

The building's proposed form is lower on Campbell St - responding to the largely 2 to 3 storey street pattern - and increases in height towards the Brooker Highway - taking precedent from both the adjacent Poplar trees and other buildings that front the Highway.

The pitched roof forms are inspired by the neighbouring sawtooth warehouse roofs as well as the abstracted pattern of roofs seen against the slope of the Glebe - particularly when viewed from West Hobart.

The 'sawtooth' roof form also helps to break up the form of the building against the skyline while creating a cohesive and unified design. When viewed from the north the building sits within the general basin form of the valley and creates an uneven roof pattern that comfortably sits within the collection of roof lines of the city.

#### OPENINGS

Punctuating the solidity of the residential 'blocks' the windows and balcony openings have been arranged as an abstraction of the existing heritage pattern. These take inspiration from neighbouring Victorian houses which have consistent height windows which vary in width as demanded by the floor plan.

Metal balustrades sit within these openings maintaining the simplicity of the opening and providing high degree of solar penetration to the apartments (see following page).

#### MATERIALS & COLOUR

The cladding materials and colour for the project have also been inspired by the surrounding context.

The residential 'blooks' have been specified as to be oladding either in brick or terracotta brick skin alluding to the primarily brick construction of the surrounding houses. These envisaged to be a mixture of burnt red (to match neighbouring red brick walls and roofs) and sandy grey (picking up on the warehouse context).

Translucent vertical circulation cores break up the solid brick forms of the building. These are envisaged to be clad with light weight, semi-transparent polycarbonate which are also in-keeping with the industrial context.

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NOTE: IMAGES SUPPLIED BY HCC FROM CITY MODEL

MUL REV C / JANUARY 17, 2022 US

## CONTEXTUAL ABSTRACTION

#### EXISTING PATTERN

















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#### ABSTRACTED DESIGN RESPONSE





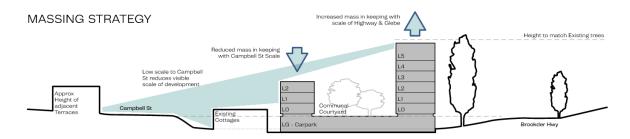


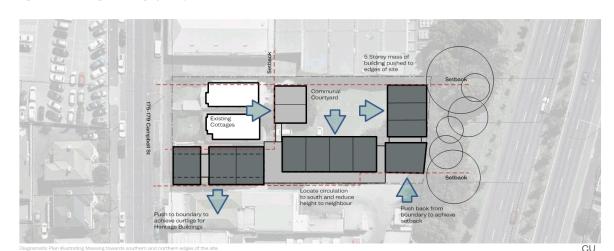






rfere with pattern of openings CU MUL REV C / JANUARY 17, 2022 US





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### CAMPBELL STREET SCALE







NCREASED MASSING AWAY FROM CAMPBELL ST (TO RHS)



CAMPBELL ST MASSING SITS WITHIN ARRAY OF VARYING HEIGHT BUILDINGS

CU MUL REV C / JANUARY 17, 2022 US

#### PROPOSED - MASSING & FORM



AERIAL VIEW - CAMPBELL ST (RHS) TO BROOKER (LHS)



CAMPBELL ST ELEVATION



MASSING OF DEVELOPMENT TO BROOKER (FROM NORTH)



MASSING OF DEVELOPMENT TO BROOKER (FROM SOUTH)

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175-179 CAMPBELL ST - PROPOSED



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Page 1186 **ATTACHMENT B** 

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Item No. 7.1.7

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### Agenda (Open Portion) City Planning Committee Meeting - 19/9/2022



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	g Office: 11 Project No. J	7 Harrington Street, Hobart 7000 173021PHPH						
Docum	nent Issue Statu	s						
Ver.	Issue Date	Description	Origi	inator	Che	ecked	App	roved
					Civil	Planning		
1		Issued for Review	CAG		CJM		GLA	
2	23.11.2021	Issued for RFI Response	CAG		CJM		GLA	
3	22.6.2022	Issued for RFI Response	GLA		CJM		MSC	23.6

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Appendix B - Concept Services Plans

Appendix C - Water and Sewer Demand Calculations

Appendix D - Stormwater Detention Calculations

# 1 Introduction

This concept services report has been prepared in support of a development application to be lodged with Hobart City Council for the construction of a multi-residential development at 177/179 Campbell Street, Hobart TAS 700 across three titles (S.P.22529/D.23364 and D.23363). The proposal involves the partial demolition of the existing buildings and a new development comprising of 8 Townhouses, 22 apartments (13 two bedrooms/9 three bedrooms) and 4 skyhomes.

The property has a total area of 2431 m² grading at between 1 & 5% from Campbell Street towards the rear of the lot adjacent to the Brooker Highway road reservation. The property shows in addition to the existing residences, an area in the northern region of the land with shrubs, trees, and a considerable portion of gravel paving for the existing light vehicles traffic/parking. The two existing properties being retained across the Campbell Street facade to the south of the land under analysis, represents approximately 200 m² combined. In addition, both properties are planned for partial demolition and reconstruction as part of the proposed development.

The concept is to be serviced with power, communications, water, sewer and stormwater connections all of which are to be installed as part of the development. This report addresses how each of these are to be provided to meet authority and planning scheme requirements.



Figure 1 - Site Locality Plan

# 2 Power, Lighting and Communications

# 2.1 Applicable Design Standards

- Electrical Infrastructure on the lot shall be designed in accordance with AS/NZS3000, Australian / New Zealand Wiring Rules.
- Lighting of common areas, where required, shall be provided to meet AS.NZS1158 .3.1 2020.
- Nation Broadband Network connections shall be provided to each unit and tenancy in accordance with the NBN standards "Residential preparation and installation: Single Dwelling Units (SDUs) and Multi Dwelling Units (MDUs)" (1).



### 2.2 Proposed System

Electrical supply to the site is to be provided from the existing TasNetworks system in Campbell Street which consists of overhead and underground services on the eastern side of the street.

A new private sub-station is proposed to be installed at the basement level of the building adjacent to Campbell Street, this sub-station will supply all of the new residential and commercial properties on the site. Due to the potential of inundation of the basement during flood events the sub-station enclosure is to be fitted with suitable flood doors to prevent flooding of the substation during these relatively short term events, refer Flood Hazard Report, Flussig Engineers, July 2021.

Where required by the planning scheme lighting of common areas including the driveway and paths will be provided in accordance with the requirements of AS.NZS 1158.3.1 and the NCC, the electrical supply to the common area lighting shall be provided from a dedicated Common Area switchboard.

Existing NBN services are located in the back of the footpath in Campbell Street adjacent to the property boundary from which a new connection to the site is to be provided.

NBN connections will be provided from the property boundary to the MDU of each unit in accordance with NBN guidelines, "Residential preparation and installation: Single Dwelling Units (SDUs) and Multi Dwelling Units (MDUs)".

NBN designs shall be prepared in accordance with the NBN design standards using the NBN Assisted Drafting Tool (ADT) and be submitted to and approved by NBN prior to the commencement of installation.

# 3 Sanitary Drainage System

### 3.1 Applicable Design Standards

The sanitary drainage system for the site shall be designed to comply with AS 3500.2 National Plumbing and Drainage Code - Sanitary Plumbing and Sanitary Drainage and to TasWater Standards (2).

An existing TasWater DN400 sewer gravity trunk main runs perpendicular to the site through the northern region of 177 Campbell St. In addition, it includes a manhole near the northwest perimeter adjacent to the boundary with Woolworths (185 Campbell Street). Furthermore, there is also sewer on the site which services 179 Campbell St, a DN100 TasWater gravity service.

### 3.2 Proposed System

As part of the development the titles for the existing properties, 175 to 179 Campbell Street are to be amalgamated creating a single lot on which the new development can be constructed. The existing private sewer drains servicing the property, are to become redundant and removed.





Figure 2: Existing Sewer Connections

The existing connection to the main will need to be upgraded to provide a DN150 connection to the new multi-story development, including the redeveloped commercial properties on Campbell Street. As the area is within the Hobart City Council boundary trap zone a boundary trap will need to be provided on the new connection. Due to the low level of the basement, approximately 1 meter lower than the surrounding ground surface and the potential for overland flows through the site and surrounding properties, it is proposed that a reflux valve be installed upstream of the boundary trap.

The DN150 connection size complies with the minimum lot connection size required by TasWater and referenced on Standard Drawing MRWA-S-104A. The property will be serviced by new internal sanitary drainage pipework to be designed following the approval of the development.

The existing DN400 TasWater sewer main running through the site has a depth below the new finished surface level of the carpark varying from 2.7 meters to 3 metres, TasWater require that the depth to invert from the carpark surface be provided as the minimum clearance above the level of the carpark finished surface to allow for future maintenance of the main. Car park levels of 15.7 to 15.8m AHD have been set to achieve this clearance to the underside of the ground floor level beams, refer drawing J173021PH-P-S1 in Appendix B.

Construction of the new development will limit TasWater access, through the existing property, to the sewer manhole located on the northeast corner of the site adjacent to the Woolworth's boundary wall. Access to this manhole can provided in the future via the Brooker Highway road reservation from Warwick St. The Hobart City Council also have a stormwater pit which provides access to the Park Street Rivulet in the vicinity of the site, within the Brooker Highway road reserve, they will also require access to this from Warwick Street.

Refer drawing J173021PH-P-S1 Appendix B for concept layouts of the proposed sanitary services for the development.

The TasWater supplement to the Sewerage Code of Australia has been used to estimate the sewerage flows from the development as follows:

Table 1: Residential Sewer Flow Calculations

	Value	Units
Number of Units (ET code: RA03)	34	No.
Equivalent Tenements	30.76	(-)
Average Dry Weather Flow	0.160	(L/s)
Peak Dry Weather Flow	1.729	(L/s)
Total Design Flow	1.957	(L/s)

Refer Appendix D for sewer flow calculations.

# 4 Water

# 4.1 Applicable Design Standards

The water reticulation system for the site shall be designed to comply with AS3500.1 National Plumbing and Drainage Code - Water Supply.

Water metering shall be provided in accordance with TasWater's Water Metering & Guidelines.

Sub-Metering shall be provided in accordance with TasWater's Southern Region Sub-Metering Policy.

Backflow Protection of the site shall be provided in accordance with TasWater's Water Boundary Backflow Containment Selection Guidelines.

Fire hydrant coverage of the site is to be provided in accordance with AS2419 and Table 8.8 of TasWater's Supplement to the Water Supply Code of Australia WSA-03 2011.

Internal fire hydrants will need to be provided.

### 4.2 Proposed System

There are currently 3 No. water connections to the properties which are to be developed, 175 to 177 Campbell Street. TasWater has a known size of only one of these, DN20 (ID 11W187160) to 179 Campbell Street with the other 2 being unknown, it is assumed that these will also be of a similar size. Each of the existing connections will become redundant and need to be sealed off at the main by a TasWater accredited Contractor.

TasWater have a DN250 CICL water main located on the eastern side of Campbell Street to which the existing connections are currently connected. It is proposed that the new site connection will be connected to this main.





Figure 3: Existing Water Connections

The development of the site with residential apartments, a consulting room and small café will result in the site will being classified as Low Hazard in accordance with TasWater Backflow Containment Guidelines. A new DN100 water connection will be required to service the domestic and fire service requirements of the development, it is proposed that the water meter assembly and fire hydrant booster be located adjacent to the central walkway into the site next to the Campbell Street footpath.

A 65mm domestic water low hazard master meter assembly will be required to service the domestic water requirements of the development. Sub metering of each residential unit, the commercial tenancies and common property landscape requirements can be installed downstream of the meter. These can be installed in the basement carpark to provide easy access for reading with individual pipework to be run from the sub-meters to each tenancy and the communal garden. Sub metering is to be installed in accordance with TasWater's Water Metering Guidelines.

Existing fire plugs are located within the street in front of 175 and 152-170 Campbell Street around 25m to 30m away from the proposed project. Due to the number of stories in the new development the site will require new internal fire hydrants to be installed in accordance with the requirements of AS419.1 and TasFire. The fire hydrant booster assembly being located downstream of the fire service meter assembly on Campbell Street.

Refer Appendix B for Water Services Concept Drawings

The TasWater supplement to the MRWA Water Supply Code has been used to estimate the flows as follows:

Table 2: Residential Water Demand Calculations <100ET - AS3500.1-2003

	Value	Units
Number of Units (ET code: RA03)	34	(-)
Equivalent Tenements	30.76	(-)
Probable Simultaneous Demand	3.46	(L/s)

Refer Appendix D for Water Flow Calculations.

# 5 Stormwater

### 5.1 Applicable Planning Scheme Requirements

The applicable planning scheme is the *Hobart Interim Planning Scheme 2015*, with the applicable provisions provided by Code E7.0, Stormwater Management Code. The proposal has been assessed against the requirements of the scheme as detailed in section 5.3.1 below.

# 5.2 Applicable Design Standards

The stormwater reticulation system for the site shall be designed to comply with AS3500.3 National Plumbing and Drainage Code - Stormwater Drainage.

## 5.3 Proposed Systems

The site is currently crossed by a DN525 HCC stormwater main which runs along the northern boundary from Campbell Street to the Park Street Rivulet which is located within the Brooker Highway road reservation just to the east of the site boundary.



Figure 4: Existing Stormwater Infrastructure

It is proposed that the DN525 stormwater pipe be realigned where it is adjacent to the new building so as it runs parallel with the northern boundary of the site in a 3.0m wide easement. The existing main is to be retained in its current location from Campbell Street past the existing house located on 179 Campbell Street to SW1.4, refer Figure 5 below.

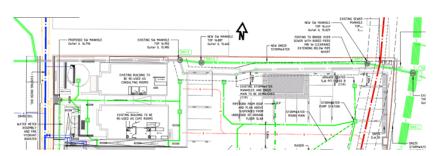


Figure 5: DN525 Stormwater Main Replacement

The level of the pipe relative to the proposed development is shown on the drawings in Appendix B with a preliminary profile and cross sections through the new carpark shown. The new pipe's location, close to the rear of the Woolworths site at 185 Campbell Street may require the under pinning of the adjacent property to ensure the pipe can be installed and maintained without risking damage to this property. This requirement to be determined during detail design where the construction detail of the boundary wall will need to be determined.

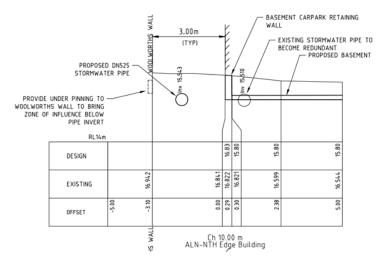


Figure 6: DN525 Stormwater Relative to New Building

The development's eastern boundary runs parallel with the Park Street Rivulet which is located within the Brooker Highway road reservation. The location of the existing main has been determined by CCTV camera and tracking of the camera unit from the surface. Cross section drawings showing the relative location of this existing main and the new development are shown on the drawings in Appendix B. The new building structural elements will need to be constructed such that they are extended below the zone of influence for this main so as to ensure that it can be excavated for maintenance in the future. The closest point of the new development to the main is 1800mm.

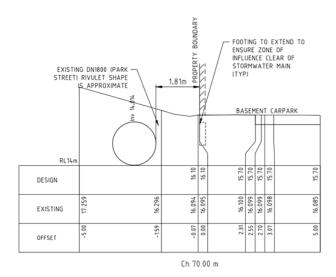


Figure 7: Park Street Rivulet Relative to New Building

A new stormwater connection is proposed into the rivulet main to service the development, a profile of this is included on drawing J173021PH-P-SW5 provided in Appendix B. Due to the level of the connection relative to the main it is proposed that a reflux valve be installed on the connection to prevent flows from the main during significant events from entering the basement carpark.

### 5.3.1 Planning Scheme Requirements E7.7.1

### A1 - Stormwater Disposal

The development meets the acceptable solution A1:

The site will drain by gravity via the new internal stormwater network and connect to the existing DN1800 Park Street rivulet culvert. The connection to the culvert can be made into the top  $1/3^{\rm rd}$  of the pipe. The level of the stormwater connection requires that pits located within the carpark basement be serviced with a stormwater pump station. All roof and plaza drainage, including the area around the existing houses at the front of the site can be collected via gravity drainage to the stormwater detention tank.

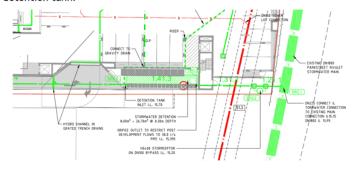


Figure 8: Site Stormwater Connection plan

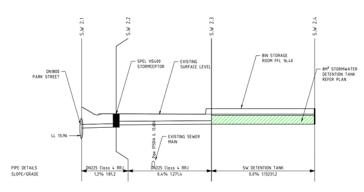


Figure 9: Site Stormwater Connection Profile

### A2 - Stormwater Quality and Quantity

The development meets the acceptable solution A2:

The stormwater system incorporates Water Sensitive Urban Design principles as per the *Water Sensitive Urban Design Engineering Procedures for Stormwater Management in Southern Tasmania* with the inclusion of a proprietary SPEL HS400 stormwater treatment device to treat stormwater run-off from the site.

A Model for Urban Stormwater Improvement Conceptualisation (MUSIC) has been created to determine the reduction in runoff pollutants from the road, landscape and roof areas considering a mixed node modelling the whole site (Figure 10). The model reflects the approximation of 10% of pervious area associated with planters, etc.

The results displayed in Figure 11 show the proposed stormwater treatment train complies with best practice pollutant reductions for all parameters.



Figure 10 - MUSIC Schematic

	Sources	Residual Load	% Reduction
Flow (ML/yr)	1.19	1.19	0
Total Suspended Solids (kg/yr)	245	14.8	93.9
Total Phosphorus (kg/yr)	0.49	0.144	70.5
Total Nitrogen (kg/yr)	3.43	1.63	52.4
Gross Pollutants (kg/yr)	46.2	0	100

Figure 11 - MUSIC Results

#### A3 - Minor Stormwater Drainage System Design

The development is compliant with acceptable solution A3:

- a) The internal stormwater network will be sized to accommodate the 5% AEP runoff from the property based on it being close to 100% impervious.
- b) Stormwater detention for any increase in flows can be incorporated by the inclusion of a 8m³ stormwater detention tank under the proposed bin store on the southern side of the site. This tank will collect all stormwater run-off from the site via either gravity drainage from roofs and courtyards or a rising main from a stormwater pump station in the basement carpark. Flows for a 15 minutes duration storm, which is in excess of the catchment time of concentration, provided in Figure 6 of the 175-170 Campbell Street, Flood Hazard Report, Flussig Oct 2021. Outlet flows will be limited to pre-development levels by an orifice outlet sized to limit post development flows to 30l/s. Refer Appendix D for stormwater detention calculations.

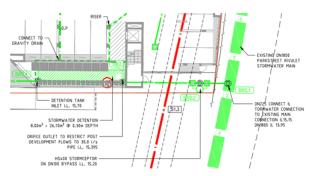


Figure 12: Stormwater Detention Tank

#### A4 - Major Stormwater Drainage System Design

Refer 175-179 Campbell Street, Flood Hazard Report, Flussig Engineers, October 2021 (Revision 3 June 2022) for discussion on overland flow paths and site inundation. All habitable floors are located more than 300mm above the calculated 1% AEP flood levels.

The Flussig report identifies significant hazard of flooding of the basement car park area in a 1% AEP plus climate change rain event. The resultant risk levels are shown as up to H5 and H6 in areas of the car park closest to the Brooker Highway. Note that the Flussig report identifies that the development will have an insignificant effect on the current flood behaviour. The area concerned is currently acting as a car park as shown in the below Google Earth image Figure 13, and hence the levels of risk are already at the H5 and H6 levels. The development may mean that the risk exposure is for 24 hours per day as compared to the current assumed day shift parking duration.

A key to minimising the risk to users of the proposed car park will be a Flood Emergency Management Plan (FEMP). The development will be run by a Body Corporate with responsibility for safety, security and maintenance of essential health and safety features of the development. While it is not intended to provide the FEMP until the detailed design stage, it is important to consider a range of measures that could be undertaken to reduce risk to future occupiers of the development.

It is recommended that the FEMP be prepared and once adopted, become part of the site maintenance schedule including audits to ensure any elements such as signage, alarm sirens, lights, barriers, water depth transducers, etc. are regularly checked and maintenance registers updated similar to other safety features such as fire extinguishers, fire blankets etc.



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It is recommended that the FEMP include occupant inductions so that they are cognisant of the flooding risks and what to do in the event of an event, which might be as simple as do not enter the car park area during extreme rainfall. These can possibly be part of any tenancy agreements.

The updated Flussig report shows a duration to maximum flow (hence depth) of around 13 minutes, slightly longer than previous modelling but still short in terms of a traditional FEMP where occupants may be evacuated from the site - in this case the occupants don't need to leave their rooms, they simply don't enter the car park. If anyone is already in the car park, they would know (from the induction, warning signs, and alarms) that they need to leave the car park promptly. The Flussig report shows the depth in the car park rises from an initial noticeable depth of 50mm to maximum in a period of around 9.5 minutes (refer Fig. 8 of the Flussig report). This gives users adequate time to move to higher ground if they notice water entering the car park. They can either walk up to road level or go up the stairs to ground floor, both of which are safe refuges.

Part of the FEMP is likely to be the appointment of flood wardens who would have a similar role to fire wardens in a fire situation. These wardens (maybe on a roster system but alerted by an alarm system) would need to patrol the car park to ensure there is nobody at risk, for example someone sleeping in a car who may note recognise the warning system.

Any electrical components of the developed FEMP system would need battery backup as major rainfall storms may coincide with a loss of power.

It is noted that higher frequency flooding events will also create risk but at a lower level. There is no significant overland flow expected until the underground pipe system is at capacity - this should be at around the 5% AEP events. When high intensity rainfall events occur, people are not aware what AEP event they are experiencing, but they can appreciate unusually heavy rain events.

One aspect to be considered in the preparation of a FEMP is the potential for someone to attempt to enter the car park to remove their vehicle from the car park to prevent property loss, this can be countered by a cable gate or similar system which would prevent vehicles entering or leaving the car park in an alarmed event. The body corporate insurance may be able to cover such property damage which would reduce the desire to extract the vehicles.





Figure 13: Google Earth image showing existing car parking

# 6 Abandoned Town Gas

TasWater Records show the presence of Abandoned Town Gas mains in Campbell Street. Incidents have occurred where civil workers have been exposed to harmful gases and Volatile Organic Compounds (VOCs) whilst excavating in roadways in Hobart and Moonah. The sources of the contaminants are mostly related to the old town gas (coal gas) pipes that were made redundant in Hobart in 1978.

Care should be taken when working in the vicinity of old mains for any new connections to the site, VOC monitoring equipment should be used and appropriated PPE should be worn by workers, further information on how to safely work in the vicinity of towns gas infrastructure should be sourced from WorkSafe Tasmania. Ring 1300 366 322 or email wstinfo@justice.tas.gov.au

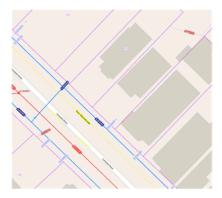


Figure 14: Existing Abandoned Gas Pipe Locations

# 7 Access and Parking

Access and parking requirements for the site are addressed in the Traffic Impact Assessment by ECTM Consulting, July 2021.

JMG have prepared drawings which demonstrate the following compliance of the development with the requirements of AS2890.1 & AS2890.2:

- Vertical clearance will be provided across the full width of the driveway for access to the adjacent property for a HRV vehicle
- Vertical clearance will be prided into the undercover carpark to allow turning of the Veolia garbage truck
- Onsite turning is provided within the property and adjacent ROW for the Veolia garbage truck
- Access to the adjacent property is available for a MRV vehicle utilising the widened driveway access
- The vertical profile of the driveway will be improved for existing heavy vehicles accessing
  the site at the existing crossover
- The new driveway profile will provide clearance for the Veolia garbage truck
- Carparking and aisle dimensions within the basement carpark are provided in accordance AS2890.1 user class 2.

# 8 Conclusion

The proposed multi-unit residential and commercial development can be constructed with the provision of all required services to comply with the requirements of Council's Planning Scheme, TasWater's Design Guidelines, and the applicable Australian Standards.

The property can be serviced with communications, power, water, sewer and stormwater connections adequately sized to cater for the number of units.

With appropriate engineering detailing, existing and new council and TasWater services can be protected from damage and future maintenance and/or replacement can be undertaken. Building footings for the new development and adjacent properties will need to extend below the zone of influence for these pipes.



The flood risk assessment has highlighted hazardous conditions in the basement car park, and a suitable FEMP will need to be developed and implemented to minimise the risk to as low as reasonably practicable, noting that these risks are already experienced in the current site use. The FEMP will need to include appointment of flood wardens, audio and visual alarms (with battery back-up) and a cable gate across the vehicle access to prevent vehicular access/egress but allow pedestrian egress. The trigger for the alarm/cable gate should be at 50mm water depth in the basement.



# 9 References

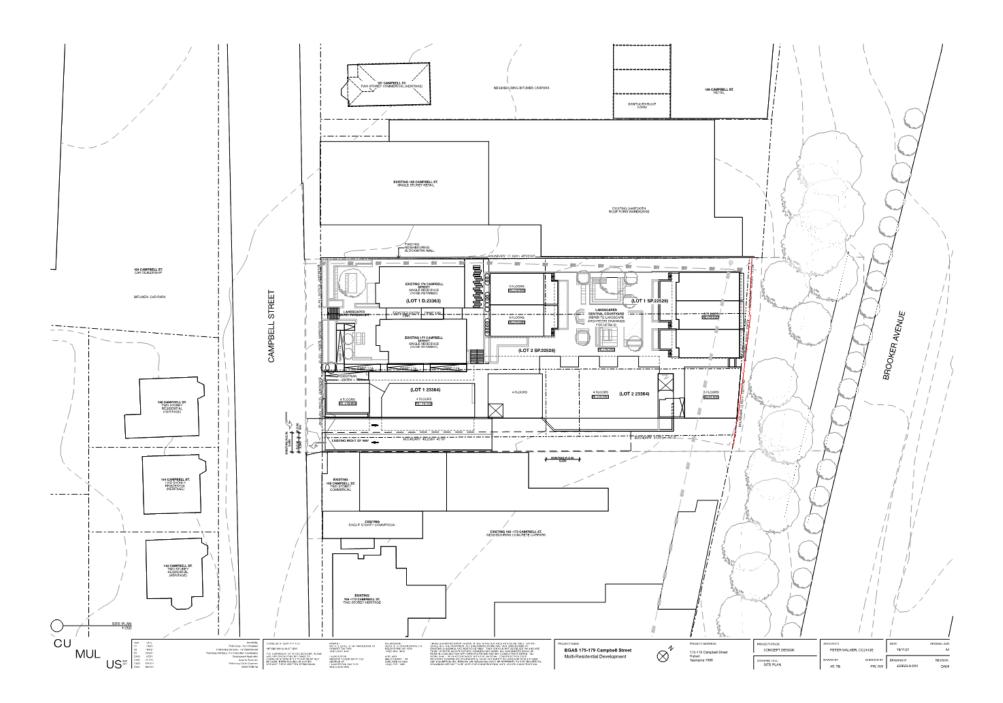
- 1. Preparation and Installation Guide for-SDUS and MDUS. [Online] https://www.nbnco.com.au/content/dam/nbnco2/2018/documents/NewDevs/preparation-and-installation-guide-for-sdus-and-mdus.pdf.
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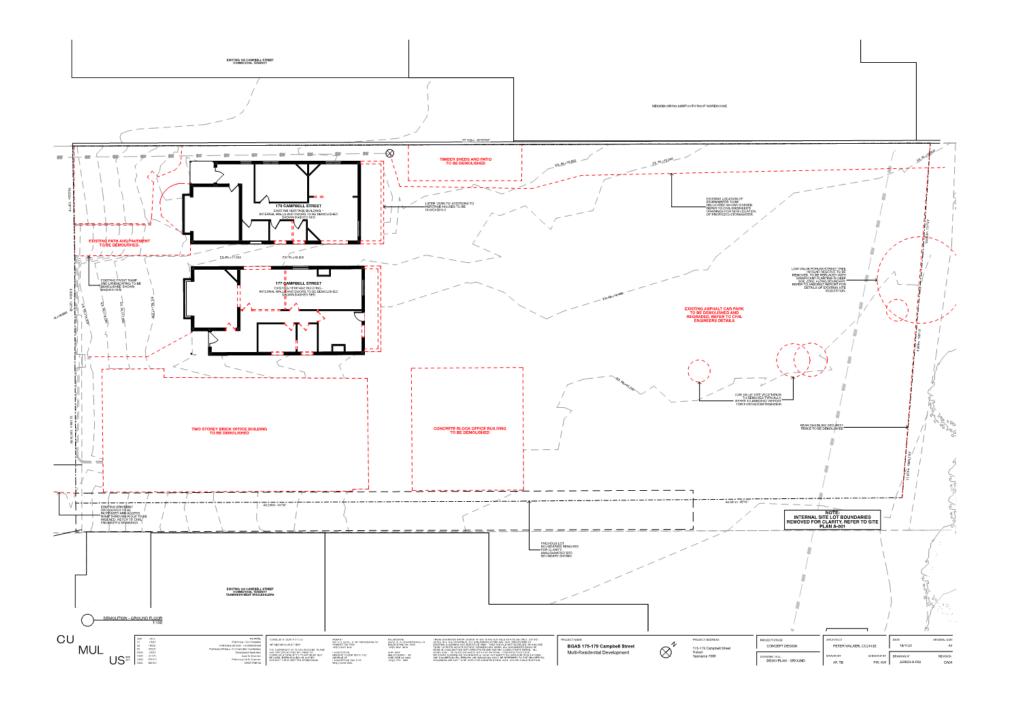


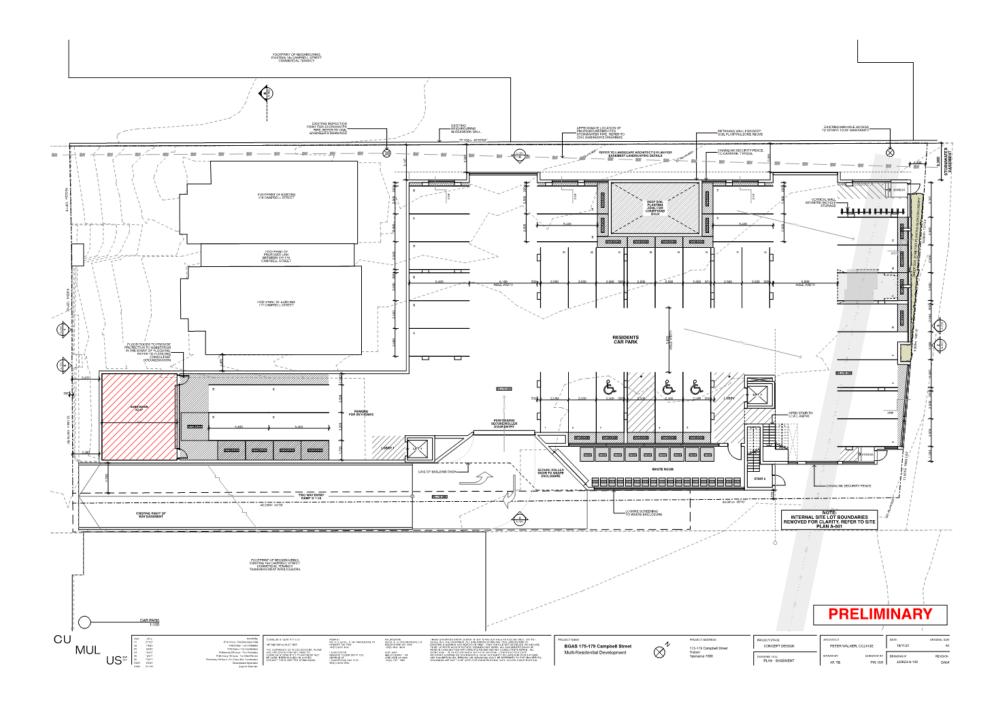
# **APPENDIX A**

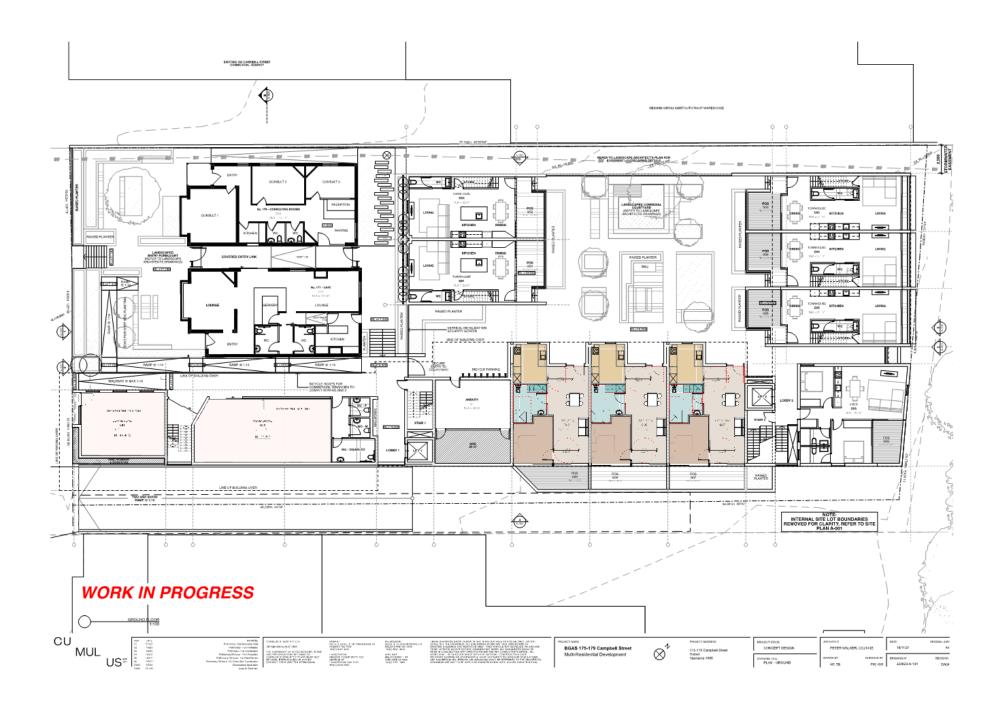
Architects Plans (Under Separate Cover)

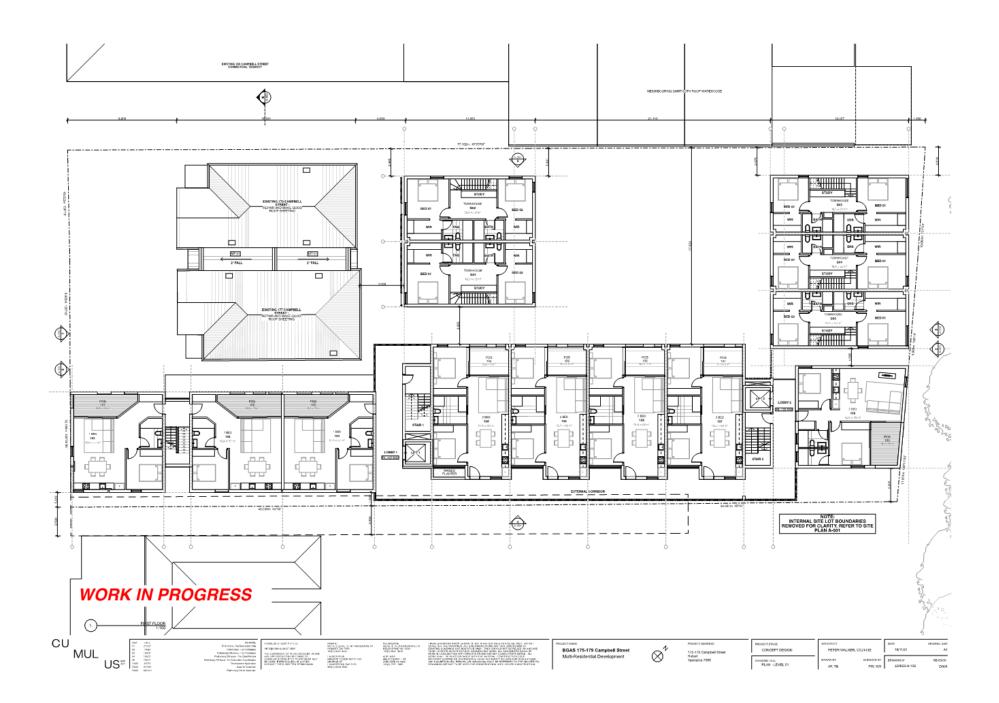


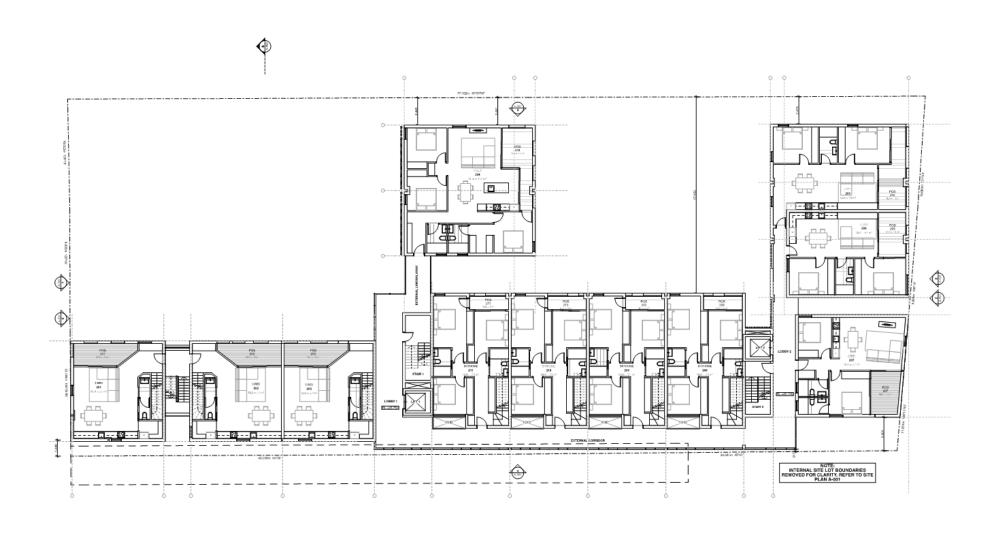




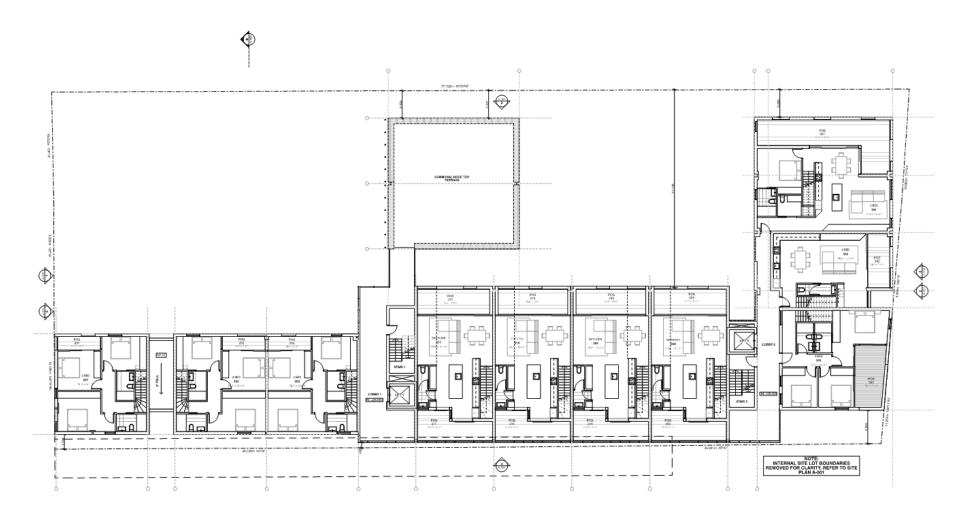






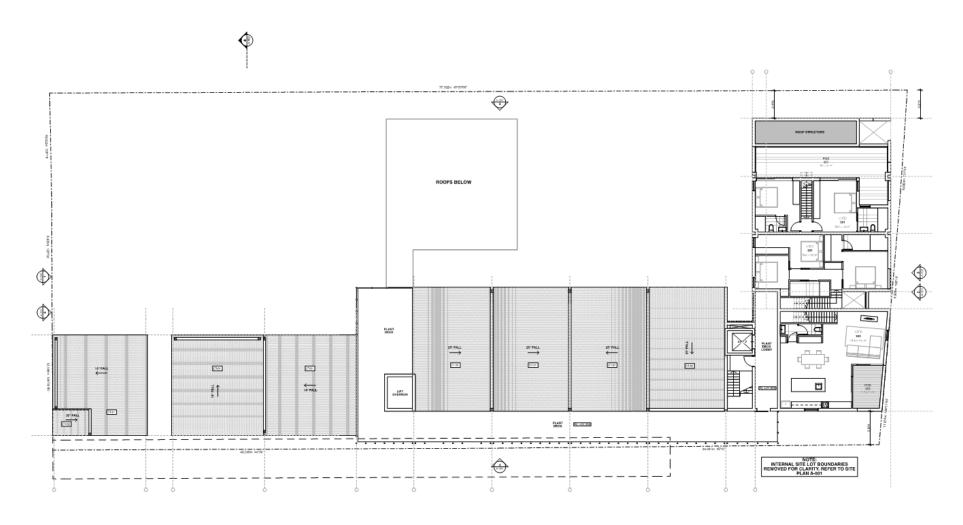






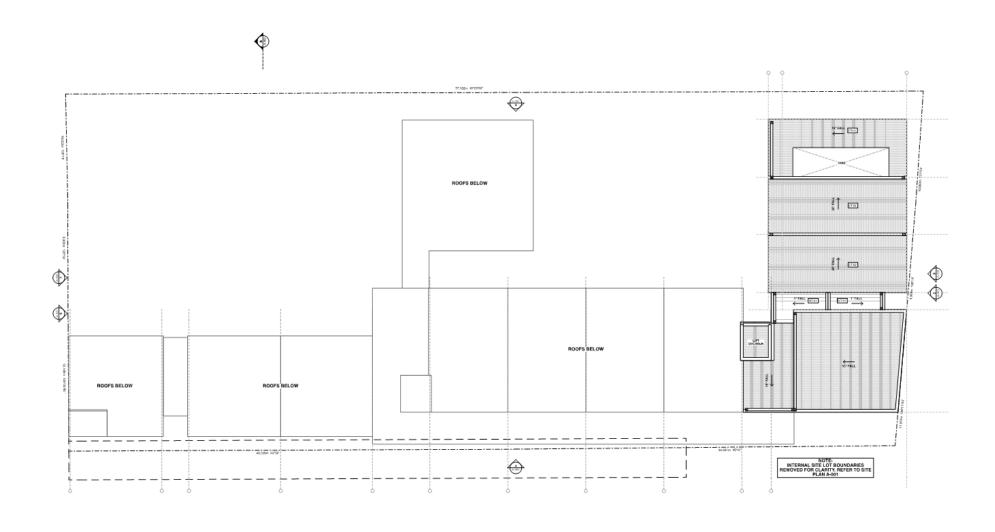
# **WORK IN PROGRESS**





# **WORK IN PROGRESS**







# **APPENDIX B**

**Concept Services Plans** 



**APPENDIX C** 

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Water and Sewer Demand Calculations



177&179 Campbell St. - Hobart WATER REQUIREMENTS

Probable Simultaneous Demand Calculation

ET's < 100

For a water flow estimate, use:

AS/NZS 3500.1:2003 Section 3

	Quantity	Units	Comments
Number of Units/Homes/Town Houses	30.76	ET's	
Probable Simultaneous Demand (PSD)	3.46	L/s	Depends on the no. of units (Cell B10), determine from: AS/NZS 3500.1:2018 Table 3.2.3

#### Average Day Usage Calculations

Average Water Demand (per day)

ET's >= 100			
	Quantity	Units	Comments
Average Day Demand (AD)	0	L/ET/day	As per 2.3.1 of TasWater Supplement
			•
Average Water Demand (per day)	0	L/day	Based on ET of 13.2

kL/day

PROBABI	TABLE 3.2.3 PROBABLE SIMULTANEOUS DEMAND (PSD) FOR DWELLINGS					
No. of units	Flow rate	No. of units	Flow rate	No. of units	Flow rate	
or dwellings	L/s	or dwellings	L/s	or dwellings	L/s	
1	0.48	35	3.74	68	5.79	
2	0.70	36	3.81	69	5.85	
3	0.88	37	3.88	70	5.91	
4	1.03	38	3.95	71	5.96	
5	1.17	39	4.01	72	6.02	
6	1.30	40	4.08	73	6.08	
7 8	1.41	41	4.14	74	6.13	
	1.53	42	4.21	75	6.19	
	1.64	43	4.27	76	6.25	
10	1.74	44	4.34	77	6.30	
11	1.84	45	4.40	78	6.36	
12	1.94	46	4.47	79	6.41	
13	2.03	47	4.53	80	6.47	
14	2.12	48	4.59	81	6.53	
15	2.21	49	4.66	82	6.58	
16	2.30	50	4.72	83	6.64	
17	2.39	51	4.78	84	6.69	
18	2.47	52	4.84	85	6.75	
19	2.55	53	4.90	86	6.80	
20	2.64	54	4.96	87	6.86	
21	2.72	55	5.02	88	6.91	
22	2.79	56	5.09	89	6.96	
23	2.87	57	5.15	90	7.02	
24	2.95	58	5.21	91	7.07	
25	3.03	59	5.27	92	7.12	

Total ET	30.76
TasWater Supp	plement Appendix B

1-2 Storeys, Medic	um Density, Dwelling			
	1 Bedroom	2 Bedroom	3 Bedroom	
Factor/dwelling	0.4	0.6	0.8	
No. of Units	0	18	16	Sum
ET	0	10.8	12.8	23.6

>2 Storeys, Hiç	h Density, Dwelling	1		
	1 Bedroom	2 Bedroom	3 Bedroom	1
Factor/dwelling	0.33	0.5	0.67	
No. of Units	0	0	0	Sum
ET	0	0	0	0

Accomoda		
	Nursing Home / Special Care Home	
Factor/Bed 0.657		
No. of Beds	0	Sum
ET	0	0

Meal Preparation		1			
Catering		Restaurant/Café	urant/Café Take Away/Fast Food (no		
Factor/GBFA m2	0.005	0.005	0.015	0.03	
GBFA m2	0	0	0	0	Sum
ET	0	0	0	0	0

Se	rvices	1		
	Industrial Laundry	Laboratories	1	
Factor/GBFA m2 0.24		0.064		
GBFA m2	0	0	Sum	
ET	0	0	0	

Business (excl	l. food preparation)	1	
	Office	ingle Retail Shop	•
Factor/GBFA m2	0	0.002	
GBFA m2	210	0	Sum
ET	0	0	0

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26	3.10	60	5.32	93	7.18
27	3.17	61	5.38	94	7.23
28	3.25	62	5.44	95	7.29
29	3.32	63	5.50	96	7.34
30	3.39	64	5.56	97	7.39
31	3.46	65	5.62	98	7.44
32	3.53	66	5.68	99	7.50
33	3.60	67	5.73	100	7.55
34	3.67	_	-	-	-

- NOTES:

  The minimum flow rates shown in this Table are based on domestic installations. If it is expected that the dwelling(s) will have a greater demand, then the probable simultaneous flow rate may be estimated using the looding unit method outlined in Appendix D.

  Determination of PSD for dwellings exceeding the scope of this Table may be estimated using the following equations.

 $Q = 0.03 n + 0.4554 \sqrt{n}$ 

where Q = flow rate, in litres per second n = number of dwellings

DESIGN FLOW | PDWF + GWI + RDI

# Agenda (Open Portion) City Planning Committee Meeting - 19/9/2022

3 Scott Street Bellerive
WSA CALCULATIONS CALCULATED VALUES UNITS

PDWF	d x ADWF	1.729359753	L/s	
	PDWF			
d	0.01*(LOG(A))^4-0.19*(LOG(A))^3+1.4*(LOG(A))^2-4.66*LOG(A)+7.57	10.79513408		
A	Gross Area of Development	0.2618	Ha	Determine area (m2) off plans
	ADWF			
ADWF	0.001736*EP (150L/d/EP - as per TasWater)	0.16019808	L/s	
EP	3 x ET	92.28		TasWater overrides WSA
6.8		00.70		W. 144 1 4 5 61 61 41

GWI	0.025 x A x Portion(wet)	0.0045815	L/s	
Portion,	et Portion of Network where GW > Pipe RL	0.7		TasWater Assumption (5.5.5.2)

RDI	0.028 x Aeff x C x I	0.223087642	L/s	
Aerr	A x (Density/150)^0.5 OR A	0.2618		Density >/< 150
Density	EP/A	352.4828113		
c	Saspect + Naspect	1.4		
Saspect	Soil Aspect	0.8		TasWater Assumption
Naspect	Network Defects Aspect	0.6		TasWater Assumption
- 1	I <sub>1,2</sub> × Factor <sub>size</sub> × Factor <sub>contamment</sub>	21.73801101		
I(1,2)	1 hr duration rainfall intensity, ARI 2 years	11.8		Determined from BOM
Factor(size)	(40/A)*0.12	1.828482642		
Factor(containment)	0.77 x (10 <sup>4</sup> (0.43X)) / (10 <sup>4</sup> (0.14X <sup>2</sup> ))	1.007504409		
X	log(ARI)	0.301029996		
ARI	Annual Reccurence Interval	2		TasWater Assumption

Total ET	30.76
TasWater Supplem	ent Appendix B

1-2 Storeys, Medium Density, Dwelling				
	1 Bedroom	2 Bedroom	3 Bedroom	
Factor/dwelling	0	0.75	1	
No. of Units	0	18	16	Sum
ET	0	13.5	16	29.5

>2 Storeys, High D		1		
	1 Bedroom	2 Bedroom	3+ Bedroom	
Factor/dwelling	0.5	0.75	1	
No. of Units	0	0	0	Sum
ET	0	0	0	0

Accomodation		
Factor/Bed	0.971	1
No. of Beds	0	Sum
ET	0	0

Meai Prep	aration				
	Catering	Restaurant/Café	Take Away/Fast Food (no public ammenities)	Take Away/Fast Food (incl. public ammenities)	
Factor/GBFA m2	0.008	0.008	0.024	0.048	
GBFA m2	0	0	0	0	Sum
ET	0	0	0	0	0

Servi	es	1	
	Industrial Laundry	Laboratories	1
Factor/GBFA m2	Factor/GBFA m2 0.24		
GBFA m2	0	0	Sum
ET	0	0	0

Business (excl. fo	od preparation)	1	
	Office	Single Retail Shop	1
Factor/GBFA m2	0.006	0.003	1
GBFA m2	210	0	Sum
ET	1.26	0	1.26

Post Development

### 177 Campbell St. - Hobart

	Time of Concentration							
C <sub>1</sub> ,10	25	mm	10% AEP, 60min Rainfall					
A=	2618	m2	Insert Catchment Area					
A=	0.00262	Km <sup>2</sup>	Calculated in Km2					
S <sub>e</sub> =	-	m/Km	Insert Catchment Grade					
L=	-	Km	Insert Flow Length					
t <sub>c</sub> =	-	mins	Tc Calculated					
	5	mins	Whole Number Tc					

### Stormwater Calculations

Impervious Area						
Existing Hardstand Area=	2546.96	m2				
Total Area =	2618	m2				
Fraction Impervious =	97%					

Runoff Coefficient						
Fraction impervious =	97%					
C1,10 =	0.100	Formula - Refer ARR Book VIII				
C10 =	0.88	Runoff Coefficient				

Frequency Conversion Factors -Refer AR&R 1987										
ARI (years) 1 2 5 10 20 40 60 80 50 100									100	
Factor, F <sub>y</sub>	0.8	0.85	0.95	1	1.05	1.2	1.17	1.19	1.15	1.2

Peak Catchment Flows For Varied 5% AEP							
Storm Durations							
AEP	Flow (m <sup>3</sup> /s)						
5%	5	0.057					
5%	10	0.043					
5%	15	0.035					
5%	20	0.030					
5%	25	0.026					
5%	30	0.023					
5%	45	0.018					
5%	60	0.015					
5%	90	0.012					
5%	120	0.010					
5%	180	0.008					
5%	270	0.006					

Peak Catchment Flows For Given AEP at									
	T.O.C.								
AEP I <sub>tc,Y</sub> (mm/h) Flow (m <sup>3</sup> /									
63.20%	38.2	0.0195							
50.00%	43.2	0.0235							
20.00%	60.0	0.0364							
10.00%	72.1	0.0461							
5.00%	84.7	0.0568							
2.00%	102.0	0.0750							
1.00%	116.0	0.0890							

Hardstand (100% Impervious)						
Roof 851						
Walkway	1649					
Carpark	0					
Impervious Area	2499.6	m2				

Landscaping (40% Impervious)							
Backyard	118.4						
Impervious Area	47.36	m2					

# Agenda (Open Portion) City Planning Committee Meeting - 19/9/2022

### 177/179 Campbell St.

### Stormwater Calculations

Boyd's (CC)

Catchment & Flow Details			Comments
Catchment Area =	0.26	На	
10 Year Runoff Coefficient = 0.88 -		-	
20 Year Effective Catchment Area =	0.24	На	
Restricted Outflow Requirement =	0.053	m3/s	Site Runoff: pre development 5% AEP, 5min (ToC) storm duration.

	Detention Calculation							29% Clima	ate Change	
Storm Duration	5% AEP	5% AEP + 29% CC	lp	Qp	V1	Smax	lp	Qp	V1	Smax
(min)	Intensity (mm/hr)	Intensity (mm/hr)	(m3/s)	(m3/s)	(m3)	(m3)	(m3/s)	(m3/s)	(m3)	(m3)
1	138.00	178.0	0.093	0.053	5.55	2.36	0.119	0.053	7.16	3.97
2	109.00	140.6	0.073	0.053	8.77	2.38	0.094	0.053	11.32	4.93
3	98.60	127.2	0.066	0.053	11.90	2.32	0.085	0.053	15.35	5.77
4	91.00	117.4	0.061	0.053	14.65	1.87	0.079	0.053	18.89	6.12
5	84.70	109.3	0.057	0.053	17.04	1.07	0.073	0.053	21.98	6.01
10	63.90	82.4	0.043	0.053	25.71	-6.24	0.055	0.053	33.17	1.22
15	51.90	67.0	0.035	0.053	31.33	-16.60	0.045	0.053	40.41	-7.51
20	44.20	57.0	0.030	0.053	35.57	-28.32	0.038	0.053	45.89	-18.01
25	38.80	50.1	0.026	0.053	39.03	-40.84	0.034	0.053	50.35	-29.52

177/179 Campbell St.

### Stormwater Calculations

IFD Table
-----------

2 min         2         52.4         59         80         94.7         109         127         1.3           3 min         3         46.3         52.2         71.4         84.9         98.6         116         1           4 min         4         41.8         47.2         65         77.8         91         108         1.           5 min         5         38.2         43.2         60         72.1         84.7         102         1           10 min         10         27.7         31.4         44.2         53.8         63.9         78.7           15 min         15         22.4         25.5         35.9         43.7         51.9         64.1         74           20 min         20         19.2         21.8         30.6         37.2         44.2         54.4         62           25 min         25         17         19.3         27         32.7         38.8         47.5         54           30 min         30         15.3         17.4         24.3         29.4         34.7         42.4         48           45 min         45         12.2         13.8         19.2         23.1         27.1	Rainfall mm/hr										
1 min         1         61         69.1         96.7         117         138         169         12           2 min         2         52.4         59         80         94.7         109         127         1           3 min         3         46.3         52.2         71.4         84.9         98.6         116         1           4 min         4         41.8         47.2         65         77.8         91         108         1           5 min         5         38.2         43.2         60         72.1         84.7         102         1           10 min         10         27.7         31.4         44.2         53.8         63.9         78.7         15           15 min         15         22.4         25.5         35.9         43.7         51.9         64.1         74           20 min         20         19.2         21.8         30.6         37.2         44.2         54.4         62           25 min         25         17         19.3         27         32.7         38.8         47.5         54           45 min         30 min         30         15.3         17.4         24.3											
2 min         2         52.4         59         80         94.7         109         127         1.3           3 min         3         46.3         52.2         71.4         84.9         98.6         116         1           4 min         4         41.8         47.2         65         77.8         91         108         1.           5 min         5         38.2         43.2         60         72.1         84.7         102         1           10 min         10         27.7         31.4         44.2         53.8         63.9         78.7           15 min         15         22.4         25.5         35.9         43.7         51.9         64.1         74           20 min         20         19.2         21.8         30.6         37.2         44.2         54.4         62           25 min         25         17         19.3         27         32.7         38.8         47.5         54           30 min         30         15.3         17.4         24.3         29.4         34.7         42.4         48           45 min         45         12.2         13.8         19.2         23.1         27.1			00.00								
3 min         3         46.3         52.2         71.4         84.9         98.6         116         1.           4 min         4         41.8         47.2         65         77.8         91         108         1           5 min         5         38.2         43.2         60         72.1         84.7         102         1           10 min         10         27.7         31.4         44.2         53.8         63.9         78.7         9           15 min         15         22.4         25.5         35.9         43.7         51.9         64.1         74           20 min         20         19.2         21.8         30.6         37.2         44.2         54.4         62           25 min         25         17         19.3         27         32.7         38.8         47.5         54           30 min         30         15.3         17.4         24.3         29.4         34.7         42.4         48           45 min         45         12.2         13.8         19.2         23.1         27.1         32.6         37           1 hour         60         10.4         11.8         16.2		_							194		
4 min         4         41.8         47.2         65         77.8         91         108         1.           5 min         5         38.2         43.2         60         72.1         84.7         102         1           10 min         10         27.7         31.4         44.2         53.8         63.9         78.7           20 min         15         22.4         25.5         35.9         43.7         51.9         64.1         74           20 min         20         19.2         21.8         30.6         37.2         44.2         54.4         62           25 min         25         17         19.3         27         32.7         38.8         47.5         54           30 min         30         15.3         17.4         24.3         29.4         34.7         42.4         48           45 min         45         12.2         13.8         19.2         23.1         27.1         32.6         37           1 hour         60         10.4         11.8         16.2         19.4         22.7         27         30.6           1.5 hour         90         8.35         9.44         12.9         15.3	2 min	_			80				142		
5 min         5         38.2         43.2         60         72.1         84.7         102         1           10 min         10         27.7         31.4         44.2         53.8         63.9         78.7           15 min         15         22.4         25.5         35.9         43.7         51.9         64.1         74           20 min         20         19.2         21.8         30.6         37.2         44.2         54.4         62           25 min         25         17         19.3         27         32.7         38.8         47.5         54           30 min         30         15.3         17.4         24.3         29.4         34.7         42.4         48           45 min         45         12.2         13.8         19.2         23.1         27.1         32.6         37           1 hour         60         10.4         11.8         16.2         19.4         22.7         27         30           1.5 hour         90         8.35         9.44         12.9         15.3         17.7         20.9         23           2 hour         120         7.14         8.07         11         13	3 min								130		
10 min         10         27.7         31.4         44.2         53.8         63.9         78.7           15 min         15         22.4         25.5         35.9         43.7         51.9         64.1         74           20 min         20         19.2         21.8         30.6         37.2         44.2         54.4         62           25 min         25         17         19.3         27         32.7         38.8         47.5         54           45 min         30         15.3         17.4         24.3         29.4         34.7         42.4         48           45 min         45         12.2         13.8         19.2         23.1         27.1         32.6         37           1 hour         60         10.4         11.8         16.2         19.4         22.7         27         30           1.5 hour         90         8.35         9.44         12.9         15.3         17.7         20.9         23           2 hour         120         7.14         8.07         11         13         15         17.6         19           3 hour         180         5.73         6.5         8.86         10.4 <th>4 min</th> <th>The second secon</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>122</th>	4 min	The second secon							122		
15 min         15         22.4         25.5         35.9         43.7         51.9         64.1         74           20 min         20         19.2         21.8         30.6         37.2         44.2         54.4         62           25 min         25         17         19.3         27         32.7         38.8         47.5         54           30 min         30         15.3         17.4         24.3         29.4         34.7         42.4         48           45 min         45         12.2         13.8         19.2         23.1         27.1         32.6         37           1 hour         60         10.4         11.8         16.2         19.4         22.7         27         30           1.5 hour         90         8.35         9.44         12.9         15.3         17.7         20.9         23           2 hour         120         7.14         8.07         11         13         15         17.6         19           3 hour         180         5.73         6.5         8.86         10.4         12         14         15           4.5 hour         360         3.92         4.48         6.17		-			60				116		
20 min         20         19.2         21.8         30.6         37.2         44.2         54.4         62           25 min         25         17         19.3         27         32.7         38.8         47.5         54           30 min         30         15.3         17.4         24.3         29.4         34.7         42.4         48           45 min         45         12.2         13.8         19.2         23.1         27.1         32.6         37           1 hour         60         10.4         11.8         16.2         19.4         22.7         27         30           1.5 hour         90         8.35         9.44         12.9         15.3         17.7         20.9         23           2 hour         120         7.14         8.07         11         13         15         17.6         19           3 hour         180         5.73         6.5         8.86         10.4         12         14         15           4.5 hour         270         4.6         5.23         7.17         8.44         9.67         11.3         12           4.5 hour         360         3.92         4.48         6.17 <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>91</th>									91		
25 min         25         17         19.3         27         32.7         38.8         47.5         54           30 min         30         15.3         17.4         24.3         29.4         34.7         42.4         48           45 min         45         12.2         13.8         19.2         23.1         27.1         32.6         37           1 hour         60         10.4         11.8         16.2         19.4         22.7         27         30           1.5 hour         90         8.35         9.44         12.9         15.3         17.7         20.9         23           2 hour         120         7.14         8.07         11         13         15         17.6         19           3 hour         180         5.73         6.5         8.86         10.4         12         14         15           4.5 hour         270         4.6         5.23         7.17         8.44         9.67         11.3         12           4 hour         360         3.92         4.48         6.17         7.28         8.34         9.75         10           9 hour         540         3.11         3.57         4.97									74.3		
30 min         30         15.3         17.4         24.3         29.4         34.7         42.4         48           45 min         45         12.2         13.8         19.2         23.1         27.1         32.6         37           1 hour         60         10.4         11.8         16.2         19.4         22.7         27         30           1.5 hour         90         8.35         9.44         12.9         15.3         17.7         20.9         23           2 hour         120         7.14         8.07         11         13         15         17.6         19           3 hour         180         5.73         6.5         8.86         10.4         12         14         15           4.5 hour         270         4.6         5.23         7.17         8.44         9.67         11.3         12           4.5 hour         360         3.92         4.48         6.17         7.28         8.34         9.75         10           9 hour         540         3.11         3.57         4.97         5.9         6.78         7.99         8           12 hour         720         2.62         3.02         4.2	20 min				30.6	37.2			62.9		
45 min         45         12.2         13.8         19.2         23.1         27.1         32.6         37           1 hour         60         10.4         11.8         16.2         19.4         22.7         27         30           1.5 hour         90         8.35         9.44         12.9         15.3         17.7         20.9         23           2 hour         120         7.14         8.07         11         13         15         17.6         19           3 hour         180         5.73         6.5         8.86         10.4         12         14         15           4.5 hour         270         4.6         5.23         7.17         8.44         9.67         11.3         12           4 hour         360         3.92         4.48         6.17         7.28         8.34         9.75         10           9 hour         540         3.11         3.57         4.97         5.9         6.78         7.99         8           12 hour         720         2.62         3.02         4.24         5.05         5.84         6.92         7.           18 hour         1080         2.03         2.34         3.	25 min		17	19.3	27		38.8	47.5	54.8		
1 hour         60         10.4         11.8         16.2         19.4         22.7         27         30           1.5 hour         90         8.35         9.44         12.9         15.3         17.7         20.9         23           2 hour         120         7.14         8.07         11         13         15         17.6         19           3 hour         180         5.73         6.5         8.86         10.4         12         14         15           4.5 hour         270         4.6         5.23         7.17         8.44         9.67         11.3         12           6 hour         360         3.92         4.48         6.17         7.28         8.34         9.75         10           9 hour         540         3.11         3.57         4.97         5.9         6.78         7.99         8           12 hour         720         2.62         3.02         4.24         5.05         5.84         6.92         7.           18 hour         1080         2.03         2.34         3.34         4.01         4.67         5.59         6           24 hour         1440         1.67         1.94	30 min		15.3	17.4				42.4	48.6		
1.5 hour         90         8.35         9.44         12.9         15.3         17.7         20.9         23           2 hour         120         7.14         8.07         11         13         15         17.6         19           3 hour         180         5.73         6.5         8.86         10.4         12         14         15           4.5 hour         270         4.6         5.23         7.17         8.44         9.67         11.3         12           6 hour         360         3.92         4.48         6.17         7.28         8.34         9.75         10           9 hour         540         3.11         3.57         4.97         5.9         6.78         7.99         8           12 hour         720         2.62         3.02         4.24         5.05         5.84         6.92         7.           18 hour         1080         2.03         2.34         3.34         4.01         4.67         5.59         6           24 hour         1440         1.67         1.94         2.78         3.35         3.93         4.73         5.           30 hour         1800         1.43         1.65	45 min		12.2	13.8	19.2	23.1	27.1	32.6	37.1		
2 hour         120         7.14         8.07         11         13         15         17.6         19           3 hour         180         5.73         6.5         8.86         10.4         12         14         15           4.5 hour         270         4.6         5.23         7.17         8.44         9.67         11.3         12           6 hour         360         3.92         4.48         6.17         7.28         8.34         9.75         10           9 hour         540         3.11         3.57         4.97         5.9         6.78         7.99         8           12 hour         720         2.62         3.02         4.24         5.05         5.84         6.92         7.           18 hour         1080         2.03         2.34         3.34         4.01         4.67         5.59         6           24 hour         1440         1.67         1.94         2.78         3.35         3.93         4.73         5.           30 hour         1800         1.43         1.65         2.38         2.89         3.4         4.11         4.           36 hour         2160         1.25         1.45	1 hour			11.8	16.2	19.4	22.7	27	30.5		
3 hour         180         5.73         6.5         8.86         10.4         12         14         15           4.5 hour         270         4.6         5.23         7.17         8.44         9.67         11.3         12           6 hour         360         3.92         4.48         6.17         7.28         8.34         9.75         10           9 hour         540         3.11         3.57         4.97         5.9         6.78         7.99         8           12 hour         720         2.62         3.02         4.24         5.05         5.84         6.92         7.           18 hour         1080         2.03         2.34         3.34         4.01         4.67         5.59         6           24 hour         1440         1.67         1.94         2.78         3.35         3.93         4.73         5.           30 hour         1800         1.43         1.65         2.38         2.89         3.4         4.11         4.           36 hour         2160         1.25         1.45         2.09         2.54         3         3.63         4.           48 hour         2880         0.999         1.16	1.5 hour		8.35	9.44	12.9		17.7	20.9	23.4		
4.5 hour         270         4.6         5.23         7.17         8.44         9.67         11.3         12           6 hour         360         3.92         4.48         6.17         7.28         8.34         9.75         10           9 hour         540         3.11         3.57         4.97         5.9         6.78         7.99         8           12 hour         720         2.62         3.02         4.24         5.05         5.84         6.92         7.           18 hour         1080         2.03         2.34         3.34         4.01         4.67         5.59         6           24 hour         1440         1.67         1.94         2.78         3.35         3.93         4.73         5.           30 hour         1800         1.43         1.65         2.38         2.89         3.4         4.11         4.           36 hour         2160         1.25         1.45         2.09         2.54         3         3.63         4.           48 hour         2880         0.999         1.16         1.68         2.05         2.42         2.93         3.           72 hour         4320         0.718         0.8	2 hour	120	7.14	8.07	11	13	15	17.6	19.6		
6 hour         360         3.92         4.48         6.17         7.28         8.34         9.75         10           9 hour         540         3.11         3.57         4.97         5.9         6.78         7.99         8           12 hour         720         2.62         3.02         4.24         5.05         5.84         6.92         7.           18 hour         1080         2.03         2.34         3.34         4.01         4.67         5.59         6           24 hour         1440         1.67         1.94         2.78         3.35         3.93         4.73         5.           30 hour         1800         1.43         1.65         2.38         2.89         3.4         4.11         4.           36 hour         2160         1.25         1.45         2.09         2.54         3         3.63         4.           48 hour         2880         0.999         1.16         1.68         2.05         2.42         2.93         3.           72 hour         4320         0.718         0.831         1.2         1.46         1.73         2.09         2.           96 hour         5760         0.564         0	3 hour		5.73	6.5	8.86	10.4	12	14	15.5		
9 hour         540         3.11         3.57         4.97         5.9         6.78         7.99         8           12 hour         720         2.62         3.02         4.24         5.05         5.84         6.92         7.           18 hour         1080         2.03         2.34         3.34         4.01         4.67         5.59         6           24 hour         1440         1.67         1.94         2.78         3.35         3.93         4.73         5.           30 hour         1800         1.43         1.65         2.38         2.89         3.4         4.11         4.           36 hour         2160         1.25         1.45         2.09         2.54         3         3.63         4.           48 hour         2880         0.999         1.16         1.68         2.05         2.42         2.93         3.           72 hour         4320         0.718         0.831         1.2         1.46         1.73         2.09         2.           96 hour         5760         0.564         0.65         0.932         1.13         1.34         1.6         1.           120 hour         7200         0.466         <	4.5 hour	270	4.6	5.23	7.17	8.44	9.67	11.3	12.5		
12 hour         720         2.62         3.02         4.24         5.05         5.84         6.92         7.           18 hour         1080         2.03         2.34         3.34         4.01         4.67         5.59         6           24 hour         1440         1.67         1.94         2.78         3.35         3.93         4.73         5.           30 hour         1800         1.43         1.65         2.38         2.89         3.4         4.11         4.           36 hour         2160         1.25         1.45         2.09         2.54         3         3.63         4.           48 hour         2880         0.999         1.16         1.68         2.05         2.42         2.93         3.           72 hour         4320         0.718         0.831         1.2         1.46         1.73         2.09         2.           96 hour         5760         0.564         0.65         0.932         1.13         1.34         1.6         1.           120 hour         7200         0.466         0.536         0.762         0.921         1.08         1.29         1.           144 hour         8640         0.4	6 hour	360	3.92	4.48	6.17	7.28	8.34	9.75	10.8		
18 hour         1080         2.03         2.34         3.34         4.01         4.67         5.59         6           24 hour         1440         1.67         1.94         2.78         3.35         3.93         4.73         5.           30 hour         1800         1.43         1.65         2.38         2.89         3.4         4.11         4.           36 hour         2160         1.25         1.45         2.09         2.54         3         3.63         4.           48 hour         2880         0.999         1.16         1.68         2.05         2.42         2.93         3.           72 hour         4320         0.718         0.831         1.2         1.46         1.73         2.09         2.           96 hour         5760         0.564         0.65         0.932         1.13         1.34         1.6         1.3           120 hour         7200         0.466         0.536         0.762         0.921         1.08         1.29         1.           144 hour         8640         0.4         0.459         0.646         0.776         0.904         1.08         1.	9 hour	540	3.11	3.57	4.97	5.9	6.78	7.99	8.9		
24 hour         1440         1.67         1.94         2.78         3.35         3.93         4.73         5.           30 hour         1800         1.43         1.65         2.38         2.89         3.4         4.11         4.0           36 hour         2160         1.25         1.45         2.09         2.54         3         3.63         4.           48 hour         2880         0.999         1.16         1.68         2.05         2.42         2.93         3.           72 hour         4320         0.718         0.831         1.2         1.46         1.73         2.09         2.           96 hour         5760         0.564         0.65         0.932         1.13         1.34         1.6         1.3           120 hour         7200         0.466         0.536         0.762         0.921         1.08         1.29         1.           144 hour         8640         0.4         0.459         0.646         0.776         0.904         1.08         1.	12 hour	720	2.62	3.02	4.24	5.05	5.84	6.92	7.75		
30 hour         1800         1.43         1.65         2.38         2.89         3.4         4.11         4.6           36 hour         2160         1.25         1.45         2.09         2.54         3         3.63         4.           48 hour         2880         0.999         1.16         1.68         2.05         2.42         2.93         3.           72 hour         4320         0.718         0.831         1.2         1.46         1.73         2.09         2.           96 hour         5760         0.564         0.65         0.932         1.13         1.34         1.6         1.3           120 hour         7200         0.466         0.536         0.762         0.921         1.08         1.29         1.           144 hour         8640         0.4         0.459         0.646         0.776         0.904         1.08         1.	18 hour	1080	2.03	2.34	3.34	4.01	4.67	5.59	6.3		
36 hour         2160         1.25         1.45         2.09         2.54         3         3.63         4.           48 hour         2880         0.999         1.16         1.68         2.05         2.42         2.93         3.           72 hour         4320         0.718         0.831         1.2         1.46         1.73         2.09         2.           96 hour         5760         0.564         0.65         0.932         1.13         1.34         1.6         1.           120 hour         7200         0.466         0.536         0.762         0.921         1.08         1.29         1.           144 hour         8640         0.4         0.459         0.646         0.776         0.904         1.08         1.	24 hour	1440	1.67	1.94	2.78	3.35	3.93	4.73	5.36		
48 hour         2880         0.999         1.16         1.68         2.05         2.42         2.93         3.           72 hour         4320         0.718         0.831         1.2         1.46         1.73         2.09         2.           96 hour         5760         0.564         0.65         0.932         1.13         1.34         1.6         1.6           120 hour         7200         0.466         0.536         0.762         0.921         1.08         1.29         1.           144 hour         8640         0.4         0.459         0.646         0.776         0.904         1.08         1.	30 hour	1800	1.43	1.65	2.38	2.89	3.4	4.11	4.67		
72 hour         4320         0.718         0.831         1.2         1.46         1.73         2.09         2.           96 hour         5760         0.564         0.65         0.932         1.13         1.34         1.6         1.           120 hour         7200         0.466         0.536         0.762         0.921         1.08         1.29         1.           144 hour         8640         0.4         0.459         0.646         0.776         0.904         1.08         1.	36 hour	2160	1.25	1.45	2.09	2.54	3	3.63	4.13		
96 hour         5760         0.564         0.65         0.932         1.13         1.34         1.6         1.6           120 hour         7200         0.466         0.536         0.762         0.921         1.08         1.29         1.4           144 hour         8640         0.4         0.459         0.646         0.776         0.904         1.08         1.	48 hour	2880	0.999	1.16	1.68	2.05	2.42	2.93	3.34		
120 hour         7200         0.466         0.536         0.762         0.921         1.08         1.29         1.           144 hour         8640         0.4         0.459         0.646         0.776         0.904         1.08         1.	72 hour	4320	0.718	0.831	1.2	1.46	1.73	2.09	2.38		
<b>144 hour 8640</b> 0.4 0.459 0.646 0.776 0.904 1.08 1.	96 hour	5760	0.564	0.65	0.932	1.13	1.34	1.6	1.82		
211	120 hour	7200	0.466	0.536	0.762	0.921	1.08	1.29	1.47		
168 hour 10080 0.351 0.403 0.563 0.671 0.776 0.928 1.	144 hour	8640	0.4	0.459	0.646	0.776	0.904	1.08	1.22		
	168 hour	10080	0.351	0.403	0.563	0.671	0.776	0.928	1.05		

Pre Development

# 177/179 Campbell St.

Time of Concentration						
C <sub>1</sub> ,10	25	mm	10% AEP, 60min Rainfall			
A=	2618	m2	Insert Catchment Area			
A=	0.00262	Km <sup>2</sup>	Calculated in Km2			
S <sub>e</sub> =	S <sub>e</sub> = -		Insert Catchment Grade			
L=	-	Km	Insert Flow Length			
t <sub>c</sub> =	-	mins	Tc Calculated			
5 mins Whole Number Tc						

### Stormwater Calculations

Impervious Area					
Existing Hardstand Area = 2364.8 m2					
<b>Total Area =</b> 2618 m2					
Fraction Impervious =	90%				

Runoff Coefficient						
Fraction impervious =	90%					
C1,10 =	0.100	Formula - Refer ARR Book VIII				
C10 =						

Frequency Conversion Factors -Refer AR&R 1987										
ARI (years)	1	2	5	10	20	40	60	80	50	100
Factor, F <sub>y</sub>	0.8	0.85	0.95	1	1.05	1.2	1.17	1.19	1.15	1.2

Peak Catchment Flows For Varied 5% AEP							
S	Storm Durations						
AEP	Duration (min)	Flow (m <sup>3</sup> /s)					
5%	5	0.053					
5%	10	0.040					
5%	15	0.033					
5%	20	0.028					
5%	25	0.024					
5%	30	0.022					
5%	45	0.017					
5%	5% 60 0.014						
5%	5% 90 0.011						
5%	120	0.009					
5%	180	0.008					
5%	270	0.006					

Peak Catchment Flows For Given AEP at						
T.O.C.						
AEP	I <sub>tc,Y</sub> (mm/h)	Flow (m <sup>3</sup> /s)				
63.20%	38.2	0.0183				
50.00%	43.2	0.0220				
20.00%	60.0	0.0341				
10.00%	72.1	0.0432				
5.00%	84.7	0.0532				
2.00%	102.0	0.0702				
1.00%	116.0	0.0833				

Hardstand (100% Impervious)				
Roof	704			
Concrete Ground Resd.	229			
Carpark / Driveway	841			
Impervious Area	1774	m2		

Landscaping (70% Impervious)					
Gravel and Grass	844				
Impervious Area	590.8	m2			

#### **APPENDIX D**

#### **Stormwater Detention Calculations**



Johnstone McGee & Gandy

incorporating Dale P Luck & Associates

177 & 179 CAMPBELL STREET

Engineers & Planners

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Rainfall mm/hr								
		Annual Ex	ceedance Pi	obability (	AEP) mm/hr			
Duration	Duration (min)	63.20%	50%	20%	10%	5%	2%	1%
1 min	1	61	69.1	96.7	117	138	169	194
2 min	2	52.4	59	80	94.7	109	127	142
3 min	3	46.3	52.2	71.4	84.9	98.6	116	130
4 min	4	41.8	47.2	65	77.8	91	108	122
5 min	5	38.2	43.2	60	72.1	84.7	102	116
10 min	10	27.7	31.4	44.2	53.8	63.9	78.7	91
15 min	15	22.4	25.5	35.9	43.7	51.9	64.1	74.3
20 min	20	19.2	21.8	30.6	37.2	44.2	54.4	62.9
25 min	25	17	19.3	27	32.7	38.8	47.5	54.8
30 min	30	15.3	17.4	24.3	29.4	34.7	42.4	48.6
45 min	45	12.2	13.8	19.2	23.1	27.1	32.6	37.1
1 hour	60	10.4	11.8	16.2	19.4	22.7	27	30.5
1.5 hour	90	8.35	9.44	12.9	15.3	17.7	20.9	23.4
2 hour	120	7.14	8.07	11	13	15	17.6	19.6
3 hour	180	5.73	6.5	8.86	10.4	12	14	15.5
4.5 hour	270	4.6	5.23	7.17	8.44	9.67	11.3	12.5
6 hour	360	3.92	4.48	6.17	7.28	8.34	9.75	10.8
9 hour	540	3.11	3.57	4.97	5.9	6.78	7.99	8.9
12 hour	720	2.62	3.02	4.24	5.05	5.84	6.92	7.75
18 hour	1080	2.03	2.34	3.34	4.01	4.67	5.59	6.3
24 hour	1440	1.67	1.94	2.78	3.35	3.93	4.73	5.36
30 hour	1800	1.43	1.65	2.38	2.89	3.4	4.11	4.67
36 hour	2160	1.25	1.45	2.09	2.54	3	3.63	4.13
48 hour	2880	0.999	1.16	1.68	2.05	2.42	2.93	3.34
72 hour	4320	0.718	0.831	1.2	1.46	1.73	2.09	2.38
96 hour	5760	0.564	0.65	0.932	1.13	1.34	1.6	1.82
120 hour	7200	0.466	0.536	0.762	0.921	1.08	1.29	1.47
144 hour	8640	0.4	0.459	0.646	0.776	0.904	1.08	1.22
168 hour	10080	0.351	0.403	0.563	0.671	0.776	0.928	1.05

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#### 177 & 179 CAMPBELL STREET - HOBART

#### STORMWATER CALCULATION - PRE DEVELOPMENT

Time of Concentration						
C <sub>1</sub> ,10	25	mm	10% AEP, 60min Rainfall			
A= 2,567.00		m2	Insert Catchment Area			
A=	A= 0.00257		Calculated in Km2			
Tc	15	mins	Whole Number Tc			

Impervious Area					
Existing Hardstand Area=	2,159.90	m2			
Total Area =	2,567.00	m2			
Fraction Impervious =	0.84				

Runoff Coefficient						
Fraction impervious =	84.14%					
C1,10 =	0.10	Formula - Refer ARR Book VIII				
C10 =	0.77	Runoff Coefficient				

	Frequency Conversion Factors -Refer AR&R 1987									
ARI (years)	1	2	5	10	20	40	60	80	50	100
Factor, F <sub>y</sub>	0.8	0.85	0.95	1	1.05	1.2	1.17	1.19	1.15	1.2

Peak Catchment Flows For Varied 5% AEP							
S	Storm Durations						
AEP	Duration (min)	Flow (m³/s)					
5%	5	0.049					
5%	10	0.037					
5%	15	0.030					
5%	20	0.026					
5%	25	0.022					
5%	30	0.020					
5%	45	0.016					
5%	60	0.013					
5%	90	0.010					
5%	120	0.009					
5%	180	0.007					
5%	270	0.006					

Peak Catchment Flows For Given AEP at T.O.C.						
AEP	I <sub>tc,Y</sub> (mm/h)	Flow (m³/s)				
63.20%	22.4	0.0099				
50.00%	25.5	0.0120				
20.00%	35.9	0.0188				
10.00%	43.7	0.0241				
5.00%	51.9	0.0301				
2.00%	64.1	0.0407				
1.00%	74.3	0.0492				

Garden (50%)				
Vegetation Area	155.00	m2		
Impervious Area	77.50	m2		

Gravel (60%)					
Carpark Gravel Area	824.00	m2			
Impervious Area	494.40	m2			

Hardstand Area (100% Impervious)				
Roof	655	m2		
Concrete Floor	464	m2		
Asphalt Carpark & Driveway	469	m2		
Impervious Area	1588	m2		

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#### 177 & 179 CAMPBELL STREET - HOBART

#### STORMWATER CALCULATION - POST DEVELOPMENT

	Time of Concentration						
	C <sub>1</sub> ,10	25	mm	10% AEP, 60min Rainfall			
	A= 2,567.00 A= 0.00257		m2	Insert Catchment Area			
			Km <sup>2</sup>	Calculated in Km2			
	Tc=	15	mins	Whole Number Tc			

Impervious Area					
Existing Hardstand Area=	2,499.00	m2			
Total Area =	2,567.00	m2			
Fraction Impervious =	97%				

Runoff Coefficient						
Fraction impervious =	97%					
C1,10 =	0.100	Formula - Refer ARR Book VIII				
C10 =	0.88	Runoff Coefficient				

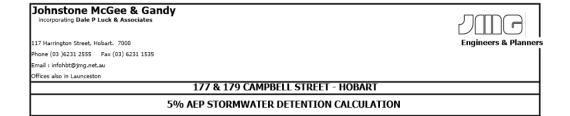
	Frequency Conversion Factors -Refer AR&R 1987									
ARI (years)	ARI (years) 1 2 5 10 20 40 60 80 50 100							100		
Factor, F <sub>y</sub>	0.8	0.85	0.95	1	1.05	1.2	1.17	1.19	1.15	1.2

Peak Catchment Flows For Varied 5% AEP						
Storm Durations						
AEP	Duration (min)	Flow (m <sup>3</sup> /s)				
5%	5	0.056				
5%	10	0.042				
5%	15	0.034				
5%	20	0.029				
5%	25	0.026				
5%	30	0.023				
5%	45	0.018				
5%	60	0.015				
5%	90	0.012				
5%	120	0.010				
5%	180	0.008				
5%	270	0.006				

Peak Catchment Flows For Given AEP at T.O.C.							
AEP I <sub>tc,Y</sub> (mm/h) Flow (m <sup>3</sup> /s)							
63.20%	22.4	0.0112					
50.00%	25.5	0.0136					
20.00%	35.9	0.0214					
10.00%	43.7	0.0274					
5.00%	51.9	0.0342					
2.00%	64.1	0.0462					
1.00%	74.3	0.0559					

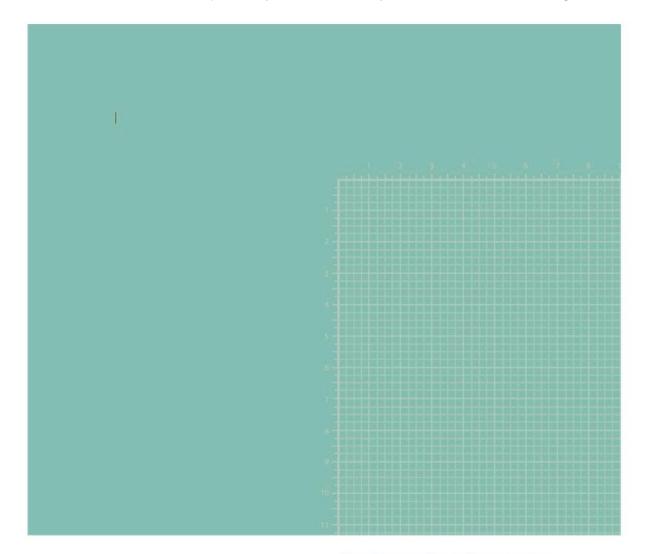
Hardstand Area (100% Impervious)						
Roof + Building Line	1,343.00	m2				
Driveway	300.00	m2				
Concrete Floor	754.00	m2				
Impervious Area	2,397.00	m2				

Vegetation (60% Impervious)						
Garden Beds	170	m2				
Impervious Area	102	m2				



Catchment & Flow Details			Comments
Catchment Area = 0.26 Ha		На	
10 Year Runoff Coefficient = 0.88 -		-	
20 Year Effective Catchment Area =	0.24	На	
Restricted Outflow Requirement =	0.0301	m3/s	Site Runoff: pre development 5% AEP, 20min (ToC) storm duration.

Detention Calculation							
Storm Duration	5% AEP	lp	Qp	V1	Smax		
(min)	Intensity (mm/hr)	(m3/s)	(m3/s)	(m3)	(m3)		
1	138.00	0.091	0.030	5.45	3.64		
2	109.00	0.072	0.030	8.61	5.00		
3	98.60	0.065	0.030	11.68	6.27		
4	91.00	0.060	0.030	14.37	7.15		
5	84.70	0.056	0.030	16.72	7.70		
10	63.90	0.042	0.030	25.23	7.19		
15	51.90	0.034	0.030	30.73	3.67		



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# 175-179 Campbell Street, Stormwater Management Plan

Prepared For: SOLUTIONSWON GROUP PTY LTD



#### **Document Information**

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**Revision History** Rev Description Prepared by Reviewed by Authorised by No. 00 175-179 Campbell St, SWMP Mark Smith John Holmes Max W. Möller 08/07/2021 Corrections following peer review Mark Smith Max W. Möller 29/05/2022 01 John Holmes section 3.3, update to pre/post dev depth maps. Minor formatting changes.

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29<sup>th</sup> May 2022

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#### 1. Introduction

Flüssig Engineering has been engaged by **Solutionswon Group Pty Ltd** to undertake a site-specific Stormwater Management Plan for the property at number 175-179 Campbell Street, Hobart in the **City of Hobart** municipality. The purpose of this report is to determine the quantity and quality properties of stormwater runoff on the existing and post-development lot drainage for the 5% AEP.

#### 1.1 Objectives and Scope

This stormwater analysis has been written to meet the standards of the Hobart City Council Interim Planning Scheme 2015 (HIPS, 2015), with the intent of understanding the development influences on local runoff. The objectives of this study are:

- Provide an assessment of the current and proposed site runoff for the 5% AEP Storm event ensuring
  there is no increase in runoff from the development, or any increase can be catered for by receiving
  infrastructure.
- Provide an assessment of the receiving infrastructure and its capacity.
- Provide quality mitigation methods which met water pollutant reduction standards of 80% TSS, 45% TN and 45% P.
- · Provide maintenance regimes for any mitigation methods.
- Provide recommendations for potential future development, where appropriate.

#### 1.2 Limitations

This study is limited to the objectives of the client engagement, the availability and reliability of data, and including the following:

- The quantity model is limited 5% AEP worst case temporal design storm.
- All parameters have been derived from best practice manuals and available relevant studies (if applicable) in the area.
- All provided data by the client or government bodies for the purpose of this study is deemed fit for purpose and has not been checked for accuracy.
- The study is to determine the effects of the new development on stormwater runoff and should not be used outside the specified area without further assessment.

#### 2. Site Characteristics

#### 2.1 Site Location

175-179 Campbell Street, Hobart is located along the Park Street Rivulet. The properties total approximately 2,430m<sup>2</sup> (Figure 1). The site is in inner city Hobart and is listed as mixed urban use.

Figure 1 below outlines the approximate location for the site at 175-179 Campbell Street.



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Figure 1. Development Location, 175-179 Campbell Street, Hobart

#### 2.2 Topography

The 2D surface model was taken from *Mt Wellington LiDAR 2011* to create a 1m and cell size DEM. For the purposes of this report, 1m cells are enough to capture accurate flow paths. The DEM with hill shading can be seen below (Figure 2).



Figure 2. 1m DEM (Hill shade) of Property Area



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#### 2.3 Proposed Development

The proposed development consists of the construction of multi storey townhouse complex at the rear of 175-179 Campbell Street, currently a partially sealed carpark. This includes the redivision of a DN525 stormwater main to allow for footings.

#### 3. Stormwater Quantity

#### 3.1 Catchment

The following Table 1 states the adopted hydrological parameters for the RAFTS catchment.

Table 1. Parameters for RAFTS catchment

Catchn		Initial Loss	Continuing Loss	Manning's N	Manning's N	Non-linearity
Area (		Perv/imp (mm)	Perv/imp (mm/hr)	pervious	impervious	factor
0.24	3	10/1	3.0/0.0	0.035	0.018	-0.285

#### 3.1.1 Design Rainfall Events

Design storm durations and temporal pattern were calculated using Australian Rainfall and Runoff 2019 (ARR19) guidelines, running ten temporal pattern events through each duration to determine the worst-case duration using the median temporal pattern. below shows the 5% AEP 10min duration temporal pattern 8 rainfall event as the storm event.

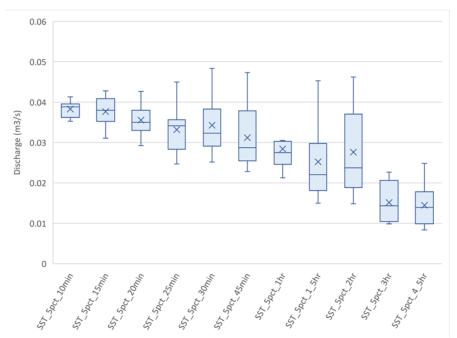


Figure 3. 1% Box and Whisker Plot

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#### 3.1.2 Land use

Pervious and impervious land use for the development both pre- and post-development were derived from plans and aerial imagery. Land use values are as follows in Table 2.

**Table 2. Site Characteristics** 

Catchment	Area (ha)	Area (ha)  Average Slope (%)  Total Land use pervious/ impervious (ha)		Storm duration and pattern
Pre- Development	0.243	2.6	0.040/ 0.203	5% 10-minute storm pattern 8
Post- Development	0.243	2.6	0.02/ 0.223	5% 10-minute storm pattern 8

#### 3.1.3 Roughness (Manning's n)

Roughness values for this model were derived from the ARR 2019 Guidelines. The Manning's values are listed in Table 3.

Table 3. Manning's Coefficients (ARR 2019)

La	ınd Use	Roads	Open Channel	Rural	Residential	Parks	Buildings	Piped Infrastructure
Ma	nning's n	0.018	0.035	0.04	0.045	0.05	0.3	0.013

#### 3.2 Development Runoff

Stormwater runoff from the development site has been assessed under pre- and post-development models to determine the potential impact the development at 175-179 Campbell Street has on the immediate local flows. As per planning guidelines it is a requirement that this does not worsen from pre to post development.

Using the above parameters, the site was calculated using Infoworks ICM software and ARR19 best practice manuals. Site characteristics for the pre- and post-development model were summarised in Table 2. Site Characteristics.

#### 3.3 Model Results

The pre- and post-development scenarios were calculated using Infoworks ICM software against the 5% AEP. The storm durations were derived from the worst case median temporal pattern for these two events which were both 10 minutes duration.

The pre and post conditions can be seen in Table 4 below showing the peak discharge and increase in peak discharge from pre to post development.



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Table 4. Discharge rates pre- and post-development

Design Event (AEP)	Peak Discharge (L/	Difference (L/s)	
Design Event (AEF)	Pre-Development	Post- Development	Difference (L/S)
5%	37	39	2

As per the Hobart City Council Interim Planning Scheme 2015, E7.0 (Stormwater Management) the post-development allowable site discharge must not exceed the pre-development site discharge. As can be seen from Table 4, this is exceeded in the 5% AEP by a peak discharge of 39 L/s, 2 L/s more than the allowable site discharge of 37 L/s. Therefore, the site must detain the difference using an onsite stormwater detention (OSD) system.

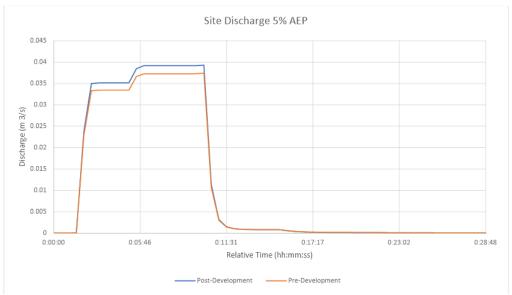


Figure 4. Site Discharge Pre- Vs Post-development comparison

#### 3.4 On-Site Detention Sizing and Configuration

Pre- and post-development 5% AEP modelling for the site shows a total volume of 19.594 m³ post-development, 0.88m³ more than pre-development flows of 18.714. As per ARR2019, Book 9, Section 5.5.1 "An Integrated Approach" – Figure 5.6, a single 880 Litre detention tank is proposed to be discharged into existing stormwater network.

#### 3.5 Maintenance

To ensure ongoing operation of the tanks, strata owners/body corporate would be required to perform regular maintenance on OSD devices to ensure they remain in good working order. This would include but not be limited to the tasks described in Table 5.



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**Table 5. Concept Maintenance Plan** 

Task	Action	Frequency
General Cleaning – pits, pipe, filters etc.	Clear all debris from tank and tank filters, ensure operational.	Approximately every 6 months
Specialised cleaning and inspection	Inspect all pipes, inflow and outflow – flush if required. Inspect all filters replace if required. Inspect main tank for defects.	Yearly
Maintenance	Perform detailed inspection and maintenance of tank and associated infrastructure by a qualified person.	Every 5 years

The above maintenance plan is generic and based on best practise advice. Specific maintenance plans should be created for each specific device upon purchasing or confirmation of design.

#### 3.6 Existing Stormwater Network Capacity

The site currently drains to an existing council DN525 stormwater pipe that runs through the site and joins into a DN1800 trunk main (piped Park Street Rivulet). The DN525 has an upstream contributing catchment of approximately 2 ha of commercial zoned area (largely impervious). As can be seen from Figure 5, with the addition of upstream Park Street Rivulet catchment and Providence Rivulet the existing infrastructure is well under capacity for even a 5% AEP event, flooding the existing car park and neighbouring properties.

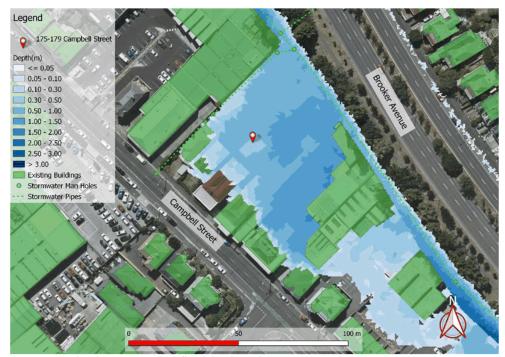


Figure 5. Pre-development 5% AEP, flood depths and extents



29<sup>th</sup> May 2022

With the introduction of the lowered car park the basement carpark flooding occurs with depths of up to 1.5m (Figure 7). Figure 7 Shows how the Park Street Rivulet floods the proposed re-aligned DN525 restricting any additional flow from contributing catchments and flooding 175-179 Campbell Street and surrounding properties.

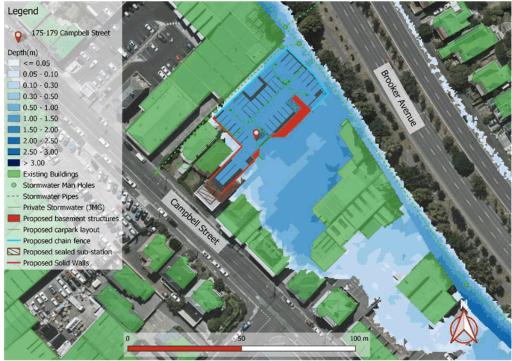


Figure 6. Post - Development 1% AEP at 2100, flood depths and extents

Figure 8 shows the capacity of the DN525 Stormwater infrastructure with only the contributing catchments to this section of pipe included (localised rainfall). In this long section current requirement is 34 L/s at post development contribution well under the pipe's maximum 92.5 L/S free flowing capacity.



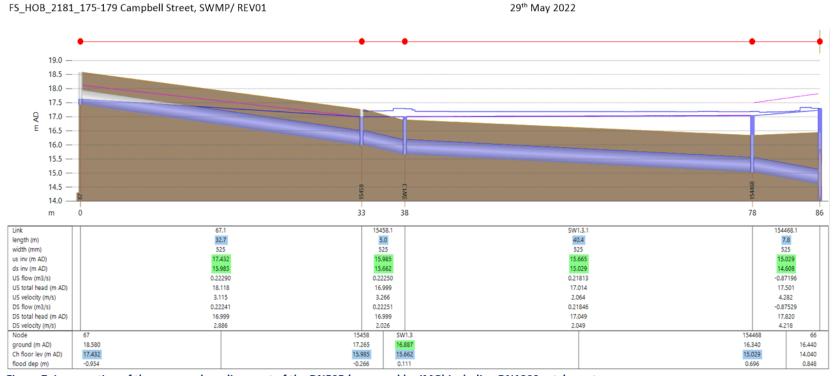


Figure 7. Long section of the proposed re-alignment of the DN525 (proposed by JMG) including DN1800 catchments.



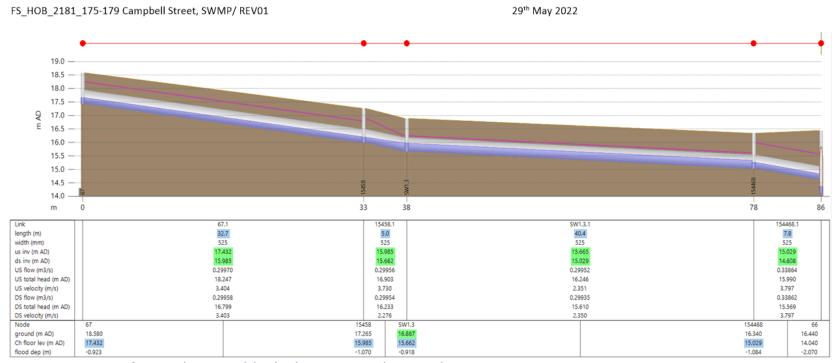


Figure 8. Long Section of proposed DN525 with localised to DN525 contributing catchments.



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#### 3.7 Quantity Summary

This concept quantity report is based off limited available information and guidelines from the Hobart City Council in line with the Hobart Interim Planning Scheme. The following is a summary of the concept requirements for stormwater management for the development at 175-179 Campbell Street, Hobart:

- 1. Site exceeds pre-development maximum discharge by 0.20 L/s for the 5% AEP.
- 2. Recommended onsite storage detention of 880 litres for the 10 min storm duration.
- 3. Site drainage to have minimum 1.0kL tank as OSD for site.
- New building must provide a free flowing path to allow for overland flow path for the 1% and 5% AEP runoff around development site.

#### 4. Stormwater Quality

Water quality modelling for the site has been undertaken with the urban stormwater improvement. conceptualisation software MUSIC. The modelling conducted in MUSIC has been done in accordance with MUSIC Modelling Guidelines (BMT WBM, August 2019) and the Tasmanian State Stormwater Strategy. This document provides a guide to water quality modelling methodology and outlines the assumptions that should be made when selecting input parameters.

Recommendation for the improvement of the water quality on site would include the diversion of stormwater flows from the subdivision to a primary and secondary treatment (treatment train). This would reduce the pollutants in the receiving waters further downstream and be a safe design option if future usage of this sub catchment provides higher pollutant storm water runoff.

#### 4.1 Stormwater Quality Treatment (Construction phase)

During construction, many pollutants are generated from various sources. These pollutants can easily be captured in stormwater runoff and introduced into the downstream receiving environment, polluting the waterways. Some of the main construction phase pollutants are described below:

- Litter from construction Material packaging, paper, plastic, food packaging, off cuts etc.
- Sediment erosion and transports from excavated material and fresh surfaces.
- Hydrocarbons equipment and machinery
- · Toxic material cement, solvents, paints, cleaning agents etc.
- pH altering substances cement, cleaning agents etc.

Construction phase pollutants should be planned and mitigated for by a designed site-specific SWMP as part of the drawing set. This should detail controls including, but not limited to:

- Diversion of upslope water (where applicable)
- · Stabilised exit/entry points
- Minimise site disturbance where possible.
- Implement sediment control along downslope boundaries.
- · Appropriate location and protection for stockpiles
- Capture on-site runoff that may contain pollutants.
- Maintain control measures.
- Stabilise site after disturbance (revegetate etc)



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#### 4.2 Stormwater Quality Modelling

Stormwater pollutant modelling for Campbell Street development was undertaken using Model for Urban Stormwater Improvement Conceptualisation (MUSIC) software, version 6.3.0 under the guidelines of the State Stormwater Strategy and Interim Planning Scheme.

This model splits the catchment into the following typical areas:

- Roof Catchment
- · Road Catchment
- Driveways
- Revegetated land

The following fraction impervious and land areas were adopted in the modelling as per the concept design measurements. Revegetated land was left to freely drain to the node as there is no mechanism to drain this area to a treatment device. See Table 6 below for fraction imperviousness (fi).

**Table 6. Adopted Fraction Impervious** 

Catchment Area (ha)	Roof		Driveways		Revegetated	
(IIa)	Area (ha)	fi	Area (ha)	fi	Area (ha)	fi
0.243	0.203	1	0.02	0.9	0.02	0

#### 4.2.1 Council Planning Quality Removal Standards

The Hobart Interim Planning Scheme 2015 has adopted the pollutant removal targets and best practice from the State Stormwater Strategy 2010. See Table 7 for target removal rates.

**Table 7. State Stormwater Strategy Pollutant Removal Targets** 

Parameter	Result Pollutant Retention on Developed Site
Total Suspended Solids (TSS) (kg/yr)	80%
Total Phosphorous (TP) (kg/yr)	45%
Total Nitrogen (TN) (kg/yr)	45%
Total Pollutants (kg/yr)	100%

#### 4.3 Treatment Train

To achieve stormwater pollutant removal targets outlined above and considering site constraints, this model utilised a primary and secondary proprietary treatment. The treatment train consists of a primary stormwater tank, followed by a gross pollutant trap which receives flow from new ground impervious areas and roofs (via rainwater tank). The driveway is captured by a Hydrochannel or similar.



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#### **Quality Results** 4.4

The MUSIC pollutant load reductions can be seen detailed in Table 8 below. As can be seen when comparing the MUSIC results to the required state stormwater strategy target load reductions, the specified treatment train outlined above and as seen in Table 8, shows that all targets either meet or exceed reduction targets.

Table 8. Pollutant Removal Achieved vs Targets.

Parameter	Required Load Reduction (%)	MUSIC Modelled Load Reduction (%)	State Stormwater Targets Achieved
Total Suspended Solids (TSS) (kg/yr)	80.0	79.9	Υ
Total Phosphorous (TP) (kg/yr)	45.0	76.6	Y
Total Nitrogen (TN) (kg/yr)	45.0	45.2	Y
Total Pollutants (kg/yr)	90.0	99.2	Y

Based on the water quality assessment using the MUSIC software, it is found that the pollutant reduction improvement can be achieved by adopting the Stormwater Quality Improvement Devices (SQIDs) specified in Table 9.

Table 9. Required SQIDS

Stormwater Quality Improvement Device	Quantity
Detention Tank	1
Spel Hydrosystem HS.800	1







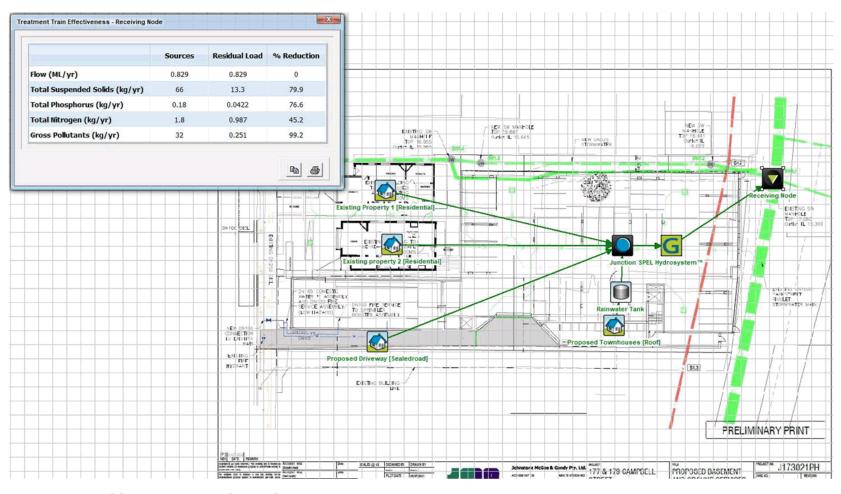


Figure 9. Music Model Treatment Train and removal statistics



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#### 4.5 SQID Maintenance

To ensure ongoing operation of all treatment systems the strata management group would be required to perform regular maintenance on all treatment devises to ensure they remain in good working order. This would include, but not be limited to, information described in Table 10.

Table 10. Concept Maintenance Plan

Task	Action	Frequency
General Cleaning	Clear all pollutants from storage and device filters, ensure operational	Approximately every 6 months
Specialised cleaning and inspection	Inspect all storage, inflow and outflow – clean and flush if required. Inspect all filters replace if required. Visually inspect main device for defects	Yearly
Maintenance	Perform detailed inspection and maintenance of tank and associated infrastructure by a qualified person.	Every 5 years

The above maintenance plan is generic and based on removal rates and best practise advise. Specific maintenance plans should be created for each specific device upon purchasing or confirmation of design.

#### 4.6 Quality Summary

Flüssig Spatial recommends the following be undertaken to ensure the ongoing stormwater quality from the developed site:

- 1. Construction quality control should be implemented to prevent pollution during construction.
- 2. Installation of treatment devices in the order specified in this document.
- Maintenance plans need to be created and adhered to ensure the ongoing operation of the systems.

#### 5. Conclusion

The Concept Stormwater Management Plan for 175-179 Campbell Street, Hobart development site has reviewed the post development quantity and quality scenarios. Post-development quantity and quality has been assessed against the State Stormwater Strategy to ensure the post-development flows meet specified standards.

The following conclusions were derived in this report:

- A comparison of the post-development peak flows for the 5% AEP storm event were undertaken against pre-development discharge and found to meet the allowable discharge using OSD measure which include 1.0Kl detention tank.
- 2. 1% and 5% AEP OFP is considered through the site and car park must maintain a free flow through the car park.
- SQIDs designed and sized using MUSIC can achieve required pollutant removal through the installation of said primary treatment devices.

Under the Stormwater Management Plan, the development site will meet current specified standards for both quantity and quality control.



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#### 6. Limitations

Flüssig Engineers were engaged by **Solutionswon Group Pty Ltd**, for the purpose of a site-specific Stormwater Management Plan for 175-179 Campbell Street, Hobart, as per E7.0 of the Hobart Interim Planning Scheme 2015. This report is deemed suitable for purpose at the time of undertaking the study. If the conditions of the development should change, the plan will need to be reviewed against all changes.

This report is to be used in full and may not be used in part to support any other objective other than what has been outlined within, unless specific written approval to do otherwise is granted by Flüssig Engineers.

Flüssig Engineers accepts no responsibility for the accuracy of third-party documents supplied for the purpose of this Stormwater Management Plan.



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# 175-179 Campbell Street, Flood Hazard Report

Prepared For: SOLUTIONSWON GROUP PTY LTD



#### **Document Information**

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Revi	Revision History							
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00	175-179 Campbell St, Flood Report	Mark Smith	John Holmes	Max W. Möller	07/07/2021			
01	Appendix A & B added	Mark Smith	John Holmes	Max Moller	13/10/2021			
02	Appendix A Amended	Mark Smith	John Holmes	Max Moller	18/02/2022			
03	Additional detail re. storm verification, boundary conditions, blockage and time to inundation	Mark Smith	John Holmes	Max Moller	31/05/2022			

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APPENDIX A: Risk Assessment Matrix APPENDIX B: A3 Inundation Maps

FS\_HOB\_2181\_175-179 Campbell Street, Flood Report/ REV03

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#### 1. Introduction

Flüssig Engineering has been engaged by **Solutionswon Group Pty Ltd** to undertake a site-specific Flood Hazard Report for the property at number 175-179 Campbell Street, Hobart in the **City of Hobart** municipality. The purpose of this report is to determine the flood characteristics on the existing and post-development flood hazard scenarios for the 1% AEP plus climate change storm event.

#### 1.1 Objectives and Scope

This flood analysis has been written to meet the standards of the Hobart City Council Interim Planning Scheme 2015 (HIPS, 2015), with the intent of understanding the development risk with flooding. The objectives of this study are:

- Provide an assessment of the flood characteristics through the site under the 1% AEP plus climate change (CC) scenario.
- Provide comparison of flooding for pre- and post-development against acceptable solution and performance criteria.
- Provide flood mitigation recommendations for potential future development, where appropriate.

#### 1.2 Limitations

This study is limited to the objectives of the client engagement, the availability and reliability of data, and including the following:

- The flood model is limited to a 1% AEP + CC worst case duration design storm.
- All parameters have been derived from best practice manuals and available relevant studies (if applicable) in the area.
- All provided data by the client or government bodies for the purpose of this study is deemed fit for purpose and has not been checked for accuracy.
- The study is to determine the effects of the new development on flooding behaviour and should not be used as a full flood study outside the specified area without further assessment.

#### 2. Model Build

#### 2.1 Overview of Catchment

The property at 175-179 Campbell Street, Hobart is located along the Park Street Rivulet. At this point the contributing catchment is made up of the upper Park Street Rivulet, Providence Gully Rivulet and a small catchment from the Brooker Highway to Church Street, North Hobart (Figure 1). These total approximately 283 ha and drain from a maximum height of approximately 322 mAHD to the site at approximately 16 mAHD. The land use is predominantly General Residential and Inner Residential with areas of light industrial and commercial zones, with the specific site being listed as mixed urban use.

Figure 1 below outlines the approximate contributing catchment for the site at 175-179 Campbell Street.



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Figure 1. Contributing Catchment, 175-179 Campbell Street, Hobart

#### 2.2 Hydrology

The upper catchment was modelled using Infoworks ICM hydrology (RAFTS) module, which uses the Australian designed Laurenson method to calculate runoff to the outlet. The catchment characteristics (% impervious, roughness etc.) were taken from best practice manuals. The hydrology catchment was connected to the 2D hydraulic model.

The following Table 1 states the adopted hydrological parameters for the RAFTS catchment.

Table 1. Parameters for RAFTS catchment

Catchment	Initial Loss	Continuing Loss	Manning's N	Manning's N	Non-linearity
Area (ha)	Perv/imp (mm)	Perv/imp (mm/hr)	pervious	impervious	factor
283	10/1	3.0/0.0	0.045	0.018	

#### 2.2.1 Design Rainfall Events

HIPS 2015 requires modelling of flood events of 1% AEP (100yr ARI) for the life of the development. Therefore, the design events assessed in this analysis are limited to the 1% AEP + CC design events. Due to the size and grade of the catchment the peak rainfall time was restricted to between 10 min -4.5 hrs.

The model ran each duration for the 1% AEP design event against 10 temporal patterns sourced from the ARR data hub. ARR 2019 advises the use of the worst-case duration median temporal pattern to ensure the event is not too conservative. These events were run through a hydrologic model to determine the required storm event. Figure 2 shows the box and whisker output of the model run. The model shows that the 1%



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AEP 10 min storm temporal pattern 5 was the worst-case median storm. Therefore, this storm event was used within the hydraulic model. The short duration storm found to be the worst case is likely caused by the short nature of the side catchments in conjunction with short duration flooding from the upper catchments causing the largest runoff at the site.

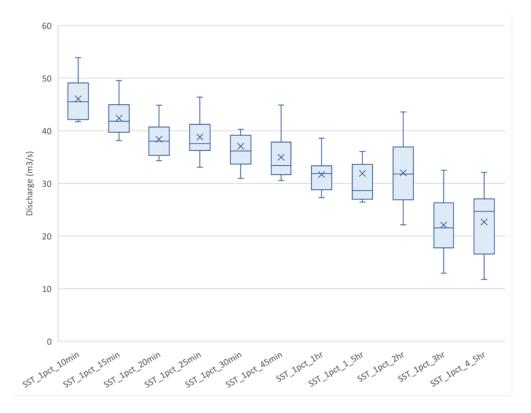


Figure 2. 1% Box and Whisker Plot

#### **Verification of Worst-Case Storm**

Given the contributing catchment and the 10-minute median worst case storm result, the hydrology model was verified using two individual scenarios to compare the outcomes of the hydrology output.

Scenario 1 included each sub catchment connected to the Park Street Rivulet underground 1D pipe infrastructure with the outlet connected via a 110m wide 1D channel. The result was assessed at both the pipe and channel for the worst-case event.

Scenario 2 connects each sub catchment to its respective downstream catchment until the final catchment (at site) is connected to the 1D Park Street system. The worst-case storm was assessed based on the total outflow from the last sub catchment. This method ignores any 1D and 2D model parameters and assesses purely from the runoff routing calculations.

In both cases the median worst-case storm resulted in the 10-minute storm and similar discharge quantities. Given the near identical outputs, and no gauge data available along Park Street Rivulet to calibrate the hydrology model, the 10-minute storm was accepted for use in the hydraulic model.



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#### 2.2.2 Climate Change

As per ARR 2019 Guidelines, for an increase in rainfall due to climate change at 2100, it is recommended the use of RCP 8.5. However, ARR 2019 recommends that this figure be used in lieu of more local data being available. Climate Futures Tasmania, 2010 (CFT) was a Tasmanian in-depth, entire state study into climate. Table 2 shows the ARR 8.5 increase compared to the CFT increase of 30% that was used within the model.

**Table 2. Climate Change Increases** 

Sub-Catchment	CFT increase @ 2100	ARR 8.5 increase @ 2100		
Hobart	30.0%	16.3%		

#### 2.3 Hydraulics

A 1D/2D hydraulic model was created to determine the flood level through the target area.

#### 2.3.1 Extents and topography

The hydraulic model extends from Brisbane Street to Burnett Street and from the Brooker to Argyle Street. This considers the interaction between pipe network and sub catchment inflows as well as showing all overland flow paths, detention basins and weirs. Hydraulic topography ranges between 15-40 mAHD with the site location around approximately 16 mAHD, with an average gradient of approximately 5.1%.

#### **Boundary Conditions**

Inflow points were supplied at the end of each catchment as a hydrology/hydraulic connected inflow point. All sub catchments were connected to the closest pit, all pits were connected to the 2D zone to provide the overland flow as egress from a pit or manhole.

Given the complexities of the downstream natural 'bowl', with Brisbane Street acting as a weir, the 2D model is extended to below Brisbane Street to ensure all terrain features and restrictions can be included without any user bias associated with guessing fixed boundaries.

#### 2.3.2 Blockage

Blockage in the DN1800 Park Street Rivulet was not considered as there are no culvert inlets into this main that provide an opening large enough to block this pipe at any percent. Given the nature and location of the on-grade inlets, pits blockage at a pit level was deemed unlikely for this model and no pit level blockage was applied.

#### 2.3.3 Calibration/Validation

This catchment has no stream gauge to calibrate the model against a real-world storm event. Similarly, there is little historical information available, and no past flood analysis undertaken to validate against the flows obtained in the model. Therefore, all parameters have been adopted from best practice manuals.

#### **2.3.4** Survey

The 2D surface model was taken from *Mt Wellington LiDAR 2011* to create a 1m and cell size DEM. For the purposes of this report, 1m cells are enough to capture accurate flow paths. The DEM with hill shading can be seen below (Figure 3).



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Figure 3. 1m DEM (Hill shade) of Property Area

#### 2.3.5 Roughness (Manning's n)

Roughness values for this model were derived from the ARR 2019 Guidelines. The Manning's values are listed in Table 3.

Table 3. Manning's Coefficients (ARR 2019)

Land Use	Roads	Open Channel	Rural	Residential	Parks	Buildings	Piped Infrastructure
Manning's n	0.018	0.035	0.04	0.045	0.05	0.3	0.013

#### 2.3.6 Walls

All significant walls/fences and retaining structures were included as 2D linear wall structures within the 2D model, all walls are assumed built to withstand flooding. Wall heights were derived from Utility Detection and Mapping survey or design documents.

#### 2.3.7 Infrastructure

Major pipe network including Park Street Rivulet was included within the model as 1D structures linked to the 2D mesh. Infrastructure location and size was sourced from City of Hobart's GIS open-source database, where inverts are not known a default 600mm cover was included.



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#### 2.3.8 Buildings

Buildings were represented as mesh polygons with a high Manning's n value within the model. Buildings with unknown floor levels were set with a minimum 300mm above ground. This method allows for flow through the building if the flood levels/pressure become great enough. The aim is to mimic flow through passageways such as doors, windows, and hallways.

Commercial properties along the boundary of each lot and the Brooker Highway Road reserve, were set to 4m high to act as solid structures along the overland flow path of Park Street Rivulet. This will provide a better flow path representation; however, it is likely to show conservative flood levels as some of these properties would likely flood, reducing the overall level.

Although on the conservative side, this approach was adopted as it is deemed that the direction of flow and level would be the most accurate representation.

#### 2.4 Model Results

The 1% AEP at 2100 was run through the pre-development and post-development model scenarios to compare the effects flooding has onsite and to surrounding areas. It can be seen from the pre-development model runs (Figure 4), that significant flooding occurs through the site as well as all neighbouring properties and Campbell Street. This is expected given the current site topography and the catchment that feeds the Park Street Rivulet. The post-development run (Figure 5) shows the proposed structure extending well over the flood inundation hazard area. To mitigate against flooding, the current design proposes the ground level as a basement carpark, remaining open along the Park Street Rivulet side, with chain fencing to provide security. Included in the design and model as solid structures are the proposed wall against the existing dwellings at the front of the property including a staircase, two lift wells and a substation.

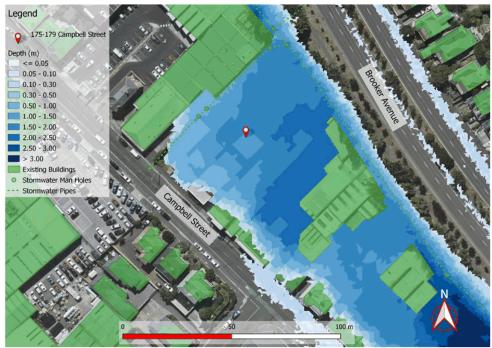


Figure 4. Pre-development 1% AEP at 2100, flood depths and extents



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It can be seen in Figure 5 that the proposed structures have minimal effect on surrounding properties. However, Figure 6 shows that the proposed structure does increase flow within the Brooker Road Reserve from 29.09 to 32.93 m $^3$ /s. This increase is relatively minor and does not cause an increase in flood hazards to any properties down to 1A Brisbane Street.

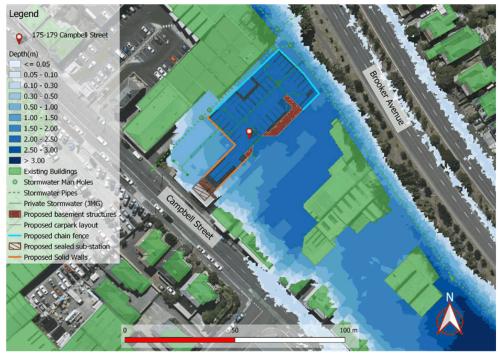


Figure 5. Post - Development 1% AEP at 2100, flood depths and extents

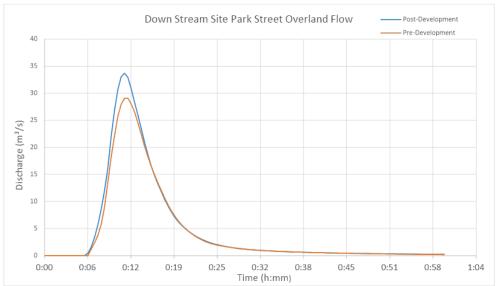


Figure 6. Pre and Post Development Downstream Site, Park St Rivulet OFP Flow 1% +CC



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#### 2.4.1 Displacement of Overland Flow on Third Party Property

Figure 7 shows post-development depths on 169-173 Campbell St as the property immediately downstream, and on 167 Campbell Street to 1A Brisbane Street, when compared against pre-development, there is no increase in flood extents or depths.

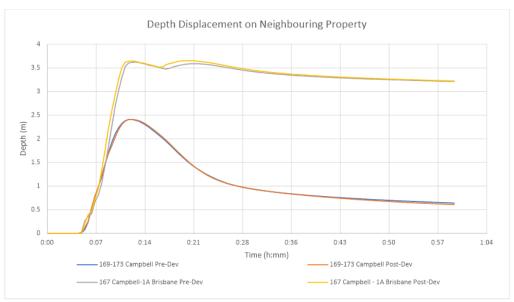


Figure 7. Pre and Post Development Depth Displacement 1% +CC

#### **Time To Inundation**

Figure 8 shows the pre vs post development depth-time graph. It can be seen from this graph that time to maximum inundation occurs at approximately 13m30s with a maximum depth in the post development scenario of 2.3 m, however, initial ingress of water into the carpark of approximately 30 mm, occurs around 5 minutes from the beginning of the storm.

Therefore, from the first noticeable ingress of water to the peak there is approximately 8 mins, with water extending to greater than 1 meter at 8m03s from first ingress.



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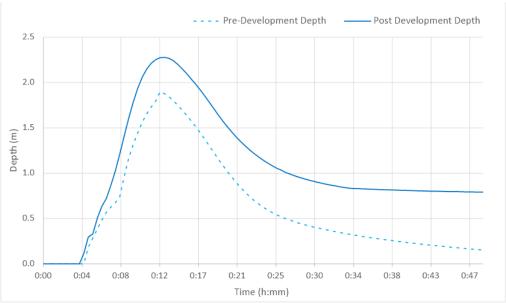


Figure 8. Pre & post-development depth

#### 2.4.2 Development Effects on Stormwater Discharge

Figure 9 below shows the discharge hydrograph for the new property combined with the neighbouring proposed property runoff. The graph was captured in the model for both pre- and post-development runs and combined in graph format to demonstrate the change in net discharge. It can be seen from Figure 9 the pre-development discharge of  $18.32~\text{m}^3/\text{s}$  is marginally lower than the post-development discharge of  $19.17~\text{m}^3/\text{s}$ . This can be attributed in the change in flow around structures such as the lift well and stairs.

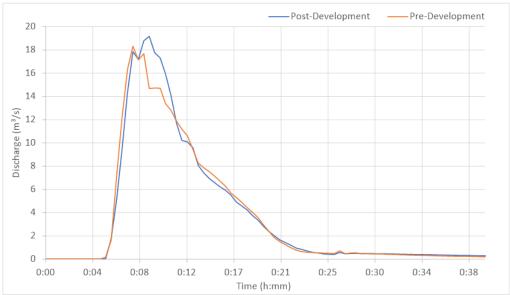


Figure 9. Pre and Post Development Net Discharge 1% +CC



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#### 2.5 Description of Building Regulation S.53

In accordance with the Building Regulations S.53, the finished floor levels of habitable rooms must be at least 300mm above the defined flood level for that land. This includes:

#### • S.53 – Acceptable Solution

a) A new habitable building must have a floor level no lower than the 1% AEP (100 yr ARI) storm event plus 300 mm.

#### 2.5.1 New Habitable Building

The construction of a new dwelling is required to either have a habitable floor level >1% AEP CC flood level + 300mm and meet the performance criteria of the Building Regulations S.53. This is equivalent to a height of 18.315 mAHD or greater for habitable space as per 1% AEP CC. The new dwelling must meet this regulation as shown in Table 4. (The floor level floor level >1% AEP CC flood level + 300mm does not apply for non-habitable buildings).

Table 4. Habitable Floor Construction Levels

Dwelling	Dwelling 1% AEP +CC flood level (mAHD)		Current Design Floor Level (mAHD)	
175-179 Campbell St 18.015		18.315	19.200	

#### 3. Flood Hazard

The proposed property is subject to inundation predominately <2m flood depth and <5.6m/s velocity (Figure 11). This places the hazard rating as adopted by Australian Flood Resilience and Design Handbook as predominantly H5 – *Unsafe for vehicles and people*, and some structures as shown in Figure 10, with the exception of the boundary with Brooker Highway, can see hazard ratings of up to H6. Downstream of the site, the post-development hazard rating shows minimal to no change from pre-development. However, the hazard remains above H4 in most areas.

Therefore, in the event of 1% AEP +CC, basement car park flood flows are predominately unsafe for people and vehicles and furthermore can create structural damage if not suitably catered for. Flüssig Engineers recommend any structures (piers or otherwise) be designed and certified by a suitably qualified person to withstand hydrodynamic and hydrostatic forces. Use of the carpark will be required to undergo a risk management and flood emergency evacuation design to ensure safe use for people.

Current design shows level access to Campbell Street, which would allow unimpeded access to the street free from flooding. Access to the basement carpark should be restricted in a flooding event.



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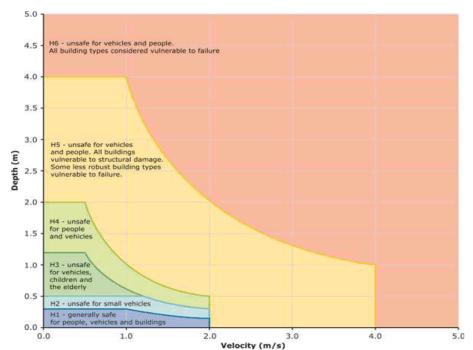


Figure 10. Hazard Categories Australian Disaster and Resilience Handbook





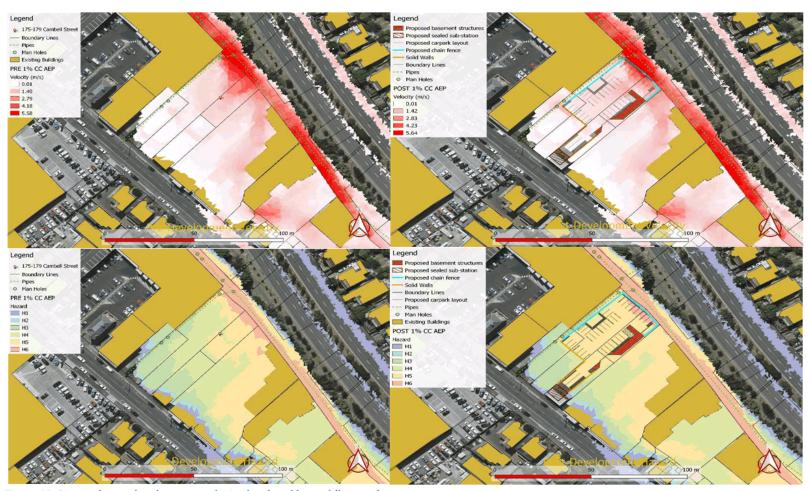


Figure 11. Pre- and post-development velocity (top) and hazard (bottom) maps



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#### Table 5. HIPS 2015 E15.8.3 Acceptable Solution Response

Acce	ptable Solution	Resp	Response from Flood Report					
<b>A1</b>		A1						
		All re	esponses have been derived from modelling report FS_HOB_2181					
				Met (Y/N)				
(a)	A new habitable building must have a floor level no lower than the 1% AEP (100 yr ARI) storm event plus 300 mm.	(a)	Minimum Floor level set at 18.315mAHD for all habitable floor levels. Proposed floor level set at 19.200mAHD.	Y				
(b)	be for the creation of separate lots for existing buildings; An extension to an existing habitable building must comply with one of the following: (a) floor level of habitable rooms is no lower than the 1% AEP (100 yr ARI) storm event plus 300 mm; (b) floor area of the extension no more than 60 m2 as at the date of commencement of this planning scheme.	(b)	N/A	N/A				
(c)	The total floor area of all non-habitable buildings, outbuildings and Class 10b buildings under the Building Code of Australia, on a site must be no more than 60 m2.	(c)	N/A	N/A				



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#### Table 6. HIPS 2015 E15.8.3 Performance Criteria Response

E15.7.5 Riverine, Coastal Investigation Area, Low, Medium, High Inundation Hazard Areas  Objective:  (a) To ensure that landfill and mitigation works do not unreasonably increase the risk from riverine, watercourse and inland flooding, and risk from coastal inundation.							
Perfo	rmance Criteria	Resp	onse from Flood Report				
P1		P1					
Landfill, or solid walls greater than 5 m in length and 0.5 m in height, must satisfy all of the following:  All responses have been derived from modelling report FS_HOB_2181							
				Met (Y/N)			
(a)	No adverse effect on flood flow over other property through displacement of overland flows;	(a)	No adverse effects can be seen on neighbouring private properties through the displacement of overland flows. However, a small increase in flow has been shown along the Park Street Rivulet through the reduction in available flood plain area. The slight increase does not increase hazard in the area from the already extreme rating.	Y			
(b)	the rate of stormwater discharge from the property must not increase;	(b)	Rate of discharge from the property remains consistent pre- and post- development	Y			
(c)	stormwater quality must not be reduced from pre- development levels.	(c)	There is no evidence that stormwater quality will be reduced.	Y			



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#### 4. Conclusion

The Flood Hazard Report for 175-179 Campbell Street, Hobart property site has reviewed the potential prevs post- development flood scenarios.

The following conclusions were derived in this report:

- A comparison of the pre- and post-development peak flows for the 1% AEP shows that there is no displacement of flood waters on neighbouring private properties, however there is a slight increase in flows down the overland flow path of the Park Street Rivulet (Brooker Highway).
- 2. Peak discharge from the site remains constant between pre- and post-development flood scenarios.
- 3. Peak flood depths on private property downstream remains constant between pre- and post-development scenarios.
- 4. Velocity pre- and post-development remains consistent downstream of the development, on 3<sup>rd</sup> party property, with a small diversion of increased velocity around the stairwell/elevator structure located on site.
- Hazard from flooding in the area is predominantly H5 post development scenario, with predominately H4 for pre-development. Downstream of the development, on 3<sup>rd</sup> party property, the hazard rating remains constant (high) between pre- and post-development.
- Post-development depth, velocity and hazard require Hydrostatic and hydrodynamic structural design considerations.

#### 5. Recommendations

Flüssig Engineers therefore recommends the following engineering design parameters be adopted for the development to ensure the works meets the Inundation Code for properties, and future residents are free and safe from inundation:

- 1. The new buildings proposed habitable floor level is to have a minimum floor height of 18.315 mAHD.
- 2. The new building and associated structures must be designed to resist flood forces (hydrodynamic and hydrostatic) including debris, for flood depths >2m and velocities >5m/s.
- 3. Vehicles should be prevented from being swept away by means of a barrier or similar. Proposed chain link fence will need to withstand debris including vehicles.
- Building use in inundated areas should be limited to use deemed safe under the ARR Disaster manual categories.
- 5. Substation should be sealed to flooding to prevent inundation and subsequent damage of electrical infrastructure.
- All electrical and mechanical mechanisms for lifts should be provided above flood level or provide a strict inspection regime after any flooding event.
- Any treatment devices including but not limited to stormwater or sewer treatment, to provide sealed chambers or similar with backflow prevention devices.



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8. An emergency evacuation plan be implemented as a precaution to flooding.

Under the requirements of Flood Hazard Report, the development site will likely meet current acceptable solutions and performance criteria under the Hobart Interim Planning Scheme 2015.

#### 6. Limitations

Flüssig Engineers were engaged by Solutionswon Group Pty Ltd, for the purpose of a site-specific Flood Hazard Report for 175-179 Campbell Street, Hobart, as per E15.0 of the Hobart Interim Planning Scheme 2015. This study is deemed suitable for purpose at the time of undertaking the study. If the conditions of the property should change, the plan will need to be reviewed against all changes.

This report is to be used in full and may not be used in part to support any other objective other than what has been outlined within, unless specific written approval to do otherwise is granted by Flüssig Engineers.

Flüssig Engineers accepts no responsibility for the accuracy of third-party documents supplied for the purpose of this Flood Hazard Report.



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#### 7. References

- Australian Disaster Resilience Guideline 7-3: Technical flood risk management guideline: Flood hazard, 2014, Australian Institute for Disaster Resilience CC BY-NC
- 2. Ball J, Babister M, Nathan R, Weeks W, Weinmann E, Retallick M, Testoni I, (Editors), 2019, Australian Rainfall and Runoff: A Guide to Flood Estimation, Commonwealth of Australia
- 3. Entura 2019, Newtown Rivulet Flood Study, Hydroelectric Company Pty Ltd, ENTURA-11B3E2.
- 4. Grose, M. R., Barnes-Keoghan, I., Corney, S. P., White, C. J., Holz, G. K., Bennett, J. & Bindoff, N. L. (2010). Climate Futures for Tasmania: General Climate Impacts Technical Report.



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### **APPENDIX A: Risk Assessment Matrix**



Site/job

FS\_HOB\_2181\_175-179 Campbell St Flood Report

RISKS OF THE DEVELOPMENT IMPACTING ON EXISTING FLOOD BEHAVIOUR

	Pre-Development Risk Identification (1% AEP)  Post-Development					Recommendations				
Risk Ref No	Risk Type A - Asset P - Project F - Financial S - Safety	Risk Description	Conclusions derived from report for the post development scenario	Risk v	with no Tre	Risk Level	Treatment	Risk foll	owing recon treatment	
P1	A, F, S	There is a risk that the development could displace flood waters on neighboring properties resulting in damage to adjoining assets,	No increased displacement of flood waters observed in flood model. No treatment recommended.	N/A	N/A	#N/A	none required	N/A	N/A	#N/A
P2	A, S	flow in the overland flow path resulting in damage to downstream	Slight increase in flows down the overland flow path of the Park Street Rivulet.	Rare	Minor	Low	none recommended	Rare	Minor	Low
P3	A, F, S	There is a risk that during a 1% AEP flood event, the development could result in an increase in the peak discharge from the site resulting in damage to stormwater infrastructure, assets and risk to personal safety.	No increase in peak discharge.	N/A	N/A	#N/A	none required	N/A	N/A	#N/A
P4	A, S	could increase as a result of the development increasing the risk of	No increase on peak flood depths downstream from the development site.	N/A	N/A	#N/A	none	N/A	N/A	#N/A
P5	A,S	There is a risk that the development could increase the velocity of the floodwater resulting in damage to assets, infrastructure and increased risk to personal safety.		Possible	Moderate	High	Electrical and mechanical lift mechanisms to provided above installed above flood level. Habitable floor level to be above 18.315 mAHD.	Rare	Minor	Low
P6	A, F, S	rating for surrounding areas and downstream resulting in increased risk to property and safety of residents and visitors.	There is an increase in the Hazard rating from H4 to H5 in the immediate area of the development, while remaining constant downstream.	Possible	Moderate	High	Structural design to consider hydrostatic and hydrodynamic forces at >2m depth and >5m/s velocity, chain link fence to prevent vehicle and debris movement, but allowing free flow of flood water, building use in inundated area limited to use deemed safe under ARR disaster manual categories, emergency evacuation plan to be implemented in relation to flooding.	Unlikely	Moderate	Medium

Site/ job number FS\_HOB\_2181\_175-179 Campbell St Flood Report

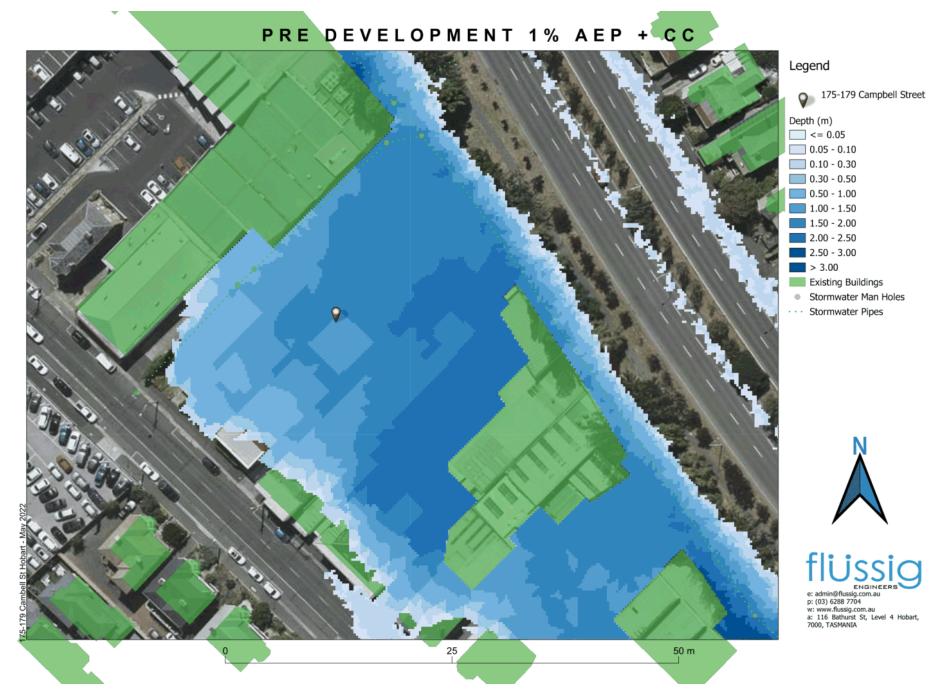
#### RISKS OF FLOOD BEHAVIOUR ON THE DEVELOPMENT POST CONSTRUCTION

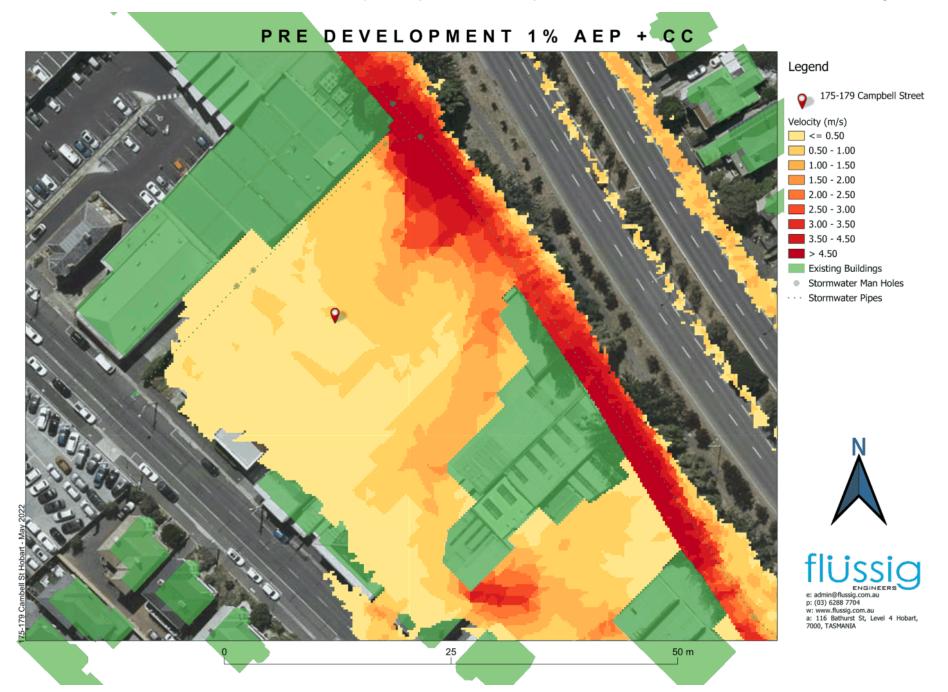
	Risk Identification (1% AEP)					Recommendations				
Risk Ref No	Risk Type A - Asset P - Project F - Financial S - Safety	Risk Description	Risk w	O Deed ne uce	B is k leve		Treatment	Risk follow poo III III	Consequence	B is k leve
D1	A	There is a risk that during a 1% AEP flood event, excessive flow could result in back flow of treatment devices (inc. stormwater and sewer).	Possible	Minor	Medium		Treatment devices to be installed with sealed chambers and backflow prevention devices.	Rare	Minor	Low
D2		There is a risk to personal safety in areas categorised as hazard H5 (i.e. waste room and carpark) during a 1% AEP flood event.	Unlikely	Moderate	Medium	1	An emergency exit door should be installed at the far end of the waste room ensuring people cannot become trapped.  An emergency management plan should be established and communicated to the occupants and visitors to the site, all structures should be cretified for hydrodynamic and hydrostatic forces.	Rare	Minor	Low
D3	A, F	There is a risk that the flow path of a 1% AEP flood event could result in damage to the proposed development due to flood water depth, velocity and debris.	Almost Certain	Moderate	Extreme	ŀ	Building designed to resist flood forces, inc debris, for flood depths >2m & velocity >5m. Substation to be sealed.	Unlikely	Minor	Low
D4	A, S	There is a risk the flow path in hazard categories of H5 could pose a risk to assets and personal safety of the occupants of the development.	Possible	Moderate	High	1	Chain link fence erected to prevent and withstand vehicle and debris movement. Inundated areas of building to be limited to use according to ARR Disaster manual categories.  Electrical and mechanical lift mechanisms to provided above installed above flood level.	Rare	Minor	Low

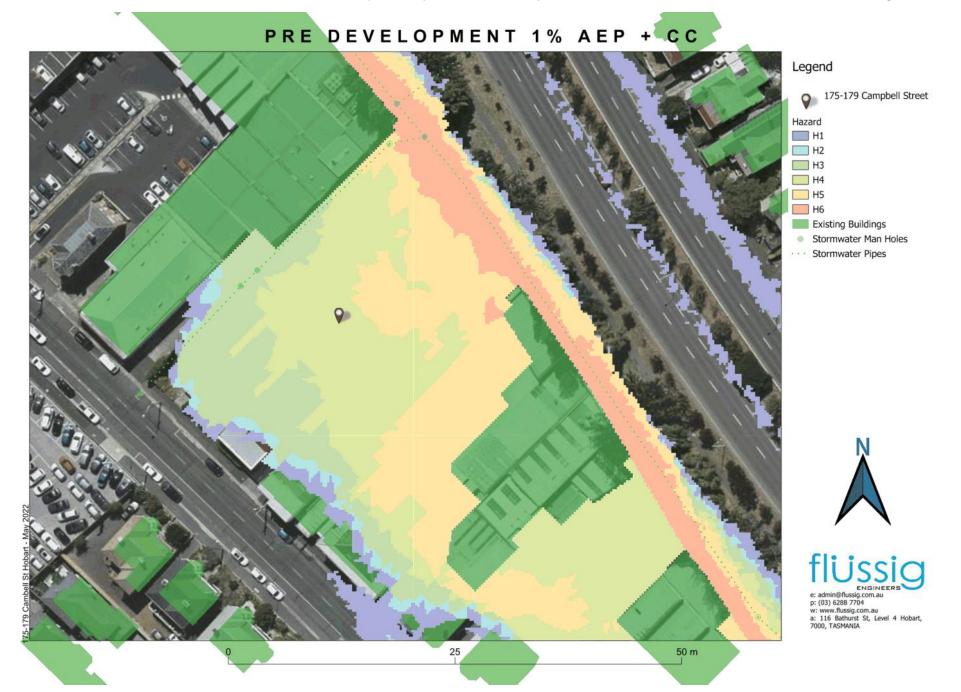
31st May 2022

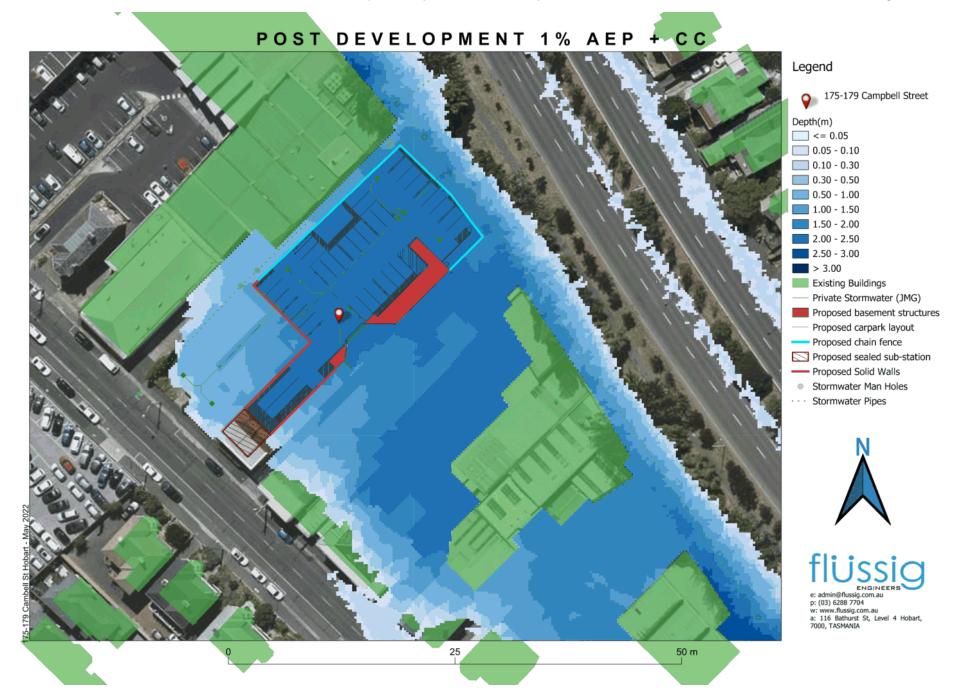
### **APPENDIX B: A3 Inundation Maps**

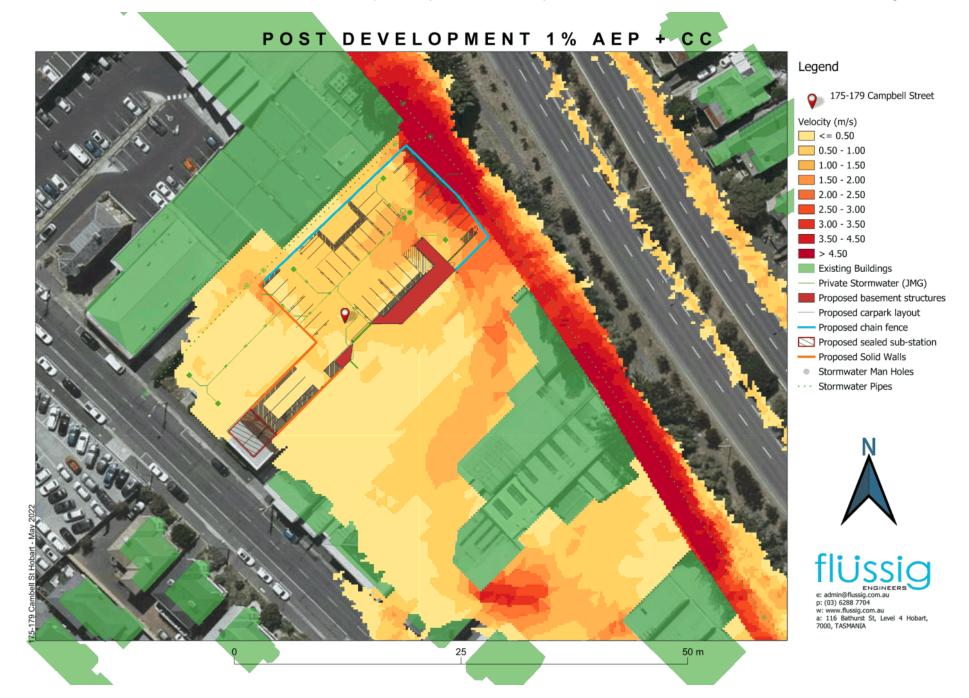














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# BGAS Multi-Residential Development

# 175-179 Campbell St, Hobart

# **Traffic Impact Assessment**

Prepared for JMG Engineers and Planners

Version 5

January 2022





#### BGAS Multi-Residential Development, 175-179 Campbell St, Hobart Traffic Impact Assessment

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#### Acronyms

AADT	Average Annual Daily Traffic
ADT	Average Daily Traffic
AWDT	Average Weekday Daily Traffic
CBD	Central Business District
DSG	Department of State Growth
HCC	Hobart City Council
MRV	Medium rigid vehicles
SRV	Small rigid vehicles
SISD	Safe Intersection Sight Distance
TIA	Traffic Impact Assessment
vpd	vehicles per day
vph	vehicles per hour



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#### 1 Introduction

#### 1.1 Background and Scope of Work

The property at 175-179 Campbell St, Hobart is being developed by BGAS. The 2,421 m<sup>2</sup> site contains an existing business and two original cottages fronting Campbell St with a large area of vacant land at the rear of the properties, some of which is currently used for carparking.

BGAS is proposing to develop a multi-residential apartment building with commercial space across the properties at 175-179 Campbell St. The footprint will incorporate the existing cottages at 177 and 179 Campbell St. The design provides the commercial frontage on Campbell St by retaining the original cottages for businesses and incorporating new commercial space at 175 Campbell St. Hobart City Council (HCC) requires a traffic impact assessment to be submitted with the development application for the proposed development.

ECTM Consulting Pty Ltd has been engaged by JMG to undertake the Traffic Impact Assessment for the proposed multi- residential development at 175-179 Campbell St, Hobart.

#### 1.2 Traffic Impact Assessment Scope

The scope of this TIA is outlined as follows:

- Review of the existing road environment in the vicinity of the subject site and the traffic
  conditions on the road network.
- Provision of information on the proposed development with regards to traffic movements and activity.
- Identification of the traffic generation potential of the proposal with respect to the surrounding road network in terms of road network capacity.
- Review of the parking requirements of the proposed development and assessment of the parking supply with Planning Scheme requirements.
- Traffic implications of the proposal with respect to the external road network in terms of traffic efficiency and road safety.
- Provision of conclusions and recommendations relating to the key findings drawn from the traffic impact assessment.

This TIA has been prepared with reference to the Department of State Growth publication, *A Traffic Impact Assessments Guidelines*, September 2020 and Hobart Interim Planning Scheme 2015 (Planning Scheme). This TIA has also been prepared with reference to other relevant publications as listed in Section 7.

#### 1.3 Subject Site

The subject site is located at 175-179 Campbell St, Hobart and covers four titles of varying size. The site sits in the fringe area of the Hobart Central Business District (CDB) and as such is an inner city location. The site is zoned 15.0 Urban Mixed Use under the Planning Scheme and is not subject to any additional overlays that require consideration in this TIA. Beyond the Urban Mixed Use zone, there is 11.0 Inner Residential zone to the east and north, and 23.0 Commercial to the south and west.



The subject site and surrounding road network are shown in Figure 1 and the location of the existing site access is shown in Figure 2. Surrounding land use in the immediate area of the site includes car sales yard, various retail and commercial businesses, residential properties and small supermarket.

Figure 1 Subject Site and Surrounding Road Network



Figure 2 Existing Site Access



Base image by TASMAP® State of Tasmania



#### 2 Existing Conditions

#### 2.1 Transport Network

For the purpose of this report, the transport network under review consists of the section of Campbell St in Hobart between the intersections with Warwick St and Brisbane St which includes the intersection with Patrick St.

Campbell St in the study area is a one-way Council owned road travelling in a south-eastly direction toward Hobart CBD where it ends at the intersection with Davey St. The sealed carriageway has an average width of 12 m between the kerbs (near the existing site access) and consists of two lanes for traffic, a 2 m wide cycle lane and on-street parking on both sides of the road. The traffic lanes are defined by a broken white centre line while a solid white line delineates the cycle lane on the western side of the road. There are three traffic lanes on approach to the signalised intersection with Brisbane St — the cycle lane become a through and right-turn lane, centre lane is a through lane only and left lane becomes through and left turn lane.

The proposed development site access is located on a straight and level section of Campbell St which has a posted speed limit of 50 km/hr. Pathways with an average width of 2.5 m are evident on both sides of the subject section of Campbell St and street lighting is generally provided on both sides of the road. Figure 3 and Figure 4 illustrate Campbell St, viewing to the south-east (towards Brisbane St intersection) and north-west (toward Warwick St intersection) respectively.

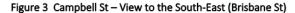
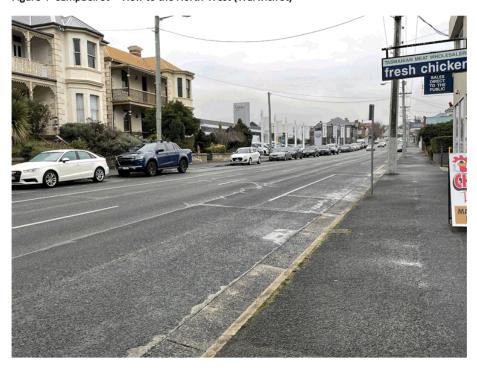






Figure 4 Campbell St - View to the North-West (Warwick St)



On-street parking is available frequently on both sides of the road; located between the numerous accesses into properties along this section. The parking bays are marked and signposted with time limits (either 2P, 1P or ½P). There is evidence of yellow lines along kerbs indicating no stopping zones. There are many off-street carparks associated with surrounding businesses and various properties.

Campbell St is a Metro bus route with the closest bus stop located approximately 40 m to the southeast of the site. The site is in easy walking distance to the Hobart CDB on relatively level terrain for the most part and has access to other sustainable transport modes such as the Intercity Cycleway, a shared-use commuter and recreational user corridor, extending from Claremont in the north of the Greater Hobart area, to the Hobart Regatta Grounds in located near Hobart CBD.

In summary, Campbell St operates as a collector road defined as connecting arterial roads to local areas and supplementing arterial roads in providing traffic movements between urban areas. Collector roads provide high connectivity by supplementing arterial roads in connecting suburbs, business districts and localised facilities.

The following observations were made in the vicinity of the proposed development during the site inspection at 9 am on Tuesday 15 June 2021:

- Drivers were able to easily find gaps to enter or exit the traffic flow from parking spaces or site accesses due to the upstream signalised intersection with Warwick St.
- On-street parking in the study area appears to have a high-turnover of vehicles.



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- Very few vehicles were observed using the existing site access next to 175 Campbell St this was confirmed by an AM peak period survey as discussed in Section 2.4.
- Campbell St predominately carries light vehicles, but heavy vehicles are not unusual given there is a medium-size supermarket, large car yard and bodyworks in the same block.
- Reasonable volume of pedestrian traffic on both sides.

Warwick St and Brisbane St are both two-lane, two-way Council owned roads and are signalised at their intersections with Campbell St. Green time is predominantly with Campbell St as the major road. Both Warwick St and Brisbane St operate as link roads, connecting arterial roads such as the Brooker Ave to collector roads such as Campbell St.

Patrick St is a two-lane, two-way Council owned road controlled by a give-way sign at the intersection with Campbell St. This intersection is 40 m to the south-east of the proposed development site access. Patrick St also operates as a link road.

#### 2.2 Existing Traffic Volumes

HCC administers traffic counting stations on local roads within its municipality while the Department of State Growth administers State owned roads and signalised intersections across Tasmania. DSG use the Sydney Coordinated Adaptive Traffic System (SCATS) to obtain data from signalised intersections. Given the signalised intersection of Campbell St with Warwick St provides SCATS data, this data source was utilised to provide current and representative traffic volumes.

Table 1 provides relevant traffic volume data, noting the following:

- Average daily traffic (ADT), average weekday daily traffic (AWDT) and peak volumes on Campbell St is based on data extracted from one week of Campbell St/ Warwick St intersection SCATS data collected in May 2021.
- A review of the May 2021 SCATS dataset indicates very consistent traffic volumes across weekdays as well as on Saturday and Sunday.
- Weekday peak hour volumes are also very consistent and occur at the same morning and afternoon time everyday.

Table 1 Existing Traffic Volume Data

Location	ADT	AWDT	Weekday	AM Peak	Weekday PM Peak		
Location	(vpd) (vpd)		AWT (vph)	Period	AWT (vph)	Period	
Campbell Street (Mid-block; two lanes one-way)	7,800	8,803	915	8.00-9.00	772	16.00-17.00	

#### 2.3 Road Safety Performance

The following crash data has been obtained from Department of State Growth for the section of Campbell St from which the site is accessed and other areas of interest in the study area and is for the period January 2016 to April 2021. This data is based on compulsory reporting to Police if someone is injured or if an involved vehicle is damaged to the extent that it cannot be driven (i.e.



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needs to be towed away). Crashes that do not meet these criteria do not have to be reported to Police although many are for other reasons.

Crash data can provide valuable information on the road safety performance of a road network. Existing road safety deficiencies can be highlighted through the examination of crash data, which can assist in determining whether traffic generation from the proposed development may exacerbate any identified issues.

It is evident from the data in Table 2 that there have been a low number of crashes in the section of Campbell St from which the site will be accessed. One crash had a severity of 'minor' (occurred in September 2017) while the remaining crashes had a severity of 'property damage only'.

It is noted three of the crashes occurred within the vicinity of the subject site however all occurred before August 2017 with a severity of 'property damage only'. Two of the three crashes were parking related while one involved a parallel lane side swipe. There have been no crashes near the site access for the past 4 years.

Occurrence of crashes is also evident in the areas immediately surrounding the subject site. However, the maximum injury severity has been recorded as 'first aid' and the overall frequency is low given the 5 year period over which this data has been collected.

Table 2 Crash Summary

Location	Year	Number of Crashes	Number of Injury Crashes
Campbell St between Intersection with Warwick St and Brisbane St	2016-2020	10	1 x Minor
Intersection of Campbell St and Warwick St	2016-2021	9 (3 in 2021)	1 x Minor; 4 x first aid
Intersection of Campbell St and Brisbane St	2017-2019	5	1 x Minor; 1 x first aid
Intersection of Campbell St and Patrick St	2019	2	2 x Minor

#### 2.4 Existing Activity

The subject site consists of an existing business at 175 Campbell St and two original cottages at 177 and 179 Campbell St. There is a large area of vacant land at the rear of the properties, currently used for carparking (under lease arrangements) and accessed via a driveway to the south-east of 175 Campbell St.

The existing site access driveway is situated on the adjoining property of 169-173 Campbell St (Title 140732/1) over which 175-177 Campbell St has right of way. This adjoining property has another access driveway as shown in Figure 5. A meat wholesalers business operates on this site hence a survey of the access arrangement was conducted during an AM peak period (1 December 2021) to establish how they are currently being utilised. A summary of the survey results is provided below:

 Site access driveway 1 – 21 light vehicles IN (13 during the period 6.45 am to 8 am); 2 small delivery vans IN; 1 small delivery van OUT



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 Site access driveway 2 – 1 light vehicle IN; 2 small delivery vans OUT; 1 medium delivery van IN and OUT (reversed into the driveway at 7.45am with no issues and minor delay for one light vehicle)

#### Other observations included:

- The carpark at the rear of 175 Campbell St appears to be utilised by people working in the
  area as there was a steady flow of people from the driveway shortly after light vehicles
  entered (between 7 and 8 am).
- Customers accessing the meat wholesalers utilised on-street parking which was readily
  available out the front (rather than park at the rear although this is offered as an option).
- Heavy vehicle movements are not unusual in this section of Campbell St due to deliveries to the supermarket, car yards and vehicle bodyworks.

Assuming the above survey results are representative of how the accesses are utilised, it appears light vehicles and small delivery vans use Access 1, and while all vehicle types may use Access 2, medium-sized heavy vehicles are more likely to enter and exit this site at this point.

Additional information regarding the adjoining business (Tasmanian Meat Wholesalers) is provided below:

#### Operational characteristics of TMW

- Has an annual turnover of approximately \$10M supplying a variety of products to wholesale and retail clients
- The site currently employs 35 full time staff
- The site currently sells approximately 52 tonnes of product a year
- The business currently operates across 169-173 Campbell Street, with a commercial lease for carparking on the adjacent site (175 Campbell Street)

#### Operational hours

- The retail shop is currently open:
  - o 7:30 18:00, Monday Friday
  - o 7:30 14:00, Saturday
  - o Closed Sunday
- The commercial/wholesale currently operates:
  - o 6:00 18:00, Monday Friday
  - o Closed Saturday & Sunday

#### Transport and access

- The site is currently serviced by approximately 7 deliveries a week by TMW vehicles which comprise 'Medium Rigid' trucks
- The site is also serviced by third party suppliers with a variety of 'Heavy Rigid' trucks, with smaller trucks entering the site and larger vehicles loading from the street
- The site operates an LPG forklift which operates within the service yard areas and buildings approximately 12 hours a day (6:00 – 18:00, Monday – Friday)



Figure 5 Existing Site Access Arrangement for Subject Site and Adjoining Property



#### 3 Proposed Development

The proposed development at 175-179 Campbell St, Hobart consists of a multi-residential apartment building with commercial space at the Campbell St frontage. The residential component of the design comprises 31 apartments with a mix of townhouse, 1, 2 and 3 bedroom apartments and skyhomes. A commercial frontage is provided by retaining the original cottages at 177 and 179 Campbell St for businesses and incorporating new commercial space at 175 Campbell St.

The  $2,421 \,\mathrm{m}^2$  development footprint covers most of the land area of the three properties with the existing building at 175 Campbell St being removed and the existing cottages at 177 and 179 Campbell St integrated into the design.

The following key elements of the proposed development are of importance to this TIA:

Basement level contains a carpark (35 spaces), bicycle storage (12 space rack), storage
areas and services which will be accessed by vehicles via a two-way site access driveway
located to the south-east of the site; and

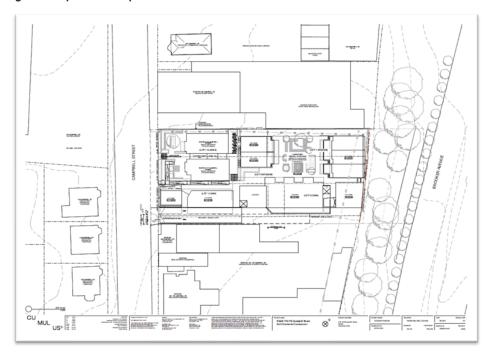


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 Ground level is situated at Campbell St level providing access to the commercial areas and a central courtyard beyond which some apartments can be directly entered as well as access points for apartments on floors above.

The proposed development site plan is provided in Figure 6.

Figure 6 Proposed Development Site Plan



Ref: Cumulus Studios, Concept Design, Revision DA04, 18 November 2021

#### 4 Traffic Impacts

#### 4.1 Traffic Generation

The nature of the proposed development on the site is best represented by a traffic generating classification of 'Medium density residential flat building', 'Office and commercial' and 'Restaurant' as defined in the NSW Guide to traffic generating developments (Roads and Traffic Authority NSW 2002).

Recent surveys indicate a much lower peak hour vehicle trip rate when residential flat dwellings are located within metropolitan areas compared with regional areas. The weekday rates for AM and PM peak vehicle trips per unit ranged between 0.07-0.32 and 0.06-0.41 respectively for higher density residential flats in a metropolitan area. (RMS, 2013)

Based on the medium density residential rates provided in the RTA guide but applying 40% reduction in daily trips and 40% reduction in peak hour trips due to the factors of inner-city area and close proximity to services, the proposed development is expected to generate traffic volumes as shown in Table 3.



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In summary, the proposed development together may generate an additional 182 journeys each day and add around 18 vehicles per hour to the AM and PM weekday peak periods of the surrounding road network. This is considered to be appropriate given the close proximity of the subject site to the Hobart CBD, short walking distance to a mainstream supermarket (90m) and range of other services, and access to a key route of the public transport system.

Table 3 Traffic Generation

Activity	Quantity	Daily Vehicle Trip Rate <sup>1</sup>	Daily Trips (veh/day)	Weekday Peak Hour Vehicle Trip Rate <sup>1</sup>	Weekday Peak Hour Trips (veh/hr)
Residential: Multiple dwelling containing 2 or more bedrooms Rate is / unit or apartment	31 apartments	3	94	0.24	7
Business and professional services: Consulting rooms, Commercial space Rate is / 100 m² gross floor area	214 m <sup>2</sup> GFA	10	22	2	5
Food services: Café Rate is / 100 m² gross floor area	111 m² GFA	60	66	5	6
Total trips			182		18 (each peak)

Note 1: RTA NSW Guide to traffic generating developments, 2002

#### 4.2 Traffic Efficiency Impacts

Table 4 provides the traffic volumes on Campbell St once the proposed development has commenced.

Table 4 Traffic Volumes after Proposed Development

Location	ADT (vpd)	% Increase in ADT	% Increase in AM Weekday Peak	% Increase in PM Weekday Peak	
Campbell St (2021)	7,991	2.3%	1.9%	2.2%	

As indicated in Section 2.1, Campbell St operates as a collector road and as such, can carry between 3,000-10,000 vehicles per day. Whilst this a broad range, Campbell St has a wide carriageway, provision of footpaths and good sight distance along this section due to the combined pavement width and open nature of the street. There is spare capacity in this section of Campbell St (ADT of 7,991 veh/day) under the current conditions.

The proposed development will add a low number of vehicles per hour to each peak morning and afternoon hour traffic flow on Campbell St. Based on this assessment, the level of service will remain the same hence it is considered that the traffic efficiency will not be adversely affected by the proposed development.



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#### 4.3 Site Access Impacts

The existing site access arrangements were described in Section 2.4, noting the properties at 175-177 Campbell St currently have right of way over the existing driveway (shown in Figure 7). The driveway is part of the adjoining property and hence is also utilised by the business on this site. The traffic is predominately comprised of a low volume of light vehicles but also small delivery vans. The existing site access is approximately 3 m wide, and an upward grade exists for traffic leaving the property to access Campbell St.

Figure 7 Existing Site Access



The access arrangements for the proposed development involve the ongoing use of the existing driveway however it will be upgraded to accommodate two-way light vehicle movements and access by small to medium rigid vehicles (SRV and MRV). Some key details of the access upgrade are provided below.

#### Width

- According to the AS/NZS 2890.1:2004 Parking facilities Part 1: Off-street car parking, the
  vehicle access driveway width into the site should be 5.5 m (Table 3.1 and Table 3.2 of the
  Australian Standard) for a User Class 1A (residential, domestic and employee parking), local
  access facility with 25 to 100 parking spaces. It is proposed to widen the existing site access
  by 2 m in order to provide a 5.5 m wide driveway over the full distance of 40 m to the
  carpark entrance.
- The existing access driveway currently safely operates as a two-way lane with a combination of light vehicles and small trucks. Whilst it appears likely that medium rigid vehicle movements associated with the meat wholesalers will enter and exit at Site Access



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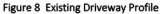
2 based on access survey results (Figure 5 and Section 2.4), a turning path for MRVs accessing the meat wholesalers via the proposed development site access in shown in Appendix A.

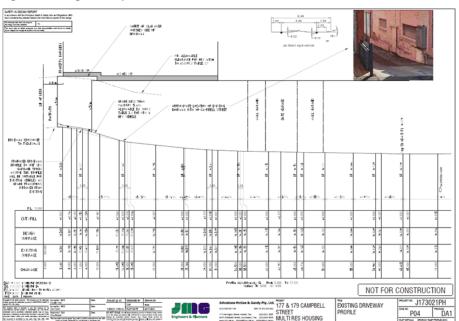
### Height

- Level 1 of the building will overhang the site access on the north-western side, at a vertical height of 4.5 m at the Campbell St property boundary.
- To allow for potential MRV into the meat wholesalers, a step up in the new slab has been included to provide 4.5 m vertical clearance to comply with AS 2890.2 as shown in Figure 8.
- It is noted that MRVs are unlikely to utilise this access driveway, given the presence of a more suitable alternative access into the area behind the meat wholesalers.

### Grade

 The grade change does not comply with AS2890.2 however an assessment of a SRV (Garbage truck) negotiating the crossover is shown in Appendix B to demonstrate it will work effectively. As the new profile will be better than the existing with regard to grade changes it is assumed there will be no impact on the existing vehicles accessing the site.







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### 4.4 Sight Distance Assessment

The Austroads publication, Guide to Road Design, Part 4A: 'Unsignalised and Signalised Intersections', 2021 defines Safe Intersection Sight Distance as "the minimum distance which should be provided on the major road at any intersection". Austroads 2021 states SISD:

- is measured along the carriageway from the approaching vehicle to the conflict point; the line of sight having to be clear to a point 7.0 m (5.0 m minimum) back along the side road from the conflict point.
- provides sufficient distance for a driver of a vehicle on the major road to observe a vehicle on a minor road approach moving into a collision situation (e.g. in the worst case, stalling across the traffic lanes), and to decelerate to a stop before reaching the collision point
- is viewed between two points to provide inter-visibility between drivers and vehicles on the major road and minor road approaches. It is measured from a driver eye height of 1.1 m above the road to points 1.25 m above the road, which represents drivers seeing the upper part of cars.
- assumes the driver on the minor road is situated at a distance of 7.0 m (minimum of 5.0 m) from the conflict point on the major road SISD allows for a 3 sec observation time for a driver on the priority legs of the intersection to detect a problem ahead (e.g. car from minor road stalling in through lane), plus the SSD.
- provides sufficient distance for a vehicle to cross the non-terminating movement on twolane two-way roads, or undertake two-stage crossings of dual carriageways, including those with design speeds of 80 km/h or more.
- should also be provided for drivers of vehicles stored in the centre of the road when undertaking a crossing or right-turning movement.
- enables approaching drivers to see an articulated vehicle, which has properly commenced a manoeuvre from a leg without priority, but its length creates an obstruction.

The Planning Scheme states the requirements for SISD in E5.0 Road and Railway Assets Code, E5.6.4 Sight distance at accesses, junctions and level crossings which are closely aligned with the Austroads requirements. Figure E5.1 Sight lines for Accesses and Junctions from the Planning Scheme is shown in Figure 9. However, it is important to point out the above mentioned Austroads guide also states that while sight distances at accesses should comply with the sight distance requirements for intersections, these criteria often cannot be obtained for various reasons. In these cases, the minimum gap sight distance should be assessed in context of the specific situation.

The site access on Campbell St was assessed for available SISD with a summary of sight distance findings provided in Table 5, noting:

- Campbell St is categorised in 'all other roads' and hence 'X' is required to equal 5 m in Figure
- The vehicle speed equates to the 85<sup>th</sup> percentile speed however this is unknown for Campbell St hence the posted speed limit will be utilised.



Figure 9 Extract from Planning Scheme: Figure E5.1 Sight Lines for Accesses and Junctions

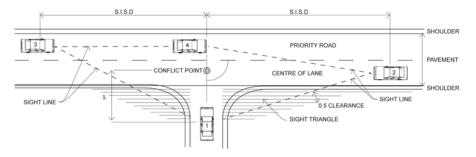


Table 5 Sight Distance Assessment

Access / Junction	85 <sup>th</sup> Percentile Speed	Required SISD	Min Gap (5 s) Sight Distance	Sight Distance Left	Sight Distance Right	Comments
Campbell St site access	50 km/hr	80 m	69 m	NA	~45 m	SISD may be impeded due to location of power poles and presence on-street parking

As shown in Table 5, the sight distance to the right of the existing site access does not meet the Planning Scheme requirement for a range of reasons including impeded by the presence of onstreet parking. However, it is acknowledged on-street parking is commonplace in urban streets thus it is normal for sight distance to be partly obstructed at site accesses. Drivers generally observe gaps between parked vehicles.

The sight distance to the right of the existing site access meets the minimum safe sight distance (SSD) requirement of 45 m (for 50 km/hr speed) but falls short of the SSD with the desirable 5 s gap (69 m) stated in Section 3.2.4 of AS/NZS 2890.1 Off-street car parking (for exiting an access driveway other than a domestic property) and Section 3.4.5 of AS/NZS 2890.2 Off-street commercial vehicle facilities. The Australian Standard also highlights the potential need to restrict parking either side of the access driveway to ensure an approaching vehicle is not obstructed. However, this block of Campbell St has a high degree of property access, including heavy vehicle movements, yet it operates well and with minimal safety issues. Hence, it is noted also there are numerous other examples on Campbell St where it would be challenging to satisfy the SISD requirement.

Figure 10 shows the view to the right of the existing site access. Although the SISD will be deficient according to the planning scheme requirements, it is considered the site access will operate in a safe and efficient manner due to the existing access function of the road, one-way two-lane arrangement with preceding signalised intersection to provide gaps in the traffic flow, provision for cyclists and pedestrians, proposed access upgrade and absence of road safety issues in the vicinity of the site access.



Figure 10 View Right at Existing Site Access



### 4.5 Road Safety Impacts

Analysis of crash history data for the section of Campbell St relevant to the proposed development along with an on-site investigation of the site access has highlighted a deficiency in the required sight distance for use as a development access and a low level crash history in the surrounding area.

However, no significant detrimental road safety impacts are foreseen as a result of the proposed development based on the following:

- The existing site access has operated safely and efficiently for many years as an access to
  the subject site and adjoining existing businesses. The proposed development does not
  significantly increase the number of movements in and out of the access nor to the road
  network.
- There is sufficient capacity in the surrounding road network to safely absorb the minimal increase in traffic movements.
- There is no crash history trend as such to suggest that there is a road safety deficiency in the vicinity of the existing site access. Furthermore, there has been no crashes near the site access in the past four years.
- Whilst the proposed development is new in concept for this site, vehicle movements into
  and out of the site will not be seen as an unusual event by other motorists due to existing
  access into other properties along this section of Campbell St.

## 4.6 Assessment of Relevant Road and Railway Assets Code Use Standards

The Planning Scheme requires developments to comply with relevant Use Standards set out in the Road and Railway Assets Code. Applicable use standards are addressed in Table 6.



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### Table 6 Planning Scheme E5.0 Road and Railway Assets Code

Acceptable Solutions / Performance Criteria	Assessment of Compliance with Code
E5.5.1 Existing road accesses and junctions A3  The annual average daily traffic (AADT) of vehicle movements, to and from a site, using an existing access or junction, in an area subject to a speed limit of 60km/h or less, must not increase by more than 20% or 40 vehicle movements per day, whichever is the greater.  P3  Any increase in vehicle traffic at an existing access or junction in an area subject to a speed limit of 60km/h or less, must be safe and not unreasonably impact on the efficiency of the road, having regard to: (a) the increase in traffic caused by the use; (b) the nature of the traffic generated by the use; I the nature and efficiency of the access or the junction; (d) the nature and category of the road; I the speed limit and traffic flow of the road; (f) any alternative access to a road; (g) the need for the use; (h) any traffic impact assessment; and (i) any written advice received from the road authority.	<ul> <li>Acceptable solution is not met but has been assessed in this TIA against the Performance Criteria. It is deemed acceptable on the following grounds:</li> <li>Increase in daily vehicle trips will be less than 2.5% and whilst more than 40 vehicle movements per day are expected, this is likely to be off-set by the inner city location of the proposed development which will encourage the use of other modes of transport.</li> <li>The proposed development is located in a section of Campbell St already providing a high level of accessibility to local businesses in the area – the site access arrangements are consistent with those around it hence does not introduce any new elements.</li> <li>There is sufficient capacity in Campbell St as a collector road for the additional traffic movements from the proposed development.</li> <li>The existing site access has operated safely and efficiently to date and will be upgraded as part of the proposed development.</li> <li>A minor crash history exists for the area but there is no evidence of significant road safety issues in the study area.</li> <li>Campbell St signalised intersection with Warwick St effectively creates gaps in the traffic flow for this section of the road for safe entry/exit into properties and parking but not so long that traffic flow is restricted.</li> </ul>
E5.6.2 Road accesses and junctions A2 No more than one access providing both entry and exit, or two accesses providing separate entry and exit, to roads in an area subject to a speed limit of 60km/h or less.	Acceptable solution is met – One existing access will provide both entry / exit and no new accesses are proposed as part of the development.



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Acceptable Solutions / Performance Criteria
E5.6.4 Sight distance at accesses, junctions and level crossings
A1

Sight distances at:

an access or junction must comply with the Safe Intersection Sight Distance shown in Table  ${\sf E5.1}$ 

#### P1

The design, layout and location of an access, junction or rail level crossing must provide adequate sight distances to ensure the safe movement of vehicles, having regard to:

- (a) the nature and frequency of the traffic generated by the use;
- (b) the frequency of use of the road or rail network;

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- I any alternative access;
- (d) the need for the access, junction or level crossing;
- I any traffic impact assessment;
- (f) any measures to improve or maintain sight distance; and
- (g) any written advice received from the road or rail authority.

#### Assessment of Compliance with Code

Acceptable solution is partially met as safe intersection sight distance to the right of the site access is deficient and on-street parking restricts sight distance to the left of the site access. E5.6.4 has been assessed in this TIA against the Performance Criteria for both light and heavy vehicles. It is deemed acceptable on the following grounds:

- Sight distance to the right of the site access meets the minimum safe sight distance requirement stated in Figure 3.2 of AS/NZS 2890.1 for exiting an access driveway other than domestic property.
- It is acknowledged on-street parking is commonplace in urban streets thus it is normal for sight distance to be partly obstructed at site accesses. Drivers generally observe gaps between parked vehicles.
- The site access arrangements are consistent with those around it hence does not introduce any new elements.
- In addition to being a collector road, Campbell St plays a local access role hence it is challenging to satisfy the SISD requirement for all access points along this road when on-street parking is present.
- There is sufficient capacity in Campbell St for the additional traffic movements from the proposed development.
- Use of the site access to enter/exit the off-street carpark is less frequent due to the largely residential nature of the development.
- Whilst the site access will be upgraded, the existing site access has operated safely and efficiently to date.
- A minor crash history exists for the area but there is no evidence of significant road safety issues in the study area.
- A range of small, medium and large heavy vehicles were observed manoeuvring in and out of accesses nearby and at the subject/adjoining site during morning peak hour, and whilst there were very minor delays at times, the traffic continues to flow well and without incident.
- Good provision for pedestrians and cyclists in this area with wide carriageway hence providing opportunities for drivers to identify potential conflict points and assess suitability to accept gap for entry into traffic flow.



### 5 Parking Assessment

## 5.1 Parking Provision and Carpark Layout

Parking provision and carpark layout for the proposed development is shown in Figure 11. It is proposed to provide an off-street carparking area on the basement level of the building footprint. A total of thirty-five (35) car spaces will be provided for the residential component of the development, consisting of one space for each of the twenty-seven (27) apartments and townhouses, and two spaces each for the four skyhomes (total of 8).

It is noted that car spaces numbered 3, 4 and 5 will be compliant with accessibility design criteria hence can be allocated to residents with these requirements as needed. However, these spaces will not be signposted for accessible use only to avoid limiting their use. Car spaces 32 to 35 are in jockey configuration providing two spaces each for two of the skyhomes, and satisfying the requirement to be 2.6 m wide.

A vertical wall-mounted bicycle storage rack for up to twelve bikes, is located between car space 13 and an external exit pathway. The provision of bike storage for residents complements the development's close proximity to the city and encourages alternative modes of transport.

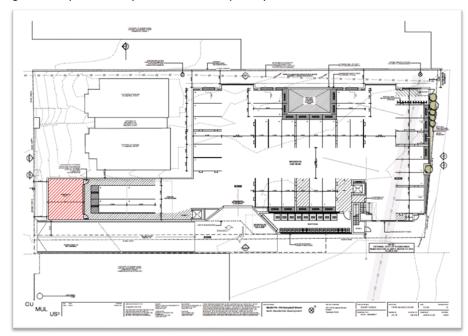


Figure 11 Proposed Development Off-Street Carpark Layout

Ref: Cumulus Studios, Concept Design, Revision DA06, 13 January 2022

There is a considerable amount of time-limited on-street parking (60 car spaces) available in the Campbell St block between Warwick St and Brisbane St, with parking bays marked and signposted with time limits (either 2P, 1P or ½P) as described in Section 2.1. This is complemented by existing



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off-street parking provided within properties in the immediate surrounding area as can be seen in the aerial image shown in Figure 1.

The traffic generated from the proposed development is not likely to impact the availability of the parking in the surrounding area due to the provision of off-street parking for the proposed development as well as existing off-street parking in the area and turn-over rate of time-limited on-street parking. However, surrounding parking facilities will be utilised (as they are by all businesses and residential properties in the local area) to some extent by those either living or working at the 175-179 Campbell St development.

### 5.2 Calculated Parking Requirements

The proposed development must be categorised in several use classes specified in the Planning Scheme due to the multi-use nature of the development including 'Residential', 'Business and professional services' and 'Food services'. Parking requirements for the proposed development at the subject site have been calculated using *Table E6.1 Number of Car Parking Spaces Required*. An overview of the calculated parking requirements is provided in Table 7 which is based on applicable Use Class as defined in the Planning Scheme. Accordingly, 87 parking spaces are required to comply with the Planning Scheme.

The proposed development parking provision does not align with the planning scheme requirement hence is assessed against performance criteria in Point 1 of Table 8.

**Table 7 Parking Requirements** 

Use Class	Number	Planning Scheme Rates	Parking Spaces Required
Residential: Multiple dwelling containing 1 bedroom	6 x 1 bedroom apartments	1 for each dwelling and visitor parking (see below)	6
Residential: Multiple dwelling containing 2 or more bedrooms	25 x 2+ bedroom apartments	2 for each dwelling and visitor parking (see below)	50
Residential: Visitor parking associated with dwellings	31 apartments	1 dedicated visitor parking space per 4 dwellings (applies to both types of multiple dwellings)	7
Business and professional services: Consulting rooms	100 m <sup>2</sup>	1 for each 30 m <sup>2</sup> of floor area	3
Business and professional services: Commercial space	114 m²	1 for each 30 m <sup>2</sup> of floor area	4
Food services: Café	111 m²	15 for each 100 m² of floor area or 1 space for each 3 seats	17
Total parking spaces required			87

### 5.3 Assessment of Relevant Parking and Access Code Use Standards

The Planning Scheme requires all use and development to comply with relevant Use Standards set out in the Parking and Access Code. Applicable use standards are addressed in Table 8.



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### Table 8 Planning Scheme E6.0 Parking and Access Code

#### Code Use Standards Assessment of Compliance with Use Standard E6.6.1 Number of Car Parking Spaces Acceptable solution not met / Performance criteria addressed - The number of A1 Acceptable Solution car spaces for the proposed use at the site as required by the Planning Scheme The number of on-site car parking spaces must be: is outlined in Section 5.2. It has been calculated the number of car spaces to be no less than and no greater than the number specified in Table E6.1 provided does not align with the Planning Scheme parking requirements. P1 Performance Criteria However, it is recommended that the proposed parking provision is acceptable The number of on-site car parking spaces must be sufficient to meet the reasonable based on the following grounds: needs of users, having regard to all of the following: • The residential component of the proposed development is sited in a (a) car parking demand location that reduces the need for a personal vehicle due to the high level (b) the availability of on-street and public car parking in the locality of accessibility to local services and community activities (c) the availability /frequency of public transport within a 400m walking distance of · There is a considerable range of on-street parking around the subject site to cater for visitors to the building and business employees (d) the availability and likely use of other modes of transport Campbell St is a Metro route and a bus stop is located less than 50 m from (e) the availability and suitability of alternative arrangements for car parking proposed development Car parking demand in this section of Campbell St is likely to vary (f) any reduction in car parking demand due to the sharing of car parking spaces by considerably across the day with turnover of time-restricted on-street multiple uses, either because of variation of car parking demand over time or parking regularly making spaces available for short-term use because of efficiencies gained from the consolidation of shared car parking spaces • Private off-street parking is provided extensively for various purposes in this (g) any car parking deficiency or surplus associated with the existing use of the land area taking pressure off on-street parking availability (h) any credit which should be allowed for a car parking demand deemed to have Close proximity to the Hobart CBD and North Hobart with the option to use been provided in association with a use which existed before the change of parking transport modes such as walking, cycling or bus requirement, except in the case of substantial redevelopment of a site • The café is likely to attract people in the local area as there are very few (i) the appropriateness of a financial contribution in lieu of parking towards the cost other similar food services, and it is likely customers will walk or ride rather of parking facilities or other transport facilities, where such facilities exist or are than drive. planned in the vicinity (j) any verified prior payment of a financial contribution in lieu of parking for the land any relevant parking plan for the area adopted by Council (k) the impact on the historic cultural heritage significance of the site if subject to the Local Heritage Code (m) whether the provision of the parking would result in the loss, directly or indirectly, of one or more significant trees listed in the Significant Trees Code



Code Use Standards	Assessment of Compliance with Use Standard
E6.6.2 Number of Accessible Car Parking Spaces for People with a Disability A1 Car parking spaces provided for people with a disability must:	Acceptable solution met – The proposed development building is classified by the Building Code of Australia as a mix of classes. The classes and number of accessible car spaces required include:
<ul><li>(a) satisfy the relevant provisions of the Building Code of Australia;</li><li>(b) be incorporated into the overall car park design;</li><li>(c) be located as close as practicable to the building entrance.</li></ul>	<ul> <li>Class 2 (two or more sole occupancy units) – Not required</li> <li>Class 5 (office/commercial) – 1 space for every 100 carparking spaces or part thereof</li> <li>Class 6 (café) – 1 space for every 50 carparking spaces or part thereof</li> </ul>
	D3.5 Accessible carparking of the BCA states that accessible carparking spaces need not be provided in a carparking area where a parking service is provided and direct access to any of the carparking spaces is not available to the public. This is the case for the proposed development where the carpark provided is for the residential apartments with no public access.
	On-street carparking in this section of Campbell St is likely to provide suitable alternatives in some cases for accessible parking, particularly given the wide, level carriageway and time-restricted parking available along the front of the proposed development.
E6.6.3 Number of Motorcycle Parking Spaces A1	Not considered applicable to this development however it is noted on-street motorcycle parking is provided in the next block just after the Brisbane St intersection.
E6.6.4 Number of Bicycle Parking Spaces A1 The number of onsite bicycle parking spaces provided must be no less than the number specified in Table E6.2.	Acceptable solution met / Performance criteria addressed – Whilst not required under the planning scheme, a bicycle storage rack for up to 12 bikes will be provided in the basement carpark for residential apartments.
	Bicycle parking is applicable for the proposed commercial and food activities both of which individually cover very small floor areas. Hence provision has been made for 5 bicycle hoops outside the commercial area of the proposed development which is considered appropriate for the subject site.



Code Use Standards	Assessment of Compliance with Use Standard
E6.7.1 Number of Vehicular Accesses A1 The number of vehicle access points provided for each road frontage must be no more than 1 or the existing number of vehicle access points, whichever is the greater.	Acceptable solution met – One vehicle access on Campbell St.
E6.7.2 Design of Vehicular Accesses A1  Design of vehicle access points must comply with all of the following:  (a) in the case of non-commercial vehicle access; the location, sight distance, width and gradient of an access must be designed and constructed to comply with section 3 – "Access Facilities to Off-street Parking Areas and Queuing Areas" of AS/NZS 2890.1:2004 Parking Facilities Part 1: Off-street car parking;  (b) in the case of commercial vehicle access; the location, sight distance, geometry and gradient of an access must be designed and constructed to comply with all access driveway provisions in section 3 "Access Driveways and Circulation Roadways" of AS2890.2 – 2002 Parking facilities Part 2: Off-street commercial vehicle facilities	<ul> <li>Acceptable solution partially met/ Performance criteria addressed. The existing access will be utilised noting the following aspects:</li> <li>Entry width of 5.5 m wide (Combined for Category 1 access as defined in Tables 3.1 and 3.2 – Based on User Class 1A; local road frontage, &lt;100 car spaces) will be provided;</li> <li>Location requirements are met in Section 3.2.3 of AS/NZS 2890.1</li> <li>Minimum entering sight distance to the right is acceptable despite SISD not achieved for reasons given in Section 4.4</li> <li>Minimum sightlines for pedestrian safety appear to be met (as required in Figure 3.3 of AS/NZS 2890.1:2004) however this should be checked at the site access detailed design stage</li> <li>Grade of access driveway complies with Table 3.2 of AS/NZS 2890.2, designed to suit SRV (garbage truck) – refer to Figure 8</li> </ul>
P1 Design of vehicle access points must be safe, efficient and convenient, having regard to all of the following: (a) avoidance of conflicts between users including vehicles, cyclists and pedestrians (b) avoidance of unreasonable interference with the flow of traffic on adjoining roads (c) suitability for the type and volume of traffic likely to be generated by the use or development (d) ease of accessibility and recognition for users	Performance criteria addressed:  (a) Campbell St is a one-way, two lane section of road with a dedicated cycle lane where the proposed development is located, hence provides opportunities to avoid conflicts between various road users, particularly as cyclists are encouraged to use the cycle lane on the opposite side of the road and pedestrians are provided with wide footpaths on both sides  (b) There is evidence from site survey observations to indicate various sized rigid vehicles regularly access businesses along Campbell St and through timely traffic gap selection such as when signals change, these vehicles largely avoid interfering with traffic flow  (c) & (d) Existing access has operated safely and efficiently to date as a two-way single lane hence the upgraded access will be suitable for the type and relatively small increase in traffic utilising the access (predominantly light vehicles associated with the proposed development)



Code Use Standards	Assessment of Compliance with Use Standard
E6.7.3 Vehicular Passing Areas Along an Access A1  Vehicular passing areas must: (a) be provided if any of the following applies to an access: (i) it serves more than 5 car parking spaces; (ii) is more than 30 m long; (iii) it meets a road serving more than 6000 vehicles per day; (b) be 6 m long, 5.5 m wide, and taper to the width of the driveway; (c) have the first passing area constructed at the kerb; (d) be at intervals of no more than 30 m along the access.	Acceptable solution met – Existing access meets a road serving more than 6,000 vehicles per day. The width of the access at the kerb will be 5.5 m and will continue at this width for the length of the 40 m driveway up to the carpark entry. The driveway then tapers to a 3m width over a 10 m distance providing an area to reverse into if required.
E6.7.4 On-Site Turning A1 On-site turning must be provided to enable vehicles to exit a site in a forward direction, except where the access complies with any of the following: (a) it serves no more than two dwelling units; (b) it meets a road carrying less than 6000 vehicles per day.	Acceptable solution met – Off-street carpark enables vehicles to exit in a forward direction.  It is noted waste management contractors will require access to the proposed development hence a turning path assessment has been completed (refer Appendix A). A typical waste collection vehicle utilised for these types of premises is able to manoeuvre and exit in a forward direction, however any larger commercial vehicles will not be able to access the carpark due to entry clearance height (discussed in E6.7.5).  Collection of waste will be completed outside peak traffic times to ensure carpark access is not impacted and queuing does not occur.
E6.7.5 Layout of Parking Areas A1 The layout of car parking spaces, access aisles, circulation roadways and ramps must be designed and constructed to comply with section 2 "Design of Parking Modules, Circulation Roadways and Ramps" of AS/NZS 2890.1:2004 Parking Facilities Part 1: Off-street car parking and must have sufficient headroom to comply with clause 5.3 "Headroom" of the same Standard.	Acceptable solution met – The off-street carpark concept design indicates consideration of key parking area elements and based on a high-level review appears to comply with Section 2 of AS/NZS 2890.1:2004. Some specific points:  Dimensions of car spaces will meet standard design requirements for the designated User Class 1A.  Entry into the proposed development carpark will have a clearance height of approximately 2.8 m (refer to Appendix B). This satisfies Clause 5.3 Headroom – general requirement of a minimum of 2.2 m.
	It is recommended to ensure the detailed design of carpark layout is in accordance with relevant clauses of Section 2 AS/NZS 2890.1.



Code Use Standards	Assessment of Compliance with Use Standard
E6.7.6 Surface Treatment of Parking Areas	Acceptable solution will be addressed to the necessary standard in the detailed
A1	design phase of the proposed development.
Parking spaces and vehicle circulation roadways must be in accordance with all of the	
following;	
(a) paved or treated with a durable all-weather pavement where within 75m of a	
property boundary or a sealed roadway;	
(b) drained to an approved stormwater system, unless the road from which access is	
provided to the property is unsealed.	
E6.7.7 Lighting of Parking Areas	Acceptable solution will be addressed to the necessary standard in the detailed
A1	design phase of the proposed development.
Parking and vehicle circulation roadways and pedestrian paths serving 5 or more car	
parking spaces, used outside daylight hours, must be provided with lighting in	
accordance with clause 3.1 "Basis of Design" and clause 3.6 "Car Parks" in AS/NZS	
1158.3.1:2005 Lighting for roads and public spaces Part 3.1: Pedestrian area	
(Category P) lighting.	
E6.7.8 Landscaping of Parking Areas	Not applicable.
E6.7.9 Design of Motorcycle Parking Areas	
E6.7.11 Bicycle End of Trip Facilities	
E6.7.10 Design of Bicycle Parking Areas	Acceptable solution will be addressed to the necessary standard in the detailed
A1	design phase of the proposed development.
(a) be provided in accordance with the requirements of Table E6.2	
(b) be located within 30 m of the main entrance to the building	
E6.7.12 Siting of Car Parking	Acceptable solution met – Carpark located behind retail and commercial
A1	buildings.
Parking spaces and vehicle turning areas, including garages or covered parking areas	
in the Inner Residential Zone, Urban Mixed Use Zone, Village Zone, Local Business	
Zone and General Business Zone must be located behind the building line of buildings	
located or proposed on a site except if a parking area is already provided in front of	
the building line of a shopping centre.	
E6.7.14 Access to a Road	Acceptable solution met – Existing access to Campbell Street.
A1	
Access to a road must be in accordance with the requirements of the road authority.	



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#### 6 Conclusions and Recommendations

This report documents the findings from a Traffic Impact Assessment conducted for the proposed residential apartment building at 175-179 Campbell St, Hobart. This assessment has been conducted following a review of available traffic data, information on the proposed development and site plans provided to ECTM Consulting, relevant standards and guidelines, the Hobart Interim Planning Scheme and other supplementary traffic information.

The analysis undertaken in this report demonstrates that the additional traffic generated from the proposed development at the subject site on a day to day basis during normal peak hours, will not impact the operation of the surrounding road network nor significantly affect the existing road capacity.

The key findings of the TIA are summarised as follows:

- There is sufficient capacity in the surrounding road network to safely absorb the relatively small increase in traffic movements.
- There is no crash history trend to suggest that there are road safety deficiencies in the vicinity
  of the existing site access.
- The existing site access has operated safely and efficiently for many years as an access to the subject site and adjoining property at 169-173 Campbell St and will be upgraded as part of the proposed development.
- Minimum sight distance requirements are met at the site access although exiting the site may
  be restricted at times due to on-street parking. However, there are other examples on
  Campbell St where it would be challenging to satisfy the SISD requirement when on-street
  parking is present. As such, it is considered the site access provides acceptable safe entry and
  exit for the reasons outlined in the relevant section of the report.
- The proposed parking provision and carpark layout is considered adequate based on the grounds described in the report.

The following recommendations are made based on the findings of the TIA:

- Design site access in accordance with applicable clauses of Section 3 AS/NZS 2890.1:2004 Offstreet car parking noting the site access needs to be widened to a minimum of 5.5 m.
- Check minimum sightlines for pedestrian safety are adequate at the site access detailed design stage.
- Incorporate modification of the site access driveway grade into the detailed design phase to achieve the AS/NZS 2890.1:2004 Off-street car parking standard as far as reasonably practicable.
- Ensure carpark layout is designed in accordance with relevant clauses of Section 2 AS/NZS
  2890.1:2004 Off-street car parking noting dimensions of car spaces will meet standard design
  requirements for the designated User Class 1A (residents and employees).
- Ensure bicycle parking is designed in accordance with relevant clauses of AS 2890.3:2015
   Parking facilities Bicycle parking.
- Review and address parking area surface treatment, drainage and lighting requirements as stated in the Planning Scheme during the detailed design phase.

In conclusion, the proposed development does not significantly increase the number of movements on the local road network during peak periods and is unlikely to impact on existing parking facilities therefore should not adversely impact on traffic efficiency and road safety in the area. Based on the findings of this report and subject to the recommendations above, the proposed development is supported on traffic grounds.



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#### 7 References

Australian Building Codes Board, National Construction Code 2019 Building Code of Australia – Volume 1, Amendment 1, 2020

Australian Standards, AS/NZS 2890.1:2004, Parking facilities—Off-street car parking

Australian Standards, AS/NZS 2890.2:2018, Parking facilities—Off-street commercial vehicle facilities

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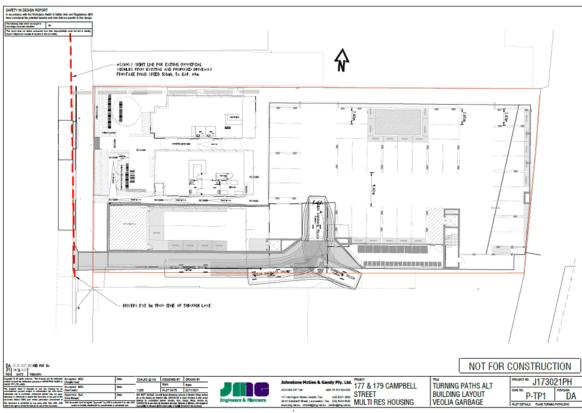
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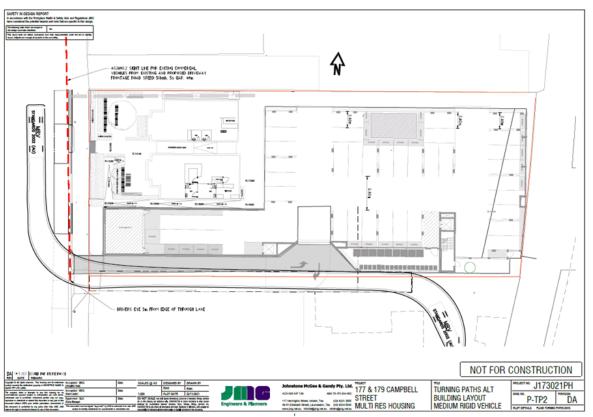


# Appendix A – Small and Medium Rigid Vehicle Turning Paths



Ref: JMG Drawing P-TP1 22/11/21 – Turning Paths Alt Building Layout Veolia Garbage

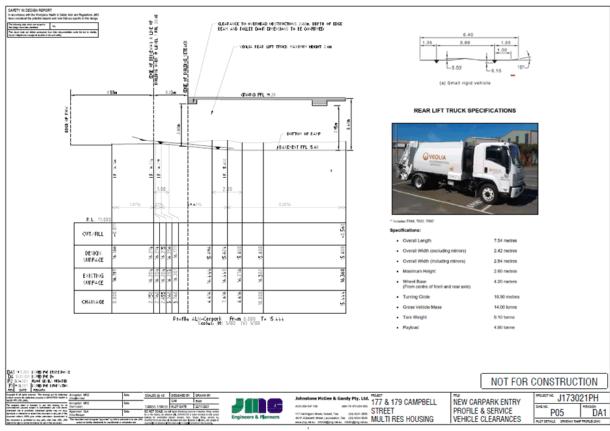




Ref: JMG Drawing P-TP2 22/11/21 – Turning Paths Alt Building Layout Medium Rigid Vehicle



# Appendix B - Waste Collection Truck Carpark Entry Clearance



Ref: JMG Drawing P05 22/11/21 - New Carpark Entry Profile and Service Vehicle Clearance



BGAS Multi-Residential Development, 175-179 Campbell St, Hobart Traffic Impact Assessment

### **Document History and Status**

Version	Date of Report	Prepared by	Revision type
1.0	30/06/2021	A Halley	Issued to client
2.0	7/07/2021	A Halley	Minor amendments
3.0	22/11/2021	A Halley	Update drawings and no. of car spaces
4.0	1/12/2021	A Halley	Inclusion of new information, update drawings, additional site access assessment
5.0	13/1/2021	A.Halley	Update Section 5 with revised carpark drawing and clarification of parking provision

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ENVIRONMENTAL SITE ASSESSMENT 175-179 Campbell Street, Hobart November 2021

For Solutionswon Group Pty Ltd

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ATTACHMENT B

Environmental Site Assessment: 175-179 Campbell Street, Hobart, Tasmania. November 2021

## **DOCUMENT CONTROL**

Title	Version	Date	Author	Reviewed By
Environmental Site Assessment: 175- 179 Campbell Street, Hobart, Tasmania	Version 1	25 <sup>th</sup> November 2021	Mark Downie	JP Cumming

Environmental Site Assessment: 175-179 Campbell Street, Hobart, Tasmania. November 2021

### **EXECUTIVE SUMMARY**

This report presents the findings of an Environmental Site Assessment (ESA) undertaken by Geo-Environmental Solutions Pty. Ltd. (GES) at 175-179 Campbell Street, Hobart, Tasmania - hereby referred to as 'The Site'. GES was commissioned by Solutionswon Group Pty Ltd to conduct the site assessment.

This ESA has been prepared by a suitably qualified and experienced practitioner in accordance with procedures and practices detailed in National Environmental Protection Measure [Assessment of Site Contamination] (NEPM ASC; 2013).

The objective of this ESA was to investigate the site for contamination, and address performance criteria under the potentially contaminated land code (E2) of the *Hobart City Council Interim Planning scheme 2015*. The assessment determines the suitability and safety of the soil for excavation at a typical depth for foundation & services excavation, and any human or environmental risks from the soil present on site.

The following information was gathered during the desktop investigation:

- The site is zoned *Urban Mixed Use* under the Hobart City Councils Interim Planning Scheme of 2015. The geology of the site is Quaternary alluvial deposits. Groundwater is inferred to travel south east along similar trajectory to the Brooker Highway towards the River Derwent. Surface water may be collected in stormwater culverts and discharged into Hobart Rivulet to the south east, or may infiltrate nearby unsealed areas to infiltrate to groundwater.
- A review of available information suggests that the site has been mostly residential land for 50+
  years, with the buildings on site being converted to office use in more recent years. There are no
  records of potentially contaminating activities occurring on the site, or dangerous goods being
  stored on the site. The site is adjacent to a commercial warehouse and supermarket (formerly a
  commercial site with fuel storage) and as such there is potential for the presence of contaminants
  in the local area.
- Contaminants Of Potential Concern (COPC) include the following: TPH/TRH; Mono Aromatic hydrocarbons: (BTEXN); PAH; and metals.

From the soil assessment, it is concluded that:

- <u>Environment:</u> Zinc was detected above NEPM ASC 2013 EIL guideline limits in one sample, and Benzo(a)pyrene exceeded NEPM ASC 2013 ESL guideline limits in two samples. Metals and hydrocarbons were at elevated levels in samples which corresponded with overlying fill material, and not in the underlying clay soil.
- Human Health: There were no human health guideline exceedances for dermal contact or vapour intrusion risk. For NEPM ASC 2013 guidelines for dust inhalation and soil ingestion; for sample BH01 0.50, PAHs exceeded HIL C Class (recreation) investigation limits and Benzo(a)pyrene exceeded both HIL C Class and HIL D Class (commercial/industrial), and for sample BH02 0.50, Benzo(a)pyrene exceeded HIL C Class.
- Excavated Soil Management: In terms of *IB105*, the soil is a mixture of Level 1 Material (Clean Fill), Level 2 Material (Low Level Contaminated Soil), Level 3 and Level 4 Material (Contaminated Soil). If the soil is to be disturbed, it must be handled in accordance with IB105 and disposed of in line with IB105 and Controlled Waste Guidelines.

### GES recommends the following:

- There are human health guideline exceedances for dust inhalation and soil ingestion, a Contamination Management Plan (CMP) will be required to mitigate risks to human receptors prior to development at the site.
- There are exceedances for ESL and EIL ecological guideline limits. A Soil and Water Management Plan (SWMP) will be required to account for the management and erosion of soil with ecological impacts during developments at the site.
- Any disposal of soil off site must be in accordance with IB105 and the controlled waste regulations.
   Excavated soil will require disposal at a suitable waste facility and a permit to transport the waste (obtained through the EPA) will be required.

Environmental Site Assessment: 175-179 Campbell Street, Hobart, Tasmania. November 2021

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### **ABREVIATIONS**

AEC Areas of Environmental Concern

AHD Australian Height Datum

ALS Analytical Laboratory Services

ANZECC Australia and New Zealand Environment and Conservation Council

BGS Below Ground Surface

BH Borehole

BTEXN Benzene Toluene Ethylbenzene Xylene Naphthalene

COA Certificate of Analysis
COC Chain of Custody

COPC Contaminant of Potential Concern

CRC CARE Corporative Research Centre for Contamination Assessment and Remediation of the

Environment

CSM Conceptual Site Model

DQO Data Quality Objectives

EOH End Of Hole

EIL Ecological Investigation Levels
ESL Ecological Screening Levels

EPA Environmental Protection Authority
ESA Environmental Site Assessment
GDA94 Geocentric Datum of Australia 1994
GES Geo-Environmental Solutions Pty. Ltd.

HIL Health Investigation Levels
HSL Health Screening Levels
IL Investigation Levels
LOR Limits of Reporting
MDL Mean Detection Limit

NATA National Association of Testing Authorities

NEPM ASC National Environmental Protection (Assessment of Site Contamination) Measure

NHMRC National Health and Medical Research Council

NL Non Limiting

NRMMC Natural Resource Management Ministerial Council

PAH Polynuclear Aromatic Hydrocarbons
PCP Physico-Chemical Parameters
PHC Petroleum Hydrocarbons
PID Photo-Ionisation Detector

PPA Preferential (PVI) Pathways Assessment

PVI Petroleum Vapour Intrusion

TPH Total Petroleum Hydrocarbons

TRH Total Recoverable Hydrocarbons

USCS Unified Soil Classification System

### 1 INTRODUCTION

### 1.1 General

This report presents the findings of an Environmental Site Assessment (ESA) undertaken by Geo-Environmental Solutions Pty. Ltd. (GES) at 175-179 Campbell Street, Hobart - hereby referred to as 'The Site'. The site location is presented in Figure 1 and the aerial photograph is presented in Figure 2. GES was commissioned by Solutionswon Group Pty Ltd to conduct the site assessment.

The site appears to of predominantly residential use for >50 years, and is surrounded by long-standing commercial and light industrial area. The ESA will compare contamination against E2.6.2 Excavation code of the Potentially Contaminated Land Code which will account for any future potential contact or excavation of earth such as services trenches or digging for foundations.

This ESA has been prepared by a suitably qualified and experience practitioner in accordance with procedures and practices detailed in National Environmental Protection Measure [Assessment of Site Contamination] (NEPM ASC; 2013) guidelines and key regulations and policies identified in the References section of this document. Personnel engaged in preparing this ESA are listed in Appendix 1 along with their relevant qualifications and years of experience.

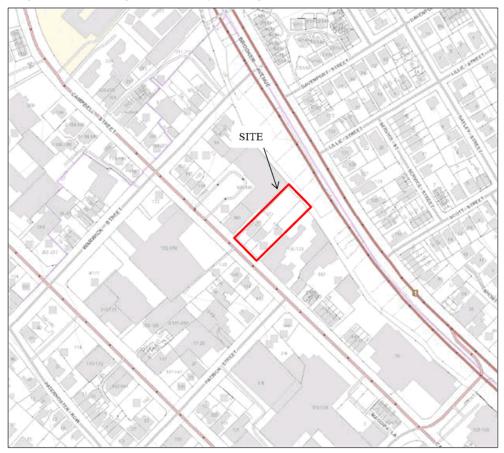


Figure 1 Site Location (Image C/O The LIST)

# 1.2 Site Layout

An aerial image of the existing site layout is presented in Figure 2.



Figure 2 Existing Site Layout (Image C/O The LIST)

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#### 1.3 Site Details

Site details are presented in Table 1.

#### Table 1 Site Details

#### SITE LOCATION:

175-179 Campbell Street, Hobart, Tasmania

### INVESTIGATION AREA

The site, with attention to be paid to the area behind the existing houses

### SITE ELEVATION & GRADIENT

Approximately 20 m AHD gently SE sloping site

### SITE SURFACING

Sealed driveways, gravel hardstands, grasses and shrubs

#### TITLE REFERENCES

The title references: CT 23364/1, 23364/2, 22529/3, 23363/1

#### SITE OWNER

Building Group Apprenticeship Scheme Ltd

#### PREVIOUS LANDUSE

Mixed residential then office use for at least 50 years

#### SITE SURROUNDING LAND ZONING

Tasmanian Interim Planning Scheme 2015; Urban Mixed Use

#### SITE LAND USE

Mixed offices and residential

#### PROPOSED LAND USE

Mixed offices and residential

#### SURROUNDING LAND USE:

Adjacent properties all Urban mixed use, mix of offices, retail and residential

### 1.4 Investigation Objectives

The objective of this ESA was to investigate the site for contamination, we have done this by addressing E2.6.2 performance criteria under the *Hobart City Council Interim Planning scheme 2015* for excavation. To assess the suitability and safety of the soil for excavation at a typical depth foundations and services, and any human or environmental risks of the soil present on site.

Given the potential for contamination leaching to depth from upgradient sources, we have investigated the soil at a variety of depths where possible, and investigated any groundwater if found during testing.

## 1.5 Scope of Works

The scope of work for this ESA was to:

- Conduct a desktop and an invasive soil investigation at the site.
- Drill seven (7) soil bores and collect sixteen (16) primary soil samples, and any groundwater samples if groundwater is present (note – groundwater was not present); the primary samples were sent for analysis of total recoverable hydrocarbons (TRH) Benzene Toluene Ethylbenzene Xylene Naphthalene (BTEXN), Polynuclear Aromatic Hydrocarbons (PAH), and a suite of fifteen (15) metals to a National Association of Testing Authorities (NATA) accredited laboratory.
- Samples were sent with quality assurance/ quality control (QA/QC) samples including one rinsate blank, one duplicate sample.
- Determine the absence or presence and if present the level of site contamination and compare soil
  results against the relevant guidelines.
- · Conduct a risk assessment, known as a Conceptual Site Model; and
- Report findings in an Environmental Site Assessment report, detailing specific onsite human health or environmental risk which may source from potentially detected contamination.

### 2 PLANNING

### 2.1 Overview

GES has previously conducted a desktop Preliminary Site Investigation (PSI) at the site (GES 2021) to determine likelihood of contamination. The client has requested an Environmental Site Assessment to test for contamination and as a requirement for lodging a development application at the site. Plans include a development of units behind the existing houses, with a car parking basement below the proposed units, refer to Appendix 2 for plans.

The site is not considered a potentially contaminated site by Hobart City Council (HCC), but it is identified as sharing a boundary with a potentially contaminated site at 181-189 Campbell Street.

The site is within a long standing commercial and light industrial area, with decommissioned underground fuel storage identified at 181-189 Campbell Street, 12 Warwick Street and 171 Argyle Street. Given the long history of commercial and light industrial operations in the area (notably upgradient mechanics and workshops), other potential sources of contamination may be present. Identifying all potential contamination sources is beyond the scope of this report.

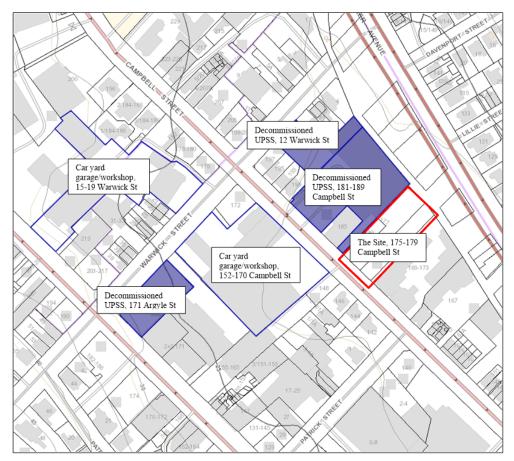


Figure 3 Potentially Contaminated Sites

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### 2.1.1 Excavation Works E2.6.2 P1

For this investigation we have addressed E2.6.2 P1 performance criteria to determine levels of potential contamination on site, of Hobart City Council's Interim Planning Scheme 2015. The performance criteria identify that any future potential excavation works must not adversely impact on health and the environment, having regard to:

- (a) an environmental site assessment that demonstrates there is no evidence the land is contaminated; or
- (b) a plan to manage contamination and associated risk to human health and the environment that includes:
  - i. an environmental site assessment;
  - ii. any specific remediation and protection measures required to be implemented before excavation commences; and
  - a statement that the excavation does not adversely impact on human health or the environment.

### 2.1.2 Statement of Suitability

A statement based on the results of the Environmental Site Assessment that the excavation as part of the planned works will not adversely impact on human health or the environment is to be provided (subject to implementation of any identified remediation and/or protection measures as required).

### 3 DESKTOP STUDY

### 3.1 Site Zoning

The site is zoned *Urban Mixed Use* under the Tasmanian Interim Planning Scheme of 2015. The adjacent land on the north eastern side of Campbell Street is also zoned mixed use whilst the land on the south western side of Campbell Street is zoned commercial – see Figure 4. The site is to be assessed against land use Class D for Commercial and Industrial land use, for construction of units that will be not in direct contact with soil, due to a car parking basement below the units. A small strip of ground along the north western edge of the units will be retained and landscaped (see Appendix 2 for architect plans), and this area should be assessed against land use Class C for Recreational Land Use.



Figure 4 Hobart City Councils Interim Planning Scheme Zones (2015)

### 3.2 Site Walkover

An initial site walkover was completed by GES staff on  $30^{th}$  June 2021, an additional site walkover with soil sampling was completed by GES staff on the  $26^{th}$  October 2021. No obvious staining or odour of the site surface or underlying soil was observed. Images are presented in Appendix 3.

## 3.3 MRT Geology Mapping

The geology of the site has been mapped by Mineral Resources Tasmania, see Figure 5. The majority of the site is inferred to be underlain with  $\mathbf{Q}\mathbf{a}$  (Quaternary aged alluvial deposits), with a boundary to  $\mathbf{Q}$  (Undifferentiated Quaternary sediments) around the buildings existing at the Campbell Street frontage. Triassic sandstone is likely to be present upslope. Geological descriptions follow:

- R-Triassic Undifferentiated Upper Parmeener Supergroup rocks.
- Jd Jurassic Dolerite and related rocks.
- Qa Quaternary deposits Alluvial gravel, sand and clay.
- **Q** Undifferentiated Quaternary sediments.



Figure 5 Mineral Resources Tasmania 1:25000 Scale Mapping (The LIST).

### 3.4 Hobart City Council Records

The Hobart City Council was contacted for comment. The following information was provided:

- The Site is not listed as a potentially contaminated site.
- The site adjacent to the site; 181-189 Campbell Street is listed as a potentially contaminated site.
   This site had underground fuel storage tanks which were decommissioned in 1999 as part of redevelopment of the site for a supermarket.
- The site at 12 Warwick Street formerly hosted underground fuel tanks which were decommissioned in 2010.

### 3.5 EPA Regulated Premises

There are no EPA Regulated Premises layer points on The LIST within a 500m radius of the Site. There are two sites listed as containing decommissioned former underground fuel infrastructure (pins as shown in Figure 6), 12 Warwick Street approximately 75m upgradient of the site and 171 Argyle Street approximately 130m upgradient of the site. The adjacent site at 181-189 Campbell Street is not listed despite council records indicating decommissioned former fuel tanks at the site.

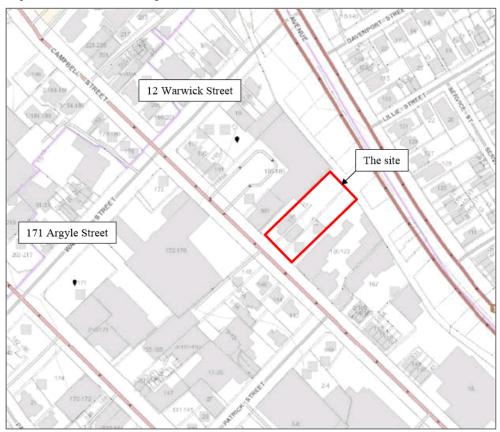


Figure 6 Spatial Relationship of nearby EPA listed premises (Image source The LIST)

Environmental Site Assessment: 175-179 Campbell Street, Hobart, Tasmania. November 2021

#### 3.6 WorkSafe Tasmania Records

WorkSafe Tasmania were contacted by phone to ascertain if a dangerous goods search was required for the site. The search was not deemed necessary as no files were held for the site. This includes any possible WorkSafe Tasmania records, and the EPA ERLUR records. A further search was not warranted given the site has predominantly been residential for the past 50 years and has not been used for any industrial purposes.

### 3.7 Previous Environmental Site Investigations

GES undertook a PSI of the Site in June 2021, with conclusions as follows:

The desktop investigation has identified there is low risk for contaminated soil or groundwater on site. However, it cannot be demonstrated without doubt that the land is not contaminated, given that there are records of dangerous goods storage (underground fuel tanks) on the adjacent site (181-189 Campbell Street). Therefore, it is recommended that an environmental site assessment be completed to test for contamination on the site prior to any site excavation and development works.

GES is unaware of any other site investigations at the Site, or at the adjacent 181-189 Argyle Street.

### 3.8 Historical Aerial Photography Interpretation

Historical aerial photographs of the site and surrounding areas were accessed through the Department of Primary Industries, Parks, Water and Environment (DPIPWE) and Google Earth images were reviewed for the period 2003-2020. Individual aerial photos are presented in Appendix 4.

**Error!** Not a valid bookmark self-reference. Table 2 presents a summary of alterations to the site between photo events, and the individual aerial photos are presented in Appendix 4.

Table 2 Historical Aerial Photograph Review

Photo	Observations
1957	The site features a house on each title, with gardens and small sheds visible in each backyard, consistent with residential use.
1969	The site is unchanged from 1957.
1977	The buildings on each site remain, the rear yard of 175 Campbell has been cleared and perhaps the building converted from residential to an office use
1989	Renovations to 175 Campbell have occurred, new small warehouse building to rear of existing building on 175 Campbell, further clearing for car parking at rear of 177-179 Campbell
2020	The site is largely unchanged from 1989

The surrounding area appears to feature commercial and light industrial premises surrounding the site in all photos, including the adjacent 181-189 Campbell Street (now a supermarket), and car yards on the opposite side of Campbell Street. This suggests a long history of commercial and light industrial operations in the general vicinity of the Site.

### 3.9 Site Topography, Drainage & Hydrogeology

The site is situated in a relatively flat area with a gentle gradient to the east, in a slight depression between Campbell Street and the Brooker Highway. Surface water from the site is likely to drain in a south easterly direction parallel with the Brooker Highway eventually towards the Hobart Rivulet. Groundwater is likely to have a low gradient and slow to moderate movement towards the south east. Refer to Figure 7.

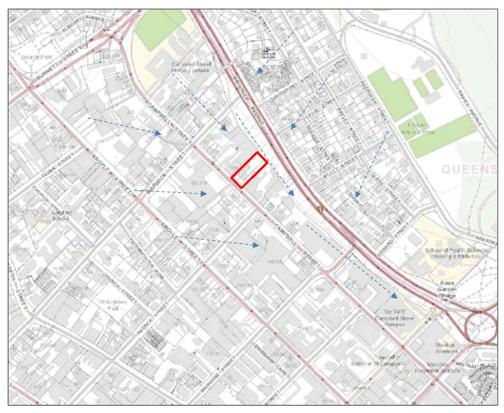


Figure 7 Contour Elevations and Inferred Surface and Groundwater Flow Direction

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#### 3.10 Groundwater

No groundwater was encountered during excavation and soil sampling at the Site, with boreholes terminating at depths between 1.7 and 2.2m BGS.

### 3.10.1 Potential Up-Gradient Contamination Sources

The presence of former upgradient underground fuel tanks is a potential contamination source for groundwater at the site. Given the long history of light industrial land use in the vicinity, other potential up-gradient contamination sources may be present, identifying all contamination sources is beyond the scope of this report.

### 3.10.2 Downgradient Ecosystem Receptors

The closest downgradient ecosystems are Hobart Rivulet approximately 800m to the south east, and the Derwent River approximately 1km to the south east. It is likely that groundwater will have slow movement, due to the low gradient in the area.

### 3.10.3 Registered Water Bores

The closest registered Water Bore is 2864 (Water Resources Tasmania, Groundwater Information Access Portal), located on the eastern side of the Queens Domain, 1.4km from the site. The bore is not in the same groundwater catchment of the Site and is not considered applicable to the Site. Water bores have not been considered further in this investigation.

### 3.11 Potential Contamination Issues

There is no evidence of any industrial operations, or storage of dangerous goods on the site.

The site has predominantly been used for residential purposes over the last 50+years, with more recent development on 175 Campbell Street for offices with an associated small warehouse storage building to the rear.

The rear of the site is also used for car parking. The chance of hydrocarbon contamination of soil due to occasional parking is considered low, however possible in surface soils. There is also potential for localised contamination from former residential use and the burning of coal or other backyard waste.

The main potential contamination impact upon the site is the former storage of fuel on the upgradient properties at 181-189 Campbell Street and 12 Warwick Street which may have impacted groundwater in the local area with hydrocarbons and lead.

### 3.11.1 Areas of Potential Concern

The areas of potential concern is the area of the site, in the event that soil or groundwater has been contaminated by the activities outlined above in Section 3.11.

### 3.11.2 Contaminants of Potential Concern

Potential contaminants of potential concern (COPC) that have been considered include the following:

- Total Petroleum/Recoverable Hydrocarbons (TPH/TRH);
- Mono Aromatic hydrocarbons: Benzene, Toluene, Ethylbenzene, Xylene, Naphthalene (BTEXN);
- · Polynuclear Aromatic Hydrocarbons (PAHs); and
- A suite of 15 Metals.

### 4 FIELD INVESTIGATION PROCEDURES

### 4.1 Works Summary

Site investigation works comprised of soil bore drilling which is summarised in Table 3 and Figure 8

Table 3 Summary of Site Investigation Work Dates

Scope	Data	Lab Report	Details					
Geoprobe direct push drilling & Sample collection	21st October 2021	EM2121267 Primary Lab	16 Primary soil samples, 1 Duplicate sample, and 1 Rinsate sample were collected for analysis.  No groundwater was encountered within the depths drilled, and no groundwater samples collected.					



Figure 8 Borehole Plan (Aerial photo overlay)

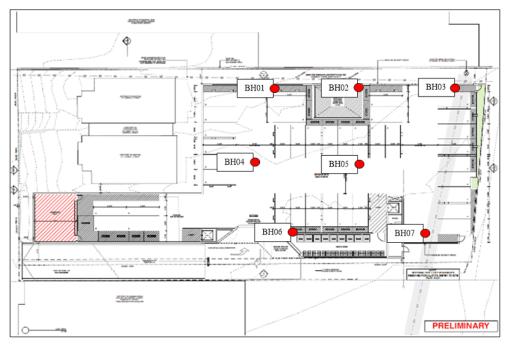


Figure 9 Borehole Plan (Preliminary Architect plans for ground level/basement)

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### 4.2 Soil Investigation

### 4.2.1 Borehole Drilling

A total of seven 65 mm diameter soil bores drilled using the industry recognized Geoprobe direct push drilling system for assessing site geology and sampling for contamination impact.

### 4.2.2 Soil Sampling

Soil sampling was conducted per the National Environmental Protection Measure (NEPM ASC 2013) and AS4482 sampling guidelines. Table 4 presents a summary of the soil assessment methodology adopted at the site.

Table 4 Summary of Soil Sampling Methods

Activity	Details / Comments
Drilling Method	Geoprobe direct push drilling system, and 65mm hand auger to clear for services.
Soil Logging	Logging the soil was conducted in accordance with the unified soil classification system (USCS) as detailed in AS1726 (1993).
Decontamination of Sampling Equipment	Quantum Clean Laboratory Detergent (R213) was used to decontaminate reusable sampling equipment (hand auger) between each borehole sampling event.
Soil Screening	In accordance with AS4482.2. Individual soil samples were collected from the core tray at 0.5 intervals below ground surface (bgs) and/or change in geology. Collected samples were deemed to not have odour associated with hydrocarbon contamination, and screening for volatile fractions using a photoionisation Detector (PID) was deemed not necessary.
Laboratory Soil Sample Collection	In accordance with AS4482.2. All samples were collected using disposable nitrile gloves.  Samples were selected for laboratory analysis:  at 0.5m below ground surface (bgs)  at 1.5m below ground surface (bgs)  at 2.2m or 2.5m below ground surface (bgs)  A minimum number of samples were carefully selected which would provide enough information to delineate soil contamination.
Sample preservation	Samples were placed into a jar for laboratory analysis. Soil jars were placed in a pre- chilled cool box with ice bricks.
Sample holding times	Sample holding times were within acceptable range (based on NEPM ASC B3-2013) from collection to extraction.

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### 4.2.3 Sample Analysis

Primary and QC samples were submitted to Analytical Laboratory Services (ALS), Springvale, Melbourne for analysis. A total of 18 samples (16 primary and 2 QC) were selected for analysis. Chain of Custody (COC) documentation was completed and is provided in Appendix 5 along with the Sample Receipt Notification (SRN) for each batch. Table 5 presents a summary of the laboratory analyses undertaken.

Table 5 Overview of Soil and Groundwater Analysis and Quality Control

Analytes	Primary Soil Samples	Duplicate Soil Samples <sup>a</sup>	Rinse Blank <sup>b</sup>
TRH	16	1	1
BTEXN	16	1	1
PAH	16	1	1
Suite 15 Metals	16	1	1

Sampling Quality Control Standards (AS4482):

Given metals were analysed, there was requirement to assess the following soil physical properties to determine soil threshold investigation levels: Soil grain class (sand/silt or clay); % Clay content; Cation exchange capacity (CEC); and Soil pH. The soil physical properties were based on knowledge of similar soil types encountered around the greater Hobart area.

a – Duplicate and Inter-Laboratory Split samples, one (1) in twenty (20) primary samples b– Single rinse sample per piece of equipment per day

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### 5 QUALITY CONTROL

All Field and laboratory Quality Assurance and Quality Control (QA/QC) details and outputs are presented in Appendix 6.

### 5.1 Field

It is standard to expect up to 10% error in field duplication and up to 10% laboratory error. Therefore, in theory up to 20% error can be assumed on duplicate analysis. Some variation may exist in soil and groundwater because even though all efforts are made to split samples homogeneously, fragments of materials may bias samples in certain elements.

Relative Percentage Differences (RPDs) for the duplicate samples where applicable are calculated using the method outlined below.

The acceptance criteria used for the RPDs depend on the levels of contaminants detected and the laboratory's Method Detection Limits. The closer the levels detected are to the MDL the greater the acceptable RPD. RPDs are calculated as follows:

- RPD <50% for low level results (<20 \* MDL)
- RPD <30% for medium level results (20-100 \* MDL)</li>
- RPD <15% for high level results (>100 \* MDL)
- No limit applies at <2 \* MDL (Method Detection Limit)</li>

Field QA/QC procedures and compliance are summarised in Table 6

Table 6 Soil Field QA/QC procedures and Compliance

QA/QC Requirement	Compliance	Comments				
Appropriate sampling strategy used and representative samples collected	Yes	Sampling program was undertaken in accordance with AS4482.1-2005				
Appropriate and well documented sample collection, handling, logging and transportation procedures.	Yes	Appropriate and well documented				
Decontamination	Yes	Appropriate decontamination such as cleaning tools before sampling and between sample locations was undertaken				
Chain-of-custody documentation completed	Yes  COC were completed in accordance with NEPM ASC Schedule B2, Section 5.4.5 and transported under strict COC procedures. The signed COC documents are included in this report, which includes the condition report on arrival of samples to the Laboratory, cross checking of sample identification and paperwork and preservation method.					
Required number of splits: Duplicate & inter-lab splits: 1 per 20 primary samples	No	1 duplicate sample was collected and analysed as per AS4482.1-2005. An inter-lab split sample was not collected.				
QA/QC samples reported RPD's within indicated MDL guidelines.	No	For Duplicate and BH01 0.50 pairs, 57% of analytes complied. Non compliances were generally for hydrocarbons, particularly PAH, as outlined in Appendix 6. This suggest a non-uniform distribution of hydrocarbons within the soil samples.				
Required numbers of rinse blank samples collected with no laboratory detections?	Yes	One rinse blank was collected, as per AS4482.1-2005.				
Trip blanks collected with no laboratory detections?	NA	According to Australian Standards, there is no requirement to collect trip blanks, unless there is potential for hydrocarbon contamination.				
Field blanks collected with no laboratory detections?	NA	According to Australian Standards, there is no requirement to collect field blanks, unless there is concern with cross contamination risks.				
Samples delivered to the laboratory within sample holding times and with correct preservative	Yes	All samples were sent to the laboratory within holding times and correct preservative.				

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### 5.2 Laboratory

Soil laboratory QA/QC procedures and compliance are summarised in Table 7.

Table 7 Soil Laboratory QA/QC Procedures and Compliance

QA/QC Requirement	Compliance	Comments
All analyses NATA accredited	Yes	ALS Laboratories is NATA Accredited. Appropriate analytical methods used, in accordance with Schedule B(3) of the NEPM ASC 2013. Acceptable laboratory limits of reporting (LORs) adopted.
Method Blanks: zero to <practical limit<br="" quantitation="">(PQL)</practical>	Yes	There were no method blank value outliers in the QCI report.
Laboratory Control Samples: 70% to 130% recovery for soil.	Yes	There were no laboratory control sample recovery outliers in the QCI report.
Matrix spikes: 70% to 130% recovery for organics or 80%-120% recovery for inorganics	Yes	There were no matrix spike outliers in the QCI report
Duplicate Samples: 0% to <20% RPD.	No	There were 19 duplicate sample RPD outliers in the EM2121267 QCI report. 17 of the RPD outliers are for hydrocarbons in sample BH01 0.50, and could be attributed to non-uniform distribution of hydrocarbons in that sample.
Surrogates: 70% to 130% recovery	Yes	There were no surrogate recovery outliers in the QCI report.
Analysis holding time outliers	Yes	There were no analysis holding time outliers in the QCI report.
Quality Control Sample Frequency Outliers	No	For EM2002563 QCI Report: For NEPM 2013 B3 & ALS QC Standard; PAH/Phenols; Laboratory Duplicates and Matrix Spikes below expected, TRH – Semivolatile Fraction; Laboratory Duplicates and Matrix Spikes below expected

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### 6 FIELD INVESTIGATION FINDINGS

### 6.1 Soil Bores

### 6.1.1 Geological Interpretation

Our test holes yielded a clayey soil underneath a surface of fill material. Fill material is deeper at the north western edge (from 0.4m BGS at BH03 to 1.0m BGS at BH01 and BH02), and shallower at the south eastern edge (from 0.1m BGS at BH06 to 0.3m BGS at BH07). The fill material featured bricks in some samples suggesting debris from demolitions, and did not contain hydrocarbon odour. The geology of the site is mapped as Quaternary alluvial deposits, and clay soils below the fill surface are likely to have formed from alluvial deposits. Test holes yielded refusal on underlying rocks at depths around 1.7-2.2m BGS, the underlying rock may not be bedrock, as gravels encountered varied between test holes, which can be an indication of boulder deposits underlying alluvial clays.

### 6.1.2 Grain & Depth Class Interpretation

Grain size classifications are applied to all soils at the site to determine threshold screening level concentrations for hydrocarbons (and chromium) to assess soil ecological and human health risks.

Grain class threshold values are determined based on either the:

- · sample grain size (in the case of ecological screening levels or chromium limits); or
- average grain class overlying the sample point (when assessing petroleum vapour screening levels) relative to the proposed finished floor level.

Table 8 provides a summary of the grain class averages for material overlying the samples.

Table 8 Summary of Grain Class Based on USCS Classification

	Red	_	Soil Grain Size Class Averaging Above Soil Sample						Attenuation			HSL													
Sample	Footing Excavation Depth <sup>A</sup> - Fill Thickness <sup>A</sup> - Green	Sample PVI Depth (m) Relative to Slab/Cut Depth	GW	GP	GM	GC	sw	SP	SM	sc	ML	CL	OL	мн	СН	ОН	а	Rock (R )	Existing Pavement (P)	Crawl Space Thickness (m)	Proposed CONCRETE (CH)	CrawlSpace	Biodegradation	Petroleum Vapour Intrusion Grain Class*	SAMPLE USCS
BH01 0.50	0.4	0.4	0.1									0.3								NA	0.1	1.0	1.0	CLAY	CL
BH01 1.50	0.4	1.5	0.4									0.5					0.5			NA	0.1	1.0	1.0	CLAY	CI
BH02 0.50	0.4	0.4										0.3								NA	0.1	1.0	1.0	CLAY	CL
BH02 1.50	0.4	1.5	0.4									0.5					0.5			NA	0.1	1.0	1.0	CLAY	CI
BH03 0.50	0.4	0.4										0.3					0.1			NA	0.1	1.0	1.0	CLAY	CI
BH03 1.50	0.4	1.5										0.3					1.1			NA	0.1	1.0	1.0	CLAY	CI
BH04 0.50	0.4	0.4										0.3					0.1			NA	0.1	1.0	1.0	CLAY	CI
BH04 1.50	0.4	1.5										0.3					1.1			NA	0.1	1.0	1.0	CLAY	CI
BH04 2.50	0.4	2.5										0.5					1.8			NA	0.1	1.0	1.0	CLAY	CL
BH05 0.50	0.4	0.4													0.3		0.1			NA	0.1	1.0	1.0	CLAY	СН
BH05 1.50	0.4	1.5													1.3		0.1			NA	0.1	1.0	1.0	CLAY	СН
BH05 2.20	0.4	2.2													1.7		0.3			NA	0.1	1.0	1.0	CLAY	CI
BH06 0.50	0.4	0.4													0.3					NA	0.1	1.0	1.0	CLAY	СН
BH06 1.50	0.4	1.5													1.4					NA	0.1	1.0	1.0	CLAY	СН
BH07 0.50	0.4	0.4								0.2					0.2					NA	0.1	1.0	1.0	CLAY	СН
BH07 1.50	0.4	1.5								0.2					1.2					NA	0.1	1.0	1.0	CLAY	СН

### Footnotes:

<sup>\*</sup> Grain class is modified based on proposed building construction: concrete is interpreted to have similar vapour intrusion properties to clay and is therefore designated as CLAY within the grain size averaging assessment; backfill is inferred to comprise of gravel (GW)

Sample has been collected from above the proposed excavation (base of slab or proposed ground level) and is not relevant in PVI risk assessment

<sup>^</sup> Excavation depths are approximate and may vary due to change in services depths or overall building/footing construction design

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ATTACHMENT B

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### 6.1.3 Soil Contamination Observations

No staining or odour consistent with hydrocarbon contamination were observed either on the site surface, or in the soil during the site visit. Collected samples were not observed to have any odour consistent with hydrocarbon contamination.

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### 7 SOIL ECOLOGICAL IMPACT ASSESSMENT

### 7.1 Protected Environmental Values

The requirement for protecting soil from contaminated activities in Tasmania is managed under the Environmental Management and Pollution Control Act 1994 (EMPCA) which states in Part 5A:

- (2) An area of land is a contaminated site if -
  - (a) there is in, on or under that area of land a pollutant in a concentration that -
    - (i) is above the background concentration; and
    - (ii) is causing or is likely to be causing serious or material environmental harm or environmental nuisance, or is likely to cause serious or material environmental harm or environmental nuisance in the future if not appropriately managed;

Potential soil impact at the site is assessed through application of the following environmental investigation guidelines.

### 7.2 NEPM ASC (2013) Guidelines

The following ecological investigation guidelines are to be addressed in order to assess acceptable levels of risk to terrestrial ecosystems:

- NEPM ASC (2013) Ecological Investigation Levels (EIL's) have been developed for selected
  metal and organic substances. EIL's depend on specific soil and physicochemical properties and
  land use scenarios and generally apply to the top two (2) metres of the soil profile (NEPM ASC
  2013):
- NEPM ASC (2013) Ecological Screening Levels (ESL's) have been developed for selected
  petroleum hydrocarbon compounds and total petroleum hydrocarbon fractions. ESL's broadly
  apply to coarse- and fine-grained soils and various land use scenarios within the top two (2) metres
  of the soil profile (NEPM ASC 2013).

Soil analytical results are compared against Ecological Screening Levels (ESL's) and EIL's limits presented in Table 9.

Table 9 Summary of Soil Contaminates Considered as part of this investigation, based on NEPM (2013) ASC

	Analytes In	vestigated					
Investigation	Hydrocarbo	ons		Metals			
Levels (IL)	BTEX	TRH (F1 to F4)	Benzo(a) pyrene (PAH)	Naphthalene (PAH)	Zn, Cu, Cr(III), Ni & As	Lead	DDT
ESL's	Analysed	Analysed	Analysed				
EIL's	$\geq$			Analysed	Analysed	Analysed	Not Analysed

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### 7.3 Guidelines

### 7.3.1 Ecological Screening Levels

The following compounds were compared against NEPM ASC (2013) Ecological Screening Levels (ESL's):

- BTEX:
- F1 to F4 TRH; and
- Benzo(a)pyrene (PAH)

Selection of ESL threshold investigation limits are set out in the NEPM ASC (2013) guidelines and require classification of the soil according to:

- Land use sensitivity:
  - Areas of ecological significance
  - · Urban residential and public open space; and
  - Commercial and industrial.
- Dominant particle size passing through a 2 mm sieve into:
  - Coarse sand sizes and greater; and
  - · Fine clay and silt sizes.

Adopted NEPM ASC (2013) soil and land use classifications are presented below.

### 7.3.2 Ecological Investigation Levels

The following compounds were compared against Environmental Investigation Levels:

- Lead:
- Nickel;
- · Chromium;
- Zinc;
- Copper;
- Arsenic; and
- Naphthalene.

There was a requirement to classify the soil according to physicochemical properties to develop investigation limits for the above listed compounds. Adopted physicochemical parameters are presented in the results tables.

Selection of EIL threshold investigation limits are set out in the NEPM ASC (2013) guidelines and require classification of the soil per specific soil and physicochemical properties which are presented in the results tables. The adopted land use scenarios presented in Table 10.

We have selected Commercial and Industrial land use as most applicable as; The surrounding area is predominantly commercial premises, The proposed residential developments will be built above a carpark basement and not in direct contact with any soil, and a lack of ecological receptors being within an urban environment with contained stormwater networks.

Table 10 Adopted Land Use Scenario for the Soil Bores

Land Use Scenario	Applicable Soil Bores
Areas of Ecological Significance	
Urban Residential & Public Open Space	
Commercial & Industrial	All soil bores

Based on a preliminary assessment of site soil conditions, the following physicochemical properties are applied to assess guideline EIL's:

- · Clay content consistent with field observations;
- A soil pH and cation exchange capacity (CEC) consistent with Table 11.

Table 11 Cation Exchange and Clay content, Adopted for the Site

Soil Physicod Site	chemical Prop	erties Adopte	d for The
USCS	Clay %	CEC	рН
R	100	10	6.0
GW	0	10	6.0
GP	0	10	6.0
GM	10	15	6.0
GC	30	20	6.0
SW	0	10	6.0
SP	0	10	6.0
SM	10	15	6.0
SC	20	20	6.0
ML	30	20	6.0
CL	100	35	6.0
OL	50	35	6.0
MH	30	35	6.0
CH	100	45	6.0
ОН	100	60	6.0
PT	100	80	6.0
Р	0	0	6.0
CL	100	35	6.0
CI	100	35	6.0
Rock	0	10	4.5

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### 7.4 Findings

### 7.4.1 Ecological Screening Levels

Laboratory analytical results are presented in Appendix 7. Table 12 compares soil analytical results against relevant NEPM ASC (2013) ESL's. Concentrations which exceeded laboratory limit of reporting (LOR) are highlighted in bold, and ESL exceedances are highlighted with a coloured cell.

The concentration of Benzo(a)pyrene was 20-50x above ESL in BH01 0.50, and 5-20x above ESL in BH02 0.50, at commercial/industrial land use.

Table 12 Summary of Soil Analytical Results Compared with ESL's for commercial/industrial land use.

NEPM Ecological	Screening Leve	ls for So	il		ВТ	EX		PAH		TRH		
X - Indicates Sa	old - Indicates LOR Exceedances - Indicates Sample has been Excavated  olour Shading - Indicates ESL Exceedances:			61		sene		Benzo(a)pyrene	C10)	) - C16)	5 - C34)	1 - C40)
>1 x, * 2-5 x, **				Benzene	Toluene	Ethylbenzene	Xylenes	Benzo(a	F1 (06 -	F2 (>C10 - C16)	F3 (>C16 - C34)	F4 (>C34 - C40)
۵	ate	Class irse)	se	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	Sample Date	Soil Texture Class (fine /coarse)	Land Use	LOR 0.2	LOR 0.5	LOR 0.5	LOR 0.5	LOR 0.5	LOR 10	LOR 50	LOR 100	LOR 100
BH01 0.50	21/10/21	F	COM/IND	<0.2	<0.5	<0.5	<0.5	27.4***	<10	70	1440	240
BH01 1.50	21/10/21	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH02 0.50	21/10/21	F	COM/IND	<0.2	<0.5	<0.5	<0.5	9++	<10	<50	480	100
BH02 1.50	21/10/21	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH03 0.50	21/10/21	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH03 1.50	21/10/21	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH04 0.50	21/10/21	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH04 1.50	21/10/21	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH04 2.50	21/10/21	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH05 0.50	21/10/21	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH05 1.50	21/10/21	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH05 2.20	21/10/21	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH06 0.50	21/10/21	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH06 1.50	21/10/21	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH07 0.50	21/10/21	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH07 1.50	21/10/21	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100

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### 7.4.2 Ecological Investigation Levels

Table 13 compares soil analytical results against relevant EIL's. Concentrations which exceeded laboratory LOR are reported in the table, EIL exceedances are highlighted with a coloured cell. Zinc exceeded commercial/industrial guidelines by 1-2x in BH01 0.50.

Table~13~Soil~Analytical~Results~Compared~Against~Ecological~Investigation~Levels~commercial/industrial~land~Against~Ecological~Investigation~Levels~commercial/industrial~land~Against~Ecological~Investigation~Levels~commercial/industrial~land~Against~Ecological~Investigation~Levels~commercial/industrial~land~Against~Ecological~Investigation~Levels~commercial/industrial~land~Against~Ecological~Investigation~Levels~commercial/industrial~land~Against~Ecological~Investigation~Levels~commercial/industrial~land~Against~Ecological~Investigation~Levels~commercial/industrial~land~Against~Ecological~Investigation~Levels~commercial/industrial~land~Against~Ecological~Investigation~Levels~commercial/industrial~land~Against~Ecological~Investigation~Levels~commercial/industrial~land~Against~Ecological~Investigation~Levels~commercial/industrial~land~Against~Ecological~Investigation~Levels~commercial/industrial~land~Against~Ecological~Investigation~Levels~commercial/industrial~land~Against~Ecological~Investigation~Levels~commercial/industrial~land~Against~Commercial~land~Against~Comme

use.													
NEPM Ecological	Investigati	on Levels fo	r Soil										
	Bold - Indicates LOR Exceedances X - Indicates Sample Within Inferred Excavation												
	Colour Shading - Indicates EIL Exceedances: >1 x, * 2-5 x, ** 5-20 x, *** 20-50 x, **** >50 x												
Q	Date	EIL Land Use Sensitivity Class	CEC (cmolc/kg)		Soil Texture Class (fine /coarse)	Copper (CEC)	Copper (pH)	Nickel	Zinc	Chromium III	Lead	Arsenic	Naphthalene
Sample ID	Sample Date	EIL Land Use Sensitivity Cl	Soil CEC	Soil pH	Soil Texture C (fine /coarse)	gy/gm	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH01 0.50	21/10/21	COM/IND	35	6 (3)	F	55	55	13	243	14	201	<5	<1
BH01 1.50	21/10/21	COM/IND	35	6 (3)	F	18	18	13	21	16	8	<5	<1
BH02 0.50	21/10/21	COM/IND	35	6 (3)	F	81	81	16	655	21	406	6	<1
BH02 1.50	21/10/21	COM/IND	35	6 (3)	F	23	23	14	22	14	9	<5	<1
BH03 0.50	21/10/21	COM/IND	35	6 (3)	F	42	42	16	43	24	37	<5	<1
BH03 1.50	21/10/21	COM/IND	35	6 (3)	F	39	39	22	22	14	6	<5	<1
BH04 0.50	21/10/21	COM/IND	35	6 (3)	F	22	22	12	14	20	12	<5	<1
BH04 1.50	21/10/21	COM/IND	35	6 (3)	F	31	31	13	17	16	6	<5	<1
BH04 2.50	21/10/21	COM/IND	35	6 (3)	F	15	15	16	29	13	5	<5	<1
BH05 0.50	21/10/21	COM/IND	45	6 (3)	F	36	36	18	20	28	16	<5	<1
BH05 1.50	21/10/21	COM/IND	45	6 (3)	F	23	23	13	18	14	<5	<5	<1
BH05 2.20	21/10/21	COM/IND	35	6 (3)	F	33	33	17	30	10	5	<5	<1
BH06 0.50	21/10/21	COM/IND	45	6 (3)	F	34	34	18	21	30	13	<5	<1
BH06 1.50	21/10/21	COM/IND	45	6 (3)	F	30	30	17	23	27	10	<5	<1
BH07 0.50	21/10/21	COM/IND	45	6 (3)	F	33	33	17	24	29	13	<5	<1
BH07 1.50	21/10/21	COM/IND	45	6 (3)	F	28	28	16	17	14	5	<5	<1

pH Designation:
(1) Using 0.01M CaCl2 extract. Rayment, G.E. and Lyons, D.J. (2011). "Soil Chemical Methods – Australasia". 495+20 pp. CSIRO Publishing, Melbourne.

<sup>(2)</sup> pHF (1:5). Adjusted by subtracting 0.75 with +/- 0.25 error to calibrate to the CaCl2 method (per comm. ALS Brisbane Acid Sulphate Soils Laboartory). Methods in accordance with Ahem, C.R., Stone Y., and Blunden B. (1998b). 'Acid Sulfate Soils Assessment Guidelines'. Acid Sulfate Soils Management Advisory Committee, Wollongbar, NSW, Australia.

<sup>(3)</sup> Classified in accordance with parent material typical soil pH as per the Tasmanian soils database

### 8 SOIL HUMAN HEALTH DIRECT CONTACT ASSESSMENT

### 8.1 Guidelines

Guidelines presented are based on potential exposure of human receptors to soil impact which may include:

- Trench workers repairing or building services (typically to 1 m bgs). This classification is not dependent on the land use class.
- Onsite workers which may be exposed to potential shallow soil impact during development of the site; and
- Onsite future residents having access to landscaped communal space on the site.

### 8.1.1 Land Use Classification

The NEPM ASC (2013) guidelines have been referenced to ensure that the correct land use and density category has been adopted for the site and the surrounding properties (where applicable). As per NEPM ASC 2013 guidelines, the adopted land use class is dependent on the building density and the opportunity for soil access by site occupants (exposure to potentially impacted soil). Aspects needing to be considered include:

- Whether the site is of sensitive land use such as a childcare centre, preschool, primary school or aged care facility in which case land use Class A is applicable;
- The percentage of paved area to determine direct contact exposure risk and therefore classification as low or high density; and
- · Classification based on residential, recreational or commercial/industrial setting.

### 8.1.2 Adopted Land Use Classification

The adopted land use class is presented in Table 14. Land use class is based on the opportunity for soil access as per NEPM ASC 2013 guidelines. Soil contact is anticipated during the construction stage of the proposed project, with negligible opportunity for soil contact post-construction phase given residential properties are above a basement carpark, noting an exception being small areas of landscaped ground along the north western edge of the property which we have assessed as equivalent to open public space.

Table 14 Summary of Land Use Setting and Density for Determining Exposure Risk

Soil Bores	Construction Phase	Location	Land Use	Pathway	Land Use Class
All soil	During	Site	Construction worker and trench workers	ALL	D and trench worker specific
		Offsite	Commercial/ Industrial workers	DI	D
	Post	Site	Future maintenance workers including trench workers	ALL	D and trench worker specific
		Site	Future public space users	ALL	С
		Site	Residential site users above carpark basement	ALL	D

DC – Dermal Contact - Trench Worker Guidelines (CRC CARE 2013); DI – Dust Inhalation - HIL Guidelines (NEPM ASC 2013); SI – Soil Ingestion - HIL Guidelines (NEPM ASC 2013) or ALL – All of above

### 8.1.3 Health Investigation & Screening Levels

The main exposure pathways and methods for assessing heath risk from contaminated soils are presented in Table 15.

Table 15 Summary of Exposure Pathways and Preliminary (Tier 1) Methods for Assessing Human Exposure Risk

Exposure Scenario	Contaminant Type	Tier 1 Assessment Method	Reference
Vapour Inhalation – Indoor (PVI)		HSL's	NEPM ASC (2013)
Vapour Inhalation - Trench (PVI)	Petroleum Hydrocarbons	(addressed in PVI sections)	CRC CARE (Friebel
Dermal Contact	Try di octili octili	HSL's	& Nadebaum, 2011)
Dust Inhalation	Metals	Health Investigation Levels	NIEDM ACC (2012)
Soil Ingestion	PAH's Chlorinated Solvents	(HIL's)	NEPM ASC (2013)

PVI - Petroleum Vapour Intrusion

### 8.2 Findings

### 8.2.1 Dermal Contact - Petroleum Hydrocarbons

Laboratory analytical results are presented in Appendix 7. Table 16 presents soil hydrocarbon analytical results compared against CRC CARE (Friebel & Nadebaum, 2011) HSL guidelines for assessing dermal contact risk. Concentrations which exceeded laboratory LOR are highlighted in bold, HSL exceedances would be highlighted with a coloured cell indicating the highest HSL land used class which is exceeded.

There were no hydrocarbon guideline exceedances for dermal contact. No dermal contact risk has been identified.

Table 16 Soil Analytical Results Compared Against CRC CARE (Friebel & Nadebaum, 2011) Guidelines for Dermal Contact

Dermal Conta			EP	080: BTE	KN			EP080/	/071: TRH				
Dermal Conta	Health Screening Level act Hazard from Soil rocarbons'	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	C6 - C10 Fraction	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction			
Units		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg			
LOR		0.2	0.5	0.5	0.5	1	10	50	100	100			
HSL A Low De	nsity Residential	100	14000	4500	12000	1400	4400	3300	4500	6300			
HSL B High De	nsity Residential	140	21000	5900	17000	2200	5600	4200	5800	8100			
HSL C Recreat	ional	120	18000	5300	15000	1900	5100	3800	5300	7400			
HSL D Comme	ercial/Industrial	430	99000	27000	81000	11000	26000	20000	27000	38000			
Intrusive Mai	ntenance Worker	1100	120000	85000	130000	29000	82000	62000	85000	120000			
Date	Sample												
21/10/2021	BH01 0.50	<0.2	<0.5	<0.5	<0.5	<1	<10	70	1440	240			
21/10/2021	BH01 1.50	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100			
21/10/2021	BH02 0.50	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	480	100			
21/10/2021	BH02 1.50	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100			
21/10/2021	BH03 0.50	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100			
21/10/2021	BH03 1.50	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100			
21/10/2021	BH04 0.50	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100			
21/10/2021	BH04 1.50	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100			
21/10/2021	BH04 2.50	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100			
21/10/2021	BH05 0.50	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100			
21/10/2021	BH05 1.50	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100			
21/10/2021	BH05 2.20	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100			
21/10/2021	BH06 0.50	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100			
21/10/2021	BH06 1.50	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100			
21/10/2021	BH07 0.50	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100			
21/10/2021	BH07 1.50	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100			

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### 8.2.2 Dust Inhalation & Soil Ingestion

Laboratory analytical results are presented in Appendix 7. Soil analytical results are compared against combined dust inhalation and soil ingestion risk is assessed through the application of NEPM ASC (2013) Health Investigation Levels (HILs) for exposure to soil contaminants are presented in Table 17. Concentrations which exceed laboratory LOR are highlight in bold (except for the metals), and HIL exceedances are highlighted with a coloured cell indicating the highest HIL land used class which is exceeded.

There were guideline exceedances for dust inhalation and soil ingestion for Benzo(a)pyrene in BH01 0.50 exceeding both Recreational HILs (open space area post-construction) and Commercial/Industrial HILs (site workers, construction phase).

There were guideline exceedances for dust inhalation and soil ingestion for Benzo(a)pyrene in BH02 0.50 exceeding Recreational HILs (open space area post-construction) but below Commercial/Industrial HILs (site workers, construction phase).

There were guideline exceedances for dust inhalation and soil ingestion for Total PAHs in BH01 0.50 exceeding Recreational HILs (open space area post-construction), but below Commercial/Industrial HILs (site workers, construction phase).

Table 17 Soil Analytical Results Compared Against NEPM ASC (2013) Health Investigation Levels Guidelines

able 17 50h Ahaiyutah Kesuks Compared Agamsi (Ali M ASC (2015) Reakh Investigation Levels Guidelines																																		
NEPM Health Investigation Leve	ls (HIL's)																																	(0)
Dust Inhalation and Soil Inge Assessment	stion	tent						Total											ne			_				Dene	ranthene	anthene	ne .	cd)pyrene	thracene	srylene		ne ТЕQ (WHO)
X - Indicates Sample Within Pr Excavation Zone	oposed	Moisture Con	Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium To	Cobalt	Copper	Lead	Manganese	Nickel	Selenium	Vanadium	Zinc	Mercury	Naphthalene	Acenaphthyle	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Denztajanuna Chrysene	onlj(q)ozi	Benzo(k)fluor	Benzo(a)pyrene	Indeno(1.2.3.	Dibenz(a.h)anthr	Benzo(g.h.i)perylene	PAHs	Benzo(a)pyrer
Units		%	3ң/3ш	mg/kg	gy/gm	mg/kg	Bk/Bw	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	gy/gm	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	$\neg$	mg/kg.	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR		1	50	1	2	2	5	5	5	2	5	5	2	5	5	5	0.1	0.5	0.5	0.5	0.5	0.5	0.5	0.5 0	.5 0.	5 0.5	5 0.5	0.5	0.5	0.5	0.5	0.5 0	0.5	0.5
HIL A Low Density Residential	₩ HIL A		100		60	4500	20		100	6000	300	3800	400	200		7400	40															3	000	3
HIL B Medium/High Density Resident	✓ HIL B		500		90	40000	150		600	30000	1200	14000	1200	1400		60000	120															4	100	4
HIL C Recreational	₩ HIL C		300		90	20000	90		300	17000	600	19000	1200	700		30000	80									$\top$						3	000	3
HIL D Commerial/Industrial	HIL D		3000		500	300000	900		4000	240000	1500	60000	6000	10000		400000	730															40	000	40
HIDE ROW	D		3000		500	300000	900		4000	240000	1500	60000	6000	10000			730					$\Box$										40	000	40
Sample date: Sample ID																					_	_	$\perp$	$\perp$	$\perp$	$\perp$	$\perp$	$\perp$	L_'		$\Box$	$\perp$	$\perp$	
21/10/2021 BH01 0.50		16.7	<5	140	<1	<50	<1	14	10	55	201	273	13	<5	46	243	0.2	1.0	7.8	1.6	8.3	9.6	5.9 7	4.6 73	3.9 30	.4 28.	.6 17.2	17.7	27.4	14.1	4.4	16.1 4:	19	40
21/10/2021 BH01 1.50		17.5	<5	40	<1	<50	<1	16	11	18	8	71	13	<5	39	21	<0.1	-	-	$\overline{}$	-	-	_	_	_	_	_	_	_	-	-	<0.5 <0	_	0.5
21/10/2021 BH02 0.50		17.1	6	270	<1	<50	2	21	18	81	406	401	16	<5	79	655	0.4	<0.5	1.8	<0.5	1.2	3.6	3.6 1	8.0 19	9.4 9.	2 9.4	1 5.9	7.7	9.0	4.7	1.5	5.4 1	10	13
21/10/2021 BH02 1.50		18.6	<5	70	<1	<50	<1	14	18	23	9	268	14	<5	52	22	<0.1	<0.5	<0.5	<0.5	<0.5	0.5	0.5	0.5 <0	0.5 <0	.5 <0.	5 <0.5	<0.5	<0.5	<0.5	<0.5	<0.5 <0	0.5 <	0.5
21/10/2021 BH03 0.50		24.6	<5	120	<1	<50	<1	24	12	42	37	296	16	<5	88	43	0.3	<0.5	<0.5	<0.5	<0.5	0.5	0.5 <	0.5 <0	0.5 <0	.5 <0.	5 <0.5	<0.5	<0.5	<0.5	<0.5 €	<0.5 <0	0.5 <	0.5
21/10/2021 BH03 1.50		16.3	<5	20	<1	<50	<1	14	19	39	6	177	22	<5	143	22	<0.1	<0.5	<0.5	<0.5	<0.5	0.5	0.5 <	0.5 <0	0.5 <0	.5 <0.	5 <0.5	<0.5	<0.5	<0.5	<0.5 €	<0.5 <0	0.5 <	0.5
21/10/2021 BH04 0.50		21.3	<5	110	<1	<50	<1	20	7	22	12	79	12	<5	66	14	<0.1	-	$\overline{}$	$\overline{}$	$\overline{}$	-	_	_	_	$\overline{}$	_	_	_	-	-	<0.5 <0	_	_
21/10/2021 BH04 1.50		20.6	<5	60	<1	<50	<1	16	12	31	6	115	13	<5	55	17	<0.1	-	$\overline{}$	$\rightarrow$	$\rightarrow$	_	_	-	_	-	-	_	_	_	$\rightarrow$	<0.5 <0	_	_
21/10/2021 BH04 2.50		13.2	<5	20	<1	<50	<1	13	10	15	5	102	16	<5	25	29	<0.1	-	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$	_	_	_	$\overline{}$	_	-	-	-	-	<0.5 <0	_	_
21/10/2021 BH05 0.50		30.6	<5	140	1	<50	<1	28	19	36	16	567	18	<5	103	20	<0.1	-	-	$\overline{}$	-	$\overline{}$	_	-	_	$\overline{}$	$\overline{}$	_	_	_	$\overline{}$	<0.5 <0	_	_
21/10/2021 BH05 1.50		18.3	<5	20	<1	<50	<1	14	10	23	<5	93	13	<5	41	18	<0.1	-	$\overline{}$	$\rightarrow$	$\rightarrow$	_	_	-	_	-	_	_	_	_	$\rightarrow$	<0.5 <0	_	_
21/10/2021 BH05 2.20		16.5	<5	50	<1	<50	<1	10	14	33	5	272	17	<5	81	30	<0.1	-	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\overline{}$	$\overline{}$	$\overline{}$	$\overline{}$	$\overline{}$	_	_	-	$\rightarrow$	<0.5 <0	-	_
21/10/2021 BH06 0.50		31.5	<5	160	1	<50	<1	30	12	34	13	173	18	<5	94	21	<0.1	-	-	$\overline{}$	$\overline{}$	-	-	-	_	$\overline{}$	_	-	_	_	-	<0.5 <0	_	_
21/10/2021 BH06 1.50		30.4	<5	70	<1	<50	<1	27	9	30	10	142	17	<5	69	23	<0.1	-	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\rightarrow$	$\overline{}$	$\overline{}$	_	$\overline{}$	$\overline{}$	_	_	-	$\rightarrow$	<0.5 <0	$\overline{}$	_
21/10/2021 BH07 0.50		25	<5	120	1	<50	<1	29	10	33	13	95	17	<5	98	24	<0.1	-	$\overline{}$	$\overline{}$	$\overline{}$	$\overline{}$	_	_	_	$\overline{}$		-	_	-	-	<0.5 <0	_	_
21/10/2021 BH07 1.50		17.1	<5	20	<1	<50	<1	14	12	28	5	62	16	<5	71	17	<0.1	<0.5	<0.5	<0.5	<0.5	0.5	0.5	0.5 <0	0.5	.5 <0.	5 <0.5	<0.5	<0.5	<0.5	<0.5	<0.5 <0	0.5 <	0.5

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### 9 INDOOR INHABITANT PVI ASSESSMENT - HSL's

This PVI assessment has been conducted in accordance with relevant CRC CARE Technical Documentation and NEPM ASC 2013 guidelines presented in references section of this report. The HSL assessment approach is generally the first (Tier 1) investigation phase adopted for assessing PVI risk at petroleum hydrocarbon (PHC) impacted sites. HSL guidelines have been applied for samples collected from the site to account for risks that may be associated with volatile hydrocarbon vapour intrusion into confined spaces where there may be an inhalation risk through longer term exposure. This does not constitute a full vapour risk assessment but provides additional information from which to further quantify any risk.

A detailed investigation (Tier 2 to 3) is recommended over an HSL assessment where an acute risk has been identified at the site (CRC CARE 2013) because of:

- · Migrating product on surface soils beneath buildings;
- · Strong PHC odours;
- Flammable risk in confined spaces; and/or
- Health complaints from occupants.

Based on the site visits, none of the above conditions have been identified at the site. If the outcome of this Tier 1 assessment reveals HSL exceedances for hydrocarbon vapour intrusion, a more detailed (Tier 2) assessment will be required to further evaluate the human health risk.

PVI risk is initially interpreted through the development of HSL threshold limits from the following classifications:

- · The geology and or hydrogeology of the investigation point; and
- · Land use sensitivity:

The resulting HSL threshold limits are compared with laboratory analytical results.

### 9.1 Selected Media for Assessing PVI Risk

Table 18 presents a summary of the preferred HSL approach to assessing PVI risk. In this case, all soil investigated was within the excavation zone and within the water table.

Table 18 Preferred Methods for Determining Site PVI Risk

Media Analysed	Method	Limitations	Order of Preference
Soil Gas	Concentrations of a soil gas through a soil vapor probe	This approach provides the most reliable data in interpreting PVI risk, although direct modelling should be applied if concentrations exceed HSL threshold limits.	Primary
Groundwater	Concentrations of PHC in groundwater through deployment of monitoring wells	More robust and reliable that soil in determining onsite and in particular, offsite risks. Determining PVI risk based on groundwater is inherently conservative when interpreting vapour risk to account for not readily discernible preferential pathways. Reference may be drawn to alternative assessment approaches:  1) Application of site-specific conditions to the CRC CARE model for assessing PVI risk 2) Soil gas interpretation for areas where a PVI risk is identified from groundwater analysis.	Secondary
Soil	Concentrations of PHC in soil	Concentrations in soil may be subject variability due to soil moisture, organic content and oxygen ingress all which create significant bias in threshold values. Reliance is place on utilizing groundwater analysis over soil. Soil results provide localised information.	Tertiary

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### 9.2 Land Use Class

For surrounding properties, the potential PVI risk is characterized through application of CRC CARE HSL's for each individual property based on their existing land use (NEPM 2013; Friebel & Nadebaum 2010). The CRC CARE guidelines have been referenced to ensure that the correct land use and density category has been adopted for surrounding land use to ensure health risks are consistent with the HSL models. Aspects considered include the:

- · Sensitivity of the existing or potential land use;
- Percentage of paved area for defining potential vapour migration risk;
- Type of basement garage which may influence the confinement of PHC vapors;
- · Presence of a slab or cavity for discerning vapour intrusion risk.

If hydrocarbon impacted soil is discerned at the site, consideration is given to downgradient receptors. Where applicable, land use class therefore considers:

- · Downgradient receptors where onsite HSL exceedances have been identified in soil; and
- Variations in land use for different parts of the proposed development.

The following land use classes are applied:

• HSL D for commercial spaces, and residential dwellings above basement car parks - All test holes

#### 9.3 Soil Assessment

Laboratory analytical results are presented in Appendix 7. Table 19 presents the results against a potential indoor vapour risk. Concentrations which exceeded laboratory LOR are highlighted in bold. HSL exceedances would be highlighted with a coloured cell.

There was no indoor vapour risk identified.

Table 19 Soil Analytical Results Compared Against HSL D for Indoor Vapour Risk

Soil Hydrocarbo Intrusion (NEP Soil Sample An	M 2013)	sessing Indoo			EP		EP080/071: TRH				
Bold - Indicates L	OR Exceedances	i			۵		Ethylbenzene	Total Xylenes	Naphthalene		
Colour Shading	- Indicates HS	L Exceedances	zen	ene	lbe	×	hth				
>1 x, * 2-5 x, **	•		Benzene	Toluene	Ethy	Tota	Nap	F1	F2		
Sample ID	Sample Date	Depth Class	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
Sample ID	Sample Date	Depth Class	Class	HSL	LOR 0.2	LOR 0.5	LOR 0.5	LOR 0.5	LOR 1	LOR 10	LOR 50
BH01 0.50	21/10/2021	0-1	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	70
BH01 1.50	21/10/2021	1-2	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH02 0.50	21/10/2021	0 - 1	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH02 1.50	21/10/2021	1 - 2	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH03 0.50	21/10/2021	0 - 1	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH03 1.50	21/10/2021	1 - 2	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH04 0.50	21/10/2021	0-1	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH04 1.50	21/10/2021	1 - 2	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH04 2.50	21/10/2021	2 - 4	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH05 0.50	21/10/2021	0 - 1	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH05 1.50	21/10/2021	1-2	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH05 2.20	21/10/2021	2 - 4	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH06 0.50	21/10/2021	0-1	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH06 1.50	21/10/2021	1-2	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH07 0.50	21/10/2021	0-1	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH07 1.50	21/10/2021	1 - 2	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50

### 10 TRENCH WORKER PVI ASSESSMENT - HSL's

#### 10.1 Classification

The following Health Screening Assessment is based on hydrocarbon vapour intrusion risk to subsurface excavation workers within excavations. This is assessed through analysis of vapours from soil and soil vapours. Groundwater is generally not used to assess risk as threshold limits for all depth and grain classes are non-limiting. Land use classes are not applicable when assessing vapour intrusion into trenches.

Soil and soil vapour HSL's for assessing hydrocarbon risk to maintenance workers are based on CRC CARE Technical Report 10 guidelines (Friebel & Nadebaum 2011) and the following variables:

- Dominant grain size class of material at the soil sample depth or based on the dominant grain class
  of the backfill material based on US Agriculture Soil Classification System (SCS) and partitioning
  into either sand, silt or clay; and
- Classifying soil according to depth ranges: 0 to 2 m; 2 to 4 m; 4 to 8 m; and greater than 8 m;

### 10.2 Findings

Laboratory analytical results are presented in Appendix 7. Summary of Soil Analytical Results Compared against HSL's for Assessing PVI Risk to Trench Workers are presented in Table 20. Concentrations that exceeded laboratory LOR are highlighted in bold, and if there were any HSL exceedances they would be highlighted with a coloured cell. There were no exceedances of the CRC CARE HSL guidelines for Assessing PVI Risk to Trench Workers and no risk identified.

Table 20 Summary of Soil Analytical Results Compared against HSL's for Assessing PVI Risk to Trench Workers

Bold - Indicates LOR Exceedances  Dark Grey Shading - Indicates HSL Exceedances:  >1 x, *2-5 x, ** 5-20 x, *** 20-50 x, **** >50 x  Sample ID  Sample Date    Depth   Grain   mg/kg    WOIRCIS											
Sample ID   Sample Date   Depth   Class   Grain   Gr	for PHC Inhalation Risl	•		n		EP	EP080/071: TRH				
Sample ID   Sample Date   Class   LOR 0.2   LOR 0.5   LOR 0.5   LOR 0.5   LOR 10   LOR 50	Dark Grey Shading - In	dicates HSL Exc		Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	1		
Class   Class   Class   LOR 0.2   LOR 0.5   LOR 0.5   LOR 0.5   LOR 1.0   LOR 10   LOR 50	Console ID	Consulta Dota	Depth	Grain	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH01 1.50	Sample ID	Sample Date	Class	Class	LOR 0.2	LOR 0.5	LOR 0.5	LOR 0.5	LOR 1	LOR 10	LOR 50
BH02 0.50	BH01 0.50	21/10/2021	0 to 2m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	70
BH02 1.50         21/10/2021         0 to 2m         CLAY         <0.2         <0.5         <0.5         <1         <10         <50           BH03 0.50         21/10/2021         0 to 2m         CLAY         <0.2	BH01 1.50	21/10/2021	0 to 2m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH03 0.50	BH02 0.50	21/10/2021	0 to 2m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH03 1.50         21/10/2021         0 to 2m         CLAY         <0.2         <0.5         <0.5         <1         <10         <50           BH04 0.50         21/10/2021         0 to 2m         CLAY         <0.2	BH02 1.50	21/10/2021	0 to 2m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH04 0.50         21/10/2021         0 to 2m         CLAY         <0.2         <0.5         <0.5         <1         <10         <50           BH04 1.50         21/10/2021         0 to 2m         CLAY         <0.2	BH03 0.50	21/10/2021	0 to 2m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH04 1.50         21/10/2021         0 to 2m         CLAY         <0.2         <0.5         <0.5         <1         <10         <50           BH04 2.50         21/10/2021         2 to 4m         CLAY         <0.2	BH03 1.50	21/10/2021	0 to 2m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH04 2.50         21/10/2021         2 to 4m         CLAY         <0.2         <0.5         <0.5         <1         <10         <50           BH05 0.50         21/10/2021         0 to 2m         CLAY         <0.2	BH04 0.50	21/10/2021	0 to 2m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH05 0.50         21/10/2021         0 to 2m         CLAY         <0.2         <0.5         <0.5         <1         <10         <50           BH05 1.50         21/10/2021         0 to 2m         CLAY         <0.2	BH04 1.50	21/10/2021	0 to 2m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH05 1.50         21/10/2021         0 to 2m         CLAY         <0.2         <0.5         <0.5         <1         <10         <50           BH05 2.20         21/10/2021         2 to 4m         CLAY         <0.2	BH04 2.50	21/10/2021	2 to 4m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH05 2.20         21/10/2021         2 to 4m         CLAY         <0.2         <0.5         <0.5         <1         <10         <50           BH06 0.50         21/10/2021         0 to 2m         CLAY         <0.2	BH05 0.50	21/10/2021	0 to 2m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH06 0.50         21/10/2021         0 to 2m         CLAY         <0.2         <0.5         <0.5         <1         <10         <50           BH06 1.50         21/10/2021         0 to 2m         CLAY         <0.2	BH05 1.50	21/10/2021	0 to 2m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH06 1.50	BH05 2.20	21/10/2021	2 to 4m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH07 0.50 21/10/2021 0 to 2m CLAY <0.2 <0.5 <0.5 <0.5 <1 <10 <50	BH06 0.50	21/10/2021	0 to 2m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
	BH06 1.50	21/10/2021	0 to 2m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH07 1.50   21/10/2021   0 to 2m   CLAY   <0.2   <0.5   <0.5   <0.5   <1   <10   <50	BH07 0.50	21/10/2021	0 to 2m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
	BH07 1.50	21/10/2021	0 to 2m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50

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### 11 SOIL DISPOSAL ASSESSSMENT

### 11.1 Guidelines

Soil which is excavated from the site for landfill disposal is to be assessed against Information Bulletin 105 (IB105) for Classification and Management of Contaminated Soil for Disposal. The EPA uses four categories to classify contaminated soil as per Table 21:

- (Level 1) Fill Material;
- (Level 2) Low Level Contaminated Soil;
- (Level 3) Contaminated Soil; and
- (Level 4) Contaminated Soil for Remediation.

Fixed numerical values are presented for soil concentrations and leachable fraction concentrations.

Table 21 Summary of IB105 Classification Guidelines

	Classification (with reference to Table 2)	Controlled Waste <sup>1</sup>	Comments
Fill Material <sup>2</sup> (Level 1)	Soil that exhibits levels of contaminants below the limits defined under <i>Fill Material</i> in Table 2.	Unlikely	Soil classified as Fill Material can still be a 'pollutant' under the Environmental Management and Pollution Control Act 1994 and needs to be responsibly managed.
Low Level Contaminated Soil (Level 2)	Soil that exhibits levels of contaminants above the limits defined under <i>Fill Material</i> but below the limits defined under <i>Low Level Contaminated Soil</i> in Table 2.	Likely	Where leachable concentrations have not been prescribed, maximum total concentrations will be used to classify the soil.
Contaminated Soil (Level 3)	Soil that exhibits levels of contaminants above the limits defined under Low Level Contaminated Soil but below the limits defined under Contaminated Soil in Table 2.	Yes	Where leachable concentrations have not been prescribed, maximum total concentrations will be used to classify the soil.
Contaminated Soil for Remediation (Level 4)	Soil that exhibits levels of contaminants above the limits defined under Contaminated Soil in Table 2 (regardless of the maximum total concentrations) is generally not considered acceptable for offsite disposal without prior treatment.	Yes	Soil that contains contaminants that do not have criteria for leachable concentrations (e.g. petroleum hydrocarbons), and the levels o contaminants exceed the maximum total concentrations listed in Contaminated Soil, are generally classified as Contaminated Soil for Remediation.

### 11.2 Findings

The soil samples have been compared against IB105 guidelines for potential future soil disposal, see Table 22. The following conclusions can be made:

- The soil tested from sample BH01 0.50 is equivalent to Level 4 Material (Contaminated Soil for Remediation) due to Benzo(a)pyrene and Sum of PAH's.
- The soil tested from sample BH02 0.50 is equivalent to Level 3 Material (Contaminated Soil) due to Benzo(a)pyrene and Sum of PAH's.
- The soil is equivalent to Level 2 (Low Level Contaminated Soil) in BH05 0.50 due to Manganese.
- The remaining 13 samples are equivalent to Level 1 (Clean Fill).

PAH's, and in particular Benzo(a)pyrene is often found in a less mobile form, and we would recommend leachate testing on further site investigations, as this could reduce the volume of material classified as Level 3 and Level 4 Material, and as a result reduce the costs of soil disposal.

Metals (Lead, Manganese and Zinc) are noted to be in higher concentrations in the upper horizons associated with fill, and not in the underlying clay soil, we consider that after hydrocarbon contamination has been dealt with, the remaining soil could be classified as Level 2 for overlying fill material, and Level 1 for underlying clayey natural soil.

Table 22 Soil Analytical Results Compared Against IB105 Investigation Limits for soil Disposal

	ranning treat results comp		-8																			
Classificati	nation Bulletin 105 on and Management of ated Soil For Disposal	Arsenic	Barium	Beryllium	Cadmium	Chromium Total	Copper	Cobalt	Lead	Manganese	Mercury	Nickel	Selenium	Zinc	Benzo(a)pyrene	C6 - C9 Fraction	C10 - C36 Fraction (sum)	Sum of polycyclic aromatic hydrocarbons	Benzene	Toluene	Ethylbenzene	Total Xylenes
Unit		mg/kg	mg/kg	mg/kg	mg/kį	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	,	50	1	2	5	5	2	5	5	5	0.1	2	5	5	0.5	10	50	0.5	0.2	0.5	0.5	0.5
Investigation I	Level Selected																					
IB105 Level 1		<20	<300	<2	<3	<50	<100	<100	<300	<500	<1	<60	<10	<200	<0.08	<65	<1000	<20	<1	<1	<3	<14
IB105 Level 2		20	300	2	3	50	100	100	300	500	1	60	10	200	0.08	65	1000	20	1	1	3	14
IB105 Level 3		200	3000	40	40	500	2000	200	1200	5000	30	600	50	14000	2	650	5000	40	5	100	100	180
IB105 Level 4	_	750	30000	400	400	5000	7500	1000	3000	25000	110	3000	200	50000	20	1000	10000	200	50	1000	1080	1800
21/10/2021	BH01 0.50	<5	140	<1	<1	14	55	10	201	273	0.2	13	<5	243	27.4	<10	1630	419	<0.2	<0.5	<0.5	<0.5
21/10/2021	BH01 1.50	<5	40	<1	<1	16	18	11	8	71	<0.1	13	<5	21	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
21/10/2021	BH02 0.50	6	270	<1	2	21	81	18	406	401	0.4	16	<5	655	9	<10	520	110	<0.2	<0.5	<0.5	<0.5
21/10/2021	BH02 1.50	<5	70	<1	<1	14	23	18	9	268	<0.1	14	<5	22	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
21/10/2021	BH03 0.50	<5	120	<1	<1	24	42	12	37	296	0.3	16	<5	43	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
21/10/2021	BH03 1.50	<5	20	<1	<1	14	39	19	6	177	<0.1	22	<5	22	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
21/10/2021	BH04 0.50	<5	110	<1	<1	20	22	7	12	79	<0.1	12	<5	14	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
21/10/2021	BH04 1.50	<5	60	<1	<1	16	31	12	6	115	<0.1	13	<5	17	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
21/10/2021	BH04 2.50	<5	20	<1	<1	13	15	10	5	102	<0.1	16	<5	29	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
21/10/2021	BH05 0.50	<5	140	1	<1	28	36	19	16	567	<0.1	18	<5	20	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
21/10/2021	BH05 1.50	<5	20	<1	<1	14	23	10	<5	93	<0.1	13	<5	18	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
21/10/2021	BH05 2.20	<5	50	<1	<1	10	33	14	5	272	<0.1	17	<5	30	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
21/10/2021	BH06 0.50	<5	160	1	<1	30	34	12	13	173	<0.1	18	<5	21	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
21/10/2021	BH06 1.50	<5	70	<1	<1	27	30	9	10	142	<0.1	17	<5	23	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
21/10/2021	BH07 0.50	<5	120	1	<1	29	33	10	13	95	<0.1	17	<5	24	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
21/10/2021	BH07 1.50	<5	20	<1	<1	14	28	12	5	62	<0.1	16	<5	17	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5

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#### 12 CONCEPTUAL SITE MODEL

#### 12.1 Potential Contaminants

The Site has been used for residential properties for >50 years, and is within an area that has a long history of commercial and light industrial activities.

There is potential for contamination from off-site sources given the Site is within a long term commercial and light industrial area. The adjacent site at 181-189 Campbell Street had underground fuel storage systems decommissioned in 1999 (Hobart City Council Records).

Other potential contaminants include, the use of the site for car parking (with fuel or oil drips/leaks possible), and the presence of fill on the site of undetermined origins.

The potential contaminants include; Total Petroleum/Recoverable Hydrocarbons (TPH/TRH), Mono Aromatic hydrocarbons: Benzene, Toluene, Ethylbenzene, Xylene, Naphthalene (BTEXN), Polynuclear Aromatic Hydrocarbons (PAHs), and a suite of 15 Metals.

Figure 10 illustrates potential risks that may be associated with potential site contamination. Potential pathways have been identified and ruled out in the Conceptual Site Model.

### 12.2 Potential Human Receptors

The proposed development is to construct units over an underground car park basement.

As a result there are limited areas where future residential site users may be in contact with potentially contaminated soil, with this area being limited to the easement area along the north western part of the site, and a communal courtyard. For the sake of potential human receptors, we will treat these areas as communal open space for future residents.

Potential human receptors also includes onsite construction workers during future potential site redevelopment and future trench workers (commercial land users / trench worker specific).

### 12.3 Potential Ecological Receptors

The closest ecological receptor is the River Derwent at Sullivans Cove which is approximately 1 km to the south east of the site, and Hobart Rivulet is 770m to the south east of the site. Hobart Rivulet is contained within a culvert, and discharges into the River Derwent approximately 1.2km to the East of the Site.

### 12.4 Identified Receptors

### 12.4.1 Identified Human Receptors

NEPM ASC (2013) human Health Investigation Limits were exceeded for soil ingestions and dust inhalation for Benzo(a)pyrene at BH01 0.50 at commercial/industrial land use (applies to construction workers), and at BH02 0.50 at recreational/open space land use. The investigation area is currently used for car parking. Consequently human health risks are considered plausible future, for the future potential construction phase, and then for any potential soil contact for future residential site users.

### 12.4.2 Identified Ecological Receptors

Two of the sixteen primary samples exceeded NEPM ASC (2013) Ecological Screening Levels for Benzo(a)pyrene at commercial/industrial investigation limits. Zinc exceeded NEPM ASC (2013) Ecological Investigation Levels in one sample at commercial/industrial investigation limits. The Benzo(a)pyrene and Zinc concentration appear elevated only in samples across the north western part of the site (BH01-03) and only at the 0.50m depth, which is reflective of the overlying fill material, and not the underlying clay soil material. Soil movement including erosion has a potential present risk to ecological receptors.

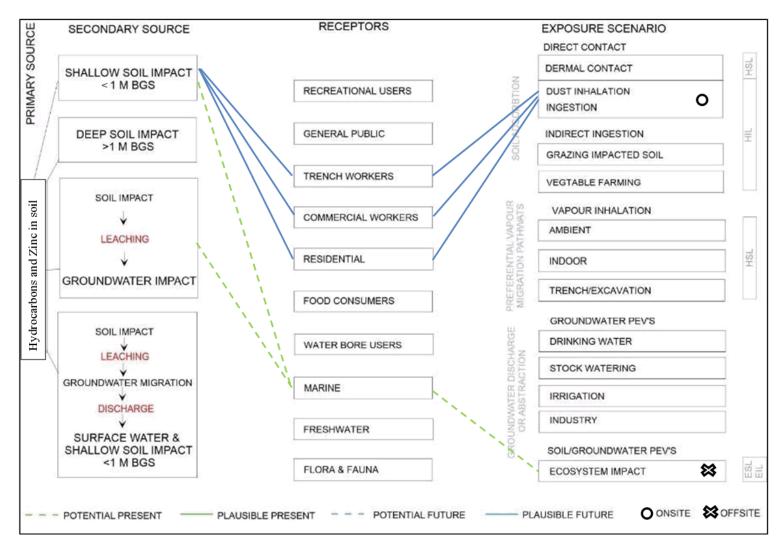


Figure 10 Conceptual Site Mode

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### 13 CONCLUSIONS & RECOMMENDIATIONS

### 13.1 Desktop Assessment

The following information was gathered during the desktop investigation:

- The site is zoned Urban Mixed Use under the Hobart City Councils Interim Planning Scheme of 2015
- The geology of the site is Quaternary alluvial deposits. Groundwater is inferred to travel south east
  along similar trajectory to the Brooker Highway towards the River Derwent. Surface water may
  be collected in stormwater culverts and discharged into Hobart Rivulet to the south east, or may
  infiltrate nearby unsealed areas to infiltrate into groundwater.
- A review of available information including historical aerial photographs suggests that it has been
  mostly residential land for 50+ years, with the buildings on site being converted to office use in
  more recent years.
- A review of available information including HCC, Worksafe Tasmania and EPA records, indicates
  that there are no records of potentially contaminating activities occurring on the site, or dangerous
  goods being stored on the site.
- The site is adjacent to a commercial warehouse and supermarket (formerly a commercial site with fuel storage) and as such there is potential for the presence of contaminants in the local area (HCC records).
- Contaminants Of Potential Concern (COPC) include the following: TPH/TRH; Mono Aromatic hydrocarbons: (BTEXN); PAH; and metals.

### 13.2 Adopted Guideline Settings

The following investigation limits were adopted for the site:

- Ecosystem receptor
  - o Discharge to Hobart Rivulet and River Derwent Urban ESL and EILs
- Human Receptor
  - HIL C//HIL D for soil direct contact risk to future open space site users that may have access to soil / Future construction workers
  - HIL C / HIL D for soil ingestion and dust inhalation risk to future open space site users in contact with soil / Future construction workers soil direct contact risk
  - o HSL C / HSL D vapour risk to site users open space/ future potential trench workers

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### 13.3 Soil Assessment

From the soil assessment, it is concluded that:

- Environment: For commercial/industrial investigation limits, Zinc was detected above NEPM ASC 2013 EIL guideline limits in one sample; BH02 0.50. Benzo(a)pyrene exceeded NEPM ASC 2013 ESL guideline limits in two samples; BH01 0.50 and BH02 0.50. Zinc and hydrocarbons were at elevated levels in the two samples mentioned, which corresponds with overlying fill material, and not the underlying clay soil. For any disturbance to the soil planned on the site, a Soil and Water Management Plan (SWMP) should be put in place to account for the management and erosion of soil with ecological impacts.
- <u>Human Health:</u> There were no human health guideline exceedances at HSL C or HSL D for dermal contact. For NEPM ASC 2013 guidelines for dust inhalation and soil ingestion; for sample BH01 0.50, PAHs exceeded HIL C Class (recreation) investigation limits and Benzo(a)pyrene exceeded both HIL C Class and HIL D Class (commercial/industrial), and for sample BH02 0.50, Benzo(a)pyrene exceeded HIL C Class. A Contamination Management Plan (CMP) will be required to account for the management of soil with human health impacts prior to any construction work on the site.
- <u>Vapour Risk</u> There were no indoor vapour risks or inhalation risk for trench workers or site users
  identified and therefore no risk to human receptors for vapour.
- Excavated Soil Management: In terms of *IB105*, of the sixteen samples; One sample (BH01 0.50) is considered Level 4 Material (Contaminated Soil) due to Benzo(a)pyrene and Sum of PAHs. One sample (BH02 0.50) is considered Level 3 Material (Contaminated Soil) due to Benzo(a)pyrene and Sum of PAHs. One sample (BH05 0.50) is considered Level 2 Material (Low Level Contaminated Soil) due to Manganese. The remaining thirteen samples can be considered Level 1 Material (Clean Fill). Elevated concentrations of metals (Lead, Zinc and Manganese) and hydrocarbons (Benzo(a)pyrene and total PAHs) were all observed in the overlying fill material at the site, and not in the underlying clayey natural soil profile.
- If the soil is to be disturbed, it must be handled in accordance with IB105 and disposed of in line with IB105 and Controlled Waste Guidelines. It is likely that soil excavation will occur on the site, and we recommend further testing to better delineate the areas of contamination, and we also recommend leachate testing of the PAH hydrocarbon fractions. The PAH fractions, and in particular Benzo(a)pyrene, are commonly found in less mobile forms, and as a result leachate testing may reduce the volume of soil requiring disposal as Level 3 and Level 4 material by reclassifying the material as Level 2 if found to be in less mobile forms.

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### 13.4 Conclusion Summary

GES recommends the following:

- There are human health guideline exceedances for dust inhalation and soil ingestion for Benzo(a)pyrene at HIL Class D (commercial/industrial) levels, which is applicable to construction workers at the site during development. There are human health guideline exceedances for dust inhalation and soil ingestion for Benzo(a)pyrene and Total PAHs at HIL Class C (recreational) levels, which is applicable areas of open space post-development. As a result of this, a Contamination Management Plan will be required prior to development at the site.
- Zinc was detected above EIL guideline limits in one sample, and Benzo(a)pyrene exceeded ESL guideline limits in two of the sixteen primary samples. A Soil and Water Management Plan (SWMP) will be required to account for the management and erosion of soil with ecological impacts.
- For any soil disturbance on site, disposal of soil off site must be in accordance with IB105 and the
  controlled waste regulations. Excavated soil will require disposal at a suitable waste facility and a
  permit to transport the waste (obtained through the EPA) will be required.
- Elevated levels of hydrocarbon and metals were observed in the overlying fill material, and not in
  the underlying clayey soil material. We recommend further analysis focusing on the areas of
  identified contamination, to better delineate contamination. We also recommend future analysis to
  include leachate testing, as PAHs are often in less mobile forms and may present a lower IB105
  Level Classification as a leachable fraction results.
- Any imported fill will need to be verified as Clean Fill in line with IB105.

### Statement of Suitability.

Based on the results of this Environmental Site Assessment, the excavation as part of the planned works will not adversely impact on human health or the environment subject to implementation of remediation and/or protection measures including;

A Contamination Management Plan that addresses risk of dust inhalation and ingestion of hydrocarbon contaminated soil to human receptors during the construction phase, and in areas where soil may be present as open space post construction phase.

A Soil and Water Management Plan that to accounts for the management and erosion of soil with ecological impacts during the construction phase.

Yours faithfully,

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Soil Scientist

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Environmental Site Assessment: 175-179 Campbell Street, Hobart, Tasmania. November 2021

### LIMITATIONS STATEMENT

This Environmental Site Assessment Report has been prepared in accordance with the scope of services between Geo-Environmental Solutions Pty. Ltd. (GES) and SolutionsWon Group Pty Ltd (the client). To the best of GES's knowledge, the information presented herein represents the Client's requirements at the time of printing of the Report. However, the passage of time, manifestation of latent conditions or impacts of future events may result in findings differing from that described in this Report. In preparing this Report, GES has relied upon data, surveys, analyses, designs, plans and other information provided by the Client and other individuals and organisations referenced herein. Except as otherwise stated in this Report, GES has not verified the accuracy or completeness of such data, surveys, analyses, designs, plans and other information.

The scope of this study does not allow for the review of every possible soil and groundwater contaminant over the whole area of the site. Samples collected from the investigation area are assumed to be representative of the areas from where they were collected and indicative of the contamination status of the site at that point in time. The conclusions described within this report are based on these samples, the results of their analysis and an assessment of their contamination status.

This report does not purport to provide legal advice. Readers of the report should engage professional legal practitioners for this purpose as required.

No responsibility is accepted for use of any part of this report in any other context or for any other purpose by third party.

Environmental Site Assessment: 175-179 Campbell Street, Hobart, Tasmania. November 2021

### Appendix 1 GES Staff

Geo-Environmental Solutions (GES) is a specialist geotechnical and environmental consultancy providing advice on all aspects of soils, geology, hydrology, and soil and groundwater contamination across a diverse range of industries.

Geo Environmental Solutions Pty Ltd:

- ACN 115 004 834
- ABN 24 115 004 834

### GES STAFF - ENGAGED IN SITE INVESTIGATION WORKS

Dr John Paul Cumming B.Agr.Sc (Hons) Phd CPSS GAICD

- · Principle Author and Principle Environmental Consultant
- PhD in Environmental Soil Chemistry from the University of Tasmania in 2007
- 18 years' experience in environmental contamination assessment and site remediation.

Mr Mark Downie B.Agr.Sc

- Soil Scientist
- 8 Year experience in contamination assessment and reporting of soils and groundwater.

Mr Grant McDonald (Adv. cert. hort.)

- · Soil Technician
- 10 years' experience in hydrocarbon and heavy metal contamination sampling of soils and groundwater.

### GES STAFF - CONTAMINATED SITES EXPERIENCE

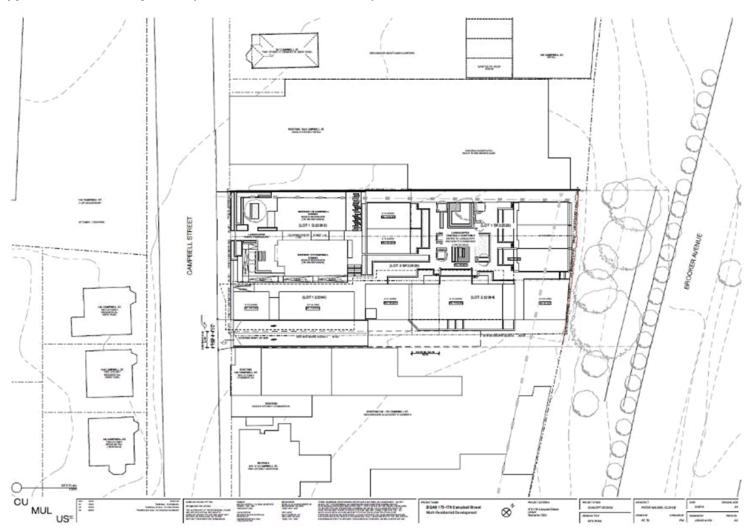
Dr Sam Rees B.Agr.Sc (Phd)

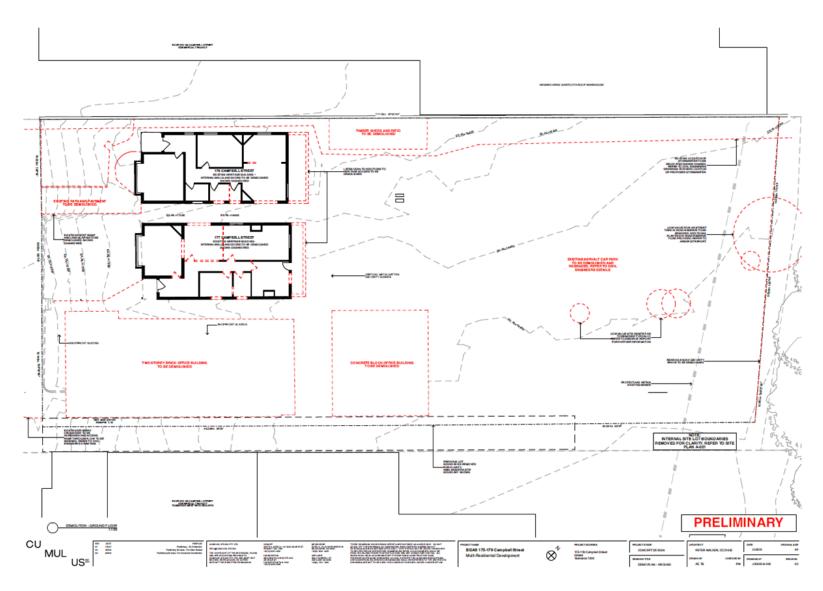
- Soil & Environmental Scientist
- 6 years' experience in hydrocarbon and heavy metal contamination assessment and reporting of soils and groundwater.

Mr Aaron Plummer (Cert. IV)

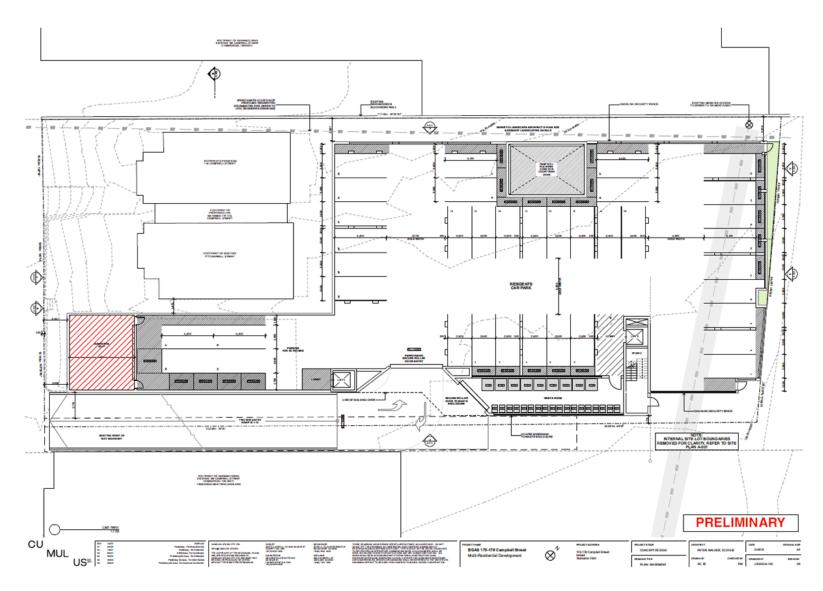
- Soil Technician
- 6 years' experience in hydrocarbon and heavy metal contamination sampling of soils and groundwater.

### **Appendix 2 Preliminary Plans (Cumulus Studio Architects)**





Appendix 2 Preliminary Architect Plans



Appendix 2 Preliminary Architect Plans

Page 1368
ATTACHMENT B



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#### Appendix 3 Site Photographs

June 2021 walkover:





Environmental Site Assessment: 175-179 Campbell Street, Hobart, Tasmania. November 2021 October 2021 site investigation:



Appendix 3 Site Photographs



Appendix 3 Site Photographs



Appendix 3 Site Photographs



Appendix 3 Site Photographs



Appendix 3 Site Photographs



Appendix 3 Site Photographs

Page **60** 



Appendix 3 Site Photographs

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#### **Appendix 4 Historical Aerial Photographs**



Plate 1 Historical Aerial Photograph – January 2020 (C/O Google Earth)



Plate 2 Historical Aerial Photograph – October 2003 (C/O Google Earth)



Plate 4 Historical Aerial Photograph, 1977 (c/o DPIPWE)

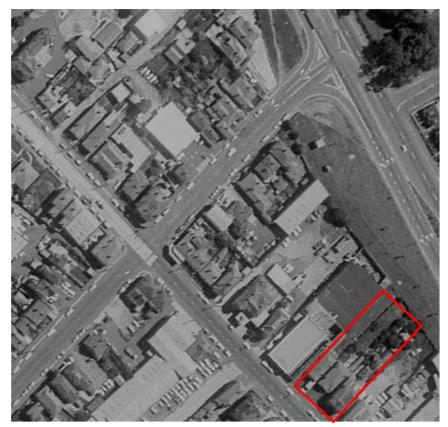


Plate 5 Historical Aerial Photograph, 1969 (c/o DPIPWE)



Plate 6 Historical Aerial Photograph, 1958 (c/o DPIPWE)

#### Appendix 5 Chain of Custody (COC) and Sample Receipt Notification (SRN)



	SAMPLE RECEIPT	NOTIFICATION	(SRN)
Work Order	: EM2121267		
Client Contact Address	: GEO-ENVIRONMENTAL SOLUTIONS : DR JOHN PAUL CUMMING : 29 KIRKSWAY PLACE BATTERY POINT TASMANIA, AUSTRALIA 7004	Contact : Pet	vironmental Division Melbourne er Ravlic /estall Rd Springvale VIC Australia 1
E-mail Telephone Facsimile	: jcumming@geosolutions.net.au : +61 03 6223 1839 : +61 03 6223 4539	Telephone :+61	er.ravlio@alsglobal.com  38549 9645  -3-8549 9628
Project Order number C-O-C number Site Sampler	: Campbell : :		13 2017GEOENVSOL0001 (EN/222) PM 2013 B3 & ALS QC Standard
Dates Date Samples Receive Client Requested Due Date	d : 26-Oct-2021 11:10 : 03-Nov-2021	Issue Date Scheduled Reporting Date	26-Oct-2021 03-Nov-2021
Delivery Details Mode of Delivery No. of coolers/boxes Receipt Detail	Carrier : 1	Security Seal Temperature No. of samples received / and	: Intact. ; 8.2°C - Ice Bricks present alysed : 18 / 18

#### General Comments

- This report contains the following information:

  - Sample Container(s)/Preservation Non-Compliances Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- Please direct any queries related to sample condition / numbering / breakages to Client Services.
- Sample Disposal Aqueous (3 weeks), Solid (2 months) from receipt of same
- Analytical work for this work order will be conducted at ALS Springvale.
- Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested. Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical
- analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS Enviro

Environmental Site Assessment: 175-179 Campbell Street, Hobart, Tasmania. November 2021

: 26-Oct-2021 Issue Date Page

: 2 of 3 : EM2121267 Amendment 0 Work Order Client

GEO-ENVIRONMENTAL SOLUTIONS



All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

. No sample container / preservation non-compliance exists.

Sample Container(s)/Preservation Non-Compliances

#### Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation not Digestion) as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component. All - EAGS 10.

| Noster Coried
| SOIL - EAGS 10.
| SOIL - EAGS 10 Matrix: SOIL Laboratory sample Sampling date / Sample ID EM2121267-001 21-Oct-2021 00:00 BH01 0.50 1 1 EM2121267-002 21-Oct-2021 00:00 BH01 1.50 1 EM2121267-003 21-Oct-2021 00:00 BH02 0.50 EM2121267-004 21-Oct-2021 00:00 BH02 1.50 EM2121267-005 21-Oct-2021 00:00 BH03 0.50 1 1 EM2121267-006 21-0ct-2021 00:00 BH03 1.50 EM2121267-007 21-Oct-2021 00:00 BH04 0.50 EM2121267-008 21-Oct-2021 00:00 BH04 1.50 EM2121267-009 21-Oct-2021 00:00 BH04 2:50 EM2121267-010 21-Oct-2021 00:00 BH05 0:50 1 1 1 11 21-Oct-2021 00:00 BH05 0.50 EM2121267-011 21-Oct-2021 00:00 BH05 1.50 1 1 EM2121267-012 21-Oct-2021 00:00 BH05 2:20 EM2121267-013 21-Oct-2021 00:00 BH06 0:50 EM2121267-014 21-Oct-2021 00:00 BH06 1:50

1 1

Matrix: WATER Laboratory sample Sampling date / Sample ID EM2121267-018 21-Oct-2021 00:00 Rinsate

21-Oct-2021 00:00 BH07 1.50

Proactive Holding Time Report

EM2121267-015 21-Oct-2021 00:00 BH07 0:50

EM2121267-017 21-Oct-2021 00:00 Duplicate

EM2121267-016

Environmental Site Assessment: 175-179 Campbell Street, Hobart, Tasmania. November 2021

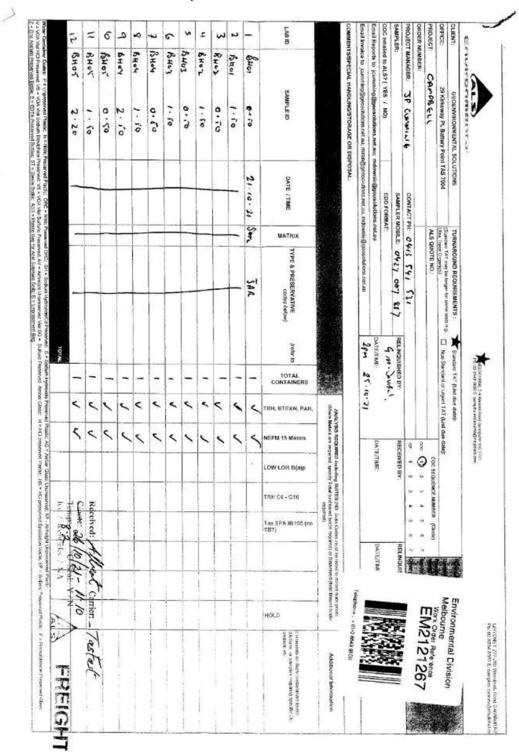
Issue Date Page Work Order Client : 26-Oct-2021

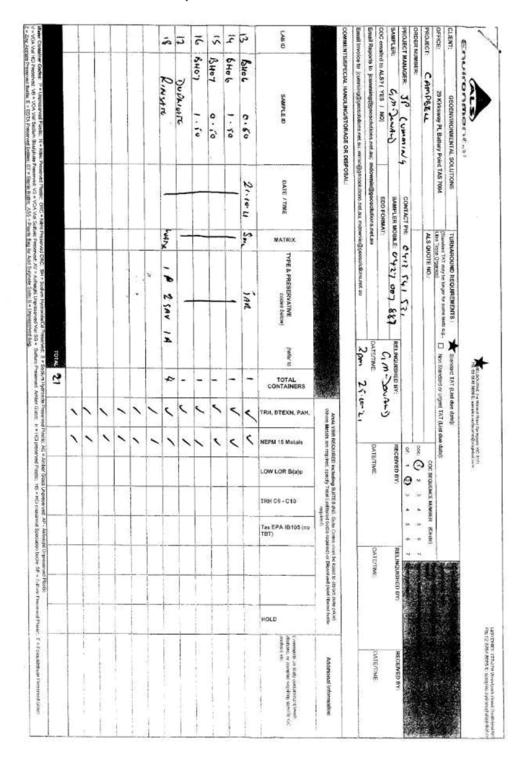
3 of 3 EM2121267 Amendment 0 GEO-ENVIRONMENTAL SOLUTIONS



#### Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables		
JOHN PAUL CUMMING		
- *AU Certificate of Analysis - NATA (COA)	Email	jcumming@geosolutions.net.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	jcumming@geosolutions.net.au
- "AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	jcumming@geosolutions.net.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	jcumming@geosolutions.net.au
- A4 - AU Tax Invoice (INV)	Email	jcumming@geosolutions.net.au
- Chain of Custody (CoC) (COC)	Email	jcumming@geosolutions.net.au
- EDI Format - ENMRG (ENMRG)	Email	jcumming@geosolutions.net.au
- EDI Format - ESDAT (ESDAT)	Email	jcumming@geosolutions.net.au
M IRAN		42
- A4 - AU Tax Invoice (INV)	Email	miran@geosolutions.net.au
MARK DOWNIE		
<ul> <li>*AU Certificate of Analysis - NATA (COA)</li> </ul>	Email	mdownie@geosolutions.net.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	mdownie@geosolutions.net.au
- "AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	mdownie@geosolutions.net.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	mdownie@geosolutions.net.au
- A4 - AU Tax Invoice (INV)	Email	mdownie@geosolutions.net.au
- Chain of Custody (CoC) (COC)	Email	mdownie@geosolutions.net.au
- EDI Format - ENMRG (ENMRG)	Email	mdownie@geosolutions.net.au
- EDI Format - ESDAT (ESDAT)	Email	mdownie@geosolutions.net.au





#### **Appendix 6 Quality Assurance and Quality Control**

	_							-					_																																									
Duplicate Comparrison	Sample	Moisture Content (dried @ 1037	Arsenic	Barlam	Beryllium	Cadmium	Oromium Total	Cobait	Copper		Margarete	Nickel	Zinc	Mercury	Naphthalene	Aconaphthylene	Acenaphthene	Fluorene	Pienanthrene	Anthracene	Fluorambene	Pyrene	Benefalandsracene	Onytese	Benzo(b)fluoranthene	Benzo(k)fluoraethene	Bessol al pyrone	Indeno(1.23 od)pyrene	Dibeni(ah)anthracene	Benzolg.h.i]porytene	Sum of polycydic aromatic hydr	Benzo(a)pyrone TEQ (WHO)	Benzene	tthylbenzene	meta & paraXylene	ortho Xylene	Sum of BTEX	Total Xylenes	representative Of . Of Emerica	CID - CI4 Fraction	CLS - C28 Fraction	C9 - CR: Fraction	City - City from loans	Cato - Cato Francisco (parti)	OS - C3D Fraction F1	>C10 - C16 Fraction	>C16 - C34 Fraction	>CM - C40 Fraction	>CLD - C4D Fraction (sum)	13	Selevium	Boron	Besco(a)pyrone TEQ (haif LOR)	Beszo(ajpyrene TEQ (LOR)
Unit		96	mg/kg	mg/kg	mg/kg n	g/kg/m	ng/kg/m	g/kg/mg	p/kg mg/	/kg mg	/kg m	z/kg/mg/	/kg mg/l	qp mg/k	g mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg r	ng/kg	mg/kg n	ng/kg m	g/kg m	g/kg m	p/kg m	e/kg me	c/ke/mp	kg mg/l	eme/ke	mg/kg	mg/kg n	rg/kg/mj	/kg/mg	kg/mg/k	ig mg/k	g mg/	kg mg	/kg m	g/kg/mg/k	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg/	mg/kg	mg/kgr	ng/kg
LOR		1	50	1	2	5	5	5	2 5		5	2 5	5	0.1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2.5	0.5 0	0.2	5 0.5	0.5	0.5	0.2	0.5	. 3	50	100	10	0 5	0	10 10	50	100	100	50	50	5	2	0.5	0.5
21/10/2021	Duplicate	19.5	6	160	4	d	17	11 5	2 18	4 3	47 :	4 4	7 275	0.2	0.5	2.1	<0.5	1.5	17.7	4.1	22.9	23.3	10.3	10.6	7.4	8.1	10.2	5.4 1	1.6	6.3 1	32 1	15.1 <0	0.2 <0	5 <0.5	<0.5	<0.5	<0.2	0.5	1 4	0 <50	340	20	0 54	10 <	10 <10	<50	480	<100	480	<50	6	<50	15.1	15.1
21/10/2021	8H01 0.50	16.7	<5	140	<1	<1	14	10 5	55 20	1 2	73	3 46	6 243	0.2	1	7.8	1.6	8.3	79.6	15.9	74.6	73.9	30.4	28.6	17.2	17.7	27.4	14.1 4	4.4 1	16.1 4	19 4	40.2 <0	0.2 <0	5 40.5	40.5	<0.5	<0.2	0.5	1 <	0 <50	115	0 48	0 16	30 <	10 <10	70	1440	240	1750	70	<5	<50	40.2	40.2
Relative Percentage Difference (R			NA	13.3	NA	NA I	9.4	9.5 5	.6 8.1		3.9	4 2	2 11.6	0.0	66.7	115.2	NA	138.8	127.2	118.0	106.1	104.1	98.8	91.8	79.7	74.4	91.5	89.2 9	3.3 /	17.5 10	04.2 9	IO.8 N	NA N	NA NA	NA.	NA	NA	NA 1	A N	NA NA	108	7 82	4 10	05 1	NA NA	NA.	100.0	NA.	113.9	NA.	NA	NA	90.8	90.8
RPD Compliance Limit %		-	NA	15		NA.			30 30				0 30	50	NA	50	50	50	30	30	30	30	30	30	30	30	30	50	50	30	15	30 N	NA N	NA.	NA.	NA	NA.	NA B	A N	s NA	50	5	3 3	0 1	NA NA	NA	50	NA	30	NA.	NA	NA	30	30
Method Detection Limit (MDL)		20		1100		NA :			00 50		00	10 10	0 500		NA	10	10	10	50	50	50	50	50	50	50	50	50	10					NA N	N. Bus	NA.	NA	NA.	NA B	A N	NA.	200	0 200	30 50		NA NA	-	2000	NA.	5000	NA.	NA.	NA.	50	50
		20	TEA.	2200	ren .	nan ,	100	200	00 20			- 20		*	1804	20	20	20		30	30	30	30		30	30	30	20	-		30	JC 15	en re	100	TEN	THE R	TEN	ren r		n nex	200	200			AR AR	TANK.	2000	in the second	3000	THE .				30
MDL Class		LOW	NONE	HIGH	NONE N	ONE	OW U	OW M	ED ME	D M	ED L	JW LO	W ME	LOW	NONE	LOW	LOW	LOW	MED	MED	MED	MED	MED	MED	MED	MED	MED	LOW L	OW N	MED H	IGH N	MED NO	ONE NO	NE NON	E NONE	NONE	NONE	ONE NO	NE NO	NE NON	E LOW		W M	ED N	ONE NON	NONE	LOW	NONE	MED	NONE	NONE	NONE	MED	MED
RPD Compliance With MDL?	32/56 (57%)	YES	YES	YES	YES	YES	YES 1	YES Y	ES YE	S Y	ES Y	ES YE	IS YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO I	NO I	NO I	NO I	NO Y	ES YE	S YES	YES	YES	YES	YES Y	ES Y	S YES	NO	N	D N	0 1	res yes	YES	NO	YES	NO	YES	YES	YES	NO	NO
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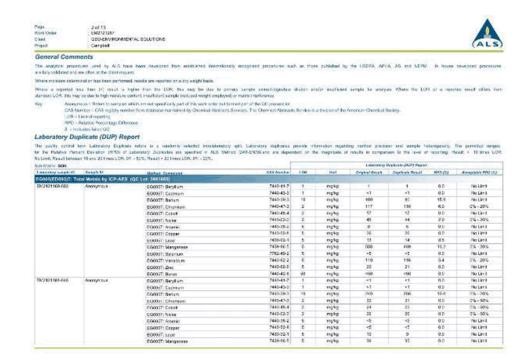
\*Footnote: For Duplicate and BH01 0.50 pairs, 57% of analytes complied. Non compliances include: an RPD of 115% for Acenaphthylene where <50% was expected; Inconsistent Detection for Acenaphthene an RPD of 139% for Fluorene where <50% was expected; an RPD of 106% for Fluoranthene where <30% was expected; an RPD of 104% for Pyrene where <30% was expected; an RPD of 99% for Benz(a)anthracene where <30% was expected; an RPD of 99% for Benz(a)phrene where <30% was expected; an RPD of 80% for Indeno(1.2.3.cd)pyrene where <30% was expected; an RPD of 91% for Benzo(a)pyrene where <50% was expected; an RPD of 88% for Indeno(1.2.3.cd)pyrene where <50% was expected; an RPD of 91% for Benzo(a)pyrene where <50% was expected; an RPD of 91% for Benzo(a)pyrene TEQ (WHO) where <30% was expected; an RPD of 109% for C15 - C28 Fraction where <50% was expected; an RPD of 100% for C10 - C36 Fraction (sum) where <30% was expected; an RPD of 91% for Benzo(a)pyrene TEQ (LOR) where <30% was expected; an RPD of 91% for Benzo(a)pyrene TEQ (LOR) where <30% was expected;

Quality Control Blanks	Ansenic	Beryllium	Barlum	Cadmium	Chromium	Cobalt	Copper	pead	Manganese	Nickel	Selenium	Vanadium	Zinc	Boron	Mercury	Benzene	Toluene	Ethylbenzene	meta- & para-Xylene	ortho-Xylene	Sum of RTEX	Naphthalene	C6 - C9 Fraction	C10 - C14 Fraction	CLS - C28 Fraction	C10 - C36 Fraction (sum)	C6 - C10 Fraction	C6 - C10 Fraction minus BTEX (F1)	>C10 - C16 Fraction	>C16 - C34 Fraction	>C10 - C40 Fraction (sum)	>C10 - C16 Fraction minus Naphthalene (F2)	Naphthalene	Acenaphthylene	Acenaphthene	fluorene	Phenanthrene	Anthracene	fluoranthene	Pyrene Benzialanthracene	Chrysne Chrysne	Benzo(b+j fluoranthene	Benzo(k)fluoranthene	Benzofalpyrene	indeno(1.2.3.cd)pyrene	Dibenz(ah)anthracene	Benzolg.h.i)perylene Sum of polycyclic aromatic hydrocarbons	Benzo(a)pyrene TEQ (zero)	
Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	ug/L	ıg/L με	/L µg	/L µg/	μg/L	µg/L µ	g/L µg	/L µg/	L μg/L	μg/L	µg/L µ	g/L µg	L µg/	L µg/L	μg/L	µg/L	μg/L	µg/L µ	g/L µ	g/L µ	g/L µ	z/L μg	yL μg/	/L µg/	L μg/L	μg/L	µg/L	µg/L µ	g/L µg/	L µg/L	4
LOR	0.001	0.001	0.001	mg/L 0.0001	0.001	0.001	0.001	0.001	0.001	0.001	0.01	0.01	0.005	0.05	0.0001	1	2	2	2	2 :	1	- 5	20	50 1	00 50	50	20	20	100 1	00 10	0 100	100	1	1	1	1	1	1	1	1 1	1 1	1	1	0.5	1	1	1 0.5	5 0.5	4
Date Sample																															$\top$																	T	
21/10/2021 Rinsate	<0.001	<0.001	0.002	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	0.01	0.005	<0.05	0.0001	<1	<2	<2 <	2 <	2 <2	<1	<5	<20	<50 <1	100 <50	<50	<20	<20 <	100 <	00 <10	0 <10	0 <100	<1.0	<1.0	<1.0	<1.0 <	1.0 <1	.0 <1	1.0 <1	.0 <1.0	.0 <1.0	0 <1.0	<1.0	<0.5	<1.0	<1.0 <	.0 <0.5	5 <0.5	1

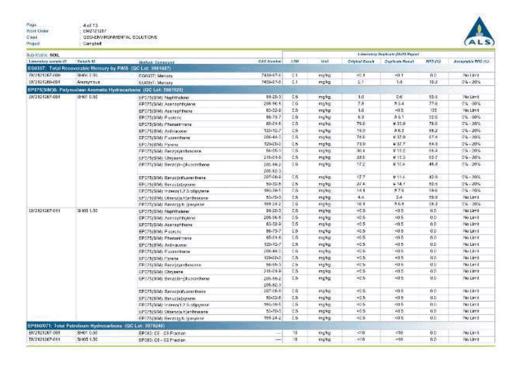
Environmental Site Assessment: 175-179 Campbell Street, Hobart, Tasmania. November 2021



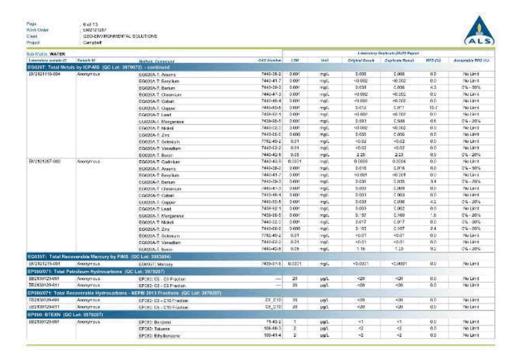
RIGHT SOLUTIONS | RIGHT PARTNER



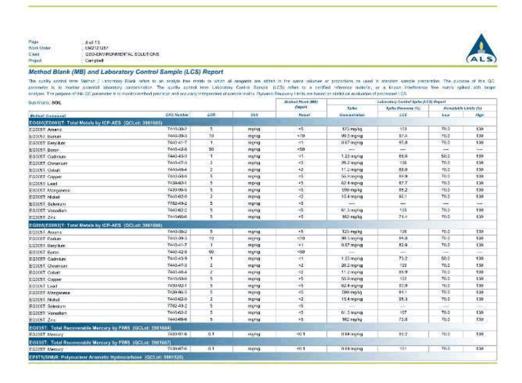
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Lawrency surple (D	Entals 65	Nobel Consult	CALAVANA	1.001	Bell	Cripbral Break	Conficets Beaut	855,00	Ancestably RNS (S
GOUGEDONST: T	otal Metals by ICP-AES	rQC Lot 1881685) - continued							
DV2121161-046	Ananymous	EG005T: Salarium	7782-49-2	5	make	*5	+5	0.0	No Limit
		EG007T: Vanadium	7440-62-2	6	market	82	48	6.7	0% - 60%
		EGOST; Zivo	7440-66-0	5	make	7	7	0.0	No Umit
		ECCOPT: Buron	7440-42-5	90	mate	₹90	~50	0.0	No Limit
COSSEDUSSIT: T	otal Metals by ICP-AES	(QC Let: 3581686)							
N2121287-009	169404 2:90	FO005T: Manganase	/430-56-5	b: -	mghp	102	A 194	2/4	094-2094
0/2421200-001	Accounts	CG035T: Lead	7439-92-1	5	make	309	÷ 500	27.A -	0%-20%
N2121287-000	18:434 2.90	EGOST: Barytum	7440-41-7	1	mghg	(81)	- 41	0.0	740 Lavil
		EGOST: Carmun	7440-45-9	- 1	ngto	ल	-41	0.0	No Limit
		EG000T: Ballam	7440-20-3	10	make	20	20	4.0	No Limit
		EG007T: Chranium	7440.47.3	2	mg*ig	- 13	1)	0.0	No Limit
		EGODST; Cobell	7440-46-4	2	mgfsp	30	. 6	22.4	No Limit
		FO007T Nicke	7440-02-0	2	nyky	.16	12	20.9	No Limit
		EG005T: Anané:	7440-26-2	5.	make	-45	-45	0.0	No Limit
		EGG97: Cosser	7440-00-0		mg/kgi	15	12.	13.2	76a Limit
		EG005T: Lend	7439-49-1	.6.	0490	- 6	et	0.0	No. Fierit
		EGG91: Salar um	7780-49-2	8	mg%p	*5	1.0	d.D	Féa Live II
		FG003T: Variation	7440-62-2	.6:	mgtig	5.26	23	3.8	No timit
		EG0051: Zivi	7440-68-0	5	mg%p	29	21	22.0	No Limit
		EG003T: Boron	7440.42-5	90	reging.	993	~50	0.0	. No Limit
0/2121266-001	Ananymous	EG095T: Beryllum	7440-41-7	3	rights	4	1	0.0	No Limit
		EG005T: Castream	7440-43-0	1	mgNp	*1	- 11	0.0	74a Limit
		EG00ST: Before	7440-36-3	10	nyke	200	270	10.6	0% - 20%
		EG005T; Chronium	7440-47-3	2	make	34	54	d.p	No Limit
		EG00ST: Creek	7440-48-4	5	rights -	11	- 15	0.0	No Lincit
		EG095T: Nake	7440-02-3	2	mg#g	12	12	4.0	No Livit
		EG005T: Arsenio	7440-28-2	(b)	nghg		- £	0.0	No Lint I
		EG095T: Copper	74(0-00-8	5	mg%p	100	100	4.5	0% - 20%
		EG005T: Mangareso	7430-08-5		mg/kgi	561	570	1.6	0% - 20%
		EGORT: Selecture	7762-66-2	6	rig5g	- 4	-45	0.0	No Limit
		EG009T: Vanadium	7440-62-2	5.	ngtp	22	32	0.0	No Limit
		EG007T: Zinc	7440 66 8	6	reging	294	243	18.9	0% 20%
		EG005T: Baron	7440-42-8	90	maha	-20	+50	0.0	746 Little
AESS: Molekure C	ontent (Orled & 105-11	0°C) (QC Let: 3984226)							
0/2121255-001	Ananymous	EACSS: Marrier Contact		0.1	*	24.1	25.4	52	0% - 20%
9/2121267-010	3905 (150	FASSE Moisson Cornect		0.1	160	30.8	30.7	0.4	0% - 20%
0015T: Total Re-	coverable Moroury by F	W8 (QC Lot: 5981684)	The second second						
907 81121169 000	Monymous	FG0377: Mercury	7456.67.6	0.3	make	-93.1	40.1	0.0	No.Lint
DV2424101-040	Appropriate	EQ031T: Marcury	7430-67-2	0.4	mgta	+0.1	+0.1	9.0	No Limit



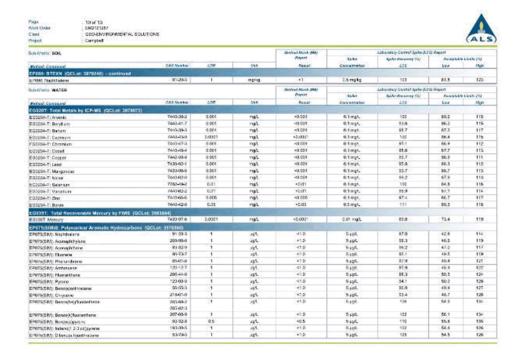
Negu Nork Ordur Dank Hoped	S of 13 EMZ121287 GEO-ENV/RONNS Campbell	SYNAL SOLUTIONS							ALS
NO WARK BOIL						Lineratory	Doylerate (DuP) Paper	3 -	
Lateratory sample (D	Yanab 67	Hisbod: Constant	CAS Number	1.001	Ref	Cripbral Result	Capitrate Result	850,00	Annualità MAC (10)
EPSEAN71: Total Pa	etroleum Hydrocarbon								
EN2121267-001	RH01 0.90	EP271: C15 - C25 Frazen	_	100	make	1150	3 500	72.6	0% - 99%
		EPO71 C19 - C38 Fredom	-	100	make	460	250	82.0	No Limit
		FP071: C10 - C11 Ftx 700	100	90	make	960	<50	0.0	No Livrit
		EPO71: C10 - C35 Predien (earl)	-	50	make	1030	+ 790	CR4	0% - 20%
DV2121267-011	31-05 1.50	EP071 C16 - C25 France	-	100	make	×100	5100	0.0	Plo Livit
		EPO71: C39 - C30 Fredien	-	100	mgtip	<100	<100	0.0	No Limit
		EP071: 010 - 014 Fraction	_	90	mg/kgr	~93	-50	0.0	No Limit
		EPO71: C10 - C30 Fraction (sum)		- 90	nyke	-150	<50	0.0	No Livrit
EPOSON71: Total Re	ecoverable Hydrocarb	ons - KEPN 2013 Fractions IQC Lot: 3879248)							
DV2121267-001	20401 (1.90	EPOSO CE - C10 Fraction	C6 C10	-10	make	<10	<10	0.0	No Livie
DV2121287-011	SP-935 1.50	EPORD, Ch - C10 Francisco	DE_C10	10	make	*10	*10	d.p	Notend
		one - NEPN 2013 Fractions (OC Lot: 3261526)	- 300000		- CANADA	The second second	Contract of the Contract of th	- VA	
EN72121287-001	59-901-0.90		_	100	make	1440	A 1933	68.7	05-005
3/2121267-001	SHOT 1.30	EPO71: >C16 - C54 Fraction EPO71: >C34 - C49 Fraction		100	make	260	150	62.3	Mother
			_	93	make	70	+50	28.3	74o Literal
		EPC71: >C10 - C16 Fraction EPC71: >C10 - C40 Fraction trum;		90	reging	1750	3 830	71.3	0% - 20%
D/2424267-011	01405 1.50	EPO71: +C16 - C34 Frecian		100	make	#100	#100	9.0	No Limit
incatatalizacii	10000,130	EPO71 1006 - 040 Fraction	- 2	100	11474	V100	1100	0.0	Nothers
		EPO71 - C10 - C16 Fraction		90	make	150	450	9.0	Notire
				93	115,00	698	190	dp	740 Lavis
-	Name and Address of the Owner, where the Owner, which is the Own	EP071, >C10 - C40 Frequer burn)		91	11414	7.90	7.490	40.	740 1371
EPIGO BTEIN (DO			1000		* W/5/15	Contract of the last			
EN/2121267-001	SH01 0.90	EPORT: Berzone	71-43-2	0.2	maha	40.6	-02	0.0	Plo Limit
		EP080: Taluene	100 66-3		ngsg		-0.6	0.0	No Limit
		EPORO: Ethylberizone	100-41-4	0.5	ngtg	-0.5	+0.5	0.0	No Limit
		EPC4D: nato- A para-Xylene	106-36-3 106-42-3	0.6	ngty	-93.6	40.6	0.0	No Linch
		LPORD selva-Kylana	\$5-47-5	9.5	ngta	+0.5	×0.5	90	No Limit
		EPOSC Kryzthalece	91-20-3		mg/kg	381	- 1	0.0	740 Limit
DC2424267-041	30-905 1,50	CPC40: Bennene	71-43-2	0.2	mgkp	-01.2	49.2	6.0	No Limit
		EPORO: Tolyona	108-86-3	0.5	mgNg	42.5	40.5	0.0	No Limit
		EPOSO: Dityberance	100-41-4	0.0	rightp	-0.6	-0.6	0.0	No Lint
		EPOED: metal-& para-Xyrisms	106-38-3 118-42-3	0.5	right	*15	×0.5	ap	No Limit
		FPS60 orbo-kylene	66-47-6	0.6	nights	40.6	40.6	0.0	No Livit
		EPOSO: Naghithalana	PH-2D-3	(10)	mg%p	- 1	*1	0.0	No Limit
sh Water WATER		VINE ALL AND A			-	Liberality	Depterate (DOF) Popul	Sm ***	-
Laboratory surgeout?	Entals 13	Nechod Company	GAEAbete	1.04	Hel	Grightal Receiv	Capitate Resort	80,048	Acceptably 890 (N
EG020T: Total Mota	Is by ICP-MS (QC Lot								
F9/2121110-004	Secretary	EGGNA-T Cadram	7440-49-9	0.0004	700	<0.0317	<0.0002	0.0	No Limit

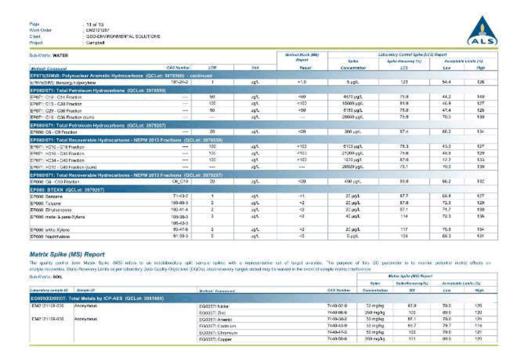






Negu Albrik Ordur Client Propost	9 of 13 EM2121287 GEO-ENVIRONMENTAL Campbell	SOLUTIONS							AL
Sub-Nattic SOIL					Michael Mich (Mil)	V1.000	Laborary Control Spike (LC)		
					Agent	Na-box	April of the energy (14)	Acrestas	respitely.
Method Command	The state of the s	C45 North	608	048	Report	Concentration	409	Lee	Mgn
EP075(SIM)B: Poly	muclear Aromatic Hydrocarbo	ons (QCLot: 3981525) - con	tinued						
brunksty: Naphtra	dere	93-29-3	4.5	mgéq	*0.5	2 10/91	100	85.7	125
EPOTG/SIM/ Acenapt	htyree	203 96 8	0.6	mgrag	40.6	a ng kg	100	61,0	129
EPOTS/EM/: Acuruph	Nitera	83-32-9	45	merica	-93.5	3 mg/kg	20.6	60.0	120
EP076(SIM): Fluorone	0	86-73-7	0.5	mgrig	40.5	2.10(1)	25,0	81.3	126
EPOTO/SIM/: Phenan	trace	85-01-8	0.5	treing	-01.5	2 mg/kg	99.4	79.4	123
EPOPSEM, Arthur	1676	120-12-7	0.5	mgrega.	*0.5	S TEATS	164	81.7	127
EP075(SW): Floorant	Core	299-44-0	9.6	mgreg .	415	8 1939	533	78.3	124
DTRITS(SIN): Pyrere		129-00-0	9.5	merica	-01.5	A makes	102	79.2	126
EPOTO(SPJ); Bertz(s)	entracene	96-99-3	0.5	regiog	40.5	2 100 95	102	78.0	123
EPOTO/SPAY: Chrysler	ne.	218-01-9	0.5	meng	-0).5	a ngag	. 193	60.9	130
EPOTS(SM), Benzejb	brjilomirihana	205-99-2 205-62-3	45	ingriga	wa.s	2 1994	87.5	70.0	121
EP075(SW): Bertook	Charantene	207-09-9	0.5	mong	90.5	Singhij.	95.3	80.4	199
CPUTS(SPA): Bermin	Alpanene	59-32-0	.0.5	morea	49.5	3 7633	19.5	70.2	123
EP076(SW); Indeno;	1.2.3 otjeyrone	193-29-5	0.5	mgeig	40.5	S make	90,3	67.3	122
EPOTG/SINE Diberal	is hisonthrabene	63.70.3	0.6	mong	-0).6	8 ng/kg	95.4	66.8	123
EPOTS(ERV): Bercold	g.h./(print/fere)	191-24-2	0.5	merca	*0.5	3 make	10.5	65.0	127
EPC001071: Total P	Petroleum Hydrocarbona (OC	Lot: 1979248)							
EP080, O8 - O9 Fixed			10	meng -	×10	35 make	81.6	58.5	131
PROSESTS Total P	Wireleam Hydrocarbona (OC	Let 3/81526		The state of the s					
EP071: C10 - C14 Po			. 90	menty	9.0	660 mg/kg	109	76.0	128
EFBT! CIS-COS FO	seine.		100	merca	e105	2430 mg 4g	105	10.0	123
EP071: 029 - 036 Fro			100	region	+102	1392 mg%p	141	N2.4	121
EP871: C10 - C36 Per			60	mong	400	(100)			- heigh
COCOLULTY Total C	Recoverable Hydrocarbons - N	SCAM DON'T COMMISSION (OCCUPA	4 24702400	A STATE OF THE PARTY OF THE PAR	A STATE OF THE PARTY OF THE PAR				
EPRIOR OS - C10 Fras		C6 C10	10	more	610	41 make	12.0	59.3	120
DESCRIPTION OF THE PERSON NAMED IN	MANAGEMENT OF THE PARTY OF THE	MONTH OF THE PARTY	MANAGEMENT OF THE PARKS	The same of the sa	7,710	- The state of the			1600
	Recoverable Hydrocarbons - N	EDW 2013 Fractions (OCT 0	90	mgring	-50	500 make	118	77.0	130
EP671: >C10 - C16 F EP671: >C16 - C34 F			106	meng.	4100	3700 mana	102	61.5	120
EPOT! >C34 - C40 F			120	merca	+122	270 maks	102	73.3	120
EP871; >050 - 040 F			50	110/10	190	2010109404		722	131
THE RESIDENCE OF THE PARTY OF	DESCRIPTION OF THE PROPERTY OF	-	- 50	in the same	all a second	Access to the last of the last		17.7	h = 70
EPCOD BTEXN (O	CL 00. 3979248)	71492	02:	The same of the sa	912	- Consta	82.2	61.6	117
EPRIN Secrece		193494	0.5	100/03	40.5	2.0939	10.1	85.8	125
EF092 Icharm		103414	85	me-ca.	90.5	2 10/61		80.4 85.4	125
EP000 Etryfoot2000		774176488	0.5	ucug		2 19313	89.1	. 450.0	124
EP000 mets- & para-	70	105-42-3	100000	wood	-0.5	4 1993	88.0	64.8	
E-1000 othe-Xylani		25-17-6	0.5	mgreg .	*0.5	2 T(\$ 02	93.7	88.7	132



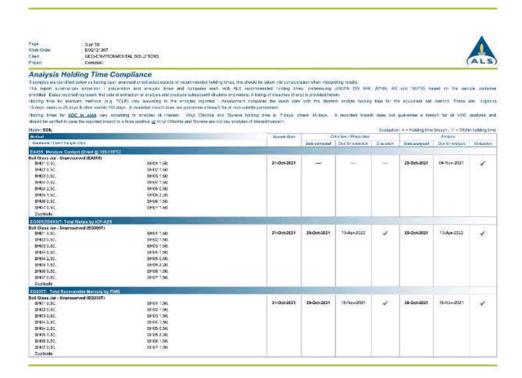






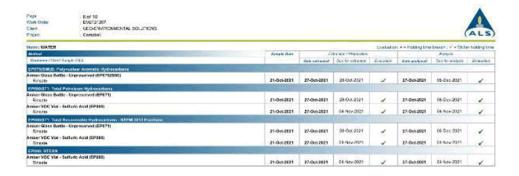


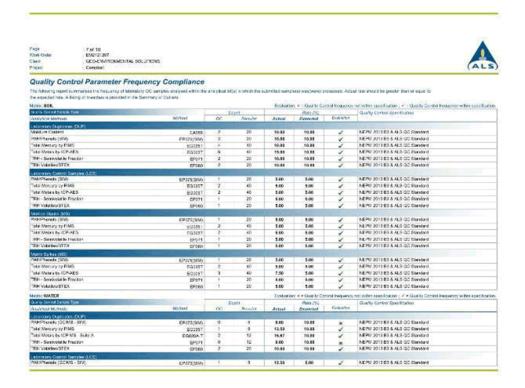




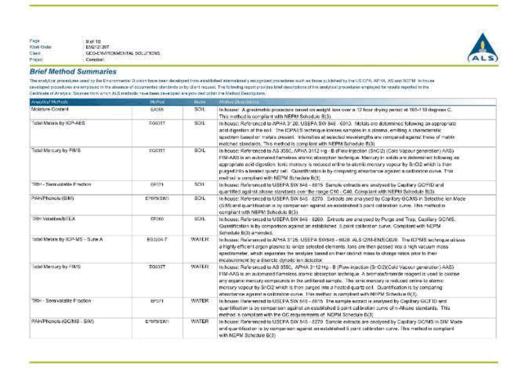


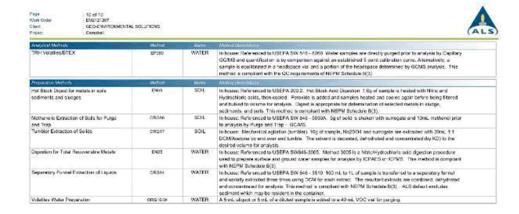












Environmental Site Assessment: 175-179 Campbell Street, Hobart, Tasmania. November 2021

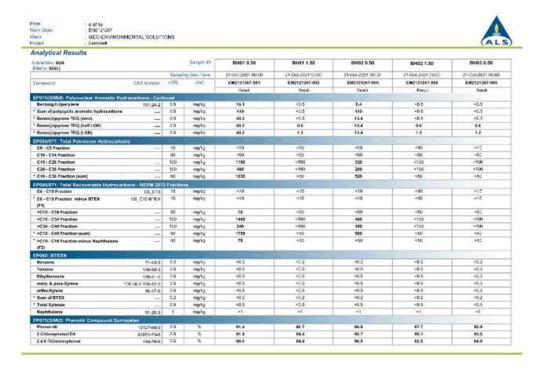
#### **Appendix 7 Certificate of Analysis**



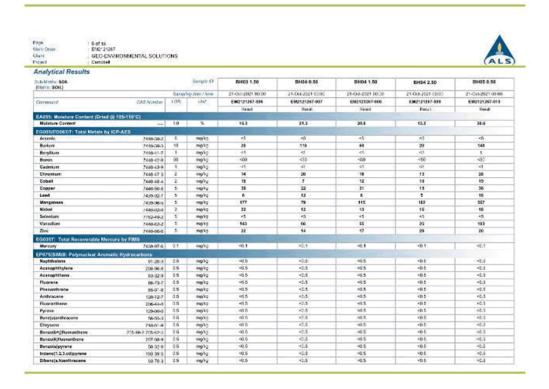
RIGHT SOLUTIONS | RIGHT PARTNER

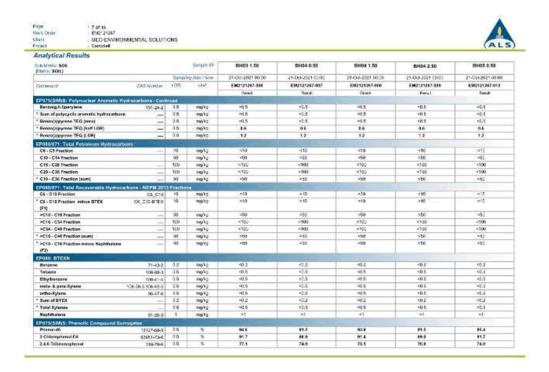


ork Onder lant	3 of 18 ENC: 21267 GEC-ENVIRONMENTAL SOLUTION Compiled	CNS						AL
Analytical Results								
Reb-Mario 904. Reprint 904.			Sarqu's AD	BH01 0.50	BH01 1.50	BH02 0.50	BH02 1.50	BH03 0.50
byers, acres		Savovo	dier/See	21-0/0/2021 00:00	21-0x4-2021-00/00	21-0xt-2021 00:30	21-00-2021 (0:0)	21-0(1-0021-00-00
Corpost	CAS Number	105	OW	EM2121267-001	EW2121297-032	EN2121267-003	EM2121267-884	EW2121297-005
and the same of th	(45,00,000,000)	Carrier .	10790	Read	Donat.	Rest	Ferei	Detail:
EASSS: Moisture Conta	ent (Dried @ 105-110°C)			The Part of the Pa	THE RESERVE			
Moisture Content		1.0	*	16.7	17.5	17.1	16.4	24.6
EGOS/EDGS)T: Total	Metals by ICP-AES		STATE OF					
Arseric	2440-36-2	6	mg%p.	- d.	46	- 6	45	-6
Barlam	7410-09-0	10.	moke	140	40	270	70	129
Berylliam	7416-41-7	:1:	mght	- 41	41	- 41	.61	্ব
Boron	7440 42 8	60.	mgNg	460	-450	460	<50	460
Carintan	7440439	4.	mg/sp	-41	81	2	- 31	্ব
Chromium	7446 47 3	2	mg/s	14"	16	21	14	24
Cobat	7440 48 4	2	mg/g	10	10	15	18	12
Copper	7440-50-8	.6:	make.	15	16	41	23	42
Lead	7439-92-1		11035	201		466		37
Manganess	7459-96-5	5	10,43	273	71	401	264	295
Nickel	/4484(2-0	2.	m0,45	13	12	- 14	14	16
Solecture	7792-49-2	3	u0,45	-3	- 15	- 4	45	-65
Varacture	7446-82-2	5	mays:	46	20	79	62	66
Disc	7440-56-5	5	ma/s	243	21	466	22	43
EG035T: Total Recove	rable Mercury by FIMS	- 50						
Mercury	7438-97-6	0.1	mg/s	1.2	30,1	3.4	<0.1	0.3
	lear Aromatic Hydrocarbons							
Naphthalons	91-20-3	0.6	mg h 5	1.0	40.5	40.5	40.5	+0.5
Acerophitylere	206-96-8	0.5	mg/rg	7.8	*0.5	1.0	+0.5	<0.6
Acceptitions	83-32-9	0.5	mays	1.6	40.5	40.5	*D.5	=0,5
Fluorene	86-73-7	0.5	mays:	1.3	+0,5	1.2	+0.5	+0.3
Pharanthrane	85-01-8	0.5	u49,55	79.6	+0.5	124	-0.1	-0.1
Anthrasana	120-12-7	0.5	m6,45	15.8	40,5	3.4	40.5	+0.5
Rioranthena	206-64-0	0.5	w6,53	74.6	40.5	18.6	*8.5	×0,5
Pyrese	129-01-0	0.5	m0,y2	73.0	40.5	19.4	40.5	10.5
Berejajanthracene	56-55-3	0.5	mg/s	30.4	<0.5	1.2	40.5	40.5
Chrysone	210-01-9	0.6	indy3	28.6	<0.5	9.4	40.5	40,3
Beracib+  fluorenthess		0.6	mg/sj	17.2	<0.5	1,9	40.6	- 50,5
Beraul)(Norumbers	207-08-9	0.6	mg/sp	17.5	30.5	7.7	<0.5	×0.5
Benzola(pyrene	50.32.9	0.6	mg/2	27.4	<0.5 <0.5	2.0	10.5	<0.6 <0.6
Intero/1.2.1.of/pyrens	190 39 6	0.5	11972	14.1	11000	4.7	<0.5	
Dibens   s.h) unthracene	58 70 3	0.5	110).5	4.4	10.5	1.5	×0.5	>0.5



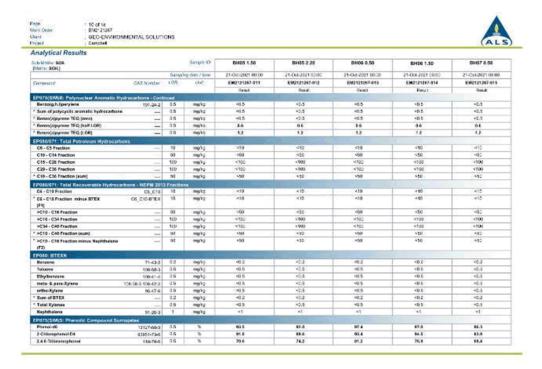




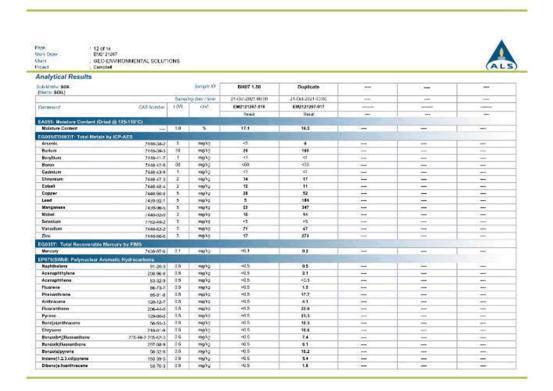




lorix Onder lant	9 of 18 EX2*21267 GEC-ENVIRONMENTAL SOLUTI Compted	CNS						AL
Analytical Result	s			Company of Street				
Sub-Marin: SOL. Blarin: SOLL)			Sample AD	BH05 1.50	BH35 2.20	BH04 0.50	BH06 1.50	BH07 0.50
process accept		Sergi	no distr/Sine	21-0/0/2021 00:00	21-0x4-2021-00/00	21-Out-2021 DO:30	21-00-2021 (0:0)	21-0(+2021 00 00
Corposid	CAS Number	105	062	EM2121297-011	EW2121297-012	EW2121267-013	EM2121267-414	E92121297-015
				Result	Renat:	Resid	Facult	Result:
EASSS: Moisture Contr	ent (Dried @ 105-110°C)							
Moleture Content		1.0	- %	14.3	16.5	34.5	30.4	25.0
EGOS(ED093)T: Total	Metals by ICP-AES							
Arsenic	2440-38-2	. 6	mg/s	- 4	46	-di	45	- 4
Barlam	24(0-38-3	10.	mg/s	59	. 60	160	70	123
Berylliam	7440-41-7	: (1)	mg/s;	-41	ব	1	Q1.	15
Boron	7410 42 8	60.	mg%g	<00	<50	<00	<50	460
Cachrison	7440 43 9	21.	mg%;	-41	41	- (45)	41	ব
Chromium	7440 47 3	- 2	mg/s	14	10	31	27	29
Cobat	7440 48 4	2	mg/g	10	14	12		10
Copper	7440-50-8	- 5	make	23	22	34	30	33
Lead	7439-02-1		maha	*15	5	13	10	13
Manganess	7459-96-5	- 5	110,45	23	272	173	142	95
Nickel	7440-102-0	2.	mo <sub>3</sub> 5	13	17	- 11	17	17
Solecture	7792-49-2	3	u0,15	+5	+5	- 4	45	+5
Varacture	7440-62-2	5	mokt	41	81	34	69	66
Zire	7440-56-5	5	ma/s	9	30	. 21	23	24
EG035T: Total Recove	rable Mercury by FIMS							
Mercury	7439-97-6	0.1	mg/sp	9).1	30.1	- 90.1	<0.1	39.5
EP075(SIMIB: Polynuc	lear Aromatic Hydrocarbons							
Naphthalone	91-20-3	0.6	mghb	40.5	40.5	40.5	×0.5	+0.5
Acenophitylene	208.98.8	0.5	mg/tg	10.5	*2.5	10.5	*0.5	<0.8
Aceraphthens	83-32-9	0.5	make	×0.5	40.5	*0.5	*D.5	*0.0
Fluorene	86-73-7	0.5	maks.	×6.5	+0.5	×0.5	+0.5	+0.3
Pharanthrace	85-01-8	0.5	melto	+0.5	+0.5	+0.5	-0.5	-0.5
Anthraome	120-12-7	0.5	mey:	×4.5	+0.5	*0.5	4D.5	+0.5
Reparttees	206-44-0	0.5	me32	49.5	45.5	40.5	*B.5	40,5
Pyrane	129-00-0	0.5		49.5	40.5	40.5	<0.5	+0.9
Bereissinthracore	56-55-3	0.5	mgkt	o) 5	47.5	40.5	40.5	40.5
Chrysone	210-01-8	0.6	mpks	40.5	40.5	40.5	40.5	140.5
Beraulb+ fluorumhene	22546226623	0.6	mg/sj	0).6	<0.5	40.5	40.5	<0.6
Benevik/Novembere	207-00-9	0.6	mgNg	40.5	30.5	<0.5	<0.5	140.5
Benacia(syrene	50.32.0	0.6	mgh <sub>2</sub>	40.5	<0.5	40.5	<0.5	40.8
Indeno(1.2.1.od)pyrene	190 59 6	0.5	11972	40.5	<0.5	×0.5	<0.5	40.5
Diberaja himritracene	58 70 3	0.5	mg/s	40.5	10.5	v0.5	ND.5	¥0.6

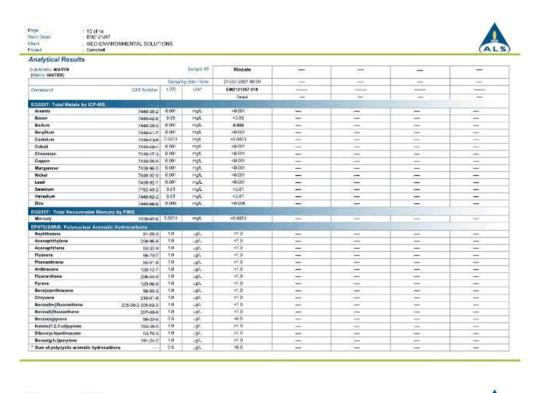


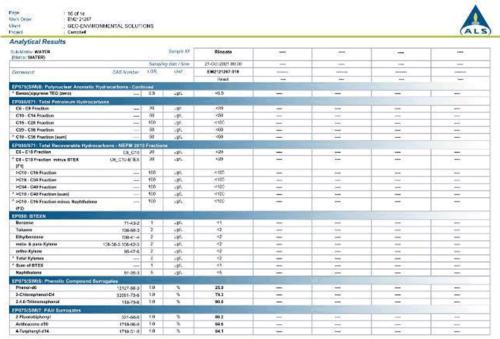


















#### **Submission to Planning Authority Notice**

Council Planning Permit No.	PLN-21-471		Cou	ncil notice date	5/07/2022	
TasWater details						
TasWater Reference No.	TWDA 2022/01054-HCC		Date	e of response	15/07/2022	
TasWater	Phil Papps	Diama Na	047	0474 931 272		
Contact	Oliver Leith (Trade Waste)		0460 007 105			
Response issued to						
Council name	CITY OF HOBART					
Contact details	coh@hobartcity.com.au					
Development deta	ils					
Address	175 CAMPBELL ST, HOBART		Prop	erty ID (PID)	7162926	
Description of development	Multi-Residential Development					
Schedule of drawi	Schedule of drawings/documents					
Prepared by	Drawing/document No.			Revision No.	Date of Issue	
Cumulus Studio	Site Plan / J20823-A-001			DA05	23/11/2021	
Cumulus Studio	Basement Floor Plan / J20823-A100			DA06	13/01/2022	
Cumulus Studio	Ground Floor Plan / J20823-A101			DA07	10/02/2022	
Cumulus Studio	Level 01-05 Floor Plans / J20823-A102-A106			DA05	23/11/2021	
JMG	Concept Servicing Plan / J173021PH / P03			DA1	19/11/2021	
JMG	Sewer Clearance Profile / J173021PH / P-S1			DA1	19/11/2021	
I						

#### Condition

Pursuant to the *Water and Sewerage Industry Act* 2008 (TAS) Section 56P(1) TasWater imposes the following conditions on the permit for this application:

#### **CONNECTIONS, METERING & BACKFLOW**

 A suitably sized water supply with metered connections and sewerage system and connections to the development must be designed and constructed to TasWater's satisfaction and be in accordance with any other conditions in this permit.

**Advice**:TasWater will not accept direct fire boosting from the network unless it can be demonstrated that the periodic testing of the system will not have a significant negative effect on our network and the minimum service requirements of other customers serviced by the network. To this end break tanks may be required with the rate of flow into the break tank controlled so that peak flows to fill the tank do not also cause negative effect on the network.

- Any removal/supply and installation of water meters and/or the removal of redundant and/or
  installation of new and modified property service connections must be carried out by TasWater at
  the developer's cost.
- Prior to use of the development, any water connection utilised for the development must have a backflow prevention device and water meter installed, to the satisfaction of TasWater.

#### **TASWATER ASSET PROTECTION & ACCESS**

4. The developer must take all precautions to protect existing TasWater infrastructure. Any damage caused to existing TasWater infrastructure during the construction period must be promptly



reported to TasWater and repaired by TasWater at the developer's cost.

- Ground levels over the TasWater assets must not be altered without the written approval of TasWater.
- The developer must ensure unfettered access at all times to TasWater's sewer maintenance hole (Asset A444950).

#### **56W CONSENT**

7. Prior to the issue of the Certificate for Certifiable Work (Building) and/or (Plumbing) by TasWater the applicant or landowner as the case may be must make application to TasWater pursuant to section 56W of the Water and Sewerage Industry Act 2008 for its consent in respect of that part of the development which is built over and/or within two metres of TasWater infrastructure.

#### TRADE WASTE

- 8. Prior to the commencement of operation the developer/property owner must obtain Consent to discharge Trade Waste from TasWater.
- The developer must install appropriately sized and suitable pre-treatment devices prior to gaining Consent to discharge including but not limited to sink and floor wastes for all commercial food prep areas.
- The Developer/property owner must comply with all TasWater conditions prescribed in the Trade Waste Consent.

#### **DEVELOPMENT ASSESSMENT FEES**

11. The applicant or landowner as the case may be, must pay a development assessment fee of \$723.84 to TasWater, as approved by the Economic Regulator and the fee will be indexed, until the date paid to TasWater. The payment is required within 30 days of the issue of an invoice by TasWater.

#### Advice

#### General

For information on TasWater development standards, please visit <a href="https://www.taswater.com.au/building-and-development/technical-standards">https://www.taswater.com.au/building-and-development/technical-standards</a>

For application forms please visit <a href="https://www.taswater.com.au/building-and-development/development-application-form">https://www.taswater.com.au/building-and-development/development-application-form</a>

#### Submetering

As of July 1 2022, TasWater's Sub-Metering Policy no longer permits TasWater sub-meters to be installed for new developments. Please ensure plans submitted with the application for Certificate(s) for Certifiable Work (Building and/or Plumbing) reflect this. For clarity, TasWater does not object to private sub-metering arrangements. Further information is available on our website (<a href="www.taswater.com.au">www.taswater.com.au</a>) within our Sub-Metering Policy and Water Metering Guidelines.

#### Service Locations

Please note that the developer is responsible for arranging to locate the existing TasWater infrastructure and clearly showing it on the drawings. Existing TasWater infrastructure may be located by a surveyor and/or a private contractor engaged at the developers cost to locate the infrastructure.

The location of this infrastructure as shown on the GIS is indicative only.

- (a) A permit is required to work within TasWater's easements or in the vicinity of its infrastructure. Further information can be obtained from TasWater
- (b) TasWater has listed a number of service providers who can provide asset detection and location services should you require it. Visit <a href="https://www.taswater.com.au/Development/Service-location">www.taswater.com.au/Development/Service-location</a> for a list of



companies.

#### 56W Consent

The plans submitted with the application for the Certificate for Certifiable Work (Building) and/or (Plumbing) will need to show footings of proposed buildings located over or within 2.0m from TasWater pipes and will need to be designed by a suitably qualified person to adequately protect the integrity of TasWater's infrastructure, and to TasWater's satisfaction, be in accordance with AS3500 Part 2.2 Section 3.8 to ensure that no loads are transferred to TasWater's pipes. These plans will need to also include a cross sectional view through the footings which clearly shows;

- (a) Existing pipe location and depth and proposed finished surface levels over the pipe;
- (b) Minimum above ground clearance must be no less than 3.0m;
- (c) The line of influence from the base of the footing must pass below the invert of the pipe and be clear of the pipe trench and;
- (d) A note on the plan indicating how the pipe location and depth were ascertained.
- (e) The location of the property service connection and sewer inspection opening (IO).

#### **Boundary Trap Area**

The proposed development is within a boundary trap area and the developer will need to provide a boundary trap that prevents noxious gases or persistent odours back venting into the property's sanitary drain. The boundary trap is to be be contained within the property boundaries and the property owner remains responsible for the ownership, operation and maintenance of the boundary trap.

#### **Trade Waste**

If hot food is being prepared in the commercial café a grease arrestor may be required under the Trade Waste pre-treatment guidelines. If no hot food or hot foods limited to service of foods cooked/prepared off site such as slices of cake, toasted sandwiches, pies etc plus coffee then a grease arrestor is unlikely to be required. If service is restricted to only coffee then category 0 may apply please see the 2022 pretreatment guidelines and Customer Category Guidelines for details

<a href="https://www.taswater.com.au/customers/businesses/trade-waste/commercial-trade-waste-customers">https://www.taswater.com.au/customers/businesses/trade-waste/commercial-trade-waste-customers</a>

Prior to any Building and/or Plumbing work being undertaken, the applicant will need to make an application to TasWater for a Certificate for Certifiable Work (Building and/or Plumbing). The Certificate for Certifiable Work (Building and/or Plumbing) must accompany all documentation submitted to Council. Documentation must include a floor and site plan with:

- · Location of all pre-treatment devices i.e. grease arrestor;
- Schematic drawings and specification (including the size and type) of any proposed pre-treatment device and drainage design; and
- Location of an accessible sampling point in accordance with the TasWater Trade Waste Flow Meter and Sampling Specifications for sampling discharge.
- Details of the proposed use of the premises, including the types of food that will be prepared and served: and
- The estimated number of patrons and/or meals on a daily basis.

At the time of submitting the Certificate for Certifiable Work (Building and/or Plumbing) a Trade Waste Application form is also required. If the nature of the business changes or the business is sold, TasWater is required to be informed in order to review the pre-treatment assessment.

The application forms are available at <a href="http://www.taswater.com.au/Customers/Liquid-Trade-waste/Commercial">http://www.taswater.com.au/Customers/Liquid-Trade-waste/Commercial</a>



# Declaration

The drawings/documents and conditions stated above constitute TasWater's Submission to Planning Authority Notice.

TasWater Contact Details			
Phone	13 6992	Email	development@taswater.com.au
Mail	GPO Box 1393 Hobart TAS 7001	Web	www.taswater.com.au

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ATTACHMENT D



Specialist Knowledge.
Practical Solutions.

9 August 2022

Jacob Ziesel Stormwater Systems Engineer - Analyst City of Hobart GPO Box 503 HOBART Tasmania 7001 Pitt & Sherry (Operations) Pty Ltd ABN 67 140 184 309

Phone 1300 748 874 info@pittsh.com.au pittsh.com.au

Located nationally —

Melbourne Sydney Brisbane Hobart Launceston Newcastle Devonport



Dear Jacob

#### Re: PLN-21-471 - Review of Advertised Documents - Flooding and Stormwater -

#### Rev 01

pitt&sherry have been engaged by City of Hobart (Council) to undertake a technical review of the flooding and drainage material provided from the proposed development at 173 – 179 Campbell Street Hobart (PLN-21-471).

The subject of the review is to determine:

- Whether Council have sufficient information to assess the development under the planning scheme (HIPS E15 – Inundation Prone Areas Code and E7 Stormwater Management Code)
- · Whether the development is acceptable under those clauses of the planning scheme; and
- If it is acceptable, what can be reasonably conditioned for.

The following advertised documents have been reviewed:

- PLN-21-471 175 CAMPBELL STREET HOBART TAS 7000 Advertising Documents 1 of 6 Plans.PDF
- PLN-21-471 175 CAMPBELL STREET HOBART TAS 7000 Advertising Documents 2 of 6 Planners and Architects Report.PDF; and
- PLN-21-471 175 CAMPBELL STREET HOBART TAS 7000 Advertising Documents 3 of 6 -Engineering Reports.PDF.

The review has been based on how the material supplied responds to planning requirements.



#### 1. Development Assessment

#### 1.1 E7 – Stormwater Management Code

Table 1: E7.7.1 Stormwater Drainage and Disposal

Acceptable Solution		Performance Criteria		
	rater from new impervious surfaces must be ad of by gravity to public stormwater infrastructure.	manage a)	having regard to the suitability of the site, the system design and water sensitive urban design principles collected for re-use on the site;	
A2 A stormwater system for a new development must incorporate water sensitive urban design principles for the treatment and disposal of stormwater if any of the following apply:  a) the size of new impervious area is more than 600 m2;  b) new car parking is provided for more than 6 cars;  c) a subdivision is for more than 5 lots.		P2 A stormwater system for a new development must incorporate a stormwater drainage system of a size and design sufficient to achieve the stormwater quality and quantity targets in accordance with the State Stormwater Strategy 2010, as detailed in Table E7.1 unless it is not feasible to do so.		
	r stormwater drainage system must be designed to with all of the following:  be able to accommodate a storm with an ARI of 20 years in the case of non-industrial zoned land and an ARI of 50 years in the case of industrial zoned land, when the land serviced by the system is fully developed; stormwater runoff will be no greater than preexisting runoff or any increase can be accommodated within existing or upgraded public stormwater infrastructure.	P3 No Perf	formance Criteria	
A4 A major accomn	stormwater drainage system must be designed to	P4	formance Criteria	

#### Response

#### A1/P1

Page 12 of the advertised documents (engineering reports) presents the proposed stormwater point for the site. A DN225 pipe is proposed to be connected to the DN1800 Park Street Rivulet Drain. Figure 8 and Figure 9 show the plan and long section of the proposed connection demonstrating the site can be connected to the public stormwater system. As such. The development complies with A1

#### A2/P2

The planning response detailed on page 13 of the engineering reports states the development meets the acceptable solution A2. Although, the assessment provided responds to P2. The most reasonable approach for a development of this size is to assess the site against P2 which has been done.

There are inconsistencies with how the water quality assessment is presented. Under the response to planning criteria on Page 13, a table of treatment train effectiveness is presented, along with a model schematic (Figure 1). There is no further information provided on how these model results were obtained

On page 60 of the engineering reports, a different water quality assessment is presented with a different model schematic and different results (Figure 2). This assessment does provide sufficient information to assess water quality compliance.

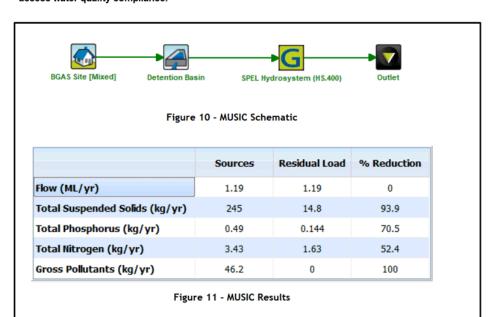


Figure 1: Water quality results presented in response to planning criteria (JMG - Page 13)

Parameter	Required Load Reduction (%)	MUSIC Modelled Load Reduction (%)	State Stormwater Targets Achieved
Total Suspended Solids (TSS) (kg/yr)	80.0	79.9	Y
Total Phosphorous (TP) (kg/yr)	45.0	76.6	Υ
Total Nitrogen (TN) (kg/yr)	45.0	45.2	Υ
Total Pollutants (kg/yr)	90.0	99.2	Υ

Figure 2: Water quality results presented in Flussig Report (Flussig - Page 60)

The information provided from Page 59 to Page 62 of the engineering reports provides sufficient detail for council to accept.

It should be noted the model results presented in the planning response to P2 do not have any technical background. A reasonable approach has been undertaken for this part of the assessment as an assessment has been provided that demonstrates compliance. It is recommended that council condition that an appropriate water quality management system be implemented meeting the Stormwater Quality Targets.

#### A3/P3

The internal site drainage has been appropriately sized for the development. The peak flow rates presented in the rational method calculation and pipe size proposed are reasonable to convey flow to the public stormwater system. Although, the performance of the drainage system could be impacted by the proposed detention basin.

Part of a stormwater detention assessment has been undertaken, although there are important hydraulic features of the detention basin that have not been documented. Page 14 of the engineering reports states that a basin is to be provided that limits flow to the pre-developed condition with a suitably size orifice. No detail has been provided for the orifice size or the peak operating levels of the basin.

Detail should have been provided to demonstrate that the basin/orifice arrangement does not raise the peak water level above the design surface level. Hence based on the information provided, it is not possible to accept the response provided for A3. Based on the review undertaken, this is likely something that can be addressed, and council can condition an appropriate detention and drainage system to be provided with supporting calculations.

In addition to the drainage system servicing the site, the development proposes to realign an existing DN525 council stormwater main. As the development proposes to alter part of the existing minor drainage system, proposed design should be assessed under A3.

The hydraulic analysis associated with the realignment is presented in Page 54 to Page 57 of the engineering reports (Flussig). A long section / hydraulic grade line has been presented for the proposed case. Based on the information presented, it is not possible to determine whether or not the capacity of the minor drainage system is adequate under the assumption that the tailwater level in the downstream network was below the ground.

Based on the information presented it is not possible to accept the proposed realignment. It is recommended that the realignment is conditioned such that the pipe provided ensures the 5% AEP HGL is below the ground level with an assumed tailwater level also below ground.

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#### A4/P4

The proposed development is located within a flood affected area. A major overland flow path exists at the rear of the property. The proposed development footprint is within this area.

A design to accommodate this flow path has not been provided. The flood modelling undertaken has classified the flood hazard as predominantly H5 and some areas of H6.

A major stormwater drainage system is required a system to provide safe conveyance of stormwater runoff and a specific level of flood mitigation. The flood hazard category estimated and proposed use in the major stormwater drainage path does not constitute safe conveyance of floodwater.

The physical design of the development has not appropriately considered the overland flow path and relied upon administrative measures to attempt to manage the risk. The proposed solution accepts there will be damage to property (cars).

The response to A4 provided on Page 14 state all habitable floors are located more than 300mm above the calculated 1% AEP flood level. It is noted that the HIPS defines a habitable building as a building of Class 1 - 9 of the Building Code of Australia. The National Construction Code defines carparks as a class 7a building. As such the not all habitable floor areas are above the 1% AEP flood level.

Based on the information provided, the development does not comply with A4.



#### 1.2 E15 - Inundation Prone Areas Code

As the site is impacted by riverine inundation, the items from Code E15 relating to riverine inundation need to be responded to. These are E15.7.4 and E15.7.5. Only items relating to new buildings have been detailed below

Table 2: E15.7.4 Riverine Inundation Hazard Areas

Objective: To ensure that the risk from riverine, watercourse or inland flooding is appropriately managed and takes into account the use of buildings

Acceptable Solution	Performance Criteria		
A1	P1		
A new habitable building must have a floor level no lower than the 1% AEP (100yr	A new habitable building must have a floor level that satisfies the following:		
ARI) storm event plus 300mm	a) Risk to users of the site, adjoining or nearby land is acceptable;		
	<ul> <li>Risk to adjoining or nearby property or public infrastructure is acceptable;</li> </ul>		
	<ul> <li>Risk to buildings and other works arising from riverine flooding is adequately mitigated through siting, structural or design methods;</li> </ul>		
	d) Need for future remediation works is minimised; and		
	<ul> <li>e) Provision of any developer contribution required pursuant to policy adopted by Council for riverine flooding protection works.</li> </ul>		

#### Response

#### A1/P1

As the carpark is a Class 7a building, the carpark is considered to be a habitable building. As the proposed car park floor level is 15.70m AHD, and the 1% AEP + CC flood level is estimated to be 18.015m AHD, A1 is not achieved and the performance criteria must be responded to.

A specific response to P1 has not been provided. The review of the compliance against P1 has been undertaken based on the information presented in the engineering reports.

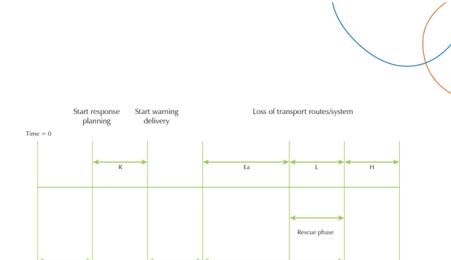
#### (a) Risks to users of the site, adjoining or nearby land is acceptable.

Page 80 of the engineering reports presents flood hazard maps for both the existing and developed case for the 1% AEP + climate change event. The maps show an increase in flood hazard category on the site through the lowering of the ground level to facilitate the design of the car park. The flood hazard is predominantly H5 with some areas of H6. The flood hazard category H5 means unsafe for vehicles and people. All buildings vulnerable to structural damage. Some less robust building types vulnerable to failure. H6 means unsafe for vehicles and people. All building types considered vulnerable to failure. The level of flood risk within the carpark is considered to be unacceptable. It is noted the flood hazard rating on the site has increased when compared to the existing condition.



The proposed approach to manage risk is to implement a Flood Emergency Management Plan (FEMP). There is no discussion regarding alternate options for managing flood risk. The following comments are provided on the proposed FEMP:

- The engineering report states, depth in the car park rises from an initial noticeable depth of 50mm to maximum in a period of around 9.5 minutes (engineering reports, Page 13 - JMG). It is noted the maximum depth is approximately 2.2m. This is the time it takes to reach peak depth, but no comment has been provided on the time it takes to which flow becomes hazardous to people and infrastructure. This will be shorter and hence further reduces the time available to vacate affected areas.
- An understanding of how the flood hazard changes with time is required. The assumption of adopting a FEMP based on the time to peak depth is not appropriate. The documentation provided to support a FEMP as being possible is lacking adequate detail.
- The time for noticeable overland flow to hazardous flooding is too short for a flood emergency
  management plan to be appropriately implemented. It appears the approach relied upon will be
  for people to notice flood water and will make a decision to remove themselves from the area.
  There is no time for instruction or intervention from a flood warden. The emergency response
  system relies on automated measures as warning devices, although it is likely they may only
  provide minutes of warning.
- Figure 3 shows an exert from the Australian Disaster Resilience Manual 20 and presents an
  example evacuation timeline. For this example, only the first four steps are relevant. For a FEMP
  to work, the time between the first indication of flooding and the prediction of inundation height,
  plus the response initiation time must be less than the time where flood water first becomes
  hazardous (noting this is less than 9.5 minutes). There has been no discussion in the material
  provided on evacuation timeline.
- A risk assessment is documented in Appendix A of the report (Page 88 of engineering reports).
   Risk Ref No. D2 recognises there is a risk to personal safety within the car park and waste room.
   The assessment nominates a consequence of moderate for a risk that could result in serious injury or death. This does not appear to be correct.
- The risk assessment states that with implementation of the flood emergency management plan
  that the consequence, reduces from moderate to minor. The consequence will not change with
  the implementation of administrative risk reduction measures. There is still the consequence of
  serious injury and death.
- The JMG report accepts that cars may become damaged and have suggested the body corporate
  insurance may be able to recover losses. This still means people will be without a car for a
  period of time. Insurance should not need to be relied upon if the risk is known prior to the
  development be constructed; and
- The flood hazard categorisation is predominantly H5 and some H6 and represents hazards
  typically found in defined river and creek channels. Areas that contain this level of hazard would
  normally be left clear of development. It is not recommended to place infrastructure or provide
  incentive for people to access areas like this.



P = prediction calculation, R = response initiation, W = warning delivery, En = time needed to evacuate, Ea = time available to evacuate
L = time lost due to failure of evacuation routes/system. H = headroom for error. Note: H can be negative if tm is earlier than tc.

Start

Time segments are not drawn to scale

inundation

height

First

of floodi

Figure 3: Flood evacuation timeline (Figure 2: Australian Disaster Resilience Manual 20: Flood Preparedness, 2009, Australian Institute for Disaster Resilience CC BY-NC)

The proposed design exposes users to an unacceptable level of risk with a mitigation option that cannot guarantee the safety of people and accepts the damage to property will occur. The proposed approach does not meet P1 (a)

#### (b) Risk to adjoining or nearby property or public infrastructure is acceptable.

Start

Section 2.4.1 of the Flussig Report states there will be no displacement of overland flow over other property. A graph is provided in Figure 7, although, this only demonstrates a change at a single point. A comparison between the flood maps provided in Appendix B, Pre-Development 1% AEP + CC and Post-Development 1% AEP + CC, do show an increase in flood depth downstream, a minor decrease in flood extent onto Campbell Street, an increase in the flood extent within the Brooker Avenue Road Reserve and a minor increase in flood extent behind Woolworths.

A high level review of the flood hazard maps suggests the extent of H6 hazard increases downstream.

Furthermore, figure 6 (page 75 of the engineering reports) shows an increase in peak flow rate of approximately 13% within the Brooker Avenue Road reserve.

To appropriately quantify the change in flood behaviour, a water level difference / flood afflux map or suitably detailed equivalent information is required. This has not been provided and hence there isn't enough information provided to adequately address P1 (b). This is information that should have been provided at this stage of the development assessment. As such it cannot be conditioned.

(c) Risk to buildings and other works arising from riverine flooding is adequately mitigated through siting, structural or design methods

With regard to mitigation options relating to structural design of the development, the engineering report has recommended the building be designed to resist flood forces. A review of the structural design is beyond the scope of this assessment although this item can be conditioned.

ime before

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ATTACHMENT D



(d) Need for future remediation works is minimised

By allowing the overland flow path to pass through the car park introduces a problem for the development to deal with in the future. Damage to cars and building utilities are likely which will impose burden on those living at the proposed development site.

(e) Provision of any developer contribution required pursuant to policy adopted by Council for riverine flooding protection works

Developer contribution not applicable for this development.



Table 3: E15.7.5 Riverine, Coastal Investigation Area, Low, Medium, High Inundation Hazard Areas

Objective: To ensure that landfill and mitigation works do not unreasonably increase the risk from riverine, watercourse and inland flooding, and risk from coastal inundation.

Acceptable Solution	Performance Criteria
A1 For landfill, or solid walls greater than 5 m in length and 0.5 m in height, there is no acceptable solution.	P1 Landfill, or solid walls greater than 5 m in length and 0.5 m in height, must satisfy all of the following: a) no adverse affect on flood flow over other property through displacement of overland flows; b) the rate of stormwater discharge from the property must not increase; and c) stormwater quality must not be reduced from predevelopment levels.

#### Response

#### A1/P1

As the proposed development introduces a new structure into the development site that is greater than 5m, A1 cannot be achieved and the performance criteria (P1) must be addressed.

(a) no adverse affect on flood flow over other property through displacement of overland flows;

Section 2.4.1 of the Flussig Report states there will be no displacement of overland flow over other property. A graph is provided in Figure 7, although, this only demonstrates a change at a single point. A comparison between the flood maps provided in Appendix B, Pre-Development 1% AEP + CC and Post-Development 1% AEP + CC, do show an increase in flood depth downstream, a minor decrease in flood extent onto Campbell Street, an increase in the flood extent within the Brooker Avenue Road Reserve and a minor increase in flood extent behind Woolworths.

A high level review of the flood hazard maps suggests the extent of H6 hazard increases downstream.

To appropriately quantify the change in flood behaviour, a water level difference / flood afflux map or suitably detailed equivalent information is required. This has not been provided and hence there isn't enough information provided to adequately address P1 (b). The review of flood maps provided suggests there is a change, but it is not possible to ascertain the impact. This is information that should have been provided at this stage of the development assessment. As such it cannot be conditioned.

#### (b) the rate of stormwater discharge from the property must not increase

Figure 6 (page 75 of the engineering reports) shows an increase in peak flow rate of approximately 13% within the Brooker Avenue Road reserve. The statement provided in the response to planning criteria (page 82 of the engineering reports) states no change. The response is inconsistent with the detail provided in the report. P1 (b) has not been achieved. Information should have been provided at this stage. It is not recommended to condition for this.

#### (c) stormwater quality must not be reduced from pre-development levels

The response stated on page 82 of the engineering reports suggest there is no evidence that stormwater quality will be reduced. Based on the review of the site this is reasonable and can be accepted.



#### 2. Summary

A review of documentation has been undertaken that intends to address relevant provisions in the *Hobart Interim Planning Scheme 2015*, in particular, the Inundation Prone Areas Code (E15) and the Stormwater Management Code (E7). The outcome of the assessment is summarised below:

- E7.7.1 A1/P1 Can accept
- E7.7.1 A2/P2 Condition for. Can be achieved, although inconsistencies provided within the report
- E7.7.1 A3/P3 (Detention system) Condition for. Missing information relating to the detention system
  proposed.
- E7.7.1 A3/P3 (DN525 realignment) Condition for. Sufficient information has not been provided that
  demonstrates the new main meets the capacity requirement (5% AEP). Recommend an agreed and
  reasonable tailwater below ground be adopted for pipe sizing.
- E7.7.1 A4/P4 not achieved. The overland flow path passes through the car park. It appears the design
  has not considered options for overland flow. E7.7.1 A4/P4 states the overland flow path must be designed
  to provide safe conveyance of stormwater runoff. The results of the flood hazard assessment indicate that
  the stormwater flows through the site are no safe for people or infrastructure.
- E15.7.4 A1/P1 not achieved. Development relies on A1, assuming the habitable floor is the building structure and rooms within it. The HIPS defines a habitable building as buildings of Class 1 9 per the Building Code of Australia (now the National Construction Code (NCC)). A carpark is considered to be a Class 7a building and hence is to be considered a habitable building. The documentation provided was assessed against P1. The approach adopted leaves an unacceptable level of residual risk; and
- E15.7.5 A1/P1 not achieved. Sufficient information has not been provided to quantify the impact on adjoining property.

The proposed development is located in an area affect by extremely hazardous flood water in a 1% AEP + Climate Change flood event. The primary issue is part of the development exposes users to an unacceptable level of risk, which is in conflict with the purpose of the code, and in particular E15.7.4/P1. It is our opinion that the management measure proposed (emergency management plan) is not appropriate for this situation. Even if a detailed flood emergency plan could be developed, there would be a problem enacting the plan as the time required to enact the plan would be far longer than the flood response time.

It is reasonable to assume a person could be located within the basement carpark at the onset of flooding. They could be exposed the highly hazardous flooding (as defined by Australian Rainfall & Runoff Flood Hazard Categorisation- Book 6 — Chapter 7) and hence we do not believe the development in its current form meets the requirements of the HIPS.

Joshua Coates

Associate Civil / Hydraulic Engineer CPEng NER

#### **URBAN DESIGN ADVISORY PANEL**

#### REPORT

**TUESDAY 7 SEPTEMBER 2021** 

 169-173 Campbell Street, 175 Campbell Street, 177 Campbell Street and 179 Campbell Street – PLN-21-471

Attending: Peter Walker - Cumulus

Dean Coleman - Solutions Won Group Pty Ltd (via Teams)

The Panel met to discuss the proposal in detail and the advice below is provided for the consideration of the proponents and officers.

#### Description:

The site comprises three addresses located over four titles – 175 Campbell Street, 177 Campbell Street and 179 Campbell Street. The proposal is for the retention of the brick buildings at the front of 177 and 179 Campbell Street, demolition of the building at 175 Campbell Street, and the construction of interconnected residential buildings of 34 dwellings. The buildings features varying heights from three to six storeys, extending to a maximum height of 25.210m at the rear of the site. The overall development contains a basement car park level, commercial tenancies, a large central courtyard, 13 two-bedroom apartments, 9 three-bedroom apartments, 4 three-bedroom 'skyhomes' and 2 three bedroom townhouses and 6 two bedroom town houses all with varying private open space areas.

More specifically the proposal includes:

- Retention of the two existing heritage listed buildings sited at the front of 177 and 179 Campbell Street. Use of these buildings are to be for café and consulting rooms respectively. These properties are listed in the planning scheme but not with the Tasmanian Heritage Council.
- Demolition of the non-heritage listed building at 175 Campbell Street.
- Basement Level: One level of car parking, accessed from Campbell Street. The basement will contain 37 car parks, waste and apartment storage.
- Ground Level: The ground level will comprise of two commercial tenancies with shopfront glazing accessible from Campbell Street and an internal walkway. A large internal courtyard and the lower level of the 5 two bedroom townhouses, a three bedroom apartment and 2 two bedroom apartments.
- Level 1: Upper level of the 5 two bedroom townhouses, a two-bedroom apartment, three town houses and 4 three bedroom apartments.

- Level 2: Upper level of the 3 townhouses, upper level of the 4 three-bedroom apartments and 4 additional apartments.
- Level 3: 7 two bedroom apartments and upper of level three-bedroom apartment
- Level 4: Communal Rooftop Terrace, four sky homes and 3 three apartments
- Level 5 Upper level of the 4 skyhomes and the 3 three apartments plus plant, roof structure and lift overruns.
- Total apartments: 34
- The design features a 'saw tooth' roof taking inspiration from neighbouring warehouse roof forms and to provide an articulated form against the skyline.
- The key material is a ceramic tile/ brick in a mix of terracotta and grey tones with inclusion off form concrete, metal vertical batten screening and two polycarbonate seams for the lift/stairwell circulation areas.
- The proposal includes removal of a tree in the Brooker road reservation and additional planting

#### REPORT:

A previous early stage of the development, essentially a massing version, came before the Panel for pre-application advice at its meeting on the 28 April 2021. The Panel was broadly not supportive of that proposal, especially with regards to the impact on adjacent properties and the pattern this development would establish in exceeding the current Scheme requirements.

The proponent has developed the scheme further, particularly the architectural expression. The Panel appreciate the opportunity to review the proposal again and note the review was undertaken as a Pre-Application review. The proponent has provided 2 versions; one an original Development Application which the Panel were advised has been withdrawn, and another version which removed a level to reduce height of the proposal and other adjustments. The proponent spoke to both versions and the Panel has considered both in its review.

The Panel note the proposal substantially exceeds the current Scheme's height requirements, and if required to comment on height in a formal Development Application review, the Panel would recommend refusal on the height of the proposal. The Panel acknowledge the precinct warrants a review of Scheme requirements and an increased density, especially for housing, is appropriate. Consistent with previous advice (April 2021), the Panel seek urban analysis on the appropriateness of exceeding the current Scheme requirements and the pattern this establishes for future development.

The proponents provided their research and analysis on the broader urban context to support this development. The Panel appreciated this work, though noted some

deficiencies which if addressed, should further assist the development approach, such as an increased appreciation of the original landform and how the heritage buildings on the site relate to this. The Panel would have liked to see more rigour in the analysis of the increased density pattern this proposal establishes in relation to the impact on and from adjacent sites.

The Panel remain concerned by the precedent established by the pattern which would be as a result of 'first in, best dressed' rather than as a proposal addressing amenity issues influenced by a precinct plan. The Panel is concerned that the width of the lots in the area would generate a typology that, if developed to similar height and bulk, will progressively overshadow each neighbouring lot. The Panel appreciated the proponents reason for introducing a varied roofline, to reflect the industrial buildings' roof-lights nearby, though felt they were being used as an architectural expression and could have assisted more in reducing the height adjacent to neighbours to allow more sunlight on adjoining properties.

The panel noted that while the proposal needs to be compatible with nearby buildings, it does not need to match.

The Panel noted that the proposal did seem to be addressing the Campbell Street streetscape by reducing the height. The Panel felt that the street frontage could maintain the form in the higher of the two versions shown, given the relationship to the existing buildings on the opposite side of Campbell Street. However, the Panel were also of the opinion that massing impacts are more significant to the neighbouring properties than tinkering with the streetscape. The panel raised the issue of bulk not just height, noting that height should be an outcome of location and form.

The Panel noted the heritage constraints of the site and appreciate the Council's heritage officer's assessment is based on the Scheme's requirement for new development to be "subservient" to the heritage properties. The Panel also felt that the treatment of the heritage buildings on site likely impacted the design in a detrimental way, leaving a building behind that was trying not to be tall. The Panel questioned whether the amended plans neither provided a "subservient" relationship to the heritage buildings, nor provided a rationale for a considered design solution in respect of the Scheme's requirement for a subservient relationship. The Panel felt there is more opportunity in addressing the relationship between the heritage buildings set down low from the street, and their relationship to the original landform including the former rivulet along its Brooker Highway edge, the subsequent pattern of development through infill of the Brooker Highway, and more recent and likely future development in the precinct.

The Panel notes a number of technical issues that are unresolved that may have future impact on urban design considerations. It is suggested that landscape architectural input is concurrent with hydraulic engineering and architectural design to provide for more nuanced site design solutions. These include the work associated with the storm-water drainage, provision of a pedestrian connection to the highway to improve informal surveillance both along the Brooker as well as within the lower areas of the site and the Panel noting the apparent lift-only access from the lower level carparking to the ground floor,.

On a strict interpretation of the planning scheme provisions for height and heritage, the Panel concluded that the proposal does not comply. While there are meritorious elements of the proposal, overall they are not yet so significant as to warrant supporting the proposal, notwithstanding the non-compliance with the scheme.

# URBAN DESIGN ADVISORY PANEL REPORT

#### WEDNESDAY 28 APRIL 2021 LADY OSBORNE ROOM

#### 2. 175-179 CAMPBELL STREET - PRE-APPLICATION

Attending: Dean Coleman – Solutions Won Group Pty Ltd (via teams)

Matthew Clark - JMG Engineers & Planners

Peter Walker – Cumulus Studios Andrew Foster – Cumulus Studios

#### Description:

The proposal is to retain the two existing buildings at 177 and 179 Campbell Street, demolish the existing building on 175 Campbell Street, and construct 35 new dwellings across the three properties.

The proposal appears to comprise the following:

- Change of use of the existing buildings at 177 and 179 Campbell Street to commercial/retail.
- A new three-storey building behind the existing buildings at 177 to 179
   Campbell St for four dwellings.
- A new three-storey building to the south of the existing buildings at 177 to 179
  Campbell St, in the location of the current 175 Campbell Street, for
  commercial/retail on the ground floor, and four houses above.
- A new five storey building along the rear and partially the southern side boundary for the remaining 27 dwellings.

The proposal appears to be at an early stage of development, and specific details regarding height and materials are not provided.

#### Comments:

The site is 175, 177 and 179 Campbell Street, located on the north-eastern side of Campbell Street, between Campbell Street and Brooker Avenue. The site is located within the Urban Mixed Use Zone. The site is in the area of archaeological potential. In addition, 177 and 179 Campbell Street are heritage listed in the Hobart Interim

Planning Scheme 2015, but not with the Tasmanian Heritage Council. The site is not in a heritage precinct.

The site is adjacent to potentially contaminated sites, and is subject to the Attenuation Code (the code applies because the site is within 200m of a late night music venue). The site is within the area controlled by the Royal Hobart Hospital Specific Area Plan which requires buildings in the Inner Area to be no higher than 64.5m AHD. The site is also flood prone. There are no other relevant overlays.

The Panel wishes to note that the comments reflect the early nature of the proposal and are appreciative of the opportunity to comment at this stage.

The Panel notes the proposal has considered some contextual connections to Campbell Street, but considers that the proposal needs to consider the context well beyond the immediate streetscape. For example, more needs to be shown about the way it addresses and is viewed from the Glebe. The Panel would like to see an accurate long section taken through the site and acknowledging the Glebe and the natural rise toward Trinity Hill.

The Panel would like to see more planting on the proposed site with respect to the Brooker Avenue. They felt concern that there was a reliance on screening from trees on a public nature strip that have limited life span left. The Panel also reiterated comment on the previous proposal regarding concerns with parking on the lowest level needing to be set back to preserve trees on the public space alongside the Brooker Avenue.

The proposed front fence was presented with very limited information, alluding to an arbour screen. The Panel were therefore unable to provide specific comment on this aspect in particular, though did not discount its validity with further design rigour, including its siting relevant to the two heritage buildings and the new buildings. The panel did however discuss the need to ensure that any street frontage treatment not be to the detriment of the scale and sociability of the street as both public space and neighbourhood.

The early design proposal features a pixilation effect to break down the scale of the proposed massing. Whilst recognising the design skill demonstrated in its early stages on the façade treatment, the Panel were unanimous in seeking a more thorough analysis of and considered urban design response to the broader context. The proposed form needs to be considered in the scale of the urban precinct within the city, not just the relationships at a site or street scale. This is particularly the case given the height / massing to the southern edge of the property and the precedent this sets for adjoining properties.

The Panel found it difficult to comment on the proposal in the absence of a precinct plan. In seeking to make this a different scale of development to its surrounds, the Panel notes the proposal must achieve a high quality result and be rigorously tested to achieve a positive outcome to what could be a leader to further larger development in this precinct.

### 7.1.8 343 PARK STREET, NEW TOWN - CHANGE OF USE TO VISITOR ACCOMMODATION

PLN-22-537 - FILE REF: F22/94628

Address: 343 Park Street, New Town

Proposal: Change of Use to Visitor Accommodation

Expiry Date: 28 September 2022

Extension of Time:

Author: Mark O'Brien

#### RECOMMENDATION

That pursuant to the *Hobart Interim Planning Scheme 2015*, the Council approve the application for Change of Use to Visitor Accommodation at 343 Park Street, New Town, for the reasons outlined in the officer's report and a permit containing the following conditions be issued:

#### **GEN**

The use and/or development must be substantially in accordance with the documents and drawings that comprise PLN-22-537 - 343 PARK STREET NEW TOWN TAS 7008 - Final Planning Documents, except where modified below.

Reason for condition

To clarify the scope of the permit.

#### **PLN 18**

Prior to the commencement of the approved use, a management plan for the operation of the visitor accommodation must be submitted and approved as a Condition Endorsement, to the satisfaction of the Council's Director City Life. The management plan must include measures to limit, manage and mitigate unreasonable impacts upon the amenity of long term residents. These measures must include, but are not limited to, the following requirements:

- 1. To limit, manage, and mitigate noise generated as a result of the visitor accommodation; Parties must be prohibited.
- 2. To limit, manage, and mitigate behaviour issues caused as a result of the visitor accommodation.
- 3. To maintain the security of the building where the visitor accommodation would be located, including managing and/or limiting access to shared areas and facilities.
- 4. To specify the maximum permitted occupancy of the visitor accommodation is not more than 8 guests.
- 5. To specify that guests must utilise the site for the parking of vehicles, and that the recommended maximum number of vehicles to be parked on the site is one (1), and detail where the parking spaces are located and how the spaces are to be accessed. Additionally, at the booking stage, guests should be discouraged from bringing more than 1 vehicle and the parking of any additional vehicles in nearby streets should also be discouraged.
- 6. To provide a name and contact phone number of a person who will respond to any complaints regarding behaviour of guests. If the property is sold the Visitor Accommodation Management Plan (VAMP) must be updated with new contact details.

Once approved, the management plan must be implemented prior to the commencement of the approved use and must be maintained for as long as the visitor accommodation is in operation. The VAMP must be provided to adjacent property owners and occupiers within 14 days of being approved. If the property is sold, the updated VAMP (in accordance with 6. above) must be provided to adjacent property owners and occupiers within 10 business days of settlement.

#### Advice:

This condition requires further information to be submitted as a Condition

Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

Reason for condition

To ensure that visitor accommodation does not cause an unreasonable loss of residential amenity.

#### PLN s1

This planning permit enables the whole property to be rented out as a single visitor accommodation booking. Individual rooms must not be rented out as separate visitor accommodation bookings.

Reason for condition

To clarify the scope of the permit.

#### **ADVICE**

The following advice is provided to you to assist in the implementation of the planning permit that has been issued subject to the conditions above. The advice is not exhaustive and you must inform yourself of any other legislation, by-laws, regulations, codes or standards that will apply to your development under which you may need to obtain an approval. Visit the Council's website for further information.

Prior to any commencement of work on the site or commencement of use the following additional permits/approval may be required from the Hobart City Council.

#### **CONDITION ENDORSEMENT**

If any condition requires that further documents are submitted and approved, you will need to submit the relevant documentation to satisfy the condition via the Condition Endorsement Submission on Council's online services e-planning portal. Detailed instructions can be found here.

Once approved, the Council will respond to you via email that the condition has been endorsed (satisfied).

Where building approval is also required, it is recommended that documentation for condition endorsement be submitted well before submitting documentation for building approval. Failure to address condition endorsement requirements prior to submitting for building

approval may result in unexpected delays.

#### **NOISE REGULATIONS**

Click here for information with respect to noise nuisances in residential areas.

#### VISITOR ACCOMMODATION

More information on visitor accommodation, including when building approval is required, can be found here.

In all cases, check with your insurance company that you have adequate cover.

If you are in a bushfire prone area there may be a need to create/review the Bushfire

Management Hazard Plan for your property.

If you have a spa or a pool at your property then you are required to test for microbiological quality and chemical parameters on a monthly basis, under the *Public Health Act 1997*. If you have any questions about this then please call our Environmental Health team on 6238 2711.

If you are providing food for consumption on the property, you may require a food business registration in accordance with the *Food Act* 2003. Click here for more information, or call our Environmental Health team on 6238 2711.

You are encouraged to have in place a management plan for the operation of the visitor accommodation. The management plan should include measures to limit, manage and mitigate unreasonable impacts upon the amenity of permanent residents, including addressing issues like noise, waste management, customer behaviour, security, and maximum occupancy.

Visitor accommodation is also considered to be a commercial use and also not eligible to residential parking permits. Under the current policy for the issuing of residential parking permits, the proposed change of use to visitor accommodation would not entitle the property to a residential parking permit, or a transferable "bed and breakfast" parking permit.

Attachment A: PLN-22-537 - 343 PARK STREET NEW TOWN

TAS 7008 Planning Committee or Delegated

Attachment B: PLN-22-537 - 343 PARK STREET NEW TOWN



#### **APPLICATION UNDER HOBART INTERIM PLANNING SCHEME 2015**

Type of Report: Committee

Council: 26 September 2022 Expiry Date: 28 September 2022

Application No: PLN-22-537

Address: 343 PARK STREET, NEW TOWN

Applicant: Ting Yue

30 Harvey Place

Proposal: Change of Use to Visitor Accommodation

Representations: Seven

Performance criteria: Planning Directive No.6 - scale of visitor accommodation

#### 1. Executive Summary

- 1.1 Planning approval is sought for Change of Use to Visitor Accommodation at 343 Park Street, New Town.
- 1.2 More specifically the proposal includes:
  - change of use from residential to visitor accommodation.
  - change of use for a four bedroom dwelling with a gross floor area of approximately 286m<sup>2</sup>.
  - · one onsite parking space, accessed off Bishop Street.
- 1.3 The proposal relies on performance criteria to satisfy the following standards and codes:
  - 1.3.1 Planning Directive No.6 Visitor Accommodation
- 1.4 Seven (7) representations objecting to the proposal were received within the statutory advertising period between 29 August 2022 and 12 September 2022.
- 1.5 The proposal is recommended for approval subject to conditions.
- 1.6 The final decision is delegated to the Council, because the application is of a category that has been 'called in' by the elected representatives.

#### 2. Site Detail

2.1 The site is at 343 Park Street, New Town, with title reference 182875/3. The site contains a two storey, four bedroom, dwelling. Access to the onsite parking area is via Bishop Street. The site is bound by road reservation to the east, west and south, and vacant residential lots to the north. The surrounding area is predominantly residential. The site is a State and locally listed heritage place.



Figure 1: Aerial image of site shown in blue outline (source: LISTmap; accessed 30 August 2022)

#### 3. Proposal

3.1 Planning approval is sought for Change of Use to Visitor Accommodation at 343 Park Street, New Town.

- 3.2 More specifically the proposal is for:
  - change of use from residential to visitor accommodation.
  - change of use for a four bedroom dwelling with a gross floor area of approximately 286m<sup>2</sup>.
  - · one onsite parking space, accessed off Bishop Street.

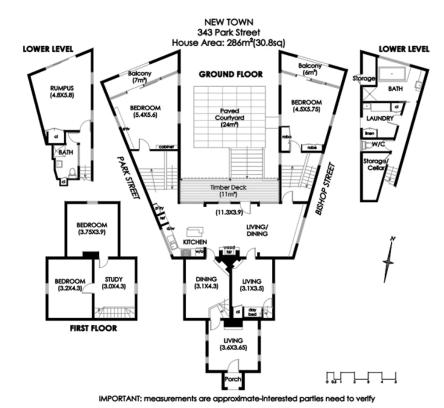


Figure 2: Floor plans (Source: Applicant)

#### 4. Background

- 4.1 The site is a State and locally listed heritage place. Therefore, the proposal was referred to Council's Cultural Heritage Officer and the Tasmanian Heritage Council.

  Due to the proposal involving no physical works, these officers provided notice that the proposal does not require assessment on heritage grounds.
- 4.2 The site was recently subdivided, in accordance with planning approval PLN-20-780. The subdivision approved access to the subject site, 343 Park Street, off Bishop Street.

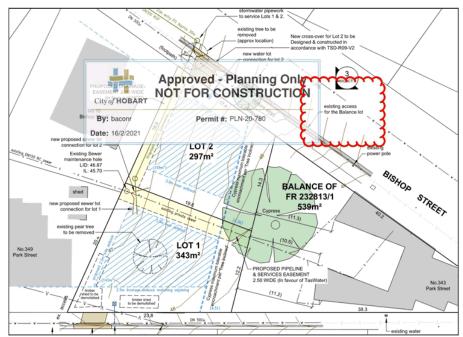


Figure 3: The approved plan of subdivision, showing the approved access to 343 Park Street off Bishop Street.



Figure 4: Google Streetview image showing the access to 343 Park Street.

#### 5. Concerns raised by representors

5.1 Seven (7) representations objecting to the proposal were received within the statutory advertising period between 29 August 2022 and 12 September 2022.

- 5.2 Six out of the seven representations are based on a pro-forma response.
- 5.3 The following table outlines the concerns raised in the representations received. Those concerns which relate to a discretion invoked by the proposal are addressed in Section 6 of this report.

The change of use to a four bedroom dwelling could result in up to 10 visitors staying per night, with frequent changes of persons occupying the property. This type of use is quite different to that ordinarily associated with the existing residential use, and contrary to the amenity of the residential area.

[Planner's note: see assessment against performance criterion in section 6.7 of this report.]

The four bedroom house may on occasions be used as a 'party house' with no concern for nearby residents.

[Planner's note: see assessment against performance criterion in section 6.7 of this report.]

We believe that the area is best suited to residential housing.

[Planner's note: whilst it is acknowledged housing affordability and housing supply shortages are an important issue, these concerns cannot be considered as part of this planning assessment as Planning Directive No.6 does not include these matters as a relevant assessment criteria.]

Having regard to the likely increase in noise to adjoining properties, the proposal is not compatible with the character and use of the area and will cause an unreasonable loss of amenity, contrary to clause 3.1(e) P1 of Planning Directive No.6.

[Planner's note: see assessment against performance criterion in section 6.7 of this report.]

We understand that the proposal does not include a parking space. We also understand there to be traffic and parking issues in the area. For example, the site is next to a busy intersection between Bishop, Gowrie, and Park Street; there are bus stops on both sides of Part Street; there is a nearby primary school and hockey centre; the area is frequented by learner drivers with driving instructors, and there are adjoining vacant lots likely to be developed in the future. The proposal will exacerbate these traffic and parking issues and will cause an unreasonable loss of residential amenity having regard to the impact on the safety and efficiency of the local road network, contrary to clause 3.1(e) P1 of Planning Directive No.6.

[Planner's note: one onsite parking space is proposed. The proposal meets all relevant acceptable solution requirements under the Parking and Access Code. The Road and Railway Assets Code is not applicable. See assessment against performance criterion in section 6.7 of this report.]

The proposal is contrary to the zone purpose statement in clause 11.1.1 of the Hobart Interim Planning Scheme as it does not provide for compatible non-residential use that primarily serves the local community.

[Planner's note: the zone purpose statements are a relevant consideration to discretionary use pursuant to clause 8.10.2 of the Hobart Interim Planning Scheme 2015. However, the zone purpose statements are not a relevant consideration in this planning assessment because the proposed visitor accommodation use is a permitted use pursuant to clause 3.1(c) of Planning Directive No.6.]

#### 6. Assessment

- 6.1 The Hobart Interim Planning Scheme 2015 is a performance based planning scheme. To meet an applicable standard, a proposal must demonstrate compliance with either an acceptable solution or a performance criterion. Where a proposal complies with a standard by relying on one or more performance criteria, the Council may approve or refuse the proposal on that basis. The ability to approve or refuse the proposal relates only to the performance criteria relied on.
- 6.2 The site is located within the Inner Residential Zone of the *Hobart Interim Planning* Scheme 2015.

- 6.3 The existing use is residential. The proposed use is visitor accommodation. The existing use is a no permit required use in the zone. The proposed use is a permitted use in the zone.
- 6.4 The proposal has been assessed against:
  - 6.4.1 Part D 11 Inner Residential Zone / Planning Directive No.6 Exemption and Standards for Visitor Accommodation in Planing Schemes
  - 6.4.2 E6.0 Parking and Access Code
- The proposal relies on the following performance criteria to comply with the applicable standards:
  - 6.5.1 Planning Directive No.6 Exemption and Standards for Visitor Accommodation in Planning Schemes:

Floor Area of Visitor Accommodation - 3.1(e) P1

- 6.6 Each performance criterion is assessed below.
- 6.7 Floor Area of Visitor Accommodation 3.1(e) P1
  - 6.7.1 The acceptable solution at clause 3.1(e) A1 requires the change of use to be not more than 200m<sup>2</sup> gross floor area.
  - 6.7.2 The proposal includes change of use to a dwelling with a gross floor area more than 200m<sup>2</sup>.
  - 6.7.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
  - 6.7.4 The performance criterion at clause 3.1(e) P1 provides as follows:

Visitor Accommodation must be compatible with the character and use of the area and not cause an unreasonable loss of residential amenity, having regard to:

- (a) the privacy of adjoining properties;
- (b) any likely increase in noise to adjoining properties;

- (c) the scale of the use and its compatibility with the surrounding character and uses within the area:
- (d) retaining the primary residential function of an area;
- (e) the impact on the safety and efficiency of the local road network; and
- (f) any impact on the owners and users rights of way.
- 6.7.5 The objectives of the visitor accommodation provisions are to ensure that visitor accommodation is compatible with the character and use of the area, and that it does not cause an unreasonable loss of residential amenity. This assessment is to have regard to privacy, noise, scale and compatibility, residential function, impact on local roads, and impact on rights of way.

#### **Privacy**

The site is bound by local roads to the east, west and south, and is adjoining vacant land under the same ownership as the site to the north. As such, the site and neighbouring properties are afforded a reasonable amount of privacy. That is, the separation distance between the site and nearest residential dwelling is greater than most separation distances between dwellings that characterise the area.

### Noise

Generally speaking, visitor accommodation use has the potential to generate noise impacts that are not dissimilar to residential use. Most noise generated from residential and visitor accommodation use occurs inside buildings and is largely not discernible to neighbours (e.g. conversations). However, there are circumstances, such as parties involving loud speakers, with the potential to generate noise impacts. This potential is theoretically greater in larger visitor accommodation properties with more guests. Therefore, a condition is recommended for the implementation of a visitor accommodation management plan, which must ensure that any excessive noise is managed appropriately. This includes a restriction to prohibit parties, and a restriction limit guest numbers to a maximum of 8.

### Scale and compatibility

The surrounding area is characterised as an inner residential suburb, with a mix of single and multiple dwellings, and interspersed with non-residential use in buildings with heritage character. That is, uses other than residential exist in the area, including hotel industry and visitor accommodation (e.g. Maylands Lodge).

With respect to compatibility with the character and use in the area, compatibility exists if the proposal is in harmony or broad correspondence with the existing uses that characterise the area. As there is existing non-residential use in the area, including visitor accommodation and hotel industry use, and given that the nature of visitor accommodation use is not dissimilar to residential use, the proposed use is considered to be compatible with the character and use of the area.

With respect to scale, the proposal is also in keeping with other nonresidential use in the area. For example, Maylands Lodge at 40 Swanston Street, which includes many hotel rooms in a larger heritage character building with curtilage to adjoining buildings.

#### Residential function

The primary residential function of the surrounding area will not be impacted by the proposal. The large majority of buildings will remain as residential use.

### Impact on local roads and rights of way

The proposal meets acceptable solution requirements for parking under the Parking and Access Code. Specifically, the site allows for onsite parking of vehicles and does not rely on any street parking. The driveway crossover to the onsite parking area is far as practically possible from the intersection of Bishop Street, Park Street and Gowrie Street. Therefore, the safety and efficiency of the local road network will not be compromised to an extent that would result in an unreasonable loss of residential amenity. There are no rights of way of relevance to the proposal.

In summary, the proposal is compatible with the character and use of the area and will not cause an unreasonable loss of residential amenity, subject to the implementation of a visitor accommodation management plan. Whilst it is acknowledged housing affordability and housing supply shortages are important issues, these concerns cannot be considered as part of this planning assessment as Planning Directive No.6 does not

include these matters as a relevant assessment criteria. The zone purpose statements also cannot be considered as part of this planning assessment because visitor accommodation is a permitted use in the zone.

6.7.6 The proposal complies with the performance criterion.

### 7. Discussion

- 7.1 Planning approval is sought for Change of Use to Visitor Accommodation at 343 Park Street, New Town.
- 7.2 The application was advertised and received seven representations (six proforma). The representations raised concerns including use, character, amenity, traffic and parking.
- 7.3 The proposal has been assessed against the relevant provisions of the planning scheme and is considered to perform well.
- 7.4 The application has been referred to Council's Cultural Heritage Officer, who have determined that no assessment against the Historic Heritage Code is required.
- 7.5 The application has been referred to the Tasmanian Heritage Council, who have provided a notice that the THC has no interests in determining the proposal.
- 7.6 The proposal is recommended for approval.

### 8. Conclusion

The proposed Change of Use to Visitor Accommodation at 343 Park Street, New Town, satisfies the relevant provisions of the *Hobart Interim Planning Scheme* 2015, and as such is recommended for approval.

#### 9. Recommendations

That:

Pursuant to the *Hobart Interim Planning Scheme 2015*, the Council approve the application for Change of Use to Visitor Accommodation at 343 Park Street, New Town, for the reasons outlined in the officer's report and a permit containing the following conditions be issued:

### GEN

The use and/or development must be substantially in accordance with the documents and drawings that comprise PLN-22-537 - 343 PARK STREET NEW TOWN TAS 7008 - Final Planning Documents, except where modified below.

Reason for condition

To clarify the scope of the permit.

#### **PLN 18**

Prior to the commencement of the approved use, a management plan for the operation of the visitor accommodation must be submitted and approved as a Condition Endorsement, to the satisfaction of the Council's Director City Life. The management plan must include measures to limit, manage and mitigate unreasonable impacts upon the amenity of long term residents. These measures must include, but are not limited to, the following requirements:

- To limit, manage, and mitigate noise generated as a result of the visitor accommodation; Parties must be prohibited.
- 2. To limit, manage, and mitigate behaviour issues caused as a result of the visitor accommodation.
- To maintain the security of the building where the visitor accommodation would be located, including managing and/or limiting access to shared areas and facilities.
- 4. To specify the maximum permitted occupancy of the visitor accommodation is not more than 8 guests.
- 5. To specify that guests must utilise the site for the parking of vehicles, and that the recommended maximum number of vehicles to be parked on the site is one (1), and detail where the parking spaces are located and how the spaces are to be accessed. Additionally, at the booking stage, guests should be discouraged from bringing more than 1 vehicle and the parking of any additional vehicles in nearby streets should also be discouraged.

To provide a name and contact phone number of a person who will
respond to any complaints regarding behaviour of guests. If the
property is sold the Visitor Accommodation Management Plan (VAMP)
must be updated with new contact details.

Once approved, the management plan must be implemented prior to the commencement of the approved use and must be maintained for as long as the visitor accommodation is in operation. The VAMP must be provided to adjacent property owners and occupiers within 14 days of being approved. If the property is sold, the updated VAMP (in accordance with 6. above) must be provided to adjacent property owners and occupiers within 10 business days of settlement.

Advice:

This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

Reason for condition

To ensure that visitor accommodation does not cause an unreasonable loss of residential amenity.

### PLN s1

This planning permit enables the whole property to be rented out as a single visitor accommodation booking. Individual rooms must not be rented out as separate visitor accommodation bookings.

Reason for condition

To clarify the scope of the permit.

#### **ADVICE**

The following advice is provided to you to assist in the implementation of the planning permit that has been issued subject to the conditions above. The advice is not exhaustive and you must inform yourself of any other legislation, by-laws, regulations, codes or standards that will apply to your development under which you may need to obtain an approval. Visit the Council's website for further information.

Prior to any commencement of work on the site or commencement of use the following additional permits/approval may be required from the Hobart City Council.

### CONDITION ENDORSEMENT

If any condition requires that further documents are submitted and approved, you will need to submit the relevant documentation to satisfy the condition via the Condition Endorsement Submission on Council's online services e-planning portal. Detailed instructions can be found here.

Once approved, the Council will respond to you via email that the condition has been endorsed (satisfied).

Where building approval is also required, it is recommended that documentation for condition endorsement be submitted well before submitting documentation for building approval. Failure to address condition endorsement requirements prior to submitting for building approval may result in unexpected delays.

#### **NOISE REGULATIONS**

Click here for information with respect to noise nuisances in residential areas.

#### VISITOR ACCOMMODATION

More information on visitor accommodation, including when building approval is required, can be found here.

In all cases, check with your insurance company that you have adequate cover.

If you are in a bushfire prone area there may be a need to create/review the Bushfire Management Hazard Plan for your property.

If you have a spa or a pool at your property then you are required to test for microbiological quality and chemical parameters on a monthly basis, under the *Public Health Act 1997*. If you have any questions about this then please call our Environmental Health team on 6238 2711.

If you are providing food for consumption on the property, you may require a food business registration in accordance with the *Food Act 2003*. Click here for more information, or call our Environmental Health team on 6238 2711.

You are encouraged to have in place a management plan for the operation of the visitor accommodation. The management plan should include measures to limit, manage and mitigate unreasonable impacts upon the amenity of permanent residents, including addressing issues like noise, waste management, customer behaviour, security, and maximum occupancy.

Item No. 7.1.8

# Agenda (Open Portion) City Planning Committee Meeting - 19/9/2022

Visitor accommodation is also considered to be a commercial use and also not eligible to residential parking permits. Under the current policy for the issuing of residential parking permits, the proposed change of use to visitor accommodation would not entitle the property to a residential parking permit, or a transferable "bed and breakfast" parking permit.

Item No. 7.1.8

# Agenda (Open Portion) City Planning Committee Meeting - 19/9/2022

(Mark O'Brien)

As signatory to this report, I certify that, pursuant to Section 55(1) of the Local Government Act 1993, I hold no interest, as referred to in Section 49 of the Local Government Act 1993, in matters contained in this report.

(Ben Ikin)

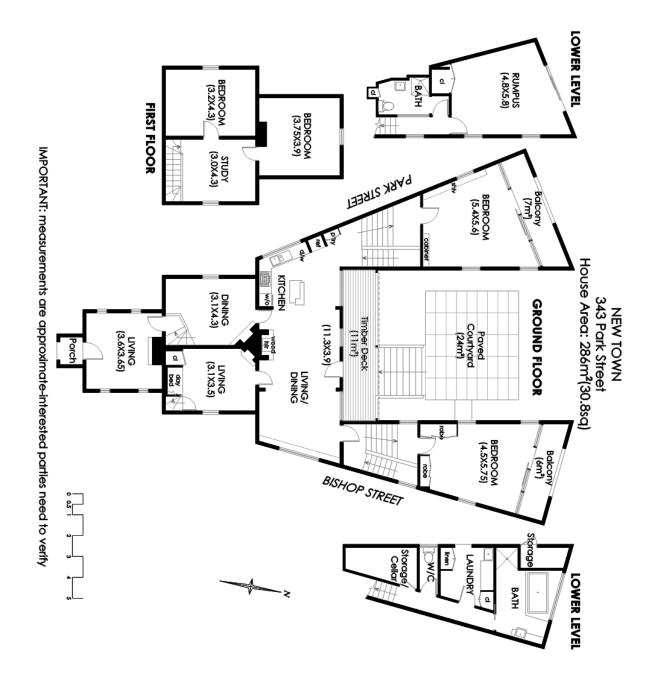
**Senior Statutory Planner** 

As signatory to this report, I certify that, pursuant to Section 55(1) of the Local Government Act 1993, I hold no interest, as referred to in Section 49 of the Local Government Act 1993, in matters contained in this report.

Date of Report: 13 September 2022

Attachment(s):

Attachment B - CPC Agenda Documents



### **BUILDING SELF-ASSESSMENT FORM**

# Director's Determination – Short or Medium Term Visitor Accommodation Section 20(1)(e) of Building Act 2016

This building self-assessment form must be completed in the following situations where the property is used or intended to be used for visitor accommodation, and a fee is being charged for such use:

- > owner occupiers of residential premises of more than four bookable rooms, or
- investment properties or shacks (not occupied by the owner) that have a gross floor area of not more than 200m² per lot used for visitor accommodation.

The completed form must be lodged with the relevant Permit Authority.

If any premises intended to be let for short-term visitor accommodation is a lot in a strata title scheme, and any other premises in that scheme are occupied as a residence by long term residents, the proponent is not permitted to use the building self-assessment process, unless the premises is located within Activity Area 1.0 Inner City Residential (Wapping) under the Sullivans Cove Planning Scheme

To:	HOBART CITT COM	UCZ L PG	rmit Authority	
	4 PU BOX 503		dress	
	HOBALT	7001 Su	burb/postcod	e
Owner / Occupie	er details:			
(Only an owner or occupies	r may complete this form)			
Owner / Occupier: (Delete one not applicable)	Ting Yue			
Postal Address:	30 Harvey Pla	ee	Phone No:	0433 996 60
	Calamvale all	4116		
Email address:	troy yue en	iet. edu	. 24	
Address of Prop Accommodation	perty used or intended to be	used for Visit	or	
Street Address:	343 Park S	+ New	utou	· n
Certificate of Title Reference No.	3/182 875			
Owner / Occupie	er Declaration:			
I/we, as the owner / building requirement	occupier of the property, declar	e that the propert	y meets th	ne following minimum
	Name: [print]	Signe	d	Date
Owner/Occupier: (Delete one not applicable)	Troy Yue	Fe	7º	17/08/22

**Building Self-assessment Form** 

1 of 3

Director's Determination - Short or Medium Term Visitor Accommodation

Occupan	ncy Permit:	
(Must tick one)		
The owner of	or occupier is to declare that –	
(a)		I, the premises is fit for occupation consistent with of occupants stated on the permit will not be
OR		
<b>X</b> (b)	an occupancy permit or occupancy cert constructed / altered before 1994).	ificate was not required (as the premises was
Plumbin	g:	
	or (b) and (c) or (d))	
	or occupier is to declare that –	
OR (a)	the premises is connected to a reticulat	ed sewerage system;
(b)	the premises is connected to an on-site	wastewater management system that:
	<ul> <li>is in good working order and will be was designed; and</li> </ul>	maintained to perform to the same standard as it
	<ul> <li>has a land application distribution as condition; and</li> </ul>	rea designed, installed and in good serviceable
	<ul> <li>the maximum number of occupants exceeded; and</li> </ul>	of the premises the system is designed for is not
	there is a maintenance contract in p	lace for the servicing of the system.
(c)	the premises is connected to a reticulat	
. ,	the premises is connected to a reticular	ed dilliking water supply system,
OR		
(d)	a private drinking water supply (including premises that meets the requirements of	ng from a tank, well, dam, etc.) is provided for the of the <i>Public Health Act 1997</i> .
Essentia	l Building Services:	
(Must tick one)		
The owner of	or occupier is to declare that -	
(a)	maintenance, and fire safety features a	the premises has an approved schedule of re maintained in accordance with Part 7 egulations 2016 and the Director's Maintenance of Determination;
(b)		approved essential maintenance schedule, but talled and maintained in accordance with
		interconnected where there is more than one
	(a) if any storey of the premises contai     (i) installed in every corridor, or I     with a bedroom; and	ns a bedroom – nallway, situated in the storey, that is associated
ling Self-asses	sment Form	2 of 3

- (ii) if there is no corridor, or hallway, situated in the storey, that is associated with a bedroom, between that part of the premises containing the bedroom and the remainder of the premises; and
- (b) in any other storey of the premises that does not contain a bedroom.
- If multistorey premises are let for visitor accommodation:
  - i. emergency evacuation lighting is provided; and
  - ii. exits are provided that are clearly marked and mapped for the visitor.

Planning: #262848	
Property	
343 PARK STREET NEW TOWN TAS 700	98
People	
Applicant *	Ting Yue 30 Harvey Place Calamvale QLD 4116 0433 996 609 troy.yue@niet.edu.au
O	
Owner *	Joel Winter 343 Park Street NEWTOWN TAS 7008 0409 609 127 joelwinterhome@gmail.com
[- ·	
Owner *	Teresa Dryza 343 Park Street NEWTOWN TAS 7008 0409 609 127 weeklydryza@gmail.com
Entered By	MATTHEW JOHN BARNARD 0411 885 627 matt@hostinghobart.com.au
Jse	
Visitor accomodation	
Details	<u> </u>
Have you obtained pre application adv	vice?
◎ No	
If YES please provide the pre applicati	on advice number eg PAE-17-xx
Are you applying for permitted visitor standards? Click on help information l	accommodation as defined by the State Government Visitor Accommodation button for definition. *
⊚ No	
Is the application for SIGNAGE ONLY?	If yes, please enter \$0 in the cost of development, and you must enter the

number of signs under Other	Details below	ow. *		
◎ No				
If this application is related t	o an enforcer	ement action please enter l	Enforcement Number	
Details				
What is the current approved	use of the la	and / building(s)? *		
Residential use				
Please provide a full descrip pool and garage) *	tion of the pro	roposed use or developme	nt (i.e. demolition and new dwe	lling, swimming
Change of use to visitor ac	commodation	n		
Estimated cost of developme	nt *			
1000.00				
Existing floor area (m2)		Proposed floor area (m2)	<u> </u>	
286.00		286.00		
Site area (m2)				
530				
Total parking spaces	Existing 1	g parking spaces	N/A  N/A  Other (no selection chosen)	
Other Details				
Does the application include No  No  How many signs, please ent this application?		are none involved in		
Tasmania Heritage Regil Is this property on the Tasma		ge Register?		
- Countries				
Required Documents				
Title (Folio text and Plan and 3 Schedule of Easements) *	43 PARK ST -	-TITLE.pdf		
Plans (proposed, existing) * F	ARK ST 343 F	Plan.pdf		
Building self assessment 3 Form permitted visitor	43 Park Buildir	ing Self Assesment form Sigr	ned.pdf	

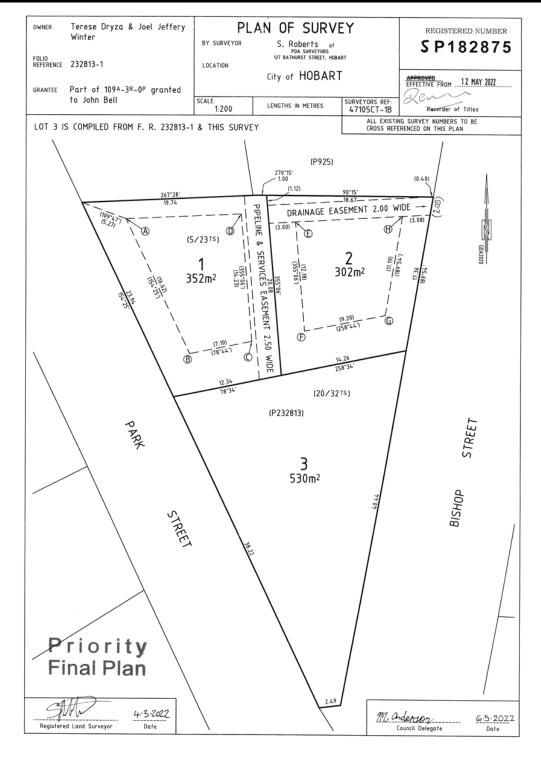


### **FOLIO PLAN**

RECORDER OF TITLES



Issued Pursuant to the Land Titles Act 1980



Search Date: 23 Aug 2022

Search Time: 01:18 PM

Volume Number: 182875

Revision Number: 01

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### **RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



#### SEARCH OF TORRENS TITLE

VOLUME	FOLIO
182875	3
EDITION	DATE OF ISSUE
1	12-May-2022

SEARCH DATE : 23-Aug-2022 SEARCH TIME : 01.16 PM

### DESCRIPTION OF LAND

City of HOBART Lot 3 on Sealed Plan 182875

Derivation: Part of 109A-3R-0P Gtd. to John Bell

Prior CT 232813/1

### SCHEDULE 1

C741491 TRANSFER to TERESE DRYZA and JOEL JEFFERY WINTER Registered 23-Apr-2007 at 12.01 PM  $\,$ 

### SCHEDULE 2

Reservations and conditions in the Crown Grant if any SP182875 FENCING COVENANT in Schedule of Easements

### UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations



### SCHEDULE OF EASEMENTS

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



### SCHEDULE OF EASEMENTS

NOTE: THE SCHEDULE MUST BE SIGNED BY THE OWNERS & MORTGAGEES OF THE LAND AFFECTED.
SIGNATURES MUST BE ATTESTED.

SP182875

Registered Number

PAGE 1 OF 5 PAGE/S

### **EASEMENTS AND PROFITS**

Each lot on the plan is together with:-

- (1) such rights of drainage over the drainage easements shown on the plan (if any) as may be necessary to drain the stormwater and other surplus water from such lot; and
- (2) any easements or profits a prendre described hereunder.

Each lot on the plan is subject to:-

- (1) such rights of drainage over the drainage easements shown on the plan (if any) as passing through such lot as may be necessary to drain the stormwater and other surplus water from any other lot on the plan; and
- (2) any easements or profits a prendre described hereunder.

The direction of the flow of water through the drainage easements shown on the plan is indicated by arrows.

Lot 1 is subject to a PIPELINE AND SERVICES EASEMENT in gross in favour of the Tasmanian Water and Sewerage Corporation Pty Ltd, it successors and assigns ("TasWater") over the land marked "Pipeline and Services Easement 2.50 wide" shown on the Plan ("the Easement Land").

Lot 2 is subject to a Right of Drainage over that part marked as "Drainage Easement 2.00 wide" in favour of the Hobart City Council and Lot 1.

Lot 1 is together with a Right of Drainage over that part of Lot 2 marked "Drainage Easement 2.00 wide".

(USE ANNEXURE PAGES FOR CONTINUATION)

FOR CONTINUATION)

SECULTION TO SUCCIONAL SOLUTION SOL

DATE: 6.5.2022

SUB · 22 · 2

REF NO.

NO. Council Delegate

M. aderson

NOTE: The Council Delegate must sign the Certificate for the purposes of identification.

Search Date: 23 Aug 2022

Search Time: 01:16 PM

SUBDIVIDER: Terese Dryza and Joel Jeffery Winter

& REFERENCE: Mr William C Justo:LAM:066591

Volume Number: 182875

Revision Number: 01

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FOLIO REF: 232813/1

SOLICITOR



### SCHEDULE OF EASEMENTS

RECORDER OF TITLES

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SP182875

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PAGE AOF 5 PAGES Vol. 169491 Fol. 1

#### Covenants

The owners of each lot on the Plan covenant with the Vendors, Terese Dryza and Joel Jeffery Winter, that the Vendor shall not be required to fence.

The owner of Lot 1 on the Plan hereby covenants with the Hobart City Council to the intent that the burden of this covenant may run with and bind the covenantor's lot and every part thereof and that the benefit therefore may be annexed and devolve with each and every part to observe the following stipulation:

 Not to build outside of the envelope marked "ABCDA" and not to allow any building to be constructed to a height of over 7.0 meters above ground level.

The owner of Lot 2 on the Plan hereby covenants with the Hobart City Council to the intent that the burden of this covenant may run with and bind the covenantor's lot and every part thereof and that the benefit therefore may be annexed and devolve with each and every part to observe the following stipulation:

 Not to build outside of the envelope marked "EFGHE" and not to allow any building to be constructed to a height of over 7.0 meters above ground level.

### **Definitions**

"PIPELINE AND SERVICES EASEMENT" is defined as follows:-

THE FULL RIGHT AND LIBERTY for TasWater at all times to:

- enter and remain upon the Easement Land with or without employees, contractors, agents and all other persons duly authorised by it and with or without machinery, vehicles, plant and equipment;
- (2) investigate, take soil, rock and other samples, survey, open and break up and excavate the Easement Land for any purpose or activity that TasWater is authorised to do or undertake;

NOTE:- Every annexed page shall be signed by the parties to the dealing, or where the party is a corporate body, be signed by the persons who have attested the affixing of the seal of that body to the dealing.

Version 1

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### SCHEDULE OF EASEMENTS

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- (3) install, retain, operate, modify, relocate, maintain, inspect, cleanse and repair the Infrastructure;
- (4) remove and replace the Infrastructure;
- run and pass sewage, water and electricity through and along the Infrastructure;
- (6) do all works reasonably required in connection with such activities or as may be authorised or required by any law:
  - (i) without doing unnecessary damage to the Easement Land; and
  - (ii) leaving the Easement Land in a clean and tidy condition; and
- (7) if the Easement Land is not directly accessible from a highway, then for the purpose of undertaking any of the preceding activities TasWater may with or without employees, contractors, agents and all other persons authorised by it, and with or without machinery, vehicles, plant and equipment enter the Lot from the highway at any then existing vehicle entry and cross the Lot to the Easement Land; and
- (8) use the Easement Land as a right of carriageway for the purpose of undertaking any of the preceding purposes on other land, TasWater reinstating any damage that it causes in doing so to any boundary fence of the Lot.

### PROVIDED ALWAYS THAT:

- (1) The registered proprietors of the Lot in the folio of the Register ("the Owner") must not without the written consent of TasWater first had and obtained and only in compliance with any conditions which form the consent:
  - alter, excavate, plough, drill or otherwise penetrate the ground level of the Easement Land;
  - (b) install, erect or plant any building, structure, fence, pit, well, footing, pipeline, paving, tree, shrub or other object on or in the Easement Land;
  - remove any thing that supports, protects or covers any Infrastructure on or in the Easement Land;
  - (d) do anything which will or might damage or contribute to damage to any of the Infrastructure on or in the Easement Land;
  - in any way prevent or interfere with the proper exercise and benefit of the Easement Land by TasWater or its employees, contractors, agents and all other persons duly authorised by it; or

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### SCHEDULE OF EASEMENTS

RECORDER OF TITLES

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SP182875

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- permit or allow any action which the Owner must not do or acquiesce in that action.
- TasWater is not required to fence any part of the Easement Land. (2)
- The Owner may erect a fence across the Easement Land at the boundaries of the Lot. (3)
- The Owner may erect a gate across any part of the Easement Land subject to these conditions:
  - the Owner must provide TasWater with a key to any lock which would prevent the (a) opening of the gate; and
  - if the Owner does not provide TasWater with that key or the key provided does not (b) fit the lock, TasWater may cut the lock from the gate.
- If the Owner causes damage to any of the Infrastructure, the Owner is liable for the (5)actual cost to TasWater of the repair of the Infrastructure damaged.
- If the Owner fails to comply with any of the preceding conditions, without forfeiting any right of action, damages or otherwise against the Owner, TasWater may:
  - (a) reinstate the ground level of the Easement Land; or
  - remove from the Easement Land any building, structure, pit, well, footing, pipeline, paving, tree, shrub or other object; or
  - (c) replace anything that supported, protected or covered the Infrastructure.

### Interpretation:

"Infrastructure" means infrastructure owned or for which TasWater is responsible and includes but is not limited to:

- (a) sewer pipes and water pipes and associated valves;
- telemetry and monitoring devices; (b)
- (c) inspection and access pits;
- (d) power poles and lines, electrical wires, electrical cables and other conducting media (excluding telemetry and monitoring devices);
- markers or signs indicating the location of the Easement Land, the Infrastructure or any warnings or restrictions with respect to the Easement Land or the Infrastructure:
- anything reasonably required to support, protect or cover any of the Infrastructure; (f)

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### SCHEDULE OF EASEMENTS

RECORDER OF TITLES

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SP, 182875

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- (g) any other infrastructure whether of a similar nature or not to the preceding which is reasonably required for the piping of sewage or water, or the running of electricity, through the Easement Land or monitoring or managing that activity; and
- (h) where the context permits, any part of the Infrastructure.

"Taswater" means Tasmanian Water and Sewerage Corporation Pty Limited (ACN 162 220 653).

Signed by the said **Terese Dryza** and **Joel Jeffery Winter** in the presence of:

Name:

Address: 4 MOUNT STUART RD

MOINT STUAPT 7002

Occupation: PAEDIATRICIAN

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### 8. REPORTS

8.1 City Planning - Advertising Report File Ref: F22/91515

Report of the Acting Director City Life of 14 September 2022 and attachments.

Delegation: Committee



MEMORANDUM: CITY PLANNING COMMITTEE

### **City Planning - Advertising Report**

Attached is the advertising list for the period 23 August 2022 to 5 September 2022.

### RECOMMENDATION

That the information be received and noted.

As signatory to this report, I certify that, pursuant to Section 55(1) of the Local Government Act 1993, I hold no interest, as referred to in Section 49 of the Local Government Act 1993, in matters contained in this report.

Karen Abey

**ACTING DIRECTOR CITY LIFE** 

Date: 14 September 2022

File Reference: F22/91515

Attachment A: City Planning - Advertising Report & 🖺

Application	Street	Suburb	Development	Works Value	Expiry Date	Referral	Proposed Delegation	Advertising Period Start	Advertising Period End
PLN-22-470	374 MURRAY STREET	NORTH HOBART	Extension to Operating Hours	\$0	07/09/2022	ayersh	Director	23/08/2022	06/09/2022
PLN-22-87	16 LAPOINYA ROAD AND STEPHENSON PLACE	FERN TREE	Dwelling and Ancillary Dwelling	\$880,000	13/09/2022	ayersh	Director	30/08/2022	13/09/2022
PLN-22-429	23 COMMERCIAL ROAD	NORTH HOBART	Partial Demolition, Resurfacing of Tennis Courts and Associated Works	\$50,000	30/09/2022	ayersh	Director	01/09/2022	15/09/2022
PLN-22-511	59 ATHLEEN AVENUE	LENAH VALLEY	Dwelling	\$640,000	19/09/2022	ayersh	Director	02/09/2022	16/09/2022
PLN-22-516	50 PROCTORS ROAD	DYNNYRNE	Change of Use to Single Dwelling	\$0	26/09/2022	baconr	Director	29/08/2022	12/09/2022
PLN-22-524	10 EVANS STREET	HOBART	Alterations (Reroofing)	\$400,000	03/10/2022	baconr	Director	02/09/2022	16/09/2022
PLN-22-536	48 - 50 ELPHINSTONE ROAD	MOUNT STUART	Partial Demolition, Alterations, and Ancillary Dwelling	\$45,000	04/10/2022	baconr	Director	05/09/2022	19/09/2022

Application	Street	Suburb	Development	Works Value	Expiry Date	Referral	Proposed Delegation	Advertising Period Start	Advertising Period End
PLN-22-321	90 MELVILLE STREET	HOBART	Demolition and New Building for 22 Multiple Dwellings and Business and Professional Services and Associated Works	\$11,000,000	23/09/2022	ikinb	Council (Council Land)	24/08/2022	07/09/2022
PLN-22-314	90 MELVILLE STREET	HOBART	Structural Works	\$575,000	15/09/2022	ikinb	Director	29/08/2022	12/09/2022
PLN-22-473	34 KALANG AVENUE	LENAH VALLEY	Partial Demolition, Alterations and Extension	\$400,000	25/09/2022	langd	Director	29/08/2022	12/09/2022
PLN-22-532	36 PROCTORS ROAD	DYNNYRNE	Change of Use to Visitor Accommodation	\$0	28/09/2022	langd	Council (Called In)	29/08/2022	12/09/2022
PLN-22-549		SOUTH HOBART	Partial Demolition and Alterations	\$31,000	04/10/2022	langd	Director	30/08/2022	13/09/2022
PLN-22-506	2/636 SANDY BAY ROAD AND COMMON LAND OF PARENT TITLE	SANDY BAY	Change of Use to Visitor Accommodation	\$0	03/10/2022	maxwellv	Council (Called In)	24/08/2022	07/09/2022

Application	Street	Suburb	Development	Works Value	Expiry Date	Referral	Proposed Delegation	Advertising Period Start	Advertising Period End
PLN-22-508	111 - 115 MACQUARIE STREET	HOBART	Partial Demolition and Alterations	\$3,500,000	14/09/2022	mcclenahanm	Director	24/08/2022	07/09/2022
PLN-22-439	3 ARGYLE STREET, SALAMANCA PLACE, MORRISON STREET, KENNEDY LANE, HUNTER STREET, FRANKLIN WHARF	HOBART	15 Water Supply Facilities	\$90,000	17/10/2022	mcclenahanm	Council (Council Applicant)	29/08/2022	12/09/2022
PLN-22-468	3 CURTIS AVENUE	SOUTH HOBART	Ancillary Dwelling	\$150,000	16/09/2022	mcclenahanm	Director	30/08/2022	13/09/2022
PLN-22-539	364 HUON ROAD	SOUTH HOBART	Partial Demolition, Alterations and Extension	\$20,000	28/09/2022	mcclenahanm	Director	30/08/2022	13/09/2022
PLN-22-79	331 CHURCHILL AVENUE	SANDY BAY	Dwelling	\$1,500,000	02/10/2022	mcclenahanm	Director	01/09/2022	15/09/2022

Application	Street	Suburb	Development	Works Value	Expiry Date	Referral	Proposed Delegation	Advertising Period Start	Advertising Period End
PLN-22-371	549 CHURCHILL AVENUE	SANDY BAY	Demolition, Dwelling, Front Fencing and Associated Works	\$800,000	29/09/2022	obrienm	Director	23/08/2022	06/09/2022
PLN-21-779	604 SANDY BAY ROAD	SANDY BAY	Demolition and Dwelling	\$700,000	23/09/2022	obrienm	Director	24/08/2022	07/09/2022
PLN-22-537	343 PARK STREET	NEW TOWN	Change of Use to Visitor Accommodation	\$1,000	28/09/2022	obrienm	Council (Called In)	29/08/2022	12/09/2022
PLN-22-552	20 BAYLEY STREET	GLEBE	Change of Use to Visitor Accommodation	\$0	04/10/2022	sherriffc	Council (Called In)	01/09/2022	15/09/2022
PLN-22-548	12 HAMILTON STREET	WEST HOBART	Partial Demolition, Alterations and Extension	\$100,000	03/10/2022	sherriffc	Director	02/09/2022	16/09/2022
PLN-22-146	1 QUEENS WALK	NEW TOWN	Partial Demolition, 150 Multiple Dwellings (85 Existing, 65 New), Car Parking, Landscaping including Tree Removal and Associated Works	\$20,000,000	23/09/2022	sherriffc	Council (Council Land)	05/09/2022	19/09/2022

Application	Street	Suburb	Development	Works Value	Expiry Date	Referral	Proposed Delegation	Advertising Period Start	Advertising Period End
PLN-22-534	50 - 62 SANDY BAY ROAD	BATTERY POINT	Signage	\$0	29/09/2022	sherriffc	Director	05/09/2022	19/09/2022
PLN-22-423	184 NEW TOWN ROAD	NEW TOWN	Partial Change of Use to General Retail and Hire	\$12,000	25/09/2022	smeea	Director	24/08/2022	07/09/2022
PLN-22-472	208 CHURCHILL AVENUE	SANDY BAY	Partial Demolition, Alterations, Extension and Swimming Pool	\$450,000	07/10/2022	smeea	Director	30/08/2022	13/09/2022
PLN-22-287	71 A LETITIA STREET	NORTH HOBART	29 Multiple Dwellings and Associated Works	\$6,000,000	11/10/2022	smeea	Council (Major Development)	05/09/2022	19/09/2022

# 8.2 Delegated Decision Report (Planning) File Ref: F22/93249

Report of the Acting Director City Life of 14 September 2022 and attachments.

Delegation: Committee



### **MEMORANDUM: CITY PLANNING COMMITTEE**

### **Delegated Decision Report (Planning)**

Attached is the delegated planning decisions report for the period 29 August 2022 to 9 September 2022.

### RECOMMENDATION

That the information be received and noted.

As signatory to this report, I certify that, pursuant to Section 55(1) of the Local Government Act 1993, I hold no interest, as referred to in Section 49 of the Local Government Act 1993, in matters contained in this report.

Karen Abey

**ACTING DIRECTOR CITY LIFE** 

Date: 14 September 2022

File Reference: F22/93249

Attachment A: Delegated Decision Report (Planning) 4

12 September 2022

### Delegated Decisions Report (Planning)

				Approved A
Planning Description	Address	Works Value	Decision	Authority
PLN-22-214 Carport	376 ARGYLE STREET NORTH HOBART TAS 7000	\$ 4,000	Approved	Delegated
PLN-22-24 Deck	1/4A BEN STREET WEST HOBART TAS 7000	\$ 20,000	Approved	Delegated
PLN-22-320 Dwelling	1 HATCHERY COURT WEST HOBART TAS 7000	\$ 970,000	Approved	Delegated
PLN-22-384 Subdivision (One Additional Lot) and Two Multiple Dwellings (One Existing, One New)	48 STRICKLAND AVENUE SOUTH HOBART TAS 7004	\$ 0	Approved	Delegated
PLN-22-422 Partial Demolition, Alterations, and Extension	8 WEEMALA COURT MOUNT NELSON TAS 7007	\$ 180,000	Approved	Delegated
PLN-22-431 Dwelling	221A CHAUCER ROAD LENAH VALLEY TAS 7008 (CT 181061/23)	\$ 360,000	Approved	Delegated
PLN-22-440 Partial Demolition, Alterations, and Extension	13 THELMA DRIVE WEST HOBART TAS 7000	\$ 90,000	Approved	Delegated
PLN-22-447 Partial Change of Use to Visitor Accommodation	374 MURRAY STREET NORTH HOBART TAS 7000	\$ 60,000	Approved	Delegated
PLN-22-453 Partial Demolition, Alterations, and Extension	1 SHORT STREET GLEBE TAS 7000	\$ 250,000	Approved	Delegated
PLN-22-454 Partial Demolition, Alterations, and Extension	42 QUEEN STREET SANDY BAY TAS 7005	\$ 200,000	Approved	Delegated
PLN-22-460 Change of Use to Visitor Accommodation	137 DAVEY STREET HOBART TAS 7000	\$ 15,000	Approved	Delegated
PLN-22-463 Change of Use to Visitor Accommodation	2/42 GOULBURN STREET HOBART TAS 7000	\$ 0	Approved	Delegated
PLN-22-476 Partial Demolition, Alterations, and Extension	57 RUTH DRIVE LENAH VALLEY TAS 7008	\$ 300,000	Approved	Delegated
PLN-22-487 Partial Demolition and Alterations	208 COLLINS STREET HOBART TAS 7000	\$ 16,000	Approved	Delegated
PLN-22-490 Partial Demolition, Alterations, and Extension	3 ANDREW STREET NORTH HOBART TAS 7000	\$ 300,000	Approved	Delegated
PLN-22-492 Extension to Operating Hours	189 ELIZABETH STREET HOBART TAS 7000	\$ 0	Approved	Delegated
PLN-22-494 Partial Demolition, Alterations, and Extension	677 SANDY BAY ROAD SANDY BAY TAS 7005	\$ 180,000	Approved	Delegated
PLN-22-498 Front Fencing	39 KELLY STREET BATTERY POINT TAS 7004	\$ 12,000	Approved	Delegated
PLN-22-513 Partial Demolition, Alterations & Front Fencing	196 MELVILLE STREET WEST HOBART TAS 7000	\$ 45,000	Approved	Delegated
PLN-22-526 Outbuilding	10 DAVID AVENUE SANDY BAY TAS 7005	\$ 40,000	Approved	Delegated
PLN-22-566 Change of Use to Visitor Accommodation	28 LOUDEN STREET SOUTH HOBART TAS 7004	\$ 0	Approved	Delegated
PLN-22-576 Change of Use to Visitor Accommodation	12 COMMERCIAL ROAD NORTH HOBART TAS 7000	\$ 0	Approved	Delegated
PLN-22-81 Subdivision (Consolidation of Titles)	574 SANDY BAY ROAD SANDY BAY TAS 7005	\$ 0	Approved	Delegated

### 9. RESPONSES TO QUESTIONS WITHOUT NOTICE

Regulation 29(3) Local Government (Meeting Procedures) Regulations 2015.

File Ref: 13-1-10

### The Chief Executive Officer reports:-

"In accordance with the procedures approved in respect to Questions Without Notice, the following responses to questions taken on notice are provided to the Committee for information.

The Committee is reminded that in accordance with Regulation 29(3) of the Local Government (Meeting Procedures) Regulations 2015, the Chairman is not to allow discussion or debate on either the question or the response."

# 9.1 Hobart Smoke Free Project File Ref: F22/86188; 13-1-10

Report of the Director Connected City of 19 September 2022.

# 9.2 Short Stay Accommodation Applications File Ref: F22/39460; 13-1-10

Report of the Director City Life of 19 September 2022.

That the information be received and noted.

Delegation: Committee



MEMORANDUM: LORD MAYOR

DEPUTY LORD MAYOR ELECTED MEMBERS

### HOBART SMOKE FREE PROJECT

Meeting: City Planning Committee Meeting date: 22 August 2022

Raised by: Councillor Coats

Question:

Can the Director advise of the current status of the Hobart Smoke Free Project?

### Response:

The City's Executive Leadership Team (ELT) resolved to continue resourcing the Smoke-free Hobart initiative for another 12 months commencing August 2022. Resourcing is committed for a full time Smoking Education Officer working normal business hours. The budget for the Smoke-free Hobart initiative includes an allowance for signage maintenance.

Over the coming 12 months ELT intends to explore options for the interface between the public and the City's on-ground staff, with a view to deciding on a model for the City into the future. Part of this review will be to examine the feasibility or otherwise of declaring additional areas of the municipality smoke-free.

As signatory to this report, I certify that, pursuant to Section 55(1) of the Local Government Act 1993, I hold no interest, as referred to in Section 49 of the Local Government Act 1993, in matters contained in this report.

Jacqui Allen

**DIRECTOR CONNECTED CITY** 

Date: 6 September 2022 File Reference: F22/86188; 13-1-10



MEMORANDUM: LORD MAYOR

DEPUTY LORD MAYOR ELECTED MEMBERS

### SHORT STAY ACCOMMODATION APPLICATIONS

Meeting: City Planning Committee Meeting date: 26 April 2022

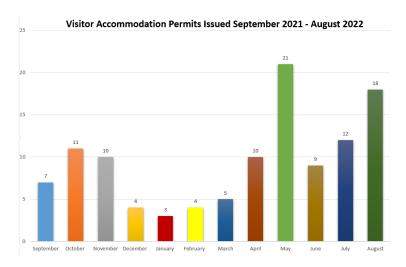
Raised by: Councillor Harvey

### Question:

Can the Director advise if there has been a noticeable spike in the number of Short Stay Accommodation Applications since the Council resolution of 28 March 2022?

### Response:

From September 2021 to March 2022, the Council received an average of 6 applications per month, since April, this average has increased to 14 applications per month, with large increases in May and August 2022.



As signatory to this report, I certify that, pursuant to Section 55(1) of the Local Government Act 1993, I hold no interest, as referred to in Section 49 of the Local Government Act 1993, in matters contained in this report.

Neil Noye

**DIRECTOR CITY LIFE** 

Date: 13 September 2022 File Reference: F22/39460; 13-1-10

### 10. CLOSED PORTION OF THE MEETING

That the Committee resolve by majority that the meeting be closed to the public pursuant to regulation 15(1) of the *Local Government (Meeting Procedures)*Regulations 2015 because the items included on the closed agenda contain the following matters:

- Minutes of a closed meeting
- Matters relating to an appeal

The following items were discussed: -

Item No. 1	Minutes of the last meeting of the Closed Portion of the Committee Meeting
Item No. 2	Consideration of supplementary items to the agenda
Item No. 3	Indications of pecuniary and conflicts of interest
Item No. 4	Planning Authority Items – Consideration of Items with
	Deputations
Item No. 5	City Acting as Planning Authority
Item No. 6	Reports
Item No. 6.1	Planning Authority Decisions Subject to Appeal before the
	Tasmanian Civil and Administrative Tribunal - Monthly Update
	LG(MP)R 15(4)(a)
Item No. 6.1	Applications under the Hobart Interim Planning Scheme 2015
Item No. 6.1.1	PLN-22-328 - 18 Grosvenor Street, Sandy Bay - Appeal
	LG(MP)R 15(4)(a)
Item No. 7	Questions Without Notice