



# CITY OF HOBART

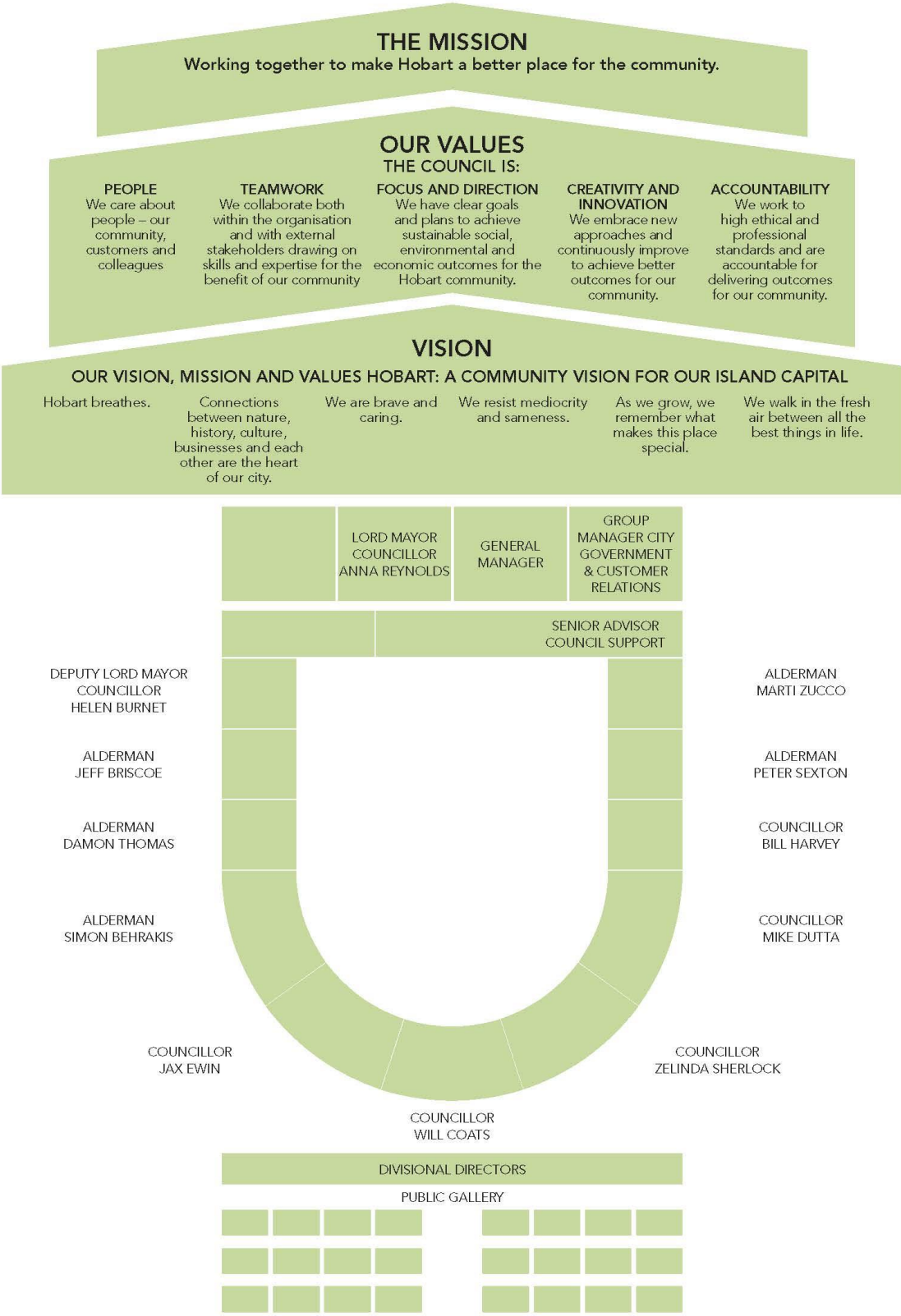
## AGENDA

OPEN PORTION OF THE SPECIAL COUNCIL MEETING

MONDAY, 18 MAY 2020

AT 5:00M







---

## **ORDER OF BUSINESS**

---

### **APOLOGIES AND LEAVE OF ABSENCE**

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

### **CITY PLANNING**

#### **2. COUNCIL ACTING AS PLANNING AUTHORITY ..... 5**

- 2.1 90 Melville Street, 127 Bathurst Street and Adjacent Road Reserve, Hobart - Demolition and New Building for 55 Multiple Dwellings, Food Services, Business and Professional Services, General Retail and Hire and Associated Works within the Adjacent Road Reserve ..... 5

#### **3. Major Projects Bill ..... 393**

**A SPECIAL MEETING OF THE OPEN PORTION OF THE COUNCIL WILL BE  
HELD ON MONDAY, 18 MAY 2020 AT 5:00PM.**

**N D Heath  
General Manager**

This meeting of the Council is held in accordance with a Notice issued by the Premier on 3 April 2020 under section 18 of the *COVID-19 Disease Emergency (Miscellaneous Provisions) Act 2020*.

**ELECTED MEMBERS:**

Lord Mayor A M Reynolds  
Deputy Lord Mayor H Burnet  
Alderman M Zucco  
Alderman J R Briscoe  
Alderman Dr P T Sexton  
Alderman D C Thomas  
Councillor W F Harvey  
Alderman S Behrakis  
Councillor M S C Dutta  
Councillor J Ewin  
Councillor Z E Sherlock  
Councillor W N S Coats

**APOLOGIES:**

**LEAVE OF ABSENCE:** Nil.

**1. INDICATIONS OF PECUNIARY AND CONFLICTS OF INTEREST**

---

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

Elected Members 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 Council has resolved to deal with.



**CITY PLANNING**

**2. COUNCIL 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 Council 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 Council will act as a planning authority in respect to those matters appearing under this heading on the agenda, inclusive of any supplementary items.

The Council is reminded that in order to comply with Regulation 25(2), the General Manager 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.

**2.1 90 Melville Street, 127 Bathurst Street and Adjacent Road Reserve, Hobart - Demolition and New Building for 55 Multiple Dwellings, Food Services, Business and Professional Services, General Retail and Hire and Associated Works within the Adjacent Road Reserve  
PLN-19-948 - File Ref: F20/48117**

---

Application Expiry Date: 18 May 2020

That pursuant to the *Hobart Interim Planning Scheme 2015*, the Council approve the application for demolition and new building for 55 multiple dwellings, food services, business and professional services, general retail and hire and associated works within the adjacent road reserve at 90 Melville Street, 127 Bathurst 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-19-948 - 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 2020/00321-HCC dated 06/04/2020 as attached to the permit.

Reason for condition

To clarify the scope of the permit.

PLN 15

A demolition waste management plan must be implemented throughout demolition.

A demolition waste management plan must be submitted and approved, prior to commencement of work on the site. 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.

All work required by this condition must be undertaken in accordance with the approved demolition waste management plan.

*Advice:*

*Once the demolition waste management plan has been approved, the Council will issue a condition endorsement (see general advice on how to obtain condition endorsement).*

*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.*

*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 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 s1

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 to the satisfaction of the Director City Planning showing exterior colours and materials in accordance with the above requirement.



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

*Advice:*

*Consideration is to be given to introducing a broader range of materials that could be utilised to soften the overall appearance of the building, to reference past uses at the site and to be more sympathetic to its residential function. For example, the materials proposed for incorporation into the ground floor street front could include timber as well as the proposed brick; these could also be extended to the upper levels.*

Reason for condition

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

PLN s2

A public artwork program is to be submitted for the forecourt lane way area. The public artwork program is to explore 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.

Prior to the issue of any relevant approval for the artworks under the *Building Act 2016*, or prior to above ground works commencing on site, whichever occurs first, detail must be submitted and approved to the satisfaction of the Director City Planning in accordance with the above requirement with final details to be provided no later than prior to the issue of an occupancy permit for the proposed development.

All work required by this condition must be undertaken in accordance with the approved plans and be operational within 3 months of the completion of the development.

Reason for condition

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

PLN s3

A landscape plan must be prepared for the soft and hard landscaping of the forecourt and laneway area, 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 to the satisfaction of the Director City Planning 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 Director City Planning.

Reason for condition

In the interest of the amenity of the space.

PLN s4

The rooftop planters are to be maintained throughout the life of the development.

Reason for condition

In the interest of amenity

ENG sw1

All stormwater from the proposed development (including but not limited to: roofed areas, ag drains, retaining wall 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).

Reason for condition

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

ENG sw4

The development (including hardstand) must be drained to Council infrastructure with sufficient receiving capacity. The new stormwater connection must be constructed and all existing connections to be abandoned must be removed and reinstated by the Council at the owner's expense, prior to the first occupation.

Detailed engineering drawings and calculations must be submitted and approved, prior to commencement of work or issue of any consent under the *Building Act 2016* (whichever occurs first). The detailed engineering drawings must include:

1. the location of the proposed and all existing connections; and
2. the size and design of the connection appropriate to satisfy the needs of the development.
3. long-sections of the proposed connection clearly showing clearances from any nearby services, cover, size, material and delineation of public and private infrastructure. Connections must be free-flowing gravity.



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

*Advice:*

*The applicant is advised to submit detailed design drawings via a Council City Amenity Division [application for a new stormwater connection](#). If detailed design to satisfy this condition is submitted via the planning condition endorsement process there may be fees associated with the assessment, and once approved the applicant will still need to submit an application for a new stormwater connection with Council City Amenity Division.*

*Where building / plumbing approval is also required, it is recommended that documentation to satisfy this condition is submitted well before submitting documentation for building/plumbing approval. Failure to address planning condition requirements prior to submitting for building/plumbing approval may result in unexpected delays.*

Reason for condition

To ensure the site is drained adequately.

ENG sw7

Stormwater pre- treatment for stormwater discharges from the development must be installed prior to first occupation.

A stormwater management report and design must be submitted and approved, prior to issue of any consent under the *Building Act 2016* or commencement of work (whichever occurs first). The stormwater management report and design must:

1. be prepared by a suitably qualified engineer;
2. include detailed design of the proposed treatment train, including final estimations of contaminant removal to achieve the stormwater quality targets in accordance with the State Stormwater Strategy 2010
3. Include a Stormwater Management Summary Plan that outlines the obligations for future property owners to stormwater management, including a maintenance plan which outlines the operational and 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:*

*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.*

*Once the stormwater management report and design has been approved Council will issue a condition endorsement (see general advice on how to obtain condition endorsement).*

*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.*

Reason for condition

To avoid the possible pollution of drainage systems and natural watercourses, and to comply with relevant State legislation.

ENG 13

An ongoing waste management plan for all commercial and domestic waste and recycling must be implemented post construction.

A waste management plan must be submitted and approved, prior to commencement of work on the site. A waste management plan must:

1. include provisions for commercial waste services for the handling, storage, transport and disposal of domestic waste and recycle bins from the development.

All work required by this condition must be undertaken in accordance with the approved waste management plan.

*Advice: Once the waste management plan has been approved Council will issue a condition endorsement (see general advice on how to obtain condition endorsement).*

*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.*



#### Reason for condition

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

#### ENG tr2

A construction traffic and parking management plan must be implemented prior to the commencement of work on the site (including demolition).

The construction traffic (including cars, public transport vehicles, service vehicles, pedestrians and cyclists) and parking management plan must be submitted and approved, prior to any approval under the *Building Act 2016* (excluding demolition). The construction traffic and parking management plan must:

1. Be prepared by a suitably qualified person.
2. Develop a communications plan to advise the wider community of the traffic and parking impacts during construction.
3. Include a start date and finish dates of various stages of works.
4. Include times that trucks and other traffic associated with the works will be allowed to operate.
5. Nominate a superintendant, or the like, to advise the Council of the progress of works in relation to the traffic and parking management with regular meetings during the works.

All work required by this condition must be undertaken in accordance with the approved construction traffic and parking management plan.

#### 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.*

*Once the construction traffic and parking management plan has been approved, the Council will issue a condition endorsement (see general advice on how to obtain condition endorsement).*

*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.*

#### 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), vehicular barriers compliant with the Australian Standard AS/NZS1170.1:2002 must be installed to prevent vehicles running off the edge of an access driveway or parking module (parking spaces, aisles and manoeuvring area) where the drop from the edge of the trafficable area to a lower level is 600mm or greater, and wheel stops (kerb) must be installed for drops between 150mm and 600mm. Barriers must not limit the width of the driveway access or parking and turning areas approved under the permit.

#### *Advice:*

*The Council does not consider a slope greater than 1 in 4 to constitute a lower level as described in AS/NZS 2890.1:2004 Section 2.4.5.3. Slopes greater than 1 in 4 will require a vehicular barrier or wheel stop.*

*Designers are advised to consult the National Construction Code 2016 to determine if pedestrian handrails or safety barriers compliant with the NCC2016 are also required in the parking module this area may be considered as a path of access to a building.*

#### Reason for condition

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

#### ENG 3a

The access driveway, circulation roadways, ramps and parking module (parking spaces, aisles and manoeuvring area) must be designed and constructed in accordance with Australian Standard AS/NZS2890.1:2004 (including the requirement for vehicle safety barriers where required).

#### *Advice:*

*It is advised that designers consider the detailed design of the access and parking module prior to finalising the Finished Floor Level (FFL) of the parking spaces (especially if located within a garage incorporated into the dwelling), as failure to do so may result in difficulty complying with this condition.*

Reason for condition

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

ENG 3c

The access driveway, circulation roadways, ramps and parking module (parking spaces, aisles and manoeuvring area) must be constructed in accordance with Australian Standard As2890.1:2009.

Prior to the first occupation, documentation by a suitably qualified engineer certifying that the access driveway, circulation roadways, ramps and parking module has been constructed in accordance with the above drawings must be lodged with Council.

*Advice:*

*Certification may be submitted to Council as part of the Building Act 2016 approval process or via condition endorsement (see general advice on how to obtain condition endorsement)*

Reason for condition

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

ENG 4

The access driveway and parking module (car parking spaces, aisles and manoeuvring area) approved by this permit must be constructed to a sealed standard (spray seal, asphalt, concrete, pavers or equivalent Council approved) and surface drained to the Council's stormwater infrastructure prior to the first occupation.

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 parking spaces approved on the site is:

- Fifty five (55) residential car parking spaces (User Class 1A),
- Four (4) commercial car parking spaces (three User Class 1A and one User Class 4),
- User Class 4),

- Minimum of two (2) motorcycle parking spaces,
- Minimum of three (3) employee bicycle parking spaces, and
- Minimum of two (2) customer bicycle parking spaces.

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 AS/NZS 2890.6:2009 (where applicable), prior to first occupation.

*Advice:*

*User Classes are as per Australian Standards AS/NZS 2890.1:2004.*

*User Class 4 (Accessible Car Parking Space) may be accommodated in the Jars Architect drawing DA04 design by simply turning the pedestrian access path adjacent to Parking Space 1 into a shared zone in accordance with AS/NZS 2890.6:2009.*

*Council encourage the provision of bicycle parking over and above the requirements of the Hobart Interim Planning Scheme 2015 and note that twelve (12) employee/residential bicycle spaces are proposed in a bicycle storage room together with five (5) customer bicycle spaces on the lane way. It is encouraged to accommodate ebikes and power points into the final design.*

Reason for condition

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

ENG 9

All car parking spaces for people with disabilities must be delineated to Australian/NZS Standard, Parking facilities Part 6: Off-street parking for people with disabilities AS/NZS 2890.6: 2009, prior to the commencement of the use.

Reason for condition

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

ENG 1

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.

This must be done within 30 days of the completion of the development or any demand from Council (whichever occurs first). Any damage must be reported immediately to 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 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 suitable qualified person 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.



6. Detail any protection measures required during construction.

All work required by this condition must be undertaken in accordance with the approved select design drawing 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 works within the highway reservation must be designed and constructed in accordance with:

- Urban - TSD-R09-v1 – Urban Roads Driveways and TSD R14-v1 Type KC vehicular crossing.
- Footpath - Urban Roads Footpaths TSD-R11-v1.

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

1. Show the cross and long section of the driveway crossover within the highway reservation and onto the property.
2. Show long and cross sections of the footpath with crossfall of 1%-4% in accordance with TSD-R11-v1.
3. Show the reinstatement of the existing crossover in accordance with TSD R14-v1 Type KC .
4. Detail any proposed or existing services or infrastructure within the area of work.
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 the drawings must demonstrate that a B85 vehicle or 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 cars underside.
7. Be prepared and certified by a suitable qualified person, to satisfy the above requirement.

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

*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.*

*A permit to construct public infrastructure and/or a road opening permit is required prior to commencing work within the highway reservation. Please contact the City of Hobart's Road Service group on (03) 6238 2108 or [coh@hobartcity.com.au](mailto:coh@hobartcity.com.au) for information regarding permits.*

Reason for condition

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

ENG s1

A Residential Waste Management Plan must be provided and approved by Council, prior to the first occupation.

*Advice:*

*Council Waste Management Staff indicate that Council collection of waste and recycling from the development is not viable and private contractor waste collection will be required. Given the width and traffic volume on Melville Street and the design of the access, Council will permit reversing movements of private waste collection vehicles into the site.*

Reason for condition

To ensure commercial vehicle activity associated with the development is safe and efficient.

## ENV 2

Sediment and erosion control measures, sufficient to prevent sediment leaving the site and 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 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](#); and any recommendations of the Environmental Site Assessment.

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

### *Advice:*

*Once the SWMP has been approved, the Council will issue a condition endorsement (see general advice on how to obtain condition endorsement).*

*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.*

### 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.

## HER 7

Prior to excavation for the proposal the following archaeological investigations and works programs must occur;

All work in accordance with the Archaeological Method Statement of the Praxis report as outlined in section 9 (p.48) with a focus on test trenching areas 1, 2, 3 and 4 following the methodology of as outlined on pages 52-53. This includes test trenching and monitoring areas as specified in section 9.2 of the Praxis report (p.51). All other recommendations of section 9.3 to 9.11 are to be followed.

An interpretation plan must be prepared if on the advice of the archaeologist there is a public benefit in doing so and dependent on the exact nature and findings of the archaeological program. It must incorporate and interpret the heritage values of the site in the new development. The interpretation plan is to be submitted and approved by Council within 1 month of the conclusion of the archaeological program and must be implemented prior to the occupation of the building.

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.

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

ENVHE 1

Recommendations in the report Environmental Site Assessment, 90 Melville Street, December 2019 must be implemented, specifically that a soil and water management plan must be in place for the duration of the development construction.

Reason for condition

To ensure that the risk to future occupants of the building remain low and acceptable.

ENVHE 4

A construction management plan must be implemented throughout the construction works.

A construction management plan must be submitted and approved prior to the issuing of any building permit under the *Building Act 2016*. The plan must include but is not limited to the following:

1. Identification and disposal of any potentially contaminated waste and asbestos;
2. Proposed hours of work (including volume and timing of heavy vehicles entering and leaving the site, and works undertaken on site);
3. Proposed hours of construction;
4. Identification of potentially noisy construction phases, such as operation of rock- breakers, explosives or pile drivers, and proposed means to minimise impact on the amenity of neighbouring buildings;
5. Control of dust and emissions during working hours;
6. Proposed screening of the site and vehicular access points during work; and
7. Procedures for washing down vehicles, to prevent soil and debris being carried onto the street.

All work required by this condition must be undertaken in accordance with the approved construction management plan.

*Advice:*

*Once the construction management plan has been approved the Council will issue a condition endorsement (see general advice on how to obtain condition endorsement).*

*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.*

Reason for condition

To ensure minimal impact on the amenity of adjoining properties and members of the public during the construction period.

Part 5 r1

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 the underground car park associated walls supporting and adjacent to the Melville Street highway reservation prior to any approval under the *Building Act 2016*.

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 the 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 Staff.*

Reason for condition

To ensure the protection of Council assets.

SUB s2

The boundary adjustment between 90 Melville Street and 127 Bathurst Street approved by the planning permit for PLN-20-176 is to be completed to the satisfaction of Council prior to the issue of any building consent, building permit and / or plumbing permit pursuant to the *Building Act 2016* (if applicable), or the commencement of works on site (whichever occurs first).

Reason for condition

To ensure there is no encroachment of the proposed development onto 127 Bathurst Street

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 ENGINEERING

All engineering drawings required to be submitted and approved by this planning permit must be submitted to the City of Hobart as a CEP (Condition Endorsement) via the City's [Online Service Development Portal](#). When lodging a CEP, please reference the PLN number of the associated Planning Application. Each CEP must also include an estimation of the cost of works shown on the submitted engineering drawings. Once that estimation has been confirmed by the City's Engineer, the following fees are payable for each CEP submitted and must be paid prior to the City of Hobart commencing assessment of the engineering drawings in each CEP:



Value of Building Works Approved by Planning Permit Fee:

Up to \$20,000: \$150 per application.

Over \$20,000: 2% of the value of the works as assessed by the City's Engineer per assessment.

These fees are additional to building and plumbing fees charged under the Building and Plumbing Regulations.

Once the CEP is lodged via the [Online Service Development Portal](#), if the value of building works approved by your planning permit is over \$20,000, please contact the City's Development Engineer on 6238 2715 to confirm the estimation of the cost of works shown on the submitted engineering drawings has been accepted.

Once confirmed, please call one of the City's Customer Service Officers on 6238 2190 to make payment, quoting the reference number (ie. CEP number) of the Condition Endorsement you have lodged. Once payment is made, your engineering drawings will be assessed.

#### 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.

#### OCCUPATION OF THE PUBLIC HIGHWAY

As you are proposing works in the highway reservation you will require a Permit to Open Up and Temporarily Occupy a Highway (for work in the road reserve). Click [here](#) for more information.

#### NEW SERVICE CONNECTION

Please contact the Hobart City Council's City Amenity Division to initiate the application process for your [new stormwater connection](#).

#### STORM WATER

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.

## 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 Traffic Engineering Unit on 6238 2804.

## 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 by the Council or by a private contractor, subject to Council approval of the design. Click [here](#) for more information.

## RIGHT OF WAY

The private right of way must not be reduced, restricted or impeded in any way, and all beneficiaries must have complete and unrestricted access at all times.

You should inform yourself as to your rights and responsibilities in respect to the private right of way particularly reducing, restricting or impeding the right during and after construction.

## WEED CONTROL

Effective measures are detailed in the Tasmanian Washdown Guidelines for Weed and Disease Control: Machinery, Vehicles and Equipment (Edition 1, 2004). The guidelines can be obtained from the Department of Primary Industries, Parks, Water and Environment [website](#).

## 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-19-948 - 90 MELVILLE STREET HOBART TAS<br>7000 - Council Report  |
| Attachment B: | PLN-19-948 - 90 MELVILLE STREET HOBART TAS<br>7000 - Council Agenda Documents                                    |
| Attachment C: | PLN-19-948 - 90 MELVILLE STREET HOBART TAS<br>7000 - Planning Referral Officer Cultural Heritage<br>Report       |
| Attachment D: | PLN-19-948 - 90 MELVILLE STREET HOBART TAS<br>7000 - UDAP Minutes  |
| Attachment E: | PLN-19-948 - 90 MELVILLE STREET HOBART TAS<br>7000 - Planning Referral Officer Development<br>Engineering Report |

**APPLICATION UNDER HOBART INTERIM PLANNING SCHEME 2015**

Type of Report:	Committee
Council:	18 May 2020
Expiry Date:	18 May 2020
Application No:	PLN-19-948
Address:	90 MELVILLE STREET , HOBART 127 BATHURST STREET , HOBART ADJACENT ROAD RESERVE
Applicant:	(Neil Shephard and Associates on behalf of Giameos Developments Pty Ltd) 100 Melville Street
Proposal:	Demolition and New Building for 55 Multiple Dwellings, Food Services, Business and Professional Services, General Retail and Hire and Associated Works within the Adjacent Road Reserve
Representations:	Ten (10) representations were received (nine (9) objections and one (1) in support).
Performance criteria:	Central Business Zone Development Standards, Potentially Contaminated Land Code, Road and Railway Access Code, Parking and Access Code, Stormwater Management Code, Attenuation Code, and Historic Heritage Code

---

**1. Executive Summary**

- 1.1 Planning approval is sought for Demolition and New Building for 55 Multiple Dwellings, Food Services, Business and Professional Services, General Retail and Hire and Associated Works within the Adjacent Road Reserve at 90 Melville Street and 127 Bathurst Street, Hobart.

- 1.2 The proposal is for the demolition of the existing building on site and construction of a residential apartment complex comprising of 55 dwellings with a ground floor café at the street frontage and a large commercial tenancy space suitable for a variety of uses.

The 11,703m<sup>2</sup> floor area development presents a grouping of buildings with six elements, the main forms are the street fronting podiums and two larger, setback elements with a maximum height of 30m with an additional enclosure for the lift overrun and plant. The buildings range from five to nine above ground levels with three levels of basement car parking containing 59 spaces as well as motorbike spaces and bicycle storage. The four one-bedroom apartments, 48 two-bedroom apartments, and three three-bedroom apartments will have balconies or terraces with planters proposed throughout the development totaling 2,099m<sup>2</sup>. The predominant external material is to be a variety of textured, light and dark precast concrete panels with extensive glazing and the intermittent use of fibre cement sheet cladding and aluminium screens. The street level façade and forecourt will feature brick to reference the site's former use as the Kemp and Denning timber storage warehouse.

The development includes a publicly accessible laneway adjoining the commercial tenancies that will facilitate the potential for a future pedestrian link to Bathurst Street. It is also envisioned that a public art component will be incorporated within the forecourt and laneway area. A section of the proposed development will encroach onto the land of 127 Bathurst Street however this will be addressed by a separate development application for a boundary adjustment. There is also associated infrastructure and road reservation works proposed within Melville Street.

- 1.3 The proposal relies on performance criteria to satisfy the following standards and codes:

- 1.3.1 Central Business Zone Development Standards - Height and Design
- 1.3.2 Potentially Contaminated Land Code
- 1.3.3 Road and Railway Access code
- 1.3.4 Parking and Access Code
- 1.3.5 Stormwater Management Code
- 1.3.6 Attenuation Code
- 1.3.7 Historic Heritage Code

- 1.4 Ten (10) representations were received with nine (9) raising concerns and one (1) in support, within the statutory advertising period between 9 April and the 27 April 2020.

- 1.5 The proposal was referred to the Urban Design Panel, who considered it at their meeting on 20 April 2020. The Panel were broadly supportive of the proposal. The Panel's minutes are provided as an Attachment to this report.
- 1.6 The proposal is recommended for approval subject to conditions.
- 1.7 The final decision is delegated to the Council.



## 2. Site Detail

- 2.1 The subject 1680m<sup>2</sup> 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. This area was subject to a recently approved (PLN-20-176) boundary adjustment and will be transferred to 127 Bathurst Street in return for the approximately 7m wide strip of land in which the proposed development will encroach upon.

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

The site at 127 Bathurst Street, is largely used for car parking and contains a two storey office building. Further afield are two heritage listed properties fronting Bathurst Street (129 Bathurst Street).

To the north, directly opposite 90 Melville Street is the main Kemp and Denning site that has recently been purchased 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.

The site is in close proximity to the recently approved 31m high apartment and commercial development of 125 Bathurst Street. Also nearby and nearing completion is the residential project of the 'The Commons' on the corner of Watchorn Street and Bathurst Street.

2.2



Figure 1: GIS Map Image 1:4000

3.3



Figure 2: GIS Map Image 1:2000

3.4



Figure 3: Subject Site

3.5



Figure 4: Subject Site



3.6



Figure 5: Views towards the subject site from the intersection of Melville Street and Barrack Street

3.7



Figure 6: Views towards the subject site from the intersection of Brisbane Street and Barrack Street

### 3. Proposal

- 3.1 Planning approval is sought for Demolition and New Building for 55 Multiple Dwellings, Food Services, Business and Professional Services, General Retail and Hire and Associated Works within the Adjacent Road Reserve at 90 Melville Street and 127 Bathurst Street, Hobart.
- 3.2 The proposal is for the demolition of the existing building on site and construction of a residential apartment complex comprising of 55 dwellings with a ground floor café at the street frontage and a large commercial tenancy space suitable for a variety of uses.

The 11,703m<sup>2</sup> floor area development presents a grouping of buildings with six elements, the main forms are the street fronting podiums and two larger, setback elements with maximum height of 30m with an additional enclosure for the lift overrun and plant. The buildings range from five to nine above ground levels with three levels of basement car parking containing 59 spaces as well as motorbike spaces and bicycle storage. The four one-bedroom apartments, 48 two-bedroom apartments, and three three-bedroom apartments will have balconies or terraces with planters proposed throughout the development totaling 2,099m<sup>2</sup>. The predominant external material is to be a variety of textured, light and dark precast concrete panels with extensive glazing and the intermittent use of fibre cement sheet cladding and aluminium screens. The street level façade and forecourt will feature brick to reference the site's former use as the Kemp and Denning timber storage warehouse.

The development includes a publicly accessible laneway adjoining the commercial tenancies that will facilitate the potential for a future pedestrian link to Bathurst Street. It is also envisioned that a public art component will be incorporated within the forecourt and laneway area. A section of the proposed development will encroach onto the land of 127 Bathurst Street however this will be addressed by a separate development application for a boundary adjustment. There is also associated infrastructure and road reservation works proposed within Melville Street.

3.3

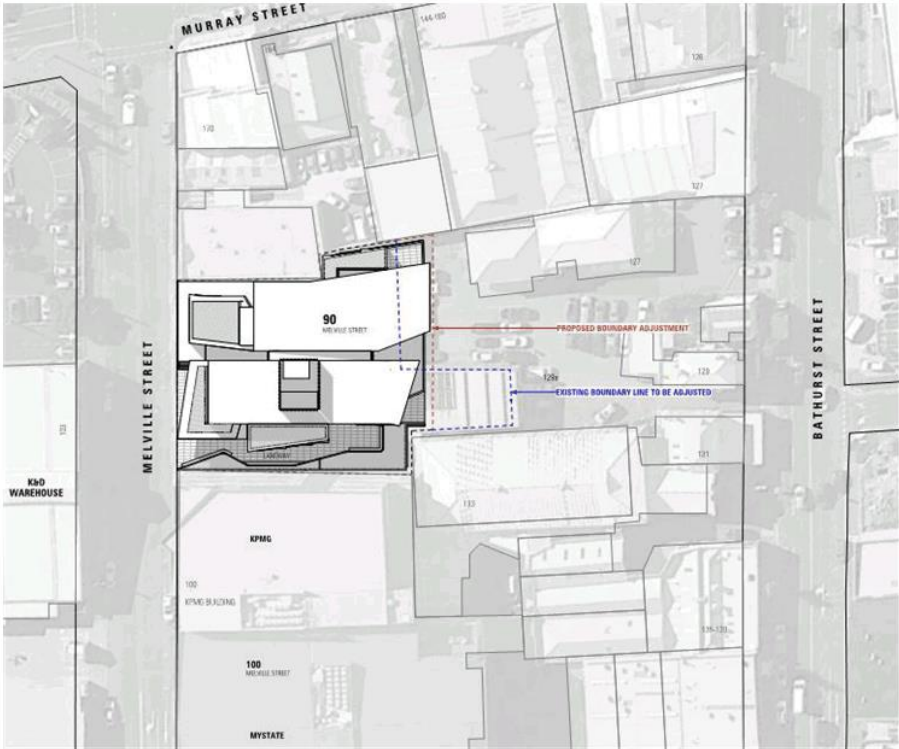


Figure 7: Site Plan



3.4



Figure 8: Montage of development from the intersection of Murray Street and Melville Street

3.5



Figure 9: Montage of development from the corner of Melville Street and Harrington Street

3.6



Figure 10: Artist's impression of street view to cafe and laneway

#### **4. Background**

- 4.1 The site was subject to a recently approved (PLN-20-176 ) minor boundary adjustment between 90 Melville Street (CT245477/1) and 127 Bathurst Street (CT56267/0). The boundary adjustment will result in transferring equal parcels of 147m<sup>2</sup> between the lots to regularise the rear boundary alignment as illustrated on the submitted plans for this application.
- 4.2 The development post lodgement was subject to variation as a result of concerns raised in respect of the height and prominence of the upper element of the proposed building. The site is located in the Central Business Fringe Height Area and due to the location of the property, its height is accentuated relative to the buildings in the Central Business Core Height Area. The amended design resulted in minor variations to the massing and reduction of the overall height of the building to a maximum of 30m with the exclusion of part of the lift overrun and plant enclosure. The maximum roof height was reduced by 5.4m however this reduction effectively reduced the prominence of the building within the broader townscape.

The following montages illustrate the variations:

4.3



Figure 11: Proposal as lodged

4.4



Figure 12: Revised (current) proposal



4.5



Figure 13: Proposal as lodged - Distant view

4.6



Figure 14: Revised (current) proposal - Distant view

4.7

The application was referred to the Urban Design Advisory Panel. The item was presented to the Panel at a meeting on the 9 April 2020. The minutes are included in full as attachment to this report.

**5. Concerns raised by representors**

5.1 Ten (10) representations were received with nine (9) raising concerns and one (1) in support, within the statutory advertising period between 9 April and the 27 April 2020.

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.

5.3	Planning requirements are not keeping up with cycling needs.
	We are very supportive of the developer's proposed facilitation of a future laneway between Melville St and Bathurst St, which would then link onwards to Liverpool Street via Watchorn Street. Such increased connectivity builds walkability and boosts our city's street life.
	There are clearly insufficient bike parking spaces in this proposal. There should be secure and convenient parking for at least 55 bikes with multiple storage rooms provided.
	It is disappointing that the Traffic Impact Assessment pays no attention to bike riders as road users, and to their current and future needs in terms of bicycle infrastructure.
	Driveway ramp should be constructed without a lip to reduce potential for bicycle falls.
	Good proposal for Hobart that provides housing and jobs. It is also a local developer with strong links to Hobart.
	The design is sympathetic to the local area with a mixture materials and treatments however another two or three levels would make the building more attractive on the skyline.
	There is plenty of onsite car parking provided and the café plus the retail offering will boost the area.
	The development should be approved with usual conditions like the recent similar approved development adjoining RACT.
	Concerned in respect of the amount of overshadowing of a Heritage listed dwelling with the development resulting in a significant loss of sunlight in the depths winter as well as afternoon sun during the rest of the year.

In combination with the approved 125 Bathurst Street the proposal will create a boxed in shadowland for this corner off Hobart. With "The Commons" development near completing it is starting to create a dense block of apartment buildings that will crowd out Hobart's historical and unique architecture.
No more high-rise apartment blocks that will dwarf the little guy, who has no option to go higher and retain his much-needed sunlight and warmth.
No detail is provided on the proposed café or retail tenancy. The large commercial tenancy is relegated to the rear of the site with no integration or connection with the streetscape.
It is arguable the development meets the intent of the Central Business Zone as its focused on high density residential use with commercial aspect of the development being an afterthought.
Due to the topographical constraints and unique setting of Hobart CBD area is finite and by Council approving high density residential development commercial uses(particularly retail) are being squeezed of the city into shopping malls and centres in outlying municipal areas. Hobart CBD risks becoming a collection of high density apartment development with token commercial venture at ground floor level.
The design of the development capitalises on the low level surrounding development. The amenity of views and solar access provided for the residents relying heavily on adjoining properties not similarly being developed.
The Planning Scheme focuses on protection residential amenity in residential zones only, it should be noted that the approval of the proposed high density development less than 1m from the boundary of a commercial business could result in land use conflicts.
The proposed development exceeds the permitted height by more than double, although reduced from when originally submitted the height is still excessive and dwarfs adjoining buildings.
There is lack of transition to adjoining development. Recent RMPAT decisions which deal with transition in height such as 9 Sandy Bay Road concluded that the buildings were out of scale with adjoining buildings despite a stepped design.
The height proposed does not result in a transition of the core area of the Central Business Zone and adjacent zones.
It is also arguable if the proposal, by virtue of its height and bulk, will make a positive contribution to the surrounding townscape which is predominantly single and double storey.
The proposed development may result in implications on the future development of adjoining properties.

The proposed development exceeds maximum height for this zone by approximately 100%.
It is not in keeping with the streetscape.
Being built at a high point of the area, it will overshadow many buildings.
The grounds for opposition, and refusal, are height, not compatible with the scale of nearby buildings, overshadowing, and is not compatible with the streetscape.
The recent poll conducted by Hobart City Council on building heights in the city showed that 88% of respondents are opposed to developments of the type proposed for 90 Melville St/127 Bathurst Street.
The council submission states that they wish to maximize the full potential of the block.
Their shadow projection diagrams and particular their Drawing Number 19066 DA 18 illustrates how disproportionate their 30 metres above the natural ground level, 9 level proposed apartment block would be to the surrounding streetscape.
The apartments from level one to eight have balconies that have a direct view north east and east with no protection of solar access and views from future development.
Council is creating potential commercial and residential land use conflicts with the development of the inner CBD area for multi-storey high density apartments.
The proposed height of the building will allow twice the density of apartment's which increases the likelihood of future land use conflicts with the surrounding commercial properties.
Due to the proximity to the boundary of the apartments it may result in restriction of the development of existing commercial uses due to noise emission issues.
Apartments are sold for a premium with residents expecting the retention and protection of their amenity, even when surrounded by established commercial businesses.
It should be ensured that access to existing business is not impeded during construction.
It is expected that Council would require the developer to ensure there is no damage or disruption to adjoining properties and uses particularly due the level of excavation.
Despite the planning report arguing that the development compiles with the performance criteria it can hardly be argued that it presents an appropriate transition of height and scale when compared to the adjacent two storey property.

The proposal refers to the site being within what Leigh Woolley designated the Hill Face Zone, which he had recommended having a maximum height of 18 metres. It was argued that this would transition to 45 metres at the 'inner edge', and therefore the proposed 30 metre maximum height (although seemingly higher from street level) would be appropriate. The attempts to adjust the perceived scale at street level, are only for a small footprint of the development along Melville Street, and does not eliminate the visual impact of the larger towers when viewed from a distance.
The 30m height is a stark contrast to the smaller dwellings further up Melville Street.
The comparison is made to 125 Bathurst Street which also appears not be sympathetic to its surroundings.
Objection to the bulk and scale of the proposed development but support the use of inner city living after decades of under utilisation of housing land for car yards etc
Because of the sites raised position it will have a dominating impact and set an undesirable precedent for the development of the K and D site.
Consideration should be given to the colour of such developments. Hobart is in danger of being overwhelmed by grim and gloomy, grey and black edifices in line with current fashion, looking alarmingly like rotting teeth. In the process losing the warmth of the stone and brick masonry that is one of its best features.

## 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 Central Business Zone of the *Hobart Interim Planning Scheme 2015*.
- 6.3 The proposed uses are Multiple Dwellings, Food Services, Business and Professional Services, and General Retail and Hire. The uses are all permitted in the zone, as is the residential use as only the access for the dwellings is on the ground floor.



- 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
  - 6.4.5 E9.0 Attenuation Code
  - 6.4.6 E13.0 Historic Heritage Code
- 6.5 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*
    - Design - Part D 22.4.3 P1*
  - 6.5.3 Potentially Contaminated Land Code -
    - Sensitive Use Part E2.5 P1*
    - Excavation 2.6.2 P1*
  - 6.5.4 Road and Railway Access Code:-
    - Sight Distance at Accesses Part E5.6.4 P1*
  - 6.5.5 Parking and Access Code:-
    - Design of Vehicular Accesses - Part E6.7.2 P1*
    - Facilities for commercial vehicles - Part E 6.7.13 P1*
  - 6.5.6 Stormwater Code:-
    - Stormwater Drainage and Disposal - Part E7.7.1 P2*
  - 6.5.7 Historic Heritage Code -

*Archaeology Part E13.10.1 P1*

## 6.5.8 Attenuation Code:-

*Development for Sensitive Use in Proximity to Use with Potential to Cause Environmental Harm Part E9.7.2 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(b) allows a maximum height of 15m, where 50% of the floor space above ground floor level is for residential use.

6.7.2 The proposed building extends to a maximum height of 30m to the top of the roof from the ground floor level, with part of the lift overrun extending an additional 1.2m. More than 50% of the floor space above ground floor level is proposed 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 proposed development is contained within the Amenity Building Envelope referred to in the performance criteria and shown in Figure 22.3 of the planning scheme, and is therefore only required to be assessed against clause 22.4.1 P3.1, which provides as follows:

*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.*

6.7.5 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.

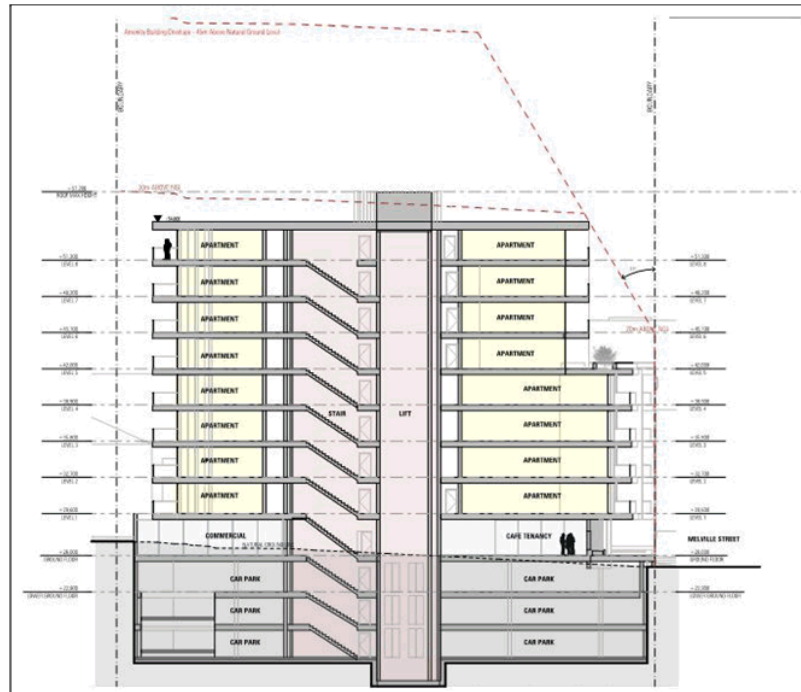


Figure 15: Amenity Building Envelope shown dashed in light red. The dark red line intersecting the lift overrun indicates 30m above natural ground level (which is not part of the Amenity Building Envelope).

- 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 development respects the transition between the Core Height Area of the Central Business Zone and adjacent zones, and second whether it (the development) makes a positive contribution to the streetscape and townscape.

Transition:

The site is located on the edge of the Central Business Fringe Height Area directly opposite the Core Height Areas on the other side of Bathurst Street and Murray Street. The purpose of the Fringe Height Area is to provide transition to the Core Height Area of the Central Business Zone from adjacent zones.

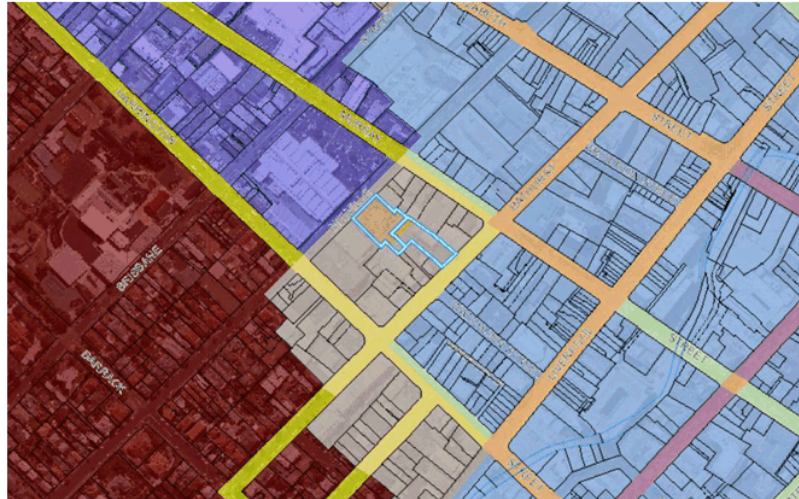


Figure 16: The subject site is highlighted. The blue denotes the Central Business Zone Core Height Area, and the lighter orange denotes the Central Business Zone Fringe Height Area, the purple denotes the Commercial Zone, while the maroon denotes the Inner Residential Zone.

The site is located within the block of the Central Business Fringe Height Area bordered by Harrington Street, Melville Street, Murray Street and Bathurst Street. To the north of site on the opposite side of Melville Street is the Commercial Zone, approximately 85m to the west is the closest point of the Inner Residential Zone with the Core Height Area to the east and south beyond Murray Street and Bathurst Street.

The large 1680m<sup>2</sup> site provides for significant development potential and the efficient utilisation of the footprint will generate development of substantial scale and bulk regardless of whether the development consists of multiple building forms or a single building form. The proposed development's highest element of roof form is 30m (with a 1.2m protrusion of the lift overrun structure), the proposal is not however a singular building form with a height of 30m. The development presents a cluster of six main building forms all with varying heights. There are two main central components that are setback from the frontage with the north-eastern

element's roof form sloping up to the rear of the site. Then there are two wing elements on either side of the building that have a reduced scale and are at a lower height than the two main central elements, and finally there are two varying podium elements at the frontage of the site, which are lower again than the wing elements. Each of these building elements feature alternating texture and colour as well as varying angles, setbacks and orientation. These aspects of siting, bulk and design of the proposal play a role in whether transition of the development from the Commercial Zone and Inner Residential Zone is respected as well as whether compatibility of the scale of the development within the broader context of the Central Business Zone is achieved.

The Commercial Zone allows for a permitted height of 15m with no required stepping back to achieve the maximum permitted height therefore it is foreseeable that future development of the directly adjacent site (103 Melville Street, the Kemp and Denning site proper) could present a 15m building form at the frontage. The form of the proposed development responds to the streetscape by use of the two podium forms of approximately 20m and 16m in height. Although at street level the majority of the built form is parallel and extends to the front boundary. The two upper podium building elements have combined width equating to only two thirds of the sites frontage, as well varying setbacks from the front boundary. Although these elements assist the development in integrating within the streetscape it presents building forms that would be comparable with the height of buildings on the adjacent frontage of the Commercial Zone. From these lower elements the scale of the development then transitions to the higher elements towards the rear of the site.

In respect of the Inner Residential Zone to the west 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 lower podium element is actually lower than the adjoining KPMG building, with the proposed development incrementally stepping up from this element to the higher elements of building, which is considered to respect the existing pattern of transition of development.

A major consideration of whether the proposed height of the building presents as a transition to the Core Height Area of the Central Business Zone beyond is its relative height to the larger scale buildings of the Central Business Zone. Due to the section of the Fringe Height Area that

the site is located in, the development's proposed visible presence within the broader townscape is of most relevance when viewed from Inner Residential zone areas to the west and the Commercial Zone to the north. The site's location within the block bordered by the Harrington Street, Melville Street, Murray Street and Bathurst Street is at a higher elevation than much of the Core Height Area of the Central Business Zone. This difference in elevation amplifies the relative height of the proposed development in the context of the broader townscape. Therefore assessing acceptability of the higher elements of the proposed development and whether it presents a transition, is based not only on its maximum height above ground level but its relative height in relation to the those buildings existing in the Core Height Area of the Central Business Zone. Although there are obviously a number of buildings of significant scale and height within the Core Height Area of the Central Business Zone it is appropriate to focus on the general established scale rather than anomalies. Through initial examination upon lodgement of the relative heights of buildings within the Core Height Area of the Central Business Zone it was found that the proposed relative height was comparable to buildings such as the under construction Melville Street student accommodation and Myer building hotel element. Due to this fact and that it substantially exceeded the permitted (acceptable solution) 30m maximum height in the Core Height Area it was considered the proposal did not respect the transition to the Core Height Area and consequently the current revised design was submitted.

The following montages visualise the proposal in the broader townscape in respect of the Inner residential areas to the west and Commercial Zone to the north:





Figure 17: Montage view of development from upper Murray Street



Figure 18: Montage view of development from upper Melville Street

The examples provided above of the Melville Street student accommodation and the hotel element of the Myer building, which are substantial in height relative to their location, also clearly present as more significant relative to the proposed development despite the site's elevation. That is, those buildings are still clearly read as higher in the townscape than the proposed development, notwithstanding the proposed development is located on a site which is topographically higher than the sites on which those developments are located. However it is

acknowledged that the site's elevated position compared to many of the higher buildings in the CBD means that the relative height of the very upper elements of the proposed building is at the limit of presenting as a transition to the Core Height Area. Ultimately it is considered that there is a clear pattern of development and buildings that are of a greater relative height than that of the proposed development, something which was evident through review of the proposal using Council's K2vi model.

The Urban Design Advisory Panel, although having reservations about the overall height of the building noted its location "within a part of the Central Business Zone that is identified as a zone of transition. It is also a zone in transition. The area is seen as an area for legitimate expansion of the Central Business Zone. In this context much of the area is underdeveloped and presents opportunities for future residential development in particular." Minutes of the meeting at which the Panel considered the development are provided as an Attachment to this report.

There is no doubt that the building dwarfs the adjoining two storey building at 82 Melville Street. However the performance criteria is not trying to ensure compatibility in scale and transition to adjoining buildings in the Central Business Zone beyond that of protecting Heritage Buildings. Such an approach would inhibit the ability to effectively develop the single central zone of Hobart. This section of Melville Street bound by Harrington Street and Murray Street presents a unique situation of no Heritage Listed properties, which presents a scenario where building scale and setback within the frontage will not be required to protect the curtilage of heritage significant properties. Also due to the northwest/northeast facing frontage of this section of the block the Amenity Building Envelope allows for a greater height of building mass closer to the frontage. Therefore although the larger elements of the proposed development present a significant scale when viewed from the north-east, any future development of the adjoining sites (which is considered to be likely if not inevitable) will serve to minimise the visual prominence of the proposed development in the townscape.

The Urban Design Panel also acknowledged that the "current proposal may initially appear more prominent, because of the significantly underdeveloped sites around it, but its overall height does fall within the parameters of the current Planning Scheme and those proposed by Leigh Woolley's Height Standards Review document." However it is to be noted the Central Hobart Building Height Standards Review Project and subsequent recommended changes to planning provisions are under review, and they do not form part of the planning scheme.



Positive Contribution:

The performance criteria requires development to earn the privilege of additional height over the permitted standard through a development's ability to provide positive contribution to the streetscape and townscape.

The form of the development presents as a cluster of buildings with massing broken down into six main components as demonstrated in the diagram below:

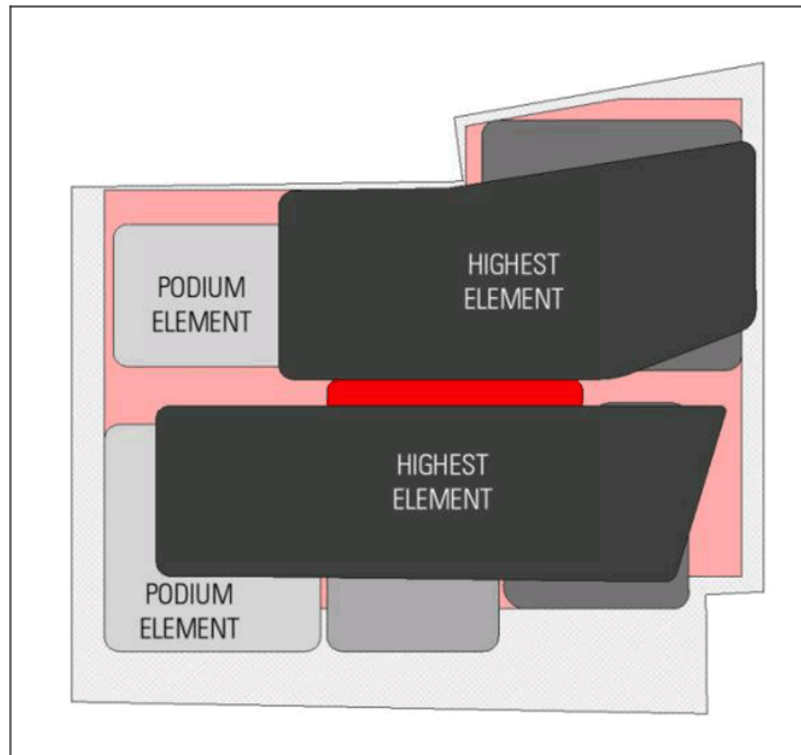


Figure 19: Breakdown of form

Beyond the breaking down of the building into the elements, each element also presents a different form, footprint and height. They feature angled elements and varying setbacks so each plane of the building presents a variation. There has been a clear intent in the design of the building to break down the form of the development which goes beyond token articulation. The residential use and pursuit of amenity for its occupants has also driven a form that perhaps a building primarily for office space or a hotel would not achieve due to the requirement of a larger efficient floor plate, rather than individual amenity of apartments.

The design responds at a street level scale through use of the podium forms, with the larger of the two presenting approximately a 1:1 scale relative to the width of the road reservation. These elements rather than filling the frontage present smaller components with a varied setback from the front boundary and angled forms. The wider of the two podiums features further breakdown of the elevation with a central articulated finned seam. The approach to the ground floor street level goes a step further with the architecture creating human scale, activating the space not just through the proposed cafe but the a creation of forecourt. In addition to the potential for activation, it creates a zone of open space with opportunities for landscaping and also a zone with no section of building.

The orientation and variation of upper levels contribute to a positive perception of the building in the broader townscape. Beyond a design simply avoiding blank side and rear elevations in a rectangular form, the building presents deep articulated elements combined with a variety of angled planes. This goes further than simply dressing a building to be viewed 'in the round', because when the development is viewed within the broader townscape each view point of the building presents a varied aspect of the building's form. The large punctures into the wall sections to create ventilation and light for the apartments in combination with inclusion of rooftop planters all contribute to adding layers and depth to the development. The elegant design feature of the wing elements of the building appearing to penetrate the central larger elements of the building above is effective in mitigating the visual bulk of the building. These combined elements all assist the building in making a positive contribution to the townscape.

The success of the design is reliant on the quality and variation of materials used. There has been effort to provide variation of texture, light and dark colour combinations of the predominant concrete panel finish. It acknowledged there has been consideration of the use of contrasting colours on the abutting large elements of the building. However the two largest elements of the building are proposed to be dark concrete. Once again the success of the predominant material choice will be determined by the quality and choice of concrete finish. The adjoining KPMG building presents examples of a combination of quality coloured, exposed aggregate, textured and polished concrete finishes. In this context it is considered relevant to note that the developer of the KPMG building is the same developer proposing this development.

The use of concrete panels is interspersed with aluminium screens and louvres with some use of fibre cement sheet, with the extensive and varied

glazing providing relief from the structure through light and reflection. However consideration of material detailing of aspects of the apartment and elements such as soffit treatment all contribute to developing additional warmth and texture.

The street level and forecourt area takes a departure from the aesthetic of the rest of the development and features the use of brick as an acknowledgement of the site's history, to achieve human scale for where people congregate and to create texture.

The Urban Design Advisory Panel also highlighted the following:

"The Panel noted the limited range of external materials being utilised and in particular the preponderance of concrete. It was suggested that consideration be given to introducing a broader range of materials that could be utilised to soften the overall appearance of the building, to reference past uses at the site and to be more in sympathetic to its residential function. For example, the materials proposed for incorporation into the ground floor street front could include timber as well as the suggested brick; these could also be extended to the upper levels."

In light of the above assessment and comments from the Urban Design Advisory Panel the positive contribution of the development's form on the townscape and streetscape is intrinsically linked to its refinement of the material palette. Therefore it is recommended that a condition be included on any permit issued that not only requires a detailed palette of materials but which includes "consideration to introducing a broader range of materials that could be utilised to soften the overall appearance of the building, to reference past uses at the site and to be more in sympathetic to its residential function." In addition it is recommended that the condition include requiring that elements of the ground level palette be incorporated into to the upper levels.

It also worth noting that the development project team consulted architect and urban design consultant Leigh Woolley in respect of the proposal due to his experience in respect of understanding the impact of building height within the Hobart CBD. The comments and consideration of the proposal by Leigh Woolley are included the submission as part of the application (and at Attachment B to this report). It concluded with general support of the proposed height noting the design approach was a departure from 'uniform bulk' with the intent to modulate each elevation.

Beyond the physical form and materials of the development the proposal

seeks to provide a positive contribution to streetscape through providing a public forecourt and laneway, with the potential to provide a pedestrian link through to Bathurst Street. The laneway allows for the development to have an increased accessible commercial façade which is far greater than the area that could be achieved on the site's frontage. It also allows for areas of landscaping and seating to be provided and with the space designed with consideration of CPTED principles. A key aspect of this space is the developer's intent for it to be activated. Beyond the café use this is to be achieved through a public art component to encompass the public accessible areas of the development. The following extract from the submission highlights the intent of the project:

"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 success of such spaces is dependent on their design and ultimately the developer's commitment to the implementation of aspects such as landscaping and public art. The Urban Design Advisory Panel also acknowledges this with the suggested early appointment of a landscape architect with consideration of how more landscaping could be incorporated into the space as well as the implementation of an artwork programme for the site. Therefore it is recommended that these aspects are required by condition on the permit. The laneway and forecourt feature of the proposal was referred to Council's City Place Making Unit who were extremely supportive of the concept.

Although the continuation of the link way through to Bathurst Street is beyond the scope of this permit, the Urban Design Advisory Panel encouraged Council to explore with the developer and neighbouring property owners to advance and implement this connection.

Another attribute of the proposal is the pursuit of providing high level of residential amenity for the occupants. This sentiment was also considered to be delivered by the Urban Design Advisory Panel. Therefore the proposal provides a positive contribution to inner city housing stock. The residential use also introduces passive surveillance, which is considered to be a positive contribution to the city.

The siting, bulk and design of the proposal is assessed as respecting the

transition between the Core Height Area of the Central Business Zone and adjacent zones, and the development is considered to make a positive contribution to the streetscape and townscape subject to conditions.

6.7.7 The proposal complies with the performance criterion.

6.8 Design - Part D 22.4.3 P1

6.8.1 The acceptable solution at clause Part D 22.4.3 A1(e) requires that building design incorporate roof-top service infrastructure, including service plants and lift structures, within the design of the roof.

6.8.2 The proposed lift overrun and rooftop plant is not specifically incorporated within the roof design.

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 Part D 22.4.3 P1 provides as follows:

*P1*

*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;*

6.8.5 The roof plant and lift overrun represent a small footprint relative to the roof area of the building. Although the lift overrun and plant is not specifically contained within the main roof design and presents a individual protrusion, it is integrated into the design of the building. The structure housing the plant and lift overrun utilises the same aluminum fin screening that that forms the central spine of the building. The screening also returns

over the roof as a pergola structure therefore presenting as an element of the building form not just a screened rooftop plant area. The screened roofing also prevents views of the roof plant from elevated residential areas of West Hobart and those higher buildings sited within the Core Height Area of Central Business Zone. The proposed treatment and screening of the lift overrun and rooftop plant is considered to meet relevant clauses (d) and (e) of the performance criteria.

6.8.6 The proposal complies with the performance criterion.

6.9 Potentially Contaminated Land Code Part E2.5 P1 and 2.6.2 P1

6.9.1 The site is listed as potentially contaminated land. The acceptable solution requires the Director of the Environmental Protection Authority to certify that the land is acceptable for the intended use, or to approve a plan to manage contamination and associated risks to ensure that the land is suitable for the intended use. No such Director's certification or approval has been provided. There is also no acceptable solution for excavation of a potentially contaminated site.

6.9.2 The proposal must therefore be assessed against the applicable performance criteria, which at clause Part E 2.5 P1 and 2.6.2 P1 provide as follows:

*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.*

and

*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.*

6.9.3 A preliminary Environmental Site Assessment and Contamination Management Plan was submitted for the site and the Council's Environmental Health Officer is satisfied that the proposal meets the relevant performance criteria subject to a condition requiring further site assessment, a contamination management plan and statement of suitability.

6.9.4 The proposal complies with the performance criterion.

6.10 Road and Railway Access Code - Sight distance at accesses and junctions - Part E5.6.4 P1

6.10.1 The proposal does not meet the Acceptable Solution for Layout of Parking Areas under clause Part E5.6.4 A1; therefore assessment against the performance criterion is relied on.

6.10.2 The performance criterion at clause Part E5.6.4 P1 provides as follows:

*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;*
- (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.*

6.10.3 The Council's Senior Development Engineering Officer is satisfied the development meets the performance criteria due to the reduction in vehicle movements, increase in familiarity of users and improvements over existing situation. The officer's report is provided as an Attachment to this report.

6.10.4 The proposal complies with the performance criterion.

6.11 Parking and Access Code - Design of Vehicular Accesses - Part E6.7.2 P1

6.11.1 The proposal does not meet the Acceptable Solution for Layout of Parking Areas under clause Part E6.7.2 A1; therefore assessment against the performance criterion is relied on.

6.11.2 The performance criterion at clause Part E6.7.2 P1 provides as follows:

*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.*

6.11.3 The Council's Senior Development Engineering Officer is satisfied with the safety of the proposed access in respect of providing adequate sight lines.

6.11.4 The proposal complies with the performance criterion.



## 6.12 Parking and Access Code - Facilities for Commercial Vehicles - Part E 6.7.13 P1

6.12.1 The proposal does not meet the Acceptable Solution for Layout of Parking Areas under clause Part E 6.7.13 A1; therefore assessment against the performance criterion is relied on.

6.12.2 The performance criterion at clause Part E 6.7.13 P1 provides as follows:

*P1*

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

6.12.3 The Council's Senior Development Engineering Officer is considered acceptable under performance criteria and the development will be required to provide its own private waste collection contractor. The officer's report is provided as an Attachment to this report.

6.12.4 The proposal complies with the performance criterion.

## 6.13 Stormwater Code - Stormwater Drainage and Disposal - Part E7.7.1 P2

6.13.1 The proposal does not meet the Acceptable Solution for Stormwater Drainage and Disposal under clause Part E7.7.1 P2; therefore assessment against the performance criterion is relied on.

6.13.2 The performance criterion at clause Part E7.7.1 P2 provides as follows:

*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.*

6.13.3 The Council's Senior Development Engineering Officer is satisfied that proposed stormwater treatment will adequately meet the performance criteria. The officer's report is provided as an Attachment to this report.

6.13.4 The proposal complies with with the performance criterion.

## 6.14 Historic Heritage Code - Places of Archaeological Potential - Part E13.10 P1

6.14.1 The acceptable solution at clause E13.10.1 A1 requires building and works to not involve excavation. The proposal includes excavation, therefore the performance criterion is relied on.

6.14.2 The performance criterion at clause Part E13.10 P1 provides as follows:

*P1*

*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'.*

6.14.3 The Council's Cultural Heritage Officer has provided the following comment:

This application is for demolition and the construction of a residential complex including 3 below ground levels of car parking and storage, ground floor level of commercial tenancies and apartments in various configurations on levels 1 to 8.

The site is located within a Place of Archaeological Potential and to the rear southern corner is a heritage listed property at 133 Bathurst Street. The property is located in the Central Business Zone. The provisions (clause 22.4.1 A5/P5 and 22.4.3 A3/P3) relating to adjacent heritage

listed places do not apply as the adjacent listed places do not share a frontage with the proposal.

The application is supported by a report by Praxis Environment, a Statement of Historical Archaeological Potential Archaeological Impact Assessment and Archaeological Method Statement, dated November 2019.

The following provisions apply:

E13.10.1 P1 Development Standards for Places of Archaeological Potential.

E13.10.1 P1 states:

*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'*

It should also be added that an additional application has been submitted for subdivision/boundary adjustment at this same property. It partially removes the long 'tongue' of land to the rear of the subject property and adheres it to the rear land parcel of 127 Bathurst Street and adheres land from 127 Bathurst Street to 90 Melville Street (PLN-20-176). The result is a 'squaring up' of the land parcel of 90 Melville Street and this is shown on the architectural drawings submitted as part of this application for the residential complex. That application is permitted under Part C Special provisions clause 9.3.

The Praxis report analyses the potential of the site to yield archaeological resources or evidence. It concludes it is possible for the site to yield archaeological evidence due to the site being the location of early development and not subject to substantial disturbance. However, the

Praxis report does not provide any analysis of the land identified in the application PLN-20-176 (notated as lot 1 and an area of 14.63 metres squared on the drawing prepared by PDA Surveyors dated 31 Jan 2020) which is covered by the boundary adjustment. It is therefore recommended that a condition of permit be included to extend the same methodology applied in the Praxis report for this current application to cover this parcel of land and implement any recommendations.

The Praxis report identifies four areas for test trenching with associated archaeological methodology. In summary, area or test trench 1 and 2 must be managed as area of high archaeological potential, while areas or test trenches 3 and 4 must be managed as monitored sites. A condition of permit is therefore required. With an appropriate condition, the proposal is considered to satisfy E13.10.1 P1

6.14.4 The officer's report is provided as an Attachment to this report.

6.14.5 The proposal complies with the performance criterion.

6.15 Attenuation Code - Part E9.7.2 P1

6.14.1 The acceptable solution at clause Part E 9.7.2 A1 requires development for 'sensitive use' within 200m of 'late night music venues' to be assessed against the performance criterion.

6.15.2 The performance criterion at clause Part E E9.7.2 P1 provides as follows:

*P1*

*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*

- 6.15.3 The Council's Environmental Development Planner has provided the following comment:
- 6.15.4 Approval is sought for a boundary adjustment and 9-storey mixed-use building at 90 Melville Street, Hobart. The ground floor would be commercial and the 8 floors above would be residential units. Three levels of underground car parking are also proposed.

#### Attenuation Code

The Attenuation Code applies because development for 'sensitive use' is proposed within the attenuation distance of an activity listed in Table E9.1 of the Code. The site is within 200m of 'late night music venues' at 112 Murray Street (Altar) and 147-167 Liverpool Street (Hanging Gardens). The location of the music venues relative to the proposed development site is shown in Figure 1 below.



Figure EDP1: 90 Melville Street (blue) relative to the late night music venues (red)

The relevant standards are under clause E9.7.2 of the Code

('Development for Sensitive Use in Proximity to Use with Potential to cause Environmental Harm').

There is no acceptable solution for A1.

Performance criterion P1 states the following:

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

Altar has live music and DJs, with indoor and outdoor spaces. The outdoor spaces do not operate after midnight so are not considered part of the 'late night music venue'. The main performance areas are inside. The nearest residential proposed at 90 Melville Street would be a minimum of 145m from Altar.

The Hanging Garden is an outdoor space associated with Altar that includes dining, bars, pop-up kitchens, live music, functions and events. The Hanging Garden is a minimum of 163m from the nearest proposed dwelling at 90 Melville Street.

No specific measures have been identified in the application to minimise noise intrusion.

In my opinion there is no credible risk of the residents of the proposed dwellings at 90 Melville Street being subject to unreasonable noise nuisance from these venues given the significant separation distances, high background noise levels and presence of screening buildings between the two sites. The exercise of discretion is recommended.

6.15.5 The proposal complies with the performance criterion.

## **7. Discussion**

- 7.1 Planning approval is sought for Demolition and New Building for 55 Multiple Dwellings, Food Services, Business and Professional Services, General Retail and Hire and Associated Works within the Adjacent Road Reserve at 90 Melville Street and 127 Bathurst Street, Hobart.
- 7.2 The application was advertised and received ten (10) representations with nine (9) raising concerns and one (1) in support. The representations raised concerns including:
- That the proposed development exceeds the permitted height by more than double, and the height and bulk is excessive as well as being not in keeping with streetscape.
  - There should be consideration of the colour with Hobart being dominated by grey and black developments.
  - The development will result in a significant overshadowing of existing buildings including a heritage listed property.
  - Also that the raised position of the building will amplify the issues of the scale and overshadowing and will create a precedent for the development of the K and D site.
  - The height does not result in a transition of the core area of the Central Business Zone and adjacent zones as well as it being arguable that it provides a positive contribution to the townscape.
  - The issue of transition to the lower scale adjoining buildings was raised with reference to a recent appeal 9 Sandy Bay Road.
  - Another point was that the design of the development capitalises on the low level surrounding development with amenity of the residents relying heavily on adjoining properties not similarly being developed. Also that the proposed development may result in implications on the future development of adjoining properties.

In response, the proposed height, scale and transition of the building is addressed under the assessment of the proposal. It is worth noting however that the intent of the relevant performance criteria of the Central Business Zone does not have regard to the transition to adjoining development with the mentioned Tribunal decision relating to development within the Urban Mixed Use Zone. In respect of overshadowing the Central Business Zone does not afford the protection of amenity beyond that of public spaces and pedestrians, and as the building is sited within the Amenity Building Envelope, it is considered to be acceptable in respect of wind and

shadowing impacts on the street. The planning scheme does not provide specific provisions in respect of the residential amenity of the occupants in the Central Business Zone. Despite this, there has been considerable effort in the proposed design to provide amenity for residents with light and ventilation maintained even in event of future development on adjoining lots.

There was also concern raised in respect of the development's focus on residential use with only ground floor commercial use, with the largest tenancy having no connection to the streetscape. It was suggested that high density residential development such as is proposed will force commercial uses out of the city. There was also the concern for potential land use conflicts due to the number of apartments and existing commercial uses. Also assurance was sought that there would be no damage or disruption to adjoining properties and uses particularly due to the level of excavation.

The proposed use arrangement is consistent with the planning scheme, which supports residential use above the ground floor. The rear tenancy would be suitable for a variety of uses and although it does not have direct access street frontage like the café, it fronts the laneway which affords a commercial facade beyond what could be achieved along the road frontage of the site. In respect of land use conflicts, it is indeed one of the challenges of inner city living however the planning scheme does apply preference to commercial uses. It would be expected due to the existing commercial nature of the area that future residents would be aware of the potential combination of uses and activities in the area. The issue of damage to adjoining properties is addressed under the Building Act, but conditions are recommended for construction and traffic management plans to minimise operational impact to nearby uses.

One representation praised the link way however raised concerns in respect of the lack of consideration of cycling needs through the lack bicycle parking, storage and consideration of crossover design to limit accidents. The proposed development is compliant in the number of bicycle parking spaces and requirements however the Development Engineer has included advice to encourage an increase in bicycle parking above the minimum with some accommodation provided for E-bikes. There is also advice to be included in respect of exploring a mountable curb without of lip.

The representation in support stated how the proposal was good for Hobart in respect of housing and jobs and is to be undertaken by a developer with strong links to Hobart. That the design is sympathetic to the local area with a mixture materials and treatments however another two or three levels would make the building more attractive on the skyline.



- 7.3 The proposal has been assessed against the relevant provisions of the planning scheme and is considered to meet the performance criteria in respect of the proposal's discretion's under Development Standards Height and Design, Potentially Contaminated Land Code, Road and Railway Access code, Parking and Access Code, Stormwater Management Code, Attenuation Code and Historic Heritage Code subject to conditions.

The key consideration of the proposal against the Scheme in the of seeking additional height over the permitted standard is whether the siting, bulk and design of development respects the transition between the core area of the Central Business Zone and adjacent zones and whether it makes a positive contribution to the streetscape and townscape.

The built form with the lower podium elements stepping up to the higher elements of the development were considered to provide a transition to the potential permitted building heights of the adjacent Commercial Zone. In respect of the Inner Residential Zone to the west, the existing adjoining commercial KPMG at 100 Melville Street building provides transition from the Harrington Street frontage to the subject site as it rises to 20m in height. The proposed development from that point incrementally steps up to the higher elements of the building, respecting the existing pattern of transition of development.

The developments proposed visible presence within the broader townscape is greatly amplified by the site's elevation relative to sections of the Core Height area of the Central Business Zone. Therefore in assessing acceptability of the higher elements of the proposed development and whether it presents a transition, was based not only on its maximum height above ground level but its relative height to the those buildings existing in the Core Height Areas of the Central Business Zone. It was of the view that the relative height of the very upper elements of the proposed building is however at its limits of presenting as a transition to the Core Height Area due to the site's elevation. Although ultimately there is still a clear pattern of development and buildings that are of a greater relative height.

In the assessment by the Urban Design Advisory Panel it was acknowledged that the proposal would initially be prominent in its location due to the undeveloped nature of the surrounding sites. However any likely future development of the adjoining sites will serve to minimise the visual prominence of the proposed development in the surrounding townscape. It was also noted that the intent of the performance criteria in respect of height is not related to a buildings transition to adjoining buildings.

The breakdown of the developments form into six components with articulated elements combined with a variety of angled planes results in the building

presenting a varied 'in the round' form when viewed within broader townscape. The design responds at a street level scale through use of the podium forms and introduction of a forecourt. It was acknowledged that the success and positive contribution of the design is reliant on the quality and variation of materials used. Therefore refinement and further detail of the material palette is recommended to be provided by condition with a focus on variation and softening. This is inline with Urban Design Advisory Panels advice who also thought the palette should reference past uses at the site and be more sympathetic to the buildings residential function.

Beyond the physical form and materials of the development the proposal was considered to provide a positive contribution to streetscape through providing a public forecourt and laneway, with the potential to provide a future pedestrian link through to Bathurst Street. There is an intent for the activation of the forecourt space and street level facade to go beyond the use of the cafe with a public art component to encompass the public accessible areas of the development. Although, as was also echoed by the Urban Design Advisory Panel, the success such spaces is dependent on their design and ultimately the developer's commitment to the implementation of aspects such as landscaping and public art. Therefore it is recommended that conditions be included in respect of these aspects.

The development intended to pursue a high level of amenity for its occupants which was agreed to be achieved by the Urban Design Advisory Panel members. Therefore proposal is viewed to provide a positive contribution to inner city housing stock as well as the residential use introducing passive surveillance into the area.

It was concluded that the siting, bulk and design of the proposal was assessed as respecting the transition between the Core Height Area of the Central Business Zone and adjacent zones, and the development is considered to make a positive contribution to the streetscape and townscape subject to conditions.

The proposed lift overrun and plant enclosure was also considered to be well integrated into the design of the building, satisfying the proposals discretion in respect of the Design Development Standards.

- 7.4 The application was referred to the City of Hobart's Urban Design Advisory Panel. Their minutes are included in full in Attachment D.

The Panel were generally supportive of the proposal identifying the public activation of the ground floor, with café, public open space, landscaping, art work and the overall high standard of amenity the apartments provided for occupants.

The Panel did have some reservations about the overall height of the development but acknowledged it was a zone of transition that presented a legitimate expansion of the Central Business Zone. Also that the area is underdeveloped making the proposal appear more prominent but the area presents opportunities for future residential development. Ultimately they determined that height fell within the parameters of the current Planning Scheme and those proposed by Leigh Woolley's Height Standards Review document.

Other issues raised by the Panel which were also mirrored in the assessment related to the proposed materials and predominant use of concrete panels. It was suggested that consideration should be given to a broader use of materials to soften the building and be sympathetic to its residential function as well reference its past. It was also of the view that the forecourt could include more landscaping with the importance highlighted of getting a landscape architect involved and the public art program initiated early in the piece.

The Panel concluded the following:

"In conclusion the Panel supports the development and suggests that, should the Council approve the application, conditions and/or advice be included supporting the early appointment of a landscape architect and the early initiation of an artwork programme for the site. The Panel also encourages the expansion of the material and colour palette for the building with the intention of further 'softening' the building to reinforce its residential nature."

In line with the Panels conclusion and the recommendation of the assessment, conditions have been recommended to be included on the permit if granted.

- 7.5 The proposal has been assessed by other Council officers, including the Council's Development Engineer, Cultural Heritage Officer, Environmental Health Officer, Environmental Development Planner as well as Council's Roads, Traffic, Surveying and Waste units. The officers have raised no objection to the proposal, subject to conditions.
- 7.6 The proposal is recommended for approval.

**8. Conclusion**

- 8.1 The proposed Demolition and New Building for 55 Multiple Dwellings, Food Services, Business and Professional Services, General Retail and Hire and Associated Works within the Adjacent Road Reserve at 90 Melville Street, 127 Bathurst 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 55 Multiple Dwellings, Food Services, Business and Professional Services, General Retail and Hire and Associated Works within the Adjacent Road Reserve at 90 Melville Street, 127 Bathurst 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-19-948 - 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 2020/00321-HCC dated 06/04/2020 as attached to the permit.**

Reason for condition

To clarify the scope of the permit.

### PLN 15

**A demolition waste management plan must be implemented throughout demolition.**

**A demolition waste management plan must be submitted and approved, prior to commencement of work on the site. 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.**

**All work required by this condition must be undertaken in accordance with the approved demolition waste management plan.**

*Advice:*

*Once the demolition waste management plan has been approved, the Council will issue a condition endorsement (see general advice on how to obtain condition endorsement).*

*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.*

*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 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 s1**

**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 to the satisfaction of the Director City Planning showing exterior colours and materials in accordance with the above requirement.**

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

*Advice: Consideration is to be given to introducing a broader range of materials that could be utilised to soften the overall appearance of the building, to reference past uses at the site and to be more sympathetic to its residential function. For example, the materials proposed for incorporation into the ground floor street front could include timber as well as the proposed brick; these could also be extended to the upper levels.*

Reason for condition

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

**PLN s2**

A public artwork program is to be submitted for the forecourt lane way area. The public artwork program is to explore 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.

Prior to the issue of any relevant approval for the artworks under the *Building Act 2016*, or prior to above ground works commencing on site, whichever occurs first, detail must be submitted and approved to the satisfaction of the Director City Planning in accordance with the above requirement with final details to be provided no later than prior to the issue of an occupancy permit for the proposed development.

All work required by this condition must be undertaken in accordance with the approved plans and be operational within 3 months of the completion of the development.

Reason for condition

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

**PLN s3**

A landscape plan must be prepared for the soft and hard landscaping of the forecourt and laneway area, 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 to the satisfaction of the Director City Planning 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 Planning.

Reason for condition

In the interest of the amenity of the space.



**PLN s4**

**The rooftop planters are to be maintained throughout the life of the development.**

Reason for condition

In the interest of amenity

**ENG sw1**

**All stormwater from the proposed development (including but not limited to: roofed areas, ag drains, retaining wall 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).**

Reason for condition

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

**ENG sw4**

**The development (including hardstand) must be drained to Council infrastructure with sufficient receiving capacity. The new stormwater connection must be constructed and all existing connections to be abandoned must be removed and reinstated by the Council at the owner's expense, prior to the first occupation.**

**Detailed engineering drawings and calculations must be submitted and approved, prior to commencement of work or issue of any consent under the Building Act (whichever occurs first). The detailed engineering drawings must include:**

1. the location of the proposed and all existing connections; and
2. the size and design of the connection appropriate to satisfy the needs of the development.
3. long-sections of the proposed connection clearly showing clearances from any nearby services, cover, size, material and delineation of public and private infrastructure. Connections must be free-flowing gravity.

**All work required by this condition must be undertaken in accordance with the**

approved detailed engineering drawings.

*Advice:*

- *The applicant is advised to submit detailed design drawings via a Council City Amenity Division [application for a new stormwater connection](#). If detailed design to satisfy this condition is submitted via the planning condition endorsement process there may be fees associated with the assessment, and once approved the applicant will still need to submit an application for a new stormwater connection with Council City Amenity Division.*
- *Where building / plumbing approval is also required, it is recommended that documentation to satisfy this condition is submitted well before submitting documentation for building/plumbing approval. Failure to address planning condition requirements prior to submitting for building/plumbing approval may result in unexpected delays.*

Reason for condition

To ensure the site is drained adequately.

#### **ENG sw7**

**Stormwater pre- treatment for stormwater discharges from the development must be installed prior to first occupation.**

**A stormwater management report and design must be submitted and approved, prior to issue of any consent under the Building Act 2016 or commencement of work (whichever occurs first). The stormwater management report and design must:**

1. **be prepared by a suitably qualified engineer;**
2. **include detailed design of the proposed treatment train, including final estimations of contaminant removal to achieve the stormwater quality targets in accordance with the State Stormwater Strategy 2010**
3. **Include a Stormwater Management Summary Plan that outlines the obligations for future property owners to stormwater management, including a maintenance plan which outlines the operational and 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:*

- *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.*
- *Once the stormwater management report and design has been approved Council will issue a condition endorsement (see general advice on how to obtain condition endorsement).*
- *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.*

## Reason for condition

To avoid the possible pollution of drainage systems and natural watercourses, and to comply with relevant State legislation.

**ENG 13**

**An ongoing waste management plan for all commercial and domestic waste and recycling must be implemented post construction.**

**A waste management plan must be submitted and approved, prior to commencement of work on the site. A waste management plan must:**

1. **include provisions for commercial waste services for the handling, storage, transport and disposal of domestic waste and recycle bins from the development.**

**All work required by this condition must be undertaken in accordance with the approved waste management plan.**

*Advice: Once the waste management plan has been approved Council will issue a condition endorsement (see general advice on how to obtain condition endorsement).*

*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.*

Reason for condition

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

**ENG tr2**

**A construction traffic and parking management plan must be implemented prior to the commencement of work on the site (including demolition).**

**The construction traffic (including cars, public transport vehicles, service vehicles, pedestrians and cyclists) and parking management plan must be submitted and approved, prior to any approval under the Building Act 2016 (excluding demolition). The construction traffic and parking management plan must:**

- 1. Be prepared by a suitably qualified person.**
- 2. Develop a communications plan to advise the wider community of the traffic and parking impacts during construction.**
- 3. Include a start date and finish dates of various stages of works.**
- 4. Include times that trucks and other traffic associated with the works will be allowed to operate.**
- 5. Nominate a superintendant, or the like, to advise the Council of the progress of works in relation to the traffic and parking management with regular meetings during the works.**

**All work required by this condition must be undertaken in accordance with the approved construction traffic and parking management plan.**

*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.*
- Once the construction traffic and parking management plan has been approved, the Council will issue a condition endorsement (see general advice on how to obtain condition endorsement).*
- 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.*

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), vehicular barriers compliant with the Australian Standard AS/NZS1170.1:2002 must be installed to prevent vehicles running off the edge of an access driveway or parking module (parking spaces, aisles and manoeuvring area) where the drop from the edge of the trafficable area to a lower level is 600mm or greater, and wheel stops (kerb) must be installed for drops between 150mm and 600mm. Barriers must not limit the width of the driveway access or parking and turning areas approved under the permit.**

*Advice:*

- *The Council does not consider a slope greater than 1 in 4 to constitute a lower level as described in AS/NZS 2890.1:2004 Section 2.4.5.3. Slopes greater than 1 in 4 will require a vehicular barrier or wheel stop.*
- *Designers are advised to consult the [National Construction Code 2016](#) to determine if pedestrian handrails or safety barriers compliant with the NCC2016 are also required in the parking module this area may be considered as a path of access to a building.*

Reason for condition

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

#### **ENG 3a**

**The access driveway, circulation roadways, ramps and parking module (parking spaces, aisles and manoeuvring area) must be designed and constructed in accordance with Australian Standard AS/NZS2890.1:2004 (including the requirement for vehicle safety barriers where required).**

*Advice:*

- *It is advised that designers consider the detailed design of the access and parking module prior to finalising the Finished Floor Level (FFL) of the parking spaces (especially if located within a garage incorporated into the dwelling), as failure to do so may result in difficulty complying with this condition.*

Reason for condition

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

#### **ENG 3c**

**The access driveway, circulation roadways, ramps and parking module (parking spaces, aisles and manoeuvring area) must be constructed in accordance with Australian Standard As2890.1:2009.**

**Prior to the first occupation, documentation by a suitably qualified engineer certifying that the access driveway, circulation roadways, ramps and parking module has been constructed in accordance with the above drawings must be lodged with Council.**

*Advice:*

- *Certification may be submitted to Council as part of the Building Act 2016 approval process or via condition endorsement (see general advice on how to obtain condition endorsement)*

Reason for condition

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

#### **ENG 4**

**The access driveway and parking module (car parking spaces, aisles and manoeuvring area) approved by this permit must be constructed to a sealed standard (spray seal, asphalt, concrete, pavers or equivalent Council approved) and surface drained to the Council's stormwater infrastructure prior to the first occupation.**

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 parking spaces approved on the site is:

- Fifty five (55) residential car parking spaces (User Class 1A),
- Four (4) commercial car parking spaces (three User Class 1A and one User Class 4),
- Minimum of two (2) motorcycle parking spaces,
- Minimum of three (3) employee bicycle parking spaces, and
- Minimum of two (2) customer bicycle parking spaces.

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 AS/NZS 2890.6:2009 (where applicable), prior to first occupation.

*Advice:*

- User Classes are as per Australian Standards AS/NZS 2890.1:2004.
- User Class 4 (Accessible Car Parking Space) may be accommodated in the Jars Architect drawing DA04 design by simply turning the pedestrian access path adjacent to Parking Space 1 into a shared zone in accordance with AS/NZS 2890.6:2009.
- Council encourage the provision of bicycle parking over and above the requirements of the Hobart Interim Planning Scheme 2015 and note that twelve (12) employee/residential bicycle spaces are proposed in a bicycle storage room together with five (5) customer bicycle spaces on the lane way. It is encouraged to accommodate ebikes and power points into the final design.

Reason for condition

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

**ENG 9**

All car parking spaces for people with disabilities must be delineated to Australian/NZS Standard, Parking facilities Part 6: Off-street parking for people with disabilities AS/NZS 2890.6: 2009, prior to the commencement of the use.

Reason for condition



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

**ENG 1**

**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.**

**This must be done within 30 days of the completion of the development or any demand from Council (whichever occurs first). Any damage must be reported immediately to 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 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 suitable qualified person 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.**
6. **Detail any protection measures required during construction.**

**All work required by this condition must be undertaken in accordance with the approved select design drawing 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 works within the highway reservation must be designed and constructed in accordance with:**

- **Urban - TSD-R09-v1 – Urban Roads Driveways and TSD R14-v1 Type KC vehicular crossing.**
- **Footpath - Urban Roads Footpaths TSD-R11-v1.**

**Design drawings must be submitted and approved prior to any approval under**

the Building Act 2016. The design drawing must:

1. **Show the cross and long section of the driveway crossover within the highway reservation and onto the property.**
2. **Show long and cross sections of the footpath with crossfall of 1%-4% in accordance with TSD-R11-v1.**
3. **Show the reinstatement of the existing crossover in accordance with TSD R14-v1 Type KC .**
4. **Detail any proposed or existing services or infrastructure within the area of work.**
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 the drawings must demonstrate that a B85 vehicle or 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 cars underside.**
7. **Be prepared and certified by a suitable qualified person, to satisfy the above requirement.**

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

*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.*
- *A permit to construct public infrastructure and/or a road opening permit is required prior to commencing work within the highway reservation. Please contact the City of Hobart's Road Service group on (03) 6238 2108 or [coh@hobartcity.com.au](mailto:coh@hobartcity.com.au) for information regarding permits.*

Reason for condition

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

**ENG s1**

**A Residential Waste Management Plan must be provided and approved by**

**Council, prior to the first occupation.**

*Advice: Council Waste Management Staff indicate that Council collection of waste and recycling from the development is not viable and private contractor waste collection will be required. Given the width and traffic volume on Melville Street and the design of the access, Council will permit reversing movements of private waste collection vehicles into the site.*

**Reason for condition**

To ensure commercial vehicle activity associated with the development is safe and efficient.

**ENV 2**

**Sediment and erosion control measures, sufficient to prevent sediment leaving the site and 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 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](#); and any recommendations of the Environmental Site Assessment.**

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

*Advice: Once the SWMP has been approved, the Council will issue a condition endorsement (see general advice on how to obtain condition endorsement).*

*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.*

**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.

**HER 7**

Prior to excavation for the proposal the following archaeological investigations and works programs must occur;

- **All work in accordance with the Archaeological Method Statement of the Praxis report as outlined in section 9 (p.48) with a focus on test trenching areas 1, 2, 3 and 4 following the methodology of as outlined on pages 52-53. This includes test trenching and monitoring areas as specified in section 9.2 of the Praxis report (p.51). All other recommendations of section 9.3 to 9.11 are to be followed.**
- **An interpretation plan must be prepared if on the advice of the archaeologist there is a public benefit in doing so and dependent on the exact nature and findings of the archaeological program. It must incorporate and interpret the heritage values of the site in the new development. The interpretation plan is to be submitted and approved by Council within 1 month of the conclusion of the archaeological program and must be implemented prior to the occupation of the building.**

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.

**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

**ENVHE 1**

**Recommendations in the report Environmental Site Assessment, 90 Melville**

**St, December 2019 must be implemented, specifically that a soil and water management plan must be in place for the duration of the development construction.**

Reason for condition

To ensure that the risk to future occupants of the building remain low and acceptable.

#### **ENVHE 4**

**A construction management plan must be implemented throughout the construction works.**

**A construction management plan must be submitted and approved prior to the issuing of any building permit under the *Building Act 2016*. The plan must include but is not limited to the following:**

1. Identification and disposal of any potentially contaminated waste and asbestos;
2. Proposed hours of work (including volume and timing of heavy vehicles entering and leaving the site, and works undertaken on site);
3. Proposed hours of construction;
4. Identification of potentially noisy construction phases, such as operation of rock- breakers, explosives or pile drivers, and proposed means to minimise impact on the amenity of neighbouring buildings;
5. Control of dust and emissions during working hours;
6. Proposed screening of the site and vehicular access points during work; and
7. Procedures for washing down vehicles, to prevent soil and debris being carried onto the street.

**All work required by this condition must be undertaken in accordance with the approved construction management plan.**

*Advice: Once the construction management plan has been approved the Council will issue a condition endorsement (see general advice on how to obtain condition endorsement).*

*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.*

Reason for condition

To ensure minimal impact on the amenity of adjoining properties and members of the public during the construction period.

**Part 5 r1**

**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 the underground car park associated walls supporting and adjacent to the Melville Street highway reservation prior to any approval under the Building Act 2016.**

**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 the 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 Staff.*

Reason for condition

To ensure the protection of Council assets.

**SUB s2**

**The boundary adjustment between 90 Melville Street and 127 Bathurst Street approved by the planning permit for PLN-20-176 is to be completed to the satisfaction of Council prior to the issue of any building consent, building permit and / or plumbing permit pursuant to the Building Act 2016 (if applicable), or the commencement of works on site (whichever occurs first).**

Reason for condition

To ensure there is no encroachment of the proposed development onto 127 Bathurst



Street

### 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 ENGINEERING

All engineering drawings required to be submitted and approved by this planning permit must be submitted to the City of Hobart as a CEP (Condition Endorsement) via the City's [Online Service Development Portal](#). When lodging a CEP, please reference the PLN number of the associated Planning Application. Each CEP must also include an estimation of the cost of works shown on the submitted engineering drawings. Once that estimation has been confirmed by the City's Engineer, the following fees are payable for each CEP submitted and must be paid prior to the City of Hobart commencing assessment of the engineering drawings in each CEP:

#### Value of Building Works Approved by Planning Permit Fee:

- Up to \$20,000: \$150 per application.
- Over \$20,000: 2% of the value of the works as assessed by the City's Engineer per assessment.

These fees are additional to building and plumbing fees charged under the Building and Plumbing Regulations.

Once the CEP is lodged via the [Online Service Development Portal](#), if the value of building works approved by your planning permit is over \$20,000, please contact the City's Development Engineer on 6238 2715 to confirm the estimation of the cost of works shown on the submitted engineering drawings has been accepted.

Once confirmed, please call one of the City's Customer Service Officers on 6238 2190 to make payment, quoting the reference number (ie. CEP number) of the Condition Endorsement you have lodged. Once payment is made, your engineering drawings will be assessed.

### 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.

#### **OCCUPATION OF THE PUBLIC HIGHWAY**

As you are proposing works in the highway reservation you will require a Permit to Open Up and Temporarily Occupy a Highway (for work in the road reserve). Click [here](#) for more information.

#### **NEW SERVICE CONNECTION**

Please contact the Hobart City Council's City Amenity Division to initiate the application process for your [new stormwater connection](#).

#### **STORM WATER**

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.

#### **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 Traffic

Engineering Unit on 6238 2804.

### **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 by the Council or by a private contractor, subject to Council approval of the design. Click [here](#) for more information.

### **RIGHT OF WAY**

The private right of way must not be reduced, restricted or impeded in any way, and all beneficiaries must have complete and unrestricted access at all times.

You should inform yourself as to your rights and responsibilities in respect to the private right of way particularly reducing, restricting or impeding the right during and after construction.

### **WEED CONTROL**

Effective measures are detailed in the Tasmanian Washdown Guidelines for Weed and Disease Control: Machinery, Vehicles and Equipment (Edition 1, 2004). The guidelines can be obtained from the Department of Primary Industries, Parks, Water and Environment [website](#).

### **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.



(Tristan Widdowson)

**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: 11 May 2020

**Attachment(s):**

Attachment B - CPC Agenda Documents

Attachment C - Referral Officer Report Cultural Heritage

Attachment D - Urban Design Advisory Panel Minutes

Attachment E - Referral Officer Report Development Engineering



ARTIST IMPRESSION - CORNER OF MELVILLE STREET AND MURRAY STREET



LOCATION PLAN 1:1000

RESIDENTIAL DEVELOPMENT  
90 MELVILLE STREET

PLANNING APPLICATION 20/03/2020  
REV 02 - REDUCED HEIGHT

DRAWING No.	DESCRIPTION
DA01	COVER PAGE
DA02	SITE PLAN
DA03	BASEMENT 1+2 FLOOR PLAN
DA04	LOWER GROUND FLOOR PLAN
DA05	GROUND FLOOR PLAN
DA06	LEVEL 1-4 FLOOR PLAN
DA07	LEVEL 5 FLOOR PLAN
DA08	LEVEL 6 FLOOR PLAN
DA09	LEVEL 7 FLOOR PLAN
DA10	LEVEL 8 FLOOR PLAN
DA11	ROOF PLAN
DA12	SECTION A
DA13	SECTION B
DA14	NORTH-WEST ELEVATION
DA15	NORTH-EAST ELEVATION
DA16	SOUTH-WEST ELEVATION
DA17	SOUTH-EAST ELEVATION
DA18	MELVILLE STREET ELEVATION
DA19	3D VISUALISATION 01
DA20	3D VISUALISATION 02
DA21	3D VISUALISATION 03
DA22	3D VISUALISATION 04
DA23	3D VISUALISATION 05
DA24	SHADOW DIAGRAM 01
DA25	SHADOW DIAGRAM 02
DA26	SHADOW DIAGRAM 03
DA27	SHADOW DIAGRAM 04

EXECUTIVE SUMMARY

FLOOR LEVEL	CAR PARKS	APARTMENTS	COMMERCIAL/RETAIL
BASEMENT 2	21	-	-
BASEMENT 1	21	-	-
LOWER GROUND	17	-	-
GROUND	-	-	2
LEVEL 1	-	8	-
LEVEL 2	-	8	-
LEVEL 3	-	8	-
LEVEL 4	-	8	-
LEVEL 5	-	7	-
LEVEL 6	-	6	-
LEVEL 7	-	6	-
LEVEL 8	-	4	-
TOTAL	59	55	2

DO NOT SCALE. DRAWINGS: WRITTEN DIMENSIONS GOVERN. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK. JAWG SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTS, SPECIFICATIONS, REPORTS AND DRAWINGS.

JACOB ALLEN WADE PTY LTD  
ABN 32 003 553 473  
THE ORDINANCE STORE  
21 CASTRAY ESPRANADE  
BATTERY POINT TASMANIA  
AUSTRALIA 7004

TELEPHONE 05 4222 4395  
FAX 05 4222 5726  
jawg@jwarchitects.com  
www.jwarchitects.com

JAWG  
ARCHITECTS

PROJECT

90 MELVILLE STREET  
Hobart, Tas, 7000

For  
Giameos Construction & Development

DRAWING

SCALE 1:2000 @ A3  
DATE March 2020  
DRAWN TL, TG  
CHECKED SV  
PLOT DATE SV  
CAD REF  
BIMBAEST, JAWG213 - BIMBAEST Basic for  
ARCHICAD 23/1896, 90 Melville St/1896,  
90 Melville St, 0404 - REVISED HEIGHT

PROJECT NORTH

ISSUE

PLANNING APPLICATION

DRAWING NAME

COVER PAGE

DRAWING NO

19066\_DA01

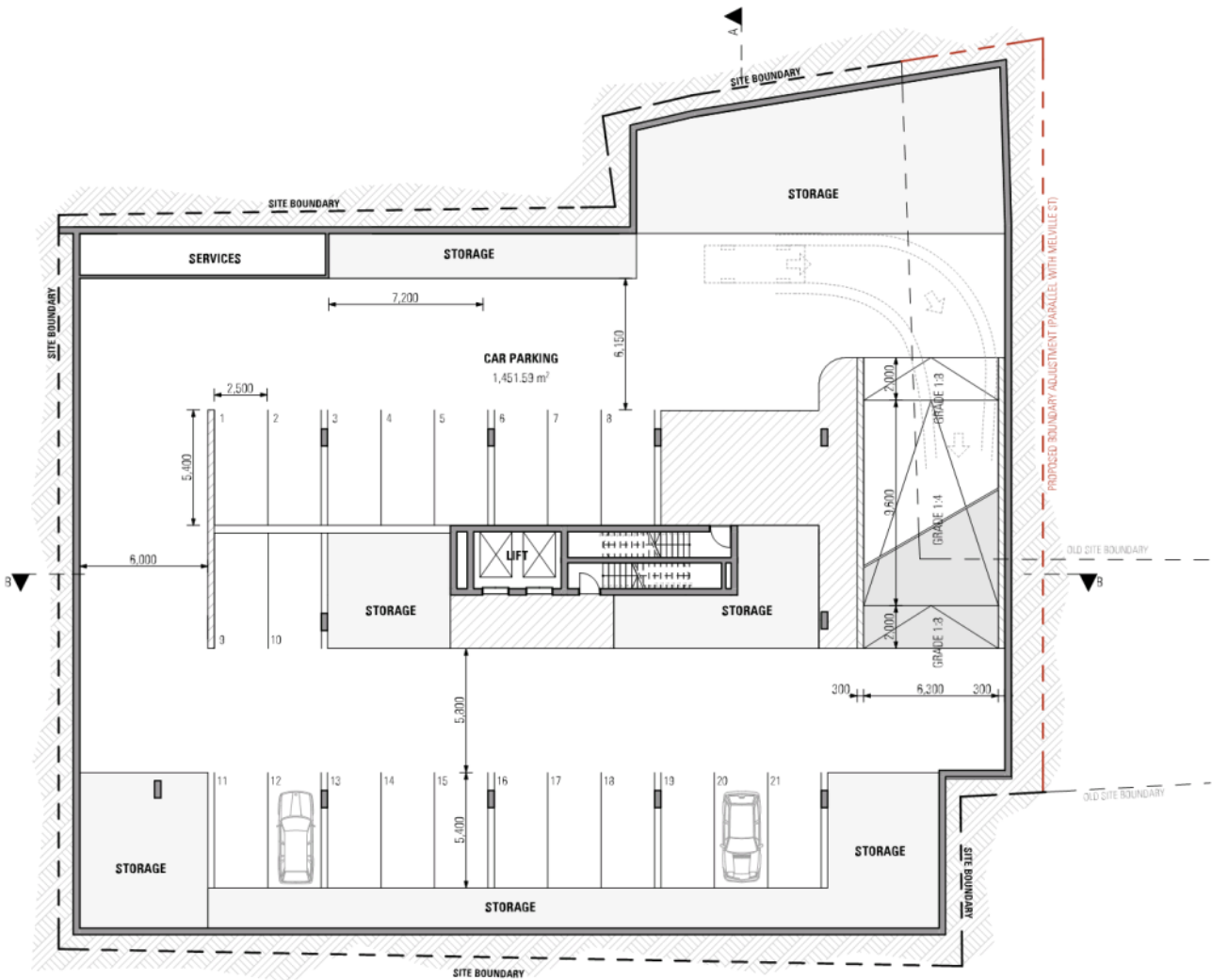
REVISION

REV 01 - 16/01/2019  
- Revised crossover  
- Staff and public bike storage added  
REV02 - 20/03/2020  
- Reduced height









DO NOT SCALE DRAWING. WRITTEN DIMENSIONS GOVERN. ALL DIMENSIONS ARE IN MILLIMETRE UNLESS NOTED OTHERWISE. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK. JAWA SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTS, SPECIFICATIONS, REPORTS AND DRAWINGS.

JACOB ALLEN WADE PTY LTD  
ABN 32 003 553 473  
THE ORDINANCE STORE  
21 CASTRAY EPLANADE  
BATTERY POINT TASMANIA  
AUSTRALIA 7004

TELEPHONE 05 9222 4395  
FAX 05 9222 5726  
jawa@jawaarchitects.com  
www.jawaarchitects.com

JAWA ARCHITECTS

PROJECT

90 MELVILLE STREET  
Hobart, Tas, 7000

For  
Giameos Construction & Development

DRAWING

SCALE 1:200 @ A3  
DATE March 2020  
DRAWN TI, TG  
CHECKED SV  
PLOT DATE  
CAD REF  
BIMBAUT, JAWA223 - Bimbaud Basic for  
ARCHICAD 22/10/2020, 90 Melville St/10000,  
90 Melville St, 0404 - REVISED HEIGHT

PROJECT NORTH



ISSUE

PLANNING APPLICATION

DRAWING NAME

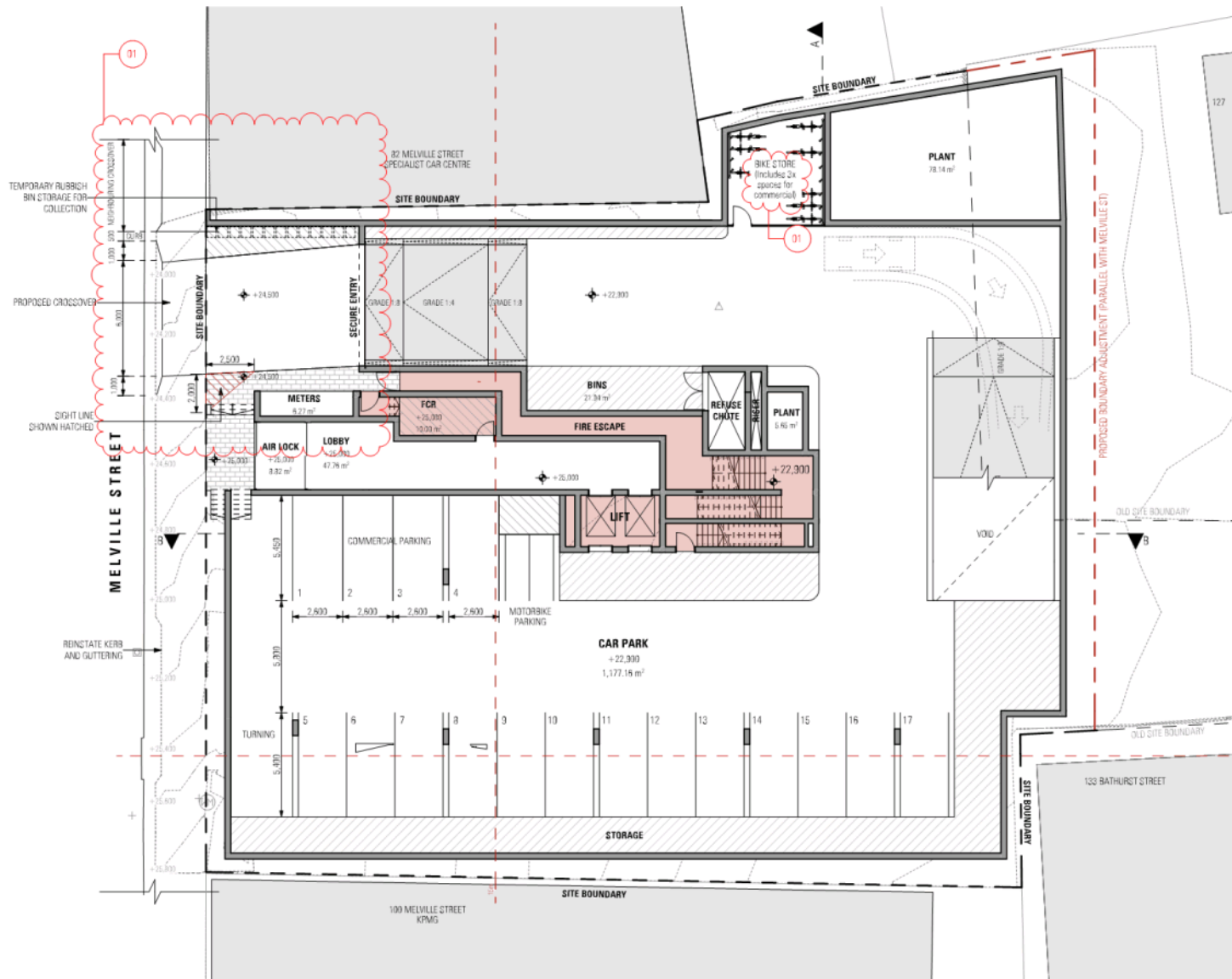
BASEMENT 1+2 FLOOR PLAN

DRAWING NO

19066\_DA03

REVISION

REV 01 - 16/01/2019  
- Revised crossover  
- Staff and public bike storage added  
REV02 - 20/03/2020  
- Reduced height



DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS GOVERN. ALL DIMENSIONS ARE IN MILLIMETRE UNLESS NOTED OTHERWISE. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK. JAWA SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTS, SPECIFICATIONS, REPORTS AND DRAWINGS.

JACOB ALLEN WADE PTY LTD  
ABN 82 003 553 473  
THE ORDINANCE STORE  
21 CASTRAY ESPRANADE  
BATTERY POINT TASMANIA  
AUSTRALIA 7004

TELEPHONE 05 9222 4395  
FAX 05 9222 5726  
jawa@jawaarchitects.com  
www.jawaarchitects.com

JAWA ARCHITECTS

#### PROJECT

**90 MELVILLE STREET**  
Hobart, Tas, 7000

For  
**Giameos Construction & Development**

#### DRAWING

SCALE 1:200 @ A3  
DATE March 2020  
DRAWN TL, TG  
CHECKED SV  
PLOT DATE  
CAD REF

#### PROJECT NORTH



#### ISSUE

**PLANNING APPLICATION**

#### DRAWING NAME

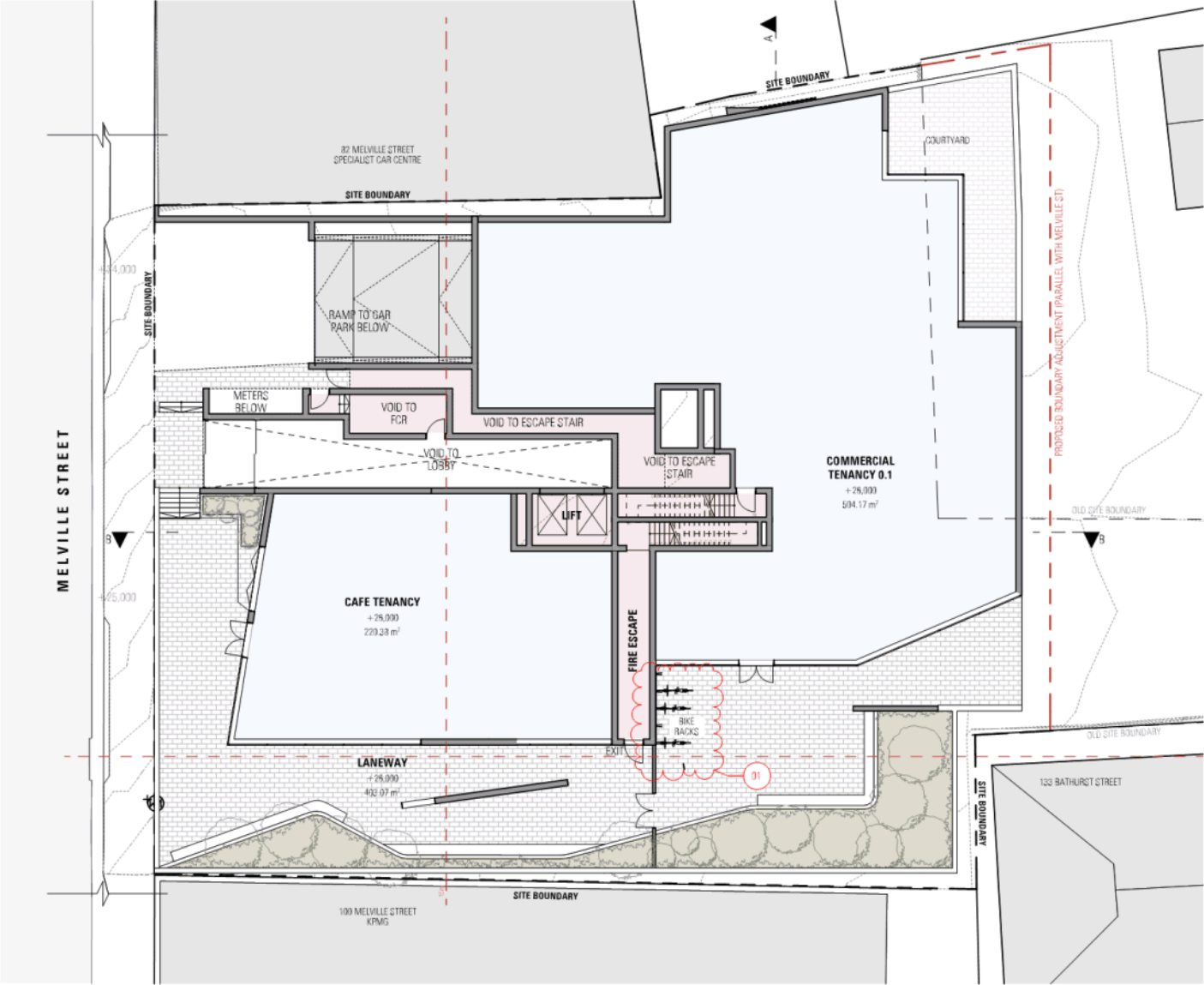
**LOWER GROUND FLOOR PLAN**

#### DRAWING NO

**19066\_DA04**

#### REVISION

REV 01 - 16/01/2019  
- Revised crossover  
- Staff and public bike storage added  
REV02 - 20/03/2020  
- Reduced height



DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS GOVERN. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK. JAWA SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTS, SPECIFICATIONS, REPORTS AND DRAWINGS.

JACOB ALLEN WADE PTY LTD  
ABN 32 003 553 473  
THE ORDINANCE STORE  
21 CASTRAY ESPRANADE  
BATTERY POINT TASMANIA  
AUSTRALIA 7004

TELEPHONE 05 9222 4395  
FAX 05 9222 5726  
jawa@jawaarchitects.com  
www.jawaarchitects.com

JAWA ARCHITECTS

PROJECT

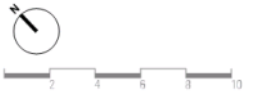
**90 MELVILLE STREET**  
Hobart, Tas, 7000

For  
**Giameos Construction & Development**

DRAWING

SCALE	1:200 @ A3
DATE	March 2020
DRAWN	TL, TG
CHECKED	SV
PLT DATE	SV
CAD REF	00000001_JAWA023 - 00000001 Basic for ARCHICAD 23/10/2019, 90 Melville 23/10/2019, 90 Melville 23/10/2019 - REVISED HEIGHT

PROJECT NORTH



ISSUE

**PLANNING APPLICATION**

DRAWING NAME

**GROUND FLOOR PLAN**

DRAWING NO

**19066\_DA05**

REVISION

REV 01 - 16/01/2019  
- Revised crossover  
- Staff and public bike storage added  
REV02 - 20/03/2020  
- Reduced height



DO NOT SCALE DRAWING. WRITTEN DIMENSIONS GOVERN. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK. JAWA SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTS, SPECIFICATIONS, REPORTS AND DRAWINGS.

JACOB ALLEN WADE PTY LTD  
ABN 32 003 553 473  
THE ORDINANCE STORE  
21 CASTRAY ESPRANADE  
BATTERY POINT TASMANIA  
AUSTRALIA 7004

TELEPHONE 05 9222 4395  
FAX 05 9222 5726  
jawa@jawaarchitects.com  
www.jawaarchitects.com

JAWA ARCHITECTS

PROJECT

90 MELVILLE STREET  
Hobart, Tas, 7000

For  
Giameos Construction & Development

DRAWING

SCALE 1:200 @ A3  
DATE March 2020  
DRAWN TL, TG  
CHECKED SV  
PLOT DATE  
CAD REF

© 2020 JAWA ARCHITECTS. All Rights Reserved. This drawing is the property of JAWA ARCHITECTS and is not to be reproduced without written permission. JAWA ARCHITECTS is not responsible for any errors or omissions in this drawing.

PROJECT NORTH



ISSUE

PLANNING APPLICATION

DRAWING NAME

LEVEL 1-4 FLOOR PLAN

DRAWING NO

19066\_DA06

REVISION

REV 01 - 16/01/2019  
- Revised crossover  
- Staff and public bike storage added  
REV02 - 20/03/2020  
- Reduced height



DO NOT SCALE DRAWING. WRITTEN DIMENSIONS GOVERN. ALL DIMENSIONS ARE IN MILLIMETRE UNLESS NOTED OTHERWISE. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK. JAWA SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTS, SPECIFICATIONS, REPORTS AND DRAWINGS.

JACOB ALLEN WADE PTY LTD  
ABN 32 003 553 473  
THE ORDINANCE STORE  
21 CASTRAY ESPRANADE  
BATTERY POINT TASMANIA  
AUSTRALIA 7004

TELEPHONE 05 9222 4395  
FAX 05 9222 5726  
jawa@jawaarchitects.com  
www.jawaarchitects.com

JAWA ARCHITECTS

PROJECT

90 MELVILLE STREET  
Hobart, Tas, 7000

For  
Giameos Construction & Development

DRAWING

SCALE 1:200 @ A3  
DATE March 2020  
DRAWN T1, TG  
CHECKED SV  
PLOT DATE  
CAD REF  
BIMBAEST, JAWA223 - BIMBAEST Basis for  
ARCHICAD 23/1896, 90 Melville St/1896,  
90 Melville St, 0404 - REVISED HEIGHT

PROJECT NORTH



ISSUE

PLANNING APPLICATION

DRAWING NAME

LEVEL 5 FLOOR PLAN

DRAWING NO

19066\_DA07

REVISION

REV 01 - 16/01/2019  
- Revised crossover  
- Staff and public bike storage added  
REV02 - 20/03/2020  
- Reduced height



DO NOT SCALE DRAWING. WRITTEN DIMENSIONS GOVERN. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK. JAWA SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTS, SPECIFICATIONS, REPORTS AND DRAWINGS.

JACOB ALLEN WADE PTY LTD  
ABN 32 003 553 473  
THE ORDINANCE STORE  
21 CASTRAY ESPRANADE  
BATTERY POINT TASMANIA  
AUSTRALIA 7004

TELEPHONE 05 9222 4395  
FAX 05 9222 5726  
jawa@jawaarchitects.com  
www.jawaarchitects.com

JAWA ARCHITECTS

PROJECT

90 MELVILLE STREET  
Hobart, Tas, 7000

For  
Giameos Construction & Development

DRAWING

SCALE 1:200 @ A3  
DATE March 2020  
DRAWN TL, TG  
CHECKED SV  
PLOT DATE  
CAD REF  
BIMBAUT, JAWA223 - BIMBAUT Basis for  
ARCHICAD 23/1996, 90 Melville St/1996,  
90 Melville St, 0404 - REVISED HEIGHT

PROJECT NORTH



ISSUE

PLANNING APPLICATION

DRAWING NAME

LEVEL 6 FLOOR PLAN

DRAWING NO

19066\_DA08

REVISION

REV 01 - 16/01/2019  
- Revised crossover  
- Staff and public bike storage added  
REV02 - 20/03/2020  
- Reduced height





DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS GOVERN. ALL DIMENSIONS ARE IN MILLIMETRE UNLESS NOTED OTHERWISE. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK. JAWA SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTS, SPECIFICATIONS, REPORTS AND DRAWINGS.

JACOB ALLEN WADE PTY LTD  
ABN 32 003 553 473  
THE ORDINANCE STORE  
21 CASTRAY ESPRANADE  
BATTERY POINT TASMANIA  
AUSTRALIA 7004

TELEPHONE 05 9222 4395  
FAX 05 9222 5726  
jawa@jawaarchitects.com  
www.jawaarchitects.com

ARCHITECTS

PROJECT

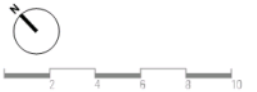
90 MELVILLE STREET  
Hobart, Tas, 7000

For  
Giameos Construction & Development

DRAWING

SCALE 1:200 @ A3  
DATE March 2020  
DRAWN TL, TG  
CHECKED SV  
PLOT DATE  
CAD REF  
BIMBAUT, JAWA223 - BIMBAUT Basic for ARCHICAD 22/10/2019, 90 Melville St, Hobart, TAS - REVISED HEIGHT

PROJECT NORTH



ISSUE

PLANNING APPLICATION

DRAWING NAME

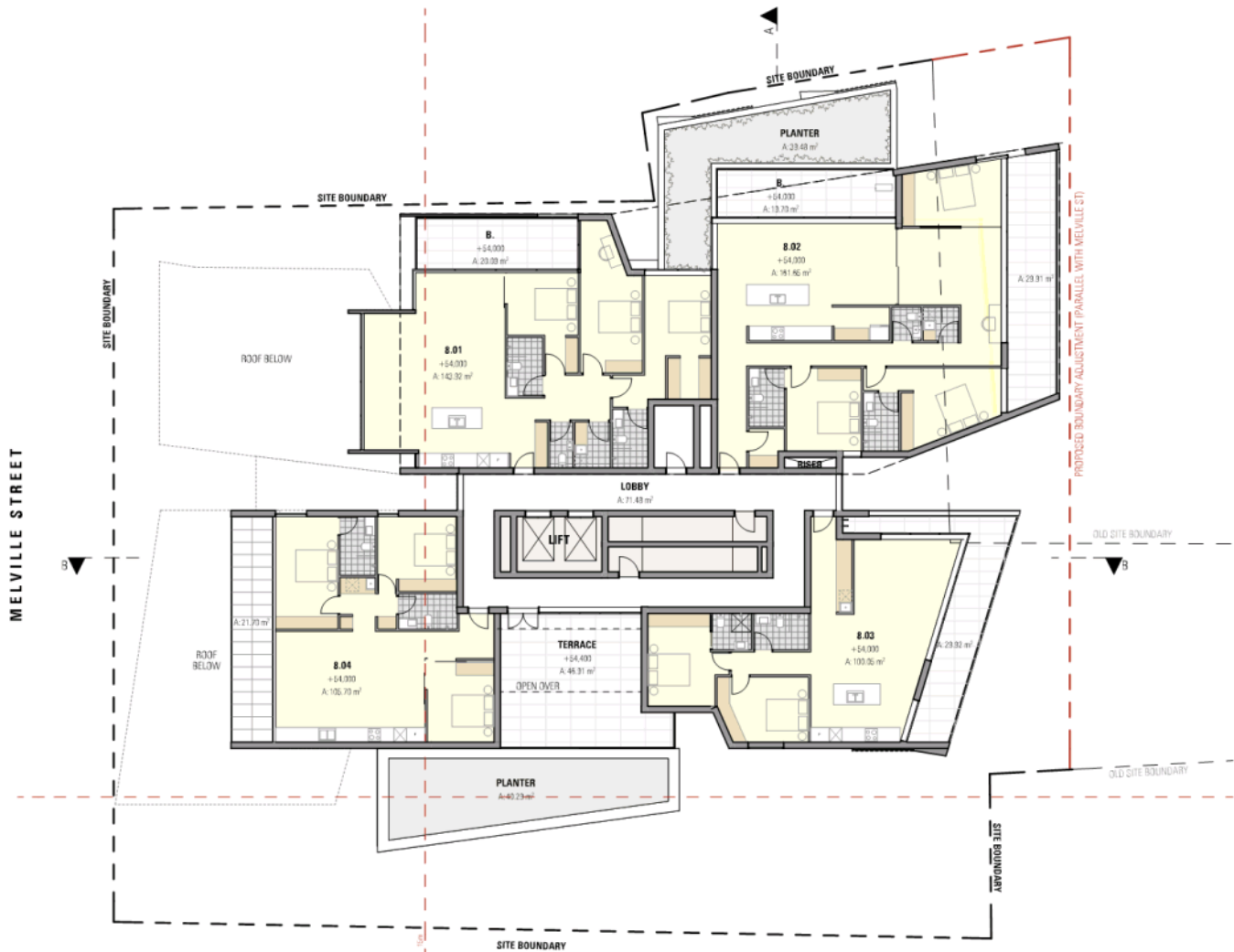
LEVEL 7 FLOOR PLAN

DRAWING NO

19066\_DA09

REVISION

REV 01 - 16/01/2019  
- Revised crossover  
- Staff and public bike storage added  
REV02 - 20/03/2020  
- Reduced height



DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS GOVERN. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK. JAWAG SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTS, SPECIFICATIONS, REPORTS AND DRAWINGS.

JACOB ALLEN WADE PTY LTD  
ABN 32 003 553 473  
THE ORDINANCE STORE  
21 CASTRAY ESPLANADE  
BATTERY POINT TASMANIA  
AUSTRALIA 7004

TELEPHONE (05) 9222 4395  
FAX (05) 9222 5726  
jawag@jwarchitects.com  
www.jwarchitects.com

JAWAG ARCHITECTS

PROJECT

**90 MELVILLE STREET**  
Hobart, Tas, 7000

For  
**Giameos Construction & Development**

DRAWING

SCALE 1:200 @ A3  
DATE March 2020  
DRAWN T1, TG  
CHECKED SV  
PLOT DATE  
CAD REF  
BIMBAEST, JAWAG223 - BIMBAEST Basis for ARCHICAD (2/1/2019), 90 Melville St (1/2019), 90 Melville St, 2019 - REVISED HEIGHT

PROJECT NORTH



ISSUE

**PLANNING APPLICATION**

DRAWING NAME

**LEVEL 8 FLOOR PLAN**

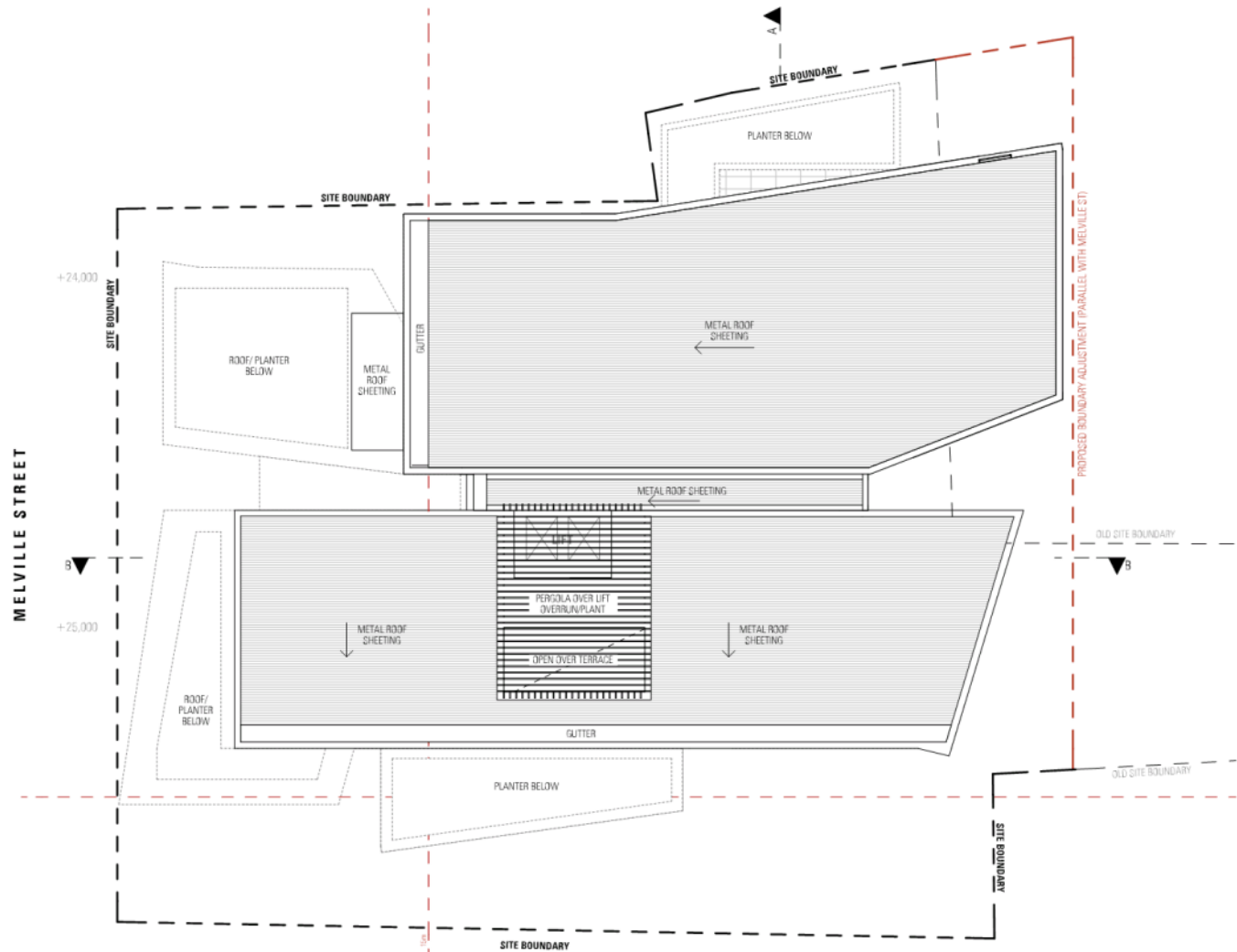
DRAWING NO

**19066\_DA10**

REVISION

REV 01 - 16/01/2019  
- Revised crossover  
- Staff and public bike storage added  
REV02 - 20/03/2020  
- Reduced height





DO NOT SCALE DRAWING. WRITTEN DIMENSIONS GOVERN. ALL DIMENSIONS ARE IN MILLIMETRE UNLESS NOTED OTHERWISE. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK. JAWW SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTS, SPECIFICATIONS, REPORTS AND DRAWINGS.

JACOB ALLEN WATTS PTY LTD  
ABN 32 003 553 473  
THE ORDINANCE STORE  
21 CASTRAY EPLANADE  
BATTERY POINT TASMANIA  
AUSTRALIA 7004

TELEPHONE 05 9222 4395  
FAX 05 9222 5726  
jaww@jwwarchitects.com  
www.jwwarchitects.com

JAWW ARCHITECTS

PROJECT

90 MELVILLE STREET  
Hobart, Tas, 7000

For  
Giameos Construction & Development

DRAWING

SCALE	1:200 @ A3
DATE	March 2020
DRAWN	TI, TG
CHECKED	SV
PLOT DATE	SV
CAD REF	SWANSEA, JAWW213 - SWANSEA Basic for ARCHICAD 23/1/2020, 90 Melville St/1/2020, 90 Melville St, 2020 - REVISED HEIGHT

PROJECT NORTH



ISSUE

PLANNING APPLICATION

DRAWING NAME

ROOF PLAN

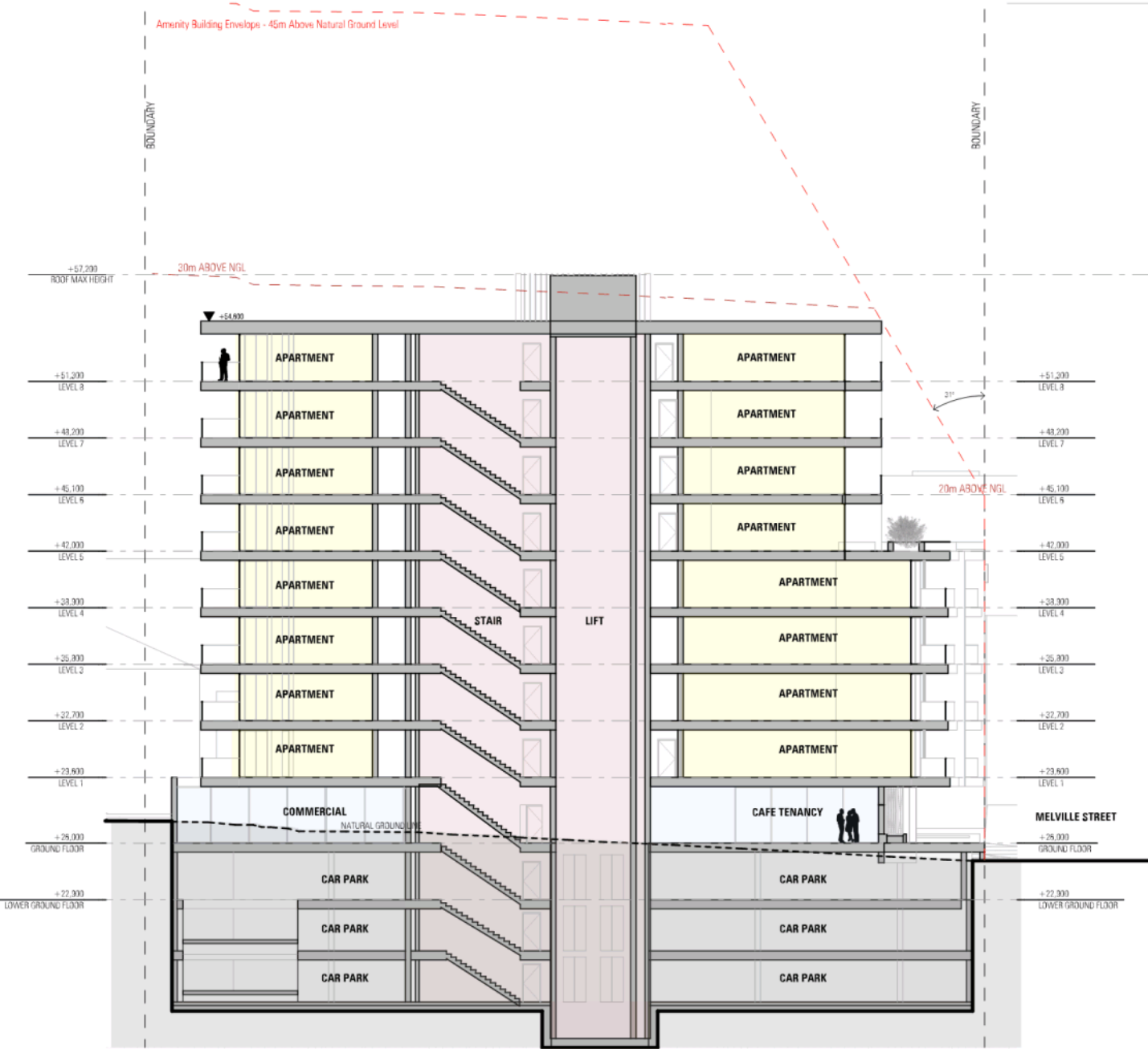
DRAWING NO

19066\_DA11

REVISION

REV 01 - 16/01/2019  
- Revised crossover  
- Staff and public bike storage added  
REV02 - 20/03/2020  
- Reduced height





DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS GOVERN. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK. JAWA SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTS, SPECIFICATIONS, REPORTS AND DRAWINGS.

JACOB ALLEN WADE PTY LTD  
ABN 32 003 553 473  
THE ORDINANCE STORE  
21 CASTRAY EPLANADE  
BATTERY POINT TASMANIA  
AUSTRALIA 7004

TELEPHONE 05 9222 4395  
FAX 05 9222 5726  
jawa@jawaarchitects.com  
www.jawaarchitects.com

JAWA ARCHITECTS

PROJECT

90 MELVILLE STREET  
Hobart, Tas, 7000

For  
Giameos Construction & Development

DRAWING

SCALE 1:200 @ A3  
DATE March 2020  
DRAWN TL, TG  
CHECKED SV  
PLOT DATE 25/03/2020  
CAD REF

Revised Basic for  
ARCHICAD 23/1996, 90 Melville 25/10066,  
90 Melville 21, 0404 - REVISED HEIGHT

PROJECT NORTH



ISSUE

PLANNING APPLICATION

DRAWING NAME

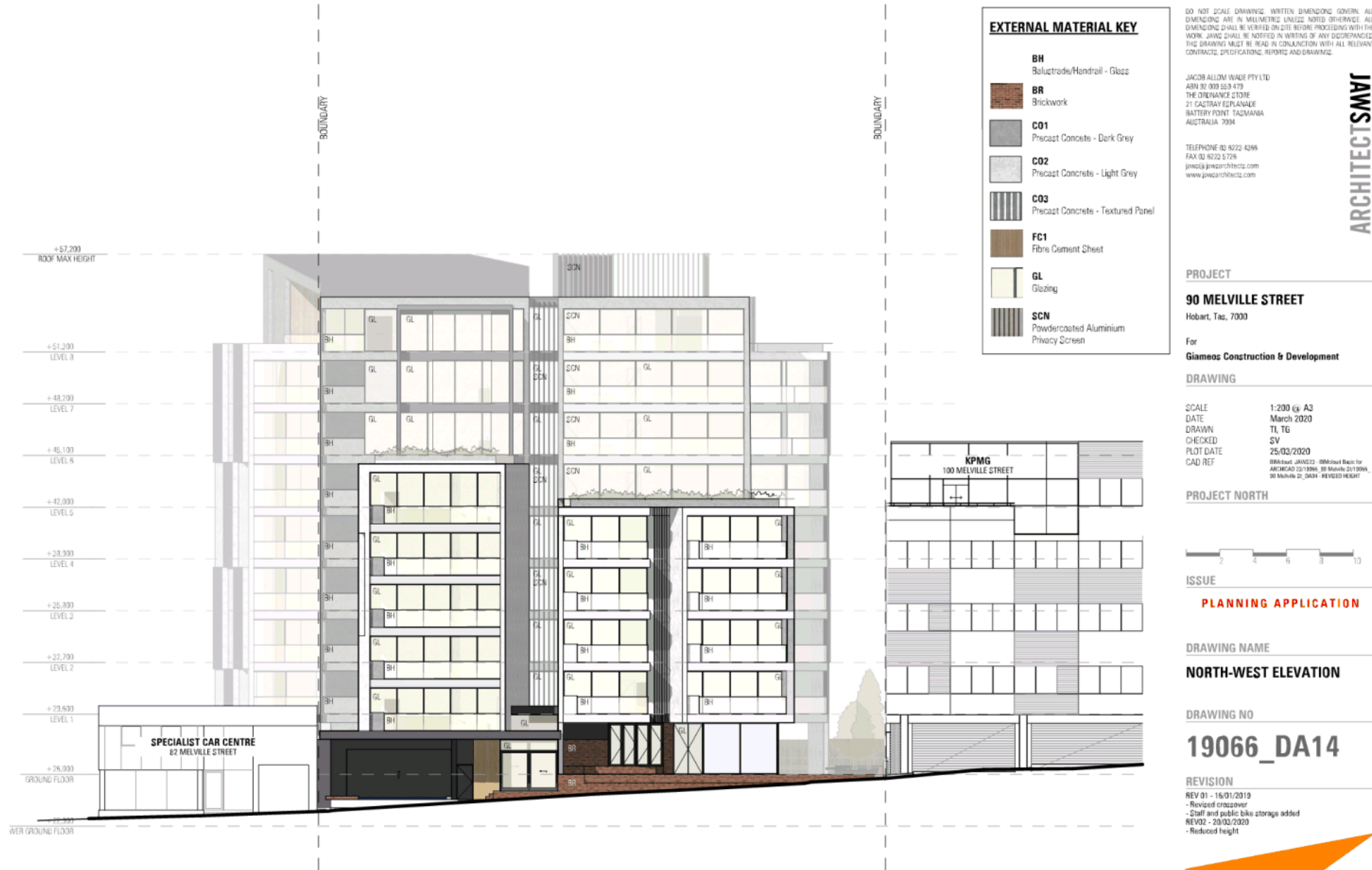
SECTION B

DRAWING NO

19066\_DA13

REVISION

REV 01 - 16/01/2019  
- Revised crossover  
- Staff and public bike storage added  
REV02 - 20/03/2020  
- Reduced height





EXTERNAL MATERIAL KEY

- BH Bulstrode/Handrail - Glass
- BR Brickwork
- C01 Precast Concrete - Dark Grey
- C02 Precast Concrete - Light Grey
- C03 Precast Concrete - Textured Panel
- FC1 Fibre Cement Sheet
- GL Glazing
- SCN Powdercoated Aluminium Privacy Screen

DO NOT SCALE DRAWING. WRITTEN DIMENSIONS GOVERN. ALL DIMENSIONS ARE IN MILLIMETRE UNLESS NOTED OTHERWISE. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK. JAWG SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTS, SPECIFICATIONS, REPORTS AND DRAWINGS.

JACOB ALLEN WORKS PTY LTD  
ABN 32 003 553 473  
THE ORDINANCE STORE  
21 CASTRAY ESPRANADE  
BATTERY POINT TASMANIA  
AUSTRALIA 7004

TELEPHONE 05 4222 4395  
FAX 05 4222 5726  
jawg@jwarchitects.com  
www.jwarchitects.com

PROJECT

90 MELVILLE STREET  
Hobart, Tas, 7000

For  
Giameos Construction & Development

DRAWING

SCALE 1:200 @ A3  
DATE March 2020  
DRAWN TI, TG  
CHECKED SV  
PLOT DATE 25/03/2020  
CAD REF JBW/2019/004 - 004/004 - REVISED HEIGHT

PROJECT NORTH



ISSUE

PLANNING APPLICATION

DRAWING NAME

NORTH-EAST ELEVATION

DRAWING NO

19066\_DA15

REVISION

REV 01 - 16/01/2019  
- Revised crossover  
- Staff and public bike storage added  
REV 02 - 20/03/2020  
- Reduced height

JAWG ARCHITECTS



EXTERNAL MATERIAL KEY	
BH	Balustrade/Handrail - Glass
BR	Brickwork
C01	Precast Concrete - Dark Grey
C02	Precast Concrete - Light Grey
C03	Precast Concrete - Textured Panel
FC1	Fibre Cement Sheet
GL	Glazing
SCN	Powdercoated Aluminium Privacy Screen

DO NOT SCALE DRAWING. WRITTEN DIMENSIONS GOVERN. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK. JAWA SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACT, SPECIFICATIONS, REPORTS AND DRAWINGS.

JACOBI ALLEN WADE PTY LTD  
ABN 82 003 553 473  
THE ORDINANCE STORE  
21 CASTRAY EPLANADE  
BATTERY POINT TASMANIA  
AUSTRALIA 7004

TELEPHONE 05 4222 4395  
FAX 05 4222 5726  
jawa@jawaarchitects.com  
www.jawaarchitects.com

PROJECT

90 MELVILLE STREET  
Hobart, Tas, 7000

For  
Giameos Construction & Development

DRAWING

SCALE 1:200 @ A3  
DATE March 2020  
DRAWN TL, TG  
CHECKED SV  
PLOT DATE 25/03/2020  
CAD REF 19066-DA16-01  
BIMBAUT, JAMES J. (BIMBAUT) Basic for ARCHICAD 23/19066, 90 Melville St/19066, 90 Melville St, 0404 - REVISED HEIGHT

PROJECT NORTH



ISSUE

PLANNING APPLICATION

DRAWING NAME

SOUTH-WEST ELEVATION

DRAWING NO

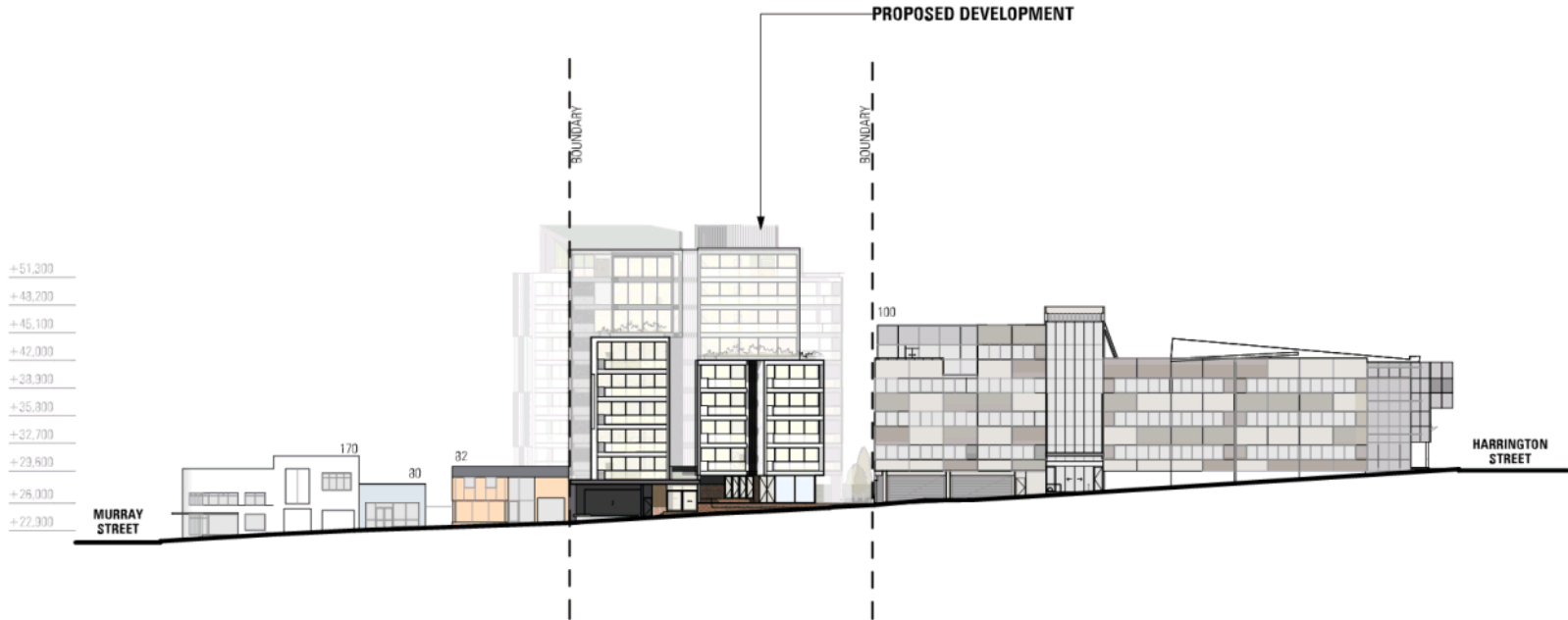
19066\_DA16

REVISION

REV 01 - 16/01/2019  
- Revised crossover  
- Staff and public bike storage added  
REV 02 - 20/03/2020  
- Reduced height







DO NOT SCALE. DRAWINGS: WRITTEN DIMENSIONS GOVERN. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK. JAWW SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTS, SPECIFICATIONS, REPORTS AND DRAWINGS.

JACOB ALLEN WADE PTY LTD  
ABN 32 003 553 473  
THE ORDINANCE STORE  
21 CASTRAY EPLANADE  
BATTERY POINT TADWANIA  
AUSTRALIA 7004

TELEPHONE 08 9222 4395  
FAX 08 9222 6726  
jaww@jawaarchitects.com  
www.jawaarchitects.com

JAWW ARCHITECTS

PROJECT

90 MELVILLE STREET  
Hobart, Tas, 7000

For  
Giameos Construction & Development

DRAWING

SCALE 1:500 @ A3  
DATE March 2020  
DRAWN TL, TG  
CHECKED SV  
PLOT DATE SV  
CAD REF  
DRAWN BY: JAWW223 - 08/03/2020  
ARCHICAD 22/1/2020 - 90 Melville 22/1/2020  
90 Melville 21, 2020 - REVISED HEIGHT

PROJECT NORTH



ISSUE

PLANNING APPLICATION

DRAWING NAME

MELVILLE STREET ELEVATION

DRAWING NO

19066\_DA18

REVISION

REV 01 - 16/01/2019  
- Revised crossover  
- Staff and public bike storage added  
REV 02 - 20/03/2020  
- Reduced height





ARTIST IMPRESSION - CORNER OF MELVILLE STREET AND MURRAY STREET

DO NOT SCALE. DRAWINGS: WRITTEN DIMENSIONS GOVERN. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK. JAWZ SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTS, SPECIFICATIONS, REPORTS AND DRAWINGS.

JACOB ALLEN WORKS PTY LTD  
ABN 82 003 553 473  
THE ORDINANCE STORE  
21 CASTRAY REPLANADE  
BATTERY POINT TASMANIA  
AUSTRALIA 7004

TELEPHONE 08 9222 4395  
FAX 08 9222 6798  
jawz@jacoballenworks.com  
www.jacoballenworks.com

JAWZ  
ARCHITECTS

PROJECT

90 MELVILLE STREET  
Hobart, Tas, 7000

For  
Giameos Construction & Development

DRAWING

SCALE  
DATE  
DRAWN  
CHECKED  
PLOT DATE  
CAD REF

OK A2  
March 2020  
TL, TG  
SV  
SV

3D Model: JAWZ123 - 3D Model Based for  
ARCHICAD 23/1896, 90 Melville St/1000A,  
90 Melville St, 0404 - REVISED HEIGHT

PROJECT NORTH

ISSUE

PLANNING APPLICATION

DRAWING NAME

3D VISUALISATION 01

DRAWING NO

19066\_DA19

REVISION

REV 01 - 16/01/2019  
- Revised crossover  
- Staff and public bike storage added  
REV02 - 20/03/2020  
- Reduced height



ARTIST IMPRESSION - CORNER OF MELVILLE STREET AND HARRINGTON STREET



ARTIST IMPRESSION - MELVILLE STREET VIEW TO CAFE AND LANEWAY

DO NOT SCALE. DRAWING: WRITTEN DIMENSIONS GOVERN. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK. JAWAS SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTS, SPECIFICATIONS, REPORTS AND DRAWINGS.

JACOB ALLEN WADE PTY LTD  
ABN 32 003 553 473  
THE ORDINANCE STORE  
21 CASTRAY ESPRANADE  
BATTERY POINT TASMANIA  
AUSTRALIA 7004

TELEPHONE 08 4272 4395  
FAX 08 4272 0 776  
jawa@jawaarchitects.com  
www.jawaarchitects.com

ARCHITECTS

PROJECT

90 MELVILLE STREET  
Hobart, Tas, 7000

For  
Giameos Construction & Development

DRAWING

SCALE  
DATE  
DRAWN  
CHECKED  
PLOT DATE  
CAD REF

OK A2  
March 2020  
TL, TG  
SV  
SV

Drawn by: JAWAS/22 - 3D Artist/Basic for  
ARCHICAD 22/1896: 90 Melville St/10066,  
90 Melville St, 0404 - REVISED HEIGHT

PROJECT NORTH

ISSUE

PLANNING APPLICATION

DRAWING NAME

3D VISUALISATION 02

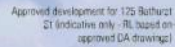
DRAWING NO

19066\_DA20

REVISION

REV 01 - 16/01/2019  
- Revised crossover  
- Staff and public bike storage added  
REV02 - 20/03/2020  
- Reduced height





**ARTIST IMPRESSION - NORTHERN CORNER OF THE INTERSECTION OF BRISBANE AND MURRAY STREET**

ARCHITECTS JAWA

- Revised crossover
- Staff and public bike storage added

REV02 - 20/03/2020

- Reduced height





MURRAY STREET NEAR DEVONSHIRE SQUARE CORNER



ARTIST IMPRESSION - MURRAY STREET NEAR DEVONSHIRE SQUARE CORNER

DO NOT SCALE. DRAWINGS - WRITTEN DIMENSIONS GOVERN. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK. JAWZ SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTS, SPECIFICATIONS, REPORTS AND DRAWINGS.

JACOB ALLEN WADE PTY LTD  
ABN 82 003 553 473  
THE ORDINANCE STORE  
21 CASTRAY REPLANADE  
BATTERY POINT TASMANIA  
AUSTRALIA 7004

TELEPHONE 03 6222 4395  
FAX 03 6222 5776  
jawz@jawaarchitects.com  
www.jawaarchitects.com

JAWZ  
ARCHITECTS

PROJECT

**90 MELVILLE STREET**  
Hobart, Tas, 7000

For  
**Giameos Construction & Development**

DRAWING

SCALE	1:10 @ A3
DATE	March 2020
DRAWN	TL, TG
CHECKED	SV
PLOT DATE	SV
CAD REF	00000001_JAWZ123_00000001

00000001\_JAWZ123\_00000001  
ARCHICAD 23/1806\_30 Melville St/10000\_30 Melville St/10000 - REVISED HEIGHT

PROJECT NORTH

ISSUE

**PLANNING APPLICATION**

DRAWING NAME

**3D VISUALISATION 04**

DRAWING NO

**19066\_DA22**

REVISION

REV 01 - 16/01/2019  
- Revised crossover  
- Staff and public bike storage added  
REV02 - 20/03/2020  
- Reduced height





WESTERN CORNER OF THE  
INTERSECTION OF MELVILLE  
STREET & BARRACK STREET



ARTIST IMPRESSION - WESTERN CORNER OF THE INTERSECTION OF MELVILLE STREET & BARRACK STREET

DO NOT SCALE. DRAWING WRITTEN DIMENSIONS GOVERN. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK. JAWZ SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTS, SPECIFICATIONS, REPORTS AND DRAWINGS.

JACOB ALLEN WADE PTY LTD  
ABN 32 003 553 473  
THE ORDINANCE STORE  
21 CASTRAY EPLANADE  
BATTERY POINT TASMANIA  
AUSTRALIA 7004

TELEPHONE 03 9222 4395  
FAX 03 9222 6726  
jawz@jawaarchitects.com  
www.jawaarchitects.com

JAWZ  
ARCHITECTS

PROJECT

**90 MELVILLE STREET**  
Hobart, Tas, 7000

For  
**Giameos Construction & Development**

DRAWING

SCALE	1:100
DATE	March 2020
DRAWN	TL, TG
CHECKED	SV
PLOT DATE	SV
CAD REF	19066_DAWZ - 3D Model Basis for ARCHICAD 23/19066 - 90 Melville St/19066 90 Melville St, 0404 - REVISED HEIGHT

PROJECT NORTH



ISSUE

PLANNING APPLICATION

DRAWING NAME

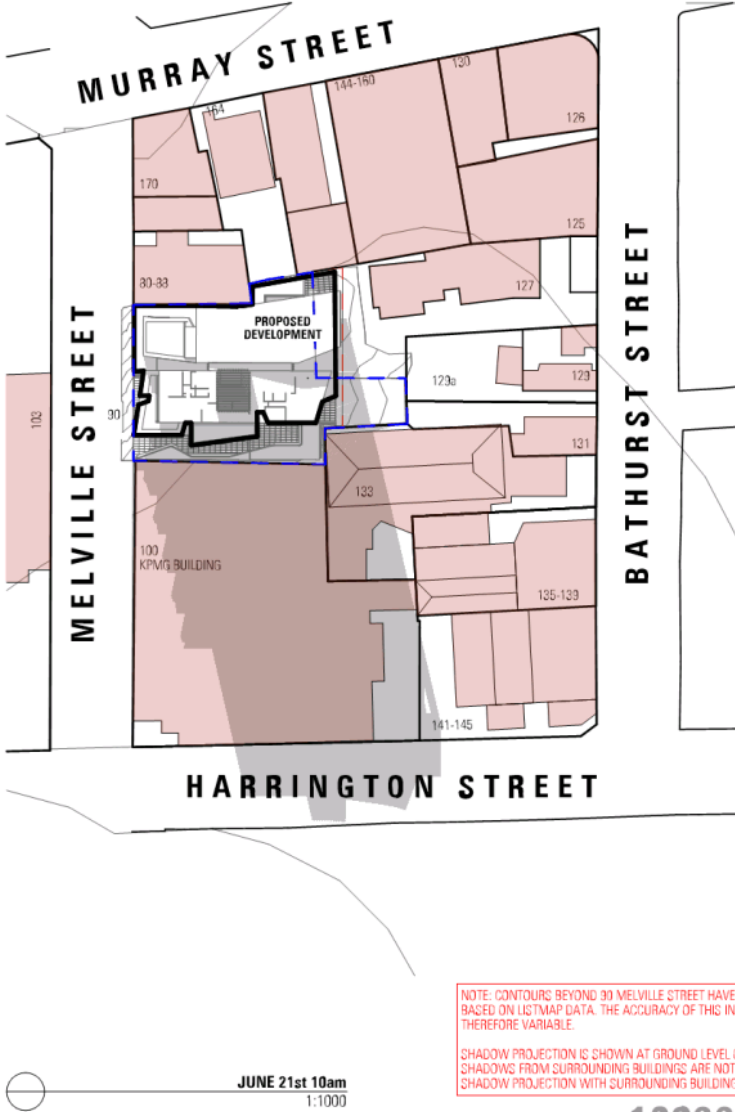
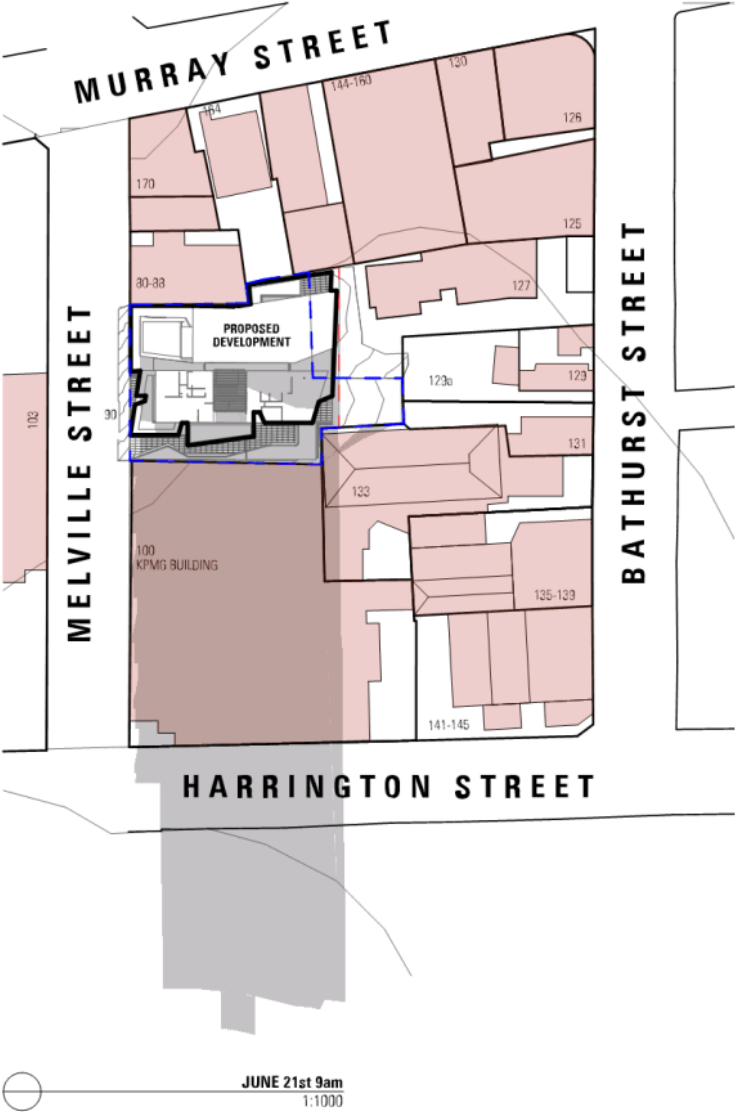
**3D VISUALISATION 05**

DRAWING NO

**19066\_DA23**

REVISION

REV 01 - 16/01/2019  
- Revised crossover  
- Staff and public bike storage added  
REV02 - 20/03/2020  
- Reduced height



NOTE: CONTOURS BEYOND 90 MELVILLE STREET HAVE BEEN EXTRAPOLATED BASED ON LISTMAP DATA. THE ACCURACY OF THIS INFORMATION IS THEREFORE VARIABLE.

SHADOW PROJECTION IS SHOWN AT GROUND LEVEL ONLY. SHADOWS FROM SURROUNDING BUILDINGS ARE NOT SHOWN. SHADOW PROJECTION WITH SURROUNDING BUILDING WILL VARY.

19066\_DA24

JAWSARCHITECTS

JAWSON ALLIANCE PTY LTD  
ABN 51 160 553 476  
100 BATHURST STREET  
21 CASTLEBRIDGE NSW  
BATHURST NSW 2134  
AUSTRALIA

TELEPHONE 62 6222 4268  
FAX 62 6222 4276  
jaws@jawsarchitects.com  
www.jawsarchitects.com

DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS CONTROL. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE. ALL DIMENSIONS SHALL BE VERIFIED BY THE CLIENT PRIOR TO COMMENCEMENT OF WORK. JAWSON SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES. THE DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTS, SPECIFICATIONS, NOTICES AND DRAWINGS.

PROJECT

90 MELVILLE STREET  
Hobart, Tas, 7000  
For  
Giannex Construction & Development

DRAWING

STATUS **PLANNING APPLICATION**

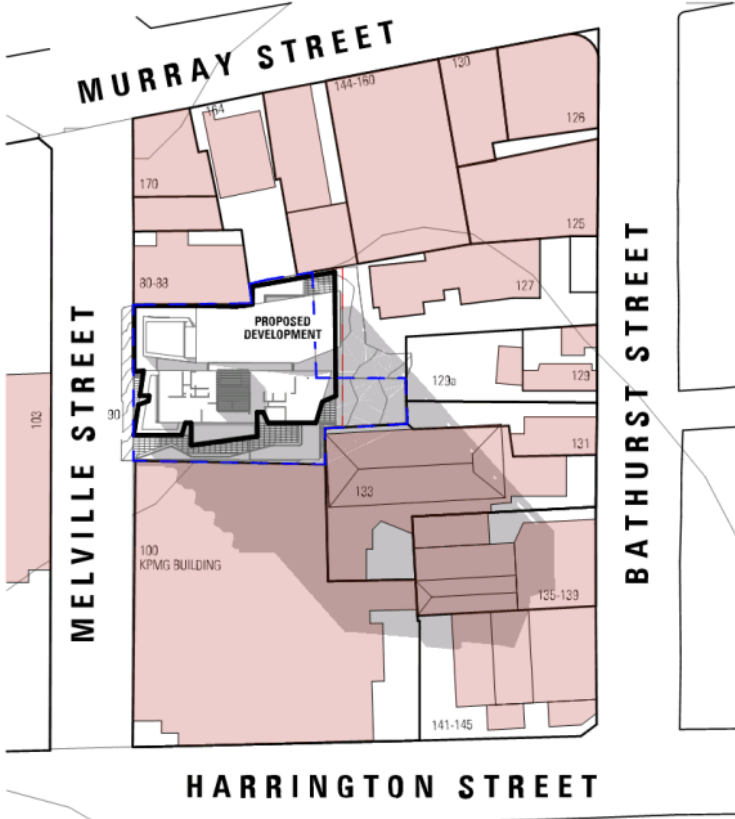
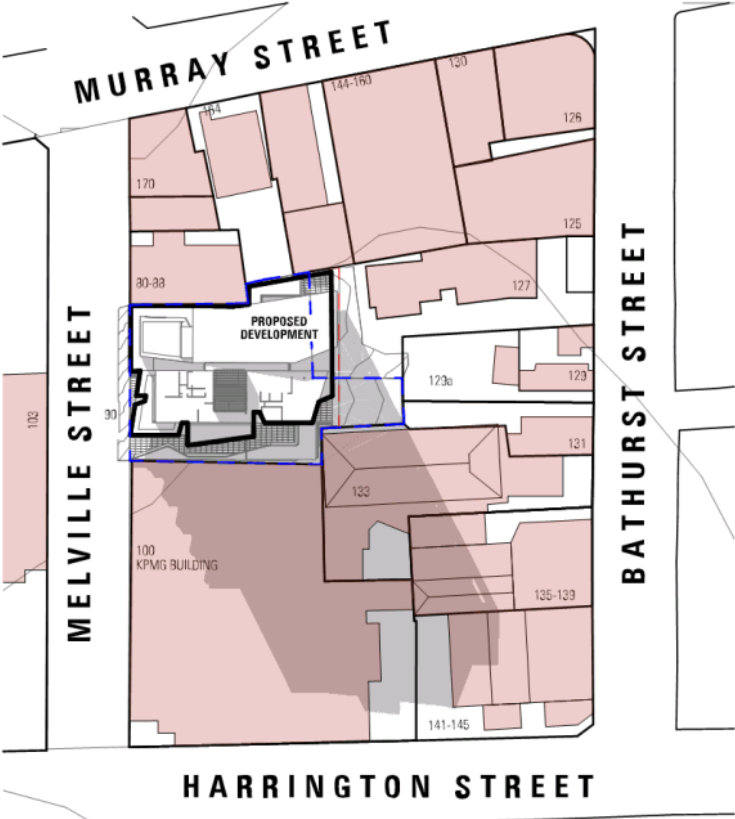
DRAWING NAME **SHADOW DIAGRAM 01**

PLOT DATE 25/03/2020  
REVISION 02

SCALE 1:1000 @ A3  
DATE 25/03/2020  
DRAWN TL, TG  
CHECKED SV

CAD REF: B:\Work\JAWSON - BATHURST - 19066 - 90 MELVILLE ST - 01.DWG - REVISED 02/03/2020

Copyright: Jaws All Rights Reserved



NOTE: CONTOURS BEYOND 90 MELVILLE STREET HAVE BEEN EXTRAPOLATED BASED ON LISTMAP DATA. THE ACCURACY OF THIS INFORMATION IS THEREFORE VARIABLE.

SHADOW PROJECTION IS SHOWN AT GROUND LEVEL ONLY. SHADOWS FROM SURROUNDING BUILDINGS ARE NOT SHOWN. SHADOW PROJECTION WITH SURROUNDING BUILDING WILL VARY.

19066\_DA25

JAWSARCHITECTS

JAWSON ALLIANCE PTY LTD  
ABN 51 160 553 470  
100 BATHURST STREET  
21 CASTLEBRAY NSW 1540  
BATHURST NSW 1540  
AUSTRALIA 2004

TELEPHONE 62 6222 4268  
FAX 62 6222 4276  
jaws@jawsarchitects.com  
www.jawsarchitects.com

DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS CONTROL. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE. ALL DIMENSIONS SHALL BE VERIFIED BY THE WORKING DRAWING SHALL BE NOTED IN WRITING OR ANY DISCREPANCIES. THE DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTS, SPECIFICATIONS, NOTICES AND DRAWINGS.

PROJECT

90 MELVILLE STREET  
Hobart, Tas, 7000  
For  
Giannex Construction & Development

DRAWING

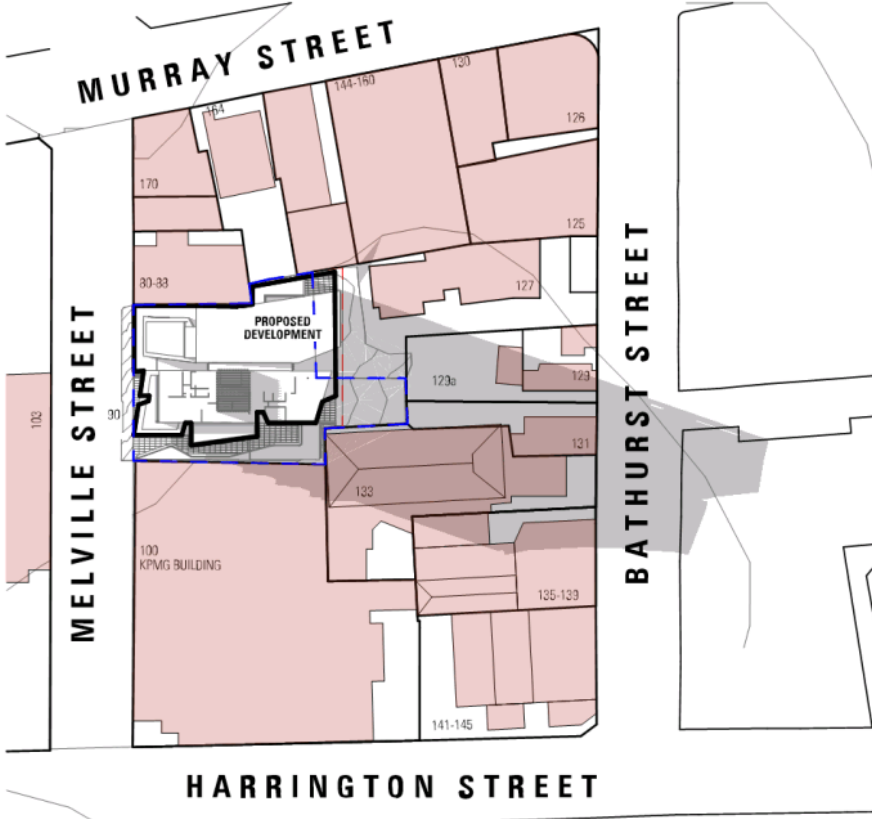
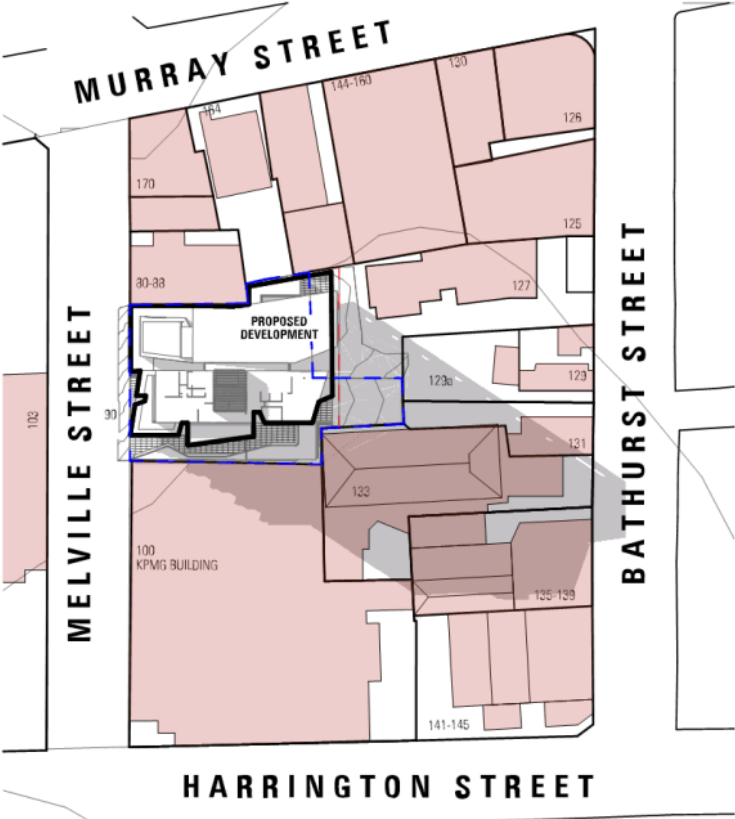
STATUS **PLANNING APPLICATION**  
PLOT DATE 25/03/2020  
REVISION 02

DRAWING NAME **SHADOW DIAGRAM 02**

SCALE 1:1000 @ A3  
DATE 25/03/2020  
DRAWN TL, TG  
CHECKED SV

CAD REF BIMbaout JAW022 - BIMbaout Basic for ARCHICAD 22/19066\_90 Melville St\_DASH - REVISED 02/03/2020

Copyright Jaws All Rights Reserved



NOTE: CONTOURS BEYOND 90 MELVILLE STREET HAVE BEEN EXTRAPOLATED BASED ON LISTMAP DATA. THE ACCURACY OF THIS INFORMATION IS THEREFORE VARIABLE.

SHADOW PROJECTION IS SHOWN AT GROUND LEVEL ONLY. SHADOWS FROM SURROUNDING BUILDINGS ARE NOT SHOWN. SHADOW PROJECTION WITH SURROUNDING BUILDING WILL VARY.

19066\_DA26

JAWSARCHITECTS

JAWSON ALLIANCE PTY LTD  
200/21 HOBART STREET  
HOBART TAS 7000  
TEL: 03 6232 4261  
FAX: 03 6232 4261  
WWW.JAWSARCHITECTS.COM

DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS CONTROL. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE. ALL DIMENSIONS SHALL BE VERIFIED BY THE WORKING DRAWING SHALL BE NOTED IN WRITING OR ANY DISCREPANCY. THE DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTS, SPECIFICATIONS, NOTICES AND DRAWINGS.

PROJECT

90 MELVILLE STREET  
Hobart, Tas, 7000  
For  
Glenmore Construction & Development

DRAWING

STATUS: **PLANNING APPLICATION**

PLOT DATE: 25/03/2020  
REVISION: 02

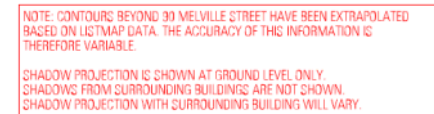
DRAWING NAME: **SHADOW DIAGRAM 03**

SCALE: 1:1000 @ A3  
DATE: 25/03/2020  
DRAWN: TL, TG  
CHECKED: SV

CAD REF: B:\Work\JAW023 - B\Work\Basis for ARCHCAD 22/10/09, 90 Melville Dr, 03\19066\_DA26 - REVISED.DWG

Copyright: Jacob Allen Works Pty Ltd





19066 DA27

© Copyright, Jacob Allen Works Pty. Ltd.

March 2020

JAWS  
ARCHITECTS**DESIGN STATEMENT - 90 MELVILLE STREET HOBART**

The proposal for 90 Melville Street Hobart sits within the CBD fringe and is predominately a residential complex with commercial/retail use on the ground floor. The development comprises 3 levels of basement carparking, ground level commercial uses for a minimum of two tenancies and 55 apartments, with a mix of four 1-bedroom apartments, forty-eight 2-bedroom apartments, and three 3-bedroom apartments.

The massing of the building has been designed to maximise the site coverage whilst maintaining setbacks to provide enhanced amenity for residents. The form is broken down into six discrete elements and provides for a series of individually identifiable components that help to reduce the overall form and massing on the site. The service core is located centrally to provide efficient access to all apartments and help divide the forms, whilst allowing light to penetrate deeply into the centre of the site. The façade treatment of this design component assists to create a unifying element that ties all the components together. Refer Diagrams 1 - 3.

**DIRECTORS**  
NEAL MACKINTOSH  
SCOTT VERDOUW

**ASSOCIATES**  
FIONA GRAHAM  
CATHERINE WILLIAMS  
HANZ LEE

**CONSULTANT**  
DAVID BUTTON

Diagram 01

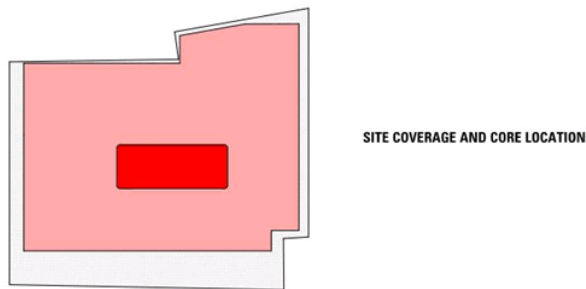
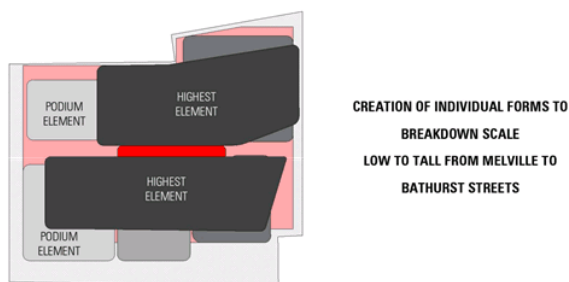


Diagram 02



JACOB ALLOM WADE P/L  
ABN 92 009 559 479

21 Castray Esplanade  
Battery Point, Tasmania  
AUSTRALIA 7004

36 Brisbane Street  
Launceston, Tasmania  
AUSTRALIA 7250

TEL: 03 6223 4366

[www.jawsarchitects.com](http://www.jawsarchitects.com)  
[jaws@jawsarchitects.com](mailto:jaws@jawsarchitects.com)

EXPERIENCE CREATIVE QUALITY

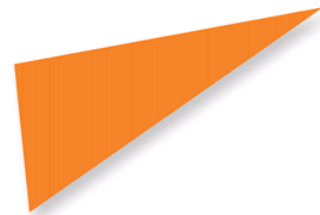
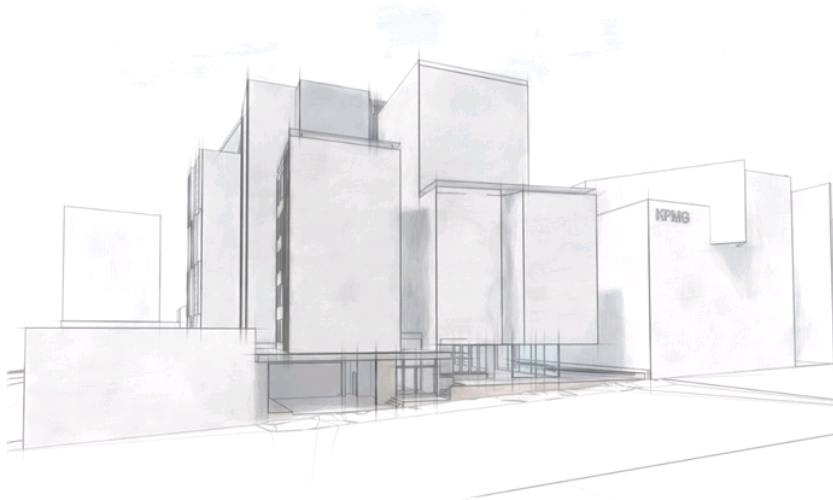


Diagram 03



The development height has been a continuous process of analysis and contextual review. The two podium buildings along Melville Street fall below 20m above natural ground level (NGL), whilst the taller buildings beyond the podium building fall under 30m above NGL. The highest point of the development is located at the deepest setback of the site, with only the service equipment and lift overruns higher than 30m above NGL. The tallest roof element to the north falls significantly to reduce the height along its length and create an interesting counterpoint to the other flat roofs at lower levels.

The composition and transition of the building and its heights has been 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 defined in Leigh's documents *Building Heights Standards Review Project*. The development sits comfortably, transitioning without being individually prominent (refer 3D visualisation 3 in Architectural DA set).

The ground plane is intended to be an activated space with retail/commercial tenancing to create a vibrant public space along Melville street. The potential also exists for future linkage to Bathurst Street via a laneway connection. Brick is used 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.



An 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

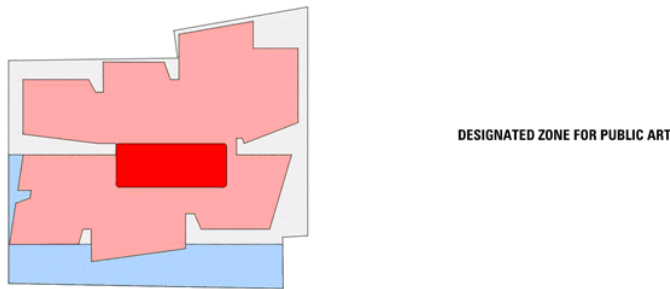
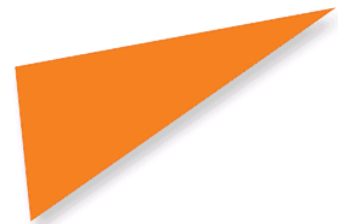
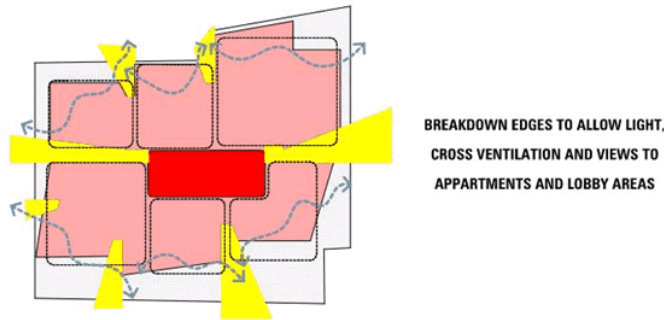


Diagram 05 – Examples of Public Art



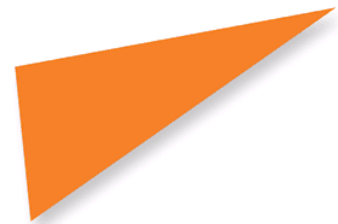
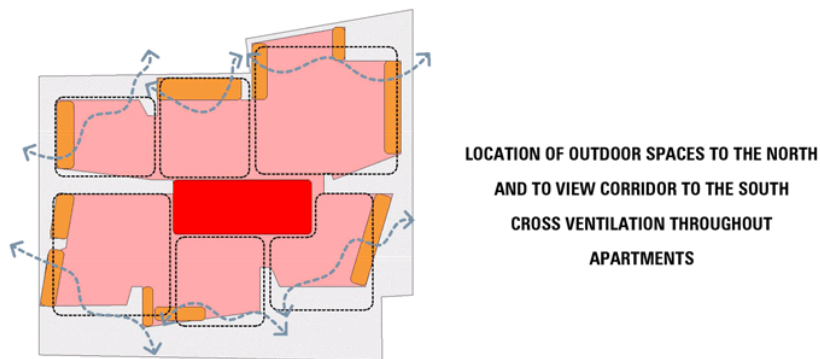
The periphery of the building forms are broken down with a recessed junction between apartments to allow for light penetration into each apartment and the shared circulation spaces. This breaking down of the edges of each of the building components allows the forms to read more as a family of buildings rather than a singular block and adds to the variation of light and contrast on the elevations. Refer diagram 06.

Diagram 06:



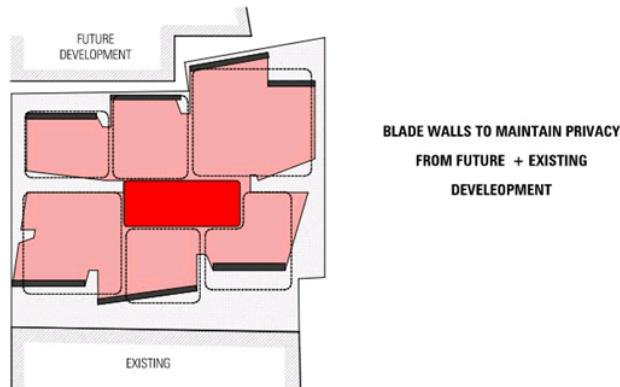
Balconies and terraces for the apartments are orientated to maximise northern aspect where possible and take advantage of the view corridor to the south of the site to Wrest Point and Sandy Bay Point down the River Derwent. In conjunction with windows, these private open areas allow for maximised cross ventilation opportunities. Refer diagram 07.

Diagram 07:



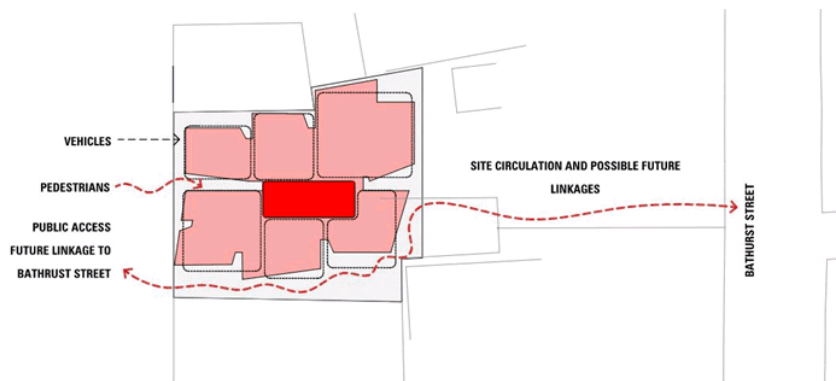
Patterned blade walls to the east and west boundaries of the buildings provide for light and shadow along the elevations and break down the scale of the facade along these edges. These blade walls also allow for privacy to the apartments from future and existing development. Refer Diagram 8.

Diagram 08:



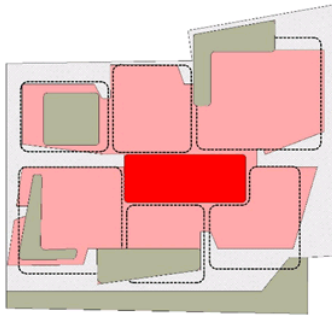
A vehicle entry point for residents and commercial vehicles to the north east corner of the site allows access to the parking areas. Pedestrian access to the apartments is located centrally on the block through an entry atrium and access to commercial tenancies is through the forecourt at ground level. Ample bike storage has been located in the parking areas for residents and commercial tenants. Refer Diagram 09.

Diagram 09:



Green roof terraces have been provided at various levels of the buildings to soften the façade edges and provide a positive outlook for residents. These areas will be planted with hardy vegetation that have minimal water requirements and are low maintenance. The terrace on level 9 is intended to be a communal outdoor space and garden area. Refer Diagram 10.

Diagram 10:



GREEN SPACES LOCATED  
ON ROOF TERRACES





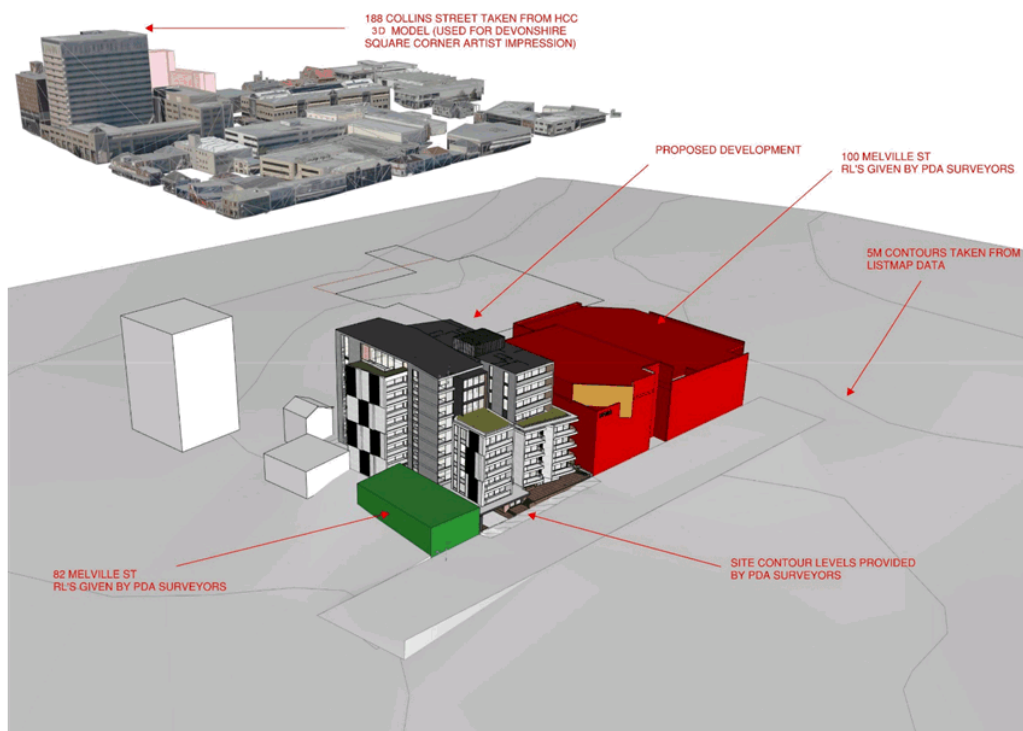
**VISUALISATION MODELLING METHEDOLOGY**

*JAWS Architects* prepared all Artist Impressions using 3D CAD software *ArchiCAD*, rendering software *Lumion*, and post production in *Adobe Photoshop*. The 3D models, including proposed Architectural models and existing surrounding context models were developed in Graphisoft *ArchiCAD* version 23.

The existing subject site is based on a referenced DWG file of the survey information prepared by PDA surveyors, with site contours in 0.200m height intervals. The survey data is on GDA and AHD datum.

In addition, survey data on the adjoining buildings 82 Melville St (shown in green in **Figure 1**) and 100 Melville St (shown in red) have also been provided by PDA Surveyors.

The surrounding site model is a combination of The List Map Tasmania data, contours at 5.0m intervals, and a section of the Hobart City Council 3D model including 188 Collins St (which is used as a reference point for visualisation 04 DA22).



**Figure 1:** ArchiCAD Site model diagram

**IMAGE PRODUCTION METHEDOLOGY**

Photos have been taken on with a handheld camera at eye level (+1500mm above ground level).

The ArchiCAD model including the proposed building, and existing surrounding context models were exported into an external rendering software package *Lumion*, version 10.0.

Each Artist Impression is set up in the approximate location where the photo is taken from using virtual cameras within the software, then the photo matching tool is utilised within *Lumion*. The surveyed adjoining buildings of 82/100 Melville St are used as reference points to match the model view to the photo (refer to **Figure 2**).

This process is carried out for each of the Artist Impressions. As 82 Melville St is not visible in visualisation 04 (DA22), the HCC 3D model data of 188 Collins St is used as the additional reference point in replacement.

Refer to the following link for further details regarding the photo matching process in *Lumion*:

<https://support.lumion.com/hc/en-us/articles/360037122794-Photo-Matching-Tutorial-1-Quick-Start>



**Figure 2:** Snapshot of the photo matching tool in rendering software *Lumion*.

**CONCLUSION**

All care and effort has been made to represent the development's scale and mass that would be evident if the proposal were to be built.

## 90 Melville Street

### Objective assessment / comments

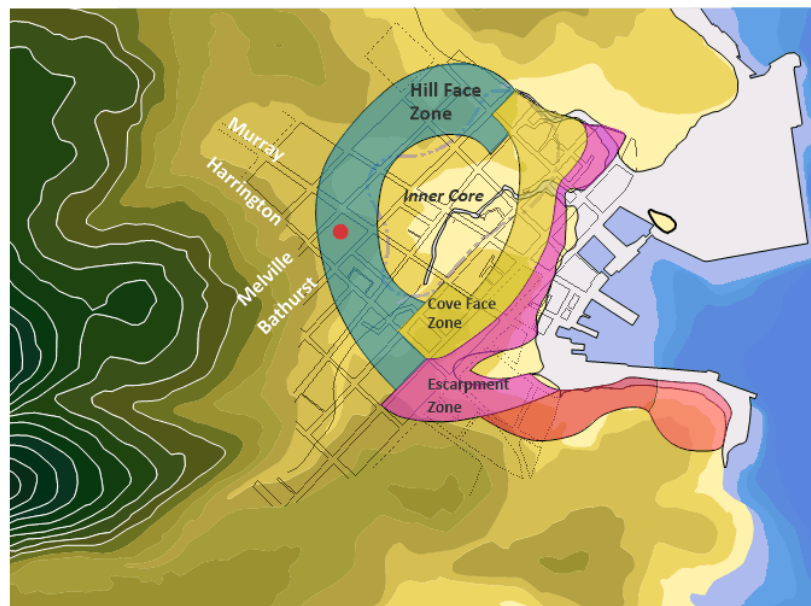
Leigh Woolley Architect

#### Background

Leigh Woolley was asked to give his opinion on the design approach to the proposed development as residential apartments of 90 Melville Street, Hobart. He did this on two occasions, (11.11.19 and 10.12.19).

These notes are in response to these brief meetings, specifically on the basis of the Building Height Standards document (June 30 2018) he produced for the Hobart City Council. \* Comments are accordingly limited to a consideration of the approach taken within that document, notably the proposed height control plane affecting the subject site.

As such it is noted that the subject site is within the proposed Hill Face or Inner Hills Zone, being the edge to the Inner Core area (or 'basin') and the encircling hill rise, especially from the south-west through to the north-west. This zone is intended to provide a transition in scale from the fine-grain of primarily residential precincts adjacent, to the denser inner core. It is located between the contained 'Inner Core Zone' (that includes the lower contours of the 'basin') and the 'natural rise' of the city centre slopes, especially to the west and north-west beyond.



● subject site

Proposed Central Hobart height control zones. The subject site is located within the Hill Face Zone which rises from 18m on its 'outer' edge to 45m on its 'inner' edge. (Woolley 2018)

(Note : The area 'contained' by the proposed height control planes (Cove Face, Escarpment and Hill Face Zones) provides a potential area of 'built intensity', where consideration of height beyond the amenity building envelope may be considered, subject to existing scheme provisions including : Amenity, Heritage and Townscape. Each 'height control plane' provides a shaped envelope suggesting a 'transition in scale' toward and in support of the defined Inner Core Zone.)

**Meeting 1:** 11am 11 November 2019

Leigh Woolley was asked to provide background to the work he had produced for the city \*. He referred in particular to the subject urban block, indicating its location within the proposed Hill Face Zone, referring to the 'transitional' intentions and potential scale outcomes, ranging across the zone from 18m on its 'outer edge', to 45m at its 'inner edge'.

It was noted that the existing contours of the subject site varied between 23 and 26m elevation along Melville Street. It was indicated that further down Melville Street (for example at its junction with Elizabeth Street) the contour is approximately 15 m elevation.

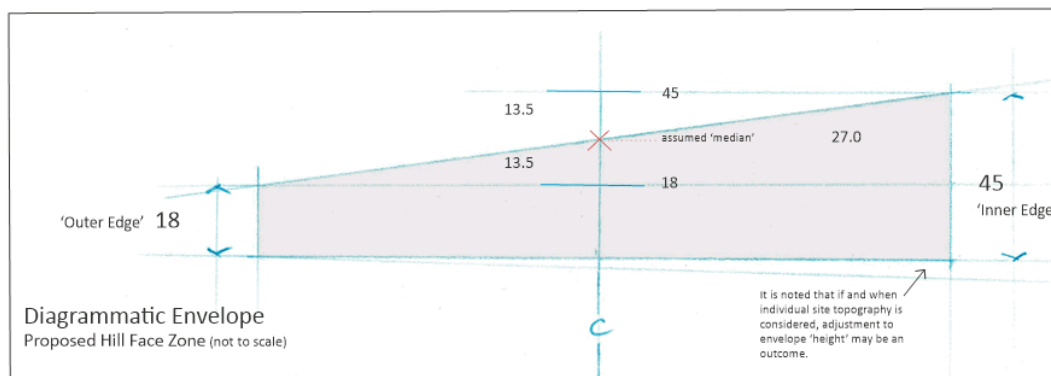
As the urban block (and subject site) is located roughly midway between outer and inner edges of the zone, a 'median' judgment to inform height outcomes should be identified. Several 'rule of thumb' approaches to identify the 'numeric mean' between inner and outer edges, (of such an envelope) suggests : (a) the difference between 18 and 45, divided equally 'vertically' (ie. 27 divided by 2 = 13.5) Add 13.5 to 18 = 31.5. Conversely (b) the metric mean identifies 27m as an outcome when 18m is subtracted from 45m = 27m. (Refer sketch below)

Taking into account the topography of the urban block and the cross-falls NW – SE., this 'mid-range' dimensional judgement may fluctuate. However in order to be broadly consistent (without actually modeling the outcome), a median between 27 and 31.5 was sought. This suggests 29.25m as the 'numeric median'. This was rounded up to 30 m as a likely acceptable 'height' outcome.

On the basis of this Leigh Woolley commented that :

*'the transitional location of the site (within the proposed Hill Face Zone), will in my mind make it difficult to support height above 30m. Street and site massing / bulk not with-standing'.*

At the end of the meeting Leigh Woolley was shown the proposed scheme. While the massing was stepped, especially toward Melville Street, with set-backs carefully considered, and recognizing that bulk reduced as height increased, particularly above 30 m, it was however noted that building height rose to around 45 m.



Meeting 2 : 2:30 pm 10 December 2019

A revised development scheme was presented.

It was noted that the scheme was 'more modeled', with more clearly defined building components differentiating elements of the earlier (more monolithic) form, potentially reducing the perceived bulk. Height was generally reduced to below 30m, with a roof top element (comprising approximately 20% of the site area), rising a floor level beyond this.

In my mind the scheme was a considerable improvement in terms of potential townscape impacts. Importantly the 'intent' of the height control plane (discussed at the earlier meeting) had clearly been considered through changes made to the scheme.



Leigh Woolley  
Architect + Urban Design Consultant  
13 December 2019



\* Building Heights Standards  
Review Project  
Leigh Woolley Architect + Urban Design Consultant  
Produced for the Hobart City Council  
June 30 2018

Leigh Woolley Architect + Urban Design Consultant Dec. 13 2019  
Addendum : 2 April 2020

**Addendum :**

In late March 2020 Leigh Woolley was forwarded the architectural drawings forming part of the proposed Development Application. He was asked whether he wished to update his earlier commentary. As a result, the following comments are made.

***Revised scheme, DA March 2020 :***

It is noted that some apartments have been located closer to the Melville Street frontage, thus reducing the podium set-back adjacent 100 Melville Street (KPMG building). It is also noted that the overall maximum height is less than 30 m above NGL.

Further considerations arising:

The height of the development anticipates a potential maximum density within the urban block, but not as a 'uniform' bulk. Rather, defined building elements modulate each elevation especially the street frontage, stepping along and back from Melville Street.

Bulk is also ameliorated by set-backs to side and rear boundaries, and by differentiation of building components within the depth of the lot. The primary building volume is set 'within', (rather than to the edges of,) the development site. This allows the architecture to be more readily expressed 'in the round', as a melding of residential 'blocks' each with its own outlook, rather than as a single monolithic form. Blank walls are accordingly minimized and the townscape advantaged.

It is also noted that the 'breaking down' of edges also allows light, cross-ventilation and views from the apartments, potentially providing local permeability and enhancing internal amenity. Building elements step down towards Melville Street, (and to a lesser extent Murray Street), while in contrast the development scale rises towards the centre of the urban block.

From the renders supplied, it is noted that when 'viewing down' Melville Street for example, (Dwg. DA 23) the development massing substantiates this characteristic 'layering', providing a consolidation and transition in scale within the urban block – back from Harrington Street and in from Melville Street.

As previously indicated, it should also be noted that the urban block is considered part of the transitional 'Hill Face' Zone\*, incorporating a potential 'height control plane' grading in scale from nearby residential and adjacent Commercial Zones, towards the inner core 'basin'. Within the 'basin' greater "intensity" is anticipated, for example on the contours SE of Bathurst Street, nearby. The approach taken would seem to be not inconsistent with this intent.

Leigh Woolley

2 April 2020





**NEIL SHEPHARD  
& ASSOCIATES**

*Planning and Development Consultants*

**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

25 March 2020



*90 Melville Street, Hobart**Mixed residential and commercial use & development**Planning Submission*

---

©This report is subject to copyright the owner of which is Neil Shephard & Associates Pty Ltd. All unauthorized copying or reproduction of this report or any part of it is forbidden by law and is subject to civil and criminal penalties as set out in the Copyright Act 1968. All requests for permission to reproduce this report or its contents must be directed to Neil Shephard.

## Table of Contents

<b>TABLE OF CONTENTS</b> .....	3
<b>1. INTRODUCTION</b> .....	4
<b>2. BACKGROUND</b> .....	5
<b>3. SITE LOCATION &amp; CONTEXT</b> .....	5
3.1 The Site.....	5
3.2 Surrounding Area.....	7
3.3 Infrastructure Service.....	8
<b>4. CONSULTATION</b> .....	9
<b>5. THE PROPOSED DEVELOPMENT</b> .....	10
<b>6. PLANNING ASSESSMENT</b> .....	12
6.1 Zoning.....	12
6.2 Zone purpose Statements.....	12
6.3 Desired Future Character Statements.....	14
6.4 Consistency with the Objectives for the Desired Future Character Statements.....	19
6.5 Use status.....	19
6.6 Use standards.....	20
6.7 Development standards for Buildings & Works.....	20
<b>7. CODES</b> .....	27
7.1 Potentially Contaminated Land Code.....	27
7.2 Road & Railway Asset Code.....	27
7.3 Parking & Access Code.....	27
7.4 Stormwater Management Code.....	27
7.5 Historic Heritage Code.....	27
7.6 Signs Code.....	28
<b>8. CONCLUSION</b> .....	29

Appendix A – Application Forms

Appendix B – Certificates of Title

Appendix C – Advice from L Woolley Architect

## 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.

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);
- Detail Survey Plan (PDA Surveyors);
- Concept Services Plan (Gandy & Roberts);
- Statement of Historical Archaeological Potential, and Archaeological Impact Assessment (Praxis Environment);
- Site contamination assessment (GES);
- Traffic and parking assessment (Milan Prodanovic);

## 2. Background

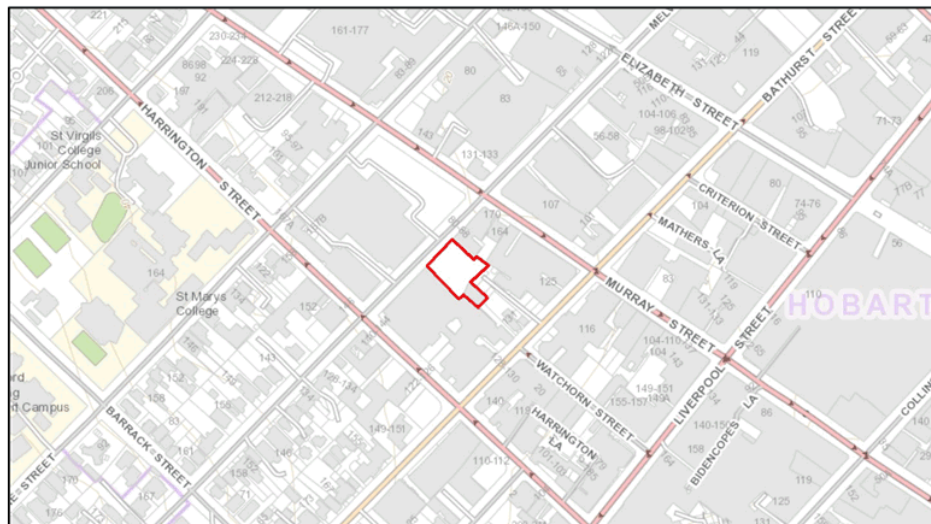
The subject land is most recently known as the Kemp & Denning timberyard and joinery, dating from 1910 (PRAXIS op cit. p23), although it had previously been divided into separate titles supporting residential cottages from as early as 1820 (ibid pp13-26).

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

## 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 7408842, and comprising of Certificate of Title 245771/1.



**Figure 1:** location of the subject land in a local context (base source: DPIPWE LISTmap 09/12/19)

90 Melville Street, Hobart

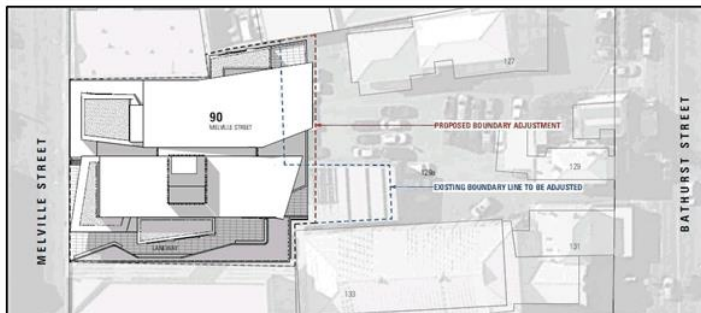
Mixed residential and commercial use &amp; development

Planning Submission



**Figure 2:** location of the subject land showing the immediate context of currently commercial surrounding use and development (base source: DPIPWE LISTmap 09/12/19)

At the time of writing this report the southeastern boundary of the land was subject to a boundary adjustment whereby the majority of the land containing the existing storage shed at the rear of the former K&D timberyard would be amalgamated with the property to the southeast (127 Bathurst Street). In return the boundary of 90 Melville would move an approximate average 7m to the southeast.



**Figure 3:** location of current boundary adjustment (base source: JAWS ARCHITECTS, Site Plan, Dwg 19066\_DA02,REV02 17 Mar 2020)



*90 Melville Street, Hobart**Mixed residential and commercial use & development**Planning Submission*

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)

### 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

*90 Melville Street, Hobart**Mixed residential and commercial use & development**Planning Submission*

---

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.



## 4. Consultation

Preliminary consultation was undertaken with senior Council planning officers in respect of Council's current 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 preliminary 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.

## 5. The Proposed Development

The application is for demolition, and construction of a residential complex with ground floor café/restaurant and commercial unit. Specifically, the proposal includes:

- Demolition of the existing building.
- Construction of a new building comprising 3 below-ground levels of car parking and storage; and nine above ground levels of commercial tenancies and residential apartments, including:

### Basement Levels 1 and 2

- 42 car spaces
- Storage
- Plant

### Lower Ground Floor Level

- 17 car spaces
- 2 motorbike spaces
- Bicycle storage room
- Bin storage
- Plant

### Ground Floor Level

- Café tenancy (220.38m<sup>2</sup>) + terrace patio off Melville Street
- Commercial tenancy (504.17m<sup>2</sup>) + courtyard and balcony
- Laneway connection and associated landscaping from Melville Street to 127 Bathurst Street
- Access ramp to below ground car parking and storage

### Levels 1 – 4

- 32 apartments comprised of 4 X single and 28 X double bedroom apartments ranging between 56.89m<sup>2</sup> and 109.21m<sup>2</sup>

### Level 5

- 7 X double bedroom apartments ranging between 86.48m<sup>2</sup> and 111.29m<sup>2</sup>
- Rooftop landscaping

### Level 6

- 6 X double bedroom apartments ranging between 86.48m<sup>2</sup> and 114.43m<sup>2</sup>
- Rooftop landscaping

### Level 7

- 6 X double bedroom apartments ranging between 86.48m<sup>2</sup> and 114.43m<sup>2</sup>

### Level 8

- 3 X three bedroom apartments and 1 X double bedroom apartment ranging between 100.05m<sup>2</sup> and 161.65m<sup>2</sup>
- landscaping

*90 Melville Street, Hobart**Mixed residential and commercial use & development**Planning Submission*

---

External surfaces of the building frame are to be pre-cast concrete panels in a selected variety of light, dark and textured finishes, intended to break up the visual massing of the building and reinforce the articulation of the form. The lateral walls (facing the adjoining Melville Street properties) will be punctuated with minor glazed window elements to provide additional light and cross ventilation. These glazed elements are also intended to visually mitigate the bulk and massing of the building.

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

Feature roof gardens are to be provided at Levels 5, and 6.

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.

## 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.

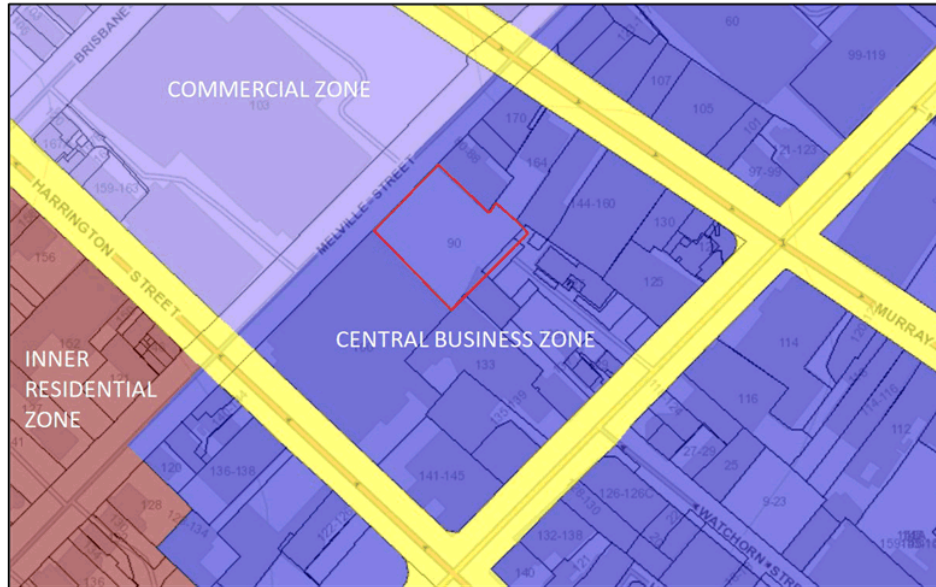


Figure 4: zoning of the subject site and surrounding area (base source: DPIPWE TheLIST 10/12/19)

### 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 includes a ground floor level café/restaurant and commercial tenancy, a street level terrace with potential laneway access through to Bathurst, the opportunity for a public art installation, and 55 residential apartments. The proposal therefore provides business, community and food 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 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, street level commercial uses including indoor/outdoor, 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 street level at a scale and character appropriate to the CBD, within easy walking distance to 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 street level commercial uses including a café/restaurant with indoor and outdoor dining 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 55 residential units 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.*

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.

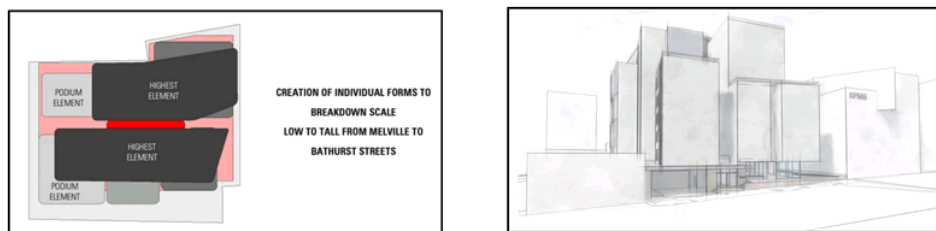
Moreover, the proposed development is well within the Amenity Building Envelope, and further assessment is not required other than with regard to the concept of 'transition'.

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 buildings designs in the Hobart CBD.

Rather than simply adopting the 'podium' design, the proposal 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).

Accordingly, 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:** excerpts from JAWS ARCHITECTS, Site modelling diagrams 2 & 3, Dec 2019)



*(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, the varying orientation of each element also ensures that as much light passes through the building as possible (see Figure 6 below).

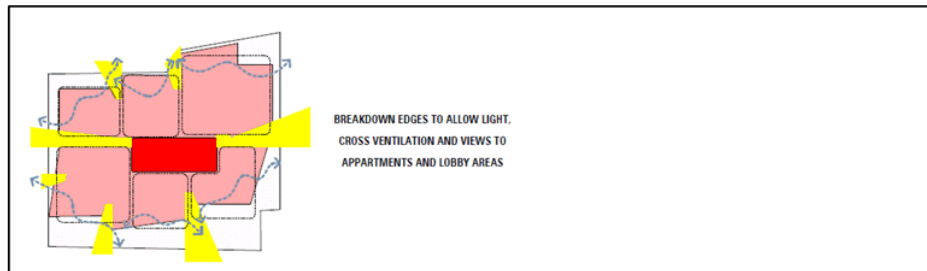


Figure 6: excerpt from JAWS ARCHITECTS, Site modelling diagram 6, Dec 2019)

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 3pm 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.

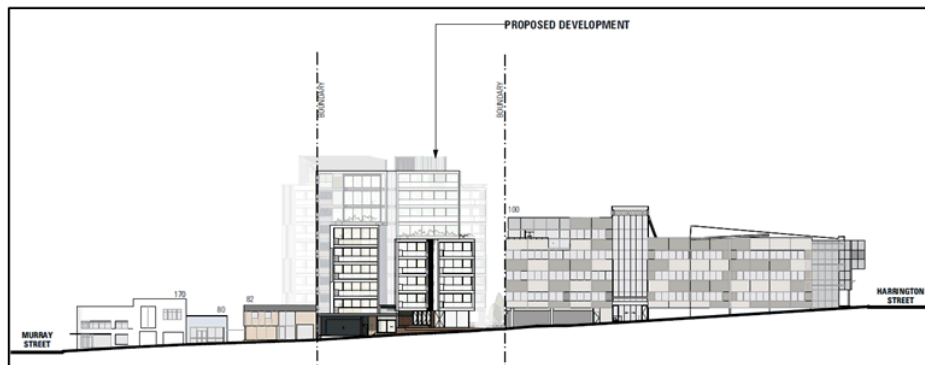
*(c) the building proportion and detail reflecting and reinforcing the streetscape pattern;*

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.



*90 Melville Street, Hobart**Mixed residential and commercial use & development**Planning Submission*

**Figure 7:** Melville Street elevation (source: JAWS ARCHITECTS, Site Plan, Dwg 19066\_DA19, REV02 Mar 2020)



**Montage 1:** Streetscape looking northeast down Melville Street. At close proximity the upper elements recede behind the lower podium elements (source: JAWS ARCHITECTS, Montage view 02, Photoshopped REV02 19 Mar 2020)

90 Melville Street, Hobart

Mixed residential and commercial use &amp; development

Planning Submission



**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 01, Dwg 19066\_DA19, REV02 17 Mar 2020)

*(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 30m - 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 approximate 1m extension above 30m is limited to the lift overrun and the top of a pergola over an outdoor roof terrace. The floor plans and cross section demonstrate that these elements are quantitatively very minor 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

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 ensuring 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 be encouraged by Council.

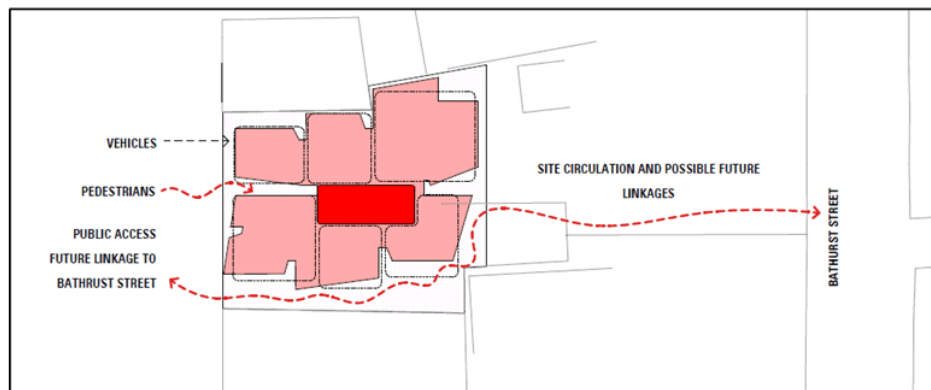


Figure 8: excerpt from JAWS ARCHITECTS, Site modelling diagram 9, Dec 2019)

## 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 is smaller and 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 'food services', 'business and professional services' and 'general retail and hire' use classes are all permitted in the Central Business Zone. These are considered to be the likely range of uses for the commercial tenancies on the Ground Floor Level.

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, the operating hours of the café/restaurant are not known. This application therefore seeks approval for operating hours in accordance with the Acceptable Solution A1, being between 7am and 12am.

### 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.



**A3/P3**

<b>Acceptable Solution</b>	<b>Performance Criteria</b>
<p><b>A3</b> Building height within the Central Business Fringe Area in Figure 22.2 must be no more than:</p> <p>(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 groundfloor level for residential use;</p> <p>unless an extension to an existing building that:</p> <p>(i) is necessary solely to provide access, toilets, or other facilities for people with disabilities; (ii) is necessary to provide facilities required by other legislation or regulation.</p>	<p><b>P3.1</b> 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.</p> <p><b>P3.2</b> 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:</p> <p>(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.</p>
<p><b>Assessment of compliance</b> 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:</p> <p><b>P3.1</b> 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.</p>	

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 less than 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 additional detail provides a more measured and responsible transition to both the CBD Core and the Commercial areas north of Melville Street.

The attention to detail also provides a greater contribution to the character of the townscape, notably when viewed 'in-the-round' including 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**

Not applicable – no part of the proposal exceeds the Amenity Building Envelope. In fact, the proposal is far lower in height, and otherwise well within the Amenity Building Envelope.

#### **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.

#### **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 proposal presents a number of built forms at the Melville Street (front) boundary. In each case there is a fundamental element – be it plinth, wall, terrace or roof overhang - that meets the boundary with no setback. This is evident in the floor plans DA04, 05 and 06, Section B (DA13), Northeast and Southwest Elevations (DA15 and 16 respectively) and the photo montages, particularly DA21 (see below).



90 Melville Street, Hobart

Mixed residential and commercial use &amp; development

Planning Submission



**Figure 10:** Excerpt from JAWS ARCHITECTS, Montage view 02 (Photoshopped REV02 19 Mar 2020)

It is considered that the proposal meets the Acceptable Solution.

#### A2/P2

Not applicable – the site does not adjoin a residential zone

#### 22.4.3 Design

Acceptable Solution	Performance Criteria
<b>A1</b> 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 façade; (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;	<b>P1</b> 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

- |   |  |
|---|--|
| <p>(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;</p> <p>(e) incorporate roof-top service infrastructure, including service plants and lift structures, within the design of the roof;</p> <p>(f) not include security shutters over windows or doors with a frontage to a street or public place;</p> | <p>pumps, air conditioning units, switchboards, hot water units or similar, is insignificant when viewed from the street;</p> <p>(e) ensure roof-top service infrastructure, including service plants and lift structures, is screened so as to have insignificant visual impact;</p> <p>(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;</p> <p>(g) only provide shutters where essential for the security of the premises and other alternatives for ensuring security are not feasible;</p> <p>(h) be consistent with any Desired Future Character Statements provided for the area.</p> |
|---|--|

#### Assessment of compliance

The proposal is assessed to meet the Acceptable Solution options as follows:



Figure 11: excerpt of frontage elevation 'Northwest Elevation' (source: JAWS, Dwg DA 15 March 2020)

- (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 45%.
- (c) Not including the terrace plinth, the maximum length of blank wall in the ground level front façade is 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 roof.
- (f) No security shutters are proposed over windows and doors.

90 Melville Street, Hobart

Mixed residential and commercial use &amp; development

Planning Submission

**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
<b>A1</b> 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 façade; (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.	<b>P1</b> 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.
<b>Assessment of compliance</b> 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 45%.
- (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 for the café/restaurant, and also provide public seating potentially integrated with art work. The area will be well lit, however after hours will be required to be made secure by appropriate gating. This will ensure that no 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 roof gardens for environmental/energy efficiency reasons, as well as 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.

**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 café/restaurant 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.

## 7. Codes

The following Codes remain relevant to both the proposed scheme amendment and the subdivision 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 Milan Prodanovic 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 Milan Prodanovic 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 Gandy & Roberts Concept Services Report which accompanies this application.

### 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.

*90 Melville Street, Hobart**Mixed residential and commercial use & development**Planning Submission*

---

## 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.



## 8. Conclusion

The proposal is for demolition, and construction of a residential complex with ground floor café/restaurant and commercial unit 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 taken advice 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 much 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;
- By activating the ground floor level with provision of a café, public space, and potential public art work and through-block linkage, the development will be visually interesting and a welcoming space for the public to gather and 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 rooftop garden and terrace.
- Resident oversight and related resident activity, in combination with light spill from ground floor commercial tenancies 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.

It's 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.



*90 Melville Street, Hobart*

*Mixed residential and commercial use & development*

*Planning Submission*

---

## **APPENDIX A: APPLICATION FORMS**

*90 Melville Street, Hobart*

*Mixed residential and commercial use & development*

*Planning Submission*

---

## **APPENDIX B: CERTIFICATES OF TITLE**

*90 Melville Street, Hobart*

*Mixed residential and commercial use & development*

*Planning Submission*

---

## **APPENDIX C: ADVICE FROM L.WOOLLEY ARCHITECT**



NEIL SHEPHARD  
& ASSOCIATES

*Planning and Development Consultants*

Mr Ben Ikin  
Senior Statutory Planner  
City Planning  
City of Hobart  
GPO Box 503  
HOBART TAS 7001

25 March 2020

Dear Sir,

**RE: PLN-19-948 - 90 MELVILLE STREET, HOBART**

I refer to your requests for further information dated 24 December 2019, 31 January 2020, and 20 March 2020.

I advise that the following material has been submitted through Council's online planning portal:

- Revised Concept Services Plan (REV02 250320) including the respective information sought under request TW1; and
- Revised plans (REV 02 250320);
- Revised design statement (250320);
- Revised Planning submission (250320);
- Revised TIA (250320); and
- Visualisation Modelling Methodology (250320)

More specifically the following matters outlined in your letter dated 20 March 2020 have been addressed:

- ✓ Additional information sought by TasWater has been included on the Concept Services Plan;
- ✓ The proposal plans have been amended to show a reduction in overall height, and the relationship to the Amenity Building Envelope demonstrated;
- ✓ Correspondingly, the Planning Submission has been amended to reflect compliance of the proposed building with the Amenity Building Envelope;
- ✓ Statements concerning the intent of the public accessibility of the proposed public pedestrian link are provided in sections 22.4.4 and 22.4.8 of the Planning Submission, both on page 26.
- ✓ The proponent is prepared to consider provision for future ramp/staircase access at the eastern end of the proposed laneway;
- ✓ The proposal plans provide for the overall majority of wall in the laneway to be transparent in the interests of passive surveillance and public safety;
- ✓ A temporary security gate is shown to be located in the proposed laneway pending ultimate connection of the laneway to the Bathurst Street property;
- ✓ A statement regarding the scaling and accuracy of visual modeling is included with the above additional information

Please let me know at your earliest convenience whether further details are required.

Yours faithfully,

A handwritten signature in blue ink that reads "Neil Shephard". The signature is written in a cursive, slightly slanted style.

NEIL SHEPHARD  
Obo Giameos Developments Pty Ltd



# **TRAFFIC IMPACT ASSESSMENT**

**PROPOSED  
RESIDENTIAL APARTMENT AND  
COMMERCIAL DEVELOPMENT**

**90 MELVILLE STREET  
HOBART**

MARCH 2020



## TRAFFIC IMPACT ASSESSMENT

### PROPOSED RESIDENTIAL APARTMENT AND COMMERCIAL DEVELOPMENT

90 MELVILLE STREET  
HOBART

MARCH 2020

11 KYTHERA PLACE, ACTON PARK TASMANIA 7170  
TEL: (03) 6248 7323 MOBILE: 0402 900 106  
EMAIL: milglad@bigpond.net.au ABN: 51 345 664 433



## CONTENTS

		Page Number
1.	INTRODUCTION	4
2.	SITE DESCRIPTION	5
3.	DEVELOPMENT PROPOSAL	6
4.	EXISTING ROAD AND TRAFFIC ENVIRONMENT	8
4.1	Road Characteristics	8
4.2	Traffic Activity	9
4.3	Crash Record	10
4.4	Public Transport Services	11
5.	TRAFFIC GENERATION BY THE DEVELOPMENT	12
6.	TRAFFIC ASSESSMENT AND IMPACT	14
6.1	Operational Impact of Increased Traffic Activity	14
6.2	Assessment of Available Sight Distances	14
6.3	Internal Traffic Access, Circulation and Car Parking	18
7.	SUMMARY AND RECOMMENDATIONS	22

### ATTACHMENTS:

Attachment A - Design drawings of proposed layout of residential apartment and commercial development

## REFERENCES:

- Australian Standard AS 1742.2-2009 – Manual of uniform traffic control devices Part 2: Traffic control devices for general use
- AUSTROADS – Guide to Road Safety Part 6: Road Safety Audit (2009)
- Road Traffic Authority NSW – Guide to Traffic Generating Developments, 2002
- Road and Maritime Services (Transport) - Guide to Traffic Generating Developments; Updated traffic surveys (August 2013)
- AUSTROADS – Guide to Road Design Part 4A: Unsignalised and Signalised Intersections (2009)
- AUSTROADS – Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings (2009)
- Australian Standard AS 2890 – Parking Facilities, Part 1 – Off-street car parking
- Hobart Interim Planning Scheme 2015

## 1. INTRODUCTION

A multi-storey residential apartment and commercial development is proposed for the property at 90 Melville Street in Hobart.

This Traffic Impact Assessment (TIA) report has been prepared in support of the proposed development.

The TIA report considers the existing road and traffic characteristics along Melville Street in the area of the development site. An assessment is made of the traffic activity that the development will generate and the effect that this traffic will have on Melville Street.

Consideration is given to the access arrangements and available sight distances along Melville Street at the junction of the driveway to the development site. An assessment is also made of the driveway design, internal vehicle traffic circulation and parking provisions within the development site having regard to current applicable Australian standards and the requirements of the Hobart Interim Planning Scheme (2015).

The report is based on the Department of State Growth (DSG) - Traffic Impact Assessment Guidelines with regard also given to current Austroads guidelines for such assessments. The techniques used in the investigation and assessment incorporate best practice road safety and traffic management principles.

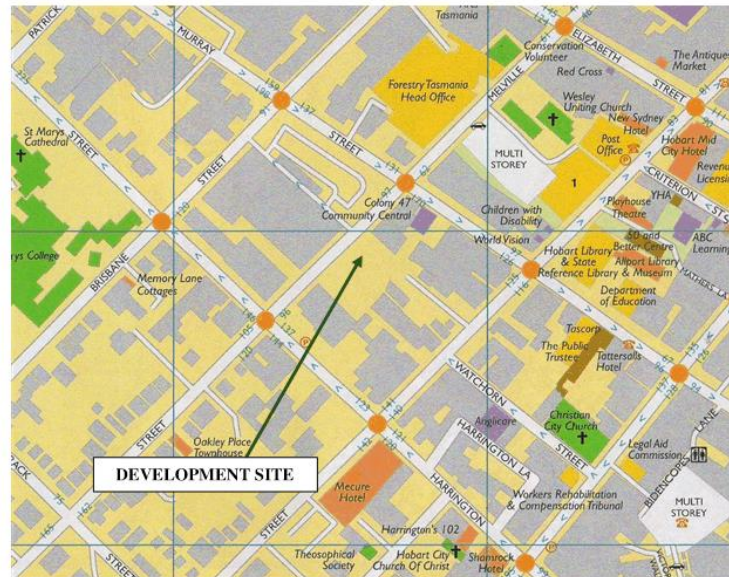
## 2. SITE DESCRIPTION

The proposed development site is located on the southern side of Melville Street and around midway between Murray Street and Harrington Street.

The site is currently used as a surface car park for some 60 cars.

The site lies within the Central Business Zone within the Hobart municipality. The surrounding development is predominantly office and commercial use.

The location of the development site has been highlighted on the extract from the street atlas for this area, seen in Figure 2.1.



**Figure 2.1: Extract of street atlas showing location of proposed apartment and commercial development site**

### 3. DEVELOPMENT PROPOSAL

The proposed development at 90 Melville Street is for the construction of a multi-storey building that will have 55 residential apartments and two commercial tenancies.

A view of the Melville Street frontage of the development site is seen in Photograph 3.1.



**Photograph 3.1: View of development site from Melville Street**

The two commercial tenancies will be on the ground floor level. One commercial tenancy is expected to be a café with floor area of 188.62m<sup>2</sup>, the other will have a floor area of 510.75m<sup>2</sup>. The total commercial floor area will be 699.37m<sup>2</sup>.

The 55 residential apartments will have a mix of one to three bedrooms. There will be:

- 4 apartments with one bedroom
- 48 apartments with 2 bedrooms; and
- 3 apartments with 3 bedrooms.

The single two way driveway off Melville Street will provide access from the ground floor level to the car parking spaces on the lower ground floor level and two basement floor levels.

There will be 17 car parking spaces and two motorcycle parking spaces on lower ground floor level and 21 car parking spaces on each of the two basement floor levels – a total of 59 car parking spaces and two motorcycle parking spaces. There is also be a secured room on the lower ground floor level which will provide parking for a number bicycles.

The commercial tenancies will be provided with of the four car parking spaces on the lower ground floor level.

The vehicle access to the car parking area within the building will be via a two-way driveway at the eastern side of the site. The driveway will have a width of 6.0m leading to the ramp to the lower ground floor and basement floor level parking.

There will be separate pedestrian access directly to/from Melville Street and each of the commercial tenancies and the residential apartments.

Design drawings of the proposed development site layout are included with this report as Attachment A.

#### 4. EXISTING ROAD AND TRAFFIC ENVIRONMENT

##### 4.1 Road Characteristics

The one road that is relevant to the proposed multistorey residential apartment and commercial development with respect to vehicular traffic is Melville Street.

In the area of the development site, Melville Street has a straight horizontal alignment on a slight downgrade to the east.

It is a two-way street with no centreline markings and metered parking along both sides of the street.

The 50km/h urban speed limit applies to Melville Street.

Views of the geometric character of Melville Street in the area of the development site are seen in Photographs 4.1 and 4.2.



**Photograph 4.1: View to west along Melville Street with development site ahead on left**





**Photograph 4.2: View to east along Melville Street with development site ahead on right beyond multistorey building**

#### **4.2 Traffic Activity**

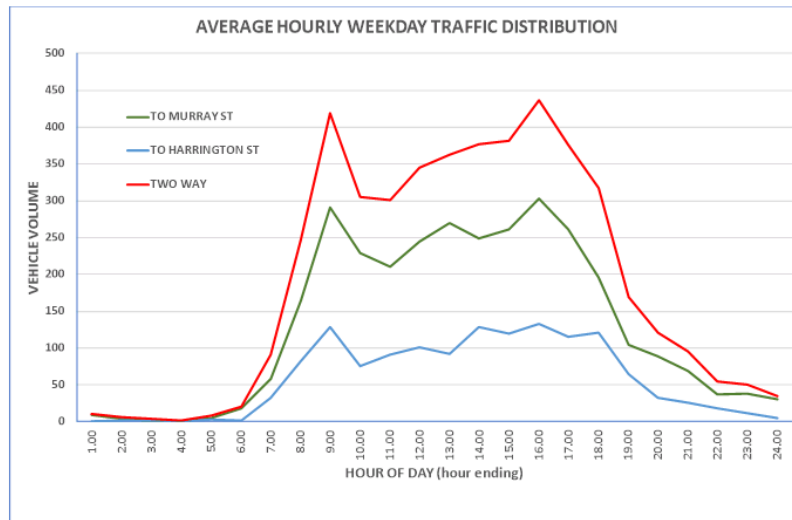
In order to refer to the traffic volume passing the development site, traffic volume data for Melville Street has been received from DSG.

The vehicle volume data are from the traffic signal loop detectors in each lane in Melville Street at the Murray Street and Harrington Street intersections with the volumes recorded on Friday 18 October 2019. This was the busiest day of that week.

The hourly traffic distribution for each direction of travel (traffic approaching Murray Street and Harrington Street) and two way traffic is shown in Figure 4.1.

The peak hour traffic volumes during the 8:00am – 9:00am and 4:00pm – 5:00pm periods were 419 vehicles/hour and 436 vehicles/hour, respectively.

The total daily traffic volume was 4,531 vehicles/day with 70% of the traffic being eastbound to Murray Street.



**Figure 4.1: Traffic volumes along Melville Street past development site driveway – Friday 18 October 2019**

#### 4.3 Crash Record

All crashes that result in personal injury are required to be reported to Tasmania Police. Tasmania Police record all crashes that they attend. Any crashes that result in property damage only, which are reported to Tasmania Police, are also recorded even though they may not visit the site.

Details of reported crashes are collated and recorded on a computerised database that is maintained by DSG.

Information was requested from DSG about any reported crashes along Melville Street between Murray Street and Harrington Street, including the intersections at each end, over the last five and three-quarter years since January 2014.

Advice has been received that the crash database has record of 20 reported crashes along this section of Melville Street.

Of these crashes, 11 crashes have occurred at the Melville Street/Murray Street intersection and seven at the Melville Street/Harrington Street intersection.

Seven of the intersection crashes were angle collisions (due to red light running), six crashes were rear end or side swipe collisions and five crashes involved a pedestrian.

10

Four of the 18 intersection crashes resulting in injury or required first aid attention.

There were only two midblock collisions, one due to a U-turn manoeuvre, the other lacks clear description of location and circumstances.

The overall crash record is not a significant concerns with respect to the proposed development.

#### **4.4 Public Transport Services**

Metro Tasmania currently operates regular route bus services to the northern suburbs along Elizabeth Street with an inbound bus stop between Melville Street and Bathurst Street, and an outbound bus stop just south of Bathurst Street. These are within 250 – 380m walking distance.

The central city bus station, where all route services are available, including to the south and east, is located around the Elizabeth Street/Macquarie Street intersection which is within around 750m walking distance.

The accessibility to the bus services makes public transport an attractive option for trips to and from locations outside the city centre. This will reduce the number of vehicle trips generated by the development.

## **5. TRAFFIC GENERATION BY THE DEVELOPMENT**

As outlined in Section 3 of this report, the proposed development under consideration is the construction of 55 residential apartments and two commercial tenancies in the multistorey building on the site at 90 Melville Street.

The residential apartments will have one to three bedrooms, with most (48 of 55 apartments) having two bedrooms. Each apartment will be provided with one car parking space in the lower ground floor level and two basement floor level car parking areas.

In considering the traffic activity that each apartment will generate when occupied, guidance is normally sought from the New South Wales, Road Traffic Authority document – Guide to Traffic Generating Developments. The RTA guide is a nationally well accepted document that provides advice on trip generation rates and vehicle parking requirements for new developments.

The updated 'Technical Direction' to the Guide dated August 2013 advises that the trip generation for residential dwellings in regional areas of New South Wales is 7.4 trips/dwelling/day.

This is consistent with findings by this consultant for dwellings in Tasmania. Surveys in the built-up areas of Tasmania over a number of years have found that typically this figure is 8.0 trips/dwelling/day with smaller residential units generating around 4 trips/unit/day and larger units generating around 6 trip/unit/day.

As has been outlined in TIA reports by this consultant for other developments, peak hour traffic surveys have been undertaken at other existing unit developments in the Hobart area. One of these was on Sandy Bay Road in 2015 at the 20 apartments in the Governor's Square development at 74 Sandy Bay Road which have car parking access off Sandy Bay Road. The traffic generation by these Governor's Square apartments during the peak hour was 3.75 vehicles/apartment/hour. These apartments each have two bedrooms.

In addition to the above, the following points are also relevant in estimating the traffic generation by the proposed development:

- the proposed apartments will have access to only one on-site car parking space;
- the development site is very close to the Hobart CBD (just over 300m walking distance to the Liverpool Street/Murray Street intersection);
- the development site is close to the 'all routes' central bus station at the Elizabeth Street bus station (around 750m walking distance) and around 350m to the northern suburbs bus route stops in Elizabeth Street near Melville Street – Bathurst Street.

12

The proposed apartments are expected to generate less traffic activity than the Grosvenor Square apartments. For the purpose of this assessment, a traffic generation rate of 3.5 vehicles/apartment/day will be assumed.

Applying this trip generation rate to the 55 residential apartments, the traffic generation is expected to be around 192 vehicles/day and around 20 vehicles/hour during peak traffic periods.

The two commercial tenancies will have a total floor area of 699.37m<sup>2</sup>. The businesses will be provided with four car parking spaces on the site for use by the owners and staff.

The turnover of cars at these four parking spaces will be quite low as say 12 vehicles/day and 1-2 vehicles/hour.

The total traffic generation by the proposed development will be around 204 vehicles/day and 22 vehicles/hour.

## 6. TRAFFIC ASSESSMENT AND IMPACT

This section of the report evaluates the impact of the expected traffic that will be generated by the proposed residential apartment and commercial development on passing Melville Street traffic volumes.

An assessment has been made of the adequacy of available intersection sight distance along Melville Street at the driveway junction; consideration has been given to the proposed internal site layout with respect to traffic circulation, parking supply and parking arrangement as well as pedestrian accessibility and safety.

### 6.1 Operational Impact of Increased Traffic Activity

The proposed residential apartment and commercial development is expected to generate around 204 vehicles/day and 22 vehicles/hour at peak traffic times of the day.

The traffic volume that will use the driveway to the development site during peak hour periods will not experience any operational traffic issues.

Given the site is currently used as a surface car park for some 60 cars, the traffic generation by the proposed development during peak hour periods for Melville Street will be less than generated at present by the car park on the site.

Passing vehicle volumes along Melville Street are currently up to 436 vehicles/hour. If they increase at 2% p.a. the volume in ten years' time will be 530 vehicles/hour. However, it could also decrease subject to the future UTAS development across the road on the current K&D site which currently has well used driveways onto Melville Street.

Intersections and junctions reach capacity when the total conflicting approach traffic volumes are around 1,500 vehicles/hour. The conflicting traffic volume at the driveway to the development site will be less than 40% of this volume.

The traffic generated by the proposed development will also not have a measurable changed impact on the operational efficiency at the Melville Street intersections with Murray Street and Harrington Street.

### 6.2 Assessment of Available Sight Distances

Consideration has been given to the available sight distances along Melville Street from the proposed driveway to the development.

The available views along Melville Street for motorists entering from the location of the proposed driveway are seen in Photographs 6.1 to 6.5.

14

In assessing the sight distance, the requirements of Clause E6.7.2 A1 would apply in this case. It states: *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.*

AS 2890.1 details the required sight distances to approaching vehicles on public roads from a driveway such as is under consideration in this assessment.

The (free speed) 85<sup>th</sup> percentile vehicle speeds along Melville Street past the development site would be up to around 45km/h but even lower speeds of 30-40km/h when crossing or turning from Murray Street or Harrington Street, as they come into sight of a vehicle turning at the driveway.

The desirable driveway sight distance is 62m for approach vehicle speeds of 45km/h and 48m for approach vehicle speeds of 35km/h with minimum required sight distances for these approach speeds being some 20m less than the desirable sight distances.

Measurements have determined a driver exiting the development site driveway will be able to see, with either an unobstructed view (mainly to the west) or, around or between parked cars, at least 45m to the Murray Street intersection and 65m to the west along Melville Street from a point 2.5m back from the kerb line or a similar distance back from the outer edge of the parking lane.

There will not be any sight line concerns for vehicles turning at the development site driveway.

All available sight distances will therefore be quite sufficient for the approach vehicle speeds.





Photograph 6.1: View to east along Melville Street from location of driveway to development site with front of vehicle at kerb line



Photograph 6.2: View to east along Melville Street from location of driveway to development site with front of vehicle at edge of parking lane



**Photograph 6.3: View to west along Melville Street from location of driveway to development site with front of vehicle at kerb line**



**Photograph 6.4: View to west along Melville Street from location of driveway to development site with front of vehicle at edge of parking lane**



**Photograph 6.5: View across Melville Street from location of development site driveway to K&D driveway**

### **6.3 Internal Traffic Access, Circulation and Car Parking**

Following input into the design of the internal driveway and parking arrangements and having due regard to the requirement of AS 2890, the proposed layout and design of the driveway, circulation area and parking arrangements which will service the apartment and commercial development is shown on the development site layout drawings in Attachment A.

Relevant design elements of the proposed site layout related to traffic are discussed below.

#### Access driveway and traffic circulation

The development site currently has two driveways. There will be only one driveway servicing access to the proposed off-street vehicle parking in the residential apartment and commercial building.

The existing eastern gutter crossover to the development site will be modified to suit the driveway into the proposed building and the existing western gutter crossover will be removed. As a result of the latter, it will be possible for council to install an additional metered parking space in this location.

These changes have been detailed on the attached civil design drawings.

At the property boundary, the driveway into the building will have a width of 6.0m to the ramp leading to the lower ground and basement car parking levels.

The ramp to the lower ground floor parking level will be 8.5m long and have a downgrade of 25% with 2m transition sections at each end, in accordance with requirements in AS 2890.1. The ramp width will also be 6.0m.

The ramps to the two basement floor car parking levels will be 13.7m long and have a downgrade of 25% with 2m transition sections at each end, in accordance with requirements in AS 2890.1. These ramp widths has been increased to 6.5m to better allow for cars to pass one another in the turning areas at the top and bottom of each ramp.

The overall design of the access and driveway is sufficient to allow vehicles to simultaneously enter and exit the driveway to/from Melville Street as well as passing one another along the internal circulation road/parking aisles.

With the car parking arrangements and available space, all cars will be able to enter and exit the site in a forward direction.

#### Car parking supply

Clause E6.6.5 of the Hobart Interim Planning Scheme 2015 states that for a development in the Central Business Zone, the acceptable solution for the number of car parking spaces on the site is:

#### ***A1***

- (a) No onsite parking is provided; or*
- (b) onsite parking is provided at a maximum rate of 1 space per 200m<sup>2</sup> of gross floor area for commercial uses; or*
- (c) onsite parking is provided at a maximum rate of 1 space per dwelling for residential uses; or*
- (d) onsite parking is required operationally for an essential public service, including, hospital, police or other emergency service.*

The proposed development will have 55 residential apartments and there will be 55 car parking spaces for these apartments (one per apartment). The development will also have two commercial tenancies with a total floor area of around 700m<sup>2</sup> and four car parking spaces will be allocated for commercial use.

Clause E6.6.5 A1(b) and (c) are applicable in this case.

The number of proposed car parking spaces will meet both subclauses and hence the acceptable solution will be met.

The four car parking spaces will be allocated for use by owners/employees of the commercial tenancies.



There will also be two motorcycle parking spaces and a secured room which will accommodate a number bicycles.

On-site parking area design

All the resident and commercial parking spaces on the site will be compliant with AS 2890.1.

The required turn paths of vehicles have been checked and found to be adequate for three-point turns by B85 cars for all manoeuvres to and from all parking spaces.

The specific dimensions that have been assessed include the following:

- All residential parking spaces will be 5.4m long and 2.5m wide in accordance, slightly more than minimum requirements for User Class 1A (as detailed in Figure 2.2 of AS 2890.1 for 90-degree parking);
- All commercial parking spaces will be 5.4m long and at least 2.6m wide in accordance with minimum requirements for User Class 3 (as detailed in Figure 2.2 of AS 2890.1 for 90-degree medium to short term employee/staff parking);
- There will be at least a 300mm clearance to the side walls and obstructions for door opening and manoeuvring (as detailed in Figure 2.3 and Figure 5.2 of AS 2890.1);
- The width of the parking aisle for the residential parking will be the minimum 5.8m (as required in Figure 2.2 of AS 2890.1 for User Class 1A and Class 2 90-degree parking);
- A 1.0m extension to the ends of the parking aisle for cars to reverse out of parking spaces is not an issue with the design layout;
- A security access roller-door will be well within the building, at the base of the first ramp (with FOB entry access), so there will not be any queuing of vehicles back into Melville Street when entering the building;
- A turnaround bay will be provided in the commercial tenancy parking area (not really required as spaces will be allocated to specific users);
- The motorcycle parking spaces will be at least 2.5m long and 1.2m wide (as detailed in Figure 2.7 of AS 2890.1);
- The height clearance will be a minimum of 2.3m in all trafficable areas including ramps, more than the 2.2m clearance required by AS 2890.1;
- There is not a need for any disabled car parking spaces for this development;

- The grade within the two basement floor level parking areas will be no more than around 1%.

With all dimensions meeting the requirements of AS 2890.1, the driveway, parking spaces and circulation areas will be compliant with the standard and meet the Acceptable Solution for Clause E6.7.5.

#### Pedestrian Traffic

There will be pedestrian access to the building directly from Melville Street, separate from the driveway.

Consideration has also been given to the required sight triangle between motorists exiting the driveway and pedestrians approaching along the Melville Street footpath, as indicated in Figure 3.3 of AS 2890.1.

The pedestrian sight triangle for exiting vehicles will be provided as required by AS 2890.1 with a clear line of sight above a height of one metre.

#### Waste collection/servicing

The collection of domestic waste will be undertaken by arrangements with Hobart City Council.

The bins will be moved along the driveway from the internal bin room to a temporary storage area along the driveway near the frontage of the property for collection, as detailed on the site layout drawings.

Commercial tenancy servicing and waste collection will be attended to by commercial or private contractors from on-street parking, outside business hours, as occurs normally for businesses in the Hobart Central Business Zone.

## 7. SUMMARY AND RECOMMENDATIONS

This Traffic Impact Assessment has been prepared in support of the planning application to the Hobart City Council for the construction of 55 apartments and two commercial tenancies at 90 Melville Street in Hobart. One of the commercial tenancies is expected to be a café.

The assessment has reviewed the existing road and traffic environment along Melville Street in the area of the development site.

In this area, Melville Street is a two-way street with no traffic lane or centreline markings. There is metered parking along both sides of the street.

Passing peak hour traffic volumes during the 8:00am – 9:00am and 4:00pm – 5:00pm periods on Melville Street are 419-436 vehicles/hour. The total daily traffic volume is around 4,530 vehicles/day with 70% of the traffic being eastbound to Murray Street.

The crash database has record of 20 reported crashes along Melville Street between Murray Street and Harrington Street over the last five and a three-quarter years since January 2014.

Of these, 11 crashes have occurred at the Melville Street/Murray Street intersection and seven at the Melville Street/Harrington Street intersection. There were only two midblock collisions, one due to a U-turn manoeuvre, the other lacks clear description of location and circumstances.

The overall crash record is not a significant concern with respect to the proposed development.

Each of the 55 residential apartments will have one car parking space and the two commercial tenancies will have four car parking spaces for owners/staff.

Public transport will be accessible to tenants of the apartments with Metro bus services along Elizabeth Street, within 250 – 380m walking distance, as well as the central city bus station which is located around the Elizabeth Street/Macquarie Street intersection, within around 750m walking distance.

It has been estimated that the proposed development, when fully developed and occupied, will generate around 204 vehicles/day and 22 vehicles/hour at peak traffic times of the day.

The traffic generation by the proposed development during peak hour periods for Melville Street will be less than generated at present by the surface car park on the site.

The traffic volume that will use the driveway to the development site during peak hour periods will not experience any operational traffic issues and also not have a measurable changed impact on the operational efficiency at the Melville Street intersections with Murray Street and Harrington Street.



An assessment has been undertaken of the available sight distances at the junction of the development site driveway with Melville Street. The available sight distances are sufficient to meet AS 2890.1 requirements and hence the planning scheme.

The required sight distance between motorists exiting the development site driveway and pedestrians approaching along the Melville Street footpath will be in accordance with Figure 3.3 of AS 2890.1.

Consideration has been given to the proposed layout and design of the internal driveway, traffic circulation provisions and parking arrangements, having regard to accepted practices and relevant Australian Standards.

The 55 car parking spaces for the 55 residential apartments and four car parking spaces for commercial use will meet the acceptable solution to Clause E6.6.5 A1.

The four commercial use car parking spaces will be allocated for owners/staff of the businesses.

A review of the site layout drawings has concluded the design is satisfactory in meeting the requirement of AS 2890.1 and therefore the Planning Scheme.

All the resident parking spaces and commercial parking space will be compliant with AS 2890.1.

With all dimensions meeting the requirements of AS 2890.1, the driveway, parking spaces and circulation areas will be compliant with the standard and meet the Acceptable Solution for Clause E6.7.5.

The existing eastern gutter crossover to the development site will be modified to suit the driveway into the proposed building and the existing western gutter crossover will be removed. As a result of the latter, it will be possible for council to install an additional metered parking space in this location.

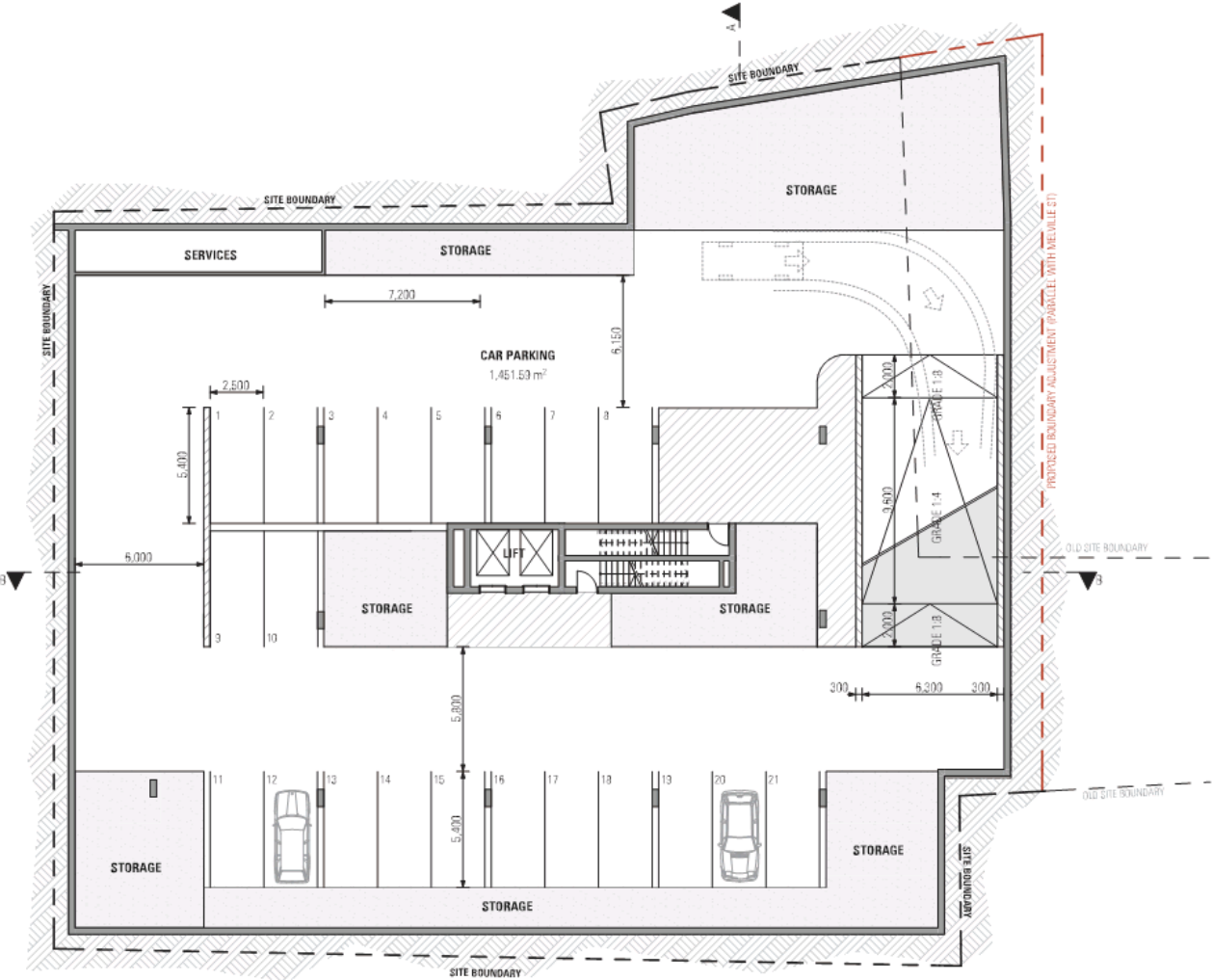
The pedestrian sight triangle for exiting vehicles will be provided as required by AS 2890.1 with a clear line of sight above a height of one metre.

The collection of domestic waste will be undertaken by arrangements with Hobart City Council. The close proximity of the bins to the roadside will allow garage truck to pull up at the kerbside near the driveway and load the bins from the temporary storage area.

Overall it has been concluded that the proposed residential apartment and commercial development can be supported on traffic grounds as it will not give rise to any adverse safety or operational traffic issues.

ATTACHMENT A

Design drawings of proposed layout of residential  
apartment and commercial development



DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS GOVERN. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK. JAWG SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES. THE DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTS, SPECIFICATIONS, REPORTS AND DRAWINGS.

JACOB ALLDM WADE PTY LTD  
ABN 92 000 659 419  
THE ORCHARDLANDS  
21 GASTREY SEPLANDS  
BATTERY POINT TASMANIA  
AUSTRALIA 7004

TELEPHONE 02 8222 4366  
FAX 02 8222 5708  
jw@jacoballdmwade.com.au  
www.jacoballdmwade.com.au

ARCHITECTS

PROJECT

90 MELVILLE STREET  
Hobart, Tas, 7000

For  
Giameos Construction & Development

DRAWING

SCALE 1:200 @ A3  
DATE March 2020  
DRAWN TL, TG  
CHECKED SV  
PLOT DATE  
CAD REF

WITHOUT JAWG'S REMOVAL FROM THE  
ARCHITECT'S OFFICE, 90 MELVILLE STREET,  
HOBART TAS, 7000. REVISED HEIGHT

PROJECT NORTH



ISSUE

PLANNING APPLICATION

DRAWING NAME

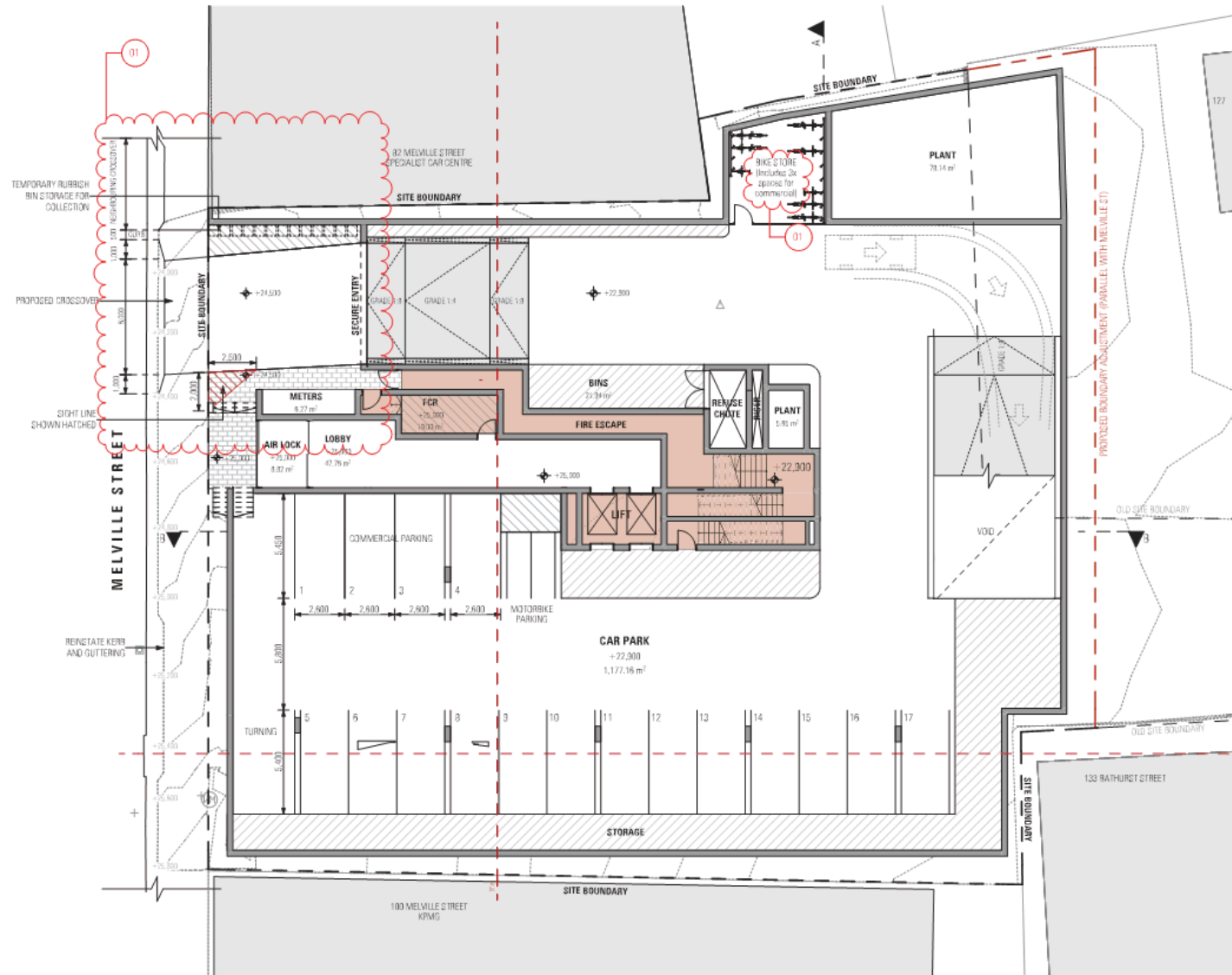
BASEMENT 1+2 FLOOR PLAN

DRAWING NO

19066\_DA03

REVISION

REV 01 - 16/01/2019  
- Revised crossover  
- Staff and public bike storage added  
REV 02 - 17/03/2020  
- Reduced height



DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS GOVERN. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK. JACOBS SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES. THE DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACT SPECIFICATIONS, REPORTS AND DRAWINGS.

JACOBS ALLIUM WADE PTY LTD  
ABN 92 000 659 419  
THE OCEANVIEW STORE  
21 GASTREY SEPLANDS  
BATTERY POINT TASMANIA  
AUSTRALIA 7004

TELEPHONE 02 8222 4266  
FAX 02 8222 5726  
jacobswade@jacobswade.com.au  
www.jacobswade.com.au

ARCHITECTS

#### PROJECT

**90 MELVILLE STREET**  
Hobart, Tas. 7000

For  
**Giameos Construction & Development**

#### DRAWING

SCALE	1:200 @ A3
DATE	March 2020
DRAWN	TL, TG
CHECKED	SV
PLOT DATE	SV
CAD REF	REVISION JAMES20 - Ground Floor to ARCHICAD 23/03/2020, 90 Melville St/0004, 90 Melville St, 0004 - REVISED HEIGHT

#### PROJECT NORTH



#### ISSUE

**PLANNING APPLICATION**

#### DRAWING NAME

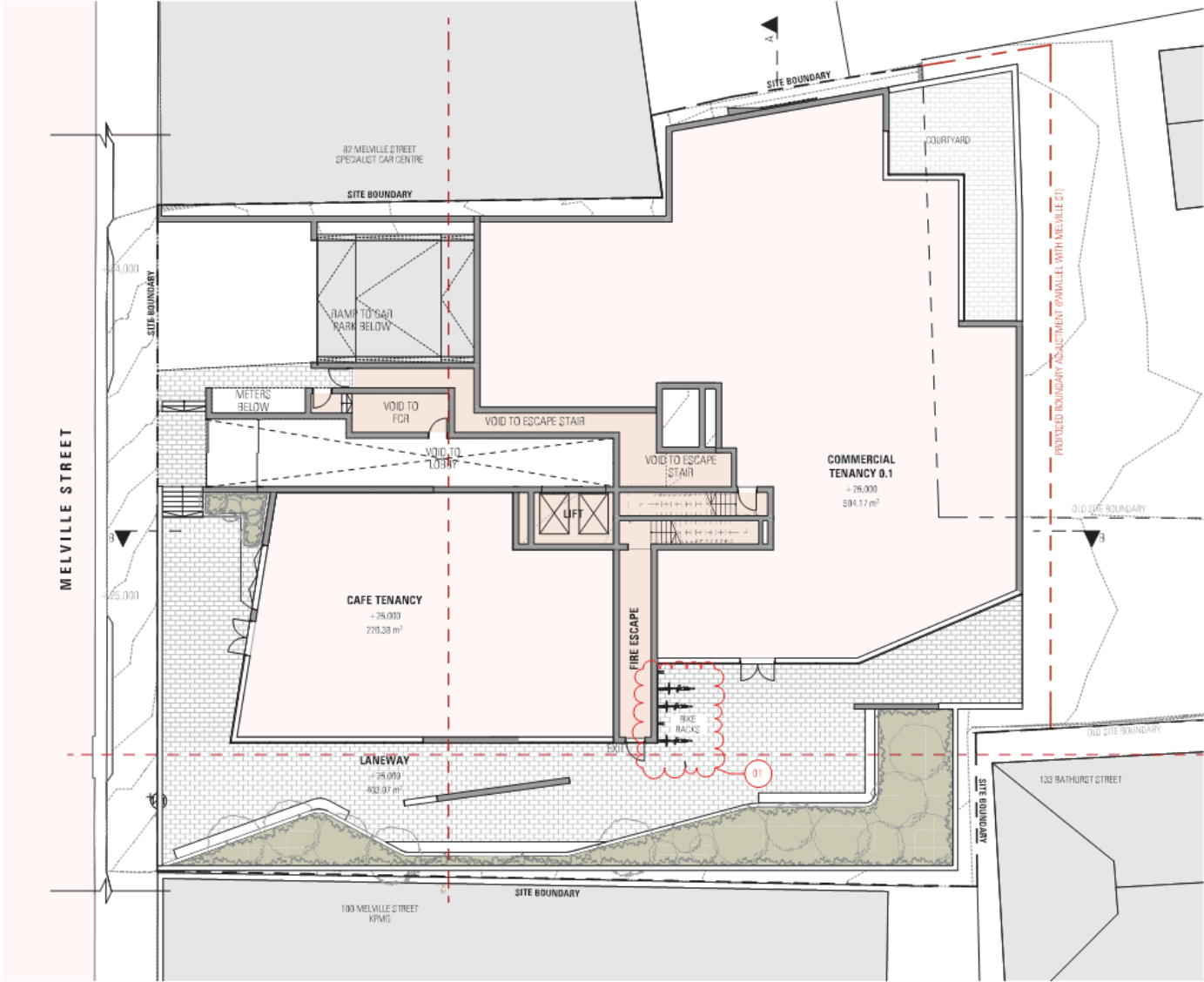
**LOWER GROUND FLOOR PLAN**

#### DRAWING NO

**19066\_DA04**

#### REVISION

REV 01 - 16/01/2019  
- Revised crossover  
- Staff and public bike storage added  
REV 02 - 17/03/2020  
- Reduced height



DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS GOVERN. ALL DIMENSIONS ARE IN METERS UNLESS NOTED OTHERWISE. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK. JAWG SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES. THE DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTS, SPECIFICATIONS, REPORTS AND DRAWINGS.

JACOB ALLOM WADE PTY LTD  
ABN 92 000 659 419  
THE ORCHARD ESTATE  
21 GASTREY SEAPLANES  
BATTERY POINT TASMANIA  
AUSTRALIA 7004

TELEPHONE 02 8222 4266  
FAX 02 8222 5726  
jacob@jacoballdom.com.au  
www.jacoballdom.com.au

ARCHITECTS

PROJECT

90 MELVILLE STREET  
Hobart, Tas. 7000

For  
Giameos Construction & Development

DRAWING

SCALE 1:200 @ A3  
DATE March 2020  
DRAWN TL, TG  
CHECKED SV  
PLOT DATE SV  
CAD REF

PROJECT NORTH



ISSUE

PLANNING APPLICATION

DRAWING NAME

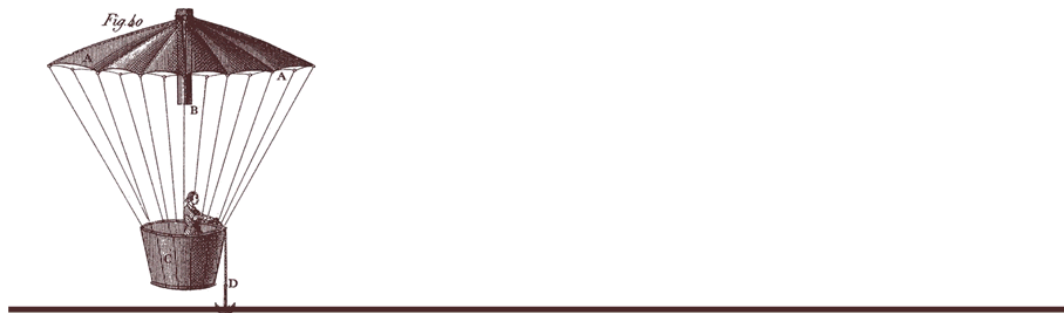
GROUND FLOOR PLAN

DRAWING NO

19066\_DA05

REVISION

REV 01 - 16/01/2019  
- Revised crossover  
- Staff and public bike storage added  
REV 02 - 17/03/2020  
- Reduced height



## Concept Services Report

### Planning Scheme Compliance & Existing Infrastructure Assessment

90 Melville St Hobart

for Giameos Constructions & Developments

19/03/2020

19.0546 – Concept Services Report – 19/03/2020

## Version control

Revision	Description	Issue date	Issued by
A	Client Review	10/12/2019	Adam Kohl
1	Planning Approval	13/12/2019	Adam Kohl
2	Revised for Planning Approval	21/01/2020	Adam Kohl
3	Reduced Building Height	19/03/2020	Adam Kohl

PROJECT NUMBER **19.0546**  
REPORT AUTHOR **Adam Kohl**  
CHECKED BY **Simon Palmer**

**Gandy and Roberts Consulting Engineers**  
STRUCTURAL CIVIL HYDRAULICS

ph (03) 6223 8877  
fx (03) 6223 7183  
mail@gandyandroberts.com.au  
159 Davey Street Hobart, Tasmania 7000  
www.gandyandroberts.com.au



## Contents

1	Background.....	4
2	Planning Scheme Requirements .....	4
3	Stormwater Management .....	5
3.1	Water Sensitive Urban Design.....	5
3.1.1	Performance Criteria.....	5
3.1.2	Stormwater System Concept.....	5
3.1.3	MUSIC Modelling .....	5
3.2	Existing Infrastructure System Performance .....	6
3.2.1	20 Year ARI Storm Event .....	6
3.2.2	Stormwater Runoff .....	6
3.2.3	Conclusion.....	6
4	Sewer and Water Services.....	7
4.1	Existing Infrastructure .....	7
4.1.1	Sewer .....	7
4.1.2	Water .....	7
4.2	Service Requirements for Proposed Development.....	7
4.2.1	Sewer .....	7
4.2.2	Water .....	7
4.3	Conclusion.....	7
5	Drawings.....	8
5.1	Drawing 19.0546 Rev 1- H010 CONCEPT SERVICES – SEWER & WATER .....	8
5.2	Drawing 19.0546 Rev 2 – H011 CONCEPT SERVICES – STORMWATER.....	8
5.3	Drawing 19.0546 Rev 2 – H012 CONCEPT SERVICES – SITE WORKS.....	8
6	Appendix.....	9
6.1	Calculations.....	9

## 1 Background

An apartment building development is currently proposed at 90 Melville Street, Hobart. In order to comply with Hobart City Council planning scheme requirements, Gandy and Roberts have been engaged to provide a concept services report in support of the development application.

## 2 Planning Scheme Requirements

The current Hobart Interim Planning Scheme 2015 requires that this development manages stormwater in compliance with the Stormwater Management Code. Code requirements for this development are:

Acceptable Solution A2 of Clause E7.7.1 Stormwater Drainage and Disposal states:

*A stormwater system for a new development must incorporate water sensitive urban design principles<sup>R1</sup> for the treatment and disposal of stormwater if any of the following apply:*

- (a) the size of new impervious area is more than 600 m<sup>2</sup>;*
- (b) new car parking is provided for more than 6 cars;*
- (c) a subdivision is for more than 5 lots.*

This development meets criteria (b) of the clause and therefore water sensitive urban design principles must be incorporated into the design of stormwater management for the site.

Acceptable Solution A3 of Clause E7.7.1 Stormwater Drainage and Disposal states:

*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 an 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.*

This development incorporates a minor stormwater drainage system, therefore the design must satisfy both criterion (a) and criterion (b) of Acceptable Solution A3. As the development is on central business zoned land, the 20 year ARI storm must be accommodated in the design.

---

<sup>R1</sup> *Water Sensitive Urban Design Engineering Procedures for Stormwater Management in Southern Tasmania or the Model for Urban Stormwater Improvement Conceptualisation (MUSIC), a nationally recognised stormwater modelling software package used to assess land development proposals based on local conditions including rainfall, land use and topography, is recognised as current best practice.*

### 3 Stormwater Management

#### 3.1 Water Sensitive Urban Design

##### 3.1.1 Performance Criteria

Performance Criteria P2 of Clause E7.7.1 requires:

*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.*

The acceptable stormwater quality and quantity targets are:

80% reduction in the average annual load of total suspended solids (TSS) based on typical urban stormwater TSS concentrations.
45% reduction in the average annual load of total phosphorus (TP) based on typical urban stormwater TP concentrations.
45% reduction in the average annual load of total nitrogen (TN) based on typical urban stormwater TN concentrations.
Stormwater quantity requirements must always comply with requirements of the local authority including catchment-specific standards. All stormwater flow management estimates should be prepared according to methodologies described in Australian Rainfall and Runoff (Engineering Australia 2004) or through catchment modelling completed by a suitably qualified person.

##### 3.1.2 Stormwater System Concept

A management system for the proposed development may incorporate the following design elements, as shown on **Drawing 19.0546 H011**.

- ☐ 'Enviroprotector' Model # ESP. 1500 – 2

##### 3.1.3 MUSIC Modelling

MUSIC V6.2.1 was used to model the performance of the proposed stormwater system. The model predicted the following performance outcomes:

- ☐ Total Suspended Solids reduction of 83%
- ☐ Total Phosphorus reduction of 69.7%
- ☐ Total Nitrogen reduction of 45.2%
- ☐ Gross Pollutants reduction of 100%

These reduction percentages satisfy Performance Criteria P2 of Clause E7.7.1.

### 3.2 Existing Infrastructure System Performance

#### 3.2.1 20 Year ARI Storm Event

A 20 year average recurrence interval storm event at the site has an intensity of 86 mm/h and a duration of 5 minutes (derived from Australian Rainfall and Runoff IFD data using the rational method).

This storm would generate a peak flow rate of 52.15 L/s, or an equivalent discharge volume of 15.6 kL with no on site detention.

A DN300 RCP stormwater main is located within Melville Street. refer **Drawing 19.0546 H011**.

The greater catchment area that discharges to the existing stormwater main includes the adjacent building at 100 Melville St and a small part of Melville Street itself. A conservative estimate of 5546 m<sup>2</sup> of catchment has been allowed for in the following calculation.

Using the rational method and assuming an impervious surface across this complete catchment area, the peak discharge to the existing infrastructure from a 1 in 20 year ARI storm event would be 132 L/s.

The existing DN300 stormwater main in Melville Street has a capacity of 148 L/s at a 2.0% grade. Confirmation on the existing grade will be required, and if 2.0% or greater the existing stormwater main would satisfy A3(a) of Clause E7.7.1.

#### 3.2.2 Stormwater Runoff

The pre-development site is 100% impervious and runoff from the site has been calculated as 40.3 L/s (20 year ARI storm).

The proposed design solution is predicted to generate a peak discharge from the site during a 20 year ARI storm of 52.2 L/s. The 11.9 L/s differential between the pre-development and post-development is due to the façade catchment, however this would currently be included in the #100 Melville St catchment and is currently entering the stormwater network.

#### 3.2.3 Conclusion

The development can be designed to satisfy Objectives A2 and A3 of Clause E7.7.1 of the Hobart Interim Planning Scheme 2015.

## 4 Sewer and Water Services

### 4.1 Existing Infrastructure

#### 4.1.1 Sewer

A TasWater asset search has verified a DN150 sewer gravity main runs along Melville Street, with an existing connection (assumed DN100) to the proposed development site. Refer **Drawing 19.0546 H010**.

#### 4.1.2 Water

A TasWater asset search has verified an existing DN150 water main runs along the near side of Melville Street, and a DN100 water main on the far side of Melville street. With an existing property connection (assumed DN20) to the proposed development site that will be abandoned. Refer **Drawing 19.0546 H010**.

### 4.2 Service Requirements for Proposed Development

#### 4.2.1 Sewer

Preliminary modelling has estimated the sewer service requirements as:

Average Dry Weather Flow = 0.23L/s.

Peak Dry Weather Flow = 2.83 L/s.

A new DN150 sewer property connection with a minimum grade of 2.0% is required to service the development.

#### 4.2.2 Water

Preliminary modelling has estimated the water service requirements as:

Domestic Supply = 5.5 L/s at 600 kPa

Fire Hydrant Flow = 20 L/s at 600kPa

Fire Sprinkler Flow = 15 L/s at 600 kPa

As the proposed building is over 25m in height, onsite break tank and pumps will need to be considered for the fire & domestic water service.

### 4.3 Conclusion

The development can be adequately serviced by the existing Taswater infrastructure.

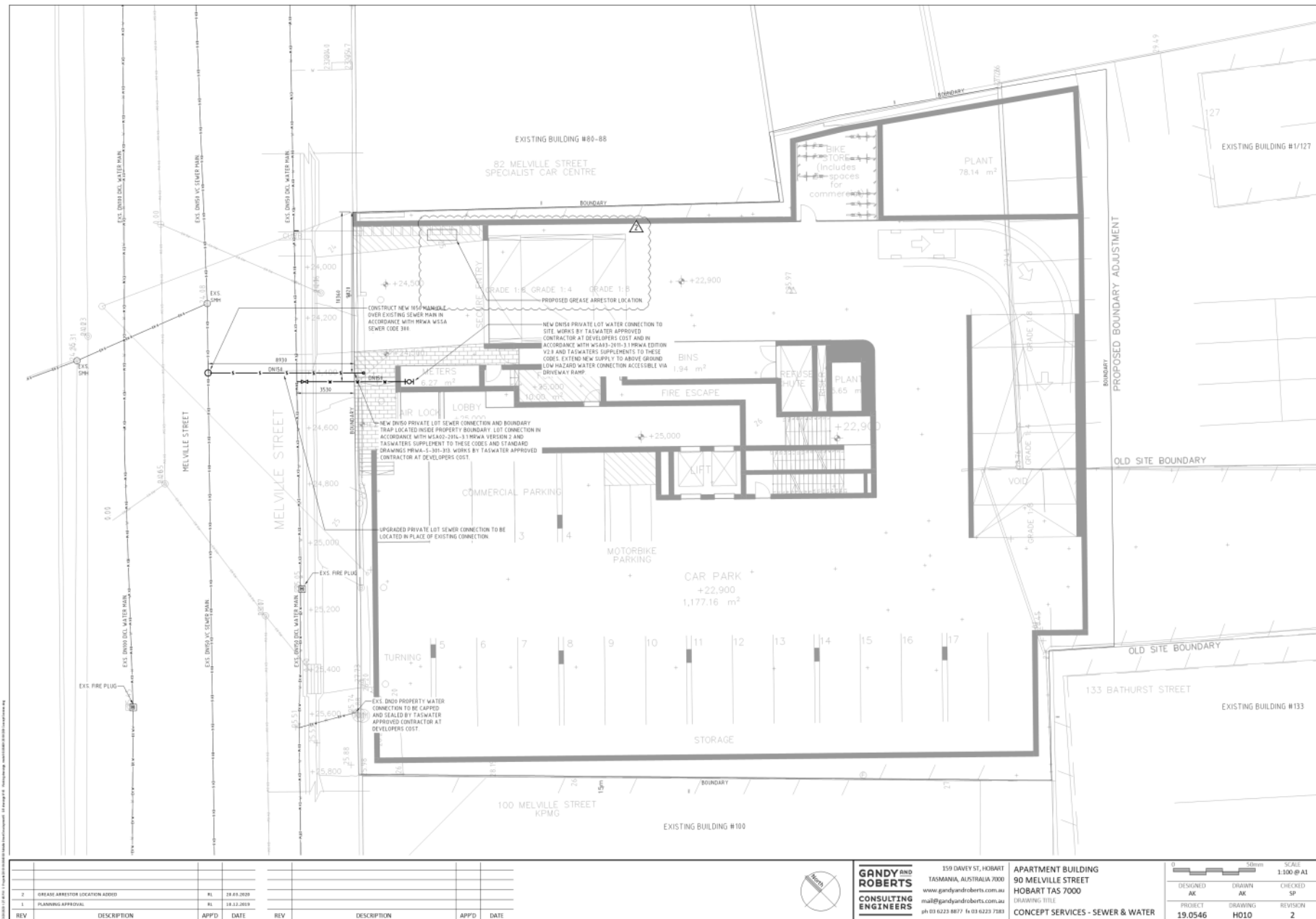
19.0546 – Concept Services Report – 19/03/2020

## **5 Drawings**

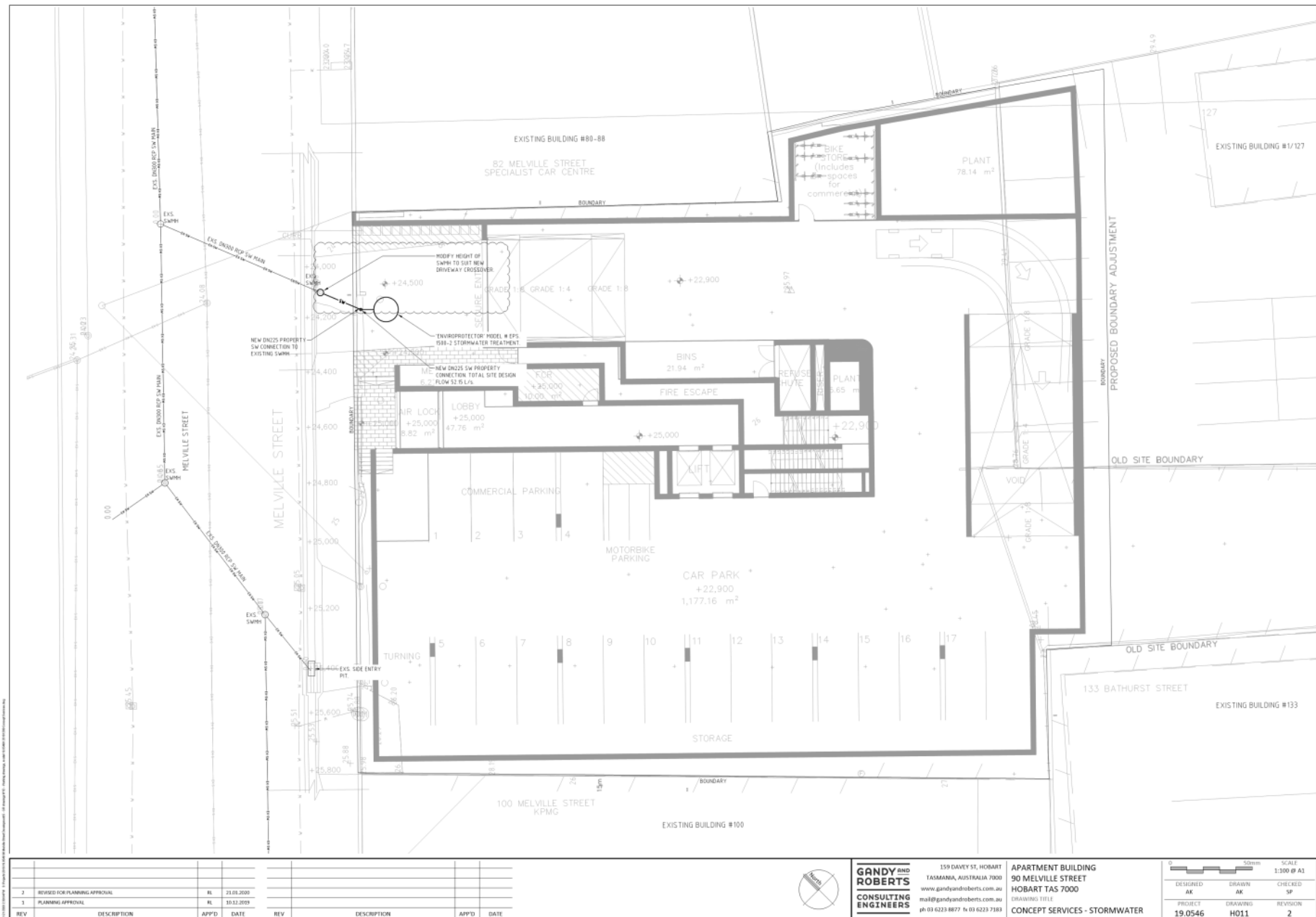
**5.1 Drawing 19.0546 Rev 2- H010 CONCEPT SERVICES – SEWER & WATER**

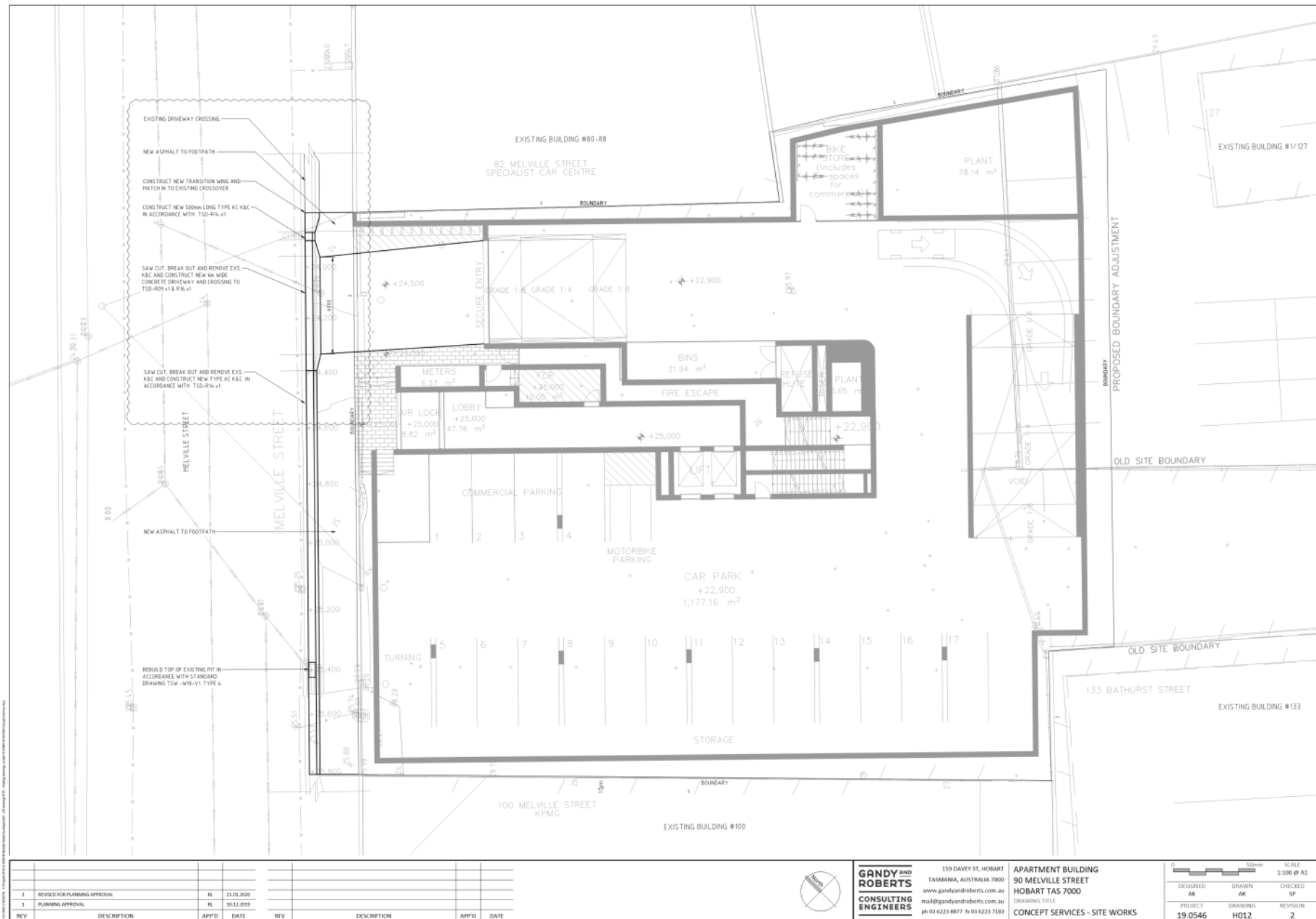
**5.2 Drawing 19.0546 Rev 2 – H011 CONCEPT SERVICES – STORMWATER**

**5.3 Drawing 19.0546 Rev 2 – H012 CONCEPT SERVICES – SITE WORKS**









19.0546 – Concept Services Report — 19/03/2020

## **6 Appendix.**

### **6.1 Calculations**

Level	Basins	Bath	DWM	Water Closet	Sink	CWM	FHR	TRO	Shower	ET's	Area Type
Basement L2	0	0	0	0	0	0	0	0	0	0	Carpark
Basement L1	0	0	0	0	0	0	0	0	0	0	Carpark
Lower Ground Floor	0	0	0	0	0	0	0	0	0	0	Plant / Carpark
Ground Floor	4	0	2	4	4	0	2	0	0	3.045	Café MP01 \ Commercial BE01
Level 1	14	1	8	13	8	8	0	8	13	5.75	Apartments RA01, RA02
Level 2	14	1	8	13	8	8	0	8	13	5.75	Apartments RA01, RA02
Level 3	14	1	8	13	8	8	0	8	13	5.75	Apartments RA01, RA02
Level 4	14	1	8	13	8	8	0	8	13	5.75	Apartments RA01, RA02
Level 5	14	1	7	10	7	7	0	7	13	5	Apartments RA02
Level 6	13	1	6	12	6	6	0	6	12	4.5	Apartments RA02
Level 7	13	1	6	12	6	6	0	6	12	4.5	Apartments RA02
Level 8	10	0	4	10	4	4	0	4	7	3.5	Apartments RA02

<b>Totals</b>	<b>110</b>	<b>7</b>	<b>57</b>	<b>100</b>	<b>59</b>	<b>55</b>	<b>2</b>	<b>55</b>	<b>96</b>	<b>43.545</b>	
<b>Fixture Units</b>	<b>110</b>	<b>28</b>	<b>171</b>	<b>400</b>	<b>177</b>	<b>275</b>		<b>275</b>	<b>192</b>		
<b>Loading Units</b>	<b>110</b>	<b>56</b>	<b>171</b>	<b>200</b>	<b>177</b>	<b>165</b>	<b>46</b>	<b>165</b>	<b>192</b>		
<b>Total Fixture Units</b>	<b>1628</b>										
<b>Total Loading Units</b>	<b>1282</b>										
<b>Fixture Unit Flow (Sewer)</b>	<b>14.1</b>	L/s									Extrapolated from AS3500.3
<b>Loading Unit Flow (Water)</b>	<b>5.5</b>	L/s									
<b>Average Dry Weather Flow</b>	<b>0.235143</b>	L/s									
<b>d' From WSA02 Figure C1</b>	<b>12.069</b>										
<b>Peak Dry Weather Flow</b>	<b>2.83794</b>	L/s									

Water Demands

<b>Domestic Flow</b>	<b>5.5</b>	<b>L/s</b>	<b>600kPa</b>
<b>Fire Hydrant Flow</b>	<b>20</b>	<b>L/s</b>	<b>600kPa</b>
<b>Fire Sprinkler Flow</b>	<b>12.7</b>	<b>L/s</b>	<b>600kPa</b>



praxisenvironment

heritage

planning

archaeology

---

po box 338  
north hobart  
tasmania 7002

0418 303 184  
info@prax.com.au

**Statement of Historical Archaeological Potential  
Archaeological Impact Assessment &  
Archaeological Method Statement**

90 Melville Street  
HOBART TASMANIA

Brad Williams  
Historical Archaeologist

November 2019

**Contents:**

<b><u>1. INTRODUCTION .....</u></b>	<b><u>1</u></b>
1.1. INTRODUCTION AND BRIEF.....	1
1.2. LIMITATIONS.....	4
<b><u>2. STATUTORY HERITAGE REQUIREMENTS .....</u></b>	<b><u>5</u></b>
2.1 HOBART INTERIM PLANNING SCHEME 2015.....	5
2.2. TASMANIAN HERITAGE REGISTER.....	7
2.3. OTHER STATUTORY HERITAGE REGISTERS/LISTS.....	8
2.4. ABORIGINAL HERITAGE ACT 1975 (AMENDED 2017) .....	8
<b><u>3. ARCHAEOLOGICAL METHODOLOGY.....</u></b>	<b><u>9</u></b>
<b><u>4. HISTORICAL BACKGROUND OF THE SUBJECT SITE .....</u></b>	<b><u>11</u></b>
4.1. RESEARCH METHODOLOGY .....	11
4.2. HISTORICAL OVERVIEW .....	12
<b><u>5. THE LIKELY SIGNIFICANCE AND RESEARCH POTENTIAL OF ARCHAEOLOGICAL REMAINS .....</u></b>	<b><u>34</u></b>
<b><u>6. CURRENT SITE OBSERVATIONS AND ASSESSMENT OF PRIOR DISTURBANCE .....</u></b>	<b><u>38</u></b>
6.1. GENERAL SITE OBSERVATIONS .....	38
6.2. LIKELY SPECIFIC DISTURBANCE EVENTS .....	40
Demolition of the 1820s-30s buildings .....	40
Construction of subsequent buildings .....	40
Subsequent service trenches etc. ....	41
<b><u>7. ARCHAEOLOGICAL ZONING PLAN AND POLICIES.....</u></b>	<b><u>42</u></b>
<b><u>8. THE PROPOSED DEVELOPMENT AND ARCHAEOLOGICAL IMPACT .....</u></b>	<b><u>46</u></b>
<b><u>9. ARCHAEOLOGICAL METHOD STATEMENT .....</u></b>	<b><u>48</u></b>



<b>9.1.</b>	<b>DISTINCT AREAS, METHODOLOGY AND SEQUENCING .....</b>	<b>48</b>
<b>9.2.</b>	<b>IMPLEMENTATION TIMEFRAME .....</b>	<b>51</b>
<b>9.3.</b>	<b>APPROACH TO WORKS.....</b>	<b>51</b>
<b>9.4.</b>	<b>CALL-IN PROVISIONS – AREAS OF LOW ARCHAEOLOGICAL POTENTIAL.....</b>	<b>53</b>
<b>9.5.</b>	<b>CESSATION OF ARCHAEOLOGICAL INPUT .....</b>	<b>53</b>
<b>9.6.</b>	<b>RECORDING .....</b>	<b>54</b>
<b>9.7.</b>	<b>ARTIFACTS.....</b>	<b>54</b>
<b>9.8.</b>	<b>REPORTING REQUIREMENTS.....</b>	<b>54</b>
<b>9.9.</b>	<b>PUBLIC BENEFIT .....</b>	<b>55</b>
<b>9.10.</b>	<b>ABORIGINAL HERITAGE .....</b>	<b>55</b>
<b>9.11.</b>	<b>SITE CONTAMINATION .....</b>	<b>56</b>

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.

This document has been prepared by Praxis Environment for JAWS Architects (obo Giameos Holdings Pty. Ltd.) (the *clients*) and may only be reproduced, used or distributed by the clients (or nominee), and for purposes by which the clients are bound by law to allow distribution, or for bona-fide historical or archaeological research. Praxis Environment otherwise expressly disclaims responsibility to any person other than the clients arising from or in connection with this document.

To the maximum extent permitted by law, all implied warranties and conditions in relation to the services provided by Praxis Environment and the document are excluded unless they are expressly stated to apply in this document.

Praxis Environment expressly disclaims responsibility for any error in, or omission from, this document arising from or in connection with any assumptions being incorrect.

The opinions, conclusions and any recommendations in this document are based on conditions encountered and information available at the time of preparation. Praxis Environment reserves the right to retract or review any opinion, conclusion or recommendation should further relevant information come to hand at any time in the future; otherwise Praxis Environment expressly disclaims responsibility for any error in, or omission from, this document arising from any such further information.

## 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>

<sup>2</sup> <http://www.heritage.tas.gov.au/media/pdf/Archae%20ResGlines%20%20FINAL%20-%20June%202009.pdf>

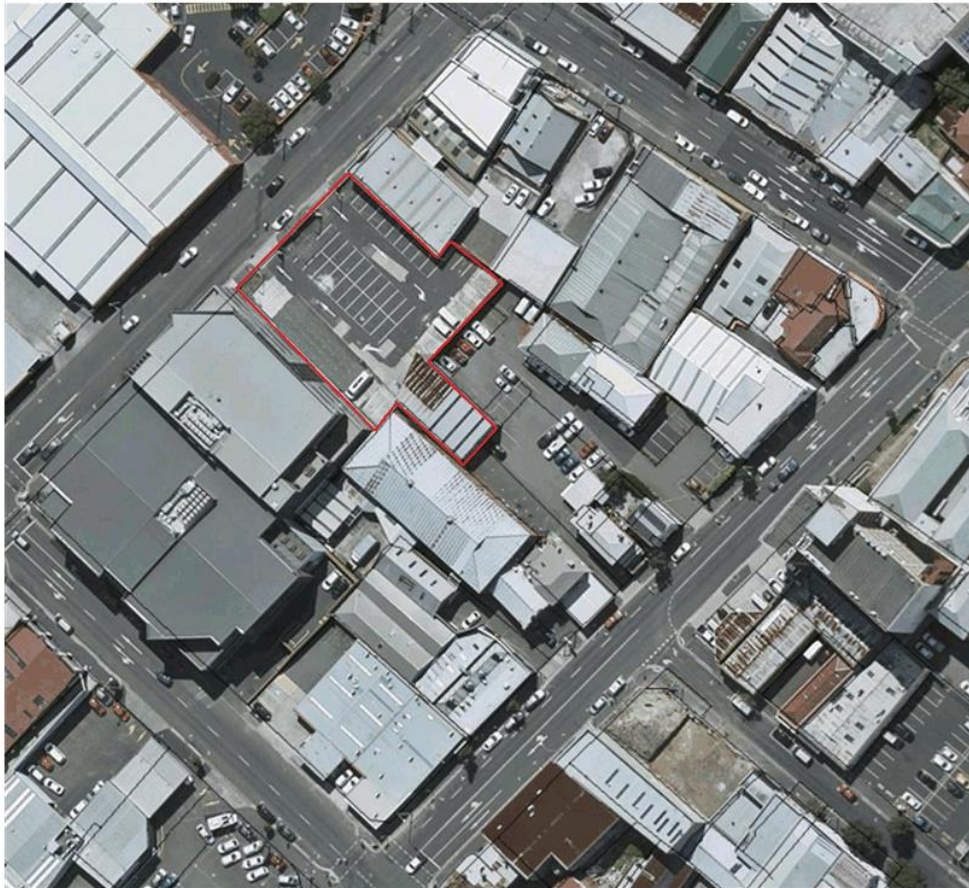


Figure 1.1 – A recent aerial image of the area – the subject site depicted in red. [www.thelist.tas.gov.au](http://www.thelist.tas.gov.au)



Figure 1.2 – Detail of a recent aerial image of the area – the subject site depicted in red. [www.thelist.tas.gov.au](http://www.thelist.tas.gov.au)



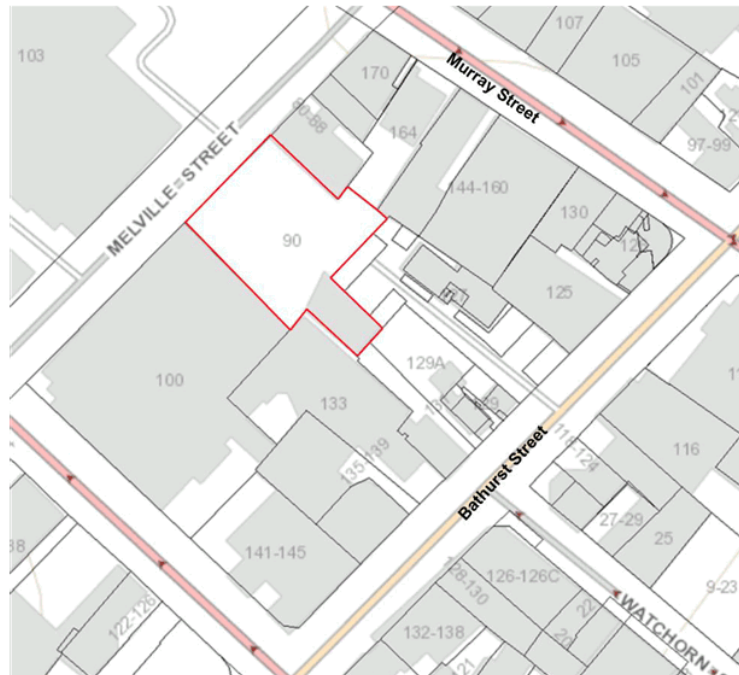


Figure 1.3 – Cadastral parcels surrounding the subject site (depicted in red) and surrounds ([www.thelist.tas.gov.au](http://www.thelist.tas.gov.au)).

## 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
<b>E.13.10.1 – Building and Works other than Demolition</b>	A1. Building and works do not involve excavation or ground disturbance.	<p>P1. Buildings, works and demolition must not unnecessarily impact on archaeological resources at places of archaeological potential, having regard to:</p> <ul style="list-style-type: none"> <li>a) the nature of the archaeological evidence, either known or predicted;</li> <li>b) measures proposed to investigate the archaeological evidence to confirm predictive statements of potential;</li> <li>c) strategies to avoid, minimise and/or control impacts arising from building, works and demolition;</li> <li>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;</li> </ul> <p>(a) measures proposed to preserve significant archaeological evidence 'in situ'.</p>
<b>E.13.10.2 – Subdivision</b>	A1. Subdivision provides for building restriction envelopes on titles over land defined as the Place of Archaeological Potential in Table E13.4.	<p>P1. Subdivision must not impact on archaeological resources at Places of Archaeological Potential through demonstrating either of the following:</p> <ul style="list-style-type: none"> <li>(a) that no archaeological evidence exists on the land;</li> <li>(b) that there is no significant impact upon archaeological potential.</li> </ul>

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>3</sup> <http://www.heritage.tas.gov.au/media/pdf/2%20Practice%20note%20-%20Archaeology.pdf>

<sup>4</sup> <http://www.heritage.tas.gov.au/media/pdf/Archae%20ResGlines%20%20FINAL%20-%20June%202009.pdf>

### 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:

Determining general archaeological potential: 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.

Understanding possible impact of development and formulation of management strategies: 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'
<b>1. Archaeological potential.</b> Are you likely to find something if you dig here? (i.e. a <u>Statement of Archaeological Potential</u> ).	Further action may not be required, although a contingency plan may be required for unexpected finds.	The significance of the archaeological potential should be investigated.
<b>2. Significance.</b> 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.
<b>3. Integrity.</b> 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.
<b>4. Impact</b> Will proposed works impact upon the significant archaeological remains? i.e. an <u>Archaeological Impact Assessment</u> .	Further action may not be required, although a contingency plan may be required for unexpected impacts.	An <u>Archaeological Method Statement</u> will be required to detail how impact will be managed/mitigated.

## 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





**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

<sup>8</sup> *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.

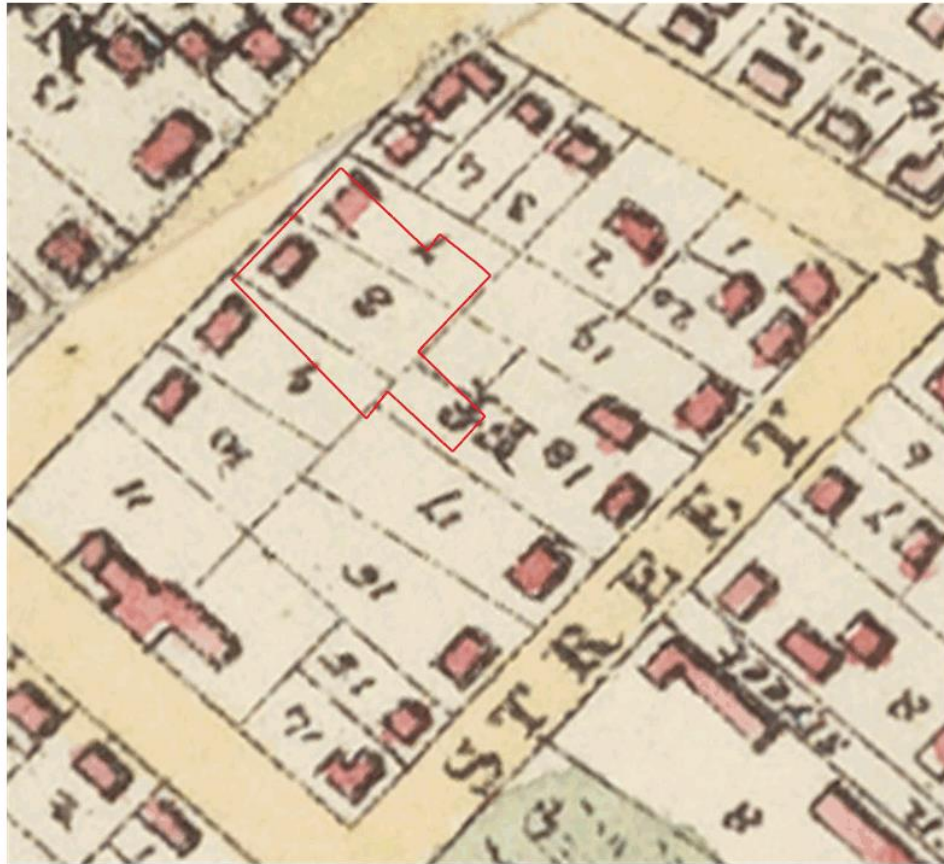


Figure 4.3 – Excerpt from Frankland's 1839 map of Hobart and surrounds. Libraries Tasmania Allport Stack 912.94661MAP.

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

<sup>10</sup> *The Mercury* 18 Jan 1892 p4

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>11</sup> DPIPWE The LIST Mem 4/7015

<sup>12</sup> DPIPWE The LIST Mem 4/6544 and 4/5389

<sup>13</sup> *The Mercury* 24 Decmber 1873 p4

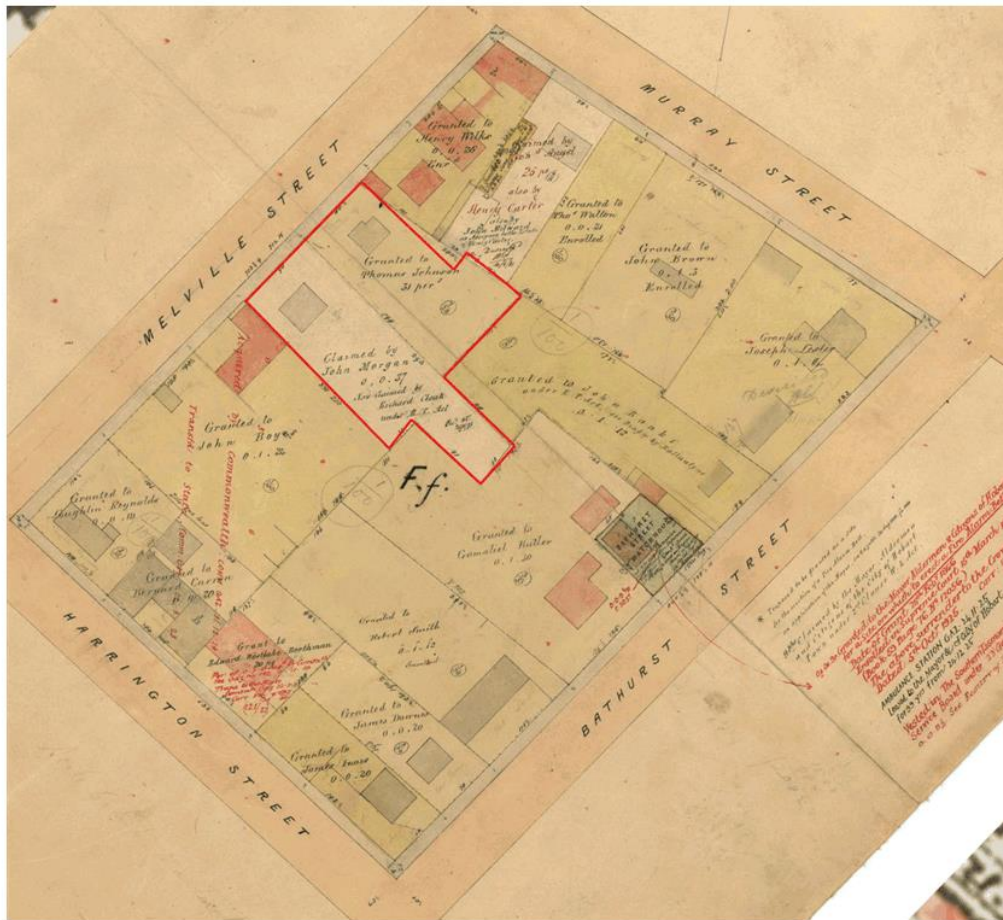
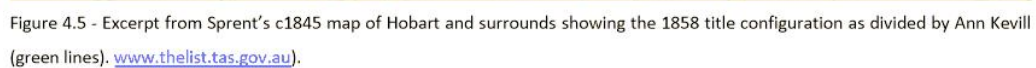


Figure 4.4 - Excerpt from Sprent's c1845 map of Hobart and surrounds. [www.thelist.tas.gov.au](http://www.thelist.tas.gov.au).





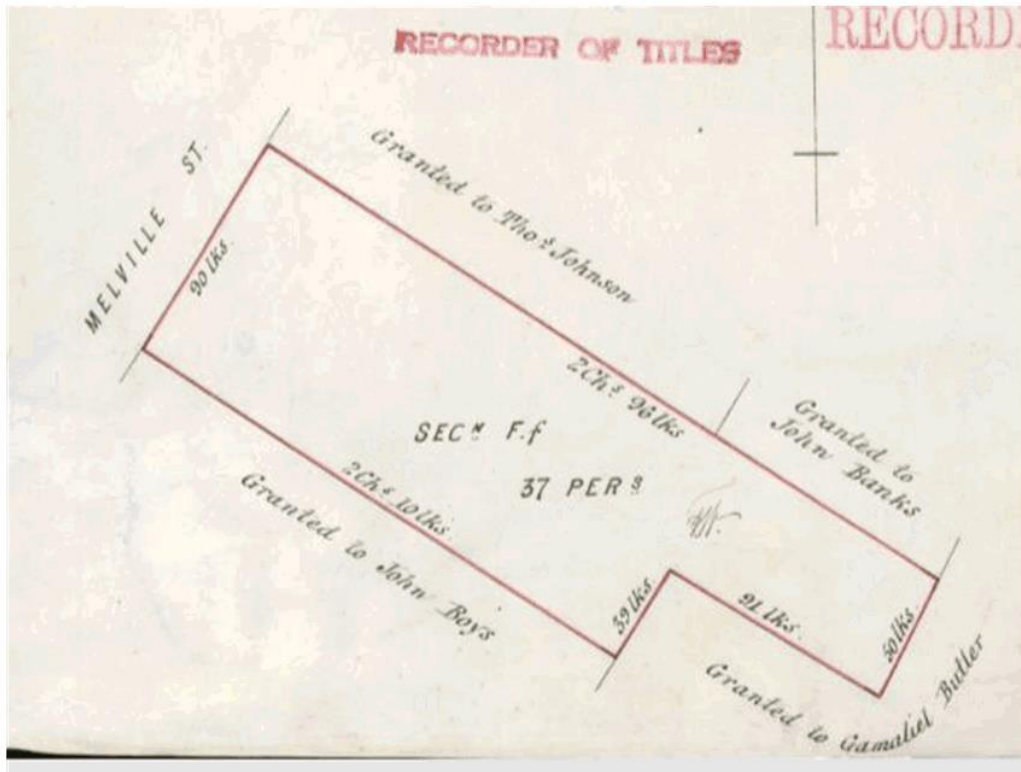


Figure 4.6 - Detail from DPIPWE Purchase Grant 222/119 showing the title as issued to Richard Cloak in 1873. Note that the allotment has reverted back to its original outline as shown in the Sprent survey.



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>15</sup> See DPIIPWE 90062: Survey Diagram Hobart 7-11



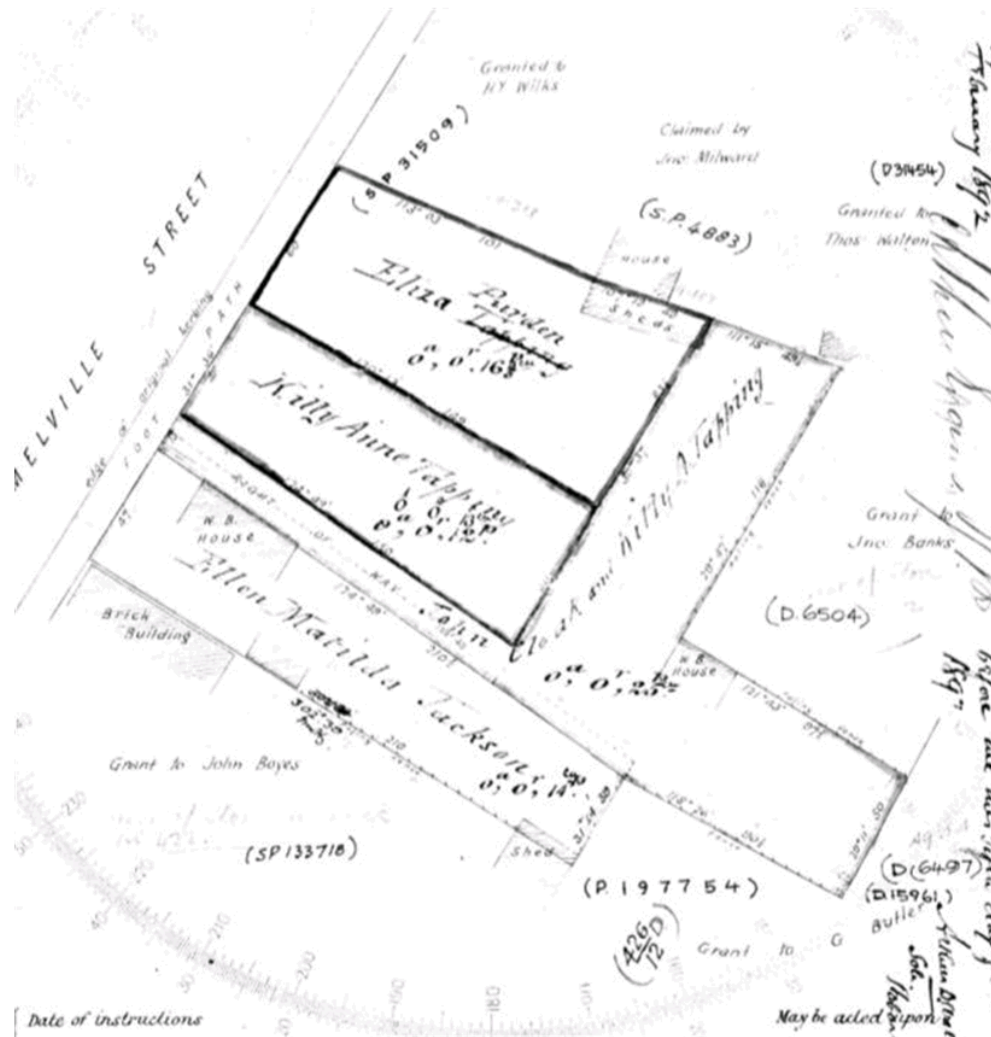


Figure 4.9 - Detail from DPIWE 90062 / Hobart 7-11 showing 1892 title configuration.

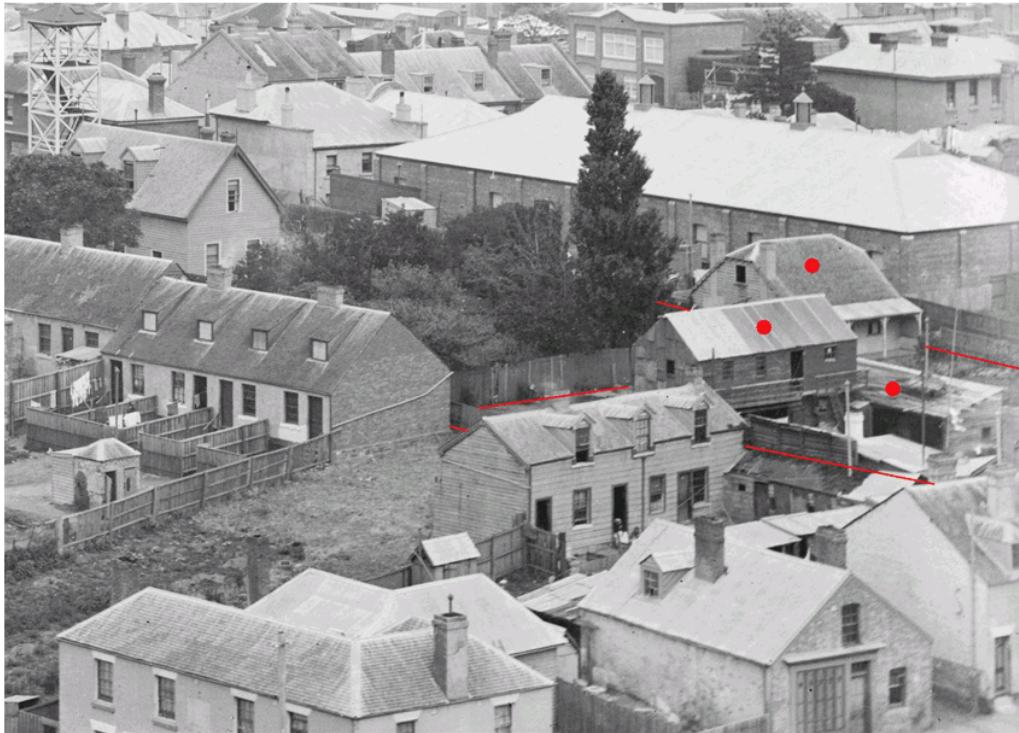


Figure 4.10 - A c1910 excerpt from a panorama of Hobart facing south. The red dots denote buildings within the subject site and the lines denote the boundaries as visible in this image. Tasmanian Archive and Heritage Officer NS392-1-736.

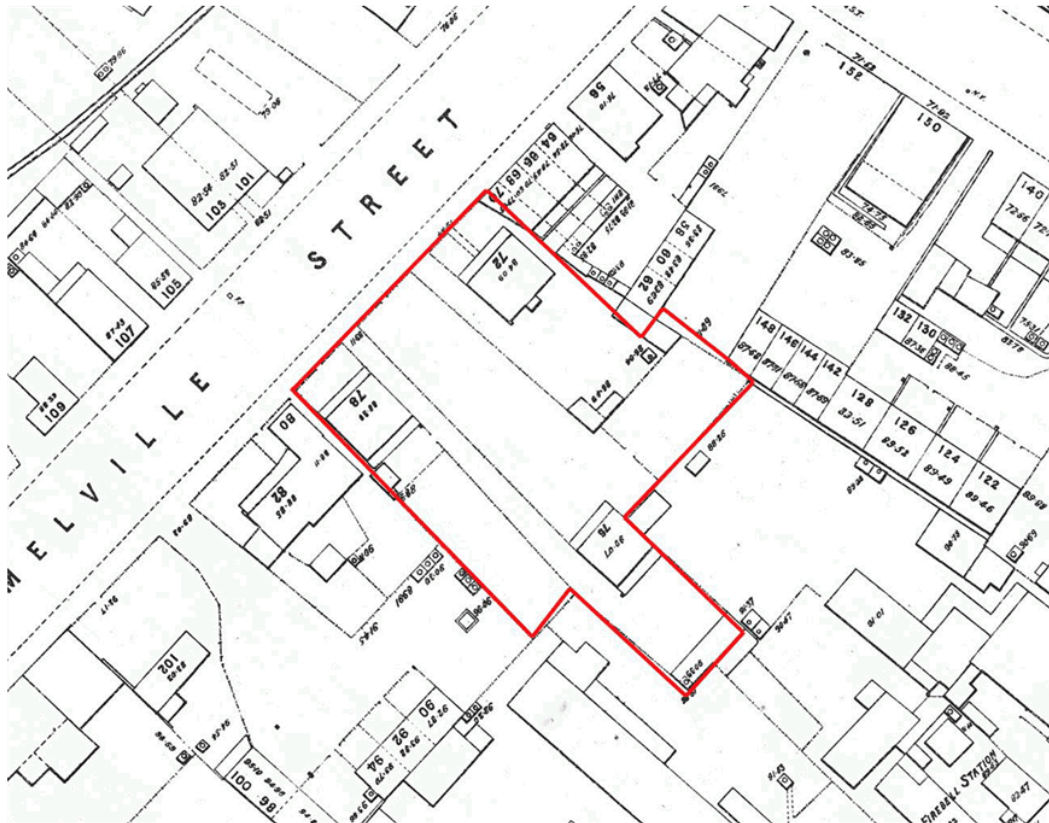


Figure 4.11 – 1907 Metropolitan Drainage Board survey showing the subject site and surrounds. (Hobart Sheet 16)

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.

<sup>16</sup> DPIWWE The LIST CT198/184; CT198/72; CT154/179; CT148/44

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.



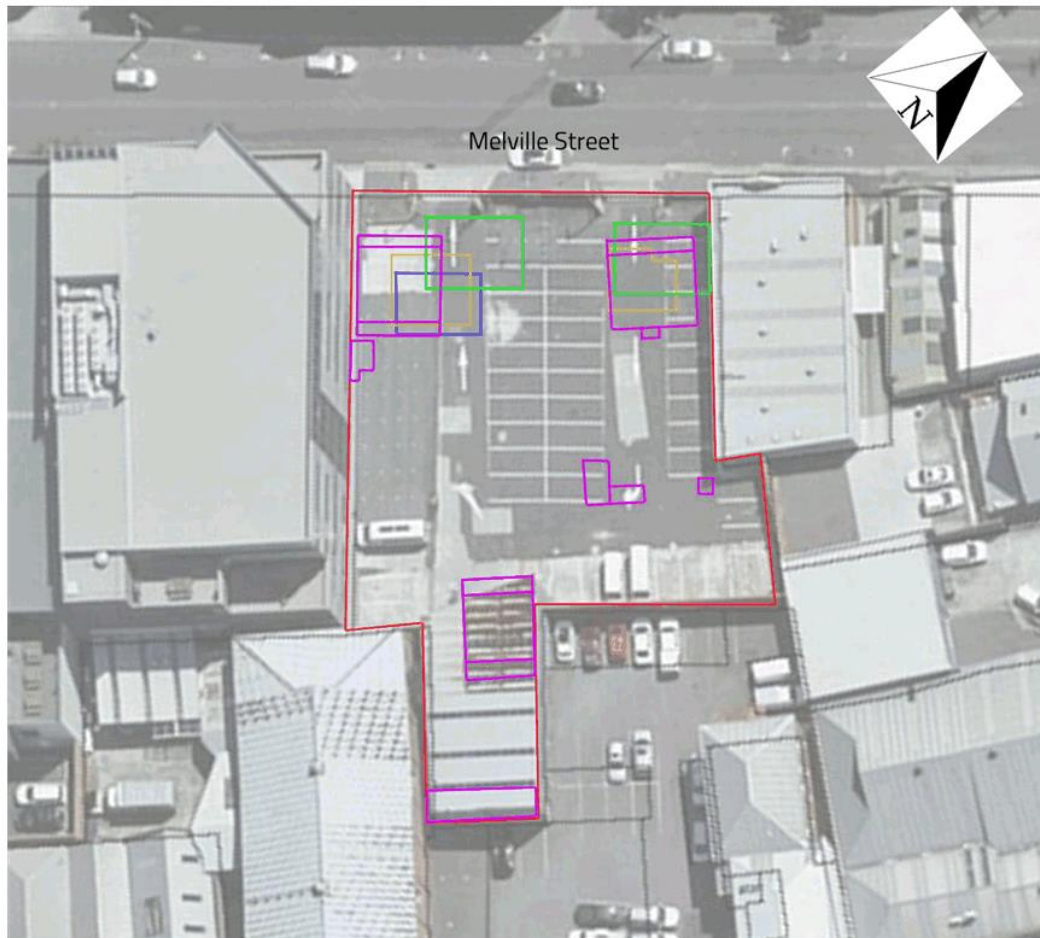


Figure 4.19 – Composite overlay of the footprint of all most-accurate known pre-1907 buildings and site features (colours as per coding above) in relation to the subject site (red).



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 Degraives 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.



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 from 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%20ResGlins%20%20FINAL%20-%20June%202009.pdf>

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.

## 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 it is 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>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>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.



## 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 c1820s-30s residential buildings, probably overlain with c1870s-1880s residential development. Artifactual remains arising from deposition associated with c90 years of domestic occupation from colonial times through to the 1910s.	Likely to be largely intact owing to the lack of substantial development post demolition.	Of <b>high archaeological potential</b> and historical interest in demonstrating the establishment and evolution of the site, the layout and construction of the early buildings and the material culture of those using/inhabiting the buildings throughout the colonial period into the early c20th.
Orange	This area is likely to yield remains of ancillary structures and features associated with all phases of development on the site (i.e. from c1830s onwards) e.g. outbuildings, drains, cesspits, paths etc.	Likely to be largely intact owing to the lack of substantial development post demolition.	Of <b>medium archaeological potential</b> and historical interest in demonstrating the later evolution of the site, the layout and construction of the later and ancillary buildings/features on the site.
Green	Unlikely to be any significant nor substantial archaeological remains due to a lack of known development in these areas and also being areas where any substantial ancillary infrastructure is likely.		Of <b>low or no archaeological potential</b> .

Accordingly, the following archaeological management policies are recommended:

1. 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 underground 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 dwelling, probably replaced by another dwelling c1870s-80s.	It is likely that any foundations of these buildings are shallow and substantial – of either brick, or more likely stone. It is unknown what impact the later residential redevelopment may have had on 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 structural remains of the buildings, evolution of these buildings/site and the yield of any artifacts as well as information on site formation processes on the site which may further guide the archaeological program. As these areas are likely to yield valuable archaeological information, the most stringent methodology will be employed here.	It is proposed that these works be undertaken ahead of the works program (post site-establishment). This area will be excavated under archaeological control as per the methodology below.
2	Site of the c1839 timber dwelling, probably replaced by another dwelling c1870s-80s.		
3	Central and rear portions of the site, sites of outbuildings associated with later c19th occupation of the site.	Given the lower significance of these remains, only a cursory mapping exercise and artifact salvaging will be undertaken – as these remains are more of historical interest than archaeological potential (this may assist in interpretation initiatives). Whilst it is 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.	It is proposed that this will be undertaken as an archaeological monitoring exercise concurrent with the works program, as this area will not require as stringent detail-excavation and recording as the higher significance areas.

Remainder of the site	Whilst the remainder of the site has not been the location of any known major development there may be archaeological remains of significance/interest across the site that were ancillary to other 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.	No archaeological monitoring is proposed for this area, however it is to be managed with call-in provisions for any unexpected finds as per the methodology below.
-----------------------	---	--

### 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

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.

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 re-designated 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).



**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).



**ENVIRONMENTAL SITE ASSESSMENT  
90 MELVILLE STREET, HOBART**

December 2019

*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.



*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.

*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.***Table of Contents**

<b>DOCUMENT CONTROL</b>	<b>I</b>
<b>EXECUTIVE SUMMARY</b>	<b>II</b>
<b>ABREVIATIONS</b>	<b>VIII</b>
<b>1 INTRODUCTION</b>	<b>10</b>
1.1 GENERAL	10
1.2 SITE DETAILS	11
1.3 INVESTIGATION OBJECTIVES	11
1.4 SCOPE OF WORKS	12
1.5 ADOPTED LAND USE SETTINGS FOR THE INVESTIGATION	12
<b>2 PLANNING</b>	<b>12</b>
2.1 OVERVIEW	12
2.2 EXCAVATION WORKS E2.6.2 P1	12
2.3 ZONING	13
<b>3 PRELIMINARY INVESTIGATION - DESKTOP</b>	<b>13</b>
3.1 GROUNDWATER	13
3.1.1 POTENTIAL UP-GRADIENT CONTAMINATION SOURCES	13
3.1.2 DOWNGRAIDENT ECOLOGICAL RECEPTORS	13
3.1.3 GROUNDWATER BORES	13
3.2 MRT GEOLOGY MAPPING	14
3.3 SITE TOPOGRAPHY, DRAINAGE & HYDROGEOLOGY	14
3.4 HISTORICAL AERIAL PHOTOGRAPHY INTERPRETATION	15
3.5 DANGEROUS GOODS RECORDS (WORKSAFE TASMANIA)	15
3.6 COUNCIL ENVIRONMENTAL RECORDS	15
3.7 TASMANIAN EPA	16
3.8 HISTORICAL SITE ENVIRONMENTAL INVESTIGATIONS	16
3.9 POTENTIAL CONTAMINATION ISSUES	16
3.9.1 AREAS OF POTENTIAL CONCERN	16
3.9.2 CONTAMINANTS OF POTENTIAL CONCERN	16
<b>4 FIELD INVESTIGATION PROCEDURES</b>	<b>17</b>
4.1 WORKS SUMMARY	17
4.2 SITE WALKOVER	17
4.2.1 SURFACE COVERINGS	17
4.2.2 SIGNS OF CONTAMINATION	17
4.3 SOIL INVESTIGATION	19
4.3.1 SOIL SAMPLING	19
4.3.2 SOIL ANALYSIS	19
<b>5 QUALITY CONTROL</b>	<b>21</b>
5.1 FIELD	21
5.2 LABORATORY	22

*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.*

<b>6</b>	<b>FIELD INVESTIGATION FINDINGS</b>	<b>23</b>
<b>6.1</b>	<b>GEOLOGICAL INTERPRETATION</b>	<b>23</b>
6.1.1	GRAIN CLASS INTERPRETATION	23
6.1.2	SOIL CONTAMINATION OBSERVATIONS	23
<b>7</b>	<b>SOIL ECOLOGICAL IMPACT ASSESSMENT</b>	<b>24</b>
<b>7.1</b>	<b>PROTECTED ENVIRONMENTAL VALUES</b>	<b>24</b>
<b>7.2</b>	<b>NEPM ASC (2013) GUIDELINES</b>	<b>24</b>
<b>7.3</b>	<b>GUIDELINES</b>	<b>24</b>
7.3.1	ECOLOGICAL SCREENING LEVELS	24
7.3.2	ECOLOGICAL INVESTIGATION LEVELS	25
<b>7.4</b>	<b>FINDINGS</b>	<b>25</b>
7.4.1	ECOLOGICAL SCREENING LEVELS	25
7.4.2	ECOLOGICAL INVESTIGATION LEVELS	26
<b>8</b>	<b>SOIL HUMAN HEALTH DIRECT CONTACT ASSESSMENT</b>	<b>27</b>
<b>8.1</b>	<b>GUIDELINES</b>	<b>27</b>
8.1.1	LAND USE CLASSIFICATION	27
8.1.2	ADOPTED LAND USE CLASSIFICATION	27
<b>8.2</b>	<b>FINDINGS</b>	<b>27</b>
8.2.1	DERMAL CONTACT - PETROLEUM HYDROCARBONS	27
8.2.2	DUST INHALATION & SOIL INGESTION	28
<b>9</b>	<b>INDOOR INHABITANT PVI ASSESSMENT – HSL'S</b>	<b>30</b>
<b>9.1</b>	<b>SELECTED MEDIA FOR ASSESSING PVI RISK</b>	<b>30</b>
<b>9.2</b>	<b>LAND USE CLASS</b>	<b>31</b>
<b>9.3</b>	<b>SOIL ASSESSMENT</b>	<b>31</b>
<b>10</b>	<b>TRENCH WORKER PVI ASSESSMENT – HSL'S</b>	<b>32</b>
<b>10.1</b>	<b>CLASSIFICATION</b>	<b>32</b>
<b>10.2</b>	<b>FINDINGS</b>	<b>32</b>
<b>11</b>	<b>SOIL DISPOSAL ASSESSMENT</b>	<b>33</b>
<b>11.1</b>	<b>GUIDELINES</b>	<b>33</b>
<b>11.2</b>	<b>FINDINGS</b>	<b>33</b>
<b>12</b>	<b>CONCEPTUAL SITE MODEL</b>	<b>35</b>
<b>12.1</b>	<b>POTENTIAL &amp; IDENTIFIED SOURCES OF CONTAMINATION</b>	<b>35</b>
12.1.1	POTENTIAL PRIMARY ONSITE CONTAMINATION	35
12.1.2	POTENTIAL PRIMARY OFFSITE CONTAMINATION	35
12.1.3	POTENTIAL SECONDARY ONSITE CONTAMINATION	35
12.1.4	IDENTIFIED PRIMARY SOURCES	35
12.1.5	IDENTIFIED SECONDARY SOURCES	35
12.1.6	SITE MODEL CONCLUSION	35

*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.*

<b>13 CONCLUSIONS</b>	<b>36</b>
<b>13.1 DESKTOP ASSESSMENT</b>	<b>36</b>
<b>13.2 SOIL ASSESSMENT FINDINGS</b>	<b>36</b>
<b>13.3 ESA CONCLUSIONS</b>	<b>37</b>
<b>14 RECOMMENDATIONS</b>	<b>37</b>
<b>REFERENCES</b>	<b>38</b>
<b>LIMITATIONS STATEMENT</b>	<b>39</b>
<b>APPENDIX 1 GES STAFF</b>	<b>40</b>
<b>APPENDIX 2 SURROUNDING BORE DATA</b>	<b>41</b>
<b>APPENDIX 3 HISTORICAL SITE PHOTOGRAPHS</b>	<b>42</b>
<b>APPENDIX 4 SITE PHOTOGRAPHS</b>	<b>44</b>
<b>APPENDIX 5 PID CALIBRATION RECORD</b>	<b>46</b>
<b>APPENDIX 6 LABORATORY CHAIN OF CUSTODY</b>	<b>48</b>
<b>APPENDIX 7 LABORATORY SAMPLE RECEIPT NOTIFICATION</b>	<b>50</b>
<b>APPENDIX 8 QUALITY ASSURANCE AND QUALITY CONTROL DOCUMENTATION</b>	<b>53</b>
<b>APPENDIX 9 BOREHOLE LOGS</b>	<b>63</b>
<b>APPENDIX 10 CERTIFICATE OF ANALYSIS</b>	<b>71</b>

**Figures**

FIGURE 1 SITE LOCATION (IMAGE SOURCED FROM THE LIST) .....	10
FIGURE 2 AERIAL PHOTOGRAPH OF THE CURRENT SITE LAYOUT (C/O GOOGLE EARTH) APRIL 2019.....	11
FIGURE 3 COUNCIL PLANNING ZONES (2015) UNDER THE TASMANIAN INTERIM PLANNING SCHEME .....	13
FIGURE 4 MINERAL RESOURCES TASMANIA 1:25000 SCALE MAPPING (THE LIST). ....	14
FIGURE 5 SURFACE TOPOGRAPHY AND INFERRED GROUNDWATER FLOW .....	14
FIGURE 6 SAMPLING PLAN .....	18

**Tables**

TABLE 1 SITE DETAILS .....	11
TABLE 2 HISTORICAL AERIAL PHOTOGRAPH LOG.....	15
TABLE 3 SUMMARY OF SITE INVESTIGATION WORK DATES .....	17
TABLE 4 SUMMARY OF SOIL SAMPLING METHODS.....	19
TABLE 5 OVERVIEW OF SOIL ANALYSIS AND QUALITY CONTROL.....	20
TABLE 6 SOIL FIELD QA/QC PROCEDURES AND COMPLIANCE .....	21
TABLE 7 SOIL LABORATORY QA/QC PROCEDURES AND COMPLIANCE.....	22
TABLE 8 SUMMARY OF GRAIN CLASS BASED ON USCS CLASSIFICATION .....	23
TABLE 9 SUMMARY OF SOIL INVESTIGATION LIMITS CONSIDERED AT THE SITE BASED IN NEPM ASC (2013) .....	24

*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.*

TABLE 10 SUMMARY OF SOIL ANALYTICAL RESULTS COMPARED WITH ECOLOGICAL SCREENING LEVEL'S FOR COMMERCIAL / INDUSTRIAL LAND USE.....	25
TABLE 11 SOIL ANALYTICAL RESULTS COMPARED AGAINST ECOLOGICAL INVESTIGATION LEVELS FOR COMMERCIAL / INDUSTRIAL LAND USE .....	26
TABLE 12 SUMMARY OF LAND USE SPATIAL AND TEMPORAL SETTING FOR DETERMINING EXPOSURE RISK .....	27
TABLE 13 SOIL ANALYTICAL RESULTS COMPARED AGAINST CRC CARE GUIDELINES FOR DERMAL CONTACT .....	28
TABLE 14 SOIL ANALYTICAL RESULTS COMPARED AGAINST NEPM (2013) HEALTH INVESTIGATION LIMIT GUIDELINES.....	29
TABLE 15 PREFERRED METHODS FOR DETERMINING SITE PVI RISK.....	30
TABLE 16 SOIL ANALYTICAL RESULTS COMPARED AGAINST HSL D FOR INDOOR VAPOUR RISK.....	31
TABLE 17 SUMMARY OF SOIL ANALYTICAL RESULTS COMPARED AGAINST HSL'S FOR ASSESSING PVI RISK TO TRENCH WORKERS.....	32
TABLE 18 SUMMARY OF IB105 CLASSIFICATION GUIDELINES .....	33
TABLE 19 SOIL ANALYTICAL RESULTS COMPARED AGAINST IB105 INVESTIGATION LIMITS FOR SOIL DISPOSAL .....	34

*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.***ABBREVIATIONS**

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

*Geo Environmental Solutions – GES**Page viii*



*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.*

PSH	Phase Separated Hydrocarbons
PVI	Petroleum Vapour Intrusion
Redox	Reduction / Oxidation Potential
SCA	Site Contamination Assessment
SCM	Site Contamination Model
TPH	Total Petroleum Hydrocarbons
TRH	Total Recoverable Hydrocarbons
USCS	Unified Soil Classification System
WRG	Water Resource Group

*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.*

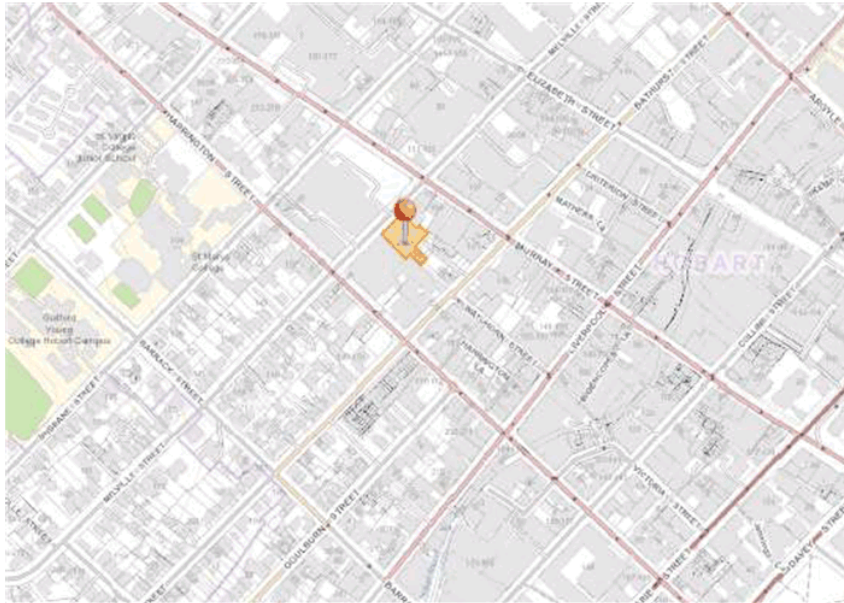
## 1 INTRODUCTION

### 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 Photograph 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**

<b>Site Address</b>	90 Melville Street, Hobart, Tasmania.
<b>Current Title identification details</b>	PID 7408842 Title Reference CT245477/1
<b>Previous land use</b>	Timber storage yard
<b>Current land use</b>	Vacant block/car parking
<b>Current Ownership (as per current certificates of title; the LIST)</b>	Giameous Holdings Pty Ltd
<b>Zoning</b>	The site is <i>Central Business</i> under the Tasmanian Interim Planning Scheme, 2015.
<b>Local Council</b>	Hobart City Council
<b>Proposed Site Use</b>	Multistorey development
<b>Requirement for current Investigation</b>	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.

*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.*

## 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.
  - 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;
- 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.

## 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;



*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.*

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



*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.*

### 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 style="list-style-type: none"> <li>Site still in use as a timber yard with timber racks small site office and rear shed.</li> <li>Historical Aerial Photograph <b>Error! Reference source not found.</b></li> </ul>
1990	<ul style="list-style-type: none"> <li>Site showing timber yard use open yard with site office and rear shed</li> <li>Main K&amp;D site at 103 Melville as it today, and one adjacent building at 100 Melville Street present</li> <li>Historical Aerial Photograph <b>Error! Reference source not found.</b></li> </ul>
1977	<ul style="list-style-type: none"> <li>Timber yard evident with large shed on front of property and narrow shed along western boundary</li> <li>Former buildings at 100 Melville Street still present, K&amp;D building not present, varied arrangement of sheds and buildings evident</li> <li>Historical Aerial Photographs <b>Error! Reference source not found.</b></li> </ul>
1958	<ul style="list-style-type: none"> <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> <li>Historical Aerial Photographs <b>Error! Reference source not found.</b></li> </ul>

### 3.5 Dangerous Goods Records (WorkSafe Tasmania)

Worksafe Tasmania was contacted for records of 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 tuckbox)
- 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.

*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.*

### **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.

*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.*

## 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.

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.



Figure 6 Sampling Plan

*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.*

### 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: <ul style="list-style-type: none"> <li>• Dial Before You Dig plans were obtained;</li> <li>• Archers Underground Service were engaged; and</li> <li>• Where practical, the first meter of the bore was cleared with a hand auger.</li> </ul>
Sampling Method	Soil samples 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.

*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.*

**Table 5 Overview of Soil Analysis and Quality Control**

<b>Analytes</b>	<b>Primary Soil Samples</b>	<b>Duplicate<sup>a</sup></b>	<b>IIS<sup>b</sup></b>	<b>Rinsate Blank</b>	<b>Trip Blank</b>
TPH/TRH	16	1	-	1	-
BTEX	16	1	-	1	-
PAH	16	1	-	1	-
15 Heavy Metals	16	1	-	1	-

Sampling Quality Control Standards (AS4482):

a – One (1) in twenty (20) inter laboratory duplicate samples

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.



*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.*

## 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)
- 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)

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 Geoprobe 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.

*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.*

## 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 Quantitation Limit (PQL)	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 outliers 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.

Environmental Site Assessment: 90 Melville Street, Hobart, December 2019.

## 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**

Sample	Footings Excavation Depth <sup>A</sup> - Red Fill Thickness <sup>A</sup> - Green	Sample PVI Depth (m) Relative to Slab/Cut Depth	Soil Grain Size Class Averaging Above Soil Sample																Attenuation				SAMPLE USCS
			GW	GP	GM	GC	SW	SP	SM	SC	ML	CL	OL	MH	CH	OH	CI	Rock (R)	Existing Pavement (P)	Crawl/Space Thickness (m)	Proposed CONCRETE (CH)	Crawl/Space	
BH1 0.5-0.6	6.7	<																NA	0.2	1.0	1.0	CLAY	CH
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	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	CH
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	CH
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.

*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.*

## 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)**

Investigation Levels (IL)	Analytes Investigated						
	Hydrocarbons				Metals		DDT
	BTEX	TRH (F1 to F4)	Benzo(a) pyrene (PAH)	Naphthalene (PAH)	Zn, Cr(III), Ni & As	Cu, Lead	
ESL's	Analysed	Analysed	Analysed				
EIL's				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.

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

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 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 Screening Levels for Soil				BTEX				PAH	TRH			
Bold - Indicates LOR Exceedances X - Indicates Sample has been Excavated				Benzene	Toluene	Ethylbenzene	Xylenes	Benzo(a)pyrene	F1 (C6 - C10)	F2 (>C10 - C16)	F3 (>C16 - C34)	F4 (>C34 - C40)
Colour Shading - Indicates ESL Exceedances: >1 x, * 2-5 x, ** 5-20 x, *** 20-50 x, **** >50 x												
Sample ID	Sample Date	Soil Texture Class (fine / coarse)	Land Use	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
				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	C	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	C	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	C	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	24.3***	<10	100	1640	3400
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

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

### 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 Investigation Levels for Soil						Copper (CEC)	Copper (pH)	Nickel	Zinc	Chromium III	Lead	Arsenic	Naphthalene
Bold - Indicates LOR Exceedances													
X - Indicates Sample Withiin Inferred Excavation													
Colour Shading - Indicates ESL Exceedances: >1 x, * 2-5 x, ** 5-20 x, *** 20-50 x, **** >50 x													
Sample ID	Sample Date	EIL Land Use Sensitivity Class	Soil CEC (cmolc/kg)	Soil pH	Soil Texture Class (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)	C	56	56	25	25	21	6	<5	<1
BH5 1.5-1.6 X	7/12/19	COM/IND	20	4.5 (3)	C	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:

1) Using 0.01M CaCl<sub>2</sub> extract. Rayment, G.E. and Lyons, D.J. (2011). "Soil Chemical Methods – Australasia". 495+20 pp. CSIRO Publishing, Melbourne.

2) pH<sub>F</sub> (1:5). Adjusted by subtracting 0.75 with +/- 0.25 error to calibrate to the CaCl<sub>2</sub> 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.

3) Classified in accordance with parent material typical soil pH as per the Tasmanian soils database / or on-site testing



Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

## 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 potential redevelopment	Onsite	Commercial workers	ALL	D
			Trench workers	ALL	D & Standard
			Residents (upper floors no soil contact) for any maintenance excavations only	DI	D

\* Pathways:

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

### 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.

*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		EP080: BTEXN					EP080/071: TRH			
		Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	C6 - C10 Fraction	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
Dermal Contact Hazard from Soil Hydrocarbons'										
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 Commercial/Industrial		430	99000	27000	81000	11000	26000	20000	27000	38000
Intrusive Maintenance 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	<b>100</b>	<b>1640</b>	<b>340</b>
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.

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

Table 14 Soil Analytical Results Compared Against NEPM (2013) Health Investigation Limit Guidelines

Bold - Indicates LOR Exceedance in Non Metallic Compounds		EA055: Moisture Content	EG005T: Total Metals by ICP-AES														EG035T: Total Recoverable Mercury by FIMS		EP075(SIM)B: Polynuclear Aromatic Hydrocarbons																	
NEPM Health Investigation Levels (HIL's)		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	Benzo(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-cd)pyrene	Dibenz(a,h)anthracene	Benzo(g,h,i)perylene	PAHs	Benzo(a)pyrene TEQ (WHO)	
Dust Inhalation and Soil Ingestion Assessment			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	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
X - Indicates Sample Within Proposed Excavation Zone			%	5	10	1	50	1	2	2	5	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	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Units																																				
LOR		1	5	10	1	50	1	2	2	5	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	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
HIL D Commercial/Industrial	<input checked="" type="checkbox"/> HIL D	3000		500	300000	900		4000	240000	1500	60000	6000	10000		400000	730																			4000	40
Sample date	Sample ID																																			
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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<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	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	<0.5	<0.5	<0.5	<0.5	<0.5	<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	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	<0.5	<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 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	<0.5	<0.5	<0.5	<0.5	<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	<5	140	<1	<50	<1	5	28	101	<5	263	21	<5	111	51	<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
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	<0.5	<0.5	<0.5	<0.5	<0.5	<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 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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<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	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	<0.5	<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	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	<0.5	<0.5	<0.5	<0.5	<0.5	<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 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	<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	<0.5	<0.5	<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	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	<0.5	<0.5	<0.5	<0.5	<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	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	<0.5	<0.5	<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	BH7 0.5-0.6 X	7.8	34	60	<1	<50	<1	6	15	77	90	348	10	<5	52	133	<0.1	0.8	3.2	1.3	2.8	39.7	8.7	42.9	43.0	19.5	19.3	18.2	15.8	24.3	11.1	4.8	12.9	268	36	
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	<0.5

*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.*

## 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 than 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: <ol style="list-style-type: none"> <li>1) Application of site-specific conditions to the CRC CARE model for assessing PVI risk</li> <li>2) Soil gas interpretation for areas where a PVI risk is identified from groundwater analysis.</li> </ol>	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 placed on utilizing groundwater analysis over soil. Soil results provide localised information.	Tertiary

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

## 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; Friebe & 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 Hydrocarbon HSL's for Assessing Indoor Vapour Intrusion (NEPM 2013)					EP080: BTEXN					EP080/071: TRH	
Soil Sample Analysis					Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	F1	F2
Bold - Indicates LOR Exceedances											
Colour Shading - Indicates HSL Exceedances: >1 x, * 2-5 x, ** 5-20 x, *** 20-50 x, **** >50 x											
Sample ID	Sample Date	Depth Class	Grain Class	HSL	mg/kg LOR 0.2	mg/kg LOR 0.5	mg/kg LOR 0.5	mg/kg LOR 0.5	mg/kg LOR 1	mg/kg LOR 10	mg/kg 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	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

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

## 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**

CRC CARE Health Screening Level Assessment for PHC Inhalation Risk To Trench Workers From Soil Sample Analysis				EPO80: BTEXN					EPO80/071: TRH	
Bold - Indicates LOR Exceedances				Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	C6 - C10 Fraction	>C10 - C16 Fraction
Dark Grey Shading - Indicates HSL Exceedances: >1 x, * 2-5 x, ** 5-20 x, *** 20-50 x, **** >50 x										
Sample ID	Sample Date	Depth Class	Grain Class							
				mg/kg LOR 0.2	mg/kg LOR 0.5	mg/kg LOR 0.5	mg/kg LOR 0.5	mg/kg LOR 1	mg/kg LOR 10	mg/kg 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



*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.*

## 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**

	<b>Classification</b> (with reference to Table 2)	<b>Controlled Waste<sup>1</sup></b>	<b>Comments</b>
<b>Fill Material<sup>2</sup></b> <b>(Level 1)</b>	Soil that exhibits levels of contaminants below the limits defined under <i>Fill Material</i> in Table 2.	Unlikely	Soil classified as <i>Fill Material</i> can still be a 'pollutant' under the <i>Environmental Management and Pollution Control Act 1994</i> and needs to be responsibly managed.
<b>Low Level Contaminated Soil</b> <b>(Level 2)</b>	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.
<b>Contaminated Soil</b> <b>(Level 3)</b>	Soil that exhibits levels of contaminants above the limits defined under <i>Low Level Contaminated Soil</i> but below the limits defined under <i>Contaminated Soil</i> in Table 2.	Yes	Where leachable concentrations have not been prescribed, maximum total concentrations will be used to classify the soil.
<b>Contaminated Soil for Remediation</b> <b>(Level 4)</b>	Soil that exhibits levels of contaminants above the limits defined under <i>Contaminated Soil</i> in Table 2 (regardless of the maximum total concentrations) is generally <b>not</b> considered acceptable for off-site 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 <i>Contaminated Soil</i> , are generally classified as <i>Contaminated Soil for Remediation</i> .
<sup>1</sup> Controlled Waste is defined in the <i>Environmental Management and Pollution Control Act 1994</i> .			
<sup>2</sup> Criteria for <i>Fill Material</i> are the limits set by the Director for the purposes of R.9(2)(a)(ii) in the <i>Regulations</i> .			

### 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.



Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

Table 19 Soil Analytical Results Compared Against IB105 Investigation Limits for soil Disposal

Information Bulletin 105  Classification and Management of Contaminated 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	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		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 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

*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.*

## **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; and
  - 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 waste 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.

*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.*

## 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

*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.*

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*

*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.*

## REFERENCES

- ANZECC, 2000. *Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites*. Australian and New Zealand Environment and Conservation Council and National Health and Medical Research Council.
- AS/NZS 1726:1993. Geotechnical Site Investigations. Standards Australia, 1993.
- AS 4482:2005 Guide to the sampling and investigation of potentially contaminated soil – Part 1: Non-volatile and semi-volatile compounds, Standards Australia, 2005.
- AS/NZS 5667.1:1998 Water quality – Sampling, Part 1: Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples, Standards Australia, 1998.
- CRC CARE 2013, Petroleum Vapour Intrusion assessment: Australian guidance, CRC CARE Technical Report no. 23, CRC for Contamination Assessment and Remediation of the Environment, Adelaide, Australia.
- Davis, GB, Merrick, NP & McLaughlan, RG 2006, Protocols and techniques for characterising sites with subsurface petroleum hydrocarbons – a review, Technical Report no. 2, CRC for Contamination Assessment and Remediation of the Environment, Adelaide, Australia.
- Davis, GB, Patterson, BM & Trefry, MG 2009a, Biodegradation of petroleum hydrocarbon vapours, Technical Report no. 12, CRC for Contamination Assessment and Remediation of the Environment, Adelaide, Australia.
- Davis, GB, Wright, J & Patterson, BM 2009, Field assessment of vapours, CRC CARE Technical Report no. 13, CRC for Contamination Assessment and Remediation of the Environment, Adelaide, Australia.
- EPA Tasmania, 2018. Information Bulletin (IB)105. *Classification and Management of Contaminated Soil for Disposal*. Version 3. Environmental Protection Authority Tasmania.
- Freeze, R.A., and Cherry, J.A., 1979, *Groundwater*: Englewood Cliffs, NJ, Prentice-Hall, 604 p.
- Friebel, E & Nadebaum, 2011, 'Health screening levels for petroleum hydrocarbons in soil and groundwater. Part 1: Technical development document', CRC for Contamination Assessment and Remediation of the Environment, CRC CARE Technical Report no. 10, Adelaide.
- GES, 2019. Contamination Management Plan: 7 Rossendell Avenue, West Hobart, Tasmania. October 2019.
- LIST (2019). Land Information System Tasmania Online Database. Department of Primary Industries, Parks, Water and Environment. 2019. <https://www.thelist.tas.gov.au/app/content/home>
- NEPC, 1999. Guideline on Data Collection, Sample Design and Reporting Schedule B (2), National Environment Protection Measure (Assessment of Site Contamination), National Environment Protection Council, 1999. Measures as amended, taking into account amendments up to National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No. 1)
- NEPM, 1999. Guideline on Investigation Levels for Soil and Groundwater, Schedule B (1), National Environment Protection (Assessment of Site Contamination) Measure, National Environment Protection Council, 1999. Measures as amended, taking into account amendments up to National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No. 1)
- Queensland Government Natural Resources and Water 'Land Series' bulletin, Measuring Salinity. 2007. Managing Queensland's natural resources for today and tomorrow.

*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.

*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.

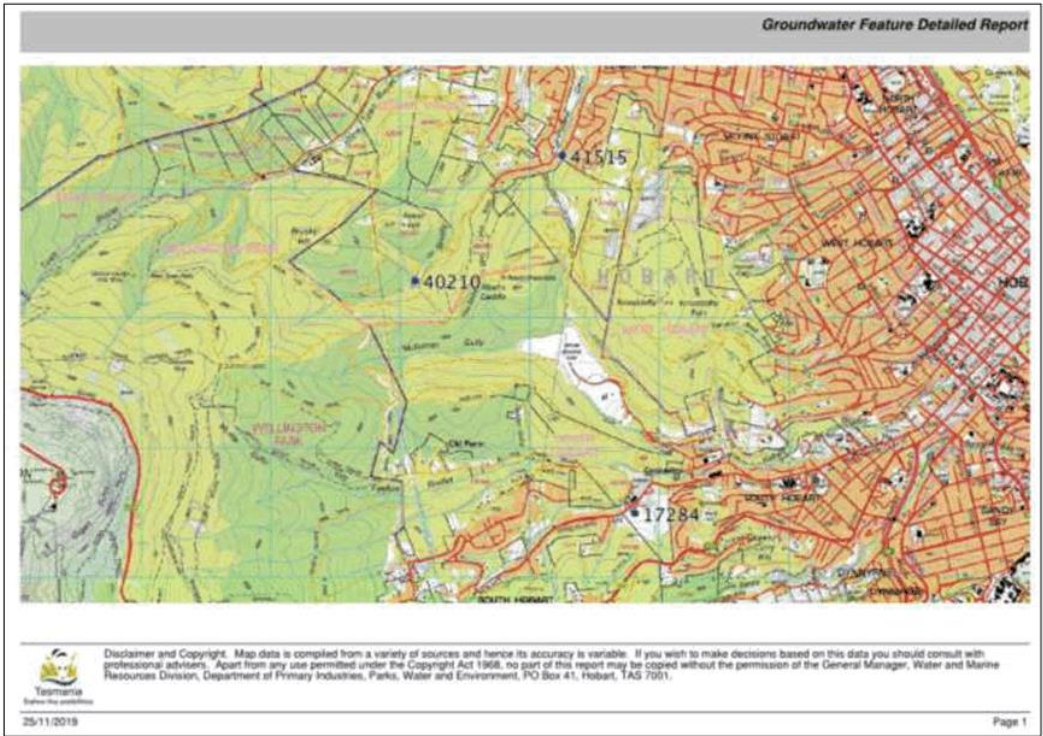
*Ms Peri Lucas B.Agr.Sc (Hons)*

- Soil Scientist
- 3Year experience in contamination assessment and reporting of soils and groundwater.



Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

Appendix 2 Surrounding Bore Data



*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.*

### Appendix 3 Historical Site Photographs



**Plate 1 Historical Aerial Photograph the Site 2008**



**Plate 2 Historical Aerial Photograph the Site 1990**



*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.*



**Plate 3 Historical Aerial Photograph the Site 1977**



**Plate 4 Historical Aerial Photograph 1958**

*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.*

**Appendix 4 Site Photographs**





*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.*



Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

## Appendix 5 PID Calibration Record



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 / REPAIR REPORT

**Customer:**

**Cash Sales**

Aaron Plummer

0400 821 977

aplummer@geosolutions.net.au

**Job No:**

4161

**Cust ABN:**

**Date:**

24/07/2019

**Service Engineer:**

Hillis, Adrian

#### Reported Fault / Required Service:

RAE SYSTEMS PGM7300 MiniRAE Lite

Serial Number: 590-902123

Service and calibration

#### Work Performed / Recommendation (if any):

Incoming evaluation - no faults found.

Calibration carried out successfully.

Functionality test - passed.

See calibration 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

**Imbros Pty Ltd**  
ABN 29 009 525 053  
1059 Cambridge Road, Cambridge  
Tasmania Australia 7170



### Calibration Test Certificate 24/07/2019

<b>Device</b>	590-902123 RAE Systems	Device Type: Next Cal Due:	MiniRAE Lite 24/01/2020
<b>Test Result</b>	Pass		
<b>Sensors</b>	Isobutylene Pass		
<b>Set Points</b>	Final Reading: Next Calibration Due:		
	100.0 ppm 24/07/2020		
<b>Options</b>	Isobutylene 100ppm 50ppm	Unit Programmed:	N/A
<b>Test Station</b>	Datalog Interval: H2S STEL Period:		
	N/A N/A		
<b>Used:</b>	Inlet 1: Yes	Inlet 2: Yes	Inlet 3: No
<b>Concentration:</b>	20.9 %	100ppm	Inlet 4: No
<b>Type:</b>	Purge	Isobutylene	Inlet 5: No
<b>Notes:</b>			

Technology for Laboratory and Marine Science



## Appendix 6 Laboratory Chain of Custody

[illegible]

Environmental Site Assessment: 90 Melville Street, Hobart, December 2019.

**CHAIN OF CUSTODY**  
ALS Laboratory  
please tick 'x'

**CLIENT:** GEOTECHNICAL SOLUTIONS  
**OFFICE:** 29 Kingsway Pl, Battery Point TAS 7004  
**PROJECT:** meiville st  
**ORDER NUMBER:** JPC  
**SAMPLER:** JPC  
**SAMPLER MOBILE:** JPC  
**CONTACT PH:** JPC  
**EDD FORMAT (or default):** JPC  
**Email Reports to:** jpc@geosolutions.net.au  
**Email Invoice to:** jpc@geosolutions.net.au

**TURNAROUND REQUIREMENTS:** ☒ Standard TAT (List due date): **9.12.19**  
☐ Non Standard or urgent TAT (List due date):  
**ALS QUOTE NO.:**

**RECEIVED BY:** **DATE/TIME:** **18/12 9.30**  
**RELINQUISHED BY:** **DATE/TIME:**

**ANALYSIS REQUIRED INCLUDING SUITES (N6):** Suite Codes must be listed to select suite price  
Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (filtered bottle required).

LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (codes below)	TOTAL CONTAINERS (refer to)	TPH, BTEX, PAH, 15 Metals	Additional Information
13	BH6 1.5-1.6	7-12-19	S	var	1	✓	
14	BH7 0.5-0.6				1	✓	
15	BH7 1.5-1.6				1	✓	
16	Duplicate				1	✓	
17	Rinse			W 20 18 1A	4	✓	
<b>TOTAL:</b>							

**RECEIVED BY:** **DATE/TIME:** **18/12 9.30**  
**RELINQUISHED BY:** **DATE/TIME:**

**Comments on any containers levels, dilutions, or samples requiring specific QC analysis etc.**

**ANALYSIS REQUIRED INCLUDING SUITES (N6):** Suite Codes must be listed to select suite price  
Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (filtered bottle required).

**RECEIVED BY:** **DATE/TIME:** **18/12 9.30**  
**RELINQUISHED BY:** **DATE/TIME:**

**Comments on any containers levels, dilutions, or samples requiring specific QC analysis etc.**

**ALS Laboratory**  
29 Kingsway Pl, Battery Point TAS 7004  
Phone: 08 9439 1111  
Email: jpc@geosolutions.net.au  
Website: www.geosolutions.net.au

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

## Appendix 7 Laboratory Sample Receipt Notification



Environmental

## SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order	: EM1921103		
Client	: GEO-ENVIRONMENTAL SOLUTIONS	Laboratory	: Environmental Division Melbourne
Contact	: DR JOHN PAUL CUMMING	Contact	: Shirley LeCornu
Address	: 29 KIRKSWAY PLACE BATTERY POINT TASMANIA, AUSTRALIA 7004	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: jcumming@geosolutions.net.au	E-mail	: shirley.lecornu@alsglobal.com
Telephone	: +61 03 6223 1839	Telephone	: +6138549 9630
Facsimile	: +61 03 6223 4539	Facsimile	: +61-3-8549 9626
Project	: Melville	Page	: 1 of 3
Order number	: ----	Quote number	: EB2017GEOENVOL0001 (EN/222)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: JPC		

Dates

Date Samples Received	: 10-Dec-2019 09:30	Issue Date	: 10-Dec-2019
Client Requested Due	: 13-Dec-2019	Scheduled Reporting Date	: 13-Dec-2019
Date			

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Intact.
No. of coolers/boxes	: 4	Temperature	: 5.2°C - Ice present
Receipt Detail	:	No. of samples received / analysed	: 17 / 17

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliance
  - 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.

RIGHT SOLUTIONS | RIGHT PARTNER

*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.*

Issue Date : 10-Dec-2019  
 Page : 2 of 3  
 Work Order : EM1921103 Amendment 0  
 Client : 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

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 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

Matrix: **SOIL**

Laboratory sample ID	Client sampling date / time	Client sample ID	SOIL - EA055-103 Moisture Content	SOIL - S-03 15 Metals (NEPM 2015 Suite - Incl. Digestion)	SOIL - S-07 TRIMBLEX/PAH (SM)
EM1921103-001	07-Dec-2019 00:00	BH1 0.5-0.6	✓	✓	✓
EM1921103-002	07-Dec-2019 00:00	BH1 1.5-1.6	✓	✓	✓
EM1921103-003	07-Dec-2019 00:00	BH1 2.5-2.6	✓	✓	✓
EM1921103-004	07-Dec-2019 00:00	BH2 0.5-0.6	✓	✓	✓
EM1921103-005	07-Dec-2019 00:00	BH2 1.5-1.6	✓	✓	✓
EM1921103-006	07-Dec-2019 00:00	BH3 0.5-0.6	✓	✓	✓
EM1921103-007	07-Dec-2019 00:00	BH3 1.5-1.6	✓	✓	✓
EM1921103-008	07-Dec-2019 00:00	BH4 0.5-0.6	✓	✓	✓
EM1921103-009	07-Dec-2019 00:00	BH4 1.5-1.6	✓	✓	✓
EM1921103-010	07-Dec-2019 00:00	BH5 0.5-0.6	✓	✓	✓
EM1921103-011	07-Dec-2019 00:00	BH5 1.5-1.6	✓	✓	✓
EM1921103-012	07-Dec-2019 00:00	BH6 0.5-0.6	✓	✓	✓
EM1921103-013	07-Dec-2019 00:00	BH6 1.5-1.6	✓	✓	✓
EM1921103-014	07-Dec-2019 00:00	BH7 0.5-0.6	✓	✓	✓
EM1921103-015	07-Dec-2019 00:00	BH7 1.5-1.6	✓	✓	✓
EM1921103-016	07-Dec-2019 00:00	Duplicate	✓	✓	✓

Matrix: **WATER**

Laboratory sample ID	Client sampling date / time	Client sample ID	WATER - W-03T 15 Metals (Total) (NEPM)	WATER - W-07 TRIMBLEX/PAH
EM1921103-017	07-Dec-2019 00:00	Rinsate	✓	✓

### Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

Issue Date : 10-Dec-2019  
Page : 3 of 3  
Work Order : EM1921103 Amendment 0  
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)
- \*AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)
- \*AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- A4 - AU Tax Invoice (INV)
- Attachment - Report (SUBCO)
- Chain of Custody (CoC) (COC)
- EDI Format - ENMRG (ENMRG)
- EDI Format - XTab (XTAB)

Email jcumming@geosolutions.net.au  
Email jcumming@geosolutions.net.au  
Email jcumming@geosolutions.net.au  
Email jcumming@geosolutions.net.au  
Email jcumming@geosolutions.net.au  
Email jcumming@geosolutions.net.au  
Email jcumming@geosolutions.net.au  
Email jcumming@geosolutions.net.au  
Email jcumming@geosolutions.net.au

#### M IRAN

- A4 - AU Tax Invoice (INV)

Email miran@geosolutions.net.au

#### SARAH JOYCE

- \*AU Certificate of Analysis - NATA (COA)
- \*AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)
- \*AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- A4 - AU Tax Invoice (INV)
- Attachment - Report (SUBCO)
- Chain of Custody (CoC) (COC)
- EDI Format - ENMRG (ENMRG)
- EDI Format - XTab (XTAB)

Email sjoyce@geosolutions.net.au  
Email sjoyce@geosolutions.net.au  
Email sjoyce@geosolutions.net.au  
Email sjoyce@geosolutions.net.au  
Email sjoyce@geosolutions.net.au  
Email sjoyce@geosolutions.net.au  
Email sjoyce@geosolutions.net.au  
Email sjoyce@geosolutions.net.au  
Email sjoyce@geosolutions.net.au



## Appendix 8 Quality Assurance and Quality Control Documentation

[illegible][illegible]



*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.*



### 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.

RIGHT SOLUTIONS | RIGHT PARTNER

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
<b>Matrix Spike (MS) Recoveries</b>							
EG005(ED093)T: Total Metals by ICP-AES	EM1921103-007	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	EM1921103-007	BH3 1.5-1.6	Manganese	7439-96-5	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.

**Outliers : Frequency of Quality Control Samples**Matrix: **WATER**

Quality Control Sample Type	Count		Rate (%)		Quality Control Specification
Method	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 &amp; other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils 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 ; ✓ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)								
Soil Glass Jar - Unpreserved (EA055)		07-Dec-2019	---	---	---	10-Dec-2019	21-Dec-2019	✓
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,	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							

Environmental Site Assessment: 90 Melville Street, Hobart, December 2019.

Page : 3 of 9  
 Work Order : EM1921103  
 Client : GEO-ENVIRONMENTAL SOLUTIONS  
 Project : Melville



Matrix: SOIL		Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.						
Method	Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG005(ED093)T: Total Metals by ICP-AES								
Soil Glass Jar - Unpreserved (EG005T)		07-Dec-2019	11-Dec-2019	04-Jun-2020	✔	11-Dec-2019	04-Jun-2020	✔
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,	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)		07-Dec-2019	11-Dec-2019	04-Jan-2020	✔	11-Dec-2019	04-Jan-2020	✔
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,	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(SIM))		07-Dec-2019	11-Dec-2019	21-Dec-2019	✔	11-Dec-2019	20-Jan-2020	✔
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,	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							

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

Page : 4 of 9  
 Work Order : EM1921103  
 Client : GEO-ENVIRONMENTAL SOLUTIONS  
 Project : Melville



Matrix: SOIL		Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.						
Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarbons								
Soil Glass Jar - Unpreserved (EP080)		07-Dec-2019	10-Dec-2019	21-Dec-2019	✔	12-Dec-2019	21-Dec-2019	✔
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,	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)		07-Dec-2019	11-Dec-2019	21-Dec-2019	✔	11-Dec-2019	20-Jan-2020	✔
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,	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 Hydrocarbons - NEPM 2013 Fractions								
Soil Glass Jar - Unpreserved (EP080)		07-Dec-2019	10-Dec-2019	21-Dec-2019	✔	12-Dec-2019	21-Dec-2019	✔
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,	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)		07-Dec-2019	11-Dec-2019	21-Dec-2019	✔	11-Dec-2019	20-Jan-2020	✔
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,	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							

Environmental Site Assessment: 90 Melville Street, Hobart, December 2019.

Page : 5 of 9  
 Work Order : EM1921103  
 Client : GEO-ENVIRONMENTAL SOLUTIONS  
 Project : Melville



Matrix: SOIL		Evaluation: x = Holding time breach ; ✓ = Within holding time.						
Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
<b>EP080: BTEXN</b>								
Soil Glass Jar - Unpreserved (EP080)								
BH1 0.5-0.6,	BH1 1.5-1.6,	07-Dec-2019	10-Dec-2019	21-Dec-2019	✓	12-Dec-2019	21-Dec-2019	✓
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							
<b>Matrix: WATER</b>								
Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
<b>EG020T: Total Metals by ICP-MS</b>								
Clear Plastic Bottle - Unfiltered; Lab-acidified (EG020A-T)								
Rinsate	07-Dec-2019	11-Dec-2019	04-Jun-2020	✓	11-Dec-2019	04-Jun-2020	✓	
<b>EG035T: Total Recoverable Mercury by FIMS</b>								
Clear Plastic Bottle - Unfiltered; Lab-acidified (EG035T)								
Rinsate	07-Dec-2019	---	---	---	11-Dec-2019	04-Jan-2020	✓	
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>								
Amber Glass Bottle - Unpreserved (EP075(SIM))								
Rinsate	07-Dec-2019	10-Dec-2019	14-Dec-2019	✓	11-Dec-2019	19-Jan-2020	✓	
<b>EP080/071: Total Petroleum Hydrocarbons</b>								
Amber Glass Bottle - Unpreserved (EP071)								
Rinsate	07-Dec-2019	10-Dec-2019	14-Dec-2019	✓	11-Dec-2019	19-Jan-2020	✓	
Amber VOC Vial - Sulfuric Acid (EP080)								
Rinsate	07-Dec-2019	10-Dec-2019	21-Dec-2019	✓	12-Dec-2019	21-Dec-2019	✓	
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>								
Amber Glass Bottle - Unpreserved (EP071)								
Rinsate	07-Dec-2019	10-Dec-2019	14-Dec-2019	✓	11-Dec-2019	19-Jan-2020	✓	
Amber VOC Vial - Sulfuric Acid (EP080)								
Rinsate	07-Dec-2019	10-Dec-2019	21-Dec-2019	✓	12-Dec-2019	21-Dec-2019	✓	
<b>EP080: BTEXN</b>								
Amber VOC Vial - Sulfuric Acid (EP080)								
Rinsate	07-Dec-2019	10-Dec-2019	21-Dec-2019	✓	12-Dec-2019	21-Dec-2019	✓	



Environmental Site Assessment: 90 Melville Street, Hobart, December 2019.

Page : 6 of 9  
 Work Order : EM1821103  
 Client : GEO-ENVIRONMENTAL SOLUTIONS  
 Project : Melville



### 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.

Matrix: **SOIL**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count			Rate (%)		Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	3	23	13.04	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	16	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	4	36	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	4	37	10.81	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	16	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	17	11.76	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	36	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	37	5.41	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	36	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	37	5.41	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	36	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	37	5.41	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			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	✖	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	17	11.76	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	5	20.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	1	0.00	10.00	✖	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Environmental Site Assessment: 90 Melville Street, Hobart, December 2019.

Page : 7 of 9  
 Work Order : EM1921103  
 Client : GEO-ENVIRONMENTAL SOLUTIONS  
 Project : Melville



Matrix: **WATER** Evaluation: \* = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)		Evaluation	Quality Control Specification
Analytical Methods		QC	Regular	Actual	Expected		
<b>Laboratory Control Samples (LCS) - Continued</b>							
Total Mercury by FIMS	EG035T	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
<b>Method Blanks (MB)</b>							
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
<b>Matrix Spikes (MS)</b>							
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	1	0.00	5.00	✗	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	5	20.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	1	0.00	5.00	✗	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

Page : 8 of 9  
Work Order : EM1921103  
Client : GEO-ENVIRONMENTAL SOLUTIONS  
Project : Melville



### 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 (SnCl <sub>2</sub> ) (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 SnCl <sub>2</sub> 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 (SnCl <sub>2</sub> )(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 SnCl <sub>2</sub> 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)

*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.*


Page : 9 of 9  
Work Order : EM1921103  
Client : GEO-ENVIRONMENTAL SOLUTIONS  
Project : Melville




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	EN00	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.

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

## Appendix 9 Borehole Logs

 GEO-ENVIRONMENTAL SOLUTIONS		PROJECT: 90 Melville Street				Log of <b>BH01</b>								
		CLIENT: Jaws Architects				EASTING: 526372.8		GDA94						
						NORTHING: 5252254.4		GDA94						
LOCATION: Hobart CBD			DATE: 7/12/2019			ELEVATION: 26.2		m AHD						
CONTRACTOR: Geo-Environmental Solutions			INVESTIGATION TYPE: ESA			TOTAL DEPTH (m): 2.6								
EQUIPMENT/METHOD: Direct Push Core			SAMPLING: Core			LOGGED BY: GM & JPC								
DEPTH (metres)	MATERIAL DESCRIPTION	USCS LITHOLOGY	UNIT	MOISTURE	SAMPLES:				Health Screening Level Exceedances*				MONITORING WELL	ELEVATION (metres)
					Sample	Grain Class	HSL	Field PID (ppm)	Benzene	Toluene	Ethylbenz.	Xylene		
0.0	FILL: Bitumen	B	FILL											
	FILL: Concrete recovered as crushed material	Conc												
0.2	Sandy SILTY CLAY: dark grey-brown, moist, firm, high plasticity		CH											
0.4														
0.6					BH1 0.5-0.6		D		XXXXXXX					
0.8														
1.0	Sandy SILTY CLAY: yellow-brown, moist, firm, high plasticity		Q											
1.2														
1.4	Silty SANDY CLAY: orange/yellow, slightly moist, stiff to very stiff, low plasticity, weathered material. Refusal													
1.6					BH1 1.5-1.6		D		XXXXXXX					
1.8			CL											
2.0														
Geo-Environmental Solutions * PVI HSL EXCEEDANCE: X: EXCAVATION; < IL; - NL; A: 1-2; B: 2-5; C: 5-20; D: 20-50; E: 50-200; F: 200-500; G: >500														




*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.*

 <b>GEO-ENVIRONMENTAL</b> SOLUTIONS		PROJECT: <b>90 Melville Street</b>  CLIENT: <b>Jaws Architects</b>		<b>Log of BH01</b>								
				EASTING: <b>526372.8</b> GDA94 NORTHING: <b>5252254.4</b> GDA94								
LOCATION: <b>Hobart CBD</b>		DATE: <b>7/12/2019</b>		ELEVATION: <b>26.2</b> m AHD								
CONTRACTOR: <b>Geo-Environmental Solutions</b>		INVESTIGATION TYPE: <b>ESA</b>		TOTAL DEPTH (m): <b>2.6</b>								
EQUIPMENT/METHOD: <b>Direct Push Core</b>		SAMPLING: <b>Core</b>		LOGGED BY: <b>GM &amp; JPC</b>								
DEPTH (metres)	MATERIAL DESCRIPTION	USCS LITHOLOGY	UNIT	MOISTURE	SAMPLES:			Health Screening Level Exceedances*		MONITORING WELL	ELEVATION (metres)	
					Sample	Grain Class	HSL	Field PID (ppm)	Benzene			Toluene
2.2												
					BH1 2.5-2.6		D		X X X X X X X			

Geo-Environmental Solutions    \* PVI HSL EXCEEDANCE: X: EXCAVATION; < IL; < NL; A: 1-2; B: 2-5; C: 5-20; D: 20-50; E: 50-200; F: 200-500; G: >500




Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

 <b>GEO-ENVIRONMENTAL SOLUTIONS</b>		PROJECT: <b>90 Melville Street</b>		Log of <b>BH02</b>									
		CLIENT: <b>Jaws Architects</b>		EASTING: <b>526353.2</b> GDA94 NORTHING: <b>5252270.1</b> GDA94									
LOCATION: <b>Hobart CBD</b>		DATE: <b>7/12/2019</b>		ELEVATION: <b>25</b> m AHD									
CONTRACTOR: <b>Geo-Environmental Solutions</b>		INVESTIGATION TYPE: <b>ESA</b>		TOTAL DEPTH (m): <b>1.6</b>									
EQUIPMENT/METHOD: <b>Direct Push Core</b>		SAMPLING: <b>Core</b>		LOGGED BY: <b>GM &amp; JPC</b>									
DEPTH (metres)	MATERIAL DESCRIPTION	USCS LITHOLOGY	UNIT	MOISTURE	SAMPLES:				Health Screening Level Exceedances*		MONITORING WELL	ELEVATION (metres)	
					Sample	Grain Class	HSL	Field PID (ppm)	Benzene	Toluene			Ethylbenz.
0.0	FILL: Bitumen	<b>B</b>	FILL										
	FILL: Concrete recovered as crushed material												
0.2	Sandy SILTY CLAY: dark grey-brown, moist, firm, high plasticity		Q										
	Sandy SILTY CLAY: yellow-brown, moist, firm, high plasticity												
0.4		<b>CH</b>											
0.6		<b>CH</b>											
0.8		<b>CH</b>											
1.0	Silty SANDY CLAY: orange/yellow, slightly moist, stiff to very stiff, low plasticity, weathered material. Refusal	<b>CL</b>											
1.2		<b>CL</b>											
1.4		<b>CL</b>											
1.6		<b>CL</b>											

Geo-Environmental Solutions \* PVI HSL EXCEEDANCE: X: EXCAVATION; < IL; < NL; A: 1-2; B: 2-5; C: 5-20; D: 20-50; E: 50-200; F: 200-500; G: >500




Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

 <b>GEO-ENVIRONMENTAL SOLUTIONS</b>		PROJECT: <b>90 Melville Street</b>		Log of <b>BH03</b>									
		CLIENT: <b>Jaws Architects</b>		EASTING: <b>526362.3</b> GDA94									
LOCATION: <b>Hobart CBD</b>		DATE: <b>7/12/2019</b>		NORTHING: <b>5252248.6</b> GDA94									
CONTRACTOR: <b>Geo-Environmental Solutions</b>		INVESTIGATION TYPE: <b>ESA</b>		ELEVATION: <b>26.3</b> m AHD									
EQUIPMENT/METHOD: <b>Direct Push Core</b>		SAMPLING: <b>Core</b>		TOTAL DEPTH (m): <b>1.6</b>									
				LOGGED BY: <b>GM &amp; JPC</b>									
DEPTH (metres)	MATERIAL DESCRIPTION	USCS LITHOLOGY	UNIT	MOISTURE	SAMPLES:				Health Screening Level Exceedances*		MONITORING WELL	ELEVATION (metres)	
					Sample	Grain Class	HSL	PID (ppm)	Benzene	Toluene			Ethylbenz.
0.0	FILL: Bitumen	B											
	FILL: Concrete recovered as crushed material	Conc.	FILL										
0.2													
	Sandy SILTY CLAY: yellow-brown, moist, firm, high plasticity	CH											
0.4													
0.6					BH3 0.5-0.6		D		X	X	X	X	X
0.8													
	Silty SANDY CLAY: orange/yellow, slightly moist, stiff to very stiff, low plasticity, weathered material. Refusal	CL	Q										
1.0													
1.2													
1.4													
1.6					BH3 1.5-1.6		D		X	X	X	X	X

Geo-Environmental Solutions \* PVI HSL EXCEEDANCE: X: EXCAVATION; < IL; < NL; A: 1-2; B: 2-5; C: 5-20; D: 20-50; E: 50-200; F: 200-500; G: >500

*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.*

 <b>GEO-ENVIRONMENTAL SOLUTIONS</b>		PROJECT:		Log of <b>BH04</b>	
		90 Melville Street		EASTING: 526352 GDA94	
		CLIENT:		NORTHING: 5252238.6 GDA94	
		Jaws Architects		ELEVATION: 26.7 m AHD	
LOCATION: Hobart CBD		DATE: 7/12/2019		TOTAL DEPTH (m): 1.6	
CONTRACTOR: Geo-Environmental Solutions		INVESTIGATION TYPE: ESA		LOGGED BY: GM & JPC	
EQUIPMENT/METHOD: Direct Push Core		SAMPLING: Core			


  

DEPTH (metres)	MATERIAL DESCRIPTION	USCS LITHOLOGY	UNIT	MOISTURE	SAMPLES:				Helath Screening Level Exceedances*		MONITORING WELL	ELEVATION (metres)	
					Sample	Grain Class	HSL	Field PID (ppm)	Benzene	Toluene			Ethylbenz.
0.0	FILL: Bitumen	B	FILL										
0.2	FILL: Concrete recovered as crushed material	Conc.											
0.4	Sandy SILTY CLAY: dark grey-brown, moist, firm, high plasticity	CH	Q										
0.6	Sandy SILTY CLAY: yellow-brown, moist, firm, high plasticity												
0.8													
1.0	Silty CLAYEY SAND: orange/yellow, slightly moist, dense, weathered material. Refusal	SC											
1.2													
1.4													
1.6													


Geo-Environmental Solutions	* PVI HSL EXCEEDANCE: X: EXCAVATION; < IL; < NL; A: 1-2; B: 2-5; C: 5-20; D: 20-50; E: 50-200; F: 200-500; G: >500
-----------------------------	--

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

 <b>GEO-ENVIRONMENTAL SOLUTIONS</b>		PROJECT: <b>90 Melville Street</b>		Log of <b>BH05</b>									
		CLIENT: <b>Jaws Architects</b>		EASTING: <b>526346.1</b> GDA94									
LOCATION: <b>Hobart CBD</b>		DATE: <b>7/12/2019</b>		NORTHING: <b>5252261.8</b> GDA94									
CONTRACTOR: <b>Geo-Environmental Solutions</b>		INVESTIGATION TYPE: <b>ESA</b>		ELEVATION: <b>25.6</b> m AHD									
EQUIPMENT/METHOD: <b>Direct Push Core</b>		SAMPLING: <b>Core</b>		TOTAL DEPTH (m): <b>1.4</b>									
				LOGGED BY: <b>GM &amp; JPC</b>									
DEPTH (metres)	MATERIAL DESCRIPTION	USCS LITHOLOGY	UNIT	MOISTURE	SAMPLES:				Health Screening Level Exceedances*		MONITORING WELL	ELEVATION (metres)	
					Sample	Grain Class	HSL	Field PID (ppm)	Benzene	Toluene			Ethylbenz.
0.0	FILL: Bitumen	B											
	FILL: Concrete recovered as crushed material	Conc.											
0.2	FILL: Clayey SANDY GRAVEL; grey/brown, slightly moist to dry, dense												
0.4		GW	FILL										
0.6	Sandy SILTY CLAY: dark grey-brown, moist, firm, high plasticity				BH5 0.5-0.6		D			X	X	X	X
0.8		CH											
1.0	Silty CLAYEY SAND: orange/yellow, slightly moist, dense, weathered material. Refusal		Q										
1.2		SC											
1.4													


Geo-Environmental Solutions \* PVI HSL EXCEEDANCE: X: EXCAVATION; < IL; - NL; A: 1-2; B: 2-5; C: 5-20; D: 20-50; E: 50-200; F: 200-500; G: >500

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

 <b>GEO-ENVIRONMENTAL SOLUTIONS</b>		PROJECT: <b>90 Melville Street</b>		Log of <b>BH06</b>								
		CLIENT: <b>Jaws Architects</b>		EASTING: <b>526377.3</b> GDA94 NORTHING: <b>5252245.5</b> GDA94								
LOCATION: <b>Hobart CBD</b>		DATE: <b>7/12/2019</b>		ELEVATION: <b>27.3</b> m AHD								
CONTRACTOR: <b>Geo-Environmental Solutions</b>		INVESTIGATION TYPE: <b>ESA</b>		TOTAL DEPTH (m): <b>1.6</b>								
EQUIPMENT/METHOD: <b>Direct Push Core</b>		SAMPLING: <b>Core</b>		LOGGED BY: <b>GM &amp; JPC</b>								
DEPTH (metres)	MATERIAL DESCRIPTION	USCS LITHOLOGY	UNIT	MOISTURE	SAMPLES:				Hazard Screening Level Exceedances*		MONITORING WELL	ELEVATION (metres)
					Sample	Grain Class	HSL	PID (ppm)	Benzene Toluene Ethylbenz. Xylene Naphthalene F1 F2			
0.0	FILL: Bitumen	B	FILL									
	FILL: Concrete recovered as crushed material	Conc.										
0.2	Sandy SILTY CLAY: dark grey-brown, moist, firm, high plasticity	CH	Q									
0.4	Sandy SILTY CLAY: yellow-brown, moist, firm, high plasticity											
0.6												
0.8												
1.0												
1.2	Silty SANDY CLAY: orange/yellow, slightly moist, stiff to very stiff, low plasticity, weathered material. Refusal	CL										
1.4												
1.6												

Geo-Environmental Solutions \* PVI HSL EXCEEDANCE: X: EXCAVATION; < IL; < NL; A: 1-2; B: 2-5; C: 5-20; D: 20-50; E: 50-200; F: 200-500; G: >500

*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.*

 <b>GEO-ENVIRONMENTAL SOLUTIONS</b>		<b>PROJECT:</b> 90 Melville Street		<b>Log of BH07</b>	
		<b>CLIENT:</b> Jaws Architects		EASTING: 526338.7    GDA94 NORTHING: 5252254.2    GDA94	
LOCATION: Hobart CBD		DATE: 7/12/2019		ELEVATION: 25.7 m AHD	
CONTRACTOR: Geo-Environmental Solutions		INVESTIGATION TYPE: ESA		TOTAL DEPTH (m): 2	
EQUIPMENT/METHOD: Direct Push Core		SAMPLING: Core		LOGGED BY: GM & JPC	

DEPTH (metres)	MATERIAL DESCRIPTION	USCS LITHOLOGY	UNIT	MOISTURE	SAMPLES:				Hazard Screening Level Exceedances*		MONITORING WELL	ELEVATION (metres)		
					Sample	Grain Class	HSL	Field PID (ppm)	Benzene	Toluene			Ethylbenz.	Xylene
0.0	FILL: Bitumen	B	FILL											
	FILL: Concrete recovered as crushed material	Conc.												
0.2	Sandy SILTY CLAY: dark grey-brown, moist, firm, high plasticity	CH	Q											
0.4														
0.6				BH7 0.5-0.6	D	X	X	X	X	X	X	X		
0.8														
1.0	Sandy SILTY CLAY: yellow-brown, moist, firm, high plasticity	CL												
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	X	X	X	X	X	X	X		
1.6														
1.8														
2.0														

Geo-Environmental Solutions    \* PVI HSL EXCEEDANCE: X: EXCAVATION; < IL; - NL; A: 1-2; B: 2-5; C: 5-20; D: 20-50; E: 50-200; F: 200-500; G: >500

*Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.***Appendix 10 Certificate of Analysis****CERTIFICATE 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 BATTERY POINT TASMANIA, AUSTRALIA 7004	Address	: 4 Westall Rd Springvale VIC Australia 3171
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	: ----	Issue Date	: 13-Dec-2019 15:19
Sampler	: JPC		
Site	: ----		
Quote number	: EN/222		
No. of samples received	: 17		
No. of samples analysed	: 17		



Accreditation No. 825  
Accredited for compliance with  
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	Position	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

RIGHT SOLUTIONS | RIGHT PARTNER



*Environmental Site Assessment: 90 Melville Street, Hobart, December 2019.*

Page : 2 of 18  
Work Order : EM1921103  
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 purposes.

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  
^ = 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 value.

- 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-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.
- 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-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: TEQ 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.

Page : 3 of 18  
 Work Order : EM1921103  
 Client : GEO-ENVIRONMENTAL SOLUTIONS  
 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
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
Compound	CAS Number	LOR	Unit	EM1921103-001	EM1921103-002	EM1921103-003	EM1921103-004	EM1921103-005
				Result	Result	Result	Result	Result
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>								
Moisture Content	---	1.0	%	22.3	17.7	21.6	20.0	14.5
<b>EG005(ED093)T: Total Metals by ICP-AES</b>								
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	<60	<50	<50	<50
Cadmium	7440-43-0	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
<b>EG035T: Total Recoverable Mercury by FIMS</b>								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	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
Benzo(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	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	<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

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

Page : 4 of 18  
 Work Order : EM1921103  
 Client : GEO-ENVIRONMENTAL SOLUTIONS  
 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
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
Compound				CAS Number LOR Unit	EM1921103-001	EM1921103-002	EM1921103-003	EM1921103-004	EM1921103-005
					Result	Result	Result	Result	Result
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued</b>									
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 mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)				----- 0.5 mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ 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
<b>EP080/071: Total Petroleum Hydrocarbons</b>									
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	<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
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>									
C6 - C10 Fraction				C6_C10 10 mg/kg	<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)				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
>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 (F2)				----- 50 mg/kg	<50	<50	<50	<50	<50
<b>EP080: BTEXN</b>									
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				108-38-3 108-42-3 0.5 mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
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 mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene				91-20-3 1 mg/kg	<1	<1	<1	<1	<1
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>									
Phenol-d6				13127-88-3 0.5 %	104	99.4	103	98.0	99.7
2-Chlorophenol-D4				93951-73-6 0.5 %	110	104	110	105	106
2,4,6-Tribromophenol				118-79-6 0.5 %	69.0	38.9	38.2	54.3	50.3

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

Page : 5 of 18  
Work Order : EM1921103  
Client : GEO-ENVIRONMENTAL SOLUTIONS  
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
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
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	321-80-8	0.5	%	113	96.4	101	97.5	99.1	
Anthracene-d10	1719-08-8	0.5	%	115	117	123	121	120	
4-Terphenyl-d14	1718-51-0	0.5	%	105	100	110	103	103	
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.2	%	76.7	74.4	77.1	78.7	85.3	
Toluene-D8	2037-28-5	0.2	%	82.5	81.1	84.9	85.4	92.5	
4-Bromofluorobenzene	460-00-4	0.2	%	95.8	96.3	97.2	105	108	



Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

Page : 6 of 18  
 Work Order : EM1921103  
 Client : GEO-ENVIRONMENTAL SOLUTIONS  
 Project : Melville

**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
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
Compound	CAS Number	LOR	Unit		EM1921103-006	EM1921103-007	EM1921103-008	EM1921103-009	EM1921103-010
					Result	Result	Result	Result	Result
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>									
Moisture Content	----	1.0	%		21.6	19.6	24.8	22.5	19.8
<b>EG005(ED093)T: Total Metals by ICP-AES</b>									
Arsenic	7440-38-2	5	mg/kg		<5	<5	<5	<5	<5
Barium	7440-39-3	10	mg/kg		280	280	170	70	600
Beryllium	7440-41-7	1	mg/kg		1	7	<1	3	2
Boron	7440-42-8	50	mg/kg		<50	<50	<50	<50	<50
Cadmium	7440-43-9	1	mg/kg		<1	<2	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		9	10	11	8	21
Cobalt	7440-48-4	2	mg/kg		25	291	8	29	22
Copper	7440-50-8	5	mg/kg		30	34	29	18	56
Lead	7439-92-1	5	mg/kg		7	<5	9	6	6
Manganese	7439-96-5	5	mg/kg		30	681	60	106	51
Nickel	7440-02-0	2	mg/kg		18	70	10	21	25
Selenium	7782-49-2	5	mg/kg		<5	<5	<5	<5	<5
Vanadium	7440-62-2	5	mg/kg		70	83	75	32	105
Zinc	7440-66-6	5	mg/kg		16	48	16	32	25
<b>EG035T: Total Recoverable Mercury by FIMS</b>									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>									
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	206-44-0	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	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	<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

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

Page : 7 of 18  
 Work Order : EM1921103  
 Client : GEO-ENVIRONMENTAL SOLUTIONS  
 Project : Melville



## Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID				
Client sampling date / time				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
Compound				EM1921103-006	EM1921103-007	EM1921103-008	EM1921103-009	EM1921103-010
CAS Number LOR Unit				Result	Result	Result	Result	Result
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued</b>								
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	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ 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
<b>EP080/071: Total Petroleum Hydrocarbons</b>								
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	<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
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	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
>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 (F2)	----	50	mg/kg	<50	<50	<50	<50	<50
<b>EP080: BTEXN</b>								
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	108-38-3 108-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	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	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>								
Phenol-d6	13127-88-3	0.5	%	99.8	102	95.7	99.3	101
2-Chlorophenol-D4	93951-73-6	0.5	%	106	110	102	106	108
2,4,6-Tribromophenol	118-79-6	0.5	%	51.9	52.3	53.1	53.6	51.5



Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

Page : 8 of 18  
Work Order : EM1921103  
Client : GEO-ENVIRONMENTAL SOLUTIONS  
Project : Melville



### 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
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
Compound	CAS Number	LOR	Unit		EM1921103-006	EM1921103-007	EM1921103-008	EM1921103-009	EM1921103-010
					Result	Result	Result	Result	Result
<b>EP075(SIM)T: PAH Surrogates</b>									
2-Fluorobiphenyl	321-60-8	0.5	%		99.4	102	95.4	99.5	99.4
Anthracene-d10	1719-06-8	0.5	%		123	127	116	122	124
4-Terphenyl-d14	1718-51-0	0.5	%		104	106	98.9	104	102
<b>EP080S: TPH(V)/BTEX Surrogates</b>									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		87.7	74.0	84.5	83.1	68.0
Toluene-D8	2037-26-5	0.2	%		94.8	80.3	91.5	88.6	65.5
4-Bromofluorobenzene	460-00-4	0.2	%		108	93.2	103	103	87.4

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

Page : 9 of 18  
 Work Order : EM1921103  
 Client : GEO-ENVIRONMENTAL SOLUTIONS  
 Project : Melville

**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
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
Compound	CAS Number	LOR	Unit	EM1921103-011	EM1921103-012	EM1921103-013	EM1921103-014	EM1921103-015	
				Result	Result	Result	Result	Result	
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>									
Moisture Content	---	1.0	%	18.0	22.9	13.2	7.8	15.3	
<b>EG005(ED093)T: Total Metals by ICP-AES</b>									
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	34	<8	
Barium	7440-39-3	10	mg/kg	220	250	130	60	660	
Beryllium	7440-41-7	1	mg/kg	<1	<1	<1	<1	<8	
Boron	7440-42-8	50	mg/kg	<50	<50	<50	<50	<80	
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<3	
Chromium	7440-47-3	2	mg/kg	8	9	23	6	27	
Cobalt	7440-48-4	2	mg/kg	33	9	18	15	29	
Copper	7440-50-8	5	mg/kg	57	29	68	77	80	
Lead	7439-92-1	5	mg/kg	<5	6	<5	90	<8	
Manganese	7439-96-5	5	mg/kg	780	33	247	348	3530	
Nickel	7440-02-0	2	mg/kg	29	8	20	10	62	
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<8	
Vanadium	7440-62-2	5	mg/kg	88	68	110	52	95	
Zinc	7440-66-6	5	mg/kg	33	11	48	133	46	
<b>EG035T: Total Recoverable Mercury by FIMS</b>									
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>									
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	0.8	<0.5	
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	3.2	<0.5	
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	1.3	<0.5	
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	2.8	<0.5	
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	39.7	<0.5	
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	8.7	<0.5	
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	42.9	<0.5	
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	43.0	<0.5	
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	19.5	<0.5	
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	19.3	<0.5	
Benzo(b)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	mg/kg	<0.5	<0.5	<0.5	15.8	<0.5	
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	24.3	<0.5	
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	11.1	<0.5	
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	4.8	<0.5	

Environmental Site Assessment: 90 Melville Street, Hobart, December 2019.

Page : 10 of 18  
 Work Order : EM1921103  
 Client : GEO-ENVIRONMENTAL SOLUTIONS  
 Project : Melville

**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
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
Compound	CAS Number	LOR	Unit		EM1921103-011	EM1921103-012	EM1921103-013	EM1921103-014	EM1921103-015
					Result	Result	Result	Result	Result
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued</b>									
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	12.9	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	<0.5	268	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	<0.5	<0.5	35.9	<0.5
^ 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
<b>EP080/071: Total Petroleum Hydrocarbons</b>									
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	mg/kg		<100	<100	<100	600	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	<50	1880	<50
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	<10	<10	<10
>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	mg/kg		<100	<100	<100	340	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	2080	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	<50	100	<50
<b>EP080: BTEXN</b>									
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	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	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	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>									
Phenol-d6	13127-88-3	0.5	%		102	99.4	100	103	100
2-Chlorophenol-D4	93951-73-6	0.5	%		108	105	107	107	106
2,4,6-Tribromophenol	118-79-6	0.5	%		52.9	52.8	50.5	81.1	66.1

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

Page : 11 of 18  
Work Order : EM1921103  
Client : GEO-ENVIRONMENTAL SOLUTIONS  
Project : Melville



### 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			
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	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	321-80-8	0.5	%	111		99.6		101		108		110	
Anthracene-d10	1719-06-8	0.5	%	127		112		129		98.5		119	
4-Terphenyl-d14	1718-51-0	0.5	%	107		102		106		91.0		107	
EP080S: TPH(V)/BTEX Surrogates													
1,2-Dichloroethane-D4	17060-07-0	0.2	%	89.9		83.6		80.3		82.6		77.9	
Toluene-D8	2037-26-5	0.2	%	99.7		90.9		89.3		92.7		85.7	
4-Bromofluorobenzene	480-00-4	0.2	%	115		108		100		104		99.6	

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

Page : 12 of 18  
 Work Order : EM1921103  
 Client : GEO-ENVIRONMENTAL SOLUTIONS  
 Project : Melville

**Analytical Results**

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	Duplicate	----	----	----	----
				Client sampling date / time	07-Dec-2019 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EM1921103-016	Result	----	----	----	----
<b>EA055: Moisture Content (Dried @ 105-110°C)</b>									
Moisture Content	----	1.0	%	17.1	----	----	----	----	----
<b>EG005(ED093)T: Total Metals by ICP-AES</b>									
Arsenic	7440-38-2	5	mg/kg	<8	----	----	----	----	----
Barium	7440-39-3	10	mg/kg	<80	----	----	----	----	----
Beryllium	7440-41-7	1	mg/kg	<8	----	----	----	----	----
Boron	7440-42-8	50	mg/kg	<80	----	----	----	----	----
Cadmium	7440-43-9	1	mg/kg	<3	----	----	----	----	----
Chromium	7440-47-3	2	mg/kg	10	----	----	----	----	----
Cobalt	7440-48-4	2	mg/kg	37	----	----	----	----	----
Copper	7440-50-8	5	mg/kg	33	----	----	----	----	----
Lead	7439-92-1	5	mg/kg	<8	----	----	----	----	----
Manganese	7439-96-5	5	mg/kg	320	----	----	----	----	----
Nickel	7440-02-0	2	mg/kg	42	----	----	----	----	----
Selenium	7782-49-2	5	mg/kg	<8	----	----	----	----	----
Vanadium	7440-62-2	5	mg/kg	74	----	----	----	----	----
Zinc	7440-66-6	5	mg/kg	44	----	----	----	----	----
<b>EG035T: Total Recoverable Mercury by FIMS</b>									
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	----	----	----	----
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>									
Naphthalene	91-20-3	0.5	mg/kg	<0.5	----	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	----	----	----	----	----
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	206-44-0	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	----	----	----	----	----
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	----	----	----	----	----



Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

Page : 13 of 18  
 Work Order : EM1921103  
 Client : GEO-ENVIRONMENTAL SOLUTIONS  
 Project : Melville

**Analytical Results**

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	Duplicate				
Client sampling date / time				07-Dec-2019 00:00					
Compound	CAS Number	LOR	Unit	EM1921103-016					
				Result					
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued</b>									
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5					
^ Sum of polycyclic aromatic hydrocarbons		0.5	mg/kg	<0.5					
^ Benzo(a)pyrene TEQ (zero)		0.5	mg/kg	<0.5					
^ Benzo(a)pyrene TEQ (half LOR)		0.5	mg/kg	0.6					
^ Benzo(a)pyrene TEQ (LOR)		0.5	mg/kg	1.2					
<b>EP080/071: Total Petroleum Hydrocarbons</b>									
C6 - C9 Fraction		10	mg/kg	<10					
C10 - C14 Fraction		50	mg/kg	<50					
C15 - C28 Fraction		100	mg/kg	<100					
C29 - C36 Fraction		100	mg/kg	<100					
^ C10 - C36 Fraction (sum)		50	mg/kg	<50					
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>									
C6 - C10 Fraction	C6_C10	10	mg/kg	<10					
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10					
>C10 - C16 Fraction		50	mg/kg	<50					
>C16 - C34 Fraction		100	mg/kg	<100					
>C34 - C40 Fraction		100	mg/kg	<100					
^ >C10 - C40 Fraction (sum)		50	mg/kg	<50					
^ >C10 - C16 Fraction minus Naphthalene (F2)		50	mg/kg	<50					
<b>EP080: BTEXN</b>									
Benzene	71-43-2	0.2	mg/kg	<0.2					
Toluene	108-88-3	0.5	mg/kg	<0.5					
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5					
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5					
ortho-Xylene	95-47-8	0.5	mg/kg	<0.5					
^ Sum of BTEX		0.2	mg/kg	<0.2					
^ Total Xylenes		0.5	mg/kg	<0.5					
Naphthalene	91-20-3	1	mg/kg	<1					
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>									
Phenol-d6	13127-88-3	0.5	%	90.6					
2-Chlorophenol-D4	93951-73-6	0.5	%	98.8					
2,4,6-Tribromophenol	118-79-6	0.5	%	60.9					



Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

Page : 14 of 18  
Work Order : EM1921103  
Client : GEO-ENVIRONMENTAL SOLUTIONS  
Project : Melville



### Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	Duplicate	----	----	----	----
				Client sampling date / time	07-Dec-2019 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	EM1921103-016	-----	-----	-----	-----	-----
				Result	---	---	---	---	---
<b>EP075(SIM)T: PAH Surrogates</b>									
2-Fluorobiphenyl	321-60-8	0.5	%	93.8	---	---	---	---	---
Anthracene-d10	1719-06-8	0.5	%	122	---	---	---	---	---
4-Terphenyl-d14	1718-51-0	0.5	%	100	---	---	---	---	---
<b>EP080S: TPH(V)/BTEX Surrogates</b>									
1,2-Dichloroethane-D4	17060-07-0	0.2	%	78.1	---	---	---	---	---
Toluene-D8	2037-26-5	0.2	%	85.3	---	---	---	---	---
4-Bromofluorobenzene	460-00-4	0.2	%	99.8	---	---	---	---	---

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

Page : 15 of 18  
 Work Order : EM1921103  
 Client : GEO-ENVIRONMENTAL SOLUTIONS  
 Project : Melville

**Analytical Results**

Sub-Matrix: <b>WATER</b> (Matrix: <b>WATER</b> )				Client sample ID	Rinsate	---	---	---	---
Client sampling date / time					07-Dec-2019 00:00	---	---	---	---
Compound	CAS Number	LOR	Unit		EM1921103-017	---	---	---	---
					Result	---	---	---	---
<b>EG020T: Total Metals by ICP-MS</b>									
Arsenic	7440-38-2	0.001	mg/L		<0.001	---	---	---	---
Boron	7440-42-8	0.05	mg/L		<0.05	---	---	---	---
Barium	7440-39-3	0.001	mg/L		<0.001	---	---	---	---
Beryllium	7440-41-7	0.001	mg/L		<0.001	---	---	---	---
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	---	---	---	---
Cobalt	7440-48-4	0.001	mg/L		<0.001	---	---	---	---
Chromium	7440-47-3	0.001	mg/L		<0.001	---	---	---	---
Copper	7440-50-8	0.001	mg/L		<0.001	---	---	---	---
Manganese	7439-98-5	0.001	mg/L		<0.001	---	---	---	---
Nickel	7440-02-0	0.001	mg/L		<0.001	---	---	---	---
Lead	7439-92-1	0.001	mg/L		<0.001	---	---	---	---
Selenium	7782-49-2	0.01	mg/L		<0.01	---	---	---	---
Vanadium	7440-62-2	0.01	mg/L		<0.01	---	---	---	---
Zinc	7440-66-8	0.005	mg/L		<0.005	---	---	---	---
<b>EG035T: Total Recoverable Mercury by FIMS</b>									
Mercury	7439-97-8	0.0001	mg/L		<0.0001	---	---	---	---
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons</b>									
Naphthalene	91-20-3	1.0	µg/L		<1.0	---	---	---	---
Acenaphthylene	208-96-8	1.0	µg/L		<1.0	---	---	---	---
Acenaphthene	83-32-9	1.0	µg/L		<1.0	---	---	---	---
Fluorene	86-73-7	1.0	µg/L		<1.0	---	---	---	---
Phenanthrene	85-01-8	1.0	µg/L		<1.0	---	---	---	---
Anthracene	120-12-7	1.0	µg/L		<1.0	---	---	---	---
Fluoranthene	206-44-0	1.0	µg/L		<1.0	---	---	---	---
Pyrene	129-00-0	1.0	µg/L		<1.0	---	---	---	---
Benz(a)anthracene	56-55-3	1.0	µg/L		<1.0	---	---	---	---
Chrysene	218-01-9	1.0	µg/L		<1.0	---	---	---	---
Benzo(b+g)fluoranthene	205-99-2 205-82-3	1.0	µg/L		<1.0	---	---	---	---
Benzo(k)fluoranthene	207-08-9	1.0	µg/L		<1.0	---	---	---	---
Benzo(a)pyrene	50-32-8	0.5	µg/L		<0.5	---	---	---	---
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	191-24-2	1.0	µg/L		<1.0	---	---	---	---
<sup>a</sup> Sum of polycyclic aromatic hydrocarbons	---	0.5	µg/L		<0.5	---	---	---	---

Environmental Site Assessment: 90 Melville Street, Hobart, December 2019.

Page : 16 of 18  
 Work Order : EM1921103  
 Client : GEO-ENVIRONMENTAL SOLUTIONS  
 Project : Melville

**Analytical Results**

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	Rinsate	----	----	----	----
				Client sampling date / time	07-Dec-2019 00:00	----	----	----	----
				Compound	CAS Number	LOR	Unit	EM1921103-017	Result
								Result	----
<b>EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued</b>									
^ Benzo(a)pyrene TEQ (zero)				----	0.5		µg/L	<0.5	----
<b>EP080/071: Total Petroleum Hydrocarbons</b>									
C6 - C9 Fraction				----	20		µg/L	<20	----
C10 - C14 Fraction				----	50		µg/L	<50	----
C15 - C28 Fraction				----	100		µg/L	<100	----
C29 - C36 Fraction				----	50		µg/L	<50	----
^ C10 - C36 Fraction (sum)				----	50		µg/L	<50	----
<b>EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions</b>									
C6 - C10 Fraction				C6_C10	20		µg/L	<20	----
^ C6 - C10 Fraction minus BTEX (F1)				C6_C10-BTEX	20		µg/L	<20	----
>C10 - C16 Fraction				----	100		µg/L	<100	----
>C16 - C34 Fraction				----	100		µg/L	<100	----
>C34 - C40 Fraction				----	100		µg/L	<100	----
^ >C10 - C40 Fraction (sum)				----	100		µg/L	<100	----
^ >C10 - C16 Fraction minus Naphthalene (F2)				----	100		µg/L	<100	----
<b>EP080: BTEXN</b>									
Benzene				71-43-2	1		µg/L	<1	----
Toluene				108-88-3	2		µg/L	<2	----
Ethylbenzene				100-41-4	2		µg/L	<2	----
meta- & para-Xylene				108-38-3 106-42-3	2		µg/L	<2	----
ortho-Xylene				95-47-8	2		µg/L	<2	----
^ Total Xylenes				----	2		µg/L	<2	----
^ Sum of BTEX				----	1		µg/L	<1	----
Naphthalene				91-20-3	5		µg/L	<5	----
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>									
Phenol-d6				13127-88-3	1.0	%		45.0	----
2-Chlorophenol-D4				93851-73-8	1.0	%		87.7	----
2,4,6-Tribromophenol				118-79-8	1.0	%		92.7	----
<b>EP075(SIM)T: PAH Surrogates</b>									
2-Fluorobiphenyl				321-60-8	1.0	%		114	----
Anthracene-d10				1719-06-8	1.0	%		100	----
4-Terphenyl-d14				1718-51-0	1.0	%		94.5	----

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

Page : 17 of 18  
Work Order : EM1921103  
Client : GEO-ENVIRONMENTAL SOLUTIONS  
Project : Melville



### Analytical Results

Sub-Matrix: <b>WATER</b> (Matrix: <b>WATER</b> )				Client sample ID	Rinsate	----	----	----	----
				Client sampling date / time	07-Dec-2019 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		EM1921103-017	-----	-----	-----	-----
					Result	---	---	---	---
<b>EP080S: TPH(V)/BTEX Surrogates</b>									
1,2-Dichloroethane-D4	17060-07-0	2	%		93.7	----	----	----	----
Toluene-D8	2037-26-5	2	%		75.4	----	----	----	----
4-Bromofluorobenzene	480-00-4	2	%		86.4	----	----	----	----

Environmental Site Assessment: 90 Melville Street, Hobart. December 2019.

Page : 18 of 18  
Work Order : EM1921103  
Client : GEO-ENVIRONMENTAL SOLUTIONS  
Project : Melville



### Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>			
Phenol-d6	13127-88-3	54	125
2-Chlorophenol-D4	93951-73-6	65	123
2,4,6-Tribromophenol	118-79-6	34	122
<b>EP075(SIM)T: PAH Surrogates</b>			
2-Fluorobiphenyl	321-60-8	61	125
Anthracene-d10	1719-06-8	62	130
4-Terphenyl-d14	1718-51-0	67	133
<b>EP080S: TPH(V)/BTEX Surrogates</b>			
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
<b>EP075(SIM)S: Phenolic Compound Surrogates</b>			
Phenol-d6	13127-88-3	10	46
2-Chlorophenol-D4	93951-73-6	23	104
2,4,6-Tribromophenol	118-79-6	28	130
<b>EP075(SIM)T: PAH Surrogates</b>			
2-Fluorobiphenyl	321-60-8	36	114
Anthracene-d10	1719-06-8	51	119
4-Terphenyl-d14	1718-51-0	49	127
<b>EP080S: TPH(V)/BTEX Surrogates</b>			
1,2-Dichloroethane-D4	17060-07-0	73	129
Toluene-D8	2037-26-5	70	125
4-Bromofluorobenzene	460-00-4	71	129



Enquiries to: City Planning  
Phone: (03) 6238 2715  
Email: [coh@hobartcity.com.au](mailto:coh@hobartcity.com.au)

11 March 2020

Neil Shephard (Neil Shephard & Associates)  
PO Box 273  
SANDY BAY TAS 7006

<mailto:neilsh@bigpond.com>

Dear Sir/Madam

**90 MELVILLE STREET, HOBART - WORKS IN ROAD RESERVATION NOTICE OF  
LAND OWNER CONSENT TO LODGE A PLANNING APPLICATION - GMC-20-9**

**Site Address:**

90 Melville Street, Hobart

**Description of Proposal:**

Demolition, Boundary Adjustment and New Building for Food Services, Business and Professional Services, General Retail and Hire and 55 Multiple Dwellings with Associated Car, Motorcycle and Bicycle Parking

**Applicant Name:**

Neil Shephard  
Neil Shephard & Associates

**PLN (if applicable):**

PLN-19-948

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.


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

Hobart Town Hall  
50 Macquarie Street  
Hobart TAS 7000

Hobart Council Centre  
16 Elizabeth Street  
Hobart TAS 7000

City of Hobart  
GPO Box 503  
Hobart TAS 7001

T 03 6238 2711  
F 03 6234 7109  
E [coh@hobartcity.com.au](mailto:coh@hobartcity.com.au)  
W [hobartcity.com.au](http://hobartcity.com.au)

 CityofHobartOfficial  
ABN 39 055 343 428  
Hobart City Council



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

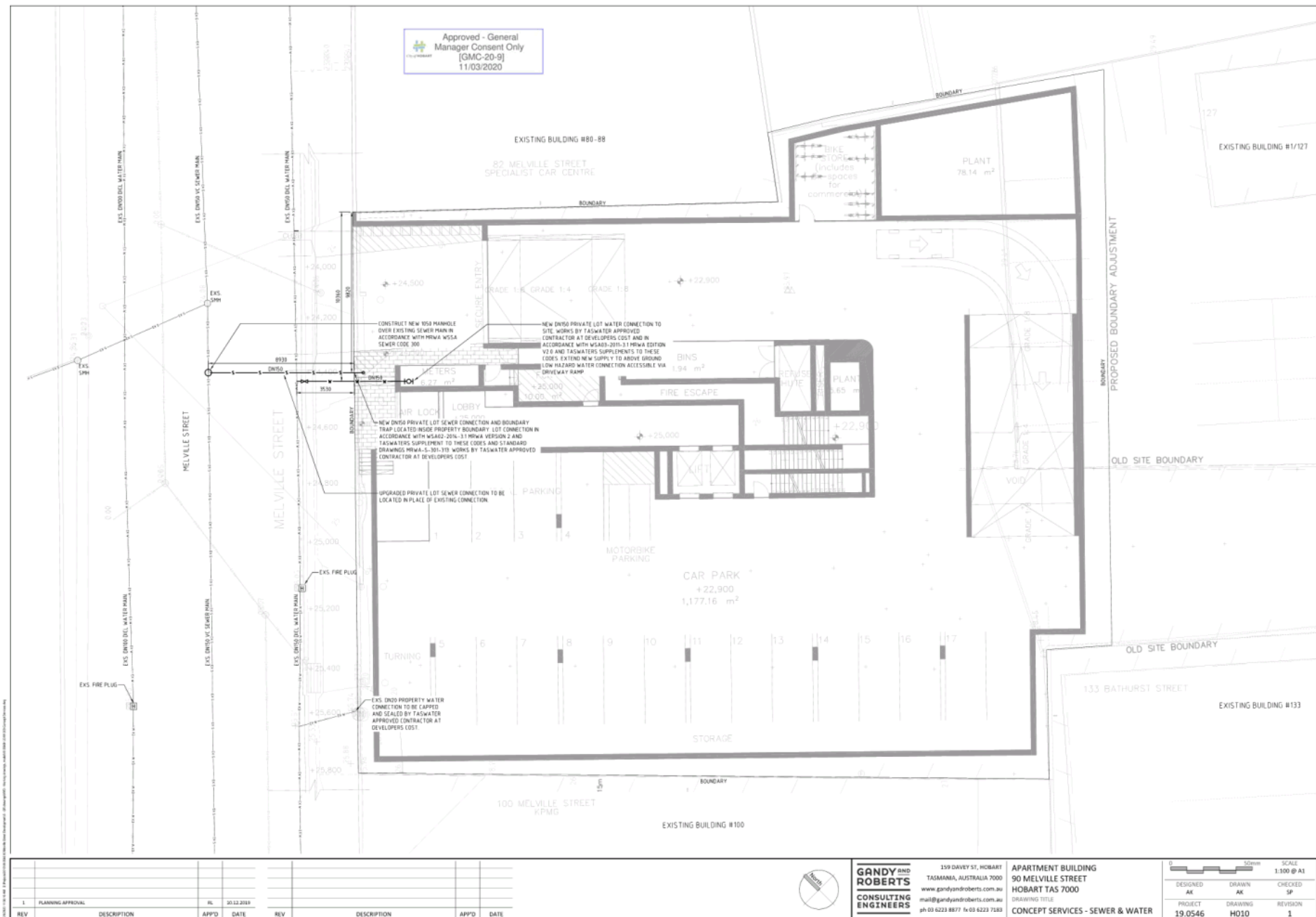


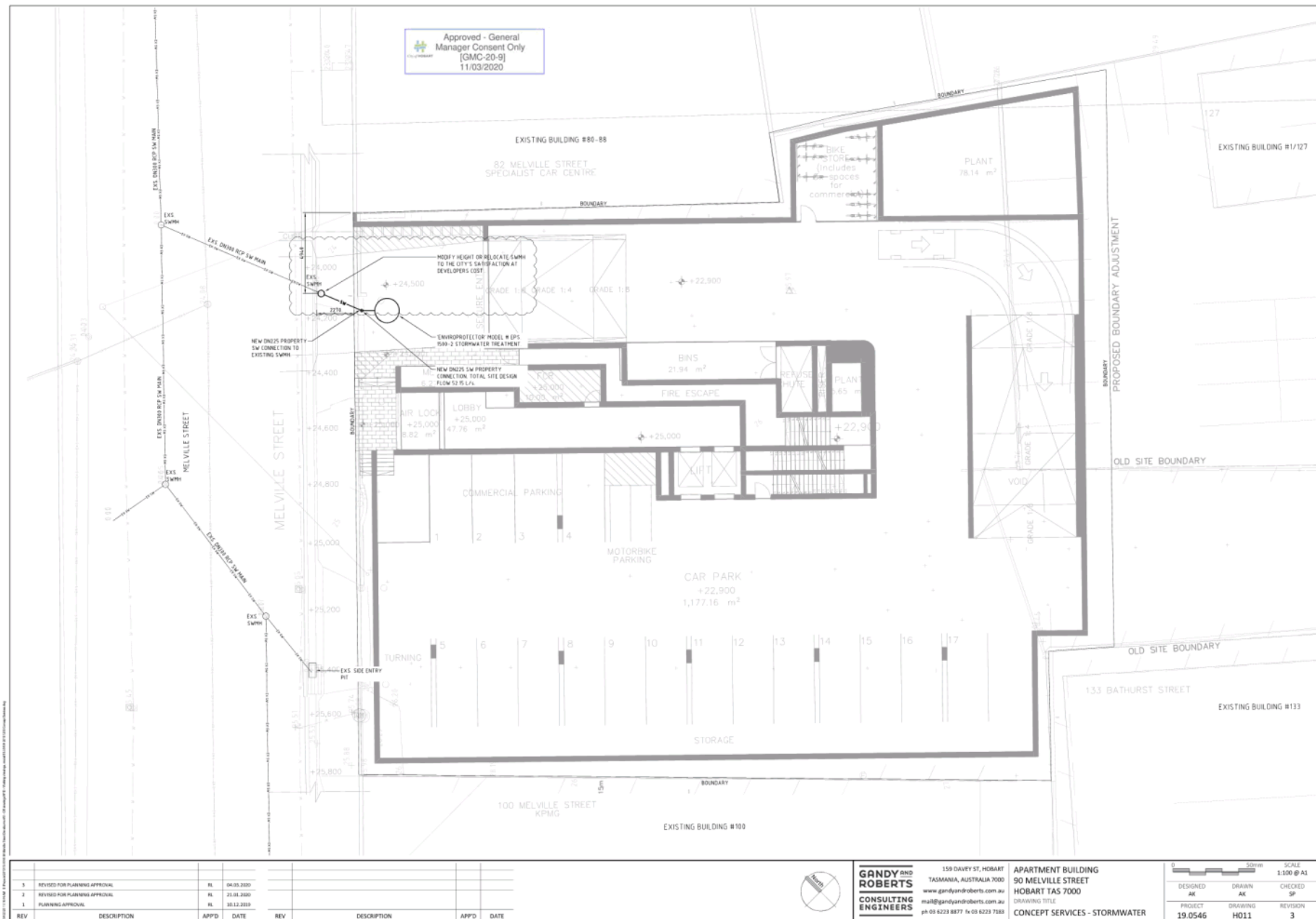
(N D Heath)

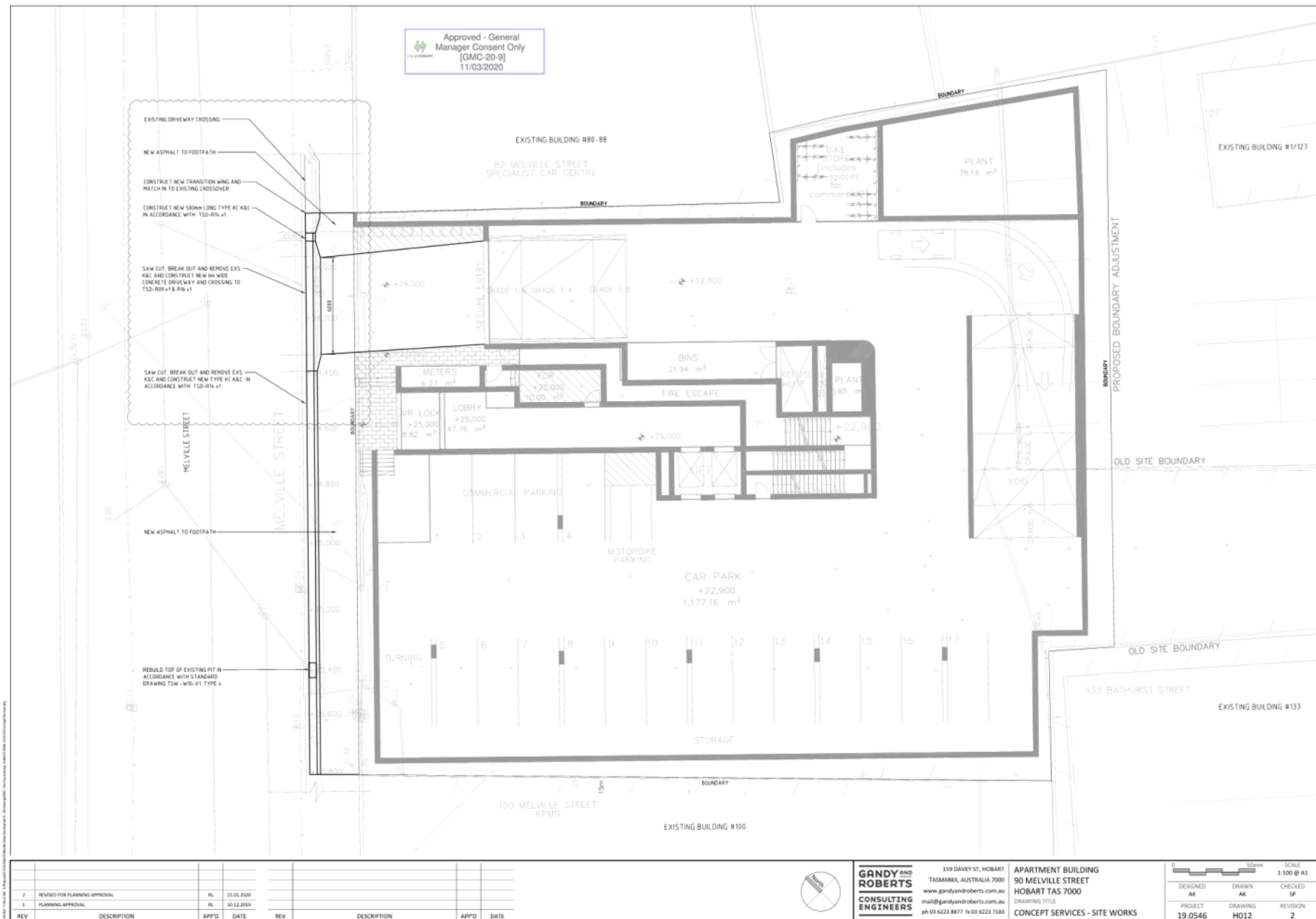
**GENERAL MANAGER**

Relevant documents/plans:

Concept Services - Sewer & Water - Drawing H010 Rev 1  
Concept Services - Stormwater - Drawing H011 Rev 3  
Concept Services - Site Works - Drawing H012 Rev 2







**RESULT OF SEARCH**

RECORDER OF TITLES

*Issued Pursuant to the Land Titles Act 1980*

## SEARCH OF TORRENS TITLE

VOLUME	FOLIO
56267	1
EDITION	DATE OF ISSUE
7	29-Aug-2012

SEARCH DATE : 19-Dec-2019

SEARCH TIME : 09.52 AM

DESCRIPTION OF LAND

City of HOBART

Lot 1 on Strata Plan 56267 (formerly being STR3208) and a  
general unit entitlement operating for all purposes of the  
Strata Scheme being a 49 undivided 1/100 interest

Derived from Strata Plan 56267

Derivation : Whole of 0A-1R-12Ps. Section F.F. Gtd. to J. Banks

Prior CT 4764/1

SCHEDULE 1

B584370 BATHURST NOMINEES PTY LTD

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 56267 folio 0

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



OS D 415  
ANNEXURE TO **CERTIFICATE OF TITLE**  
**FOLIO OF REGISTER**

VOL. 4380 FOL. 29

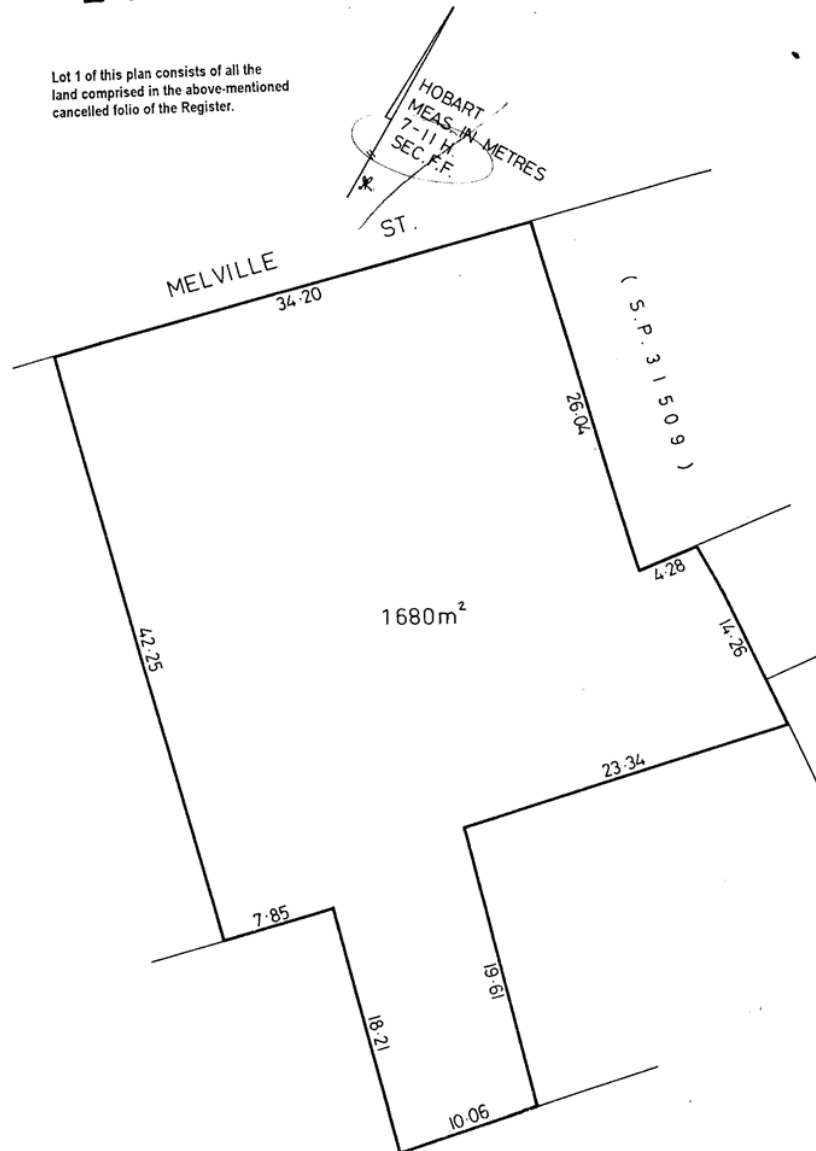


REGISTERED NUMBER

245477

Acting Recorder of Titles

Lot 1 of this plan consists of all the  
land comprised in the above-mentioned  
cancelled folio of the Register.





**RESULT OF SEARCH**

RECORDER OF TITLES

*Issued Pursuant to the Land Titles Act 1980*

## SEARCH OF TORRENS TITLE

VOLUME	FOLIO
56267	0
EDITION	DATE OF ISSUE
3	29-Jun-1999

SEARCH DATE : 19-Dec-2019

SEARCH TIME : 09.52 AM

DESCRIPTION OF LAND

City of HOBART

The Common Property for Strata Scheme 56267 (formerly being STR3208)

Derivation : Whole of 0A-1R-12Ps. Section F.F. Gtd. to J. Banks  
Prior CT 3039/81SCHEDULE 1

STRATA CORPORATION NO. 56267, 127 BATHURST STREET, HOBART

SCHEDULE 2

Reservations and conditions in the Crown Grant if any

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 245477	FOLIO 1
EDITION 6	DATE OF ISSUE 22-Aug-2019

SEARCH DATE : 19-Dec-2019

SEARCH TIME : 09.53 AM

DESCRIPTION OF LAND

City of HOBART

Lot 1 on Plan 245477

Derivation : Parts of 31 Perches Gtd. to T. Johnston Parts of  
37 Perches Gtd. to R. Cloak

Prior CT 4380/29

SCHEDULE 1M683859 TRANSFER to GIAMEOS HOLDINGS PTY LTD Registered  
28-Mar-2018 at 12.01 PMSCHEDULE 2

Reservations and conditions in the Crown Grant if any

C527525 INSTRUMENT Creating Restrictive Covenants Registered  
22-Feb-2007 at noonUNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations



## FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



Conveyancing and Law of Property Act 1884

## STRATUM PLAN

REGISTERED NUMBER

No. 3208

Sheet 1 of 4 Sheets

City or Town HOBART

56267

Locality HOBART

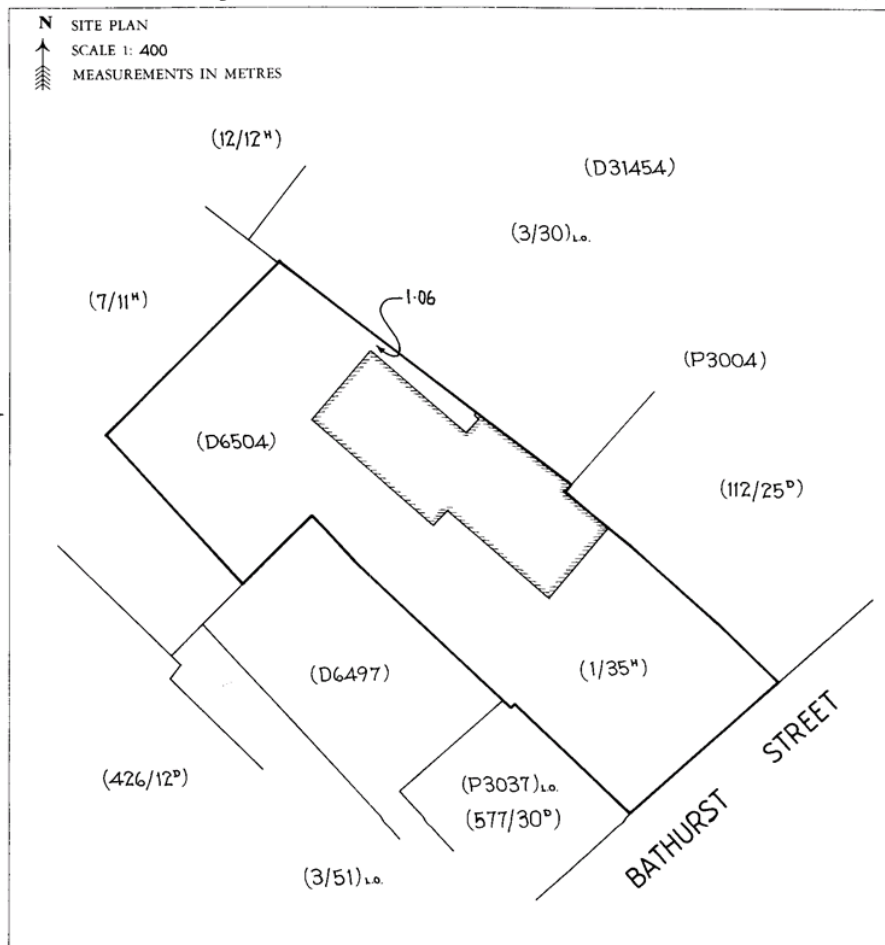
Reference to Title CT 3039:81

Site comprises the whole position of Lot 1 on Plan Diagram No. D6504 in the

Lands Titles Office

The name of the building is 127 Bathurst Street, Hobart

External  
surface  
boundaries of  
the site and  
the location of  
the building  
in relation  
thereto to  
be delineated  
in this space

REGISTERED this 12<sup>th</sup> day of APRIL 1991, No. 3208..

This plan is lodged for registration by  
PEACOCK, DARCEY & ANDERSON P/L.

*Handwritten signature*  
Recorder of Titles

US-D 754



## FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



Sheet 2 of 4 Sheets

*Michael Austin*  
Acting Town Clerk/Council Clerk

No. 3208

ALL HORIZONTAL FLAT BOUNDARIES ARE SHOWN BY HEAVY UNBROKEN LINES AND ARE ALONG THE CENTRE OF WALLS AND EXTEND VERTICALLY FROM THE CENTRE OF THE FLOOR TO THE CENTRE OF THE CEILING ABOVE UNLESS OTHERWISE STATED.

OTHER HORIZONTAL BOUNDARIES ARE ALONG :

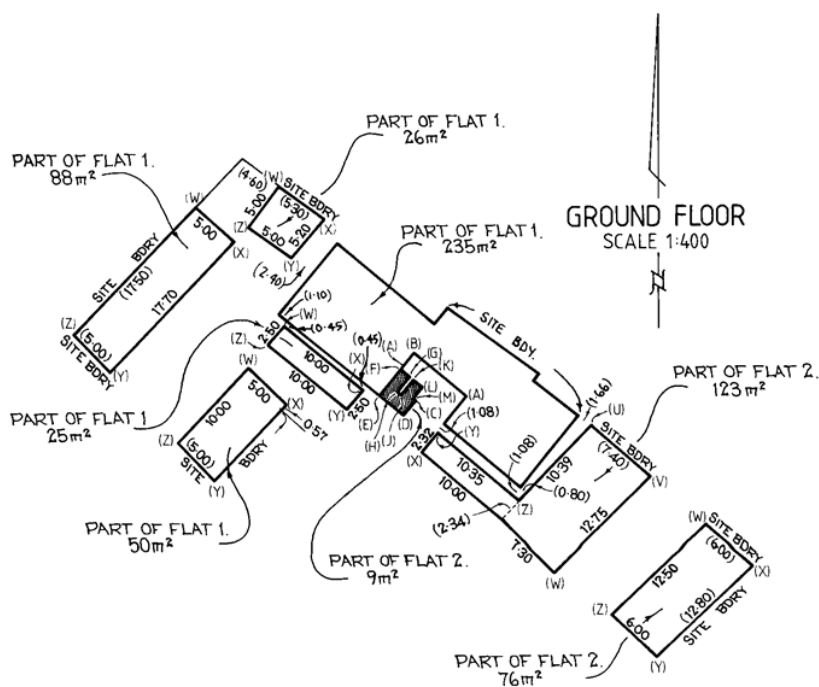
- SITE BOUNDARIES
- OPEN BOUNDARIES DESCRIBED BY MEASUREMENTS NOT IN BRACKETS
- EXTENSION OF CENTRELINE OF WALLS MARKED A-B

THE HACHURED PORTION OF FLAT 2 IS A STAIRWAY, THE HORIZONTAL BOUNDARIES OF WHICH ARE ALONG :

- CENTRE OF WALLS MARKED M-C-D-E-F
- EDGE OF CONCRETE STEPS AND LANDING MARKED G-H-J-K, L-M
- EDGE OF CONCRETE OF FIRST FLOOR LANDING MARKED F-G AND K-L AND EXTENDS VERTICALLY FROM THE UNDERSIDE OF THE CONCRETE STEPS/LANDING TO THE UNDERSIDE OF THE ROOF ABOVE.

THE PORTIONS OF THE FLATS MARKED U-V-W-X-Y-Z OR ANY PART OF THAT SERIES OF LETTERS ARE CARPARKING SPACES AND EXTEND VERTICALLY FROM GROUND LEVEL TO A HEIGHT OF 3 METRES ABOVE GROUND LEVEL.

MEASUREMENTS IN BRACKETS ARE FOR BOUNDARY FIXATION ONLY





## 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 by the Recorder of Titles and bearing his seal, and be numbered consecutively, commencing from sheet 4.

Sheet 3 of 4 Sheets

No. 3208

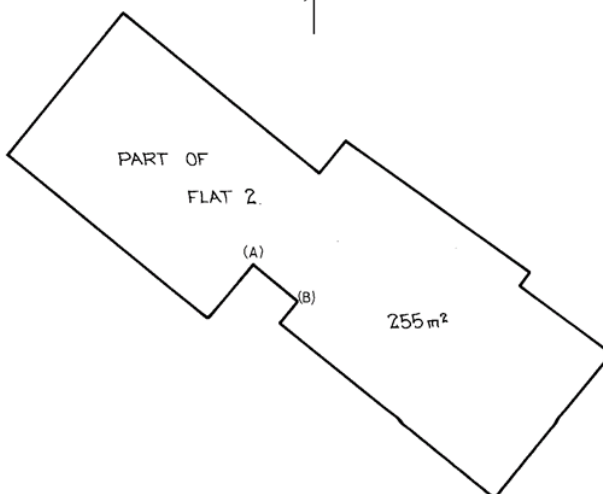
*Heath*  
Heath Town Clerk/Council Clerk

ALL HORIZONTAL FLAT BOUNDARIES ARE SHOWN BY HEAVY UNBROKEN LINES AND ARE ALONG THE CENTRE OF WALLS UNLESS OTHERWISE STATED.

THE HORIZONTAL BOUNDARY MARKED A-B IS ALONG THE EDGE OF THE CONCRETE SLAB.

THE VERTICAL BOUNDARIES ARE FROM THE CENTRE OF THE FLOOR TO THE UNDERSIDE OF THE ROOF ABOVE.

FIRST FLOOR  
SCALE 1:200





## FOLIO PLAN

RECORDED OF TITLES

*Issued Pursuant to the Land Titles Act 1980*



Sheet 4 of 4 Sheets

No. 3208

The address for service of notices on the company is:—

127 Bathurst Street  
Hobart 7000

### SURVEYOR'S CERTIFICATE

I, Anthony Cripps Peacock  
of Hobart  
a surveyor registered under the *Land Surveyor's Act 1909*, hereby certify that the building erected on the site described and delineated on sheet 1 of this plan is within the external boundaries of the title stated on sheet 1.

Dated this 21<sup>st</sup> day of December 1920

*Al Pacey*  
Registered Surveyor

### COUNCIL CLERK'S CERTIFICATE

I certify that the subdivision shown in this plan  
has been approved by the \_\_\_\_\_

HICART City Council

Dated this 22<sup>ND</sup> day of JANUARY 1991.

Present Attestation  
Acting Town Clerk/Council Clerk

FOR OFFICE USE ONLY

[illegible]





## Submission to Planning Authority Notice

Council Planning Permit No.	PLN-19-948	Council notice date	12/03/2020
<b>TasWater details</b>			
TasWater Reference No.	TWDA 2020/00321-HCC	Date of response	06/04/2020
TasWater Contact	Phil Papps Tim Watson (Trade Waste)	Phone No.	(03) 6237 8246 0427 812 711
<b>Response issued to</b>			
Council name	HOBART CITY COUNCIL		
Contact details	coh@hobartcity.com.au		
<b>Development details</b>			
Address	SE1/127 BATHURST ST, HOBART	Property ID (PID)	7703286
Description of development	Demolition, Boundary Adjustment, New Retail Buildings and 55 Multiple Dwellings		
<b>Schedule of drawings/documents</b>			
Prepared by	Drawing/document No.	Revision No.	Date of Issue
Gandy & Roberts	Concept Services Report/19.0546	--	19/03/2020
Gandy & Roberts	Concept Services – Sewer & Water / 19.0546 / H010	2	20/03/2020
<b>Conditions</b>			
Pursuant to the <i>Water and Sewerage Industry Act 2008</i> (TAS) Section 56P(1) TasWater imposes the following conditions on the permit for this application:			
<b>CONNECTIONS, METERING &amp; BACKFLOW</b>			
1. A suitably sized water supply with metered connections / sewerage system and connections to the development must be designed in accordance with TasWater's standards and any other conditions in this permit.			
<b>Advice:</b> <i>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.</i>			
2. 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 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.			
<b>TRADE WASTE</b>			
4. Prior to the commencement of operation the developer/property owner must obtain Consent to discharge Trade Waste from TasWater.			
5. The developer must install appropriately sized and suitable pre-treatment devices prior to gaining Consent to discharge.			
6. The Developer/property owner must comply with all TasWater conditions prescribed in the Trade Waste Consent.			

**BOUNDARY TRAP AREA**

7. The proposed development is within a boundary trap area and the developer must provide a boundary trap that prevents noxious gases or persistent odours back venting into the property's sanitary drain. The boundary trap must be contained within the property boundaries and the property owner remains responsible for the ownership, operation and maintenance of the boundary trap.

**DEVELOPMENT ASSESSMENT FEES**

8. The applicant or landowner as the case may be, must pay a development assessment fee of \$1,139.79 to TasWater, as approved by the Economic Regulator and the fees will be indexed, until the date paid to TasWater. The payment is required by the due date as noted on the statement when issued by TasWater.

**Advice****General**

For information on TasWater development standards, please visit

<https://www.taswater.com.au/Development/Technical-Standards>

For application forms please visit <http://www.taswater.com.au/Development/Forms>

**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 TasWater infrastructure as shown on TheList and DBYD maps is indicative only.

**Trade Waste**

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 site and plumbing plan with:

- Location, type and if applicable, volume, of all pre-treatment devices as specified within and that satisfy the requirements of the [Commercial Customers Pre-treatment Guidelines](#) which is available from [www.TasWater.com.au](http://www.TasWater.com.au)
- If cooking or serving hot food a grease arrestor is required, please provide documentation to support the proposed volume of any grease arrestor/s with reference to meal numbers and fixtures; and
- Plumbing layout showing all fixtures connected to sewer, the pre-treatment (including basket arrestors) and a trade waste sample point; and
- Location of a hose tap within 6m of any grease arrestor/s to facilitate of cleaning the pre-treatment device; and
- At the time of submitting the Certificate for Certifiable Work (Building and/or Plumbing) **a Trade Waste Application form is also required**; available from <http://www.taswater.com.au/Your-Account/Forms>

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.

For more information: <http://www.taswater.com.au/Customers/Liquid-Trade-waste/Commercial>

**Declaration**

The drawings/documents and conditions stated above constitute TasWater's Submission to Planning Authority Notice.

**Authorised by**

A handwritten signature in black ink, appearing to read "J. Taylor".

**Jason Taylor**  
Development Assessment Manager

**TasWater Contact Details**

Email	development@taswater.com.au	Web	www.taswater.com.au
Mail	GPO Box 1393 Hobart TAS 7001		

## Application Referral Cultural Heritage - Response

<b>From:</b>	Sarah Waight
<b>Recommendation:</b>	
<b>Date Completed:</b>	
<b>Address:</b>	90 MELVILLE STREET, HOBART 127 BATHURST STREET, HOBART ADJACENT ROAD RESERVE
<b>Proposal:</b>	Demolition and New Building for 55 Multiple Dwellings, Food Services, Business and Professional Services, General Retail and Hire and Associated Works within the Adjacent Road Reserve
<b>Application No:</b>	PLN-19-948
<b>Assessment Officer:</b>	Tristan Widdowson,

### Referral Officer comments:

This application is for demolition and the construction of a residential complex including 3 below ground levels of car parking and storage, ground floor level of commercial tenancies and apartments in various configurations on levels 1 to 8.

The site is located within a Place of Archaeological Potential and to the rear southern corner is a heritage listed property at 133 Bathurst Street. The property is located in the Central Business Zone. The provisions (clause 22.4.1 A5/P5 and 22.4.3 A3/P3) relating to adjacent heritage listed places do not apply as the adjacent listed places do not share a frontage with the proposal.

The application is supported by a report by Praxis Environment, a Statement of Historical Archaeological Potential Archaeological Impact Assessment and Archaeological Method Statement, dated November 2019.

The following provisions apply:

E13.10.1 P1 Development Standards for Places of Archaeological Potential.

E13.10.1 P1 states:

*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'*

It should also be added that an additional application has been submitted for subdivision/boundary adjustment at this same property. It partially removes the long 'tongue' of

land to the rear of the subject property and adheres it to the rear land parcel of 127 Bathurst Street and adheres land from 127 Bathurst Street to 90 Melville Street (PLN-20-176). The result is a 'squaring up' of the land parcel of 90 Melville Street and this is shown on the architectural drawings submitted as part of this application for the residential complex. That application is permitted under Part C Special provisions clause 9.3.

The Praxis report analyses the potential of the site to yield archaeological resources or evidence. It concludes it is possible for the site to yield archaeological evidence due to the site being the location of early development and not subject to substantial disturbance. However, the Praxis report does not provide any analysis of the land identified in the application PLN-20-176 (notated as lot 1 and an area of 14.63 metres squared on the drawing prepared by PDA Surveyors dated 31 Jan 2020) which is covered by the boundary adjustment. It is therefore recommended that a condition of permit be included to extend the same methodology applied in the Praxis report for this current application to cover this parcel of land and implement any recommendations.

The Praxis report identifies four areas for test trenching with associated archaeological methodology. In summary, area or test trench 1 and 2 must be managed as area of high archaeological potential, while areas or test trenches 3 and 4 must be managed as monitored sites. A condition of permit is therefore required. With an appropriate condition, the proposal is considered to satisfy E13.10.1 P1

Sarah Waight  
Acting Senior Cultural Heritage Officer  
9 April 2020

**URBAN DESIGN ADVISORY PANEL**  
**MINUTES**  
MINUTES OF A MEETING OF THE URBAN DESIGN ADVISORY  
PANEL  
HELD AT 2:00 PM ON MONDAY 20 APRIL 2020  
VIA VIRTUAL MEETING

---

**PLN-19-948 90 Melville Street Hobart**

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 proposal is for the demolition of the existing building on site and construction of a residential apartment complex comprising of 55 dwellings with a ground floor café at the street frontage and a large commercial tenancy space suitable for a variety of uses.

The development presents a grouping of buildings with six elements, the main forms are the street fronting podiums and two larger, setback elements with maximum height of 30m with an additional enclosure for the lift overrun and plant. The buildings range from five to nine above ground levels with three levels of basement car parking containing 59 spaces as well as motorbike spaces and bicycle storage. The 4 one-bedroom apartments, 48 two-bedroom apartments, and 3 three bedroom apartments will have balconies or terraces with roof top planters proposed throughout the Development. The predominant external material is to be a variety of textured, light and dark precast concrete panels with extensive glazing and the intermittent use of fibre cement sheet cladding and aluminium screens. The street level façade and forecourt will feature brick to reference the site's former use as the Kemp and Denning (K&D) Timber storage warehouse.

The development includes a public accessible laneway adjoining the commercial tenancies that will facilitate the potential for a future pedestrian link to Bathurst Street. It is also envisioned that a public art component will be incorporated within the forecourt and laneway area. A section of the proposed development will encroach onto the land of 127 Bathurst Street however this will be addressed by a separate development application for a boundary adjustment.

**Comments:**

The Panel found there was much to be liked about the proposal including the thoroughness of the analysis of the planning and urban design issues associated with the development.

The Panel fully supported the public activation of the Ground Floor, with café, public open space, landscaping, art work and potential through site pedestrian link to Bathurst Street.



URBAN DESIGN ADVISORY PANEL  
MINUTES  
20/04/2020

The Council is encouraged to explore ways it could work with the developer and neighbouring property owners to advance and implement the through block pedestrian link.

The Panel identified opportunities for further landscaping especially around the proposed café forecourt and on the rooftop over the carpark access driveway.

The Panel noted the limited range of external materials being utilised and in particular the preponderance of concrete. It was suggested that consideration be given to introducing a broader range of materials that could be utilised to soften the overall appearance of the building, to reference past uses at the site and to be more in sympathetic to its residential function. For example, the materials proposed for incorporation into the ground floor street front could include timber as well as the suggested brick; these could also be extended to the upper levels.

Overall, the layout of the building and the apartment design, was seen as offering a high standard of amenity for occupants.

There was a concern with regard to the amenity of Apartment 04 as it is located on the rear boundary. It was suggested that some reorientation of the living space of this apartment be considered to limit the potential future loss of amenity arising from adjacent redevelopment.

The Panel noted that the current proposal had addressed some of the matters previously raised by the officers in relation to the redevelopment of the site, resulting in a reduction in overall height of 15 metres from that originally proposed.

A key issue for consideration, in the opinion of the Panel, is whether the 30 metre height now being proposed is reasonable given that the site is located on the outer edge of the Fringe Area of the Central Business Zone. The Fringe Area is seen as an area of transition, especially in regard to height, to the adjacent Commercial and Residential Zones.

The Panel further noted that the applicant had sought the advice of consultant Leigh Woolley with in regard to the height of the proposal and that the current proposal did now have the in principle support of Mr Woolley.

To assist with the transition the Panel raised the question as to whether there were opportunities to further modulate the bulk of the building on Melville Street by stepping back some of the floors from the street. The Panel also questioned whether the height of the street-front buildings should step down towards Murray Street, thus echoing the slope in Melville Street. The applicant expressed the view that their reason for transitioning the building towards Harrington Street was to respond to the scale and density of development evident within the Residential Zone on the western side of Harrington Street. The Panel acknowledged this approach.

While the Panel does have reservations about the overall height of the development it recognises that this proposal occurs within a part of the Central Business Zone that is

**URBAN DESIGN ADVISORY PANEL  
MINUTES  
20/04/2020**

identified as a zone of transition. It is also a zone in transition. The area is seen as an area for legitimate expansion of the Central Business Zone. In this context much of the area is underdeveloped and presents opportunities for future residential development in particular.

This current proposal may initially appear more prominent, because of the significantly underdeveloped sites around it, but its overall height does fall within the parameters of the current Planning Scheme and those proposed by Leigh Woolley's Height Standards Review document.

Further, the building form in Melville Street is fragmented /broken down to transition to the Commercial Zone beginning on the other side of Melville Street.

In addition changes in materials/colours and textures and the introduction of landscaping will help with this transition.

A provision for future public access through the site to Bathurst Street together with opportunities for artwork and complementary commercial activities at the ground floor level all reaffirm the residential nature of the building and potential for further residential development to occur in this Zone and importantly adjacent Zones.

In conclusion the Panel supports the development and suggests that, should the Council approve the application, conditions and/or advice be included supporting the early appointment of a landscape architect and the early initiation of an artwork programme for the site. The Panel also encourages the expansion of the material and colour palette for the building with the intention of further 'softening' the building to reinforce its residential nature.

## Application Referral Development Engineering - Response

<b>From:</b>	
<b>Recommendation:</b>	
<b>Date Completed:</b>	
<b>Address:</b>	90 MELVILLE STREET, HOBART 127 BATHURST STREET, HOBART ADJACENT ROAD RESERVE
<b>Proposal:</b>	Demolition and New Building for 55 Multiple Dwellings, Food Services, Business and Professional Services, General Retail and Hire and Associated Works within the Adjacent Road Reserve
<b>Application No:</b>	PLN-19-948
<b>Assessment Officer:</b>	Tristan Widdowson,

### Referral Officer comments:

#### E5.0 Road and railway access code

<b>E5.1 Purpose</b>		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.
<b>E5.2 Application of this Code</b>	<b>YES</b>	<b>NO</b> The whole site is being redeveloped and as such a new vehicle crossing is being constructed.
		<b>This Code applies to use or development of land:</b>
	Yes	<b>NO</b> (a) that will require a new vehicle crossing, junction or level crossing; or
	Yes	<b>NO</b> (b) that intensifies the use of an existing access; or
	<del>Yes</del>	No (c) that involves a sensitive use, a building, works or subdivision within 50m metres of a Utilities zone that is part of:
	<del>Yes</del>	No (i) a rail network;
	<del>Yes</del>	No (ii) a category 1 - Trunk Road or a category 2 - Regional Freight Road, that is subject to a speed limit of more than 60km/h kilometres per hour.
<b>Clause for Assessment</b>		<b>Comments / Discussion (in bold)</b>

<p>Clause 5.5.1 Existing road accesses and junctions</p> <p><b>ACCEPTABLE SOLUTION</b></p>		<p>The existing road access must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015). <b><u>Documentation submitted to date does appear to satisfy the Acceptable Solution for clause E5.5.1 (A3)</u></b></p> <p><u>Acceptable Solution A3:</u> 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. - <b>COMPLIANT</b></p> <p><b>The TIA states that there will be around 204 vehicles per day from the proposed development from 1x access.</b></p> <p><b>The site has currently got approval for use as a carpark via PLN-18-280 of 59 spaces comprising 39 public and 20 monthly permit holders. Assuming 4x movements per monthly permit holder and 10x movements per public space results in 470 movements per day. This is via 2x accesses, so each access will have 235 movements per day.</b></p> <p><b>On this basis the proposal does not increase the proposed movements by 40 vpd or 20%</b></p>
<p>Clause 5.5.2 Existing level crossings</p> <p><b>NOT APPLICABLE</b></p>		<p><u>Documentation submitted to date appears not to invoke clause E5.5.2.</u></p> <p>No intensification of an existing level crossings proposed.</p>
<p>Clause 5.6.1 development adjacent to roads and railways</p> <p><b>NOT APPLICABLE</b></p>		<p><u>Documentation submitted to date appears not to invoke clause E5.6.1.</u></p> <p>No development adjacent to category 1 or category 2 road proposed.</p>

<p>Clause 5.6.2 road and access junctions</p> <p><b>ACCEPTABLE SOLUTION</b></p>		<p>The road and access junctions must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).</p> <p><b>Documentation submitted to date does appear to satisfy the Acceptable Solution for clause E5.6.2.</b> Given the reconstruction of the existing one way access into a wider 2 way access, this has been considered as a new access for the purpose of this clause.</p> <p><u>Acceptable solution - A1</u> No new access or junction to roads in an area subject to a speed limit of more than 60km/h. - <b>N/A</b></p> <p><u>Acceptable solution - A2</u> 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. - <b>COMPLIANT</b></p>
<p>Clause 5.6.3 new level crossings</p> <p><b>NOT APPLICABLE</b></p>		<p><u>Documentation submitted to date appears not to invoke clause E5.6.3.</u></p> <p><b>No new level crossings proposed.</b></p>
<p>Clause 5.6.4 sight distance at access and junctions</p> <p><b>PERFORMANCE CRITERIA</b></p>		<p>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).</p> <p><b>Documentation submitted to date does not satisfy the Acceptable Solution for clause E5.6.4 and as such, shall be assessed under Performance Criteria.</b></p> <p><u>Acceptable solution - A1:</u> Sight distances at: (a) an access or junction must comply with the Safe Intersection Sight Distance shown in Table E5.1; and - <b>NON COMPLIANT</b> (b) rail level crossings must comply with AS1742.7 Manual of uniform traffic control devices - Railway crossings, Standards Association of Australia. - <b>N/A</b></p> <p><b>In this case, the required SISD is 80 metres, noting that the vehicle speed has been assumed to be equal to the posted speed limit of 50-km/h.</b> <b>The TIA states: unobstructed view (mainly to the west) or, around or between parked cars, at least 45m to the Murray Street intersection and 65m to the west along Melville Street from a point 2.5m back from the kerb line or a similar distance back from the outer edge of the parking lane.</b> <b>The available sight distance does not meet the</b></p>

required 80 metres.

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:

(a) the nature and frequency of the traffic generated by the use; - **Most of the traffic generated by the proposed development will be residential in nature with a minor component of commercial staff. This results in the users being more familiar with the access sight distances than the existing public car parking patrons. The decreased traffic generated by the proposed development is likely to be 30 vehicles per day when all units are fully developed and occupied.**

(b) the frequency of use of the road or rail network; - **Melville Street has around 5000 vpd (as stated in the TIA) near the site. It provides access to users of the CBD. The general urban speed limit of 50-km/h applies to Melville Street. This speed limit is appropriate for the nature of the development.**

(c) any alternative access; - **No alternative access is possible for the proposed development.**

(d) the need for the access, junction or level crossing; - **The need for the use has not been assessed and is this report.**

(e) any traffic impact assessment; - **Traffic Impact Statement was submitted which believes the vehicular sight distances are adequate for the site.**

(f) any measures to improve or maintain sight distance; and - **The widening of the access will generally increase the existing sight distance except during times when cars are parked adjacent to the site.**

(g) any written advice received from the road or rail authority. - **No written advice was requested by the road authority (Council) relating to the access.**

**Council is of the opinion that the Acceptable Solution for clause E5.6.4 is not met however, given the submitted plans and documentation the development may therefore be supported under Performance Criteria P1:E5.6.4 of the Planning Scheme, mainly due to the reduction in vehicle movements, increase in familiarity of users and improvements over existing.**



--	--	--	--

**E 6.0 Parking and Access Code**

<b>E6.1 Purpose</b>			E6.1.1 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	N/A	(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	(c) ensure sufficient parking is provided on site to minimise on-street parking and maximise the efficiency of the road network;
	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	(f) ensure that vehicle access and parking areas do not adversely impact on amenity, site characteristics or hazards;
	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.
<b>E6.2 Application of this Code</b>	YES	—	<b>This code applies to all use and development.</b>
<b>Clause for Assessment</b>			<b>Comments / Discussion (in bold)</b>
Clauses 6.6's are all to do with parking number assessment. These will be assessed by planner based on DE assessment of the following relevant clauses.  <b>ACCEPTABLE SOLUTION</b>			The parking number assessment must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).  <b>Documentation submitted to date appears to satisfy the Acceptable Solution for clause E6.6.2 Accessible Parking</b> <u>Acceptable solution - A1:</u> 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.

The TIA states that no Accessible parking required, but the commercial component of the proposed development would be a Class 5 or 6 building under the BCA which requires 1x accessible parking space due to the proposed 4x commercial parking spaces. It is noted that parking space 1 on Jaws drawing DA04 could provide the shared zone easily without requiring a redesign of the car park. Condition for this to meet Acceptable Soln.

**Documentation submitted to date appears to satisfy the Acceptable Solution for clause E6.6.3**

**Motorcycle Parking**

Acceptable solution - A1:

The number of onsite 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.

59 car parking spaces proposed, this requires 2x motorcycle spaces which is proposed. Condition for clarity.

**Documentation submitted to date appears to satisfy the Acceptable Solution for clause E6.6.3**

**Bicycle Parking**

Acceptable solution - A1:

The number of onsite bicycle parking spaces provided must be no less than the number specified in Table E6.2.

Residential does not require bicycle parking. Commercial requires 3x employee and 2x customer. Propose 12 bicycle spaces in bike store room. This will cater for the employee (and some residential needs over and above Table E6.2 for residential), but will not be usable by customers due to the secure entry requirements. 5x bike racks proposed on the laneway. Condition for clarity.

It should be noted that there was a representation regarding the level of bicycle parking proposed vs what would be realistically required by (in particular) the residential needs. This representation indicates that there will be the need for 55 residential bicycle parking spaces. Although there may be some merit to the representation, the assessment must be made against the planning scheme Table E6.2 which does not require residential bicycle parking. The fact that the application proposes 12x parking spaces in the

		<p>bike store and 5x bike racks in the laneway is significantly in surplus to the requirements.</p> <p><b>Documentation submitted to date appears to satisfy the Acceptable Solution for clause E6.6.5 CBD Car Parking</b></p> <p><u>Acceptable solution - A1:</u> The number of on-site car parking spaces must be: (a) No onsite parking is provided; or (b) onsite parking is provided at a maximum rate of 1 space per 200m<sup>2</sup> of gross floor area for commercial uses; or (c) onsite parking is provided at a maximum rate of 1 space per dwelling for residential uses; or (d) onsite parking is required operationally for an essential public service, including, hospital, police or other emergency service. - <b>COMPLIANT</b></p> <p><b>Proposed for 55 apartments and 700m<sup>2</sup> of commercial.</b></p> <p><b>Residential component proposes 1 car parking space per dwelling</b></p> <p><b>Commercial requires 3.5, rounded to 4 parking spaces. Proposed 4 spaces.</b></p> <p><b>Meets Acceptable Soln.</b></p> <p>CONDITION 5: 55 residential parking spaces, 4 commercial, one of which is Accessible. Min 2x motorcycle. Min 3x employee and 2x customer bicycle parking. .</p> <p>Advice: Accessible recommended to be Parking Space 1 on Jaws Architect drawing DA04. Council encourage an increase in bicycle parking above the minimum and notes the bike store has the capacity for 12 bicycles. It is recommended that some spaces be designed to accommodate ebikes and power points be provided.</p>
<p>Clause 6.7.1 number of vehicle accesses</p> <p><b>ACCEPTABLE SOLUTION</b></p>		<p>The number of vehicle accesses must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).</p> <p><b>Documentation submitted to date appears to be able to satisfy the Acceptable Solution for clause E6.7.1.</b></p> <p><u>Acceptable solution:</u> 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. - <b>COMPLIANT</b></p> <p><b>One (1x) crossover (Melville Street frontage) -2x existing accesses to be removed and replaced with 1x new access.</b></p>

<p>Clause 6.7.2 design vehicle access</p> <p><b>PERFORMANCE CRITERIA</b></p>		<p>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).</p> <p><b><u>Documentation submitted to date appears to NOT satisfy the Acceptable Solution for clause 6.7.2.</u></b></p> <p>Acceptable Solution - 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>COMPLIANT</b></p> <p>Location - <b>Feasible</b> Sight distance <b>Vehicular feasible. Pedestrian requires Performance Assessment.</b> Width - <b>Feasible. It should be noted that the access meets the width, but the crossover will be shared with the neighbour and that this is excessive in width. This will be assessed under E6.7.14.</b> Gradient - <b>Feasible</b></p> <p>The sight distances for pedestrians i slightly limited to the west/south by a column. Almost 2m is provided (2m min as per AS2890.1). Given the width of the crossover it is likely that an exiting vehicle will not be immediately adjacent to the south/west side of the driveway and as such 2m sight distance will occur. In the off chance that the vehicle is tight up against the driveway side, there is still 1.8m of sight distance plus the fact that visibility occurs past the column which blocks the sight. This pedestrian sight distance is supported by SDE under P1.</p> <p>CONDITION ENG r3 - inc reinstate abandoned crossover. Inc reshaping/lowering of existing SW MH lid. Advice: Please contact Council Road Engineers as no lip may be approved for the mountable kerb.</p>
--	--	---

<p>Clause 6.7.3 vehicle passing</p> <p><b>ACCEPTABLE SOLUTION</b></p>		<p>Vehicle passing must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015). <b><u>Documentation submitted to date appears to be able to satisfy the Acceptable Solution for clause E6.7.3.</u></b></p> <p>Acceptable solution - A1: - <b>COMPLIANT</b></p> <p>Vehicular passing areas must:</p> <p>(a) be provided if any of the following applies to an access:</p> <p>(i) it serves more than 5 car parking spaces; - <b>Yes</b></p> <p>(ii) is more than 30 m long; - <b>Yes</b></p> <p>(iii) it meets a road serving more than 6000 vehicles per day; - <b>No</b></p> <p>(b) be 6 m long, 5.5 m wide, and taper to the width of the driveway; - <b>Feasible - As shown</b></p> <p>(c) have the first passing area constructed at the kerb; - <b>Feasible - As shown</b></p> <p>(d) be at intervals of no more than 30 m along the access. - <b>Feasible - As shown</b></p>
<p>Clause 6.7.4 on site turning</p> <p><b>ACCEPTABLE SOLUTION</b></p>		<p>On-site turning must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015). <b><u>Documentation submitted to date appears to satisfy the Acceptable Solution for clause E6.7.4.</u></b></p> <p>Acceptable solution - A1:</p> <p>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:</p> <p>(a) it serves no more than two dwelling units; - <b>APPLIES</b></p> <p>(b) it meets a road carrying less than 6000 vehicles per day. - <b>APPLIES</b></p>

<p>Clause 6.7.5 layout of parking area</p> <p><b>ACCEPTABLE SOLUTION</b></p>		<p>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).</p> <p><b><u>Documentation submitted to date appears to satisfy the Acceptable Solution for clause 6.7.5.</u></b></p> <p>Acceptable Solution A1: - <b>COMPLIANT</b></p> <p>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.</p> <p>Car Parking Space Dimensions (AS2890.1 Fig 2.2 = 2.4x5.4m Class 1A): - <b>Feasible</b></p> <p>Car Parking Space Design Envelope (AS2890.1 Fig 5.2 300mm clearance on side): - <b>Feasible</b></p> <p>Headroom: (AS2890.1 Fig 5.3 = 2.2m clearance): - <b>Feasible</b></p> <p>Parking Space Gradient (5%): - <b>Feasible</b></p> <p>Aisle Width (AS2890.1 Fig 2.2 = 5.8m Class 1A): - <b>Feasible</b></p> <p>Parking Module Gradient (manoeuvring area 5% Acceptable Soln, 10% Performance): - <b>Feasible</b></p> <p>Driveway Gradient &amp; Width (AS2890.1 Section 2.6 = 25% and 3m): - <b>Feasible</b></p> <p>Transitions (AS2890.1 Section 2.5.3 = 12.5% summit, 15% sag =&gt; 2m transition): - <b>Feasible</b></p> <p>Vehicular Barriers (AS2890.1 Section 2.4.5.3 = 600mm drop, 1:4 slope): - <b>Feasible</b></p> <p>Blind Aisle End Widening (AS2890.1 Fig 2.3 = 1m extra): - <b>Feasible</b></p> <p>Condition to ensure timing and clarity</p> <p><b>CONDITION ENG 3a and c. Inc motorcycle.</b></p>
--	--	---



Clause 6.7.6 surface treatment  <b>ACCEPTABLE SOLUTION</b>			<p>The surface treatment must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015). <b><u>Documentation submitted to date does satisfy the Acceptable Solution for clause E6.7.6.</u></b></p> <p>Acceptable Solution - A1: - <b>COMPLIANT</b> 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.</p> <p><b>Submitted plans indicate a concrete surface treatment and able to be drained to an approved stormwater system. Condition on Planning Permit to ratify timing.</b></p> <p><b>CONDITION ENG 4</b></p>
Clause 6.7.7 Lighting of parking area Planner and health unit to assess	—	—	Planner to assess
Clause 6.7.8 Landscaping Planner to assess	—	—	Planner to assess
Clause 6.7.9 motor bike parking  <b>ACCEPTABLE SOLUTION</b>			<p>The motor bike parking must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015). <b><u>Documentation submitted to date does satisfy the Acceptable Solution for clause E6.7.9.</u></b></p> <p>Acceptable Solution A1: - <b>COMPLIANT</b> 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>Feasible</b> (b) be located within 30 m of the main entrance to the building. - <b>Feasible</b></p> <p><b>Submitted documentation indicates adequate motorcycle parking provisions on-site. Conditioned via ENG 5 for numbers</b></p>

<p>Clause 6.7.10 bicycle parking</p> <p><b>ACCEPTABLE SOLUTION</b></p>		<p>The bicycle parking must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015). <b><u>Documentation submitted to date does satisfy the Acceptable Solution for clause E6.7.10.</u></b></p> <p><u>Acceptable Solution A1:</u> The number of on-site bicycle parking spaces provided must be no less than the number specified in Table E6.2. - <b>COMPLIANT</b></p> <p><u>Acceptable Solution A2:</u> 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. - <b>COMPLIANT</b></p> <p><b>Covered under Condition ENG 5</b></p>
<p>Clause 6.7.11 bicycle end trip Planner to assess</p>	—	— Planner to assess
<p>Clause 6.7.12 siting of car parking Planner to assess based on DE assessment of Clause 6.7.5 layout of parking area</p>	—	— Planner to assess

<p>Clause 6.7.13 facilities for commercial vehicles</p> <p><b>PERFORMANCE CRITERIA</b></p>		<p>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).</p> <p><b><u>Documentation submitted to date does not satisfy the Acceptable Solution for clause E6.7.13 and as such, shall be assessed under Performance Criteria.</u></b></p> <p>Acceptable Solution A1: - <b>NON COMPLIANT</b></p> <p>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:</p> <p>(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;</p> <p>(b) the use is not primarily dependent on outward delivery of goods from the site.</p> <p>Performance Criteria - P1:</p> <p>Commercial vehicle arrangements for loading, unloading or manoeuvring must not compromise the safety and convenience of vehicular traffic, cyclists, pedestrians and other road users. - <b>Feasible</b></p> <p><b>There are no loading zones within 50m and the provision of commercial vehicle loading areas is not proposed. There are three loading zones within 100m and one of which is only 60m away. On this basis Council Senior Development Engineer recommended approval under <i>Performance Criteria P1:E6.7.13</i> of the Planning Scheme.</b></p> <p><b>Matt Wilson (waste section of Council) indicated that Council will not be able to provide a waste collection service.</b></p> <p>CONDITION ENG s1: Waste Management Plan and private contractor collection.</p>
--	--	--

Clause 6.7.14 access to a road  <b>ACCEPTABLE SOLUTION</b>		<p>The access to a road must satisfy the Acceptable Solutions of the Hobart Interim Planning Scheme 2015 (HIPS 2015).</p> <p><b><u>Documentation submitted to date does appear to satisfy the Acceptable Solution for clause E6.7.14.</u></b></p> <p>Acceptable Solution A1: Access to a road must be in accordance with the requirements of the road authority. - <b>COMPLIANT</b></p> <p>Performance Criteria - P1: <b>No Performance Criteria</b></p> <p><b>Submitted plans indicates a separation of crossover with the neighbours and some sight distances. Referred to ROADS unit for their input.</b></p>
Clause 6.7.15 access to Niree Lane  <b>NOT APPLICABLE</b>		<p>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).</p> <p><b><u>Documentation submitted to date appears not to invoke clause E6.7.15.</u></b></p> <p><b>No development proposed within Niree Lane.</b></p>

**E 7.0 Stormwater**

<b>E7.1.1 Purpose</b>		<p>E7.1.1</p> <p>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.</p>
<b>E7.2 Application of this Code</b>	<b>YES</b>	<b><del>N/A</del> This code applies to development requiring management of stormwater. This code does not apply to use.</b>
<b>Clause for Assessment</b>		<b>Comments / Discussion (in bold)</b>

<p>A1 (SW disposed to Public SW Inf via Gravity / P1 (onsite/pump))</p> <p><b>ACCEPTABLE SOLUTION</b></p>		<p>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).</p> <p><b><u>Documentation submitted to date does appear to satisfy the Acceptable Solution for clause E7.7.1 (A1).</u></b></p> <p><u>Acceptable Solution A1:</u> Stormwater from new impervious surfaces must be disposed of by gravity to public stormwater infrastructure.</p> <p><b>Submitted plans appear to indicate stormwater from new impervious surfaces being able to be disposed of by gravity to public stormwater infrastructure.</b></p> <p><b>To be verified at Plumbing Permit stage.</b></p> <p><b>CONDITION ENG SW4: New SW Connection inc lowering of existing MH lid to match access requirements.</b></p>
<p>A2 (WSUD) /P2 (Mechanical Treatment)</p> <p><b>PERFORMANCE CRITERIA</b></p>		<p>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).</p> <p><b><u>Documentation submitted to date does not satisfy the Acceptable Solution for clause E7.7.1 (A2) and as such, shall be assessed under Performance Criteria.</u></b></p> <p><u>Performance Criteria – P2:</u> 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.</p> <p><b>Submitted documentation indicates proposed stormwater treatment.</b></p> <p><b>Based on the above assessment and given the submitted documentation, the stormwater disposal may be accepted under <i>Performance Criteria P1:E7.7.1 (P2)</i> of the Planning Scheme.</b></p> <p><b>CONDITION ENG SW7: SW Treatment Detailed Design.</b></p>

<p>A3 (Minor SW System)</p> <p><b>ACCEPTABLE SOLUTION</b></p>		<p>The stormwater drainage and disposal must satisfy the Acceptable Solutions of the Hobart Interim Planning Scheme 2015 (HIPS 2015).  <b><u>Documentation submitted to date does appear to satisfy the Acceptable Solution for clause E7.7.1 (A3).</u></b></p> <p><b>Acceptable Solution A3:</b>  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 an ARI of 50 years in the case of industrial zoned land, when the land serviced by the system is fully developed; -  <b>Feasible</b>  (b) stormwater runoff will be no greater than pre-existing runoff or any increase can be accommodated within existing or upgraded public stormwater infrastructure. -  <b>Feasible</b></p> <p><b>Performance Criteria – P3:</b>  <b>No Performance Criteria.</b></p> <p><b>No significant increase in impervious area as the site is 100% impervious already, only facade catchment which would already be going into the public stormwater system via neighbouring property.</b></p>
<p>A4 (Major SW System accommodates 1:100 ARI)</p> <p><b>ACCEPTABLE SOLUTION</b></p>		<p>The stormwater drainage and disposal must satisfy the Acceptable Solutions of the Hobart Interim Planning Scheme 2015 (HIPS 2015).  <b><u>Documentation submitted to date appears not to invoke clause E7.7.1 (A4).</u></b></p> <p><b>Acceptable Solution A4:</b>  A major stormwater drainage system must be designed to accommodate a storm with an ARI of 100 years.</p> <p><b>Performance Criteria – P4:</b>  <b>No Performance Criteria.</b></p> <p><b>Submitted documentation appears to indicate no significant increase in impervious area contributing to 1:100 storm.</b></p>

#### PROTECTION OF COUNCIL INFRASTRUCTURE

Council infrastructure at risk	Why?
Stormwater pipes	Yes, new SW connection and protection of SW MH dealt with via conditions ENG SW4 and ENG r3



Council road network	Yes - During construction, dealt with via ENG r3, ENG r1 and PART 5 r1.

**COMMENTS:****CONDITIONS:**

In a council related engineering context, the proposal can be supported in principal subject to the following conditions and advice.

**General Conditions:**

ENG1: Pay Costs

ENG 2a: Vehicular barriers compliant with the Australian Standard AS/NZS1170.1:2002 must be installed

ENG 3a: The access driveway and parking module (parking spaces, aisles and manoeuvring area) must be designed and constructed in accordance with Australian Standard AS/NZS2890.1:2004

ENG 3c: The access driveway and parking module (parking spaces, aisles and manoeuvring area) must be constructed in accordance with the AS2890.1

ENG 4: Surface treatment

ENG 5: The number of parking spaces approved on the site is 55 Residential Car, 4x commercial Car (1x of which to be DDA). Min 2x motorcycle. Min 3x employee bicycle. Min 2x customer bicycle. Advice: Accessible recommended to be Parking Space 1 on Jaws Architect drawing DA04. Council encourage an increase in bicycle parking above the minimum and notes the bike store has the capacity for 12 bicycles. It is recommended that some spaces be designed to accommodate ebikes and power points be provided.

ENG r3: Crossover to Road Authority Requirement. inc reinstate abandoned crossover. Inc reshaping/lowering of existing SW MH lid. Advice: Please contact Council Road Engineers as no lip may be approved for the mountable kerb.

ENG r1: Detailed design of foundations holding up road.

Part 5 1: Part 5 for holding up road with foundations.

ENG s1: Waste Management Plan. Private Contractor Waste Collection required

ENG sw1: Stormwater

ENG sw4: Development must be drained to Council infrastructure taking into account the limited receiving capacity of Council's infrastructure (Enviro Report)

ENG sw7: Stormwater pre- treatment for stormwater discharges from the development (Enviro Report)

ENV 2: SWMP design

**ADVICE:**

- Dial before you dig
- Fees and charges
- Building Permit
- Plumbing Permit
- Driveway surfacing over highway reservation
- Occupation of the Public Highway
- Right of Way
- Condition endorsement engineering

**3. Major Projects Bill**  
**File Ref: F20/48782**

---

Memorandum of the Director City Planning and Manager Development  
Appraisal of 13 May 2020 and attachment.

Delegation: Council



City of **HOBART**

## MEMORANDUM: COUNCIL

### Major Projects Bill

#### Introduction

The Tasmanian Government is continuing to push for reform to “major projects” in Tasmania. It has released two versions of the draft legislation, which would be an amendment to the *Land Use Planning and Approvals Act 1993*.

The webpage dedicated to this reform can be found [here](#), including a link to the draft legislation itself, the *Land Use Planning and Approvals (Major Projects) Bill 2020* (the **Bill**). A summary of the Bill is attached (**Attachment A**) to this report.

The issues raised by the Council in response to the previous version of the Bill, regarding the eligibility criteria, have not been adopted in the current version of the Bill. Further issues have also been identified with the Bill.

#### Background

The Council provided comments to the Tasmanian Government on earlier drafts of the Bill. Most recently, at its meeting on 22 January 2018, the Council resolved:

1. The Tasmanian Government be advised that the City of Hobart sees no need for the draft Bill to amend the *Land Use Planning and Approvals Act 1993* (LUPAA) and the *Environmental Management and Pollution Control Act 1994* to introduce a new major projects assessment process.
2. In the event that the Tasmanian Government proceeds with the *Land Use Planning and Approvals Amendment (Major Projects) Bill 2017* that the following comments be considered:
  - (i) The key issue identified with the Bill is in relation to the eligibility criteria for declaration of major projects and the fact that they are open to a wide interpretation based on the opinion of the Minister.
  - (ii) The eligibility criteria uses the term ‘significant’, ‘significance’ or ‘potentially significant’ in relation to 4 of the 5 criteria. The draft Bill does not contain any definition of ‘significant’, leaving these criteria open to wide interpretation. This creates uncertainty around what is likely to be a major project and there would be benefit in making these criteria more specific in order to provide both project proponents and the wider community with greater certainty.

- (iii) Subsection 60J(2)(b) provides that a project warrants declaration as a major project if, in the opinion of the Minister the determination by a planning authority of an application for a permit in relation to the project has been unreasonably delayed. It is not clear why this provision is required given the existing legislative provisions in relation to timeframes for making decisions on permit applications.

The concerns regarding the eligibility criteria have not been properly addressed in the latest version of the Bill and the recommendation, below, incorporates these matters again.

The specific concern regarding s.60(2)(b) has been removed from the current version, although a new criteria has been introduced into the Bill, as described below.

### Proposal

The Council has previously stated that it sees no need for this reform. The position has been put by the Government that the changes proposed from the current Projects of Regional Significance process serves to streamline the multiple approvals necessary for major developments particularly for large public infrastructure and energy projects. The State Government has also rightly concluded that most major developments are subject to planning appeals, or joint planning scheme amendments and development application, both of which are ultimately determined by expert panels. While this may be true there is still a significant degree of uncertainty for both applicants and the public as to what assessment guidelines maybe imposed compared with the current process of assessment through the Local Government Planning Schemes or as modified pursuant to section 43A of LUPAA 1993. Given this uncertainty there may well be an ongoing reluctance for applicants to use this path as has been the experience with Projects of Regional Significance and the public may continue to be suspicious of what assessment guidelines apply. Accordingly the ongoing need for the Bill still remains questionable.

Further, it is proposed to raise issues of concern with the operation of the Bill, particularly with relation to:

1. the introduction of a new “attribute” of a proposal, which is that *the characteristics of the project make it unsuitable for a planning authority to determine*, which undermines the role of the planning authority, and is vague and uncertain;
2. the role of the Minister, with the potential for political interference in the planning process;
3. the impact of the Bill on the statutory time period for the assessment of development applications;

4. the impact of the Bill on land which is administered or occupied, but not owned by the Council; and
5. ensuring that the Council has an adequate opportunity to raise issues in its capacity as highway authority and provider of the public stormwater system.

A recommendation on the response to the Bill is provided below.

### **RECOMMENDATION**

#### ***That:***

1. ***The Tasmanian Government be advised that the City of Hobart sees no need for the draft Land Use Planning and Approvals Amendment (Major Projects) Bill 2020 to amend the Land Use Planning and Approvals Act 1993 and the Environmental Management and Pollution Control Act 1994 to introduce a new major projects assessment process.***
2. ***In the event that the Tasmanian Government proceeds with the Land Use Planning and Approvals Amendment (Major Projects) Bill 2020 that the following comments be considered:***
  - (a) ***The third draft of the Bill continues to be vague in relation to the eligibility criteria for declaration of major projects and the fact that they are open to a wide interpretation based on the opinion of the Minister. Definitions have not been included to provide any clarity.***
  - (b) ***The introduction of a category of major projects in s.60K(1)(f), where:***

***the characteristics of the project make it unsuitable for a planning authority to determine;***

***undermines the role of the planning authority, particularly since the criteria are vague, uncertain and dependent on the Minister's opinion.***
  - (c) ***The introduction of the power of the Minister to be able to propose that a project be declared a major project (s.60C(2)) is inappropriate in circumstances where it is the Minister who will declare whether or not the project is a major project in s.60M. It is***

***an inherent conflict and leaves the Minister open to suggestions of political interference.***

- (d) The statutory clock for determining proposals which are not major projects is proposed to restart on the date of the declaration by the Minister: s.60D(5)(b)(i). It is preferable for the clock to restart on the date that the planning authority receives notice of the declaration, pursuant to s.60P(1)(d), to ensure that the planning authority is aware of the declaration and does not inadvertently lose time which counts towards the 42 day assessment period.***
- (e) In the event that there is a declaration that a proposal is not a major project, it is proposed that the 42 day statutory clock resets on the date that notice is provided to the planning authority pursuant to s.60P(1)(d) so that the date on which notice is provided is treated as day 1, rather than restarting the clock after the declaration. It is proposed that s.60D(5) is amended so that rather than a reference in (a) to the “relevant time” (which is defined by the date a project is proposed to be a major project), that should be amended to be the day on which the application was lodged with the planning authority. The planning authority is likely to have lost invaluable assessment time if steps have been taken by either the proponent or the planning authority to propose that it is declared to be a major project. If a proposal is significant enough to have been proposed as a major project then the planning authority will need a proper period of time in which to carry out a thorough analysis of the proposal.***
- (f) The introduction of the ability of a planning authority to propose that a project is a major proposal is welcomed. However, it is recommended that there is a pause to the statutory time frame of 42 days to allow the planning authority to properly consider whether or not to do so. If this does not occur then the timeframes imposed on the planning authority (in combination with the deemed approval provision in s.59 of LUPAA) are wholly unworkable. For example:***

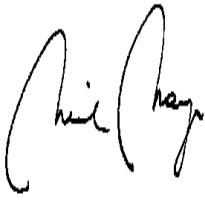
  - (i) day 1 – application received and initially reviewed by Senior Statutory Planner;***
  - (ii) days 1 – 7 (although a more realistic timeframe would be***



**14 days or more): consultations by Senior Statutory Planner with Manager, Director and internal referrals within the Council, with a report being prepared making a recommendation to the Council to propose that the project is declared to be a major project – this assumes that the Council has been provided with all relevant information in which to make an assessment as to whether a proposal is (or may be) a major project;**

- (iii) the Council would need to consider the recommendation at a Council meeting and unless it is proposed that a special meeting would be called, the likely timeframe for this to occur is two weeks or more; and**
- (iv) if the Council, as planning authority, does not accept a recommendation by its officers that a project is proposed to be declared to be a major project, then valuable assessment time has been lost (unless there has been a parallel assessment being carried out by Council officers).**
- (g) In s.60N(2), it is a requirement to obtain the consent of a Council for a declaration to be made that a project is a major project where it owns the relevant land, but not where it only administers or occupies the relevant land. This may undermine the road network, since many highways which are the responsibility of local councils are over privately owned land.**
- (h) In s.60Z, the “relevant regulators” are identified. Entities which are responsible for gas, water and sewerage are included, yet councils in their capacity as highway authority and providing the public stormwater system are not. While councils do have an opportunity to provide their views on a proposal which may be declared as a major project, that is in its capacity as a planning authority, which is a statutory role under LUPAA that is independent from its role as asset manager. It is appropriate for councils to have a role a relevant regulator in this context.**

*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 PLANNING**



Karen Abey  
**MANAGER DEVELOPMENT  
APPRAISAL**

Date: 13 May 2020  
File Reference: F20/48782

Attachment A: Major Projects Fact Sheet - Summary ↴

## FACT SHEET

## MAJOR PROJECTS BILL – IN DETAIL

## Overview

The draft Bill amends the *Land use Planning and Approvals Act 1993* (the Act) and will replace the current Project of Regional Significance (PORS) process with a process that provides confidence to both proponents and the broader community that complex and economically significant proposals will receive fair, objective and timely consideration.

The amendments to the Act deliver on a Government commitment made during the 2014 election.

Preparation of the Bill commenced in 2016 and involved two rounds of extensive stakeholder consultation in 2017 and 2018. Over 350 submissions were received, which have been carefully considered in finalising and shaping the Bill.

The Bill provides for the issuing of a consolidated major project permit that combines matters relating to land use planning, heritage, environmental management, water and sewerage infrastructure and conservation. This avoids the need to obtain separate permits once a planning permit has been obtained.

## What does the Bill do?

The Bill provides for a major project consideration process with three distinct stages:

1. An eligibility phase for the Minister to determine whether a major project proposal is suitable for consideration in the process, based upon eligibility criteria and guidelines issued by the independent Tasmanian Planning Commission;
2. A preliminary assessment stage for the independent Panel to prepare the appropriate assessment guidelines for the major project proposal; and
3. A final Assessment stage, which includes public exhibition, hearings and a final report and decision by the independent Panel.

The Bill also includes provisions to amend or correct major project permits, and to amend the relevant planning scheme to remove any inconsistency with the major project permit once it has been issued.

The Bill provides set time limits for each step of the process to provide certainty for proponents on how long the whole process should take.



### MAJOR PROJECTS FACT SHEET - SUMMARY

The Minister has no role in the assessment of the proposal, or the decision to issue a major project permit.

#### Key functions of the Bill?

Under the Bill, a proponent, council or the Minister may refer a proposal for consideration as a major project.

The Bill sets criteria that a major project proposal will need to meet to be eligible for declaration as a major project.

The Bill requires proposals to be assessed by an independent Panel, appointed by the Tasmanian Planning Commission. The Panel must include a member from the relevant local Council.

The Panel is responsible for preparing Assessment Guidelines, which form the basis of the determination of whether a major project permit should be issued.

The Bill provides for appropriate stakeholder engagement in the assessment process.

The Bill provides for the Minister to revoke the major project status at any time through the process, upon advice from the Panel or request by the proponent.

The Bill provides for a relevant regulator to require that a major project proposal be refused, if there is no prospect that the proposal could be approved under the regulator's own legislation.

The Bill provides for the staged payment of assessment fees, relevant to each phase of the process.

#### Why propose the Bill?

The current PORS assessment process set out in the Act does not contain clear direction in relation to:

- providing early feedback to the proponent that the project is unlikely to gain approval, potentially wasting significant resources before this is known;
- the timeframes make it difficult for proponents to 'forward plan' their projects when the length of approval time is unpredictable; and
- a lack of integration between any associated approvals from other government regulators required to implement the project.

Since its inception in 2010, the PORS process has never been used, suggesting that the process lacks clarity and certainty, which acts as a deterrent to potential developers.

The draft Bill aims to deliver a process that gives confidence to both proponents and the broader community that complex and economically significant proposals will receive fair, objective and timely consideration.



## MAJOR PROJECTS FACT SHEET - SUMMARY

### Where does the Major Project assessment process sit within the Tasmanian Planning System?

The Major Projects Bill provides a process within the existing Tasmanian Land Use Planning Framework that fits between normal Development Applications, and the Projects of State Significance process, as shown below.

All decisions made by the Minister and the Panel in relation to a major project proposal will be required to ensure that a major project proposal is not inconsistent with –

- Furthering the Objectives set out in the Act in Part 1 and Part 2;
- Each State Policy;
- Each Tasmanian Planning Policy (when they come into effect); and
- the relevant Regional Land Use Strategy

The final decision of the Panel must ensure that the major project represents an effective and appropriate use and development of land, and must be based on the Assessment Guidelines that are produced in stage 2 of the process.

The Bill requires each decision to be accompanied by a statement of reasons.

### What is the role of the Minister?

The Bill requires the Minister to declare whether or not a proposal is a major project. The decision of the Minister must be based upon the eligibility criteria set out in the Bill and determination guidelines to assist that are prepared by the independent Tasmanian Planning Commission.

The Bill provides for the Minister to revoke the status of major project proposal, upon advice from the Panel, where the Panel's advice may be guided by advice from a relevant regulator or by request from the proponent.

The Minister is required to prepare a report stating the reasons for his/her decision on the eligibility of the proposal to be assessed as a major project.

### What is the role of the Tasmanian Planning Commission?

The Bill requires the Tasmanian Planning Commission to establish the Development Assessment Panel and to also provide the Minister with determination guidelines to assist with applying the eligibility criteria.

Whilst not explicit in the Bill, the Tasmanian Planning Commission will provide administrative support for the assessment Panel throughout the process.



## MAJOR PROJECTS FACT SHEET - SUMMARY

### What is the role of the Proponent?

The Bill sets out the requirements for the proponent (applicant) to prepare a major project proposal for the Minister's consideration in the first phase of the process.

If the Minister declares the project to be a major project then the proponent must prepare a Major Project Impact Statement to support the assessment of the proposal.

The proponent must also respond to any request for additional information that may come from the Minister, the Panel or a participating regulator.

The proponent's role may also include attendance at public hearings held by the Panel.

### What is the role of the Panel?

The Panel must prepare Assessment Guidelines and then assess the proposal against the Act and the assessment guidelines.

The Panel is responsible for exhibition of the proposal and conducting hearings into the representations made.

The Panel is required to prepare reports into the finalisation of the assessment guidelines and the final major project permit, or the final decision to refuse the proposal.

### What is the role of the Regulators?

Regulators must inform the Panel if the proposal ought to not proceed, advise if any additional information is required in each stage of the process, or inform the Panel of any specific conditions that should be placed on the final major project permit.

The Bill sets the relevant regulators as –

- Heritage Council;
- TasWater;
- Pipeline licensees within the meaning of the *Gas Pipelines Act 2000*;
- Environment Protection Authority;
- Threatened Species and Private Land Conservation Section; and
- Aboriginal Heritage Council.

The relevant regulator may also be required to attend public hearings held by the Panel.

### What is the role of the Government?

The Bill also provides for the Minister or the Panel to consult with any other Government agencies or Tasmanian Government Businesses that are not prescribed as a regulator.

Their role is to respond to the Minister or the Panel with their issues, which may include a request for additional information.

Their role may also include attendance at the public hearings held by the Panel, and to provide the Panel with any additional information that the Panel requests.





## MAJOR PROJECTS FACT SHEET - SUMMARY

### What is the role of Local Government?

The Bill requires that the Minister must consult with the relevant Council in its capacity as the local Planning Authority before declaring a project to be a major project. This provides the Planning Authority with the opportunity to request the Minister to not declare the project as a major project. If this occurs, the Planning Authority must give reasons.

The Bill requires the Panel to consult with Planning Authorities in the region during the preparation of the assessment guidelines and also during the final assessment of the major project proposal.

Planning Authorities may also be required to attend public hearings held by the Panel.

### What is the role of the Community?

The broader Tasmanian community has the opportunity to make submissions to the major project proposal (including the major impact statement).

This may also include attendance at the public hearings held by the Panel.

### Where do I find the Bill?

A copy of the Bill is available at the Tasmanian Planning Reform website at: [www.planningreform.tas.gov.au](http://www.planningreform.tas.gov.au)

### Enquiries

Any enquiries can be directed to the Planning Policy Unit within the Department of Justice at [Planning.Unit@justice.tas.gov.au](mailto:Planning.Unit@justice.tas.gov.au) or by telephoning (03) 6166 1429.

2 March 2020