



CITY OF HOBART

AGENDA

City Planning Committee Meeting

Open Portion

Tuesday, 15 June 2021

at 5:00 pm

Council Chamber, Town Hall

THE MISSION

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

THE VALUES

The Council is:

People	We care about people – our community, our customers and colleagues.
Teamwork	We collaborate both within the organisation and with external stakeholders drawing on skills and expertise for the benefit of our community.
Focus and Direction	We have clear goals and plans to achieve sustainable social, environmental and economic outcomes for the Hobart community.
Creativity and Innovation	We embrace new approaches and continuously improve to achieve better outcomes for our community.
Accountability	We are transparent, work to high ethical and professional standards and are accountable for delivering outcomes for our community.

ORDER OF BUSINESS

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

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City Planning Committee Meeting (Open Portion) held Tuesday, 15 June 2021 at 5:00 pm in the Council Chamber, Town Hall.

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

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

COMMITTEE MEMBERS

Deputy Lord Mayor Burnet (Chairman)
Briscoe
Harvey
Behrakis
Dutta
Coats

Apologies:

Leave of Absence: Nil.

NON-MEMBERS

Lord Mayor Reynolds
Zucco
Sexton
Thomas
Ewin
Sherlock

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

2. CONFIRMATION OF MINUTES

The minutes of the Open Portion of the City Planning Committee meeting held on [Monday, 31 May 2021](#) and the Special City Planning Committee meeting held on [Monday, 7 June 2021](#), are submitted for confirming as an accurate record.

3. CONSIDERATION OF SUPPLEMENTARY ITEMS

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

Recommendation

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

4. INDICATIONS OF PECUNIARY AND CONFLICTS OF INTEREST

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

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

5. TRANSFER OF AGENDA ITEMS

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

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

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

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

6. PLANNING AUTHORITY ITEMS - CONSIDERATION OF ITEMS WITH DEPUTATIONS

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

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

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

RECOMMENDATION

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

7. COMMITTEE ACTING AS PLANNING AUTHORITY

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

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

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

7.1 APPLICATIONS UNDER THE HOBART INTERIM PLANNING SCHEME 2015

7.1.1 201 MACQUARIE STREET, 49 MOLLE STREET, 199 MACQUARIE STREET, HOBART AND ADJACENT RIVULET - PARTIAL DEMOLITION, ALTERATIONS, PARTIAL CHANGE OF USE TO OFFICE AND TWO MULTIPLE DWELLINGS, NEW BUILDING FOR 45 MULTIPLE DWELLINGS, SIGNAGE AND ASSOCIATED WORKS PLN-19-768 - FILE REF: F21/54743

Address:	201 Macquarie Street, 49 Molle Street, 199 Macquarie Street, Hobart and Adjacent Rivulet
Proposal:	Partial Demolition, Alterations, Partial Change of Use to Office and Two Multiple Dwellings, New Building for 45 Multiple Dwellings, Signage and Associated Works
Expiry Date:	21 June 2021
Extension of Time:	Not applicable
Author:	Ben Ikin

RECOMMENDATION

That pursuant to the *Hobart Interim Planning Scheme 2015*, the Council approve the application for partial demolition, alterations, partial change of use to office and two multiple dwellings, new building for 45 multiple dwellings, signage and associated work at 201 Macquarie Street, 199 Macquarie Street, 49 Molle Street, and adjacent rivulet, 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-19-768 - 201 MACQUARIE 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 2019/01665-HCC dated 7 July 2020 as attached to the permit.

Reason for condition

To clarify the scope of the permit.

PLN 15a

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

Advice:

It is recommended that the developer liaise with the Council's 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 as a Condition Endorsement 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:

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

Reason for condition

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

PLN s2

A landscape plan must be prepared by a suitably qualified landscape designer.

Prior to the issue of any approval under the *Building Act 2016* (excluding for demolition, excavation and works up to the ground floor slab), revised plans must be submitted and approved as a Condition Endorsement to the satisfaction of the Director City 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 (or another suitably qualified landscape designer) that the all landscaping works required by this condition have been implemented, must be submitted to the satisfaction of the Directory City Planning.

Advice:

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

The applicant is encouraged to consider introducing more landscaping into the design, including along the perimeter of the site, and with plants in the the ground not just in planters.

Reason for condition

In the interest of the amenity of the spaces, streetscape and townscape values of the surrounding area.

ENG 12

A construction waste management plan must be implemented throughout construction.

A construction waste management plan must be submitted and approved as a Condition Endorsement, prior to commencement of work on the site. The construction waste management plan must include:

- Provisions for commercial waste services for the handling, storage, transport and disposal of post-construction solid waste and recycle bins from the development; and
- 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 construction waste management plan.

Advice:

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

It is recommended that the developer liaise with the Council's 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.

ENG sw2.2

A post-construction CCTV recording of the Council's stormwater main within/adjacent to the proposed development, along with photos of any existing drainage structures connected to or modified as part of the development, must be submitted to Council upon completion of work.

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

Reason for condition

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

ENG sw3

The proposed development must be designed to ensure the protection and access to the Council's stormwater main.

A detailed design must be submitted and approved as a Condition Endorsement prior to the issuing of any approval under the *Building Act 2016* or commencement of works (whichever occurs first). The detailed design must:

1. Demonstrate how the design will ensure the protection and provide access to the Council's stormwater main

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

Advice:

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

Reason for condition

To ensure the protection of the Council's hydraulic infrastructure.

ENG sw5

The existing stormwater main (DN225) must be redesigned to new alignment and constructed prior to the commencement of the use.

Engineering drawings must be submitted and approved as a Condition Endorsement, prior to the issuing of any approval under the *Building Act 2016* or commencement of works (whichever occurs

first). The engineering drawings must:

1. Be certified by a qualified and experienced civil engineer;
2. Include a plan and long-section of the proposed stormwater main; and
3. Include the associated calculations and catchment area plans. These should include, but not be limited to, connections, flows, velocities, clearances, cover, gradients, sizing, material, pipe class, easements and inspection openings

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

Advice:

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

Reason for condition

To ensure Council's hydraulic infrastructure meets acceptable standards.

ENG sw6

All stormwater from the proposed development (including hardstand runoff) must be discharged to the Council's stormwater infrastructure with sufficient receiving capacity prior to first occupation. All costs associated with works required by this condition are to be met by the owner.

Design drawings and calculations of the proposed stormwater drainage and connections to the Council's stormwater infrastructure must be submitted and approved as a Condition Endorsement prior to the commencement of work. The design drawings and calculations must:

1. prepared by a suitably qualified person; and
2. include long section(s)/levels, grades and material to the point of discharge.

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

Advice:

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

Reason for condition

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

SW 7

Prior to occupancy or the commencement of the use (whichever occurs first), any new stormwater connection must be constructed and existing redundant connection(s) be abandoned and sealed at the owner's expense.

Prior to the issuing of any approval under the *Building Act 2016* or commencement of works (whichever occurs first), detailed engineering drawings must be submitted via the City of Hobart's online request form which is available on its website and approved. The detailed engineering drawings must include:

1. the location of the proposed connections and all existing connections;
2. the size and design of the connection such that it is appropriate to safely service 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;
4. connections which are free-flowing gravity driven;
5. any connections to watercourse must demonstrate adequate erosion and scour control and minimise hydraulic intrusion. The cross-sections must clearly show the top of bank and invert of watercourse.

All work required by this condition must be undertaken in accordance with the approved detailed engineering drawings. The approved stormwater connection documents must be included in your plumbing permit application document set and listed in accompanying forms.

SW 8

All stormwater runoff from impervious surfaces within the site must be treated and discharged from the site using Water Sensitive Urban Design principles to achieve stormwater quality and quantity targets in accordance with the State Stormwater Strategy 2010.

Detailed engineering designs accompanied with a report on all stormwater design parameters and assumptions or a model using industry accepted proprietary software, such as MUSIC, must be submitted and approved as a Condition Endorsement prior to the issue of any approval under the *Building Act 2016* or the commencement of work on the site (whichever occurs first).

A maintenance management schedule must also be submitted and the facility must be maintained in accordance with this schedule.

Advice:

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

ENG 13

All garbage collection associated with the development must occur wholly within the site. On-street garbage collection by private contractors within the Macquarie Street Highway Reservation is not approved.

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 tr1

Traffic management within the access driveway, circulation roadway and parking module (parking spaces and aisles) must be installed prior to the first occupation.

Traffic management design drawing(s) (including signage and line marking), must be submitted and approved as a Condition Endorsement, prior to the issue of any approval under the *Building Act 2016*. The design drawing(s) must be prepared by a suitably qualified person and include (but not be limited to):

1. Signage indicating that the car parking area is a private car park.
2. Delineation of pedestrian pathways along the shared vehicular circulation roadway.
3. Pedestrian safety bollards for egress to/from lifts and doorways.
4. Physical separation including hand rails of pedestrian pathways along the shared vehicular circulation roadway.
5. That the access driveway queuing areas are to be clearly line marked in accordance with the Traffic Impact Assessment documentation received by the Council on the 12th April 2021.
6. That the access driveway queuing areas must provide adequate space to accommodate at least two vehicles when entering from Macquarie Street in accordance with the Traffic Impact Assessment documentation received by the Council on the 12th April 2021.
7. Line marking or alternate easily identifiable traffic control devices clearly identifying entry and exit lanes.
8. Warning devices on the approaches to the service lift doors on all levels of the car park advising drivers that they may encounter a pedestrian at the lift.

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

Advice:

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

Reason for condition

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

ENG tr2

A construction traffic and parking management plan must be 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 as a Condition Endorsement, prior to commencement work (including demolition). The construction traffic and parking management plan must:

1. Be prepared by a suitably qualified person.
2. Include 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.

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

Advice:

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

Reason for condition

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

ENG 2a

Prior to first occupation or commencement of use (whichever occurs first), vehicular barriers compliant with the Australian Standard AS/NZS 1170.1:2002 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/NZS 2890.1:2004 (including the requirement for vehicle safety barriers where required), or a Council approved alternate design certified by a suitably qualified engineer to provide a safe and efficient access, and enable safe, easy and efficient use.

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 3b

The access driveway, circulation roadways, ramps and parking module (parking spaces, aisles and manoeuvring area) design must be submitted and approved as a Condition Endorsement, prior to the issuing of any approval under the *Building Act 2016*.

The access driveway, circulation roadways, ramps and parking module (parking spaces, aisles and manoeuvring area) design must:

1. Be prepared and certified by a suitably qualified engineer,
2. Be generally in accordance with the Australian Standard AS/NZS 2890.1:2004,
3. Where the design deviates from AS/NZS 2890.1:2004 the designer must demonstrate that the design will provide a safe and efficient access, and enable safe, easy and efficient use, and
4. Show dimensions, levels, gradients and transitions, and other details as Council deem necessary to satisfy the above requirement.

Advice:

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

It is 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 the design drawings approved by Condition ENG 3b of PLN-19-768 .

Prior to the first occupation or commencement of use, documentation by a suitably qualified engineer certifying that the access driveway 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 / commencement of use.

Reason for condition

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

ENG 5

The number of car / motorbike / bicycle parking spaces approved on the site is:

- Fifty (50) car parking spaces
- Eight (8) bicycle parking spaces
- Four (4) motorcycle parking spaces

All 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, prior to first occupation / commencement of use.

Reason for condition

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

ENG 5b

The access driveway queuing areas must be clearly line marked in accordance with the Traffic Impact Assessment documentation received by the Council on the 12th April 2021.

Prior to the commencement of use, documentation by a suitably qualified engineer certifying that the access driveway 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 queueing area into the development has sufficient capacity to hold two vehicles.

ENG 8

The use of the car parking spaces approved by this permit is restricted to residential, domestic associated with operations within the site.

A sign, approved by Council, and in accordance with Australian Standards AS/NZS 1742.11:2016, must be erected at the entry of the parking access to indicate the parking area is for residents only prior to first occupation.

Reason for condition

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

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 12

Parking, access and turning areas must be generally designed and constructed in accordance with the Australian Standard Parking facilities, Part 1: Off-Street Carparking, AS 2890.1 – 2004, prior to the first occupation.

Design drawings must be submitted and approved as a Condition Endorsement, prior to commencement of work. The amended design drawings must show dimensions, levels and gradients, transitions and other details as necessary to satisfy the above requirement.

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

Advice:

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

Reason for condition

To ensure that the access and parking layout for the development is to accepted standards.

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.

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 s1

Testing and commissioning certificates or equivalent supporting documentation relating to the vehicle lifts and traffic/queuing control devices must be submitted and approved as a Condition Endorsement, prior to the commencement of use.

The documentation must:

1. Be prepared by a suitably qualified person.

2. Demonstrate any that traffic/queueing control devices within the property boundary have been installed and tested and will operate to the manufacturer's specifications and all relevant Australian Standards.
3. Demonstrate that the vehicle lifts have been installed and tested and will operate to the manufacturer's specifications received by council on the 12th April 2021 and all relevant Australian Standards.
4. Provide for emergency breakdown plans and contingency options, including the change of any traffic/queueing operation, required in the event the vehicle lifts become temporarily disabled or non-operational.

Advice:

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

Reason for condition

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

ENG s2

The vehicle lifts and traffic/queueing control devices must be maintained so as to operate to the standard and specification identified in the relevant documentation submitted, approved and referred to by condition ENG s1 for the life of the building.

If, in the opinion of a suitably qualified person, the vehicle lifts and/or traffic/queueing control devices are no longer able to be maintained so as to operate to the approved standard and specification (end of service life), they must be replaced with devices which are able to perform to the equivalent standard and specification identified in the relevant documentation submitted, approved and referred to by condition ENG s1 within 14 days.

If the vehicle lifts and/or traffic/queueing control devices are replaced in accordance with the above, revised documentation must be submitted in accordance with the requirements of condition ENG s1.

Reason for condition

To ensure the continued use of the access and parking modules for the life of the unit complex without causing the loss of amenity to the users of the access and road users of Macquarie Street.

ENV 8

All recommendations in section 8 of the Geotechnical Assessment report by Geo-Environmental Solutions P/L dated July 2020 must be implemented including:

- pad footings are to be used to the south of the site, where slightly weathered dolerite bedrock is expected at the base of excavations. To the north of the site, where the quaternary alluvial deposits are encountered to 15.9 m AHD, bored pile foundations are recommended to place footings into the underlying weathered dolerite;
- cuttings onsite must be supported; and
- an Engineering Geologist must observe foundation excavations during construction to ensure that founding conditions are consistent with those on which the design recommendations are based.

Reason for condition

To reduce the risk to life and property, and the cost to the community, caused by landslides

ENV 2

Sediment and erosion control measures, in accordance with an approved soil and water management plan (SWMP), must be installed prior to the commencement of work and maintained until such time as all disturbed areas have been stabilised and/or restored or sealed to the Council's satisfaction.

A SWMP must be submitted as a Condition Endorsement prior to the issue of any approval under the *Building Act 2016* or the commencement of work, whichever occurs first. The SWMP must be prepared in accordance with the Soil and Water Management on Building and Construction Sites fact sheets (Derwent Estuary Program, 2008), available [here](#).

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

Advice:

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

Reason for condition

To avoid the pollution and sedimentation of roads, drains and natural watercourses that could be caused by erosion and runoff from the development.

HER 6

All onsite excavation and disturbance in the areas identified in the Praxis Environment report (Conservation Management Policy, Statement of Archaeological Potential and Development Impact Assessment) (dated Feb 2019) and shown as red (see figure 1.8.9 p.68) must be monitored and excavated in accordance with the recommendations of the above report (item 15 p.89 and section 2.2 pp.75-80.) Should any features or deposits of an archaeological nature be discovered on the site during excavation or disturbance:

1. All excavation and/or disturbance must stop immediately; and
2. A qualified archaeologist must be engaged to provide advice and assessment of the features and/or deposits discovered and make recommendations on further excavation and/or disturbance; and
3. All and any recommendations made by the archaeologist engaged in accordance with 2. above must be complied with in full; and
4. All features and/or deposits discovered and excavated must be reported to Council with 1 day and prior to the conclusion of the excavation; and
5. A qualified archaeologist must also undertake an audit of bulk archaeological materials such as worked sandstone blocks, 19th century bricks or cobblestones suitable for reuse. Refer also condition HER s3.

6. A copy of the archaeologist's advice, assessment and recommendations obtained in accordance with 2. 3. and 5. above must be provided to Council within 60 days of receipt of the advice, assessment and recommendations and prior to the issue of any approval under the *Building Act 2016* (excluding demolition).

Excavation and/or disturbance must not recommence until approval is granted from the Council.

Reason for condition

To ensure that work is planned and implemented in a manner that seeks to understand, retain, protect, preserve and manage significant archaeological evidence

HER 7

All artefacts of high interpretative value and/or rare or otherwise significant as determined by the qualified archaeologist engaged in accordance with Condition HER 6 must be incorporated into an on site interpretation and history.

An interpretation plan must be prepared and submitted and approved as a Condition Endorsement, prior to occupation.

The on-site interpretation must be:

- in accordance with the approved interpretation plan,
- incorporate the artefacts described above,
- located in a publicly accessible space and
- completed prior to the issue of a certificate of occupancy.

Advice:

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

Reason for condition

To ensure that there is public benefit from archaeological investigations.

HER s1

This permit does not approve any demolition, building or works to the rear outbuilding/stables.

Advice:

It is understood that works to this building will form a separate planning application after further consultation has occurred with Council's Senior Cultural Heritage Officer

Reason for condition

To protect the cultural heritage values of the site.

HER s2

A total of 6.3m of the heritage retaining wall adjacent to the rear outbuilding/stables must be retained. This is a further 3.8m in addition to what is shown on plan 112A03 issue N. Any work to repair the wall must be undertaken by a suitably qualified stonemason and must retain its historic character and appearance.

Reason for condition

To protect the cultural heritage values of the site.

HER s3

The audit report prepared in accordance with condition HER 6, must be submitted and approved as a Condition Endorsement prior to the issue of any approval under the *Building Act 2016*. The audit report must demonstrate how the finds described in HER 6 (number 5.) are to be incorporated into the development in landscaping, vertical or horizontal surfaces or other designed or decorative features. Revised plans must be submitted and approved as part of the Condition Endorsement showing the recommendations of the audit report in accordance with the above requirement.

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

Advice:

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

Reason for condition

To ensure that archaeological evidence is retained, protected and preserved or otherwise appropriately managed.

ENVHE 1

Recommendations in the report Environmental Site Assessment 201 Macquarie Street, Hobart (dated August 2019) by Geo-Environmental Solutions must be implemented for the duration of the development. Specifically:

1. As manganese exceeded Level 2 Material classification in two samples it is recommended that all soil excavated from the site is stockpiled, sampled by a suitably qualified and experienced environmental consultant and results compared against IB105 guideline limits; and
2. If deemed necessary, it is to be transported to a Level 2 waster facility (Copping). A permit to transport the waste (obtained through the EPA) will be required.

Reason for condition

To ensure that excavated contaminated soils are managed in an approved and safe manner that negates potential harm to the environment.

ADVICE

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

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

CONDITION ENDORSEMENT

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

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

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

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

BUILDING PERMIT

You may need building approval in accordance with the *Building Act 2016*. Click [here](#) for more information.

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

PLUMBING PERMIT

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

OCCUPATION OF THE PUBLIC HIGHWAY

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

You may require an occupational license for structures in the Hobart City Council highway reservation, in accordance with conditions to be established by the Council. Click [here](#) for more information.

You may require a road closure permit for construction or special event. Click [here](#) for more information.

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

GENERAL EXEMPTION (TEMPORARY) PARKING PERMITS

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

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.

STRUCTURES CLOSE TO COUNCILS' STORMWATER MAIN

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

WORK WITHIN THE HIGHWAY RESERVATION

Please note development must be in accordance with the Hobart City Council's Infrastructure By law. Click [here](#) for more information.

CBD AND HIGH VOLUME FOOTPATH CLOSURES

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

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

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

For more information about this requirement please contact the Council's City Mobility Unit on 6238 2804.

DRIVEWAY SURFACING OVER HIGHWAY RESERVATION

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

STORM WATER / ROADS / ACCESS

Services to be designed and constructed in accordance with the (IPWEA) LGAT – standard drawings. Click [here](#) for more information.

WORK PLACE HEALTH AND SAFETY

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

PROTECTING THE ENVIRONMENT

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

LEVEL 1 ACTIVITIES







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

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-19-768 - 201 MACQUARIE STREET HOBART
TAS 7000 - Planning Committee or Delegated
Report ↓ 
- Attachment B: PLN-19-768 - 201 MACQUARIE STREET HOBART
TAS 7000 - CPC Agenda Documents ↓ 
- Attachment C: PLN-19-768 - 201 MACQUARIE STREET HOBART
TAS 7000 - Senior Cultural Heritage Officer
Referral Officer Report ↓ 
- Attachment D: PLN-19-768 - 201 MACQUARIE STREET HOBART
TAS 7000 - Senior Development Engineer Referral
Officer Report ↓ 
- Attachment E: PLN-19-768 - 201 MACQUARIE STREET HOBART
TAS 7000 - Urban Design Advisory Panel Meeting
Minutes ↓ 
- Attachment F: PLN-19-768 - 201 MACQUARIE STREET HOBART
TAS 7000 - Peer Review of TIA ↓ 

**APPLICATION UNDER HOBART INTERIM PLANNING SCHEME 2015**

Type of Report:	Committee
Council:	21 June 2021
Expiry Date:	21 June 2021
Application No:	PLN-19-768
Address:	201 MACQUARIE STREET , HOBART 49 MOLLE STREET , HOBART 199 MACQUARIE STREET , HOBART ADJACENT RIVULET
Applicant:	(ERA Planning & Environment) 183 Macquarie Street
Proposal:	Partial Demolition, Alterations, Partial Change of Use to Office and Two Multiple Dwellings, New Building for 45 Multiple Dwellings, Signage and Associated Works
Representations:	170
Performance criteria:	Urban Mixed Use Zone Development Standards, Potentially Contaminated Land Code, Landslide Code, Road and Railway Assets Code, Parking and Access Code, Attenuation Code, Waterways and Coastal Protection Code Historic Heritage Code

1. Executive Summary

- 1.1 Planning approval is sought for Partial Demolition, Alterations, Partial Change of Use to Office and Two Multiple Dwellings, New Building for 45 Multiple Dwellings, Signage, and Associated Works at 201 Macquarie Street. Associated services works are proposed on 199 Macquarie Street, 49 Molle St, and within the adjacent Hobart Rivulet.

- 1.2 The proposal is for the partial demolition of the existing heritage listed building at the front of the site, the conversion of the existing stables building into an office, and the construction of a new eight storey (six above ground level storeys) building comprising 45 multiple dwellings.

More specifically the proposal is for:

- The demolition of the more recent rear additions to the existing heritage building on the site, and the conversion of this building to two dwellings (one downstairs, one upstairs).
- The conversion of the existing stables building to an office.
- Construction of a new eight storey building comprising the following:
 - Basement level 2: 25 car parking spaces.
 - Basement level 3: 24 car parking spaces, four motorcycle parking spaces.
 - Lower ground level: 7 one-bedroom apartments, bicycle storage room (for up to eight bikes), rubbish storage room.
 - Ground level: 8 one-bedroom apartments.
 - First level: 8 one-bedroom apartments.
 - Second level: 8 one-bedroom apartments.
 - Third level: 8 one-bedroom apartments.
 - Fourth level: Four one bedroom apartments, two two-bedroom apartments.
- There is a sub-basement level (basement level 1) which provides a fire escape stair.
- In total there are 43 one-bedroom dwellings, two two-bedroom dwellings, 50 car parking spaces, four motorcycles parking spaces, and a 20sqm bicycle storage area.
- The building's maximum height is 20.7m at the rear.
- Materials are to be a mix of brick, off-white textured concrete panels, glass balustrades, and anodised aluminium sliding screens.
- Access to the site is unchanged, via the existing crossover to Macquarie Street. Access to the basement level car parking is via two car lifts.
- A new sewer pipe is proposed within the site, and extending onto 199 Macquarie Street and 49 Molle Street.
- A new stormwater pipe within the site is proposed, to connect into the adjacent Hobart Rivulet.

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

- 1.3.1 Urban Mixed Use Zone Development Standards - Building Height, Residential Amenity
- 1.3.2 Potentially Contaminated Land Code - Sensitive Use, Excavation
- 1.3.3 Landslide Code - Building and Works, other than Minor Extensions

- 1.3.4 Road and Railway Assets Code - Existing Road Accesses and Junctions, Sight Distance at Access and Junctions
 - 1.3.5 Parking and Access Code - Number of Parking Spaces, Design of vehicular Accesses
 - 1.3.6 Attenuation Code - Proximity to Noisy Use
 - 1.3.7 Waterways and Coastal Protection Code - Building and Works
 - 1.3.8 Historic Heritage Code - Listed Place, Place of Archaeological Potential
- 1.4 170 representations were received, during the statutory advertising period, including five late representations. Of the representations received 168 were opposed to the proposal, and two were in support.
- 1.5 The application went to the Council's Urban Design Advisory Panel on 16 February 2021. The Panel were broadly not supportive of the application. The minutes of the Panel's meeting 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, because the proposal is more than three storeys and 2000sqm in floor area, and the application received 168 objections.

2. Site Detail

- 2.1 The site is 201 Macquarie Street, Hobart. It is a 1285sqm parcel of land on a single title. It fronts Macquarie Street and backs onto the Hobart Rivulet. It slopes quite steeply down from its street frontage to the Rivulet. At the front of the property is an existing heritage building, including a 'stables' building, and these are currently being used as four dwellings. The remainder of the site is used for car parking.
- 2.2 The site is surrounded by a mix of uses and buildings. To the north east of the site is the six storey mixed office use of 199 Macquarie Street. Immediately to the south west is the two storey heritage listed buildings of 203-205 Macquarie Street, currently in uses as offices. To the rear of the site (north west) is the Hobart Rivulet, and on the other side of that, the two storey mixed use building at 208-210 Collins Street.
- 2.3 Slightly further afield is the mixed commercial and residential development on the corner of Collins and Molle Street, 212 Collins Street, which is seven storeys.
- 2.4 The property at 49 Molle Street also adjoins the site's western boundary. This is a double storey mixed use building, built on its boundary with the Hobart Rivulet. There is car parking at the rear of the property, between the rear of the building and the shared boundary with the subject site.
- 2.6 Immediately opposite the site on the other side of Macquarie Street is the Collegiate School, including two buildings set close to the street frontage that are in the order of two and three storeys high.
- 2.6 The site is in the Urban Mixed Use zone. It is subject to the Potentially Contaminated Land Code, because the adjoining site at 199 Macquarie Street is identified as being potentially contaminated. The site is subject to the Attenuation Code because of its proximity to the late night music venues of the Duke and Hotel SoHo. As noted above the site is heritage listed, and it is also within the area of archaeological potential. The site is not within a heritage precinct. A small portion of the rear of the site is identified as having a medium landslide hazard risk. No other planning scheme overlays are applicable to the site.



Figure 1: Location plan. The subject site is highlighted blue.



Figure 2: Site plan. The subject site is bordered in blue.

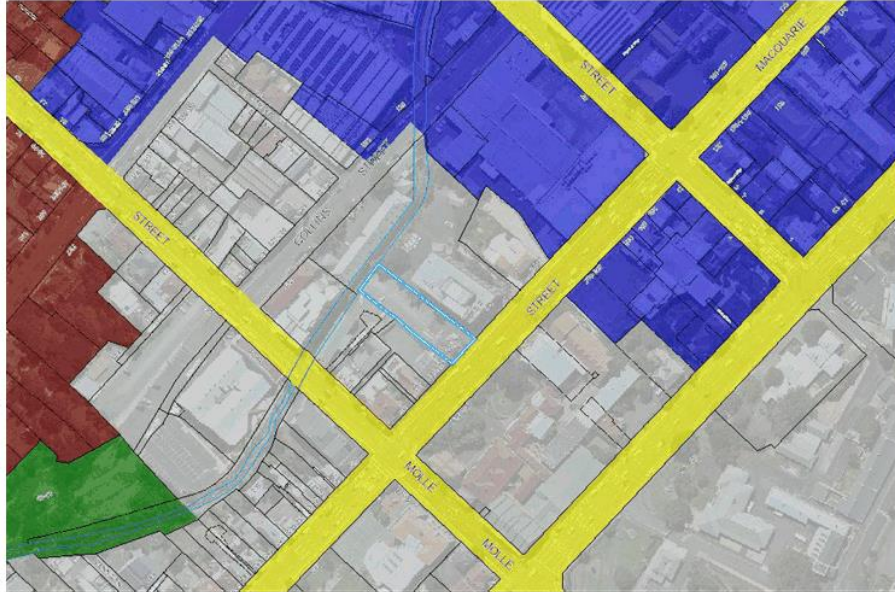


Figure 3: Zoning plan. Showing proximity of the site to the Inner Residential (maroon) and Central Business (blue) zones. The subject site is zoned Urban Mixed Use (grey). The Utilities zone is yellow, and the Open Space zone is green.

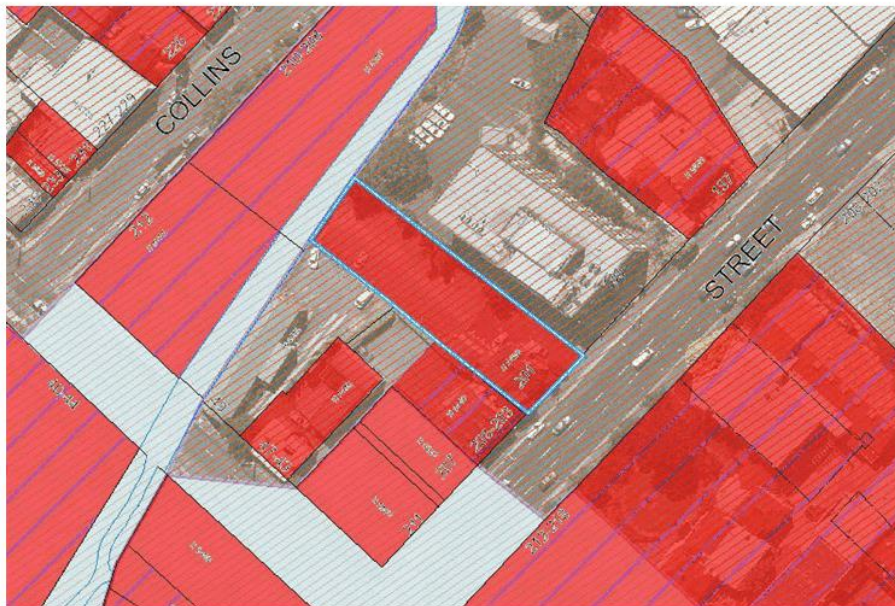


Figure 4: Heritage status of site and surrounds. Red denotes heritage listed under the planning scheme, purple hatching denotes listed with the Tasmanian Heritage Council. Light blue denotes heritage precinct. Orange hatching denotes the area of archaeological potential.



Figure 5: The front of the subject site, with the existing building to be retained located on the left hand side of the image. 199 Macquarie Street is the brown building on the right hand side of the image. 212 Collins Street is the grey building towards the middle of the image.



Figure 6: Standing at the rear of the site looking towards Macquarie Street. The existing stables building to be retained is the brick building above the row of cars. 199 Macquarie Street is the brown building on the left hand side of the image.



Figure 7: The adjoining property on Molle Street.



Figure 8: Molle Street streetscape. 212 Collins Street is the grey building on the left hand side of the image.



Figure 9: 212 Collins Street from within the subject site. The adjoining building on Molle Street is the red brick building on the left hand side of the image. 210 Collins Street is the sandstone building on the right hand side of the image.



Figure 10: The rivulet behind the subject site. 199 Macquarie Street is the brown building on the left hand side of the image. 210 Collins Street is the sandstone building in the middle of the image.



Figure 11: Collins Street streetscape.



Figure 12: Looking up at the Macquarie Street streetscape.



Figure 13: The Collegiate buildings opposite the site.

3. Proposal

- 3.1 Planning approval is sought for Partial Demolition, Alterations, Partial Change of Use to Office and Two Multiple Dwellings, New Building for 45 Multiple Dwellings, Signage, and Associated Works at 201 Macquarie Street. Associated services works are proposed on 199 Macquarie Street, 49 Molle St, and within the adjacent Hobart Rivulet.

- 3.2 The proposal is for the partial demolition of the existing heritage listed building at the front of the site, the conversion of the existing stables building into an office, and the construction of a new eight storey (six above ground level storeys) building comprising 45 multiple dwellings.

More specifically the proposal is for:

- The demolition of the more recent rear additions to the existing heritage building on the site, and the conversion of this building to two dwellings (one downstairs, one upstairs).
- The conversion of the existing stables building to an office.
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 - There is a sub-basement level (basement level 1) which provides a fire escape stair.
- In total there are 43 one-bedroom dwellings, two two-bedroom dwellings, 50 car parking spaces, four motorcycles parking spaces, and a 20sqm bicycle storage area.
- The building's maximum height is 20.7m at the rear.
- Materials are to be a mix of brick, off-white textured concrete panels, glass balustrades, and anodised aluminium sliding screens.
- Access to the site is unchanged, via the existing crossover to Macquarie Street. Access to the basement level car parking is via two car lifts.
- A new sewer pipe is proposed within the site, and extending onto 199 Macquarie Street and 49 Molle Street.
- A new stormwater pipe within the site is proposed, to connect into the adjacent Hobart Rivulet.



Figure 14: Architect's render of the proposed development. Looking at the proposed development from the front of the subject site on Macquarie Street.



Figure 15: Architect's render of the proposed development. Looking at the eastern side of the proposal, from Collins Street, with 208-210 Collins Street visible on the right hand side of the render. 199 Macquarie Street is the brown building on the left hand side of the render.



Figure 16: Architect's render of the proposed development. Looking at the rear and eastern side of the development, from Collins Street. 208-210 Collins Street is in the foreground. The mixed use development at 212 Collins Street is on the right hand side of the render.



Figure 17: Architect's render of the proposed development. Looking at the rear of the proposed development, from Collins Street. The conical shaped roof is the western end of 208-210 Collins Street. The red brick building on the right hand side, is 212 Collins Street.



Figure 18: Architect's render of the proposed development. Looking at the western side of the development, with 49 Molle Street in the foreground. 212 Collins Street is the white building on the left hand side of the render.



Figure 19: Architect's render of the proposed development. This render is taken from halfway up the steep section of Molle Street, between Goulburn and Bathurst Streets. The brown building is 199 Macquarie Street, to the right of it is the proposed development. The mixed use development at 212 Collins Street can be seen to the right of the proposed development.

4. Background

- 4.1 The proposal includes works within the Council's rivulet. As such, General Manager consent for the lodging of the application was sought and granted on 10 June 2020.
- 4.2 The applicant has also provided Crown Consent for the proposal, on the basis of cars entering from and exiting onto Macquarie Street, which is now under the jurisdiction of the State Government.

- 4.3 The applicant, architect, and client, have all engaged considerably with Council officers since the application was submitted in 2019.
- 4.4 A previous iteration of the proposal was considered as a pre-application item by the Urban Design Advisory Panel in August 2019. The minutes of this meeting are provided as an attachment to this report.
- 4.5 The application was considered by the Council's Urban Design Advisory Panel at its meeting of 16 February 2021. The Panel were broadly not supportive of the proposal. The minutes of the meeting are provided as an attachment to this report. Where relevant, the Panel's comments have been incorporated or addressed in the assessment below.

5. Concerns raised by representors

- 5.1 170 representations were received, during the statutory advertising period, including five late representations. Of the representations received 168 were opposed to the proposal, and two were in support.
- 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.

Traffic

- More and better provision of bike parking and associated facilities, including for e-bikes.
- Too much car parking is provided, which will exacerbate existing traffic congestion issues in Hobart.
- Car park lifts are inadequate for the number of parking spaces being provided, and will result in queuing into Macquarie St.
- The proposals TIA stated that there is sufficient on-street parking on the surrounding streets. We submit that this is not the case. There is not easily accessible on-street parking available along Macquarie Street and the surrounding locality. The carparking demand in this area is high and there are no other public carpark options available within close proximity. There are also parking limitations in this area due to clearway restrictions. Therefore, the current parking as proposed is not adequate.
- Unacceptable impact on flow and operation of traffic in Macquarie St.
- Inadequate onsite parking provided, including visitor parking.
- The Traffic Impact Assessment (TIA) concluded that the peak hour trip rates will be similar to the existing trip rates because of its current use as a carpark. We submit that this is not correct.
- The proposals TIA stated that there is sufficient on-street parking on the surrounding streets. We submit that this is not the case. There is not easily accessible on-street parking available along Macquarie Street and the surrounding locality. The carparking demand in this area is high and there are no other public carpark options available within close proximity. There are also parking limitations in this area due to clearway restrictions. Therefore, the current parking as proposed is not adequate.

Building Design

- The building is too high and bulky for the area.
- The building should not exceed the height of the existing building on the site (RL42.9).
- The density of the proposal is too high.
- The building is incompatible with the surrounding buildings because it is too high.
- The building should be reduced in height by one storey.
- The height and bulk will dominate the long single storey heritage building across the rivulet.
- The building does not transition in height to nearby buildings.
- There is no transition in height between the proposed building and the long single storey heritage building across the rivulet.

- The pedestrian access to the non-residential use is not readily visible from the street.
- Let's get the overall aesthetic right, and within scale of surrounding buildings.
- Consideration needs to be given to varying the heights across the building blueprint rather than this singular block of concrete, reminiscent of something built in Sydney in the 1970s.
- The prevailing mix of building heights in the area being a mix of 1-3 story 19th-20th century commercial and residential buildings. The proposed development comprises 5 storeys at the southern end, rising to a total of 8 storeys in the north. It will be one of the largest buildings in terms of height and bulk in the area if constructed. The nearby buildings of the most similar scale to the proposal are 199 Macquarie Street and 212 Collins Street. However, the development is not considered compatible to the scale of these buildings due to siting, lack of setback and transitional height. The proposal at 201 Macquarie does not provide any setback of upper levels therefore will have a greater perceived height and mass from the surrounding area. In contrast, 212 Collins Street comprises 5 stories; 3 stories are visible from street level with two upper levels setback. The setback of the upper levels and position of the site at a lower topographic point reduces its scale in comparison to the nearby 1-3 storey buildings, while also creating a transition in height.
- There is a clear lack of height transition from the North West and South West adjoining properties at 210 Collins Street, 49 Molle Street and 43-47 Molle St as shown in Figure 2 and Figure 3 below. The planning report for 201 Macquarie Street by ERA Planning includes a statement that there is a lack of development potential for the property at 49 Molle Street to justify compliance with the Performance Criteria. The reasoning for this judgement is not considered proven or valid. As these properties are within the area of the site, they must all be considered in the height transition analysis.
- The proposed building height and topography does not allow for a transition in height between the 1-2 storey commercial and residential detached buildings to the 8-storey building with the largest height difference being 16m at 210 Collins St. Additionally the proposed building does not provide any setbacks on the upper levels, changes in built form or design gestures to provide a transition in height
- In particular, the bulk, scale and height of the proposal towards the rear boundary of the subject property is significantly divergent

from the surrounding development.

- The proposal appears to have taken its cue for bulk and scale from the building at 199 Macquarie Street rather than the more prevalent modest transitional adjoining buildings

- The proposal should also be considered within the context of the Collins Street side of the street block, from which it will be readily observable and dominant in the predominantly 2 to 3 storey setting. Both the building at 199 Macquarie Street and 212 Collins Street are inconsistent with the prevailing scale and bulk of development in this street block and the surrounding area. These buildings demonstrate the impact that arises when transition is not adequately provided

- The building ignores the topography of the Rivulet. If upper stories are allowed they must be stepped back. Leigh Woolley's recommended heights are based on his analysis of Hobart's topography and following the city's natural contours. Taking an acceptable height on Macquarie St and projecting that back towards the Rivulet will destroy the very thing that his report sought to protect and turn the intention of his work on its head. The planning scheme must be applied with an awareness of the principles not just as some technical obstacles to be overcome for development gain. The bulk and scale of the proposal is completely unfitting in this location.

Residential Amenity of Future Occupants of the Building

- Dwellings are too small, lack storage space.
- The floor to ceiling heights are inadequate.
- Dwellings will not receive adequate direct sunlight.
- The proposed development is not considered to be sited or designed to optimise sunlight to the required habitable rooms. The site orientation being north south means 38% of apartments are south west facing.
- Additionally, apartments on the south east corner will be impacted by overshadowing from 199 Macquarie Street. The large extent of overshadowing is indicated in the sun shadow studies provided in Figure 5 which suggests overshadowing for over three hours per day in June and September.

Amenity of other Properties

- The building will overshadow and overlook neighbouring buildings.
- The building will overshadow the rivulet.
- My family and I walk along the rivulet often and enjoy the peace and tranquillity of such a beautiful natural area.

Proposed Use

- These apartments are clearly designed to be visitor accommodation units.

Heritage

- The development is incompatible with the heritage listed place on site.
- The maintenance of the scale of buildings in the Hobart CBD is essential to maintaining its beautiful heritage and avoid becoming just another city.
- Allowing the structure as proposed will compromise the important heritage streetscapes in the area.
- Proposed building is also depressingly grey and style not in keeping with heritage brick and sandstone buildings in nearby Molle St.
- The proposal is not considered to comply with the Performance Criteria as the discretion in building height and lack of transition is also seen in conflict with the Purpose Statement for the Zone 15.1.1.8 To provide for a diversity of uses at densities responsive to the character of streetscapes, historic areas and buildings and which do not compromise the amenity of surrounding residential areas. The site is adjacent to a number of heritage buildings and a heritage precinct. The density and scale of development results in a juxtaposition of large scale contemporary building in close proximity to the surrounding heritage streetscape, historic area and buildings, and subsequently diminishing the presence of surrounding heritage places. Immediately adjacent to the site, and illustrative of this juxtaposition of scale is the The Old Malt House at 210 Collins Street.
- The lack of separation between the proposed building and the existing building and outbuilding is considered to diminish the significance of the heritage place by increasing the visual prominence of the modern building. The siting of the proposal is not considered to be sufficiently separated from the heritage place, with no separation from the stable outbuilding. The lack of setback from the existing buildings also does not retain a

reasonable curtilage to maintain the provision of a backyard space which was a characteristic of the site and surrounding lots historically.

- The proposal will impact the streetscape of Macquarie Street by lessening the relationship between 201 Macquarie and its neighbours (203 -209) which historically formed a row of similarly sized and contemporary townhouses. It will also diminish the scenic backdropping of the West Hobart suburb and Mount Wellington which is currently viewed from Macquarie St when facing West. As such the proposal has the potential to cause substantial diminution of the historic cultural heritage significance of the place.

- The proposed building has a bulky, rectilinear form that dominates, rather than showing subservience to the existing form of the place. The siting of the proposed building from the existing buildings on the site does not indicate subservience to the place. The lack of visual separation between the existing and proposed results in dominance of the site by the modern bulky form, particularly from Macquarie Street frontage.

- The street facing wall of brickwork, glass and off form concrete does not provide a soft or visually permeable backdrop to the brick and stone materiality of the existing building. The application therefore does not demonstrate that it meets all the development standards for Heritage Places

- The alteration to the outbuilding and partial demolition of the retaining wall will result in the loss of significant fabric that contributes to the historic cultural heritage significance of the place. All the subparagraphs in E13.7.1 P1 must be satisfied. We submit that they are not all satisfied, specifically subparagraph (b) in that there are prudent and feasible alternatives to carrying out the works.

- The proposal involves a design that is incompatible with the heritage place, in terms of height, scale, bulk, form and fenestration.

- The proposal is not subservient and complementary to the heritage place in terms of scale, bulk, built form and fenestration. When comparing the built forms of the heritage place and the proposed development, the development cannot be said to be either subservient or complementary. The HIA itself acknowledged that the development is large in scale and per Visagie by introducing an element of significant size which by reason of those proportions and form, results in an incompatible design

<ul style="list-style-type: none"> The proposal, in terms of materials, built form and fenestration does not respond to the dominant heritage characteristics of the heritage place.
Servicing <ul style="list-style-type: none"> How will waste be collected? Where will rubbish bins be stored? The proposal has not demonstrated that stormwater runoff will be no greater than pre-existing runoff or that any increase can be accommodated within existing or upgraded public stormwater infrastructure. There needs to be in-built sustainability in the design and construction - water collection and reticulation, passive solar design, panels and batteries to run common property services.
Miscellaneous <ul style="list-style-type: none"> The development will result in the loss of trees on the boundary with 199 Macquarie Street, which is unfortunate. The proposal will reduce the value of my property. Construction work, including vibration (especially during foundation work that will be digging out so deeply); excess contractor traffic including fully loaded trucks will all significantly impact the structural integrity of neighbouring or nearby heritage and residential dwellings. It will also cause disruption to business operations and may cause loss of income. Protection should be afforded to those buildings, along with the intrusion of noise, dust, lighting etc. There is the possibility of the rivulet wall to be become damaged during construction, especially of a development of that size.

- 5.3 The two representations in support of the proposal made the following comments:
- I am pleased with this development, including the way it has been planned. The size and height of the building is appropriate for the area. Clever to have more inner city accommodation of this type.
 - As a business and building owner in the city, this sort of development should be encouraged to breathe life back into the city. Having high density housing on the fringes of the city would be a welcome addition in a changing world. The city is the heartbeat of a community and having people live close to the city helps everyone. I support this application as do many of my peers.

6. Assessment

- 6.1 The *Hobart Interim Planning Scheme 2015* is a performance based planning

scheme. To meet an applicable standard, a proposal must demonstrate compliance with either an acceptable solution or a performance criterion. Where a proposal complies with a standard by relying on one or more performance criteria, the Council may approve or refuse the proposal on that basis. The ability to approve or refuse the proposal relates only to the performance criteria relied on.

- 6.2 The site is located within the Urban Mixed Use Zone of the *Hobart Interim Planning Scheme 2015*.
- 6.3 The existing use is multiple dwellings (there are four dwellings on the site). The proposed use is multiple dwellings (49 multiple dwellings are proposed in total, 47 of which are in the new apartment building), and business and professional services (office). Both multiple dwellings and office are a permitted use in the zone.
- 6.4 The proposal has been assessed against:
- 6.4.1 Part D - 15.0 Urban Mixed Use Zone
 - 6.4.2 Part E - 2.0 Potentially Contaminated Land Code
 - 6.4.3 Part E - 3.0 Landslide Code
 - 6.4.4 Part E - 5.0 Road and Railway Assets Code
 - 6.4.5 Part E - 6.0 Parking and Access Code
 - 6.4.6 Part E - 7.0 Stormwater Management Code
 - 6.4.7 Part E - 9.0 Attenuation Code
 - 6.4.8 Part E - 11.0 Waterways and Coastal Protection Code
 - 6.4.9 Part E - 13.0 Historic Heritage Code
 - 6.4.10 Part E - 15.0 Inundation Prone Areas Code
- 6.5 The proposal relies on the following performance criteria to comply with the applicable standards:
- 6.5.1 Urban Mixed Use Zone:-
 - Building Height – Part D 15.4.1 P1*
 - Residential Amenity – Part D 15.4.8 P1*

- 6.5.2 Potentially Contaminated Land Code:-
Excavation and Sensitive Use - Part E 2.5 P1 & 2.6.2 P1
- 6.5.3 Landslide Code:-
Building and Works, other than Minor Extensions - E3.7.1 P1
- 6.5.4 Road and Railway Assets Code:-
Existing Road Accesses and Junctions - E5.5.1 P3
Sight Distance at Access and Junctions - E5.6.4 P1
- 6.5.5 Parking and Access Code:-
Onsite Parking Provision - Part E.6.6.1 P1
Design of Vehicular Accesses - E6.7.2 P1
- 6.5.6 Attenuation Code:-
Proximity to Noisy Use - Part E 9.7.2 P1
- 6.5.7 Waterways and Coastal Protection Code:-
Buildings and Works - E11.7.1 P1 and P4
- 6.5.8 Historic Heritage Code -
Heritage Listed Place - Part E 13.7.1 P1, 13.7.2 P1, P2, P3 & P4
- 6.6 Each performance criterion is assessed below.
- 6.7 Building Height - Part D 15.4.1 P1
- 6.7.1 The acceptable solution at clause 15.4.1 A1 requires a maximum building height of 10m.
- 6.7.2 The proposal includes a building height of approximately 20.7m at the rear of the building.
- 6.7.3 The proposal does not comply with the acceptable solution; therefore

assessment against the performance criterion is relied on.

- 6.7.4 The performance criterion at clause 15.4.1 P1 provides as follows:

Building height must satisfy all of the following:

- (a) be consistent with any Desired Future Character Statements provided for the area;*
- (b) be compatible with the scale of nearby buildings;*
- (c) not unreasonably overshadow adjacent public space;*
- (d) allow for a transition in height between adjoining buildings, where appropriate;*

- 6.7.5 There is no Desired Future Character Statement for the zone and so 15.4.1 P1(a) is met. There is no adjacent public space and so assessment against P1 (c) is not required. The site is adjacent to the Hobart Rivulet; however this section of the Hobart Rivulet is not accessible to the general public, with entry restricted to contractors who have been granted a permit to enter the area. It is therefore not considered to be 'public space' in the context of the clause.

6.7.6 **Compatible with Scale of Nearby Buildings**

In relation to (b), the Tribunal has provided the following direction of the meaning of some of the terms in this clause as follows:

Compatible:

- *To be compatible is to be consistent or congruous with that which comparison is required to be made. The Tribunal holds that to be "compatible" requires that the building height be capable of co-existing with the scale of nearby buildings.*
- *'Compatible' [means] "not necessarily the same... but at least similar to, or in harmony or broad correspondence with the surrounding area".*
- *[Compatible] requires an outcome which is in harmony or broad correspondence with the surrounding area.*

Scale:

The Tribunal holds that "scale" in this Clause should be read in the context of P1; the term takes its colour from that context. The terms of P1 relate to building height. Accordingly, the reference to scale in this part is an inference to height and requires compatibility in that respect. Such matters cannot ignore altogether the form of the building, since

height generates mass ... but the intent is that building height must be compatible with the scale (height) of "nearby" buildings.

Nearby:

"Nearby" means "close to" the subject development.

- 6.7.7 As such, this clause requires the height of the proposed building to be in harmony or broad correspondence with the height of buildings close to the subject site. As the planning report submitted with the application sets out, there is a variety of building heights close to the subject site. There are mid-rise buildings like 199 Macquarie Street (six storeys) and 212 Collins Street (seven storeys), there are two to three storey buildings like 203-205 Macquarie Street and the Collegiate School buildings at 212-218 Macquarie Street, and small single storey buildings like 207 Macquarie Street. All these buildings are within 100m of the site, and are considered to be close to the subject site. It is also relevant to note that there is a diversity in those other aspects of scale identified by the Tribunal above, for example form, footprint, siting, articulation and materiality.
- 6.7.8 The proposed building height is considered to be in broad correspondence with, able to comfortably co-exist with, and to be not significantly divergent from, the heights of other buildings close to the subject site. The form of the building, its siting, footprint, and materiality, also help it to fit in with nearby buildings. Or in other words, the proposal's scale improves the building's compatibility.
- 6.7.9 As such, on balance, the proposed building height is considered to be compatible with the scale of nearby buildings.
- 6.7.10 It is noted that the Urban Design Advisory Panel did not indicate that the proposed building height was not compatible with nearby buildings.

6.7.11 **Allow for a Transition in Height between Adjoining Buildings**

In relation to (d), again, the Tribunal has provided the following direction on what the intent of this clause is, as follows:

Transitions between adjoining buildings are common provisions in town planning controls. Obviously, the intent of such controls is to avoid discordant differences in building heights by requiring the design of higher buildings to have regard for, and a recognition of, lower buildings. Stepped buildings are one way to achieve a transition.

- 6.7.12 In terms of what buildings are considered to be adjoining, it is 199 Macquarie Street, 203 to 205 Macquarie Street, 49 Molle Street, 212 Collins Street and 208 to 210 Collins Street.
- 6.7.13 In terms of 199 Macquarie Street, and 212 Collins Street, the relationship of the proposed building to these existing buildings is considered to be acceptable on the basis that their heights are similar. The proposed building is eight storeys, 199 Macquarie Street is six storeys, and 212 Collins Street is seven storeys. Please refer above to Figure 19.
- 6.7.14 In terms of 203 to 205 Macquarie Street, the proposed building is well set back from them (over 10m) and located further down the slope, which means the heights of the buildings appear similar. It is noted that the proposed building will not be readily visible in the Macquarie Street streetscape.
- 6.7.15 In terms of 49 Molle Street, the proposed building is not insignificantly higher (refer above to Figure 18). However, there is a significant (15m) setback between these existing buildings and the proposed building, and this is considered to be an adequate separation to allow for a transition in height up to the proposed building from the lower existing building. As a consequence, the height difference is not considered to be discordant, and the transition is considered to be acceptable.
- 6.7.16 In terms of 208 to 210 Collins Street, these existing buildings are predominantly two storeys, but with a steeply pitched roof, such that the ridge height of the roof is in effect closer to at least a three storey building. There is also a higher element towards the Molle Street end of the site, associated with the former use of the buildings as a flour mill and brewery. Between this building and the proposed building is the rivulet. The rear building line of the proposed building is setback between 6m and 7m from the existing buildings, and the proposed building is at its highest point at the rear (almost 21m) because the topography of the land falls away to the rivulet. The design of the proposed building includes horizontal bands and screening, and the mid-level concrete panels on the rear elevation not being in perfect alignment, all of which help reduce the perceived height by breaking up the verticality of the building. The narrow footprint of the proposed building also helps the relationship with this existing building, ensuring there is a demonstrable gap on either side of it and its visual neighbours, namely 212 Collins Street and 199 Macquarie Street. The narrow footprint helps ensure the mass of the proposed building and its neighbours do not overwhelm the existing building on this neighbouring site. The applicant planning consultant also makes the point that the

proposed building is lower than the more prominent buildings on Macquarie Ridge. The montages provided with the application show the proposed building from in front of these existing buildings. Refer Figures 15, 16 and 17 above.

- 6.7.17 The height of the proposed and existing buildings is clearly different. The question is whether they are discordant. It's considered that the combination of the proposed height not being excessive, the setback created by the rivulet, the building's narrow footprint, the use of horizontal banding and materiality, as well as the presence of existing mid-rise buildings in close proximity (199 Macquarie Street and 212 Collins), mean that the higher proposed building has had sufficient regard for, and a recognition of, the lower existing buildings.
- 6.7.18 The Urban Design Advisory Panel made the following comments with respect to the question of transition:

The proposal sought to provide a transition in building height between 199 Macquarie Street and 212 Collins Street. The Panel is of the opinion the new building does not provide an acceptable transition between the height and form of the two existing buildings. The new building has a common height to the main building height of 199 Macquarie Street. Whilst the application had used the roof top plant room on 199 Macquarie Street to suggest a height transition, the inset location of the existing plant room results in the dominant building height of 199 Macquarie Street being the perimeter height, especially when viewed from the lower level of Collins Street. The Panel also noted whilst the seven-storey height of 212 Collins Street had been referred in the application, 212 Collins street incorporates a varied height building form, which steps down especially adjacent to the existing building at 210 Collins Street. The Panel noted the more appropriate height to evidence a transition to would be the lower height of 212 Collins Street immediately adjacent 210 Collins Street. Building in such a plane would likely have the effect of reducing the height at the rivulet end of the site by several storeys – possibly two or three.

The Panel noted the proposal had incorporated a design change to the uppermost level at the rivulet end, to assist in the reading of the transition in height through the new development. Analysis from different vantage points, especially Collins Street, lead the Panel to determine this was a welcome design consideration but was insufficient to address the Panel's concerns with the overall height of the proposal.

There was a lot of deliberation from the Panel on the building being built right up to the edge of the rivulet. There is a feeling that the rear of the building is not compatible with the transition within the streetscape of Collins Street and it loses the connection with the rivulet. Consistent with the Panel's comments from the pre-application meeting, it was also discussed whether the building should step down towards the rivulet and whether there is further opportunity to open up the apartments to allow more sun into the apartments and improve the amenity of the building.

The Panel did not see sufficient evidence for the proposed transition in building height and bulk within the precinct, as suggested by the applicants, and were disappointed the comments of the pre-application meeting had not been sufficiently investigated in the presentation of alternate urban design strategies. The Panel recognised this project presents considerable challenges in developing an infill site with large topographic differences but were not satisfied this project demonstrates a strong lead for future similar development in the area. Accordingly it is the Panel's advice that the height of the proposed development, particularly for approximately the rear half of the site, does not satisfy the City of Hobart Planning Scheme performance criteria to provide an acceptable transition in heights of adjoining buildings within the streetblock.

- 6.7.19 The comments of the Panel are noted, and it is acknowledged that the Panel are of the view that the building does not provide an adequate transition to other buildings to satisfy the planning scheme requirements. In response to the Panel's comments it is considered that ultimately the question of transition is a subjective one. Clearly there are arguments to be put not in support of the building's transition, as the Panel have done and as have most if not all of the objections received against the application. However, the guidance provided by the Tribunal is considered to be persuasive. They have clearly said the intent of a planning control in relation to transition is 'to avoid discordant differences in buildings heights, by requiring the design of higher buildings to have regard for, and a recognition of, lower buildings.' Stepping down is identified as one, but not the only, method of achieving transition. As articulated above, it is considered that the proposed building will not be discordant with the heights of adjoining buildings. It is considered that this is less controversially so with the buildings at 199 Macquarie Street, 203 to 205 Macquarie Street, 49 Molle Street and 212 Collins Street. And although less clear cut, on balance, it is also considered to be the case with 210 Collins Street. With respect to this latter building, the proposed building is considered to have had regard for it, and a recognition of it,

and this is evidenced by the stepping of the top floor back from the rear elevation, the building's narrow footprint, the breaking up of the verticality of the building by the introduction of strong horizontal lines, and the use of materials including the anodised aluminium sliding screens.

- 6.7.20 As such, on balance, and again acknowledging that this is a different conclusion to that reached by the Panel, the proposed building height is considered to allow for a transition in height between adjoining buildings.

6.7.21 **Building Height Objective:**

Subclauses (b) and (d) need to be read in the context of the objective of the building height standard, which is to ensure building height contributes positively to the streetscape. Streetscape is defined by the planning scheme as:

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

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

- 6.7.22 For this site and this building, there are three relevant streetscapes – Macquarie, Molle, and Collins.
- 6.7.23 In an overall sense the proposed building is architecturally designed and is considered to be of a high standard. The use of materials include a base level of brick, with the substantive portion of the building to be constructed of off white textured concrete, incorporating protruding decks with glass balustrades and anodised aluminium screens. Thus, as a high quality architecturally designed building with a variety of materials, the proposed building is considered to make a positive contribution to each of the relevant streetscapes.
- 6.7.24 In terms of Macquarie Street, this is a three lane one way arterial road, with minimal street panting in the section between Molle and Barrack Streets. Buildings are typically built close to the frontage, and are of an eclectic range in terms of scale and form. The proposed building will not be readily visible in this streetscape because of its setback from the frontage. Importantly the existing building on the site will be retained,

ensuring the existing building setback to the street is retained. The scale and form of the building is considered to be in keeping with the variety found on this street, including 199 Macquarie Street and the higher buildings associated with Collegiate on the opposite side of the street.

6.7.25 Molle Street is a predominantly two lane one way road, which also carries significant volumes of traffic. The section of the street between Macquarie Street and Collins Street has no street planting, but has the rivulet running underneath it. The buildings on the four 'corners' of this section of Molle Street are the most prominent. There are existing through views toward the CBD, from which the higher buildings in that area can be seen. 199 Macquarie Street is also visible. The proposed building will also be visible from these points, but will fit in with the existing higher buildings of 212 Collins Street and 199 Macquarie Street. This, in combination with the limited visibility of the proposed building and its generous setback from this street frontage means it will not be a dominating or overbearing feature in the streetscape.

6.7.26 Collins Street is a two lane two way city street. There is perhaps even more variety of built form, scale, and siting in this streetscape than in Macquarie and Molle Streets. There is no formal street plantings but there are noticeable trees within the streetscape on private property, most notably in front of 208-210 Collins Street, and 199 Collins Street. Again, the rivulet runs underneath Collins Street, and the gap it creates in the built form is a characteristic of this particular streetscape. The larger buildings of 199 Macquarie Street and 212 Collins are prominent in this streetscape. Like these two buildings, the proposed building will also appear prominent in the streetscape at some points on the street, most particularly when viewed south west up the street through the gap created by the rivulet, and when standing in front of 208-210 Collins Street. However, the gap created by the rivulet will be retained by the proposed building, which will essentially fit between the two existing larger buildings of 212 Collins Street and 199 Macquarie Street. Because of the rivulet, the proposed building is also well setback from the Collins Street frontage, reducing its visual prominence in the streetscape. The variety of materials to be used, including brick, off white concrete, glass balustrading, and anodised aluminium screens, will add visual interest and help reduce the building's visual prominence. Similarly, the form of the building includes strong horizontal banding to help break up its verticality, as well as having the top floor stepped back from the rear elevation. While it may be argued that the building could have had a greater rear setback as well as being more stepped down to the rear elevation, both the architect and the planning consultant have presented arguments in

support of the building as proposed, stating that there is a consistent pattern of building to rear boundaries, and there is not a consistent pattern of stepping buildings down to reflect the topography of the land. Finally, it is noted that there is the possibility in the future of further development at the rear of 199 Macquarie Street, where there is a permitted height of 10m. A building of that height in this location would further soften the proposed building's visibility in the Collins Street streetscape.

- 6.7.27 In terms of the proposal's contribution to the streetscape, the Urban Design Advisory Panel commented as follows:

There were concerns around the height and massing of the building and whether it provides a positive contribution to the townscape and streetscape of its setting.

There is a feeling that the rear of the building is not compatible with the transition within the streetscape of Collins Street and it loses the connection with the rivulet.

The Panel noted the importance of considering the Macquarie Street streetscape as a series of layered experiences and felt further planting opportunities would be beneficial in enhancing the heritage building and the streetscape experience on approach to the new building.

Overall, the Panel recognised the Macquarie Street façade of the new building had been reduced since the pre-application meeting, due to the removal of the roof terrace in the earlier proposal and were satisfied the height and bulk of the Macquarie Street façade and its impact on the streetscape.

- 6.7.28 Noting the comments of the Panel, the definition of streetscape, and the assessment above, the proposal is on balance considered to make a positive contribution to the Macquarie, Molle and Collins Streets streetscapes.

- 6.7.29 The proposal complies with the performance criterion.

6.8 Residential Amenity – Part D 15.4.8 P1

- 6.8.1 The acceptable solution at clause 15.4.8 A1 requires that a dwelling must have at least one habitable room window (other than a bedroom) facing between 30 degrees west of north and 30 degrees east of north.

- 6.8.2 The proposal includes new dwellings. The dwellings on the eastern side of building have windows facing more than 40 degrees east of north. The windows to the dwellings at the northern end of the building have windows facing more than 40 degrees west of north. The windows to the dwellings on the western side and southern end of the building have windows facing south west or south east.
- 6.8.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
- 6.8.4 The performance criterion at clause 15.4.8 P1 provides as follows:
- A dwelling must be sited and designed to optimise sunlight to at least one habitable room (other than a bedroom).*
- 6.8.5 The architect states 'nearly all apartments will have either a mountain or city views, and either morning or afternoon sun'. Noting the orientation and dimensions of the site, the building is sited in an appropriate manner. The design of the dwellings includes internalised corridors, and large glazed opening doors into the main living areas which are directly adjacent to an area of private open space. Those dwellings on the western side, and southern end, will receive less sunlight than those on the eastern side and northern end. However, the level light available to the western and southern dwellings is considered to be reasonable. As such, all dwellings are considered to be sited and designed to optimise sunlight to at least one habitable room (other than a bedroom). It is noted that the Urban Design Advisory Panel commented that "it was also discussed whether the building should step down towards the rivulet and whether there is further opportunity to open up the apartments to allow more sun into the apartments and improve the amenity of the building."
- 6.8.6 The proposal complies with the performance criterion.
- 6.9 Excavation and Sensitive Use - Part E 2.5 P1 & 2.6.2 P1
- 6.9.1 The site is adjacent to a potentially contaminated site at 199 Macquarie Street, and as such, is considered by the planning scheme to be potentially contaminated itself. There are no acceptable solutions for excavation of a potentially contaminated site, or for the use of a potentially contaminated site for a sensitive use, of which residential is considered to be one.
- 6.9.2 There are no acceptable solutions; therefore assessment against the

performance criteria is relied on.

- 6.9.3 The performance criterion at clauses E2.5 P1 and E2.6.2 P1 provide as follows:

E2.5 P1

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

- (a) an environmental site assessment that demonstrates there is no evidence the land is contaminated; or*
- (b) an environmental site assessment that demonstrates that the level of contamination does not present a risk to human health or the environment; or*
- (c) a plan to manage contamination and associated risk to human health or the environment that includes:*
 - (i) an environmental site assessment;*
 - (ii) any specific remediation and protection measures required to be implemented before any use commences; and*
 - (iii) a statement that the land is suitable for the intended use.*

E2.6.2 P1

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

- (a) an environmental site assessment that demonstrates there is no evidence the land is contaminated; or*
- (b) a plan to manage contamination and associated risk to human health and the environment that includes:*
 - (i) an environmental site assessment;*
 - (ii) any specific remediation and protection measures required to be implemented before excavation commences; and*
 - (iii) a statement that the excavation does not adversely impact on human health or the environment.*

- 6.9.4 The proposal has been assessed by the Council's Senior Environmental Health Officer, who has advised that the Environmental Site Assessment submitted with the application documentation satisfies the above performance criteria.

- 6.9.5 The proposal complies with the performance criteria.

- 6.10 Building and Works, other than Minor Extensions - E3.7.1 P1

- 6.10.1 There is no acceptable solution for E3.7.1 A1.
- 6.10.2 The proposal includes building and works that is more than a minor extension.
- 6.10.3 There is no acceptable solution; therefore assessment against the performance criterion is relied on.
- 6.10.4 The performance criterion at clause E3.7.1 P1 provides as follows:
- Buildings and works must satisfy all of the following:*
- (a) no part of the buildings and works is in a High Landslide Hazard Area;*
- (b) the landslide risk associated with the buildings and works is either:*
- (i) acceptable risk; or*
- (ii) capable of feasible and effective treatment through hazard management measures, so as to be tolerable risk.*
- 6.10.5 The Council's Environmental Development Planner has provided the following assessment:
- No works are proposed within a High Landslide Hazard Area.
- A geotechnical assessment including landslide assessment was submitted with the application. The landslide assessment concluded that the risks would be low (tolerable) subject to recommended risk treatments.
- The application therefore complies with the performance criterion subject to a condition requiring implementation of the report's recommendations.
- 6.10.6 The proposal complies with the performance criterion.
- 6.11 Proximity to Noisy Use - Part E 9.7.2 P1
- 6.11.1 There is no acceptable solution for E9.7.2 A1.
- 6.11.2 The proposal includes sensitive uses within the attenuation distance of two late-night music venues (192 Macquarie Street and 124 Dave Street).
- 6.11.3 There is no acceptable solution; therefore assessment against the

performance criterion is relied on.

- 6.11.4 The performance criterion at clause E9.7.2 P1 provides as follows:

Development for sensitive use, including subdivision of lots within a sensitive zone, must not result in potential to be impacted by environmental harm from use with potential to cause environmental harm, having regard to all of the following:

(a) the nature of the use with potential to cause environmental harm; including:

(i) operational characteristics;

(ii) scale and intensity;

(iii) degree of hazard or pollution that may emitted from the activity;

(b) the degree of encroachment by the sensitive use into the Attenuation Area or the attenuation distance;

(c) measures in the design, layout and construction of the development for the sensitive use to eliminate, mitigate or manage effects of emissions

- 6.11.5 The Council's Environmental Development Planner has provided the following assessment:

The music venues have the potential to cause an environmental nuisance through noise emissions.

The proposed residential uses would be more than 142m from one of the venues and more than 160m from the other. At these distances, given the relatively-high ambient noise levels in the area, the screening buildings between the sites and the design of the apartment building, there is no credible risk of noise nuisance to the new residents from the late night music venues and the exercise of discretion is recommended.

- 6.11.6 The proposal complies with the performance criterion.

6.12 Buildings and Works - E11.7.1 P1

- 6.12.1 The acceptable solution at clause E11.7.1 A1 requires that building and works within a waterway and coastal protection area are within a building area on a plan of subdivision approved under this planning scheme.

The proposal includes a building partially located within 10m of the top of the retaining wall of the rivulet, and not located within a building area on a plan of subdivision approved under this planning scheme.

- 6.12.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.

- 6.12.4 The performance criterion at clause E11.7.1 P1 provides as follows:

Building and works within a Waterway and Coastal Protection Area must satisfy all of the following:

(a) avoid or mitigate impact on natural values;

(b) mitigate and manage adverse erosion, sedimentation and runoff impacts on natural values;

(c) avoid or mitigate impacts on riparian or littoral vegetation;

(d) maintain natural streambank and streambed condition, (where it exists);

(e) maintain in-stream natural habitat, such as fallen logs, bank overhangs, rocks and trailing vegetation;

(f) avoid significantly impeding natural flow and drainage;

(g) maintain fish passage (where applicable);

(h) avoid landfilling of wetlands;

(i) works are undertaken generally in accordance with 'Wetlands and Waterways Works Manual' (DPIWE, 2003) and 'Tasmanian Coastal Works Manual' (DPIPWE, Page and Thorp, 2010), and the unnecessary use of machinery within watercourses or wetlands is avoided.

- 6.12.5 The Council's Environmental Development Planner advises:

The proposal will comply with the performance criterion subject to the implementation of a Council-approved soil and water management plan.

- 6.12.6 The proposal complies with the performance criterion.

6.13 Heritage Listed Place - Part E 13.7.1 P1, 13.7.2 P1, P2, P3 & P4

- 6.13.1 The proposal is for demolition and new work to a listed place, and a place within the area of archaeological potential. The proposal must be assessed against the following provisions of the Historic Heritage Code of the Scheme.

E13.7.1 P1 - Demolition - heritage place

E13.7.2 P1, P2, P3, P4 - New work - heritage place

E13.10.1 P1 - Demolition and new work - Place of Archaeological Potential

- 6.13.2 The performance criterion provide as follows:

E13.7.1 P1

Demolition must not result in the loss of significant fabric, form, items, outbuildings or landscape elements that contribute to the historic cultural heritage significance of the place unless all of the following are satisfied;

- (a) there are, environmental, social, economic or safety reasons of greater value to the community than the historic cultural heritage values of the place;*
- (b) there are no prudent and feasible alternatives;*
- (c) important structural or façade elements that can feasibly be retained and reused in a new structure, are to be retained;*
- (d) significant fabric is documented before demolition*

E13.7.2 P1

Development must not result in any of the following:

- (a) loss of historic cultural heritage significance to the place through incompatible design, including in height, scale, bulk, form, fenestration, siting, materials, colours and finishes;*
- (b) substantial diminution of the historic cultural heritage significance of the place through loss of significant streetscape elements including plants, trees, fences, walls, paths, outbuildings and other items that contribute to the significance of the place.*

E13.7.2 P2:

Development must be designed to be subservient and complementary to the place through characteristics including:

- (a) scale and bulk, materials, built form and fenestration;*
- (b) setback from frontage;*
- (c) siting with respect to buildings, structures and listed elements;*

(d) using less dominant materials and colours.

E13.7.2 P3:

Materials, built form and fenestration must respond to the dominant heritage characteristics of the place, but any new fabric should be readily identifiable as such.

E13.7.2 P4:

Extensions to existing building must not detract from the historic cultural heritage significance of the place.

E13.10.1 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'*

- 6.13.3 The proposal has been assessed by the Council's Senior Cultural Heritage Officer as follows. The officer's full report (including photos) is provided as an Attachment to this report.

This application is for an apartment building located on a heritage place listed in Table E13.1 of the Historic Heritage Code. It is also within a Place of Archaeological Potential. The proposal is immediately adjacent to the Hobart Rivulet Heritage Precinct.

The proposal is supported by the following documentation:

Conservation Management Policy, Statement of Archaeological Potential and Development Impact Assessment by Praxis Environment, dated February 2019 (Heritage Impact Assessment September 2019).

Representations:

168 representations were received during the advertised period. The following heritage related comments were received.

- "My specific concerns with this proposed development are in relation to the long single heritage building across the rivulet: height and width of the building dominate the heritage building therefore not respectful of the heritage design."
- "Why do these companies spoil so much of our beautiful and historic city ?"
- "The style of the proposed development is also completely incompatible with the heritage buildings in the area and the proposed development should be rejected for this reason alone. "
- " It should fit in with the heritage values of the area and not present an appearance of a building that could be from anywhere. People come to Hobart in appreciation of its heritage buildings, and the council isn't doing enough to preserve this."
- "This proposal will present a bulk wall to the vista from West Hobart and detract from the view of other heritage buildings in the area."
- "that the city CAN be developed with care and consideration for its unique heritage and not rushed.."
- "Totally inappropriate development for this historic area in terms of design, size and aesthetics. It's so ugly!!! "
- "another unimaginative converter apartment block which gives no character to our city of beautiful old sandstone buildings."
- " Too big, not respecting heritage area and buildings at all"
- "Please respect our heritage listed properties by not approving huge overshadowing modern buildings."
- "There is no transition in height between this building and the long single storey heritage building across the rivulet."
- " Totally out of character with the context within the city."
- "This is an early historic area of Hobart and developments need to be sympathetic."
- "Hobart is losing its heritage status are we to become like other mainland cities.why put so many restrictions on tassie residents who buy heritage homes why do big corporations build the altar modern high rise with out much consideration of.our beautiful city ."
- "The proposed new building is at the rear of a heritage building and directly across the rivulet is another heritage building. Both of these old red brick building will be dominated by the oblong modern block."
- " It is not designed to be subservient and complementary to the heritage place."
- "The development makes no attempt to acknowledge he sensitive cultural landscape in which it is proposed."
- "the large size and scale of the development which will appear

approximately two storeys higher than the existing building from the Macquarie Street frontage and subsequently reduce the legibility of the 19th century built-form elements. The lack of separation between the proposed building and the existing building and outbuilding is considered to diminish the significance of the heritage place by increasing the visual prominence of the modern building. The siting of the proposal is not considered to be sufficiently separated from the heritage place, with no separation from the stable outbuilding. The lack of setback from the existing buildings also does not retain a reasonable curtilage to maintain the provision of a backyard space which was a characteristic of the site and surrounding lots historically. The proposed building has a bulky, rectilinear form that dominates, rather than showing subservience to the existing form of the place. The street facing wall of the brickwork, glass and off form concrete does not provide a soft or visually permeable backdrop to the brick and stone materiality of the existing building."

- The alteration to the outbuilding and partial demolition of the retaining wall will result in the loss of significant fabric that contributes to the historic significance of the place. All subparagraphs of E13.7.1 P1 must be satisfied. Specifically subparagraph (b) in that there are prudent and feasible alternatives to carrying out the works. ... the HIA (Heritage Impact Assessment) there is reference to precedent. Any reference to precedent is done in error as there is no precedent in heritage. The proposed development cannot be justified based upon other buildings in proximity to the site that are large in scale because E13 does not provide for such a comparison. ... the proposal involves a design that is incompatible with the heritage place, in terms of height, scale, bulk, form and fenestration. ... when comparing the built forms of the heritage place and the proposed development, the development cannot be said to be either subservient or complementary. "
- "if it goes ahead, will further strip this beautiful little city of its unique character."

Background/history

This site contains two main buildings and landscape elements. There is a two storey building that faces Macquarie Street and to the rear a smaller two storey structure and rear retaining wall both of which appear on Spent drawings dated c.1841. Historic maps (c.1830) show the original building which remains on the site and a mill race running through the site running toward Government Mills in 1817. The building on Macquarie Street (see image above) was renovated and extended in about 1907-8. The house and rear smaller building have had little change since first built with minor

alterations to both. The mill race ran across the site as early as 1817 and was present for the remainder of the 19th century. No other development is known to have occurred downslope of the retaining wall with the exception of the sealing of the carpark and fencing and additions to the wall of the rivulet. The following images document the basic chronology/evolution of the site. It demonstrates that very little has changed on the site, with the exception of minor utilities, service and amenities, carparking, fencing and resurfacing.

The proposal

No changes to the front building are proposed as part of this application. Change is proposed to the smaller 1830s outbuilding (also called stables) to the rear to add on a bathroom and entry as part of its conversion to an office. Internal demolition is proposed as well as alterations to the north east elevation. The retaining wall shown in the image below (also c.1841) will also be removed.

The application is for an apartment block in the rear yard that straddles the c.1841 rear wall and abuts the rear two storey building shown above. Demolition of heritage fabric is also involved.

Assessment of Demolition

The following assessment is against the provisions of the Historic Heritage Code (clauses E13.7 and E13.10) of the Scheme:

The objective of clause E13.7.1 Demolition is:

To ensure that demolition in whole or part of a heritage place does not result in the loss of historic cultural heritage values unless there are exceptional circumstances.

There are no acceptable solutions and therefore the proposal must be assessed against E13.7.1 P1 which states:

Demolition must not result in the loss of significant fabric, form, items, outbuildings or landscape elements that contribute to the historic cultural heritage significance of the place unless all of the following are satisfied;

- (a) there are, environmental, social, economic or safety reasons of greater value to the community than the historic cultural heritage values of the place;*
- (b) there are no prudent and feasible alternatives;*
- (c) important structural or façade elements that can feasibly be retained and reused in a new structure, are to be retained;*
- (d) significant fabric is documented before demolition*

In consideration of E13.7.1 P1 Demolition, the fabric to be removed includes most of the c.1841 retaining wall, rear outbuildings, stairs to the Macquarie Street facing building and parts of the front wall and internal wall of the c.1841 outbuilding (also called stables) at the rear.

The demolition associated with the Macquarie Street facing building are acceptable because that work removes accretions that have been modified for the purposes of circulation, services and amenities, elements that have no heritage value. These are intrusive elements and do not contribute to the heritage values of the front building. Reinstatement of a single window to match existing is proposed. This is an acceptable outcome.

Modifications to the rear structure are proposed and include demolition of an internal wall and door on the ground floor and first floor as well as the demolition of walls below windows on the ground floor to change into doors/openings. Demolition of a section of floor is also proposed for the installation of a spiral staircase. At the time of a site inspection, this property was not available for an internal inspection due to tenancy matters. However, the author of the HIA, concluded that the rear building is 'probably original (if not early)' and 'retains its original form' and adds the following recommendations: 'the interior of the building appears to have a low degree of integrity, although the extent of modern linings make it impossible to determine what extent of original detailing may have survived in the building. The ground floor appears to have some original floorboards (seen from below in the basement) and the basement door appears to be original. It is recommended that in the event that these linings are removed that a further detailed analysis of the interior be undertaken to guide any future development.'

With such advice, the proposed development of this building would be in conflict with subclause (b) as it has not been determined that 'no prudent and feasible alternatives' have been explored. Clearly without definitively knowing what heritage fabric exists and without the preparation of any further analysis, the proposed works could result in the loss of significant fabric. This clause specifically states 'demolition must not result in the loss of significant fabric'. On this basis the demolition associated with this part of the proposal fails to satisfy E13.7.1 P1.

The rear building has been modified, however, it is also identified as a building of high significance as an 1830s city fringe residence with stables. It also contributes to a collection of such buildings in this locale

which have survived. However, pre-existing modifications is no justification for further demolition, alterations or the addition of accretions. If anything, this building deserves and warrants the highest level of respect and conservation. This cannot be achieved unless further analysis is undertaken. No evidence has been submitted that further conservation input has been provided, accepted and implemented as set out in the following heritage management policies in the Praxis report:

- "Policy 6 - The outbuilding is to be retained. If desired, the earlier configuration of fenestration should be reinstated.", In response, the architect has stated " Whilst the enlargement of the lower level window to create an entrance is not ideal in the sense that it further changes the heritage fabric, the photo on p.29 of the HIA does suggest an entry was originally in this location. Given this and that it makes logical planning sense to present a door in the proposed location, it was considered reasonable to make the further change to the building." This is not an adequate response to the removal of heritage fabric, particularly as no documentation or analysis by a heritage professional has been provided to demonstrate "there are no prudent or feasible alternatives" as is required by the Historic Heritage Code. This is just the architect's own view.
- "Policy 8 - The retaining wall to the rear of the outbuilding is to be retained" See postscript below.
- "Policy 9 - Any future works which may involve major interventions to the interior may require further conservation planning input." In response, it has been acknowledge that internal work will involve the stripout of current modern linings to the interior". This is not an adequate response to the removal of internal walls, of which no documentation or analysis by a heritage professional has been provided to demonstrate "there are no prudent or feasible alternatives" as is required by the Historic Heritage Code.

A total of 7.6 metres of the retaining wall (c.1841) is proposed to be demolished, leaving approximately 2.3 metres immediately adjacent to the rear building, of which only 0.8 metre is visible, the remaining ie hidden behind a lift shaft and exhaust column.

The author of the Praxis report notes that 'Elements associated with the original c1830s form and detailing of the buildings and other site features are of high significance.' and 'elements which are of high significance and must be conserved with minimal or no modification', proceeding to describe the retaining wall as having high heritage significance. (see report page 53) In this regard, the applicant's own advice is for the

retention of the wall with minimal or no modification with the plans showing more than minimal modification. In this respect, the application does not satisfy E13.7.1 P1.

Postscript to assessment of demolition of wall:

An email received from the applicant has indicated that an additional 3.8 metres of the wall can be reconstructed to be visible in the stair well and corridor and that a condition of permit would be acceptable. In response to this proposition, this would be an acceptable condition should a permit be issued. However, the matter of demolition associated with the rear outbuilding/stables remains problematic and does not comply with the applicant's own conservation policies.

Assessment of new work

The Historic Heritage Code of the Scheme states that the objectives of 'Buildings and Works other than Demolition' in the Historic Heritage Code are:

To ensure that development at a heritage place is:

- (a) undertaken in a sympathetic manner which does not cause loss of historic cultural heritage significance; and*
- (b) designed to be subservient to the historic cultural heritage values of the place and responsive to its dominant characteristics.*

There are no acceptable solutions and therefore the proposal must be assessed against E13.7.2, specifically:

Clause E13.7.2 P1 which states:

Development must not result in any of the following:

- (a) loss of historic cultural heritage significance to the place through incompatible design, including in height, scale, bulk, form, fenestration, siting, materials, colours and finishes;*
- (b) substantial diminution of the historic cultural heritage significance of the place through loss of significant streetscape elements including plants, trees, fences, walls, paths, outbuildings and other items that contribute to the significance of the place.*

Clause E13.7.2 P2 which states:

Development must be designed to be subservient and complementary to the place through characteristics including:

- (a) scale and bulk, materials, built form and fenestration;*
- (b) setback from frontage;*
- (c) siting with respect to buildings, structures and listed elements;*
- (d) using less dominant materials and colours.*

Clause E13.7.2 P3 which states:

Materials, built form and fenestration must respond to the dominant heritage characteristics of the place, but any new fabric should be readily identifiable as such.

Clauses E13.7.2 P4 which states:

Extensions to existing building must not detract from the historic cultural heritage significance of the place.

Clauses P5 and P6 are not considered relevant.

As outlined above, the proposed works to the rear outbuilding/stables involves demolition and new openings, removal of walls and insertion of a spiral staircase with a new single storey 'link' addition. New works to this building require conservation and interventions to the highest standard, not to mention the further investigations to understand the building in the first instance followed by appropriate sympathetic works. It is not considered that the advice or input of a heritage professional has been obtained to come to these conclusions and the resultant design solution.

The proposed new work when considered against E13.7.2 P1, P2, P3 and P4 involves a single storey addition to the north east elevation with an entry space, equal access toilet and kitchen to serve the office within the 1840s rear outbuilding. In addition, there is a doorway to a stairwell down to the basement and lower ground floor building. Immediately abutting the single storey element is a two storey structure which is the entry to the car lift and plant platform. See proposed drawings below. [Refer full report for photos.]

The new single storey element is in close proximity to the c.1841 outbuilding, a building that, in spite of it being to the rear of the front house has always faced outwardly to the north east in an open fashion due to its function as stables and storage with the space in front, an area formed by a retaining wall specifically to create level access.

The new building should be considered in its proximity to the c.1841 building and consideration of the overarching objectives of being subservient and sympathetic to the historic cultural heritage values of the place. Any new buildings should be sited to offer space to provide some degree of physical separation, allowing unobscured views of the north east elevation. By allowing a full and complete view of the structure rather than enclosing it. It would then be seen as an early building, complete with

its roof form, chimney, bulk and dimensions and clearly understood as a traditional structure, as well as being part of a wider grouping of traditional buildings along Macquarie Street through to the Molle Street intersection. This single storey 'link' obscures the listed building, diminishing and confusing its value as a separate building.

The rear part of the block on which the apartment block is sited, is an ideal location for higher density of construction, however its success could be better achieved with a greater physical separation from the historic features, and responding to the historic buildings and topography including the leveled area and retaining wall which dates to the 1830-40. If the proposed apartment block, were to be set further downhill on the lower side of the retaining wall, the proposal would be a far more acceptable and appropriate outcome. For example, if the front edge of the car lift were to align with the edge of the historic sandstone wall, the historic features would be given more space and the new apartment would have a more logical relationship to the level access area and the rear of the houses.

As a compromise, a revised design to the entry to the c.1841 outbuilding, utilising the space between it and the rear of the Macquarie Street space would result in a more compatible design solution for a listed place and result in less demolition. Exploration for the utilisation of the space to the south east elevation (where early service structures were once located) would be a logical solution. This is only one option of the proposal that requires deeper and more considered professional heritage input and approach.

If the applicant were in agreeance, it would be recommended that a condition be prepared, should a permit be issued, that separates out or removes the outbuilding/stables and the space between it and the car lift, from the application until further fabric analysis has been done. In essence the contentious part of the proposal is removed from the application for further work, leading to a new and separate application for this work. Working with Council Officers on the redesign to this part of the proposal would be a cleaner approach.

If this were not acceptable, the proposed works to the c.1841 building cannot be considered to satisfy E13.7.2 P1, P2, P3 and P4.

The proposed apartment building is set back from Macquarie Street with its height (shown above) responds to and takes its cues from the adjacent scale, height, massing to the adjacent property at 199 Macquarie Street,

rather than from other adjacent buildings, in Molle Street and on the other side of Collins Street. Previous suggestions to the applicant have been to acknowledge the topography of the site that falls away down to the Hobart Rivulet by creating a series of descending columns or steps, with a more responsive form that reflects Hobart's undulating landscape. Some modifications to the height and design have been taken on board. However, as recommended by so many of the representations, the removal of another floor would make the proposal more in compliance with Policy 12 of the Heritage Report which states "The overall height of any new building should ideally be lower than that of the roof peak of the existing building, however greater height may be allowable if the setback from the rear of the building is greater." (p.70 Praxis report)

In addition, the subject property is located in a Place of Archaeological Potential. Given excavation is proposed, clause E13.10.1 P1 applies and 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'*

The Praxis report identifies that a 1810 mill race crosses the rear of the site. It was once ran parallel to the Hobart Rivulet serving one of Hobart's early mills. The nature, depth and integrity of these remains are not known and as recommended in Policy 15 that "Any excavation in the vicinity of the location of the mill race is to be archaeologically monitored and if any significant remains are found these are to be managed in accordance with industry standard." In order to mitigate the impact of the proposed excavation that will result in the expected archaeological remains, the Praxis report outlines an approach for an Archaeological Method Statement, including test trenching, excavation methodology and so on.

It is recommended that should a permit be issued, a condition be included that references the recommendations as outlined in the Praxis report.

Other discussion/assessment

Much has been made of pre-application advice. That is all that it is and it should be noted that early consultation with Council Officers occurred in June and July 2019 with the applicants heritage report lodged after that in November 2019 and then relodged in June 2020 because of errors. No assessment of the proposal against the relevant provisions of the Scheme occurred within the early consultation period. This is done within the formal assessment period, after advertising when, and if, representations are received. As mentioned above 168 representations were received during the advertising period in February 2021. It is a requirement of the Land Use Planning and Appeals Act 1993 to consider matters raised in representations.

Section 51 of LUPAA 1993 states:

*(2) In determining an application for a permit, a planning authority –....
(c) must take into consideration the matters set out in representations relating to the application that were made during the period referred to in section 57(5) ;*

To reiterate, any early advice or conclusions, would not have considered relevant matters raised within the representations. In regard to this one representation raises the matter of non-compliance with E13.7.1 P1 noting specifically that the applicant must demonstrate all of the subclauses (a) to (d) are satisfied - in particular that there are 'no prudent and feasible alternatives'. As discussed above in relation to the works within the rear building/stables no evidence has been submitted to demonstrate 'that a further detailed analysis of the interior be undertaken to guide any future development.' (as stated in the Praxis report)

Conclusion

In summary, it is concluded that the proposal does not satisfy E13.7.1 P1, E13.7.2 P1, P2, P3 and P4.

Further professional heritage input is required to ensure the demolition and new work does not further compromise or result in the further erosion of heritage value of the c.1841 rear outbuilding. Conservation work of the highest standard is required for this building.

If accepted by the applicant, it is recommended that the single storey extension to the front of the c.1841 outbuilding as well as the internal

works be removed from the application to enable further thorough professional heritage analysis and design work to proceed. Council Officers would be willing to work with the applicant to achieve the best possible outcome. This could be achieved by a condition of permit.

It is noted that the applicant has already agreed to a condition that retains a further section of the c.1830-40 wall.

No heritage issues are raised in relation to the apartment building and as such, that part of the application satisfies E13.7.2 P1, P2, P3 and P4.

The heritage values of the listed structures the c.1830-40 wall and rear outbuilding would be better served by the proposed apartment building being sited below the c.1830-40 wall. The option to reduce the height of the apartment block by one floor and to modify the design approach to acknowledge the topography of the site by forming a series of descending columns or steps has already been put to the applicant as a suggested change.

ADDENDUM

Further to the above report, two conditions of approval could be imposed to address concerns and ultimately the recommendation for refusal outlined above.

A condition requiring the retention of an additional 3.8 metres of the c.1830-40 heritage wall. This would also require careful repair, rebuilding and reconstruction using traditional techniques to retain its traditional character and appearance.

An additional condition removing the works associated with the rear outbuilding/stables which dated to c.1841 to enable further detailed conservation analysis as described above is also recommended. A further application would be required for the works.

These conditions would be as follows:

Condition HER s1:

This permit does not approve any demolition, building or works to the rear outbuilding/stables.

Advice: It is understood that works to this building will form a separate planning application after further consultation has occurred with Council's Senior Cultural Heritage Officer

Reason for condition

To protect the cultural heritage values of the site.

Condition HER s2:

A total of 6.3m of the heritage retaining wall adjacent to the rear outbuilding/stables must be retained. This is a further 3.8m in addition to what is shown on plan 112A03 issue N.

Any work to repair the wall must be undertaken by a suitably qualified stonemason and must retain its historic character and appearance.

Reason for condition

To protect the cultural heritage values of the site.

With the above conditions the proposal will satisfy the relevant clauses of the Historic Heritage Code of the Scheme.

- 6.13.4 The proposal complies with the performance criteria subject to conditions.

6.14 Existing Road Accesses and Junctions - E5.5.1 P3

- 6.14.1 The acceptable solution at clause E5.5.1 A3 requires the traffic movements to and from the site, to not increase by more than 20% or 40 vehicle movements, whichever is the greater.
- 6.14.2 The proposal includes development that will result in more than 20% and 40 vehicle movements to and from the site per day.
- 6.14.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
- 6.14.4 The performance criterion at clause E5.5.1 P3 provides as follows:

Any increase in vehicle traffic at an existing access or junction in an area subject to a speed limit of 60km/h or less, must be safe and not unreasonably impact on the efficiency of the road, having regard to:

- (a) the increase in traffic caused by the use;*
- (b) the nature of the traffic generated by the use;*
- (c) the nature and efficiency of the access or the junction;*

- (d) the nature and category of the road;*
- (e) the speed limit and traffic flow of the road;*
- (f) any alternative access to a road;*
- (g) the need for the use;*
- (h) any traffic impact assessment; and*
- (i) any written advice received from the road authority.*

6.14.5 Council's Senior Development Engineer has assessed the proposal and provided the following comment:

- (a) the increase in traffic caused by the use;

Response: The increased traffic generated by the proposed development is likely to be 100 plus vehicles per day when all units are fully developed and occupied.

- (b) the nature of the traffic generated by the use;

Response: All traffic generated by the proposed development will be residential in nature.

- (c) the nature and efficiency of the access or the junction;

Response: (Initially) the information provided on the operation of the site as a whole is unsatisfactory and can not be supported. The Amended TIA was also deemed unsatisfactory and was not supported.

Now supported with sufficient supporting detail provided by Howarth Fisher and Associates. The peer review of Milan Prodanovic's TIA, provided a much higher level of detail to support the assessment including:

- The sights traffic generation with supporting data.
- Directional split into and out of the development with supporting surveys.
- Directional split and queueing sensitivity testing
- Reference to queueing theory equations.
- AM and PM peak rates provided

- (d) the nature and category of the road;

Response: Major arterial road.

(e) the speed limit and traffic flow of the road;

Response: The general urban speed limit of 50-km/h applies to Macquarie Street.

(f) any alternative access to a road;

Response: No alternative access is possible for the proposed development.

(g) the need for the use;

Response: The need for the use has not been assessed and is this report.

(h) any traffic impact assessment;

Response: Traffic Impact Assessment and amended Traffic Impact Assessment was submitted and deemed unsatisfactory. Now supported with sufficient supporting detail provided by Howarth Fisher and Associates

(i) any written advice received from the road authority.

- No written advice was requested by the road authority (Council) relating to the access.

Detail on lift operation was minimal. Traffic increase may be higher.

6.14.6 Based on all the documentation submitted, including the TIA peer review by Howarth Fisher, the proposal complies with the performance criterion.

6.15 Sight Distance at Access and Junctions - E5.6.4 P1

6.15.1 The acceptable solution at clause E5.6.4 A1 requires sight distances at an access or junction to be in accordance with the Safe Intersection Sign Distances shown in Table E5.1.

6.15.2 The proposal includes sight distances which will not comply with the Table E5.1 distances on the occasions when cars are parked on the street.

6.15.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.

- 6.15.4 The performance criterion at clause E5.6.4 P1 provides as follows:

The design, layout and location of an access, junction or rail level crossing must provide adequate sight distances to ensure the safe movement of vehicles, having regard to:

- (a) the nature and frequency of the traffic generated by the use;*
- (b) the frequency of use of the road or rail network;*
- (c) any alternative access;*
- (d) the need for the access, junction or level crossing;*
- (e) any traffic impact assessment;*
- (f) any measures to improve or maintain sight distance; and*
- (g) any written advice received from the road or rail authority.*

- 6.15.5 Council's Senior Development Engineer has assessed the proposal and provided the following comment:

- (a) the nature and frequency of the traffic generated by the use;

Response: All traffic generated by the proposed development will be residential in nature. This is compatible with the existing traffic utilising Macquarie Street near the subject site. The increased traffic generated by the proposed development is likely to be 20 vehicles per day when all units are fully developed and occupied.

- (b) the frequency of use of the road or rail network;

Response: Macquarie Street is a major arterial road.

- (c) any alternative access;

Response: No alternative access is possible for the proposed development.

- (d) the need for the access, junction or level crossing;

Response: The need for the use has not been assessed and is this report.

- (e) any traffic impact assessment;

Response: Traffic Impact Statement was submitted. Sight distance was not geometrically confirmed in report and there fore must be treated as a

discretion, but can be supported due to the width and similarity to the existing access.

(f) any measures to improve or maintain sight distance; and

Response: Not enough detail to assess.

(g) any written advice received from the road or rail authority.

Response: 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 due to the lack of geometric proof of sight lines being submitted. However after the Senior Development Engineer carried out a site inspection the development may therefore be accepted under Performance Criteria P1:E5.6.4 of the Planning Scheme.

6.15.6 The proposal complies with the performance criterion.

6.16 Number of Onsite Carparking Spaces E6.6.1 P1

6.16.1 The acceptable solution at clause E6.6.1 requires 55 car parking spaces on site.

6.16.2 The proposal includes 50 on site car parking spaces.

6.16.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.

6.16.4 The performance criterion at clause E6.6.1 P1 provides as follows:

The number of on-site car parking spaces must be sufficient to meet the reasonable needs of users, having regard to all of the following:

- (a) car parking demand;*
- (b) the availability of on-street and public car parking in the locality;*
- (c) the availability and frequency of public transport within a 400m walking distance of the site;*
- (d) the availability and likely use of other modes of transport;*
- (e) the availability and suitability of alternative arrangements for car parking provision;*
- (f) any reduction in car parking demand due to the sharing of car parking*

spaces by multiple uses, either because of variation of car parking demand over time or because of efficiencies gained from the consolidation of shared car parking spaces;

(g) any car parking deficiency or surplus associated with the existing use of the land;

(h) any credit which should be allowed for a car parking demand deemed to have been provided in association with a use which existed before the change of parking requirement, except in the case of substantial redevelopment of a site;

(i) the appropriateness of a financial contribution in lieu of parking towards the cost of parking facilities or other transport facilities, where such facilities exist or are planned in the vicinity;

(j) any verified prior payment of a financial contribution in lieu of parking for the land;

(k) any relevant parking plan for the area adopted by Council;

(l) the impact on the historic cultural heritage significance of the site if subject to the Local Heritage Code;

(m) whether the provision of the parking would result in the loss, directly or indirectly, of one or more significant trees listed in the Significant Trees Code.

6.16.5 Council's Senior Development Engineer has assessed the proposal and commented as follows:

(a) car parking demand;

Response: The empirical parking assessment indicates that the provision of 50 on-site car parking spaces will sufficiently meet the likely demands associated with the development, with the exception of onsite visitor parking.

(b) the availability of on-street and public car parking in the locality;

Response: There is a relatively little supply of on-street parking in the surrounding road network. Much of the available parking is in the form of time-restricted parking on Macquarie street, with authorised residents excepted. Department of State Growth has no obligation to provide parking along Macquarie Street in the long term and may be subject to change leaving residents with little alternative for visitor parking.

Supported with visitor parking not depending on the use of Macquarie Street.

(c) the availability and frequency of public transport within a 400m walking distance of the site;

Response: Metro Tasmania operate regular bus services within 400 metres of the subject site.

(d) the availability and likely use of other modes of transport;

Response: The site is located a convenient walking distance from shops, schools and services.

(e) the availability and suitability of alternative arrangements for car parking provision;

Response: No alternative parking provision is available.

(f) any reduction in car parking demand due to the sharing of car parking spaces by multiple uses, either because of variation of car parking demand over time or because of efficiencies gained from the consolidation of shared car parking spaces;

Response: Not applicable.

(g) any car parking deficiency or surplus associated with the existing use of the land;

Response: Not applicable.

(h) any credit which should be allowed for a car parking demand deemed to have been provided in association with a use which existed before the change of parking requirement, except in the case of substantial redevelopment of a site;

Response: Not applicable.

(i) the appropriateness of a financial contribution in lieu of parking towards the cost of parking facilities or other transport facilities, where such facilities exist or are planned in the vicinity;

Response: Not applicable.

(j) any verified prior payment of a financial contribution in lieu of parking for the land;

Response: Not applicable.

(k) any relevant parking plan for the area adopted by Council;

Response: Not applicable.

(l) the impact on the historic cultural heritage significance of the site if subject to the Local Heritage Code; and

Response: Not applicable.

(m) whether the provision of the parking would result in the loss, directly or indirectly, of one or more significant trees listed in the Significant Trees Code.

Response: No impact.

6.16.6 Based on all the documentation submitted, including the TIA peer review by Howarth Fisher, the proposal complies with the performance criterion.

6.17 Design Vehicle Access - E6.7.2 P1

6.16.1 The acceptable solution at clause E6.7.2 a1 requires the design of vehicle access points to be in accordance with the relevant Australian Standard.

6.16.2 The proposal does not meet the relevant Australian Standard due to sight lines.

6.16.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.

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

Design of vehicle access points must be safe, efficient and convenient, having regard to all of the following:

(a) avoidance of conflicts between users including vehicles, cyclists and pedestrians;

(b) avoidance of unreasonable interference with the flow of traffic on adjoining roads;

(c) suitability for the type and volume of traffic likely to be generated by the use or development;

(d) ease of accessibility and recognition for users.

- 6.16.5 Council's Senior Development Engineer has assessed the proposal and commented as follows:

(a) avoidance of conflicts between users including vehicles, cyclists and pedestrians;

Response: Acceptable, submitted documentation received from Howarth Fisher and Associates demonstrating that safe access is possible subject to conditions.

(b) avoidance of unreasonable interference with the flow of traffic on adjoining roads;

Response: Acceptable, submitted documentation appears to satisfy this requirement given the statements provided by the applicant's traffic engineer contained within the Traffic Impact Assessment

(c) suitability for the type and volume of traffic likely to be generated by the use or development; and

Response: Acceptable, submitted documentation appears to satisfy this requirement given the statements provided by the applicant's traffic engineer contained within the Traffic Impact Assessment

(d) ease of accessibility and recognition for users.

Response: Acceptable, submitted documentation appears to satisfy this requirement given the statements provided by the applicant's traffic engineer contained within the Traffic Impact Assessment

- 6.16.6 Based on all the documentation submitted, including the TIA peer review by Howarth Fisher, the proposal complies with the performance criterion.

7. Discussion

- 7.1 Planning approval is sought for Partial Demolition, Alterations, Partial Change of Use to Office and Two Multiple Dwellings, New Building for 45 Multiple Dwellings, Signage, and Associated Works at 201 Macquarie Street. Associated services works are proposed on 199 Macquarie Street, 49 Molle St, and within the adjacent Hobart Rivulet.

7.2 The application was advertised and received 170 representations. Of those, 168 were opposed to the proposal, and two were in support. The objections to the proposal raised concerns with respect to the following issues: traffic, the design of the proposed building, the residential amenity of the future occupants of the building, the amenity of other properties, the proposed use of the building, heritage impacts, and servicing. By way of response, in relation to:

- Traffic: Council's engineering staff have considered the proposal's traffic impacts in detail. There was considerable ongoing discussion between Council's Senior Development Engineer and the applicant's traffic expert in relation to, in particular, the potential impact of vehicular lifts on Macquarie Street. This led to the submitted TIA being peer reviewed by Howarth Fisher. The additional level of detail provided in the peer review provided comfort that the proposal would not have an unacceptable impact on Macquarie St. The peer review of the TIA is provided as an attachment to this report. As such, and on balance, they are of the view that the proposal complies with the relevant performance criteria, subject to conditions.
- Building design: the proposal is discretionary with respect to its height. This aspect of the proposal has been comprehensively assessed above in section 6 of the report. It is concluded that the building height of the proposal satisfies the relevant performance criteria.
- Amenity of occupants: The only discretion invoked by the proposal with respect to this issue is the orientation of the habitable room windows. This discretion is assessed above under section 6 of the report, and noting the constraints of the site and its topography, it is concluded that the proposal satisfies the relevant performance criteria.
- Amenity of other properties: The site is in the Urban Mixed Use zone, and no discretions are invoked with respect to the amenity of other properties. As such, any impacts that the proposal may have are considered by the planning scheme to not be unreasonable in this location.
- Proposed use: The proposed use is residential. If another use was proposed, this would need to be the subject of a separate planning application. Note that in the Urban Mixed Use zone visitor accommodation is a discretionary use if it is on the same site as a dwelling.
- Heritage: The Council's Senior Cultural Heritage Officer has assessed the proposal as complying with the relevant performance criteria, subject to conditions including that no works to the existing heritage outbuilding/stables are approved as part of this application.
- Servicing: Council engineering staff have assessed the proposing servicing arrangements of the site, and are satisfied that they meet the relevant performance criteria, subject to conditions.

- 7.3 The proposal was considered by the Urban Design Advisory Panel at its meeting of 16 February 2021. The Panel's minutes are provided as an attachment to this report. The Panel commented as follows:

The development was presented to the Panel during a pre-application meeting on 20 August 2019. The Panel's comments at that meeting were around the connection with the rivulet, form and bulk of the building and how to integrate landscaping into the design. The Panel understand there are constraints around the site but would have liked to have seen more changes to the design with regards to their feedback.

There were concerns around the height and massing of the building and whether it provides a positive contribution to the townscape and streetscape of its setting.

The proposal sought to provide a transition in building height between 199 Macquarie Street and 212 Collins Street. The Panel is of the opinion the new building does not provide an acceptable transition between the height and form of the two existing buildings. The new building has a common height to the main building height of 199 Macquarie Street. Whilst the application had used the roof top plant room on 199 Macquarie Street to suggest a height transition, the inset location of the existing plant room results in the dominant building height of 199 Macquarie Street being the perimeter height, especially when viewed from the lower level of Collins Street. The Panel also noted whilst the seven-storey height of 212 Collins Street had been referred in the application, 212 Collins street incorporates a varied height building form, which steps down especially adjacent to the existing building at 210 Collins Street. The Panel noted the more appropriate height to evidence a transition to would be the lower height of 212 Collins Street immediately adjacent 210 Collins Street. Building in such a plane would likely have the effect of reducing the height at the rivulet end of the site by several storeys – possibly two or three.

The Panel noted the proposal had incorporated a design change to the uppermost level at the rivulet end, to assist in the reading of the transition in height through the new development. Analysis from different vantage points, especially Collins Street, lead the Panel to determine this was a welcome design consideration but was insufficient to address the Panel's concerns with the overall height of the proposal.

There was a lot of deliberation from the Panel on the building being built right up to the edge of the rivulet. There is a feeling that the rear of the building is not compatible with the transition within the streetscape of

Collins Street and it loses the connection with the rivulet. Consistent with the Panel's comments from the pre-application meeting, it was also discussed whether the building should step down towards the rivulet and whether there is further opportunity to open up the apartments to allow more sun into the apartments and improve the amenity of the building.

Fronting Macquarie Street is an existing heritage building and the bulk of the development is formed at the rear of this building and the development is quite a solid form. This forms the entrance to the apartments and whilst the Panel accepted the proposal for the new building to be a recessive backdrop to the heritage building, there was the feeling that it is not welcoming and further work could be completed on activating this space. The Panel noted the importance of considering the Macquarie Street streetscape as a series of layered experiences and felt further planting opportunities would be beneficial in enhancing the heritage building and the streetscape experience on approach to the new building.

The Panel also felt that there could be a greater integration with the design between the Heritage cottage and the rear development.

Overall, the Panel recognised the Macquarie Street façade of the new building had been reduced since the pre-application meeting, due to the removal of the roof terrace in the earlier proposal and were satisfied the height and bulk of the Macquarie Street façade and its impact on the streetscape.

Concern was raised regarding the minimal side and rear boundary setbacks, the limited opportunities for landscaping and the potential for significant loss of amenity to apartments arising from future adjacent development.

The Panel did not see sufficient evidence for the proposed transition in building height and bulk within the precinct, as suggested by the applicants, and were disappointed the comments of the pre-application meeting had not been sufficiently investigated in the presentation of alternate urban design strategies. The Panel recognised this project presents considerable challenges in developing an infill site with large topographic differences, but were not satisfied this project demonstrates a strong lead for future similar development in the area. Accordingly it is the Panel's advice that the height of the proposed development, particularly for approximately the rear half of the site, does not satisfy the City of Hobart Planning Scheme performance criteria to provide an acceptable transition in heights of adjoining buildings within the streetblock.

- 7.4 The proposal has been assessed against the relevant provisions of the planning scheme and is considered to perform well.
- 7.5 The proposal has been assessed by other Council officers, including the Council's Development Engineer, Cultural Heritage Officer, Stormwater Engineer, Environmental Development Planner, Senior Environmental Health Officer, Parks Planner, Roads Engineer, and Traffic Engineer. 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 Partial Demolition, Alterations, Partial Change of Use to Office and Two Multiple Dwellings, New Building for 45 Multiple Dwellings, Signage and Associated Work at 201 Macquarie Street, 199 Macquarie Street, 49 Molle Street, and Adjacent Rivulet, 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 Partial Demolition, Alterations, Partial Change of Use to Office and Two Multiple Dwellings, New Building for 45 Multiple Dwellings, Signage and Associated Work at 201 Macquarie Street, 199 Macquarie Street, 49 Molle Street, and Adjacent Rivulet, 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-19-768 - 201 MACQUARIE 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 2019/01665-HCC dated 7 July 2020 as attached to the permit.

Reason for condition

To clarify the scope of the permit.

PLN 15a

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

Advice:

It is recommended that the developer liaise with the Council's 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 as a Condition Endorsement 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: This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

Reason for condition

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

PLN s2

A landscape plan must be prepared by a suitably qualified landscape designer.

Prior to the issue of any approval under the *Building Act 2016* (excluding for demolition, excavation and works up to the ground floor slab), revised plans must be submitted and approved as a Condition Endorsement to the satisfaction of the Director City 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 (or another suitably

qualified landscape designer) that the all landscaping works required by this condition have been implemented, must be submitted to the satisfaction of the Directory City Planning.

Advice:

- *This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.*
- *The applicant is encouraged to consider introducing more landscaping into the design, including along the perimeter of the site, and with plants in the the ground not just in planters.*

Reason for condition

In the interest of the amenity of the spaces, streetscape and townscape values of the surrounding area.

ENG 12

A construction waste management plan must be implemented throughout construction.

A construction waste management plan must be submitted and approved as a Condition Endorsement, prior to commencement of work on the site. The construction waste management plan must include:

- **Provisions for commercial waste services for the handling, storage, transport and disposal of post-construction solid waste and recycle bins from the development; and**
- **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 construction waste management plan.

Advice:

- *This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.*
- *It is recommended that the developer liaise with the Council's 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.

ENG sw2.2

A post-construction CCTV recording of the Council's stormwater main within/adjacent to the proposed development, along with photos of any existing drainage structures connected to or modified as part of the development, must be submitted to Council upon completion of work.

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

Reason for condition

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

ENG sw3

The proposed development must be designed to ensure the protection and access to the Council's stormwater main.

A detailed design must be submitted and approved as a Condition Endorsement prior to the issuing of any approval under the *Building Act 2016* or commencement of works (which ever occurs first). The detailed design must:

- 1. Demonstrate how the design will ensure the protection and provide access to the Council's stormwater main**

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

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

Reason for condition

To ensure the protection of the Council's hydraulic infrastructure.

ENG sw5

The existing stormwater main (DN225) must be redesigned to new alignment and constructed prior to the commencement of the use.

Engineering drawings must be submitted and approved as a Condition Endorsement, prior to the issuing of any approval under the *Building Act 2016* or commencement of works (which ever occurs first). The engineering drawings must:

1. **Be certified by a qualified and experienced civil engineer;**
2. **Include a plan and long-section of the proposed stormwater main; and**
3. **Include the associated calculations and catchment area plans. These should include, but not be limited to, connections, flows, velocities, clearances, cover, gradients, sizing, material, pipe class, easements and inspection openings**

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

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

Reason for condition

To ensure Council's hydraulic infrastructure meets acceptable standards.

ENG sw6

All stormwater from the proposed development (including hardstand runoff) must be discharged to the Council's stormwater infrastructure with sufficient receiving capacity prior to first occupation. All costs associated with works required by this condition are to be met by the owner.

Design drawings and calculations of the proposed stormwater drainage and connections to the Council's stormwater infrastructure must be submitted and

approved as a Condition Endorsement prior to the commencement of work.
The design drawings and calculations must:

1. prepared by a suitably qualified person; and
2. include long section(s)/levels, grades and material to the point of discharge.

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

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

Reason for condition

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

SW 7

Prior to occupancy or the commencement of the use (whichever occurs first), any new stormwater connection must be constructed and existing redundant connection(s) be abandoned and sealed at the owner's expense.

Prior to the issuing of any approval under the *Building Act 2016* or commencement of works (whichever occurs first), detailed engineering drawings must be submitted via the City of Hobart's online request form which is available on its website and approved. The detailed engineering drawings must include:

1. the location of the proposed connections and all existing connections;
2. the size and design of the connection such that it is appropriate to safely service 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;
4. connections which are free-flowing gravity driven;
5. any connections to watercourse must demonstrate adequate erosion and scour control and minimise hydraulic intrusion. The cross-sections must clearly show the top of bank and invert of watercourse.

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

connection documents must be included in your plumbing permit application document set and listed in accompanying forms.

SW 8

All stormwater runoff from impervious surfaces within the site must be treated and discharged from the site using Water Sensitive Urban Design principles to achieve stormwater quality and quantity targets in accordance with the State Stormwater Strategy 2010.

Detailed engineering designs accompanied with a report on all stormwater design parameters and assumptions or a model using industry accepted proprietary software, such as MUSIC, must be submitted and approved as a Condition Endorsement prior to the issue of any approval under the *Building Act 2016* or the commencement of work on the site (whichever occurs first).

A maintenance management schedule must also be submitted and the facility must be maintained in accordance with this schedule.

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

ENG 13

All garbage collection associated with the development must occur wholly within the site. On-street garbage collection by private contractors within the Macquarie Street Highway Reservation is not approved.

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 tr1

Traffic management within the access driveway, circulation roadway and parking module (parking spaces and aisles) must be installed prior to the first occupation.

Traffic management design drawing(s) (including signage and line marking), must be submitted and approved as a Condition Endorsement, prior to the issue of any approval under the *Building Act 2016*. The design drawing(s) must

be prepared by a suitably qualified person and include (but not be limited to):

1. **Signage indicating that the car parking area is a private car park.**
2. **Delineation of pedestrian pathways along the shared vehicular circulation roadway.**
3. **Pedestrian safety bollards for egress to/from lifts and doorways.**
4. **Physical separation including hand rails of pedestrian pathways along the shared vehicular circulation roadway.**
5. **That the access driveway queuing areas are to be clearly line marked in accordance with the Traffic Impact Assessment documentation received by the Council on the 12th April 2021.**
6. **That the access driveway queuing areas must provide adequate space to accommodate at least two vehicles when entering from Macquarie Street in accordance with the Traffic Impact Assessment documentation received by the Council on the 12th April 2021.**
7. **Line marking or alternate easily identifiable traffic control devices clearly identifying entry and exit lanes.**
8. **Warning devices on the approaches to the service lift doors on all levels of the car park advising drivers that they may encounter a pedestrian at the lift.**

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

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

Reason for condition

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

ENG tr2

A construction traffic and parking management plan must be 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 as a Condition Endorsement, prior to commencement work (including demolition). The construction traffic and parking management plan must:

1. **Be prepared by a suitably qualified person.**

2. Include 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.

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

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

Reason for condition

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

ENG 2a

Prior to first occupation or commencement of use (whichever occurs first), 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), or a Council approved alternate design certified by a suitably qualified engineer to provide a safe and efficient access, and enable safe, easy and efficient use.

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 3b

The access driveway, circulation roadways, ramps and parking module (parking spaces, aisles and manoeuvring area) design must be submitted and approved as a Condition Endorsement, prior to the issuing of any approval under the *Building Act 2016*.

The access driveway, circulation roadways, ramps and parking module (parking spaces, aisles and manoeuvring area) design must:

1. **Be prepared and certified by a suitably qualified engineer,**
2. **Be generally in accordance with the Australian Standard AS/NZS2890.1:2004,**
3. **Where the design deviates from AS/NZS2890.1:2004 the designer must demonstrate that the design will provide a safe and efficient access, and enable safe, easy and efficient use, and**
4. **Show dimensions, levels, gradients & transitions, and other details as Council deem necessary to satisfy the above requirement.**

Advice:

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

permit.

- *It is 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 the design drawings approved by Condition ENG 3b of PLN-19-768 .

Prior to the first occupation or commencement of use, documentation by a suitably qualified engineer certifying that the access driveway 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 / commencement of use.

Reason for condition

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

ENG 5

The number of car / motorbike / bicycle parking spaces approved on the site is:

- **Fifty (50) car parking spaces**
- **Eight (8) bicycle parking spaces**
- **Four (4) motorcycle parking spaces**

All 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, prior to first occupation / commencement of use.

Reason for condition

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

ENG 5b

The access driveway queuing areas must be clearly line marked in accordance with the Traffic Impact Assessment documentation received by the Council on the 12th April 2021.

Prior to the commencement of use, documentation by a suitably qualified engineer certifying that the access driveway 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 queueing area into the development has sufficient capacity to hold two vehicles.

ENG 8

The use of the car parking spaces approved by this permit is restricted to residential, domestic associated with operations within the site.

A sign, approved by Council, and in accordance with Australian Standards AS/NZS1742.11:2016, must be erected at the entry of the parking access to indicate the parking area is for residents only prior to first occupation.

Reason for condition

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

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 12

Parking, access and turning areas must be generally designed and constructed in accordance with the Australian Standard Parking facilities, Part 1: Off-Street Carparking, AS 2890.1 – 2004, prior to the first occupation.

Design drawings must be submitted and approved as a Condition Endorsement, prior to commencement of work. The amended design drawings must show dimensions, levels & gradients, transitions and other details as necessary to satisfy the above requirement.

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

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

Reason for condition

To ensure that the access and parking layout for the development is to accepted

standards.

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.**

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 s1

Testing and commissioning certificates or equivalent supporting documentation relating to the vehicle lifts and traffic/queuing control devices must be submitted and approved as a Condition Endorsement, prior to the commencement of use.

The documentation must:

1. **Be prepared by a suitably qualified person.**
2. **Demonstrate any that traffic/queueing control devices within the property boundary have been installed and tested and will operate to the manufacturer's specifications and all relevant Australian Standards.**

3. **Demonstrate that the vehicle lifts have been installed and tested and will operate to the manufacturer's specifications received by council on the 12th April 2021 and all relevant Australian Standards.**
4. **Provide for emergency breakdown plans and contingency options, including the change of any traffic/queueing operation, required in the event the vehicle lifts become temporarily disabled or non-operational.**

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

Reason for condition

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

ENG s2

The vehicle lifts and traffic/queueing control devices must be maintained so as to operate to the standard and specification identified in the relevant documentation submitted, approved and referred to by condition ENG s1 for the life of the building.

If, in the opinion of a suitably qualified person, the vehicle lifts and/or traffic/queueing control devices are no longer able to be maintained so as to operate to the approved standard and specification (end of service life), they must be replaced with devices which are able to perform to the equivalent standard and specification identified in the relevant documentation submitted, approved and referred to by condition ENG s1 within 14 days.

If the vehicle lifts and/or traffic/queueing control devices are replaced in accordance with the above, revised documentation must be submitted in accordance with the requirements of condition ENG s1.

Reason for condition

To ensure the continued use of the access and parking modules for the life of the unit complex without causing the loss of amenity to the users of the access and road users of Macquarie Street.

ENV 8

All recommendations in section 8 of the Geotechnical Assessment report by Geo-Environmental Solutions P/L dated July 2020 must be implemented

including:

- pad footings are to be used to the south of the site, where slightly weathered dolerite bedrock is expected at the base of excavations. To the north of the site, where the quaternary alluvial deposits are encountered to 15.9 m AHD, bored pile foundations are recommended to place footings into the underlying weathered dolerite;
- cuttings onsite must be supported; and
- an Engineering Geologist must observe foundation excavations during construction to ensure that founding conditions are consistent with those on which the design recommendations are based.

Reason for condition

To reduce the risk to life and property, and the cost to the community, caused by landslides

ENV 2

Sediment and erosion control measures, in accordance with an approved soil and water management plan (SWMP), must be installed prior to the commencement of work and maintained until such time as all disturbed areas have been stabilised and/or restored or sealed to the Council's satisfaction.

A SWMP must be submitted as a Condition Endorsement prior to the issue of any approval under the *Building Act 2016* or the commencement of work, whichever occurs first. The SWMP must be prepared in accordance with the Soil and Water Management on Building and Construction Sites fact sheets (Derwent Estuary Program, 2008), available [here](#).

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

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

Reason for Condition

To avoid the pollution and sedimentation of roads, drains and natural watercourses that could be caused by erosion and runoff from the development.

HER 6

All onsite excavation and disturbance in the areas identified in the Praxis

Environment report (Conservation Management Policy, Statement of Archaeological Potential and Development Impact Assessment) (dated Feb 2019) and shown as red (see figure 1.8.9 p.68) must be monitored and excavated in accordance with the recommendations of the above report (item 15 p.89 and section 2.2 pp.75-80.) Should any features or deposits of an archaeological nature be discovered on the site during excavation or disturbance:

1. All excavation and/or disturbance must stop immediately; and
2. A qualified archaeologist must be engaged to provide advice and assessment of the features and/or deposits discovered and make recommendations on further excavation and/or disturbance; and
3. All and any recommendations made by the archaeologist engaged in accordance with 2. above must be complied with in full; and
4. All features and/or deposits discovered and excavated must be reported to Council with 1 day and prior to the conclusion of the excavation; and
5. A qualified archaeologist must also undertake an audit of bulk archaeological materials such as worked sandstone blocks, 19th century bricks or cobblestones suitable for reuse. Refer also condition HER s3.
6. A copy of the archaeologist's advice, assessment and recommendations obtained in accordance with 2. 3. and 5. above must be provided to Council within 60 days of receipt of the advice, assessment and recommendations and prior to the issue of any approval under the *Building Act 2016* (excluding demolition).

Excavation and/or disturbance must not recommence until approval is granted from the Council.

Reason for condition

To ensure that work is planned and implemented in a manner that seeks to understand, retain, protect, preserve and manage significant archaeological evidence

HER 7

All artefacts of high interpretative value and/or rare or otherwise significant as determined by the qualified archaeologist engaged in accordance with Condition HER 6 must be incorporated into an on site interpretation and history.

An interpretation plan must be prepared and submitted and approved as a Condition Endorsement, prior to occupation.

- The on-site interpretation must be:
- in accordance with the approved interpretation plan,
- incorporate the artefacts described above,
- located in a publicly accessible space,
- and completed prior to the issues of a certificate of occupancy.

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

Reason for condition

To ensure that there is public benefit from archaeological investigations.

HER s1

This permit does not approve any demolition, building or works to the rear outbuilding/stables.

Advice: It is understood that works to this building will form a separate planning application after further consultation has occurred with Council's Senior Cultural Heritage Officer

Reason for condition

To protect the cultural heritage values of the site.

HER s2

A total of 6.3m of the heritage retaining wall adjacent to the rear outbuilding/stables must be retained. This is a further 3.8m in addition to what is shown on plan 112A03 issue N. Any work to repair the wall must be undertaken by a suitably qualified stonemason and must retain its historic character and appearance.

Reason for condition

To protect the cultural heritage values of the site.

HER s3

The audit report prepared in accordance with condition HER 6, must be submitted and approved as a Condition Endorsement prior to the issue of any approval under the *Building Act 2016*. The audit report must demonstrate how

the finds described in HER 6 (number 5.) are to be incorporated into the development in landscaping, vertical or horizontal surfaces or other designed or decorative features. Revised plans must be submitted and approved as part of the Condition Endorsement showing the recommendations of the audit report in accordance with the above requirement.

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

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

Reason for condition

To ensure that archaeological evidence is retained, protected and preserved or otherwise appropriately managed.

ENVHE 1

Recommendations in the report Environmental Site Assessment 201 Macquarie Street, Hobart (dated August 2019) by Geo-Environmental Solutions must be implemented for the duration of the development. Specifically:

1. **As manganese exceeded Level 2 Material classification in two samples it is recommended that all soil excavated from the site is stockpiled, sampled by a suitably qualified and experienced environmental consultant and results compared against IB105 guideline limits; and**
2. **If deemed necessary, it is to be transported to a Level 2 waster facility (Copping). A permit to transport the waste (obtained through the EPA) will be required.**

Reason for condition

To ensure that excavated contaminated soils are managed in an approved and safe manner that negates potential harm to the environment.

ADVICE

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

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

CONDITION ENDORSEMENT

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

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

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

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

BUILDING PERMIT

You may need building approval in accordance with the *Building Act 2016*. Click [here](#) for more information.

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

PLUMBING PERMIT

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

OCCUPATION OF THE PUBLIC HIGHWAY

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

You may require an occupational license for structures in the Hobart City Council highway reservation, in accordance with conditions to be established by the Council.

Click [here](#) for more information.

You may require a road closure permit for construction or special event. Click [here](#) for more information.

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

GENERAL EXEMPTION (TEMPORARY) PARKING PERMITS

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

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.

STRUCTURES CLOSE TO COUNCILS' STORMWATER MAIN

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

WORK WITHIN THE HIGHWAY RESERVATION

Please note development must be in accordance with the Hobart City Council's Infrastructure By law. Click [here](#) for more information.

CBD AND HIGH VOLUME FOOTPATH CLOSURES

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

It is the developer's responsibility to ensure that the proposal as designed can be

constructed without reliance on such extended closures.

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

For more information about this requirement please contact the Council's Traffic Engineering Unit on 6238 2804.

DRIVEWAY SURFACING OVER HIGHWAY RESERVATION

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

STORM WATER / ROADS / ACCESS

Services to be designed and constructed in accordance with the (IPWEA) LGAT – standard drawings. Click [here](#) for more information.

WORK PLACE HEALTH AND SAFETY

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

PROTECTING THE ENVIRONMENT

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

LEVEL 1 ACTIVITIES

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

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.



(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.



(Karen Abey)

Manager Development Appraisal

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

Date of Report: 4 June 2021

Attachment(s):

Attachment B - CPC Agenda Documents

Attachment C - Senior Cultural Heritage Officer Referral Officer Report

Attachment D - Senior Development Engineer Referral Officer Report

Attachment E - Urban Design Advisory Panel Meeting Minutes

Attachment F - Peer Review of TIA

Planning: #190266

Property

201 MACQUARIE STREET HOBART TAS 7000

People

Applicant
= ERA Planning & Environment
183 Macquarie Street
HOBART TAS 7000
(03) 6105 0443
enquiries@eraplanning.com.au

Owner
= 201 Macquarie Street Pty Ltd
342 Trammere Road
TRANMERE TAS 7018
0413 541 531
jcunning@geosolutions.net.au

Entered By
MARK O'BRIEN
183 MACQUARIE STREET
HOBART TAS 7000
0415 407 294
mark@eraplanning.com.au

Use

Multiple dwellings

Details

Have you obtained pre application advice?
☒ Yes ☐ No

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

Are you applying for permitted visitor accommodation as defined by the State Government Visitor Accommodation Standards? Click on help information button for definition. If you are not the owner of the property you MUST include signed confirmation from the owner that they are aware of this application.

☒ Yes ☐ No

Is the application for SIGNAGE ONLY? If yes, please enter \$0 in the cost of development, and you must enter the

number of signs under Other Details below.

☐ No

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

Details

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

Residential (Multiple Dwelling) and Vehicle Parking

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

47 new multiple dwelling units, 2 existing multiple dwelling units, 1 new office space. See supporting planning report for details.

Estimated cost of development

8000000.00

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

Carparking on Site

Total parking spaces Existing parking spaces N/A

51 28 ☐ Other (no selection chosen)

Other Details

Does the application include signage?

☐ No

How many signs, please enter 0 if there are none involved in this application?

0

Tasmania Heritage Register

Is this property on the Tasmanian Heritage Register?

☐ No

Documents

Required Documents

Title (Folio text and Plan and Schedule of Easements)

Title Documents.pdf

Plans (proposed, existing)

Architectural Plans.pdf

Supporting Documents

Concept Servicing Plan

Engineering Drawings.pdf

Traffic Impact Assessment

Traffic Impact Assessment.pdf

Architectural Description

Architectural Design Statement.pdf

Planning Report

Supporting Planning Submission_201 Macquarie St_4 November 2019_Final for Submission.pdf

Heritage Report

Heritage Impact Assessment.pdf

environmental site assessment

Environmental Site Assessment.pdf

State Growth Advice
State Growth Advice.pdf



201 Macquarie Street, Hobart

Supporting planning report

14 December 2020

ERA Planning Pty Ltd trading as ERA Planning and Environment

ABN 67 141 991 004

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Job Number: 1819-082**Document Status**

Document Version	Date	Author	Reviewer
DRAFT_V1	10 Sep 2019	Mark O'Brien	Caroline Lindus
DRAFT_V2	26 Sep 2019	Mark O'Brien	Caroline Lindus
FINAL FOR SUBMISSION_V1	4 November 2019	Mark O'Brien	Caroline Lindus
FINAL FOR SUBMISSION_V2	11 December 2020	Mark O'Brien	Caroline Lindus
FINAL FOR SUBMISSION_V3	17 June 2020	Mark O'Brien	Caroline Lindus
FINAL FOR SUBMISSION_V4	14 December 2020	Mark O'Brien	Emma Riley

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Appendix I Landowner's consent

Appendix J Heritage Impact Assessment

1 Introduction

1.1 Purpose of the report

ERA Planning and Environment have been engaged to provide a supporting planning submission for a multiple dwelling development at 201 Macquarie Street, Hobart. This planning report assesses the proposed development against the *Hobart Interim Planning Scheme 2015*.

Enquiries relating to this planning report should be directed to:

Mark O'Brien
Senior Planner
ERA Planning and Environment
Email: mark@eraplanning.com.au
Mobile: 0415 407 294

1.2 The proposal

The proposal consists of a new apartment complex with 45 new multiple dwelling units, 1 ground floor office and associated parking spaces. The office is intended to be used for business and professional services (dependent upon future lease arrangements). Proposal plans including architectural renders and engineering drawings can be found at **Appendix A**.

The proposal responds to an urgent need for additional medium-high density housing options across Greater Hobart. This development will deliver predominantly one-bedroom dwellings in proximity to existing services, transport and recreation facilities, providing a more affordable housing choice than existing dwellings in the area.

More specifically, the proposal comprises of:

- 43 one-bedroom and 2 two-bedroom units within a new apartment building (one-bedroom units are approximately 46m² gross floor area plus 12m² balconies, and two-bedroom units are approximately 80m² gross floor area plus 18m² terrace);
- 2 existing two-bedroom units within a heritage listed building on the property being retained;
- 2 existing two-bedroom units within a heritage listed outbuilding on the property being converted to 1 commercial tenancy (approximately 70m² gross lettable area); and
- 50 car parking bays (49 basement and 1 ground floor), 4 motorcycle parking bays, and a 20m² bicycle storage area.

It is important to note that the existing heritage place and outbuilding on the property is to be retained, with only the more modern additions proposed for removal.

It is also important to note that the access crossover will remain unchanged. The driveway will be upgraded and widened to no less than 6m to provide safe and efficient access to on-site parking via two car lifts.

The proponents have engaged with Council's Planners, Cultural Heritage Officers, Engineers and the Urban Design Advisory Panel prior to lodgement and advertising of this planning application. An architectural statement detailing these discussions can be found at **Appendix B**.

1.3 Title details

The land at 201 Macquarie Street is contained within a single title under the ownership of 201 Macquarie St Pty Ltd (CT249597/1). The proposal does however involve upgrades/connections to existing sewer and/or stormwater infrastructure on adjoining land at 49 Molle Street (CT111776/1), 199 Macquarie Street (CT9220/3), and the Hobart Rivulet.

The following landowners have therefore been notified of the intention to make this development application in accordance with section 52 of the *Land Use Planning and Approvals Act 1993*. Landowner consent from the General Manager of Hobart City Council has also been provided.

Title documentation can be found at *Appendix C* Landowner consent can be found in *Appendix I*.

Title Reference	Owner	Postal Address
Certificate of Title Volume 249597 Folio 1	201 Macquarie St Pty Ltd	342 Tranmere Road, Tranmere TAS 7018
Certificate of Title Volume 111776 Folio 1	MWJ Property Pty Ltd	Level 7, 39 Murray Street, Hobart TAS 7000
Certificate of Title Volume 9220 Folio 3	Wandoo Pty Ltd	Level 2, 141 Flinders Lane, Melbourne VIC 3000

2 Site and surrounds

201 Macquarie Street, Hobart (the site) contains an existing heritage listed building and outbuilding currently used as residential accommodation for four multiple dwellings. The site also currently contains commercial car parking for 28 vehicles.

The site is approximately 1285m² in area. Land is sloping from a height of around 35m Australian Height Datum (AHD) at the Macquarie Street frontage to around 25m AHD where the rear boundary adjoins the Hobart Rivulet.

The site is located within the Urban Mixed Use Zone and is surrounded by existing multi-storey commercial and residential developments. The Central Business Zone is situated approximately 60m northeast of the site.



Figure 1: Location Plan (Source: The LIST)



Figure 2: Zoning Plan (Source: The LIST)



Figure 3: Overlay Plan (Source: The LIST)

3 Planning assessment

3.1 Statutory controls

The site is subject to the provisions of the *Hobart Interim Planning Scheme 2015* (the Planning Scheme). Specifically, 201 Macquarie Street, Hobart is zoned Urban Mixed Use. The site is impacted by the medium landslide hazard area overlay, is within an area of archeological potential and is listed as a Heritage Place in the Planning Scheme. The property is also within the attenuation area for 124 Davey Street (Hotel Soho) and 192 Macquarie Street (The Duke of Wellington).

3.2 Use status

The proposed use for both multiple dwellings (within the Residential Use Class) and office (within the Business and Professional Services Use Class) is permitted under Use Table 15.2 of the Planning Scheme.

3.3 Use standards

The application is assessed against Clause 15.3 of the Planning Scheme in the table below.

PLANNING SCHEME REQUIREMENT	RESPONSE
15.3.1 Non-residential Use	
A1 Hours of operation must be within: (a) 7.00 am to 9.00 pm Mondays to Fridays inclusive; (b) 8.00 am to 6.00 pm Saturdays; (c) 9.00 am to 5.00 pm Sundays and Public Holidays; except for office and administrative tasks or visitor accommodation.	Complies with the acceptable solution. The proposal seeks to apply for the permitted hours of operation for non-residential use; a condition on the permit is recommended accordingly.
A2 Noise emissions measured at the boundary of the site must not exceed the following: (a) 55 dB(A) (LAeq) between the hours of 8.00 am to 6.00 pm; (b) 5dB(A) above the background (LA90) level or 40dB(A) (LAeq), whichever is the lower, between the hours of 6.00 pm to 8.00 am; (c) 65dB(A) (LAmx) at any time. Measurement of noise levels must be in accordance with the methods in the Tasmanian Noise Measurement Procedures Manual, issued by the Director of Environmental Management, including adjustment of noise levels for tonality and impulsiveness. Noise levels are to be averaged over a 15 minute time interval.	Complies with the acceptable solution. The proposed non-residential use on the site is for commercial office space. No external noise is to be generated other than vehicle access to the single dedicated parking bay.

PLANNING SCHEME REQUIREMENT	RESPONSE
A3 External lighting must comply with all of the following: (a) be turned off between 10:00 pm and 6:00 am, except for security lighting; (b) security lighting must be baffled to ensure they do not cause emission of light into adjoining private land.	Complies with the acceptable solution. External lighting is not currently proposed as part of the planning permit process. It is anticipated that external lighting will be for security purposes only and will be located and designed during the building permit stage to not cause emission of light into adjoining private land.
A4 Commercial vehicle movements, (including loading and unloading and garbage removal) to or from a site must be limited to within the hours of: (a) 7.00 am to 5.00 pm Mondays to Fridays inclusive; (b) 8.00 am to 5.00 pm Saturdays; (c) 9.00 am to 12 noon Sundays and Public Holidays.	Complies with the acceptable solution. The proposal seeks to apply for the permitted hours of operation for commercial vehicle movements; a condition on the permit is recommended accordingly.

3.4 Development standards for buildings and works

The application is assessed against Clause 15.4 of the Planning Scheme in the table below.

PLANNING SCHEME REQUIREMENT		RESPONSE
15.4.1 Building height		
A1 Building height must be no more than: 10m	P1 Building height must satisfy all of the following: (a) be consistent with any Desired Future Character Statements provided for the area; (b) be compatible with the scale of nearby buildings; (c) not unreasonably overshadow adjacent public space;	Considerations against the performance criteria area necessary. The building does not comply with the height requirements under the acceptable solution and further discussion is provided in Section 3.4.1 below.

PLANNING SCHEME REQUIREMENT		RESPONSE
	(d) allow for a transition in height between adjoining buildings, where appropriate;	
A2 Building height within 10 m of a residential zone must be no more than 8.5 m.		Complies with the acceptable solution or is not applicable. The site is not within 10m of a residential zone.
15.4.2 Setback		
A1 Building setback from frontage must be parallel to the frontage and must be no more than: 1m from the median street setback of all existing buildings on the same side of the street within 100m of the site.		Complies with the acceptable solution or is not applicable. The existing street frontage setback of approximately 2m is maintained through the retention of the existing heritage building on the site.
A2 Building setback from the General Residential or Inner Residential Zone must be no less than: (a) 3 m; or (b) half the height of the wall, whichever is the greater.		Complies with the acceptable solution or is not applicable. The site is not adjoining or in proximity to the General Residential or Inner Residential zones.
15.4.3 Design		
A1 Building design for non-residential use must comply with all of the following: (a) provide the main pedestrian entrance to the building so that it is clearly visible from the road or publicly accessible areas on the site; (b) for new building or alterations to an existing facade provide windows and door openings at ground floor level in the front façade no less than 40% of the surface area of the ground floor level facade; (c) for new building or alterations to an existing facade ensure any single expanse of blank wall in the ground level front façade and facades facing other public spaces is not greater than 30% of the length of the facade;		Complies with the acceptable solution. The non-residential use on the site is clearly visible from public areas on the site, being the shared driveway and vehicle circulation area. No changes to the existing heritage building's façade are proposed.

PLANNING SCHEME REQUIREMENT	RESPONSE
<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) provide awnings over the public footpath if existing on the site or on adjoining lots;</p> <p>(g) not include security shutters over windows or doors with a frontage to a street or public place.</p>	
<p>A2</p> <p>Walls of a building facing the General Residential Zone or Inner Residential Zone must be coloured using colours with a light reflectance value not greater than 40 percent.</p>	<p>Complies with the acceptable solution or is not applicable.</p> <p>The site is not facing the General Residential or Inner Residential Zones.</p>
15.4.4 Passive surveillance	
<p>A1</p> <p>Building design for non-residential uses must comply with all of the following:</p> <p>(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;</p> <p>(b) for new buildings or alterations to an existing facade provide windows and door openings at ground floor level in the front façade which amount to no less than 40 % of the surface area of the ground floor level facade;</p> <p>(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;</p> <p>(d) avoid creating entrapment spaces around the building site, such as concealed alcoves near public spaces;</p> <p>(e) provide external lighting to illuminate car parking areas and pathways;</p> <p>(f) provide well-lit public access at the ground floor level from any external car park.</p>	<p>Complies with the acceptable solution.</p> <p>The non-residential use on the site is clearly visible from public areas on the site, being the shared driveway and vehicle circulation area.</p> <p>No changes to the existing heritage building's façade are proposed.</p>

15.4.5 Landscaping		
A1 Landscaping along the frontage of a site is not required if all of the following apply: (a) the building extends across the width of the frontage, (except for vehicular access ways); (b) the building has a setback from the frontage of no more than 1 m.	P1 Landscaping must be provided to satisfy all of the following: (a) enhance the appearance of the development; (b) provide a range of plant height and forms to create diversity, interest and amenity; (c) not create concealed entrapment spaces; (d) be consistent with any Desired Future Character Statements provided for the area.	Considerations against the performance criteria are necessary as the building is setback greater than 1m from the frontage. The existing building frontage is landscaped and forms part of the private outdoor space of residential tenancies. A range of plant species exist and will be maintained throughout the development.
A2 Along a boundary with the General Residential Zone or Inner Residential Zone landscaping must be provided for a depth no less than: 2 m.		Complies with the acceptable solution or is not applicable. The site is not adjoining or in proximity to the General Residential or Inner Residential zones.
15.4.6 Outdoor storage		
A1 Outdoor storage areas for non-residential uses must comply with all of the following: (a) be located behind the building line; (b) all goods and materials stored must be screened from public view; (c) not encroach upon car parking areas, driveways or landscaped areas.		Complies with the acceptable solution or is not applicable. The proposal does not involve outdoor storage.
15.4.7 Fencing		
A1 Fencing must comply with all of the following: (a) fences, walls and gates of greater height than 1.5 m must not be erected within 4.5 m of the frontage; (b) fences along a frontage must be at least 50% transparent above a height of 1.2 m;		Complies with the acceptable solution or is not applicable. Additional fencing does not form part of this proposal.

(c) height of fences along a common boundary with land in the General Residential Zone or Inner Residential Zone must be no more than 2.1 m and must not contain barbed wire.		
15.4.8 Residential amenity		
A1 A dwelling must have at least one habitable room window (other than a bedroom) facing between 30 degrees west of north and 30 degrees east of north.	P1 A dwelling must be sited and designed to optimise sunlight to at least one habitable room (other than a bedroom).	Considerations against the performance criteria are necessary; 38% of the proposed apartments are south-west facing. To optimise sunlight access to south-west facing units, access corridors are internalised, with dwellings at the edge of the building afforded generously sized windows, balconies and glazing. Refer to Appendix B for further detail.
A2 The potential for direct overlooking from windows of habitable rooms with a finished surface or floor level more than 1m above natural ground level on one lot to the windows of habitable rooms, balconies, decks and roof gardens on adjacent lots must be avoided or minimised by complying with any of the following: (a) have a side boundary setback no less than 3 m; (b) be offset no less than 1.5 m from the windows of habitable rooms on adjacent lots where on the same horizontal lane; (c) have a window seal height no less than 1.5 m.		Complies with the acceptable solution or is not applicable. The proposal does not result in potential for direct overlooking as windows are setback no less than 3m or offset no less than 1.5m from habitable rooms, balconies, decks and roof gardens on adjacent lots.
A3 Outdoor living space must be provided for a dwelling that complies with all of the following: (a) be no less than 10 m ² ; (b) have a width no less than 2 m.		Complies with the acceptable solution. All new dwellings are provided with no less than 12m ² private outdoor living space.
A4 Habitable rooms of dwellings adjacent to streets carrying more than 6000 vehicle per day must be designed to achieve internal noise levels no more than 45 dBA in accordance with relevant Australian Standards for acoustics control, (including AS3671 - Road Traffic, and AS2107 - Habitable Rooms).		Complies with the acceptable solution or is not applicable. The proposed new dwellings are setback over 25m from Macquarie Street, behind the existing heritage buildings on the site. As a result, dwellings are capable

	of meeting the relevant Australian Standards during subsequent detailed design and building permit stages.
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3.4.1 Building height

The proposal is assessed against the performance criteria P1 of Clause 15.4.1 as follows.

P1(a) reads as: Building height must be consistent with any desired future character statements provided for the area.

There are no desired future character statements for the area.

P1(b) reads as: Building height must be compatible with the scale of nearby buildings.

The test within the performance criteria at subclause (b) requires both a consideration of scale and compatibility. Scale is not purely building height. Scale requires a consideration of the three-dimensional components of a building, including its form, bulk, siting, articulation and visual quality. As the scale of nearby buildings is variable when considering these three-dimensional components, the scale of the proposed building has been developed within this context. For instance:

- Form

Built form of nearby buildings includes multiple dwellings, singles dwellings, commercial development, residential development and visitor accommodation of both historic and more contemporary structures. Some buildings have traditional style rooves while other have flat roofs typical of contemporary commercial built form. This variety is typical of the urban mixed-use area and is depicted in Figure 4 and Figure 5. For a specific example, the adjoining lot at 203 Macquarie Street features a 2-3 storey heritage building with dormer windows, whereas nearby lots at 199 Macquarie Street and 212 Collins Street feature more modern 3-6 storey buildings of variable form.

The proposal presents a more modern built form which is not unprecedented in the streetscape and adds to the layering of this mixed-use area.

- Bulk

Bulk is a factor of both footprint, height and setback. The appearance of bulk can be mitigated by articulation on elevations. Building bulk of nearby buildings includes smaller residential structures of proportions akin to a single dwelling (e.g. 207 Macquarie St), larger residential structures with proportions akin to multiple dwellings (e.g. 212 Collins St) and large commercial structures with proportions akin to office blocks within the central business zone (e.g. 199 Macquarie St). This variety is depicted in Figure 4 and Figure 5. In particular, Figure 5 shows the building at 199 Macquarie Street, which is both greater in height and width than the proposal. Many buildings in the area also present a larger building footprint than the proposal, as depicted in Figure 6.

In general, the proposed building bulk is of a scale that is compatible with the surrounding development, both in terms of building footprint and dimensions.

- Siting

The siting of structures on nearby lots has occurred variably over time, predominantly due to topographical constraints and opportunities. It is however important to note that the siting of buildings

on nearby lots has often resulted in minimal or no boundary setbacks. This is particularly the case when adjoining the Rivulet, where structures have been built to the boundary at ground floor level and also have either minimal or no setback on the upper storeys. This is exemplified by the structures at 49 Molle Street, 212 Collins Street and 210 Collins Street, as depicted in Figure 7.

The proposal includes small side boundary setbacks on the habitable floor levels, but minimal rear boundary setback. As described above, this is consistent with existing adjoining development along the Rivulet.

- Articulation

Due to the nature of the mixed use area surrounding the site, as well as the year of construction of nearby buildings, there is variability with regards to building articulation. In general, there is a relatively high standard of articulation on nearby buildings (e.g. 203 Macquarie Street), however there are also more modern and less intricate structures (e.g. 199 Macquarie Street).

The proposal presents a specific approach to building articulation. A relatively high degree is presented on the southern, northern and western facades due to the introduction of glazing and balconies, and use of mixed materials such as white textured concrete and bronze anodised sliding screens. However, a more considered approach has been taken to articulation on the eastern façade fronting Macquarie Street. In particular, the eastern façade incorporates a more simplified design so as not to detract from the intricacies in the design of the existing heritage place on the site.

- Visual quality

Visual quality, whilst being somewhat subjective, could be considered as variable in the area due to the number of different land uses present. This is reflective of (re)development over time, whereby more functional buildings (e.g. 199 Macquarie St) exist alongside more ornate heritage buildings (e.g. the site) and more modern structures that attempt to balance form and function (e.g. 212 Collins St).

The proposal falls within the more modern style of built form, blending form and function with a high degree of visual quality that attempts not to dominate, nor imitate the fabric of existing heritage buildings in the area.

Compatibility is taken to be a test of whether something can exist in harmony with something else or is capable of co-existing.

The proposed development is more than capable of co-existing in harmony within the variable context described above. That is, the scale of the development is similar to nearby development in terms of form, siting, bulk, articulation and visual quality. This is visualised through architectural renders, extracts of which are depicted in Figure 8 and Figure 9, with a complete set of renders by Rosevear Stephenson Architects attached in **Appendix A**.

Additional information elaborating on the design intent of the proposal can be found at **Appendix B**.

P1(c) reads as: Building height must not unreasonably overshadow adjacent public space

Shadow diagrams submitted with the application depict the extent of overshadowing resulting from the proposal. Adjacent public space exists in the form of the Hobart Rivulet and Macquarie Street. Whilst the proposal will not result in overshadowing on Macquarie Street, minimal overshadowing will occur over the Rivulet in early morning (between approximately 9am to 10am in mid-winter). Given that this section of the Rivulet is not accessible to the public, this minor early morning overshadowing is not considered unreasonable.

P1(d) reads as: Building height must allow for a transition in height between adjoining buildings, where appropriate.

The most relevant adjoining buildings to the site include the 3-6 storey structure at 199 Macquarie Street and the 2-3 storey structure at 203 Macquarie Street. To a lesser extent the buildings at 210 Collins Street, 212 Collins Street, and 43 to 49 Molle Street are also considered.

As viewed from the Macquarie Street and Hobart Rivulet elevations, the proposal presents a distinct height transition from the adjoining high point (199 Macquarie Street) to the adjoining low points (203 Macquarie Street/49 Molle Street). When considering the more dominant view lines of the surrounding area, being Macquarie Street, Collins Street and Molle Street, the proposal clearly and appropriately transitions from these neighbouring developments. The transitions described above are depicted in Figure 8, Figure 9, Figure 11 and Figure 12.

It is not considered relevant or appropriate to transition the proposal more significantly to the buildings on Molle Street for three main reasons. Firstly, there is more than 15m separation distance between the proposal and the nearest building on Molle Street (49 Molle Street). The adjoining building at 203 Macquarie Street is closer to the proposal than the building at 49 Molle Street and is more dominant in the streetscape. It is therefore considered more appropriate to transition to this building. Secondly, given the encumbrances on the lot at 49 Molle Street, significant redevelopment is very unlikely in the future. For example, 49 Molle Street is subject to a right of carriageway to the benefit of land at 43 Molle Street and is therefore to remain as vehicle parking and access. Under these circumstances, further transitioning is unwarranted as redevelopment is unlikely and a 15m separation distance will be maintained. Thirdly, the existing apartments at 212 Collins Street, which are in proximity to buildings on Molle Street, provide a height transition precedent for which the proposal is compatible with. For example, 212 Collins Street is three levels higher than 49 Molle Street and has approximately 5m separation distance. 212 Collins Street is four levels higher than 43 and 47 Molle Street and has 15m separation distance. For comparison, the proposal is also four levels higher than the buildings on Molle Street and has no less than 15m separation.

As viewed from the northeast and southwest elevations, the proposal, when considered in the full context of nearby buildings, also allows for a suitable height transition. The overall transition from the high points (199 Macquarie Street/203 Macquarie Street) to the low points (210 Collins Street/212 Collins Street) is achieved by ensuring that the proposal is below the height of more prominent buildings on Macquarie Ridge and by stepping back top floor apartments where adjoining the rivulet. This subtle step back approach ensures that building height along the Rivulet facade visually aligns with the height of the apartment building at 212 Collins Street. In addition, a considered choice of materials for the top floor apartments will provide a greater visual transition of apparent building bulk. That is, the removal of the bronzed screens and more apparent glazing will soften the top floor and visually set the main bulk of the building on lower floors. The transitions described above are depicted in Figure 8, Figure 13 and Figure 14.

Within the context described above, the proposed building height allows for a height transition that ensures the development is compatible with the scale of existing buildings. Considering the variability in heights of nearby buildings, transitioning between the more prominent buildings has been achieved, and a more exaggerated height transition is not required to maintain this compatibility.



Figure 4: depicts variable built form and bulk of adjoining buildings along Macquarie Street frontage



Figure 5: depicts variable built form and bulk of existing development surrounding site

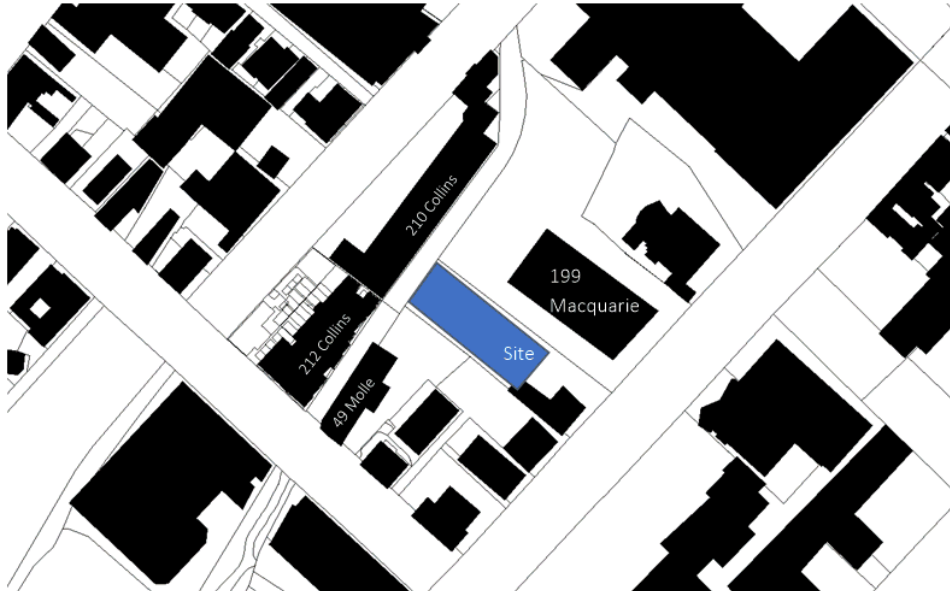


Figure 6: depicts building footprint of surrounding development (black) compared to proposal (blue)(source: The LIST)



Figure 7: depicts siting of existing development along Hobart Rivulet



Figure 8: Rendering of proposal (view from Collins Street) depicting compatibility of proposal with adjoining development (source: Rosevear Stephenson)



Figure 9: Rendering of proposal (view from Bathurst/Molle St) depicting compatibility of proposal with adjoining development (source: Rosevear Stephenson)



Figure 10: Rendering of proposal (view from Molle St/Rivulet) depicting compatibility of proposal with adjoining development (source: Rosevear Stephenson)

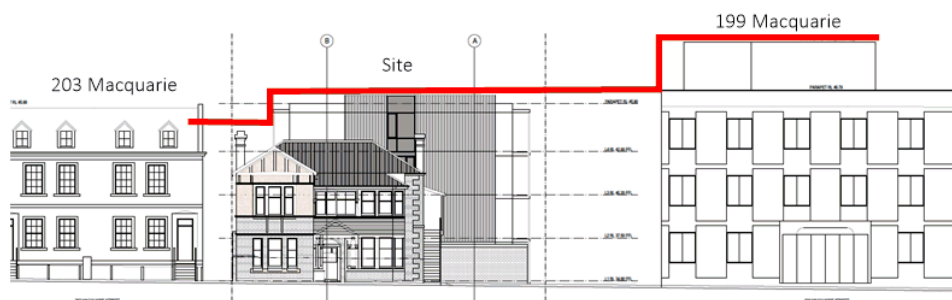


Figure 11: Macquarie Street elevation depicting transition in height between adjoining buildings and proposed development (source: Rosevear Stephenson)

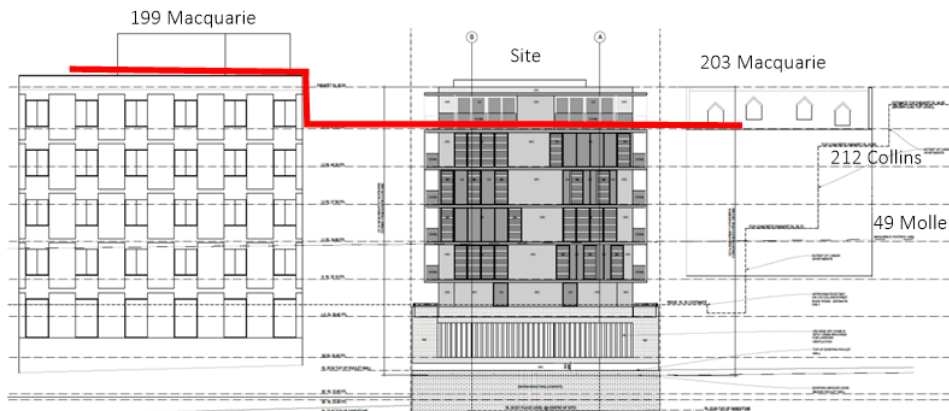


Figure 12: Hobart Rivulet elevation depicting transition in height between adjoining buildings and proposed development (source: Rosevear Stephenson)



Figure 13: Southwest elevation depicting transition in height between adjoining buildings and proposed development



Figure 14: Northeast elevation depicting transition in height between adjoining buildings and proposed development

3.5 Codes

The following codes are applicable to the application:

- Potentially Contaminated Land Code
- Landslide Code
- Road and Railway Assets Code
- Parking and Access Code
- Stormwater Management Code
- Inundation Prone Areas Code
- Attenuation Code
- Historic Heritage Code

3.5.1 Potentially Contaminated Land Code

The site is adjacent to a property at 199 Macquarie Street which is listed as having potentially contaminating activities. An Environmental Site Assessment (ESA) prepared by Geo-Environmental Solutions and dated August 2019 has therefore been submitted with the proposal to address the requirements of the Potentially Contaminated Land Code. The ESA concludes that there is no contamination at the site and no risk to human health or the environment.

For details refer to the ESA, which can be found in *Appendix D*.

3.5.2 Landslide Code

Part of the site near the Rivulet boundary is in a medium landslide hazard area. Therefore, a Geotechnical Assessment prepared by Geo-Environmental Solutions and dated July 2020 has been submitted with the proposal to address the requirements of the Landslide Code. The assessment makes several recommendations regarding construction methodology and concludes that the development presents a low and acceptable landslide hazard risk.

For details refer to the Geotechnical Assessment, which can be found in *Appendix E*.

3.5.3 Road and Railway Assets Code

The proposal involves the intensification of the existing vehicle access to Macquarie Street which is above the designated thresholds. A Traffic Impact Assessment (TIA) prepared by Milan Prodanovic Traffic Engineering & Road Safety and dated August 2020 has therefore been submitted with the proposal to address the requirements of the Road and Railway Assets Code. The TIA concludes that the peak hour trip rates resulting from the proposal will be similar to the existing trip rates that result from the current use of the site as a commercial car park. As such the proposal meets the requirements of the code.

For details refer to the TIA, which can be found in *Appendix F*.

The proposal has also been referred to the Department of State Growth as the relevant planning authority for Macquarie Street. The Department's written advice is provided in *Appendix G*. In summary, the Department does not object to proposal, citing the potential for on-street parking along Macquarie Street to be removed in future and highlighting considerations for construction impacts.

3.5.4 Parking and Access Code

The application is seeking discretion against the parking provisions as a shortfall of on-site parking is proposed. A Traffic Impact Assessment (TIA) prepared by Milan Prodanovic Traffic Engineering & Road Safety and dated August 2020 has therefore been submitted with the proposal to address the requirements of the Parking and Access Code. The TIA concludes that the proposed on-site parking supply is sufficient to meet demand and is designed as a practical solution to site constraints.

For details refer to the TIA, which can be found in *Appendix F*.

The proposal has also been referred to the Department of State Growth as the relevant planning authority for Macquarie Street. The Department's written advice is provided in *Appendix G*. In summary, the Department does not object to proposal, citing the potential for on-street parking along Macquarie Street to be removed in future and highlighting considerations for construction impacts.

3.5.5 Stormwater Management Code

This code is applicable to all use and development. A Stormwater Report and engineering drawings have been prepared by Aldanmark Consulting Engineers to detail the proposed stormwater system in accordance with the Stormwater Management Code.

For details refer to the engineering drawings found in *Appendix A* and Stormwater Report found in *Appendix H*.

The proposal involves the discharge of stormwater into the Hobart Rivulet, however, no works are proposed to the Hobart Rivulet flood wall. Given that the Hobart Rivulet forms part of the flood management system under the management of the local government, the application was deemed to require landowner consent from the General Manager to lodge the application. This consent is provided in *Appendix I*.

3.5.6 Attenuation Code

The Attenuation Code is applicable as the site is within the attenuation area for 124 Davey Street (Hotel Soho) and 192 Macquarie Street (The Duke of Wellington). The following information has been provided to address clause 9.7.2 P2, which is the only applicable clause of the code:

Both Hotel Soho and The Duke of Wellington are internal music venues. The intensity and scale of noise emissions from these venues is considered to be low, particularly considering that either venue is a minimum of 175m from the site.

In the case of the Hotel Soho, all the proposed apartments face perpendicular to the potential noise source and windows are recessed from the building face such that there is no direct line of site to the noise source. In addition, St Michael's Collegiate School is located between the noise source and receptor, buffering any impact.

In the case of the Duke of Wellington, whilst the proposed apartments do face the potential noise source, No.199 Macquarie Street shields the proposed development from a direct path of travel from the noise source. The proposed development is also upwind of the source for prevailing NW and SW winds, which would further diminish the chance of noise being heard.

For Class 2 sole occupancy units, the National Construction Code (NCC) requires sound insulation of a minimum of 50 Rw for internal walls and floors. The proposed precast concrete external cladding with minimum of R2.5 thermal insulation and double glazing (as by required of Section J of the NCC) will likely achieve a sound insulation level of greater than 50 Rw and hence the minimum level of construction required by the NCC will

provide substantial sound insulation. This will further ameliorate any risk of noise emissions from the source properties being audible.

In summary, given the separation distances and physical buffers described above, it is unlikely that the low level of noise emissions from either venue would be audible above the background inner city traffic noise at the site. Given the design and construction techniques being proposed, it is highly unlikely that noise emissions will be heard from within dwellings.

The proposal meets the performance criterion as there is no potential for the sensitive use to be impacted by environmental harm from noise generated by either venue.

3.5.7 Historic Heritage Code

The site contains an existing dwelling and outbuilding, which are listed as a heritage place and defined as a place of archaeological potential in the planning scheme. A Heritage Impact Assessment (HIA) prepared by Praxis Environment and dated September 2019 has therefore been submitted with the proposal to address the requirements of the Historic Heritage Code. The HIA concludes that the proposal will not result in the demolition of any significant heritage fabric and will not introduce development of an unprecedented scale or dominant character. As such, the proposal is capable of being approved on cultural heritage grounds.

For details refer to the HIA, which can be found in *Appendix J*.

It is also important to note that the proposal has been developed through a collaborative design process with City of Hobart's Cultural Heritage Officers, which is documented in *Appendix B*.

3.5.8 Inundation Prone Areas Code

A Flood Level Analysis Report prepared by Flussig Spatial and dated February 2020 has been submitted with the proposal. The report concludes that flood levels resulting from the 1% (plus climate change) Annual Exceedance Probability (AEP) storm event will be below the height of the existing Hobart Rivulet flood wall, which is being maintained, and well below the height a new habitable floor levels.

For details, refer to the Flood Level Analysis Report found in *Appendix H*.

4 Conclusion

The proposal presents a considered development of the site, providing for 45 new multiple dwelling units, 1 new commercial tenancy and two existing multiple dwellings. The proposal seeks to maintain and enhance the heritage place on the site by removing modern additions, thereby re-establishing its original context.

The site is afforded excellent access to essential services, as well as proximity to public transport. This provides a tremendous opportunity for development of this nature, which will bring more people and housing options into the city.

The design and scale of the proposal is considered appropriate within the context of the site. The proposed design was chosen to provide a development that presents as a 'background' building and one which is subservient to the heritage buildings in the area. The scale of the proposal is also compatible with buildings in the surrounding mixed-use area. When considering the variable form, bulk, siting, articulation and visual quality present, the proposal has been shown to exist in harmony.

The proposal requests the following planning discretions:

- Building Height 15.4.1 P1;
- Landscaping 15.4.5 P1;
- Residential Amenity 15.4.8 P1; and
- Additional code discretions applicable - refer to the relevant supporting reports.

ERA has assessed the proposal against the relevant standards within the urban mixed-use zone, which has been found to meet the requirements of the *Hobart Interim Planning Scheme 2015*. Therefore, the proposal can be approved on planning grounds.

Appendix A Proposal plans

Appendix B Architectural design statement

Appendix C Title documentation

Appendix D Environmental Site Assessment

Appendix E Geotechnical Assessment

Appendix F Traffic Impact Assessment

Appendix G State Growth advice

Appendix H Stormwater Report & Flood Level Analysis

Appendix I Landowner's consent

Appendix J Heritage Impact Assessment



E: enquiries@eraplanning.com.au

W: www.eraplanning.com.au









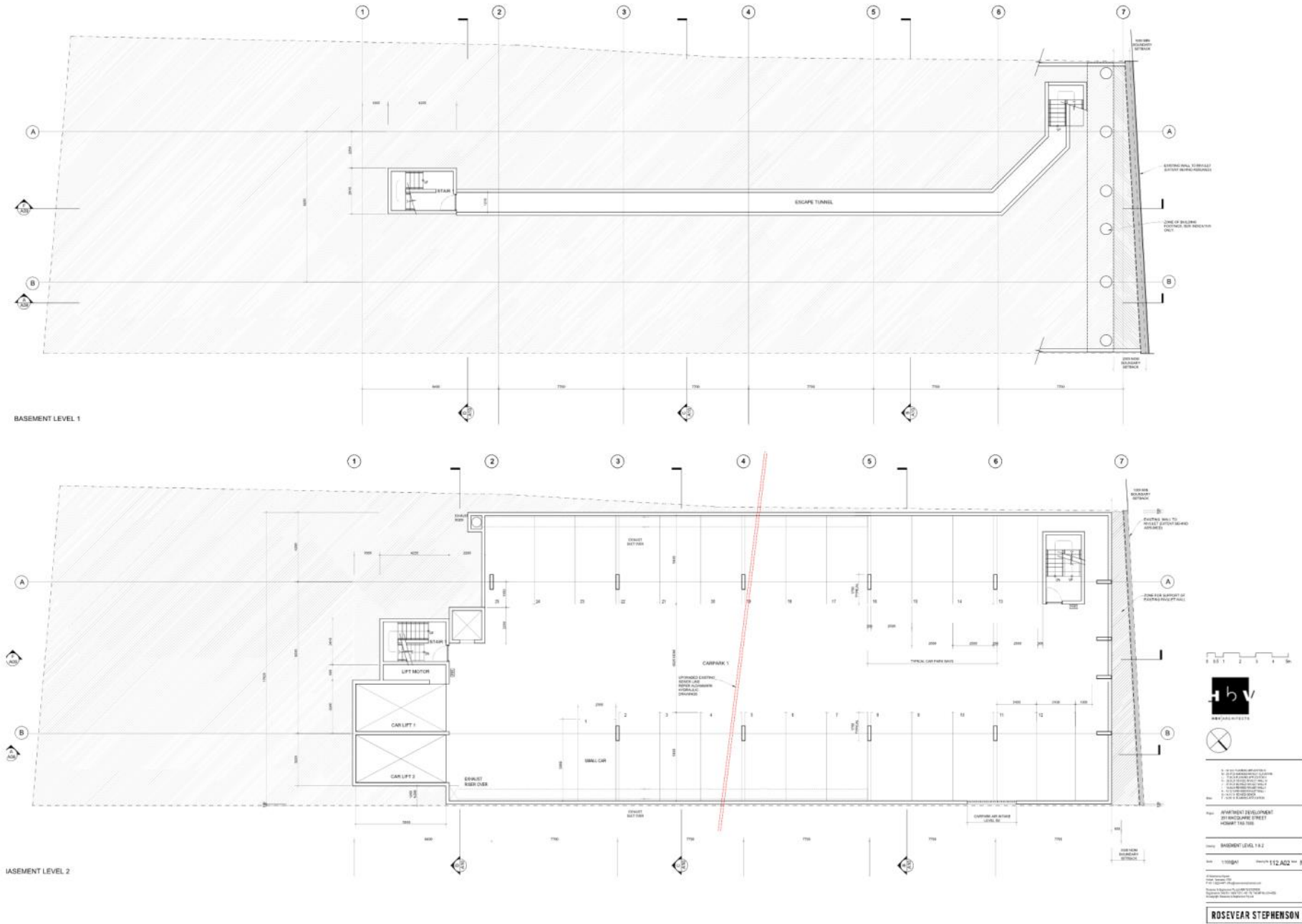


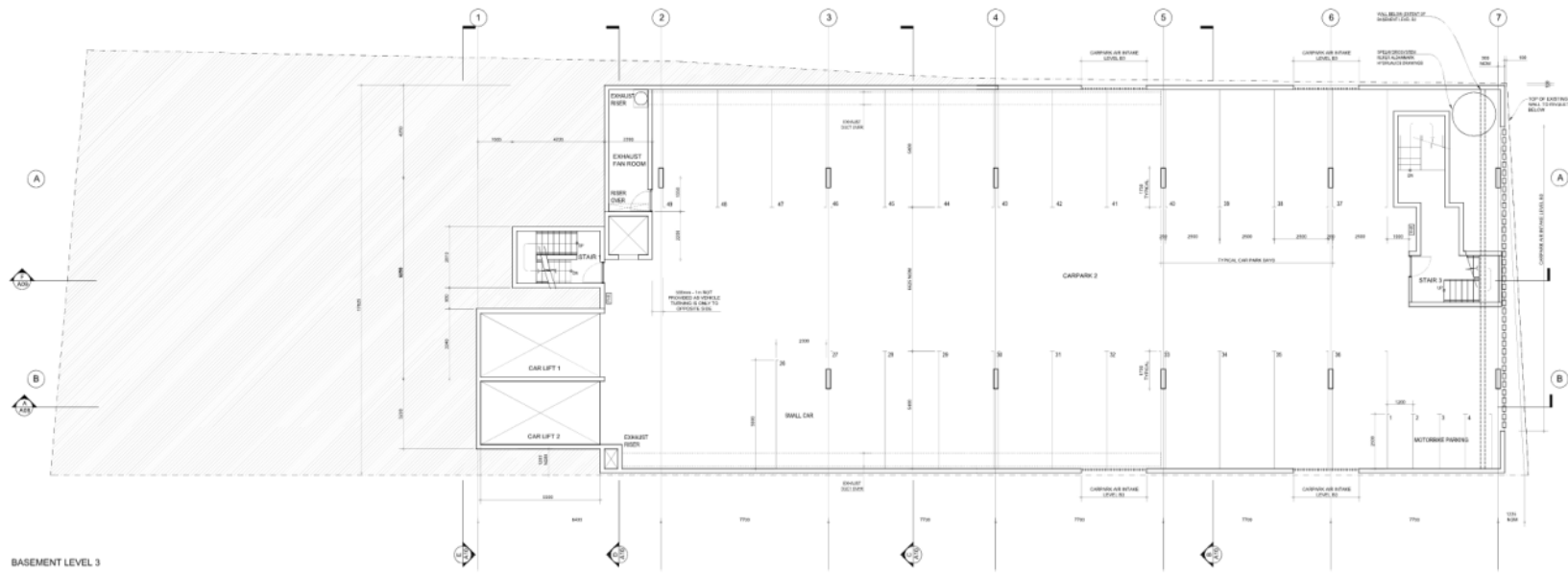
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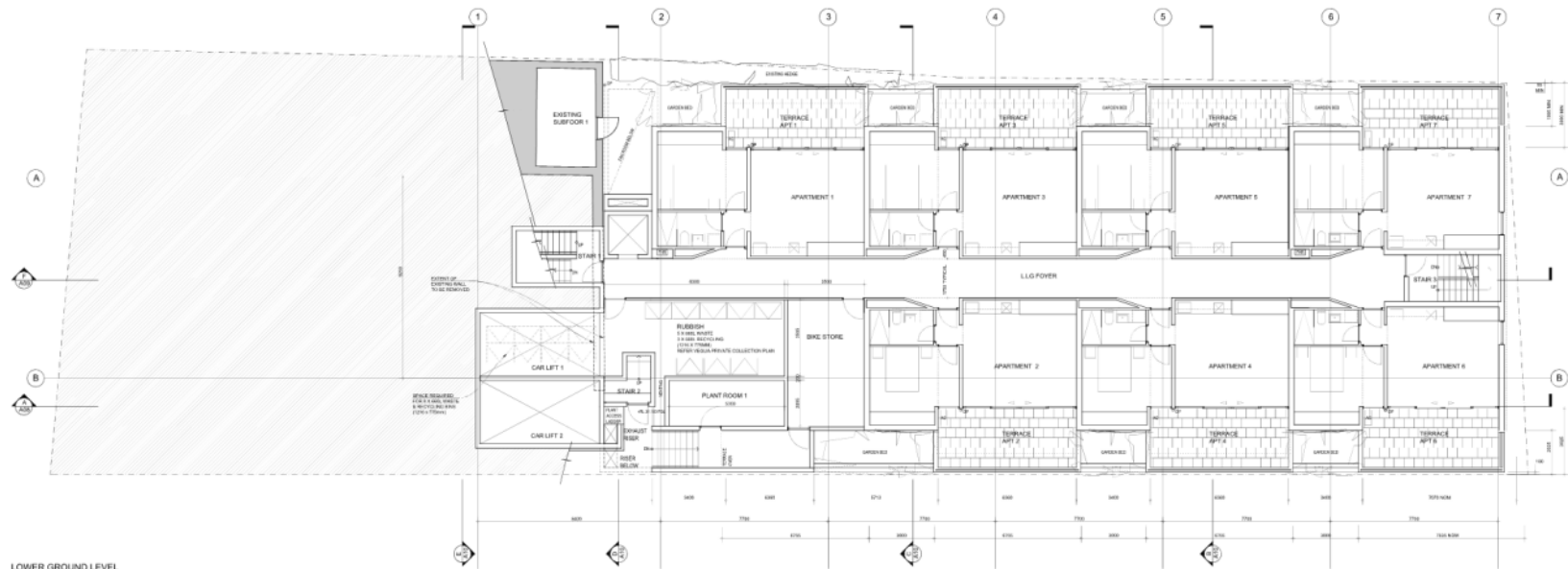








BASEMENT LEVEL 3



LOWER GROUND LEVEL

Scale: 1:1000

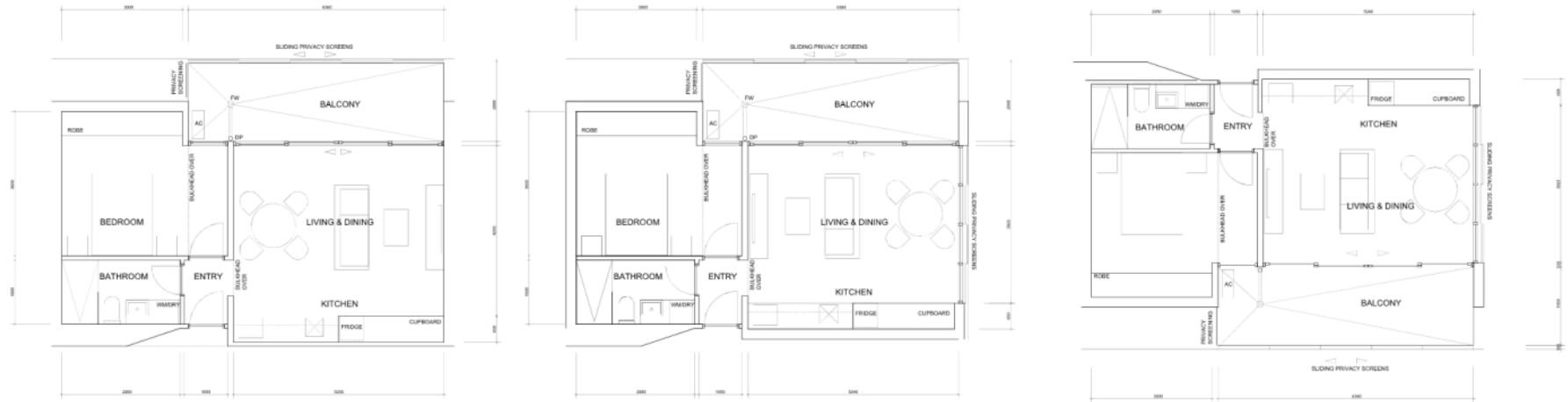
hsv
HVS ARCHITECTS

Project: APARTMENT DEVELOPMENT
201 HANCOCK STREET
HOMER 150 T05

Client: BASEMENT LEVEL 3 & LOWER GROUND

Scale: 1:1000A1 Sheet: 112.A03 of 112

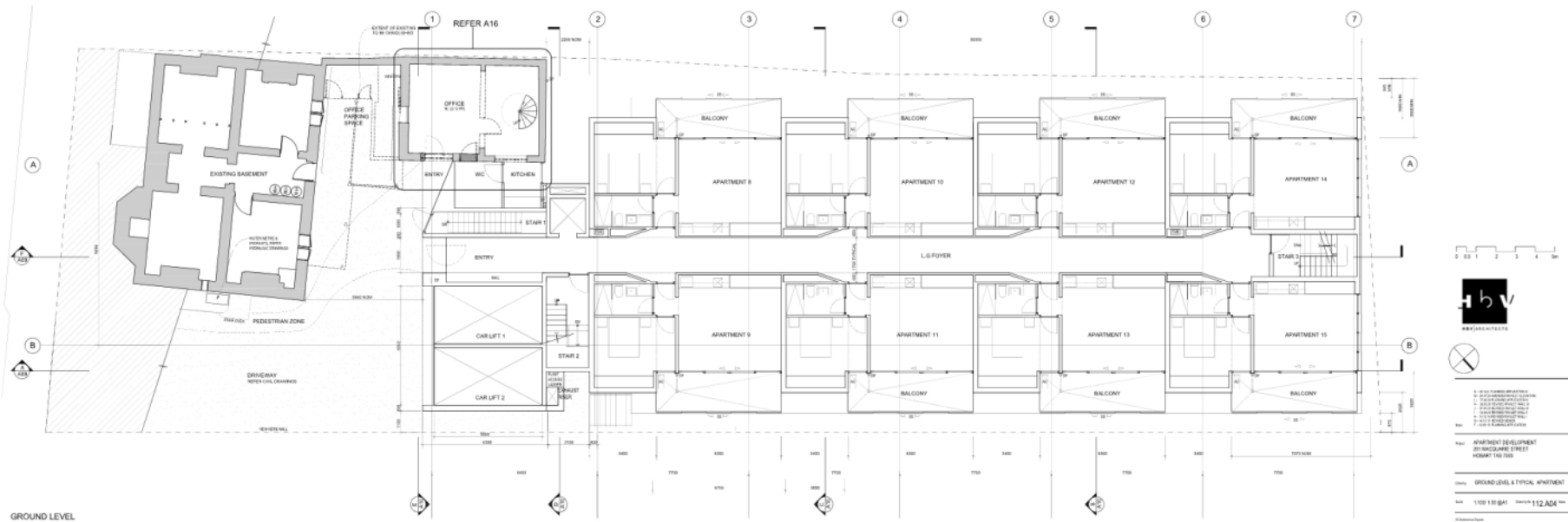
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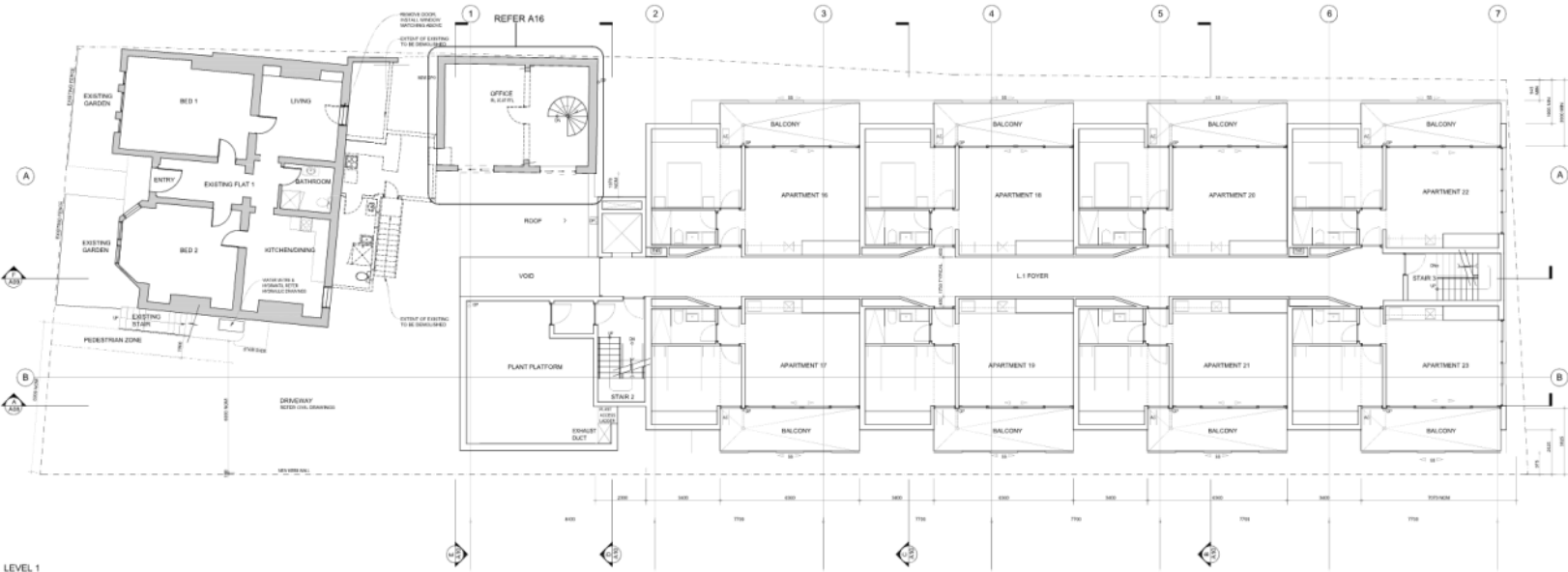
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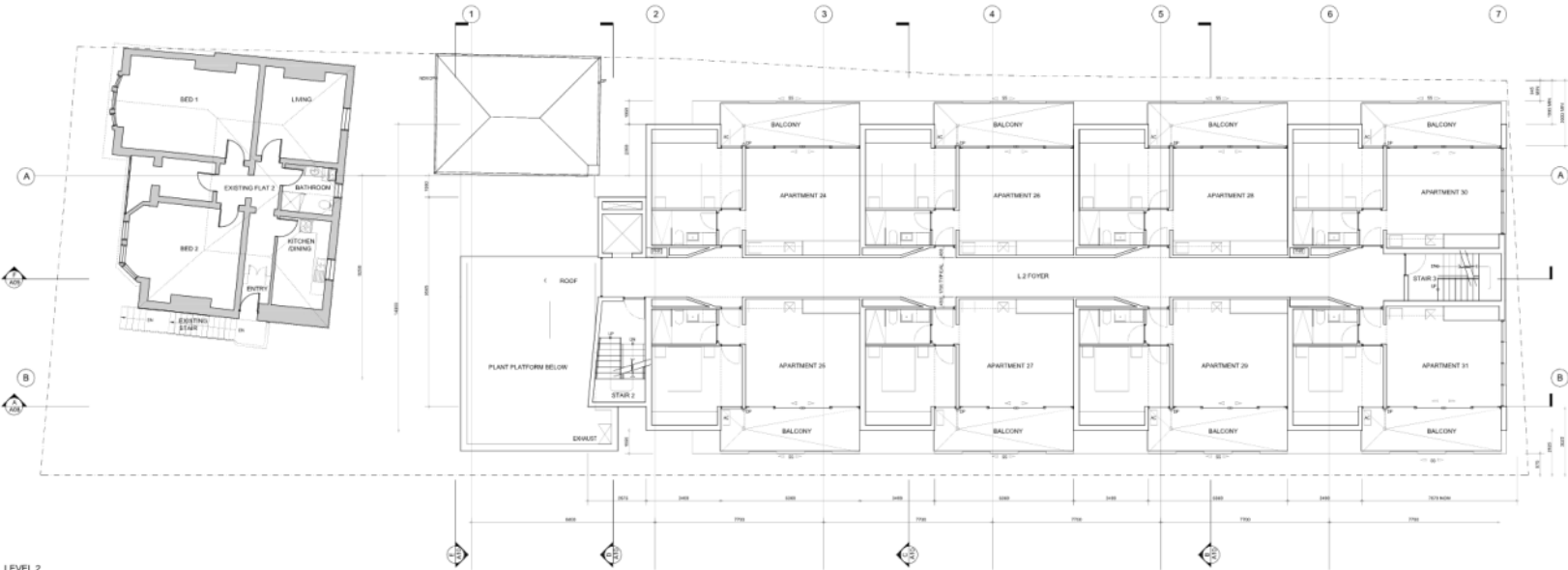


GROUND LEVEL





LEVEL 1



LEVEL 2

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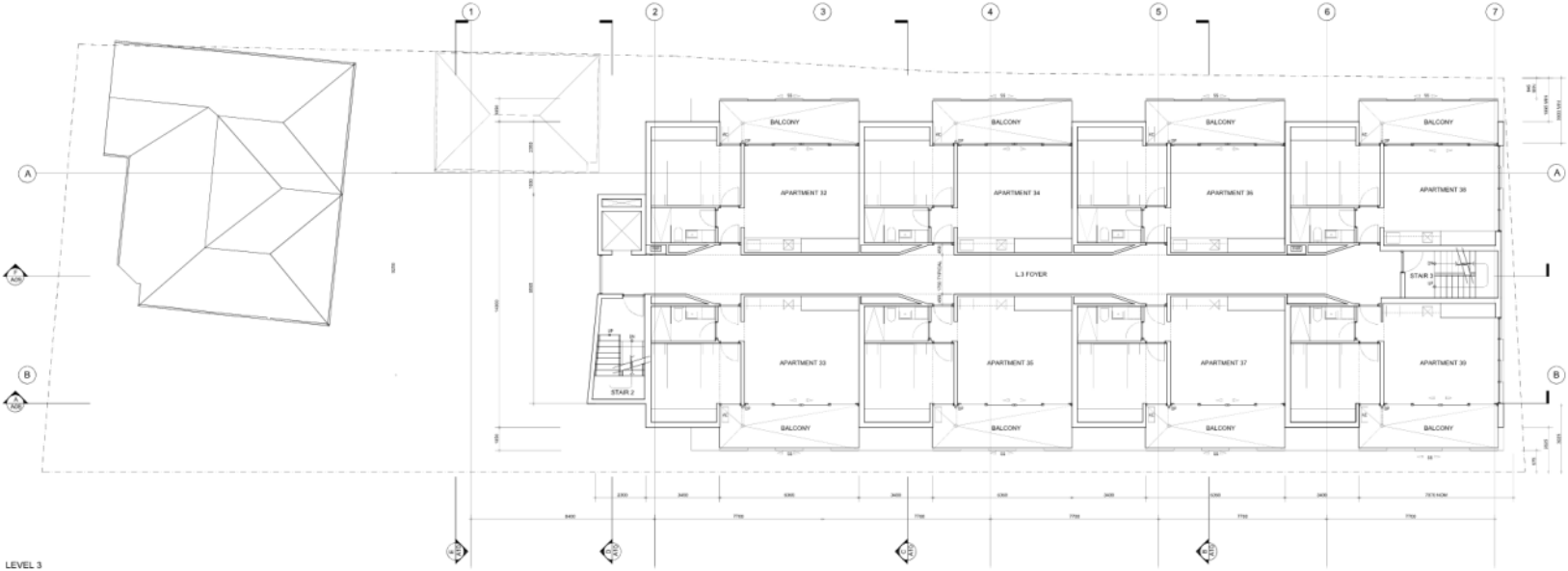
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HOMER T10 T10

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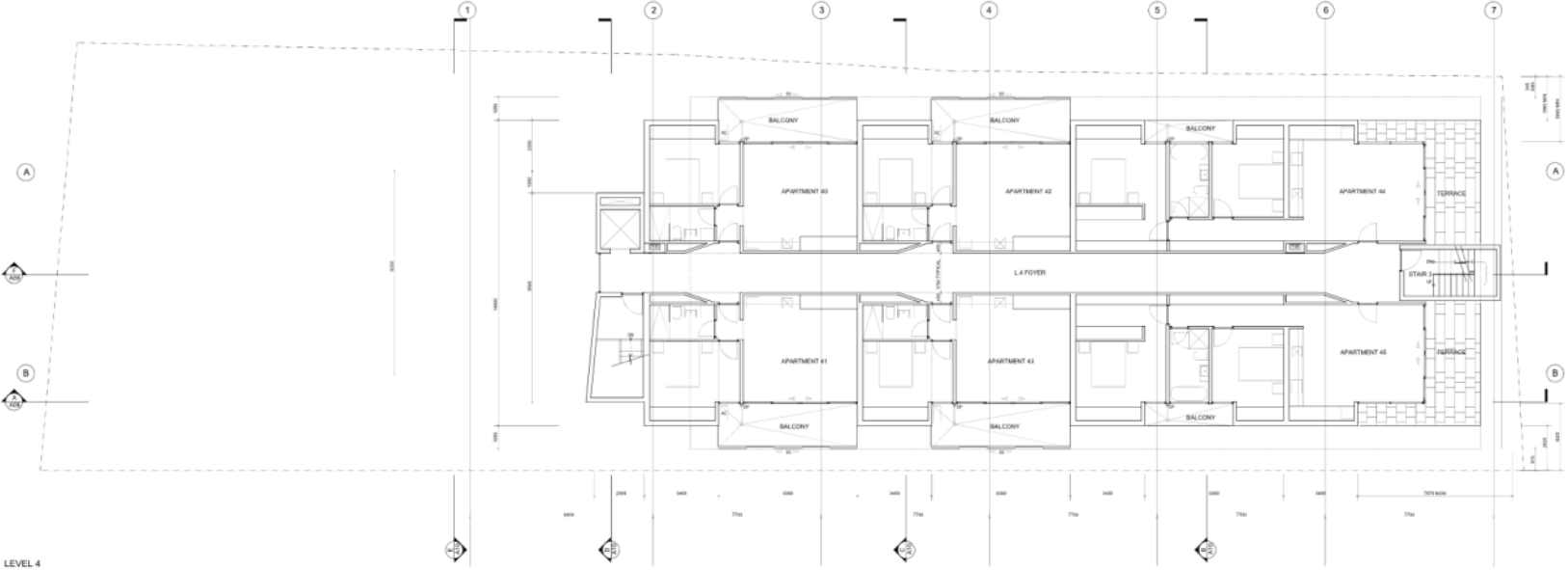
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Author: RSE
Project Manager: RSE
Project Engineer: RSE
Project Architect: RSE
Project Designer: RSE

ROSEVEAR STEPHENSON



LEVEL 3



LEVEL 4



- 1. ALL DIMENSIONS ARE IN METERS
- 2. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED
- 3. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED
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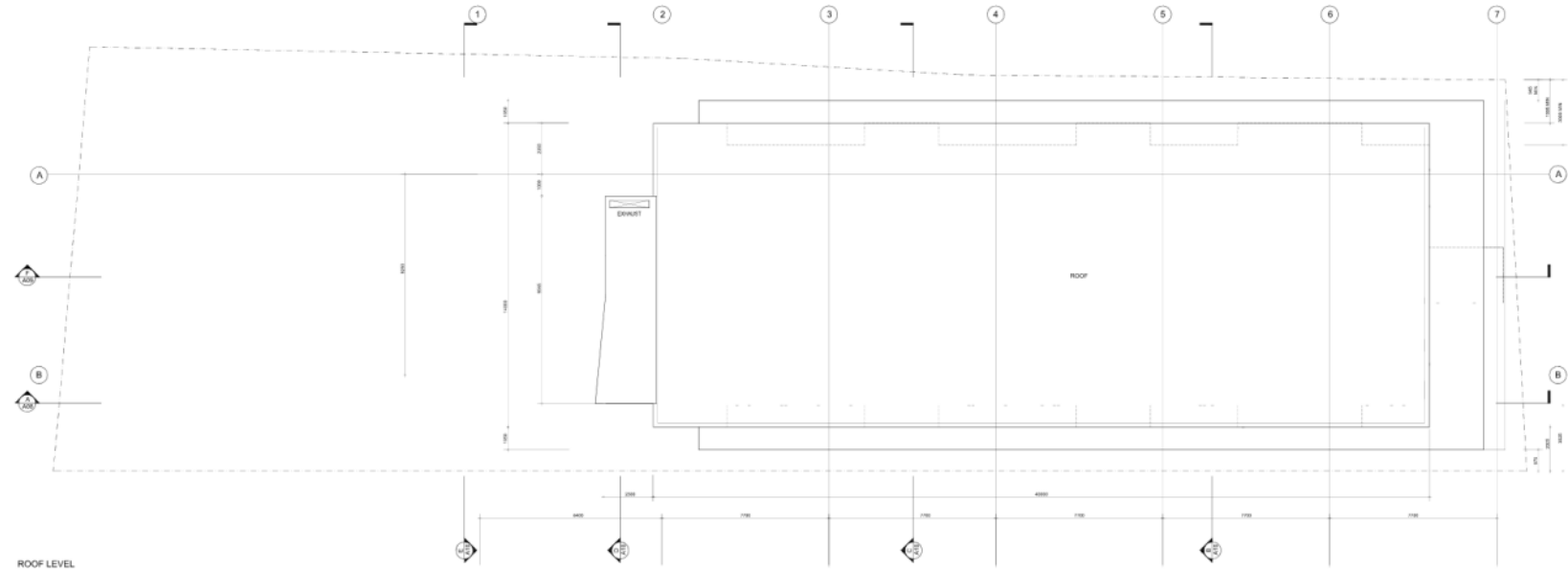
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201 HANCOCK STREET
HOMER, TAS 7305

Drawn: LEVEL 3 & 4

Date: 1/10/2021 Check: 11/2/2021

Architect:
HBY ARCHITECTS
10/10/2021
Project: 201 HANCOCK STREET
HOMER, TAS 7305

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- 1. ARCHITECT
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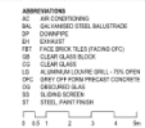
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HONGKONG 100 100

Drawn: ROOF LEVEL

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Author: HBY
Project: HBY
Project: HBY
Project: HBY
Project: HBY

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10. $\lim_{n \rightarrow \infty} \frac{1}{n} \sum_{k=1}^n \sin \frac{k\pi}{n} = 0$
11. $\lim_{n \rightarrow \infty} \frac{1}{n} \sum_{k=1}^n \cos \frac{k\pi}{n} = 0$
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Appt. APARTMENT DEVELOPMENT
291 MADUQUARRE STREET
NEWARK, N.J. 07102

Source: SECTION 4

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E-mail: iaq@iarc.fr

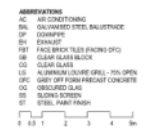
ROSEVEAR STEPHENSON



HBV ARCHITECTS

ROSEVEAR STEPHENSON





HBV ARCHITECTS

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Appt. APARTMENT DEVELOPMENT
291 RIVINGTON STREET
NEWARK, N.J. 07102

Source: ELEVATION.ME

Scale 1: 1000000 Drawing No. 112A11 Rev. 1

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ROSEMEAD STEPHENSON

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SW ELEVATION

- ABBREVIATIONS**
- AC AIR CONDITIONING
 - BR GALVANNED STEEL BRACKETED
 - DP DOWNPIPE
 - DR DRAINAGE
 - FRT FACE BRICK TILES (FACING OF)
 - GL CLEAR GLASS GLAZING
 - GL GLASS GLAZING
 - L/S ALUMINUM CLADDING (GLAZING - TOP OPEN)
 - OPC GREY OFF FORM PRECAST CONCRETE
 - CO UNCOLOURED CLAD
 - SS STAINLESS STEEL
 - ST STEEL PLANT FRAME



1. ARCHITECTURAL DRAWING
2. ARCHITECTURAL DRAWING
3. ARCHITECTURAL DRAWING
4. ARCHITECTURAL DRAWING
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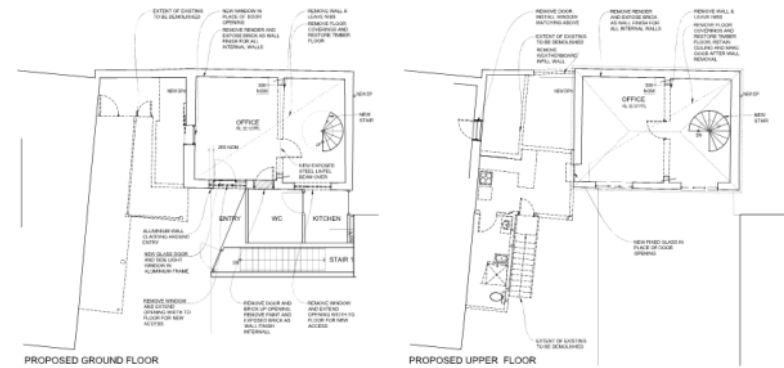
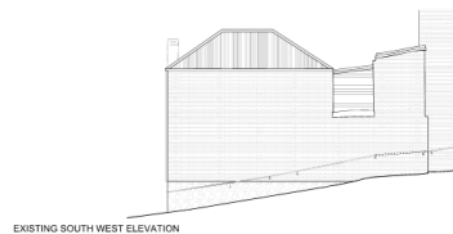
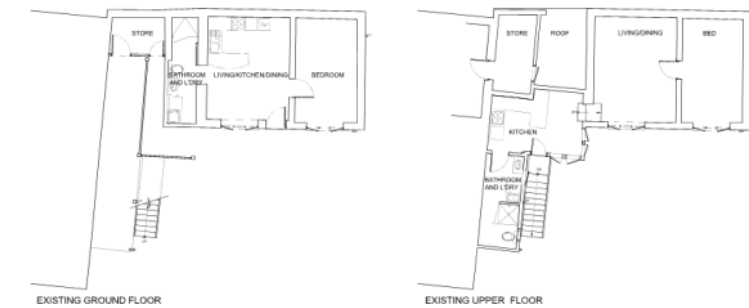
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201 HOBART STREET
HOBART TAS 7000

Client: ELEVATION SW

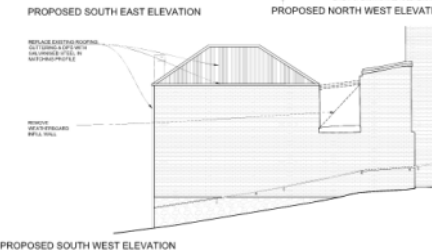
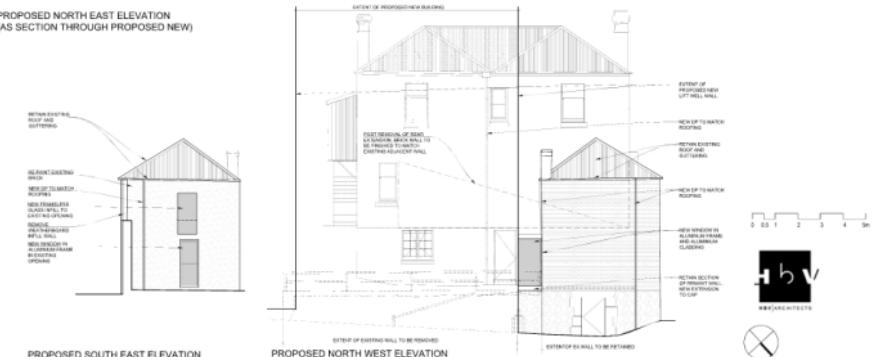
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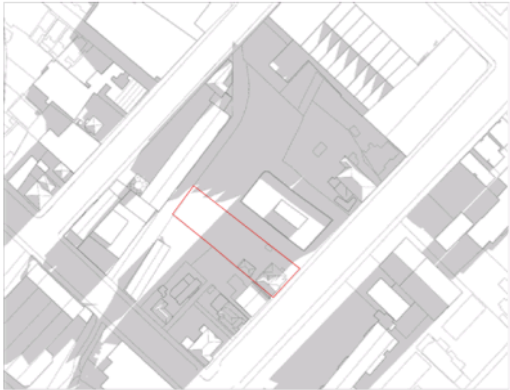
Architect: ROSEVEAR STEPHENSON

ROSEVEAR STEPHENSON



PROPOSED NORTH EAST ELEVATION
(AS SECTION THROUGH PROPOSED NEW





EXISTING SHADOWS 9 AM 22 JUNE



PROPOSED SHADOWS 9 AM 22 JUNE



EXISTING SHADOWS 12 NOON 22 JUNE



PROPOSED SHADOWS 12 NOON 22 JUNE



EXISTING SHADOWS 3 PM 22 JUNE



PROPOSED SHADOWS 3 PM 22 JUNE



Site: 10-11111111111111111111

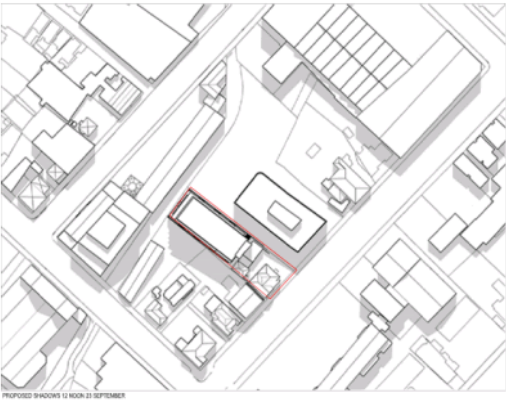
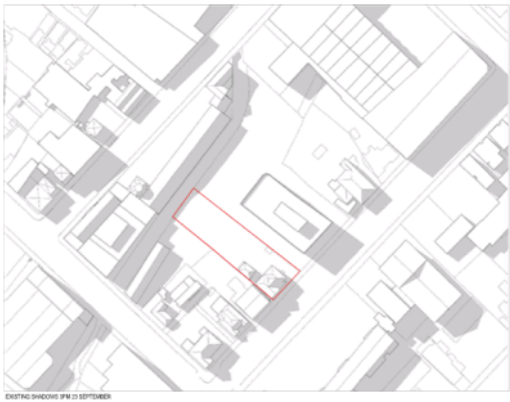
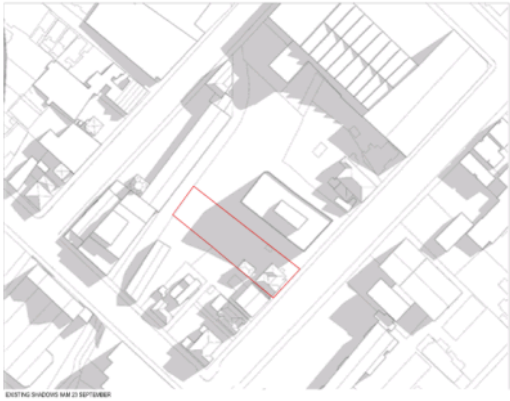
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201 HANCOCK STREET
HOBART TAS 7000

Client: SHAWON SHAWON - 22 JUNE

Scale: 1:1000 Date: 11/12/2020

Drawn by: [Name]
Checked by: [Name]
Reviewed by: [Name]
Approved by: [Name]

ROSEVEAR STEPHENSON



Rev: 1.0 - 15/03/2021
Project: APARTMENT DEVELOPMENT
201 HANCOCK STREET
HOBART TAS 7000
Drawing: SHADOWS (23 SEPTEMBER)
Scale: 1:1000
Sheet: 112.A15
Author: [Name]
Checked: [Name]
Approved: [Name]
Project Manager: [Name]

ROSEVEAR STEPHENSON

CIVIL DRAWINGS **PROPOSED UNIT DEVELOPMENT** **201 MACQUARIE STREET,** **HOBART, TASMANIA 7000**

SHEET	DRAWING	ISSUE	DATE
C0.01	OVERALL PLAN, INDEX AND NOTES	D	1/12/2020
C1.01	DESIGN LEVELS AND GRADING PLAN	D	1/12/2020
C1.02	VEHICLE TURNPATHS	D	1/12/2020
C1.03	VEHICLE TURNPATHS - GARBAGE TRUCK	D	1/12/2020

GENERAL NOTES:

1. THESE DRAWINGS ARE TO BE READ IN CONNECTION WITH THE ARCHITECTURAL, HYDRAULIC AND STRUCTURAL DRAWINGS AND SPECIFICATIONS AND THE TRAFFIC ENGINEERING REPORT. STANDARDS REFERENCED ARE TO BE THE MOST CURRENT VERSION.
2. THESE DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION UNLESS ENDORSED FOR CONSTRUCTION AND AUTHORIZED FOR THIS PURPOSE.
3. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH APPLICABLE STANDARDS, DRAWINGS AND SPECIFICATIONS, NATIONAL STANDARDS, SPAN STANDARD CODE OF AUSTRALIA & WATER SUPPLY CODE OF AUSTRALIA AND TO THE SATISFACTION OF COUNCIL'S DEVELOPMENT ENGINEER.
4. PRELIMINARY DRAWINGS TO BE READ IN CONNECTION WITH COUNCIL EXCLUSION DRAFTS 'TOLERANT & TOLERANT'.
5. ALL WORKS ARE TO BE MAINTAINED IN A SAFE CONDITION.
6. CONFIRM ALL LEVELS ON SITE PRIOR TO THE COMMENCEMENT OF WORKS.
7. CONTRACTOR TO OBTAIN APPROVALS, SERVICE CLEARANCES AND COORDINATE WORK WITH ALL RELEVANT AUTHORITIES PRIOR TO COMMENCEMENT.
8. A START OF WORKS NOTICE MUST BE OBTAINED FROM COUNCIL PRIOR TO ANY WORKS COMMENCING.
9. SURVEY DATA AND THEREAFTER PROVIDED BY RELEVANT SURVEYORS.
10. ARCHITECTURAL, LAND AND SITE LAYOUT UNDERTAKING AND PROVIDED BY RELEVANT ENGINEERING.
11. FLOOR LEVELS SET BY ARCHITECT. DRAINAGE GRADING BASED ON THESE.

WORKPLACE HEALTH & SAFETY NOTES:

- BEFORE THE CONTRACTOR COMMENCES WORK THE CONTRACTOR SHALL UNDERTAKE A SITE SPECIFIC PROJECT PRE-START HAZARD ANALYSIS (LSA) AND SAFETY ANALYSIS (SWA) WHICH SHALL BE DOCUMENTED FORM:
- THE TYPE OF WORK.
 - HAZARDS AND RISKS TO HEALTH AND SAFETY.
 - THE CONTROLS TO BE APPLIED IN ORDER TO ELIMINATE OR MINIMIZE THE RISK POSED BY THE IDENTIFIED HAZARDS.
 - THE MEASURES TO BE TAKEN TO ENSURE THE RISK CONTROLS REMAINING ARE TO BE MAINTAINED.

THESE ARE TO BE SUBMITTED TO THE SUPERINTENDENT AND/OR OTHER RELEVANT WORKPLACE SAFETY OFFICERS.

- FOR THIS PROJECT POSSIBLE HAZARDS INCLUDE BUT ARE NOT LIMITED TO:
- EXCAVATION OF ANY TYPE & DEPTH.
 - CONTAMINATED SOILS.
 - CONSTRUCTION IN PROXIMITY WITHIN WATER TABLE.
 - FELLING, LOGGING AND REMOVAL OF EXISTING TREES/VEGETATION.
 - VIBRATION AND STRUCTURAL SHAKING (TRUCKS, VIBRO).
 - COMPACTED SPACES.
 - OVERHEATED WORK AREAS.
 - UNDERGROUND STORMWATER, WATER AND SEWER PIPES.
 - TELECOMMUNICATION CABLES, BOTH UNDERGROUND & OVERHEAD.
 - ELECTRICAL POWER CABLES, BOTH UNDERGROUND & OVERHEAD.
 - WORKING AT HEIGHTS.
 - WORKING WITH ASBESTOS CONTAINING MATERIALS.
 - TRAFFIC MANAGEMENT.

EARTHWORKS & DRIVEWAY NOTES:

1. ALL EARTHWORKS SHALL BE IN ACCORDANCE WITH AS/NZS 'GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS'.
2. ALL EXCAVATION AND TYPING SHALL BE STOPPED AND GRUBBED IN THE AREA OF PROPOSED WORKS.
3. NEW OR MODIFIED DRIVEWAY CROSSLINGS SHALL BE IN ACCORDANCE WITH SPWA STANDARD DRAWING TOLERANT-11 AND MUST BE SURVEYED AND APPROVED BY COUNCIL.
4. EXCAVATED AND IMPORTED MATERIAL USED AS FILL IS TO BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
5. FILL MATERIALS SHALL BE WELL GRADED AND FREE OF Boulders OR CORBES EXCEEDING 100mm IN DIAMETER UNLESS APPROVED BY THE ENGINEER.
6. FILL REQUIRED TO SUPPORT DRIVEWAYS INCLUDING FILL IN SUBGRADE THAT SUPPORT DRIVEWAYS SHALL BE REPLACEMENT IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:
 - TOP SOIL AND ORGANIC MATTER SHALL BE STRIPPED TO A MINIMUM OF 100mm.
 - THE FILL GRADE SHALL HAVE A MINIMUM BEARING CAPACITY OF 100kPa.
 - FILL IN SUBGRADE SHALL BE REVEALED FROM INTO NATURAL GROUND.
 - THE FILL SHALL BE COMPACTED TO A MINIMUM DENSITY OF 95% (95% OF THE MAXIMUM DENSITY OF THE FILL) BY THE ENGINEER.
 - EACH LAYER SHALL BE COMPACTED TO A MINIMUM DENSITY RATIO OF 95% (95% OF THE MAXIMUM DENSITY OF THE FILL) BY THE ENGINEER.
7. WHERE THE ABOVE REQUIREMENTS CANNOT BE ACHIEVED THE ENGINEER SHALL BE CONSULTED AND THE FORMATION SHALL BE PROPOSED UNDER SUPERVISION OF THE ENGINEER TO COMPLY WITH APPROVED BASE.
8. CONCRETE PAVEMENTS SHALL BE CURED FOR A MINIMUM OF 14 DAYS USING A CURRENT BEST PRACTICE METHOD.
9. DRAIN CONTROL CATCHES SHALL BE CONSTRUCTED AS SOON AS POSSIBLE WITHOUT HINDERING THE WORK. GENERALLY THIS SHALL BE WITHIN 14 DAYS.
10. BATTERS SHALL BE SET TO A SAFE ANGLE OF REPOSE IN ACCORDANCE WITH THE BCA VOL. 1 AS INDICATED BELOW.

SOIL TYPE (REFER BCA 3.2.4)		EMBANKMENT SLOPES H:L	
		COMPACTED FILL	CUT
STABLE ROCK (R)		2:3	8:1
SAND (R)		1:2	1:2
SILT (R)		1:4	1:4
CLAY	FINE CLAY	1:2	1:1
	COARSE CLAY	NOT SUITABLE	2:3
SOFT SOILS (R)		NOT SUITABLE	NOT SUITABLE

NOTE: WHERE SITE CONDITIONS ARE UNSUITABLE FOR A BATTERED BANK CONSULT THE ENGINEER FOR A SATURABLE RETAINING WALL DESIGN. EMBANKMENTS THAT ARE TO BE LEFT EXPOSED MUST BE STABILIZED BY VEGETATION OR SIMILAR WORKS TO PREVENT SOIL EROSION.

DRAINAGE AND SERVICES NOTES:

1. ALL WORKS ASSOCIATED WITH PUBLIC STORMWATER INFRASTRUCTURE IS TO BE CARRIED OUT IN ACCORDANCE WITH SPWA STANDARD DRAWINGS AND SPECIFICATIONS AND TO THE SATISFACTION OF COUNCIL.
2. ALL WORKS ASSOCIATED WITH PUBLIC SEWER AND WATER IS TO BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT STANDARDS & SPECIFICATIONS AND TO THE SATISFACTION OF COUNCIL.
3. ALL CONNECTIONS TO EXISTING WORKS TO BE CARRIED OUT BY THE RELEVANT AUTHORITY AT COST TO SUBSEQUENTLY APPROVED CONTRACTOR.
4. HYDRAULIC LAYOUT TO BE COORDINATED WITH OTHER SERVICES. HYDRAULIC LAYOUT AS SHOWN IS NOTIONAL. LAYOUT TO BE CONFIRMED ON SITE.
5. ALL EXISTING SERVICES TO BE LOCATED ON SITE PRIOR TO THE COMMENCEMENT OF WORKS.
6. GENERAL AND SPECIAL INSTALLATION TESTING SHALL COMPLY WITH RELEVANT STANDARDS AND THE TOLERANT PLUMBING CODE.
7. INSTALL ALL SERVICES TO THE REQUIREMENTS OF AS/NZS AND PART 3.1.2 OF THE BCA.
8. PROVIDE AND MAINTAIN TRAFFICABLE AREAS SHALL BE AT A MINIMUM OF 1.0m TO THE TOLERANT APPROVED EXCHANGE POINT.
9. ALL PIPE WORK UNDER TRAFFICABLE AREAS, INCLUDING DRIVEWAYS, IS TO BE BACKFILLED WITH COMPACTED FILL.
10. DRAINAGE PIPES TO BE 150mm (150mm) DIA. PIPES UNDER TRAFFICABLE AREAS TO BE 200mm (200mm) DIA.
11. MINIMUM COVER FOR DRAINAGE PIPES SHALL BE 1.0m FOR STORMWATER AND 1.5m FOR SEWERAGE.
12. MINIMUM COVER FOR DRAINAGE PIPES SHALL BE 1.0m FOR STORMWATER AND 1.5m FOR SEWERAGE.
13. WATER CONNECTIONS SHALL BE PROVIDED WITH VENTILATION AND BACKFLOW PREVENTION AS PER TOLERANT STANDARD DRAWING TOL-10-01.
14. ALL APPROXIMATIONS TO BE INSPECTED BY COUNCIL PRIOR TO BACKFILL.
15. POTENTIAL DAMAGE TO EXISTING SERVICES SHALL BE IDENTIFIED BY THE CONTRACTOR AND TAKEN INTO ACCOUNT PRIOR TO COMMENCEMENT OF WORKS. THESE RISKS MAY NEED TO BE INCREASED IN ORDER TO AVOID DAMAGE TO EXISTING SERVICES. THESE RISKS MAY NEED TO BE INCREASED IN ORDER TO AVOID DAMAGE TO EXISTING SERVICES.

DEPTH TO BATTERY OF OUTLET	MINIMUM INTERNAL ENCLOSURE (mm)	
	WIDTH	LENGTH
0-100	400	400
100-200	400	600
200-300	400	800
300-400	400	1000
400-500	400	1200
500-600	400	1400
600-700	400	1600
700-800	400	1800
800-900	400	2000
900-1000	400	2200



THESE DRAWINGS MUST BE APPROVED BY
 COUNCIL & TWSATER PRIOR TO CONSTRUCTION

OVERALL PLAN
 SCALE 1:1000 (A1)

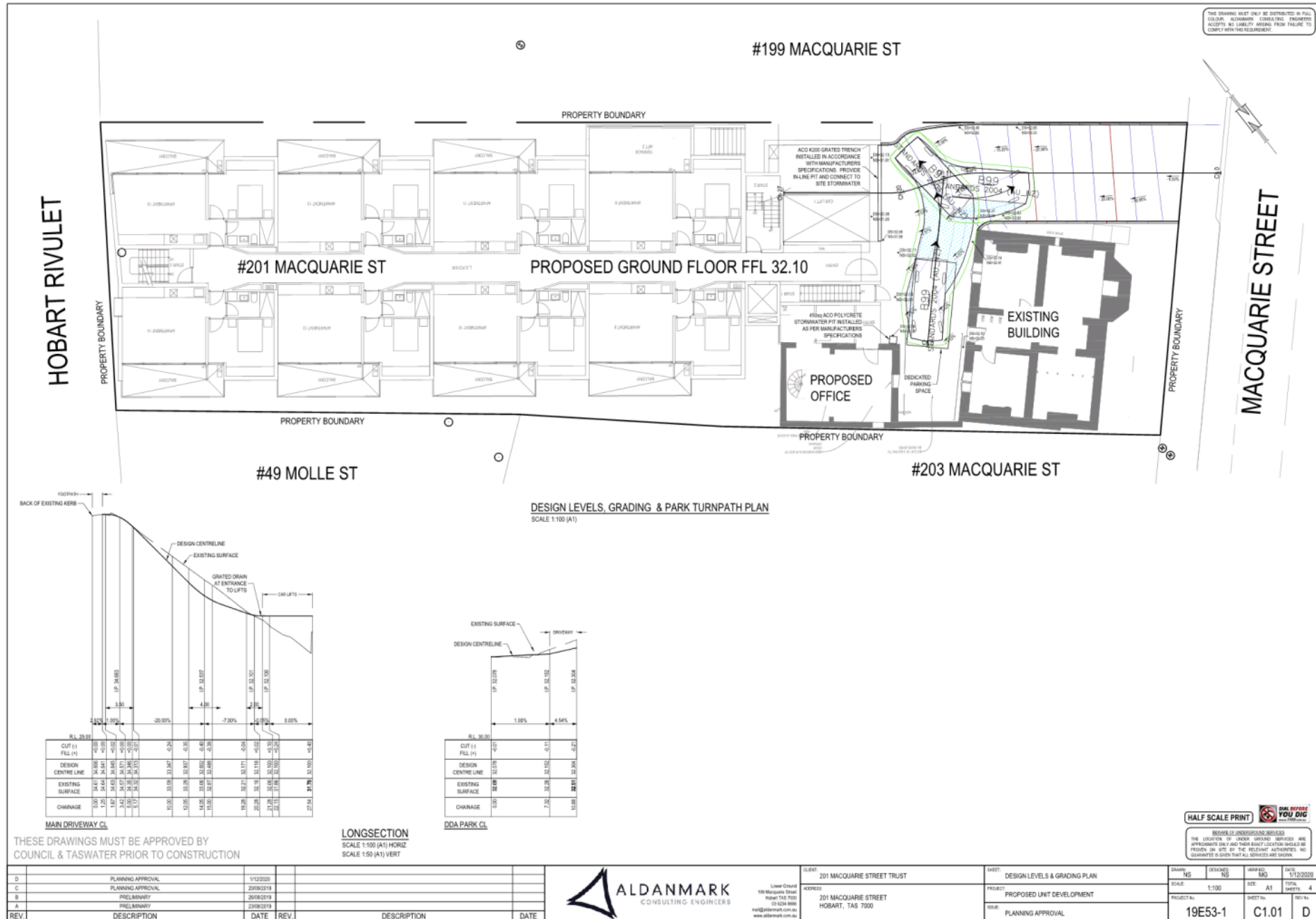


Client: 201 MACQUARIE STREET TRUST
 Address: 201 MACQUARIE STREET,
 HOBART, TAS 7000
 Tel: 03 624 9999
 Email: info@aldanmark.com.au
 Website: www.aldanmark.com.au

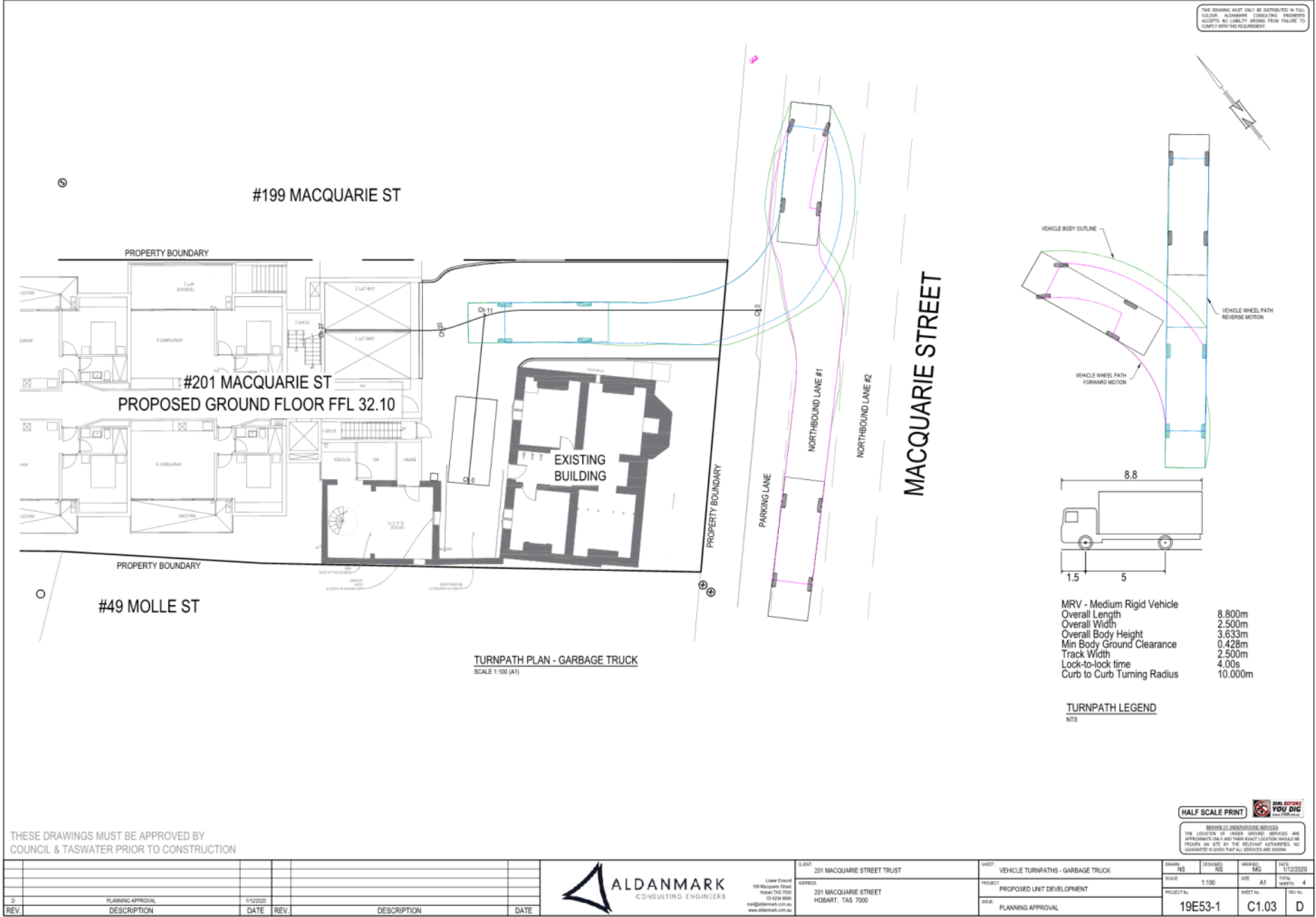
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 Address: 201 MACQUARIE STREET,
 HOBART, TAS 7000
 Tel: 03 624 9999
 Email: info@aldanmark.com.au
 Website: www.aldanmark.com.au

Sheet: OVERALL PLAN, INDEX AND NOTES
 Project: PROPOSED UNIT DEVELOPMENT
 Date: PLANNING APPROVAL

HALF SCALE PRINT			
DATE	NO	NO	NO
SCALE	1:1000	SITE	A1
PROJECT NO.	19E53-1	SHEET NO.	C0.01
DATE	1/12/2020	TOTAL SHEETS	4
REV	D	REV	D







REV.	DESCRIPTION	DATE	REV.	DESCRIPTION	DATE
01	PLANNING APPROVAL	1/12/2020			

HYDRAULIC SERVICES DRAWINGS
APARTMENT DEVELOPMENT
201 MACQUARIE STREET
HOBART TAS 7004

H0.01	HYDRAULIC INDEX	9
H0.02	HYDRAULIC NOTES	3
H1.01	EXISTING SITE SERVICES PLAN	4
H1.02	EXISTING STORMWATER SERVICES	1
H2.01	STORMWATER BASEMENT LEVELS 1 AND 2	5
H2.02	SEWER DIVERSION BASEMENT LEVEL 3	6
H2.03	GROUND FLOOR WATER	3

4	PLANNING APPROVAL	13/03/2020	9	PLANNING APPROVAL	27/11/2020
3	PLANNING APPROVAL	6/12/2019	8	PLANNING APPROVAL	08/07/2020
2	PLANNING APPROVAL	25/11/2019	7	PLANNING APPROVAL	26/06/2020
1	PLANNING APPROVAL	16/10/2019	6	PLANNING APPROVAL	13/06/2020
0	PLANNING APPROVAL	18/06/2019	5	PLANNING APPROVAL	15/05/2020
REV.	DESCRIPTION	DATE	REV.	DESCRIPTION	DATE



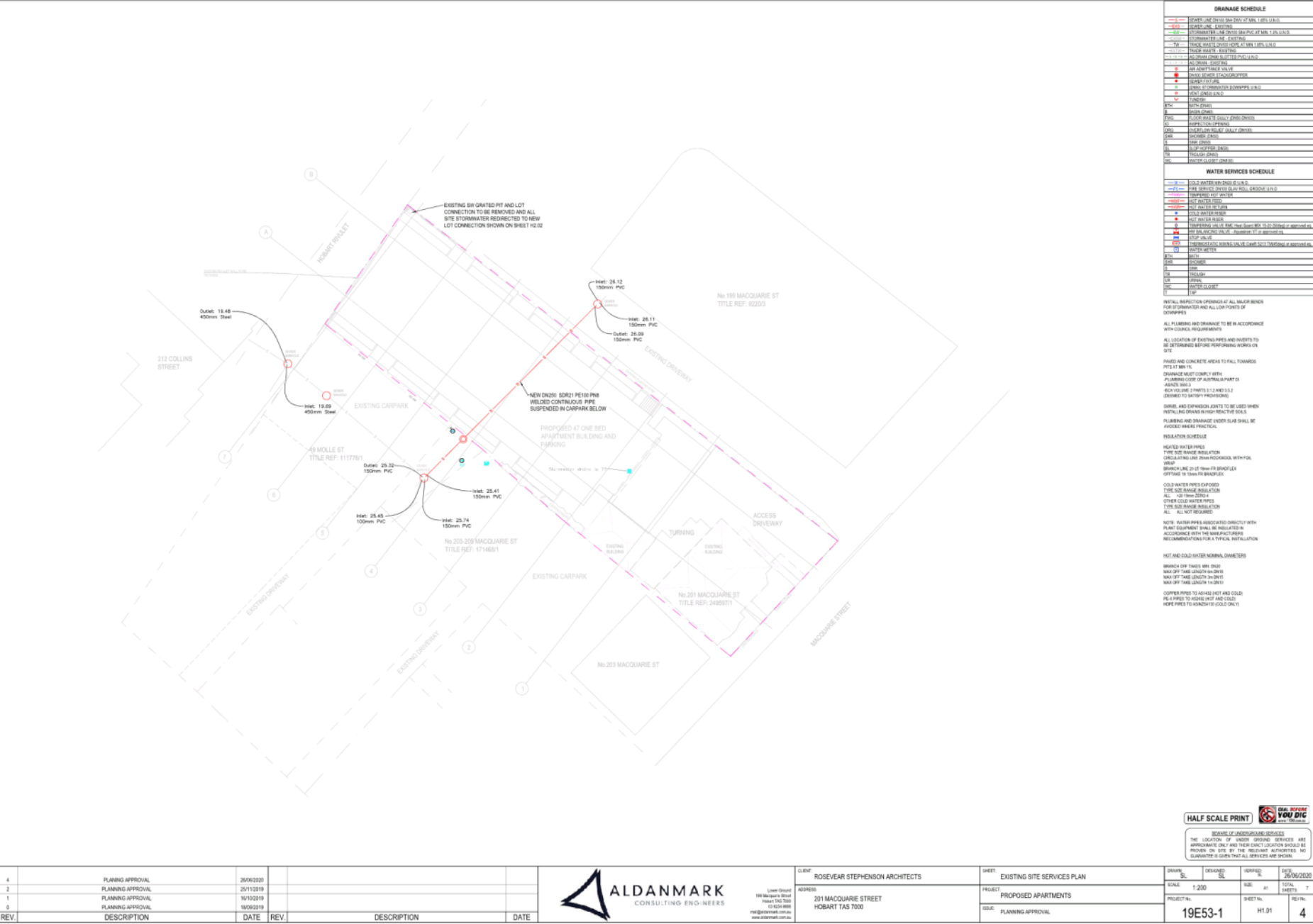
ALDANMARK
CONSULTING ENGINEERS

199 Macquarie Street
Hobart TAS 7000
03 6234 8888
info@aldanmark.com.au
www.aldanmark.com.au

CLIENT	ROSEVEAR STEPHENSON ARCHITECTS
ADDRESS	199 MACQUARIE STREET HOBART TAS 7000
SHEET	HYDRAULIC INDEX
PROJECT	PROPOSED APARTMENTS
ISSUE	PLANNING APPROVAL

DRAWN SL	DESIGNED SL	VERIFIED SL	DATE 27/11/2020
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		REV NO.	9





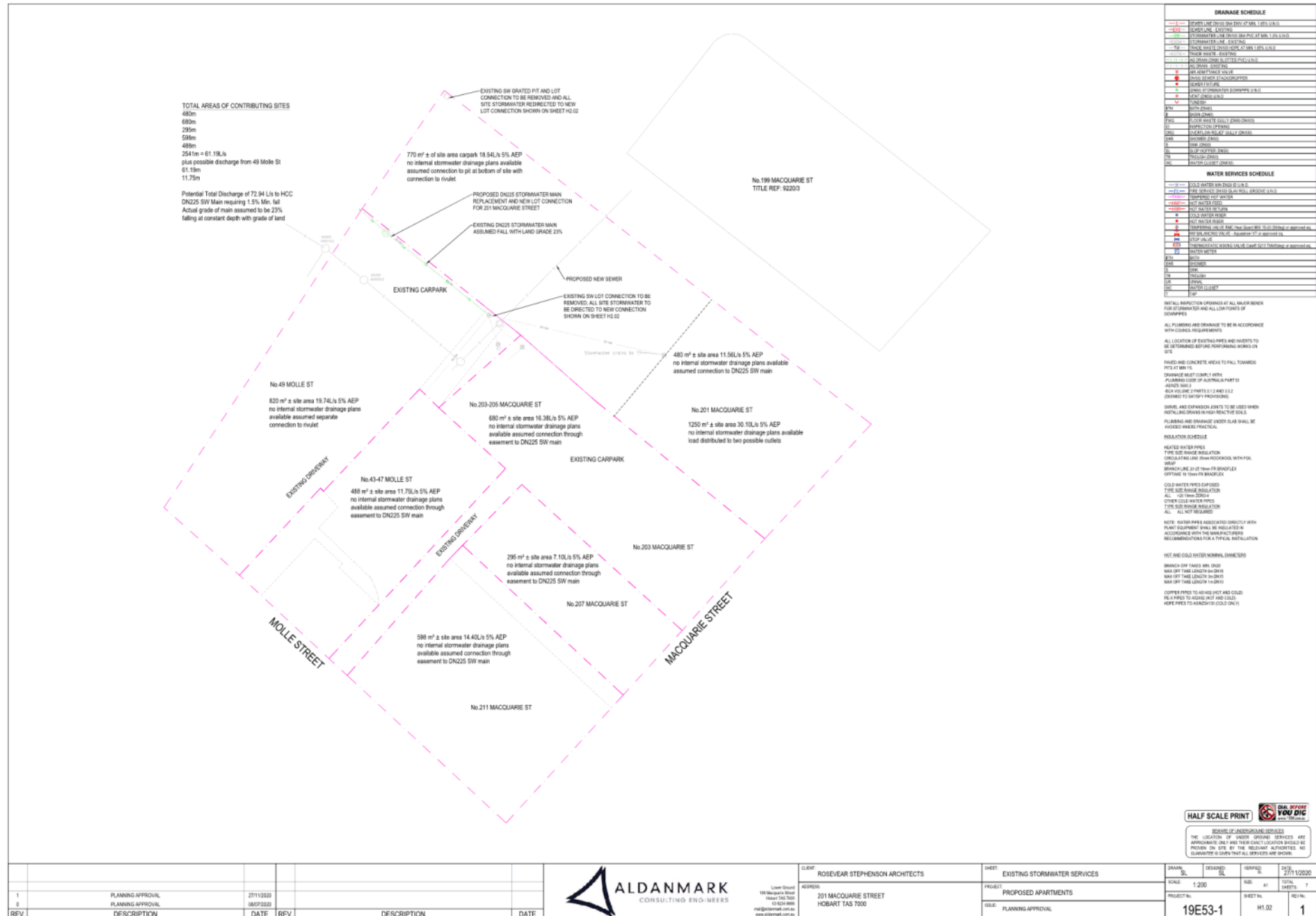
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4	PLANNING APPROVAL	18/06/2019			

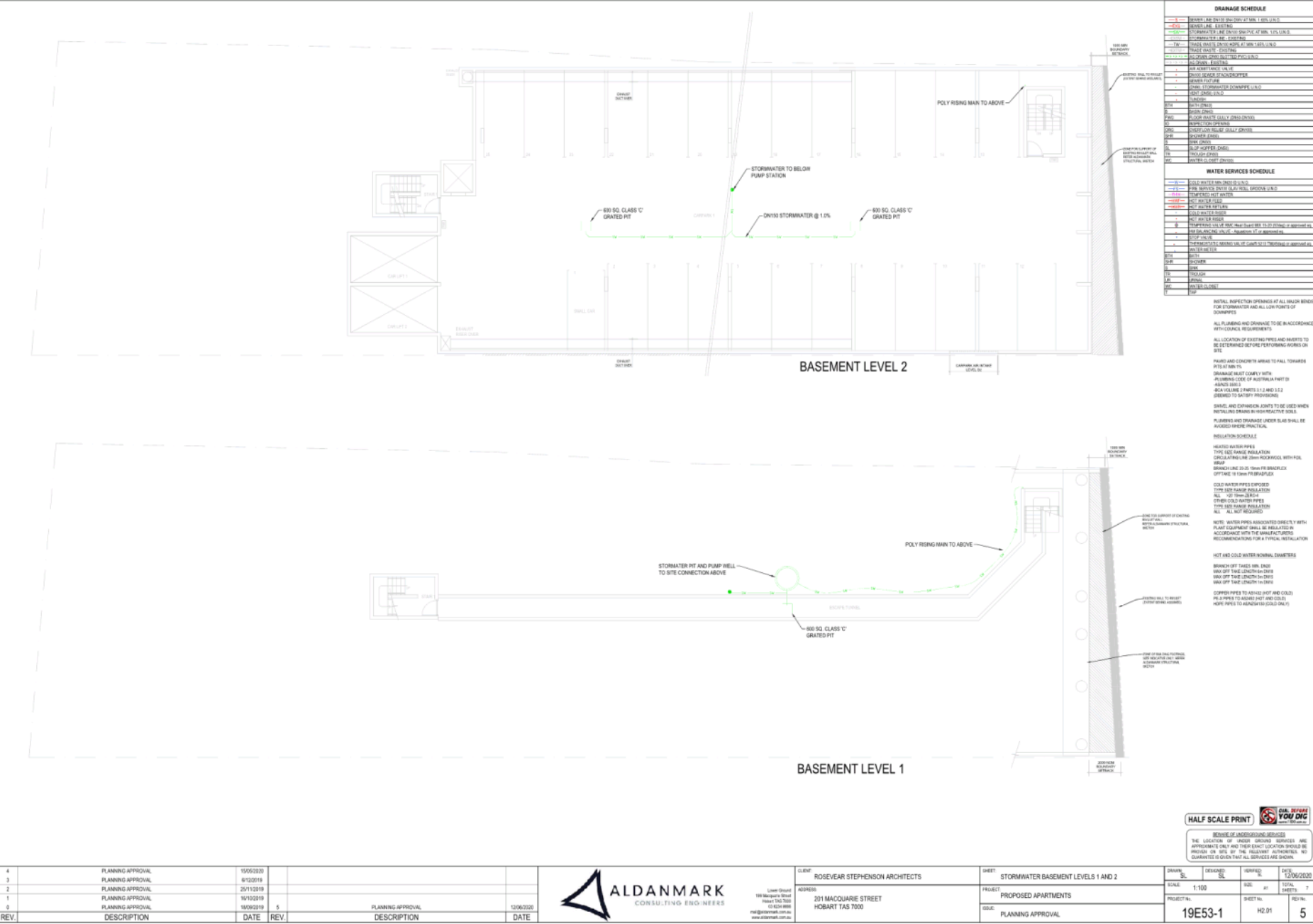


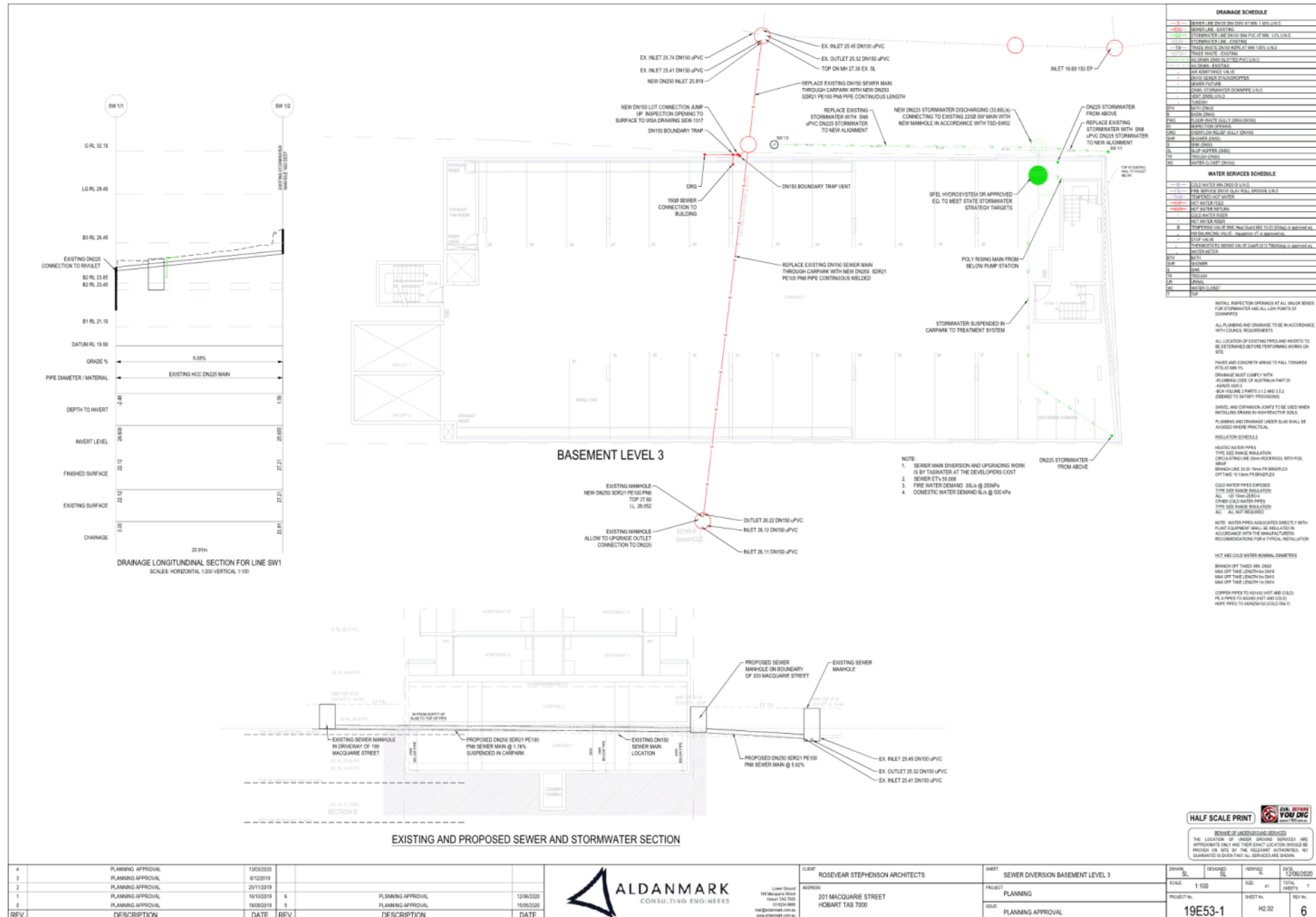
CLINT
ROSEVEAR STEPHENSON ARCHITECTS
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Hobart TAS 7000
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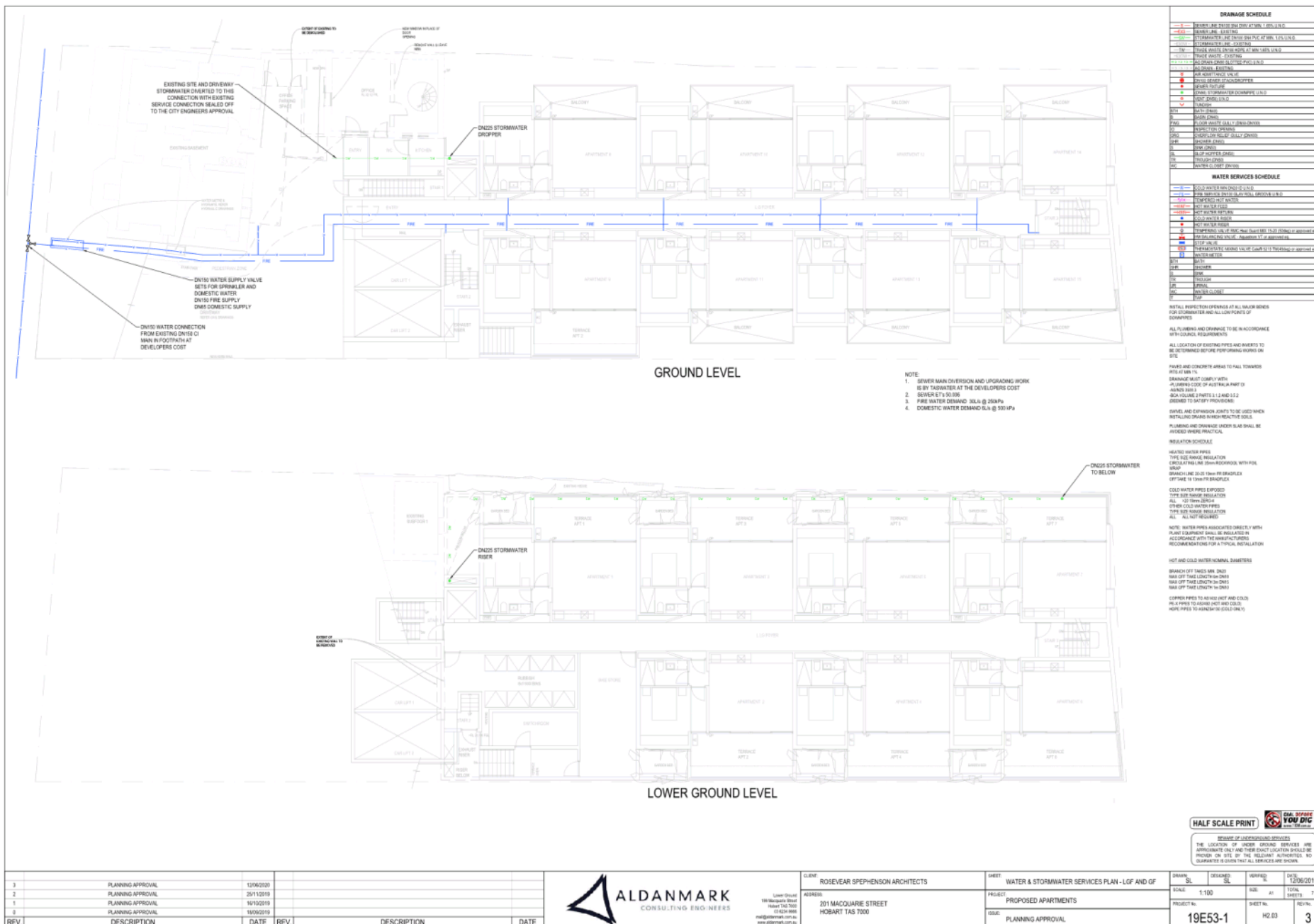
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HOBART TAS 7000
SHEET: EXISTING SITE SERVICES PLAN
PROPOSED APARTMENTS
ISSUE: PLANNING APPROVAL

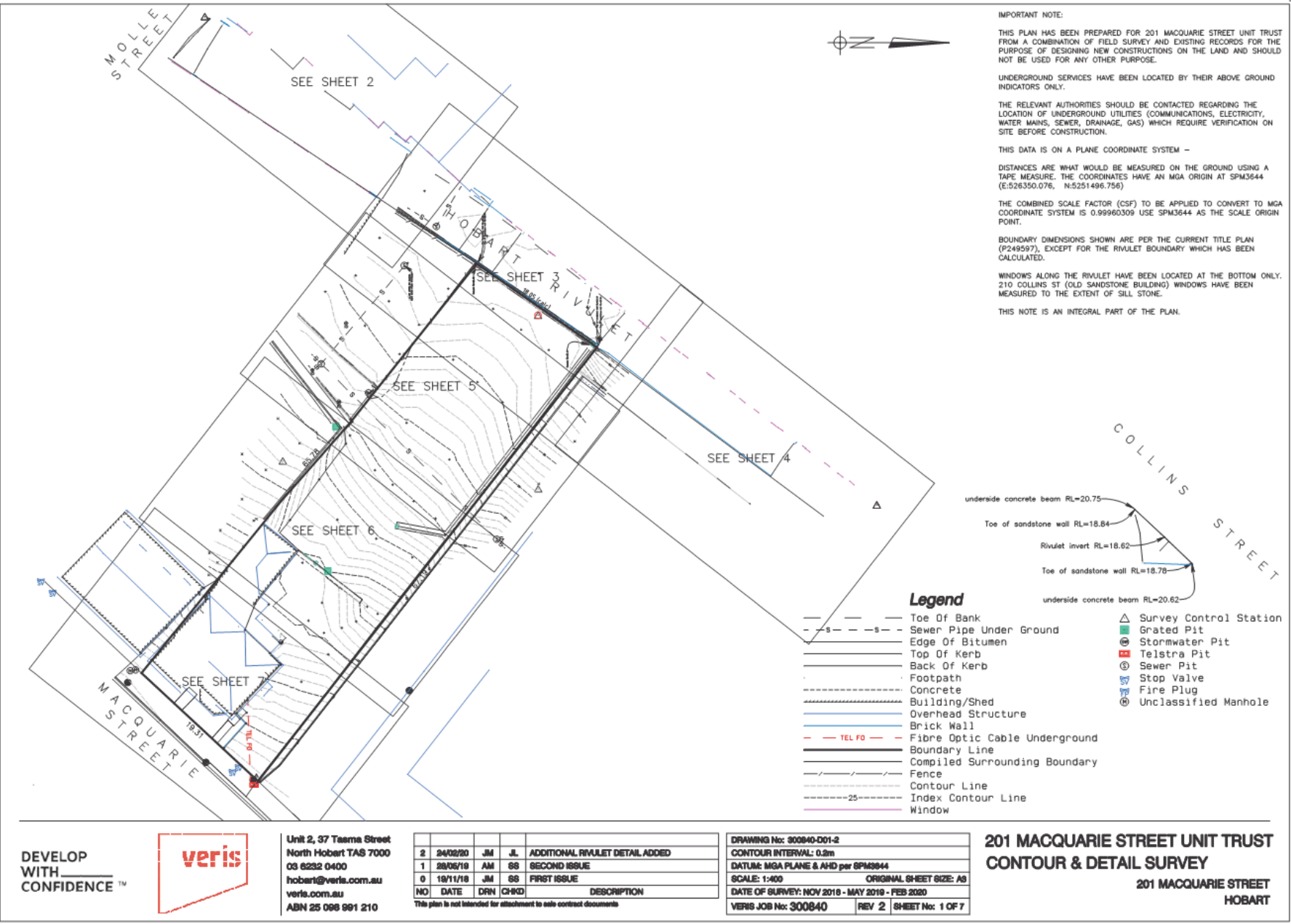
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19E53-1			

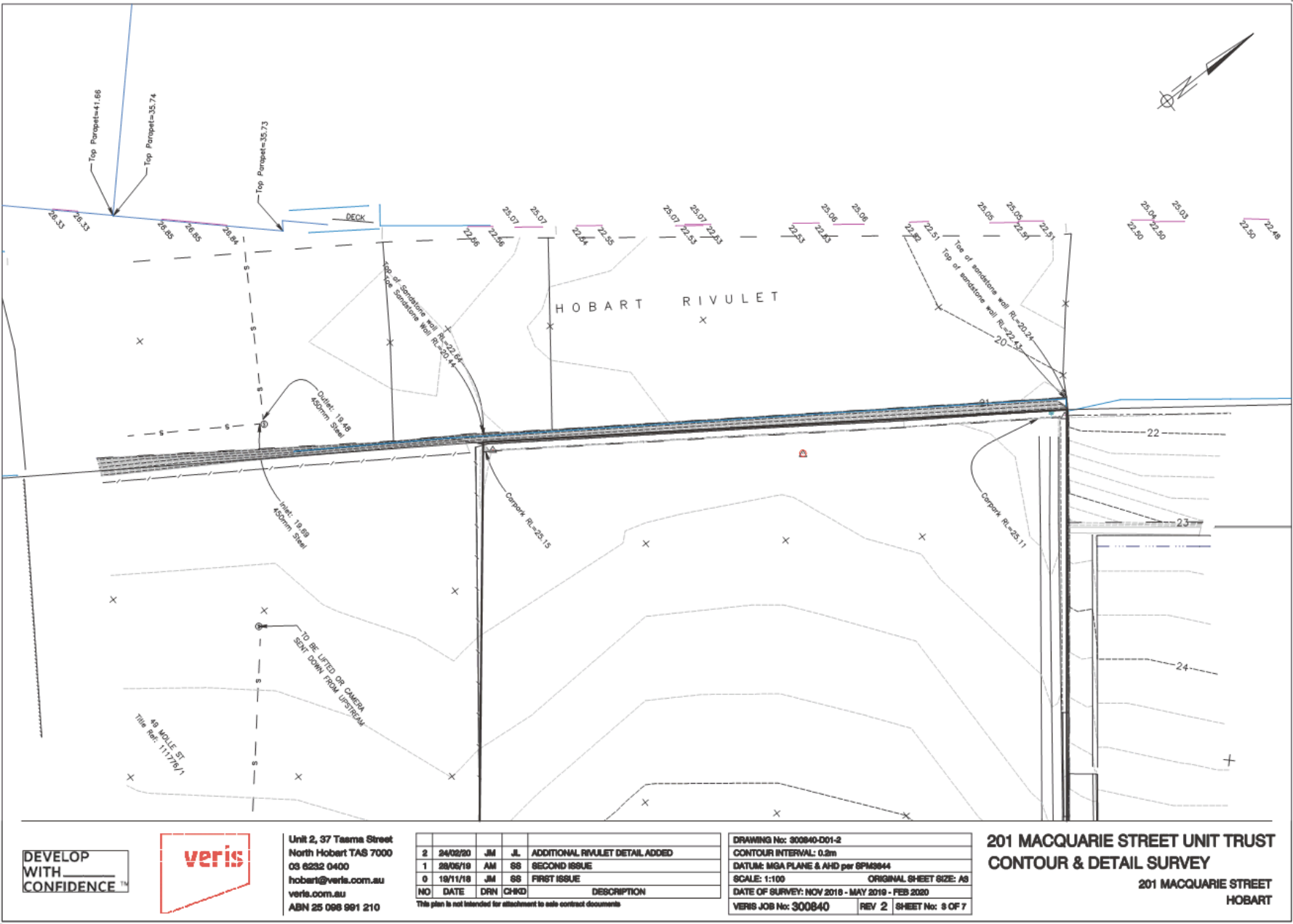












Apartment development - 201 Macquarie Street

Design statement



ROSEVEAR STEPHENSON

The proposal

The proposal is for construction of a new eight storey residential building containing two basement levels of car parking and six levels of residential accommodation. Specifically the proposal includes:

- retention of the two existing heritage listed buildings sited towards the front of the site with removal of connecting infill between the two, continued use of the front building as two flats and conversion of the rear 'stables' building from two residential flats to a single office,
- two basement levels of car parking, accessed from a driveway off Macquarie Street and serviced via two car lifts to provide 49 car spaces with electric vehicle charging and 4 motor bike spaces.
- a two storey form at ground level which provides for the apartment building entry and vehicle lifts entry in a form integrated with and appropriate to the stables building,
- six levels of apartments service via a central corridor open at the Macquarie Street end,
- 43 one bed apartments of average 47m² each with separate bedroom and bathroom, combined living, dining and kitchen and external balconies of 12m² average. Nearly all apartments will have either a mountain or city views and either morning or afternoon sun,
- 2 two bed apartments with separate bathroom, combined living, dining and kitchen, balcony and roof terrace of 18m²



Consultation

From the early concept stage, the proposal has benefitted from considerable consultation with Hobart City Council planning and heritage officers. The process followed the following stages.

Preliminary concept design meeting 12/6/19 @ HCC with Ben Ikin and Liz Wilson for planning comment:

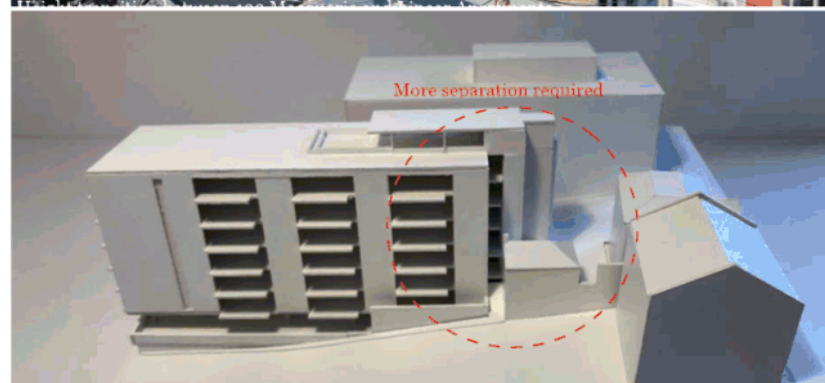
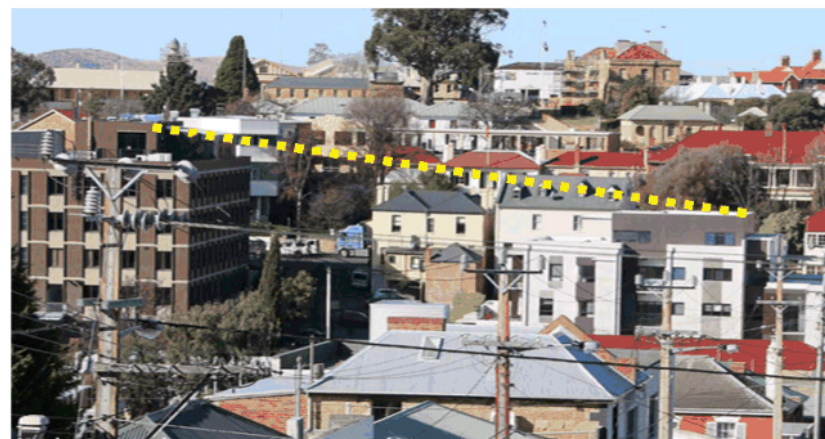
- height and scale in keeping with 199 and Linear Apartments and comfortable in relation to heritage buildings on Macquarie Street, but onus on us to demonstrate compatibility with Molle st surroundings,
- 1 to 1 parking/apartment ratio ideal,
- projection of balconies over rivulet to be discussed with Rowan Probert.

Preliminary concept design meeting 26/6/19 @ 201 Macquarie Street with Brendan Lennard and Liz Wilson for heritage comment:

- satisfied with height and bulk of proposal, but needs more separation between stables and new building,
- any overhang of rivulet including balconies would not be supported,
- stables interiors have little heritage fabric remaining, linking into the new building is acceptable.

Follow up meeting 15/07/19 @ HCC with Brendan Lennard and Ben Ikin for follow up heritage comment:

- removal of bedsits so greater separation to stables and alignment of main body of building with edge of stables achieved and satisfied BL,
- detail of how one storey entry section will connect to stables will be required,
- find potential reuse of stone from old retaining wall if possible.



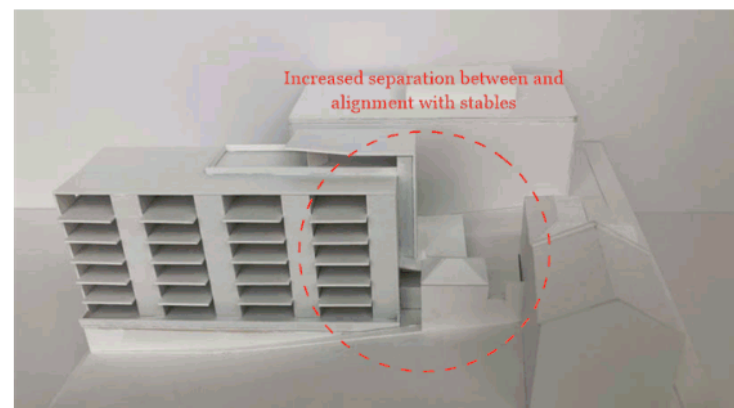
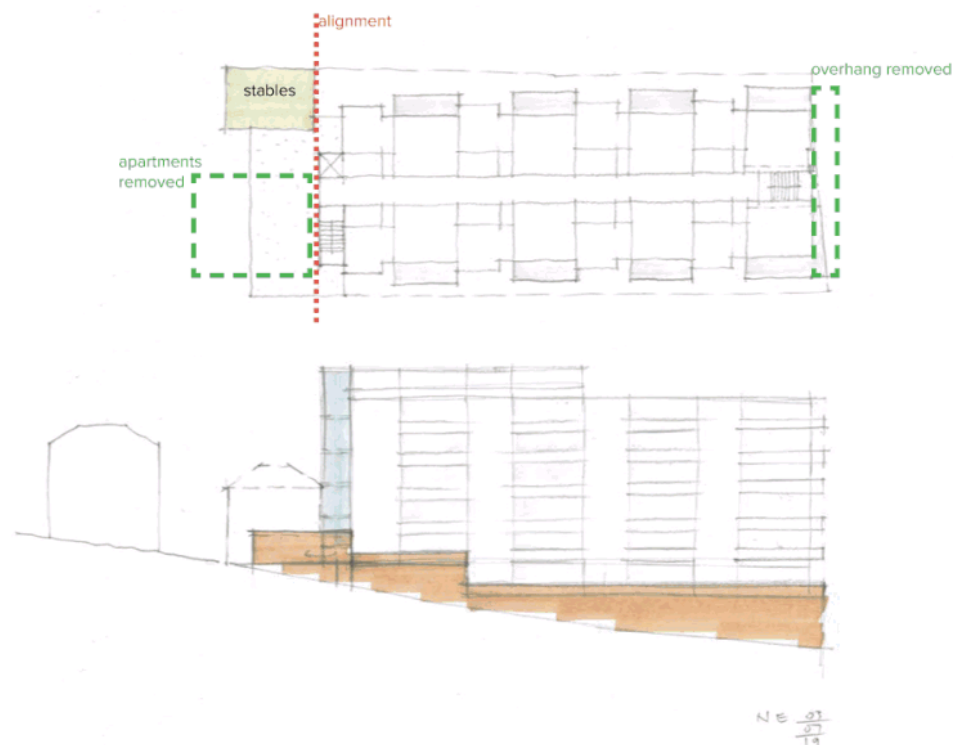
Consultation

UDAP Panel pre DA meeting 20/08/19 including Liz Wilson and Brendan Lennard:

- panel considered development should step down with topography and building should be recessive. *We highlighted such an approach would be inconsistent with surrounding buildings,*
- minimal side boundary setback was questioned,
- some apartments identified as have limited access to sunlight,
- suggestion that setback to rivulet was appropriate *however we highlighted that building to the rivulet edge was the more dominate precedent,*
- suggestion the pedestrian access along rivulet should be investigated, *we clarified that there is no council policy for this,*
- landscaping should be deep soil where possible,
- internal corridor should have natural lighting,

Follow up conversation 21/08/19 with Liz Wilson regarding UDAP meeting:

- unclear why UDAP members see stepping of the building as necessary and sees transition to neighbour buildings (not including rivulet which is not a building,) as more important,
- sees that it is adequately transitioning in height generally between the larger buildings but need to justify the circumstances in relation to the Mole Street lower scale neighbours,
- accepts argument that no setback to rivulet is consistent with the majority of buildings in the block and likely development of 199 along the rivulet will not be setback,
- suggestion that there should be greater side setback is not consistent with planning scheme and therefore not relevant.



Consultation

Following extensive negotiation with HCC stormwater management division in relation to the Hobart Rivulet frontage, GM consent was granted in June of 2020 and submission of the proposal for planning approval shortly followed.

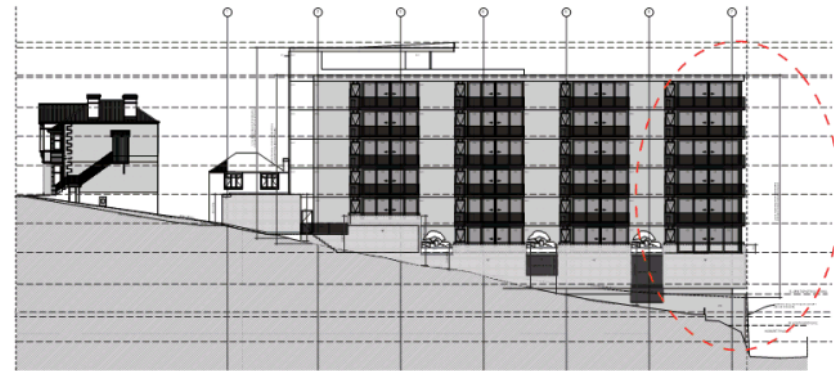
Initial assessment by assessing planner Liz Wilson led to the advice that in relation to 15.4.1 PI, the proposal was not considered to:

- be compatible with the scale of nearby buildings and,
- allow for a transition in height between adjoining buildings, where appropriate

In response a revised proposal was developed which:

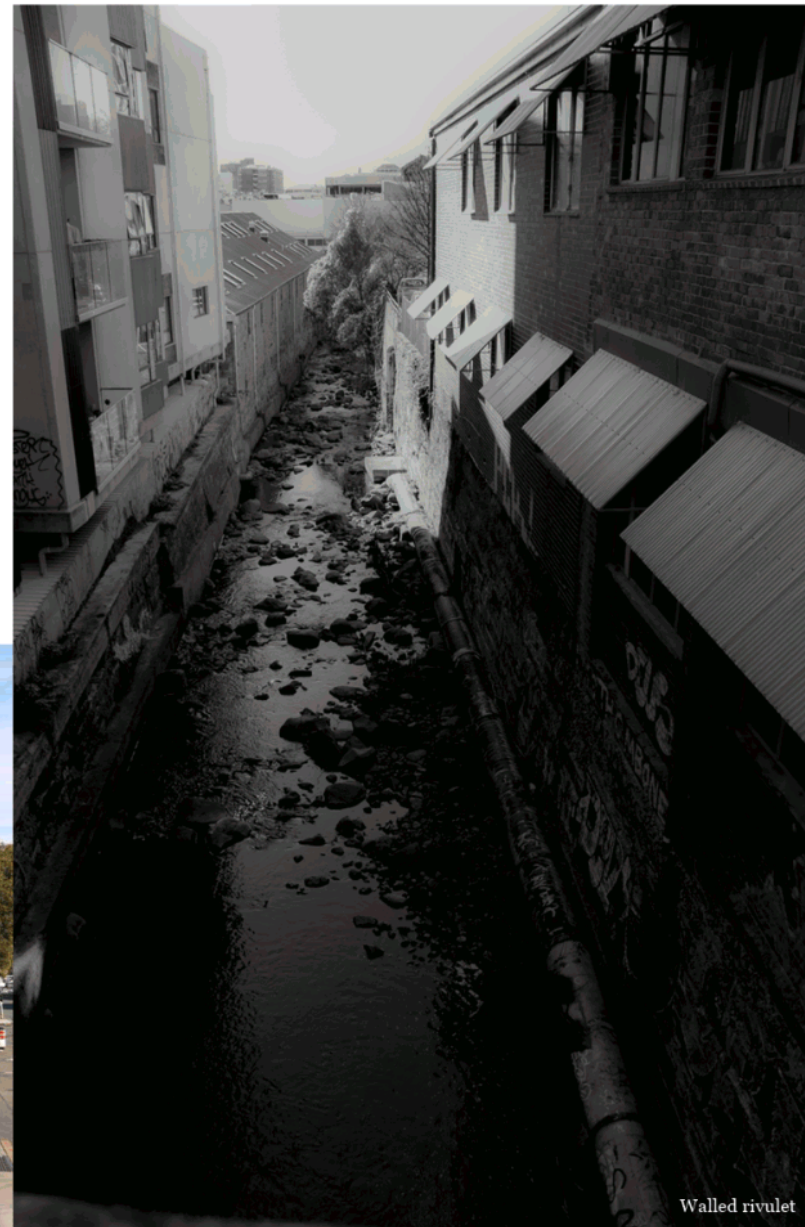
- removed level 5 and roof terrace to reduce height,
- removed two units from the NW end and introduced more setback to 'step back' from the boundaries and express the main bulk of the building as four storey,
- interlink the balconies so the slab edge reads as a continuous horizontal element which in conjunction with sliding privacy screens to all balconies, significantly reduces the appearance of bulk and scale.

This proposal was then presented to HCC planning and heritage officers on 28.09.20 who subsequently indicated in principle support for the revised proposal.



Rivulet response

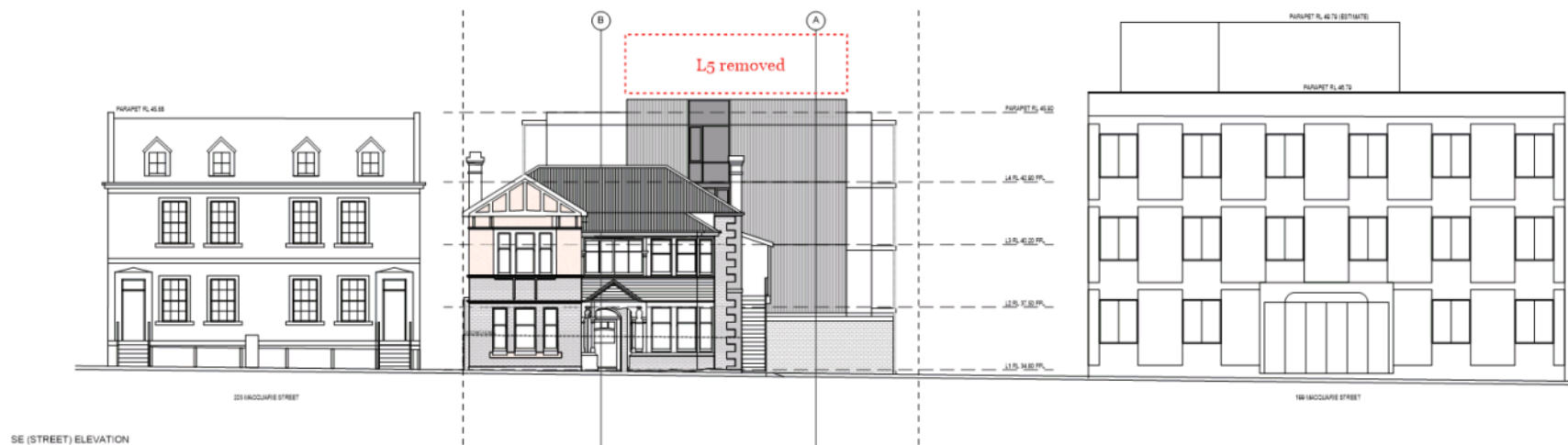
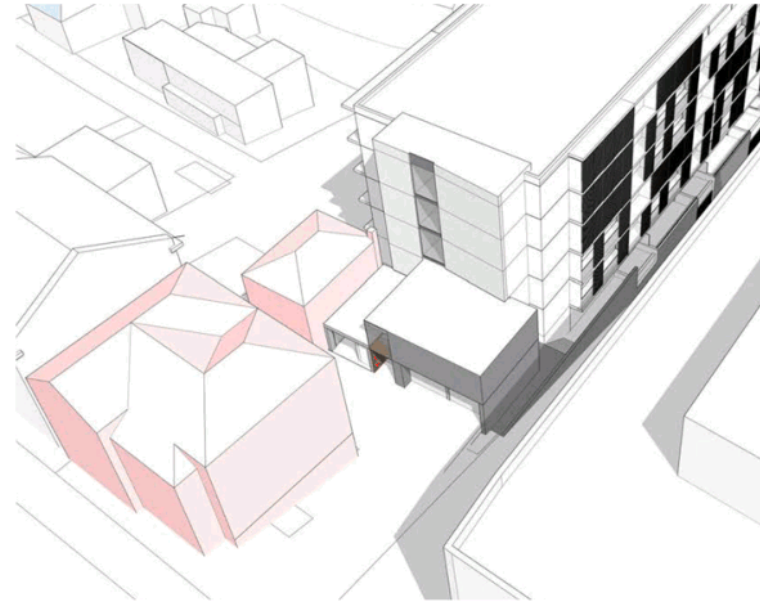
In the block between Molle and Barrack Street, the rivulet is characterised by buildings defining the rivulet 'wall' with zero setback and the proposal follows this precedent thereby reinforcing the local urban pattern. In the broader context, maintaining this precedent allows the rivulet to be located from afar by the built form. Potentially development on 199 Macquarie Street and 47-49 Molle Street can reinforce this pattern and make the rivulet less anonymous.



Street address

Whilst achieving the initial HCC direction for the proposal not to be visible behind 201 Macquarie Street from street level, the proposed building takes alignment queues from its neighbours and is massed to contribute to the streetscape as follows:

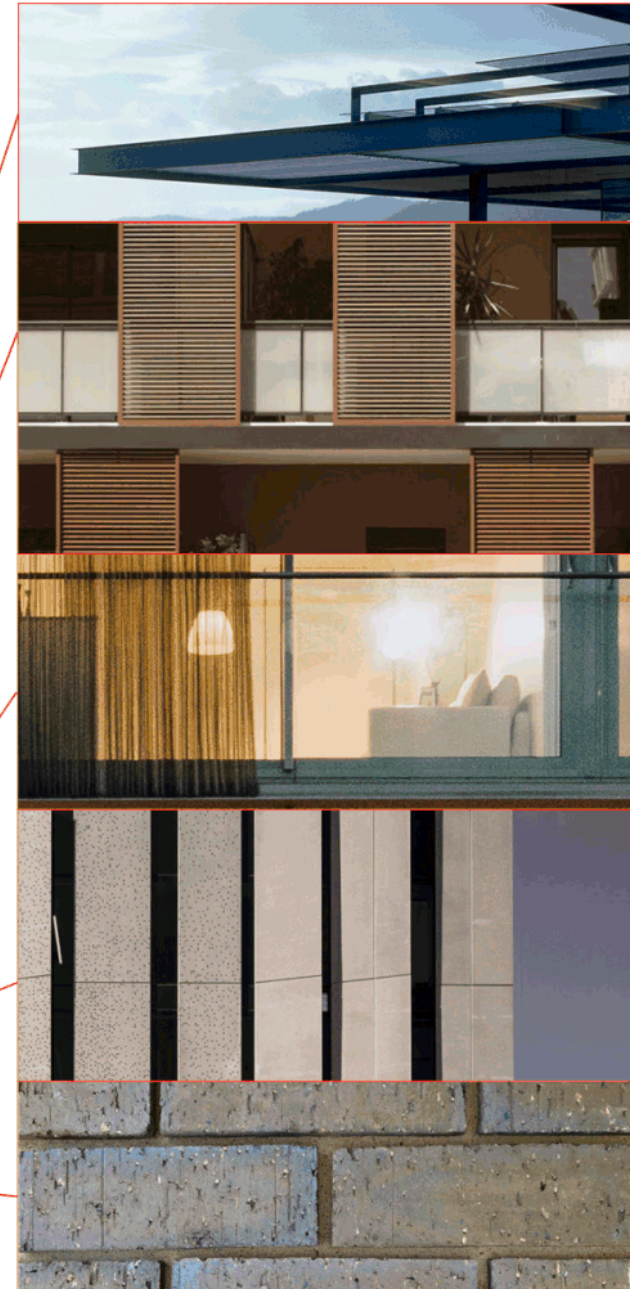
- aligning the main building bulk (parapet level RL 45.90,) with the ridge height of 203, and stepping down from 199,
- a two storey brick entrance structure to present at street level as well as reduce the overall scale of the street end. This effectively provides a 'transitional' element between the five stories of new building and the existing three storey street building,
- a referential crank to the apartment stair wall which matches the existing street building alignment.



Form and material

The proposal takes a simple tripartite approach in both form and material:

- a 'pedestal' or base of brick to make contextual connection to neighbouring history buildings in both scale and material,
- the 'shaft' or main body of articulated off white textured concrete panels, projecting balconies with glass balustrades behind bronzed anodised aluminium sliding screens,
- a 'capitol' or top in the form of the increased wall step back roof terraces and an expressed roof.

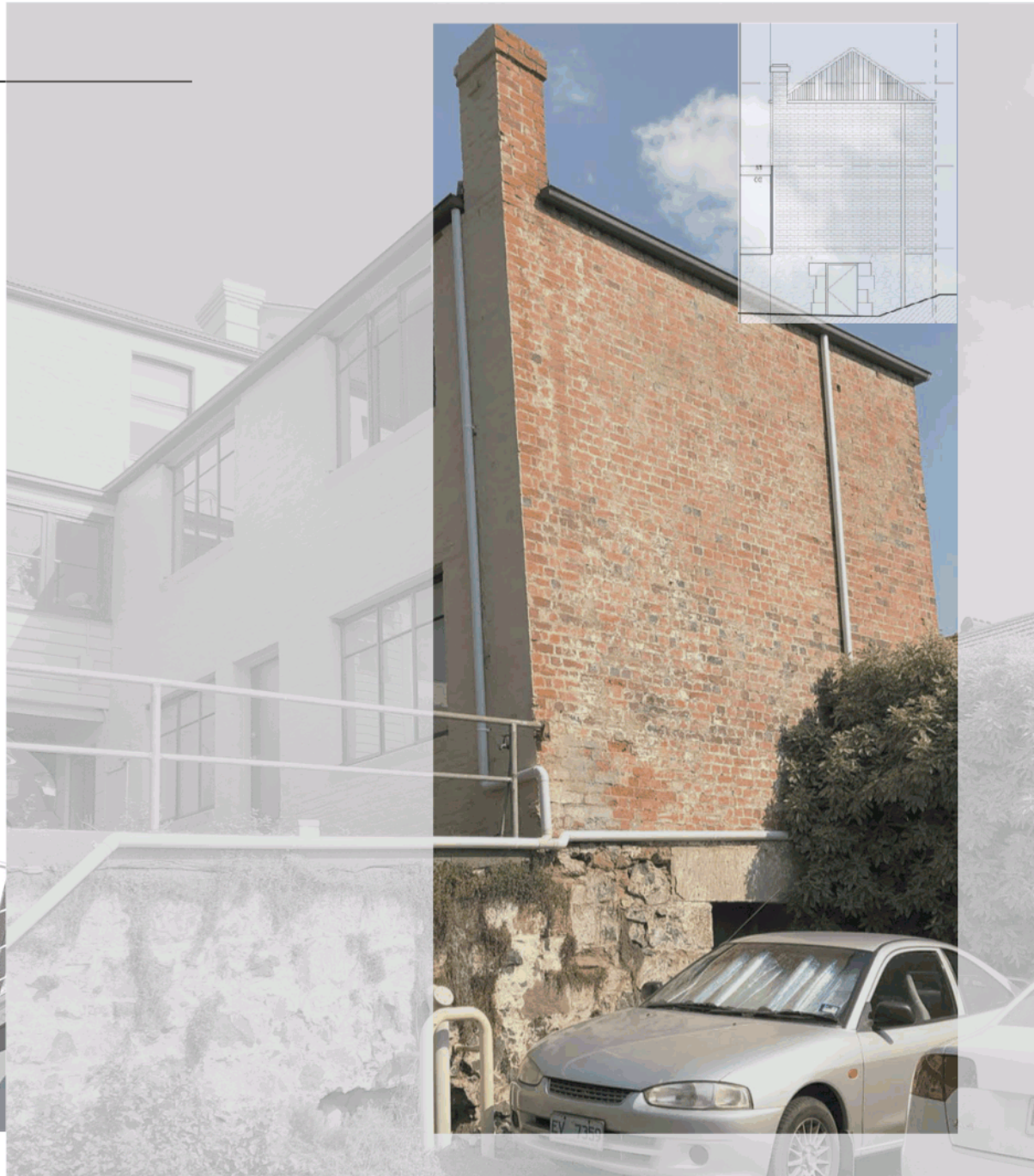
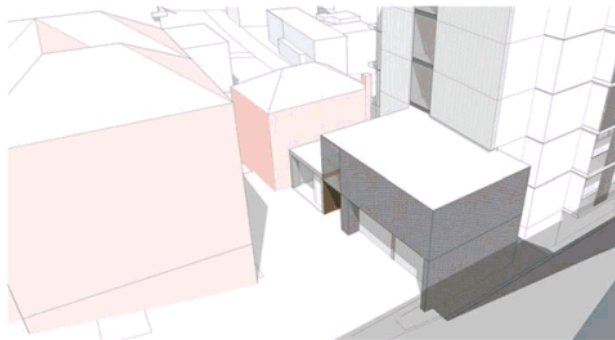


Heritage integration

The 'stables,' although significantly modified, has largely intact NW and SW elevations which are to be retained in the proposal. The NE elevation becomes integrated with the new via a single storey entry between it and the two storey apartment entry which matches the brick height of the stables.

The dilapidated retaining wall which forms the 'stables' base and a historical change of level on the site, is to be mostly removed however, a remnant section of wall and existing ground levels are retained to allow a continued understanding of that history.

Proposed for conversion to office space, the 'stables' will have poor quality residential internal alterations removed and replaced with revealed historical materials and finishes where available.

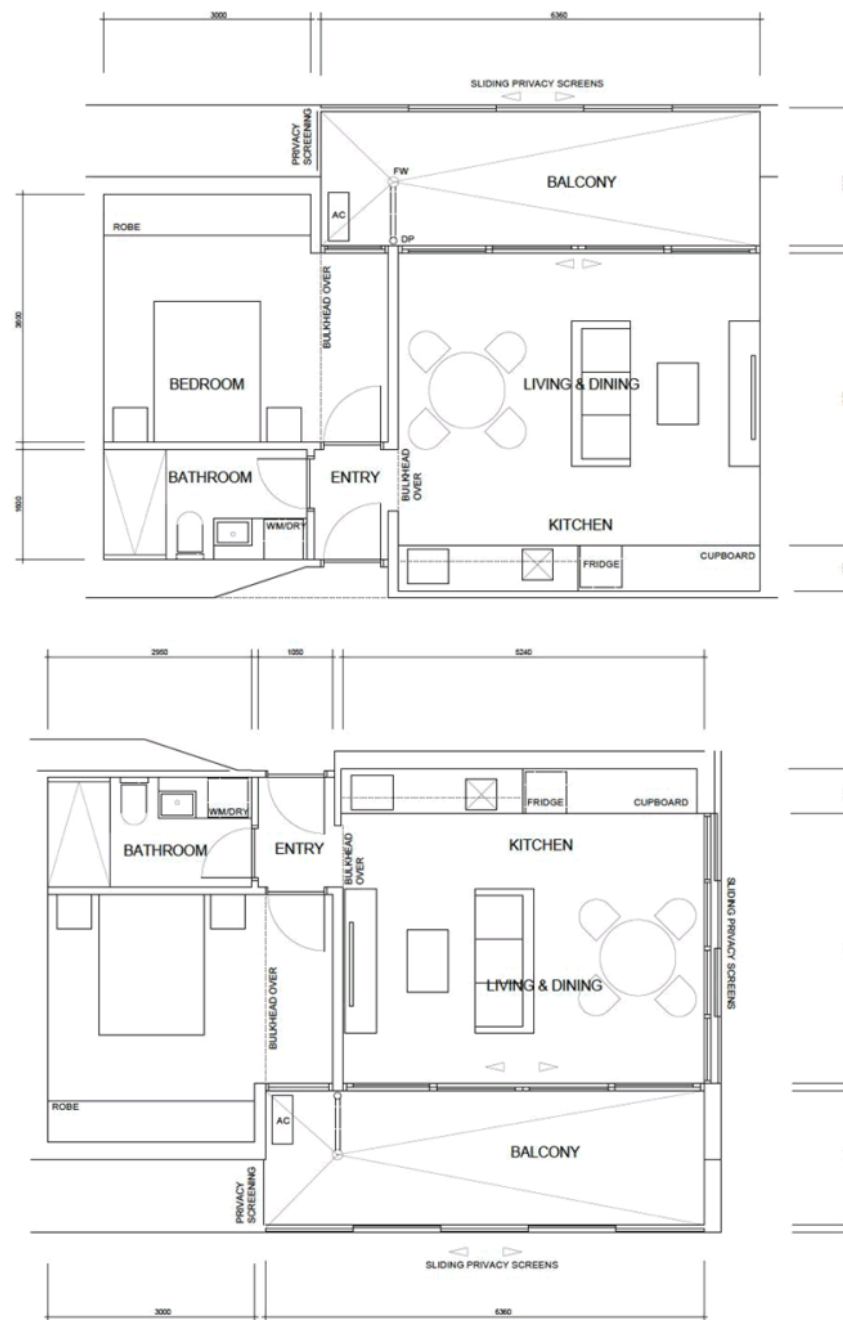


Apartment model

The developer considers the current housing market has limited options for smaller, more affordable dwellings that suit the needs of single professional people, young couples and students looking for inner city living.

The 46-47m² apartment floor plans whilst small, form an 'L' shape around the semi recessed 12m² balconies such that the interior living space integrates with outdoor living space to maximise the feeling of space whilst also delivering a separate bedroom and entry.

This apartment arrangement also presents an opportunity externally in the form of a more significant amount of glazing and balcony relative to wall area. Combined in the efficient floor plate arrangement of 8 units per level, the resultant approach to overall form was considered best as one of a simple well proportioned main building bulk which is articulated by the recessed windows and projecting balcony rhythm combined with the finer detail such as balustrades and sliding screens.



Summary

Discussion on points raised through consultation with HCC and UDAP

Heritage

Following the consultation process of June to August 2019 outlined above, we understand the proposed development had the support of Brendan Lennard in terms of the alterations to the front house and the stables as well as the relationship between them and the new building.

GM Consent

Submission for planning approval was made in November 2019 but considered invalid as GM consent was required in relation to the Hobart Rivulet. Resubmission is now made after receiving GM consent 20-35 on 10 June 2020

Planning

‘Transitioning in height in relation to the Mole Street lower scale neighbours’ being 43/47 & 49 Molle Street:

- currently vacant land used for car parking separates the buildings of 43/47 & 49 Molle Street and the proposed development,
- the rear of these buildings are approximately 13m from the boundary with 201 Macquarie and thus have approximately a 15m minimum setback to the proposed building,
- as no private outdoor spaces are potentially overlooked, and given there is 15m separation to windows facing 201, we submit that adequate setback is achieved that does not warrant 201 ‘stepping away’ to achieve further setback for privacy purposes,
- in terms of transitioning in height between the proposed 6-7 stories and the Molle Street 2 storey properties:
 - a ‘stepping down’ towards the rivulet end would compromise a transition in height between 199 and Linear Apartments,
 - Linear Apartments is 3 levels higher than 49 Molle Street with approximately 5m setback where as the proposal will be 3 levels higher than 49 Molle Street and 4 levels higher than 43/47 with 15m of setback.

UDAP

‘panel considered development should step down with topography and building should be recessive’

- this was considered but due to the strong surrounding precedent of no setback to the rivulet, no precedent of existing buildings following the topography and that any future development of 199 Macquarie Street will likely align to and follow the alignment of the rivulet, it is considered the proposed response as the most appropriate. In immediate terms it allows future occupants of the end apartments to be able to look up and down the rivulet and thereby better relate to their context. In the wider cityscape the proposed alignment to the rivulet will define the rivulet edge when viewed from afar; something a retreating approach would not do.

‘minimal side boundary setback was questioned’

- proposed setback is consistent with the planning scheme,

‘some apartments identified as have limited access to sunlight’

- The site orientation being north south about the long axis is less than ideal for maximising solar access however, the proposed arrangement of apartments does facilitate nearly all apartments to enjoy morning or afternoon sun and city or mountain views respectively. Apartments in the SE corner, (9,17,25 and 41,) will be impacted by 199 Macquarie Street but still achieve a reasonable amenity overall.

‘suggestion the pedestrian access along rivulet should be investigated’

- not council policy nor easement available,

‘landscaping should be deep soil where possible’

- given the landscaped zones at level LG are over carparks they cannot be ‘deep soil’ however soil depth of 700mm will be achieved through planter boxes,

‘internal corridor should have natural lighting’

- this has been achieved at the SE end glass block facade.

**RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME 249597	FOLIO 1
EDITION 6	DATE OF ISSUE 15-Oct-2018

SEARCH DATE : 17-Jun-2020

SEARCH TIME : 11.21 AM

DESCRIPTION OF LAND

City of HOBART
Lot 1 on Plan 249597
Derivation : The Allotment in Section H Gtd to D McPherson and
anr
Prior CT 3211/46

SCHEDULE 1

E153756 TRANSFER to 201 MACQUARIE STREET PTY LTD Registered
15-Oct-2018 at noon

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
SAVING AND RESERVING to the occupier for the time beign of the
Mill now or formerly belonging to John Walker the
right of access at all times to the Mill Race running
through the said land within described for the
purpose of cleansing and repairing the same.
E153757 MORTGAGE to Australia and New Zealand Banking Group
Limited Registered 15-Oct-2018 at 12.01 PM

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations



FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



ORIGINAL - NOT TO BE REMOVED FROM TITLES OFFICE

R.P. 1459

TASMANIA

REAL PROPERTY ACT, 1862, as amended

NOTE—REGISTERED FOR OFFICE

CONVENIENCE TO REPLACE



CERTIFICATE OF TITLE

Register Book

Vol. Fol.

3211 46

Cert. of Title Vol. 165 Fol. 135

I certify that the person described in the First Schedule is the registered proprietor of an estate in fee simple in the land within described together with such interests and subject to such encumbrances and interests as are shown in the Second Schedule. In witness whereof I have hereunto signed my name and affixed my seal.

Recorder of Titles.



DESCRIPTION OF LAND

CITY OF HOBART

ONE ROOD AND TEN PERCHES on the Plan hereon

FIRST SCHEDULE (continued overleaf)

ETHEL LOUISE MURDOCH of Hobart, Married Woman.

SECOND SCHEDULE (continued overleaf)

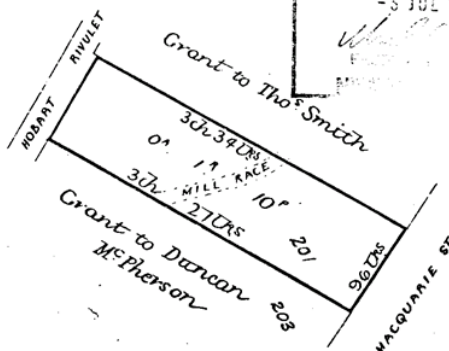
SAVING and reserving to the occupier for the time being of the Mill now or formerly belonging to John Walker the right of access at all times to the Mill Race running through the said land within described for the purpose of cleansing and repairing the same.

THE RECORDER OF TITLES ARE NO LONGER SUBSISTING.

Lot 1 of this plan consists of all the land comprised in the above-mentioned cancelled folio of the Register.

REGISTERED NUMBER

249597



The allotment in Section H. Gtd. to D. McPherson and anr. Meas. are in chains and links.

FIRST Edition. Registered 16 SEP 1971

Derived from C.T. Vol. 165 Fol. 135 - Transfer 28176 B. Shaw. *Ag*

**RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME 9220	FOLIO 3
EDITION 9	DATE OF ISSUE 17-Feb-2020

SEARCH DATE : 17-Jun-2020

SEARCH TIME : 11.23 AM

DESCRIPTION OF LAND

City of HOBART
Lot 3 on Sealed Plan 9220
(Formerly Lots 1 & 2 on SP 9220)
Derivation : Whole of 0A-2R-16Ps. and Part of 0A-1R-34Ps. Gtd.
to Thomas Smith
Prior CT 3615/43

SCHEDULE 1

M629668 TRANSFER to WANDOO PTY LTD Registered 16-Jun-2017
at 12.01 PM

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
BURDENING EASEMENT: Right of Drainage [appurtenant to the
balance of the land in Conveyance 38/4844) over the
drainage easement shown on SP 9220
SP 9220 FENCING PROVISION in Transfer
E209657 MORTGAGE to Westpac Banking Corporation Registered
17-Feb-2020 at 12.01 PM

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations



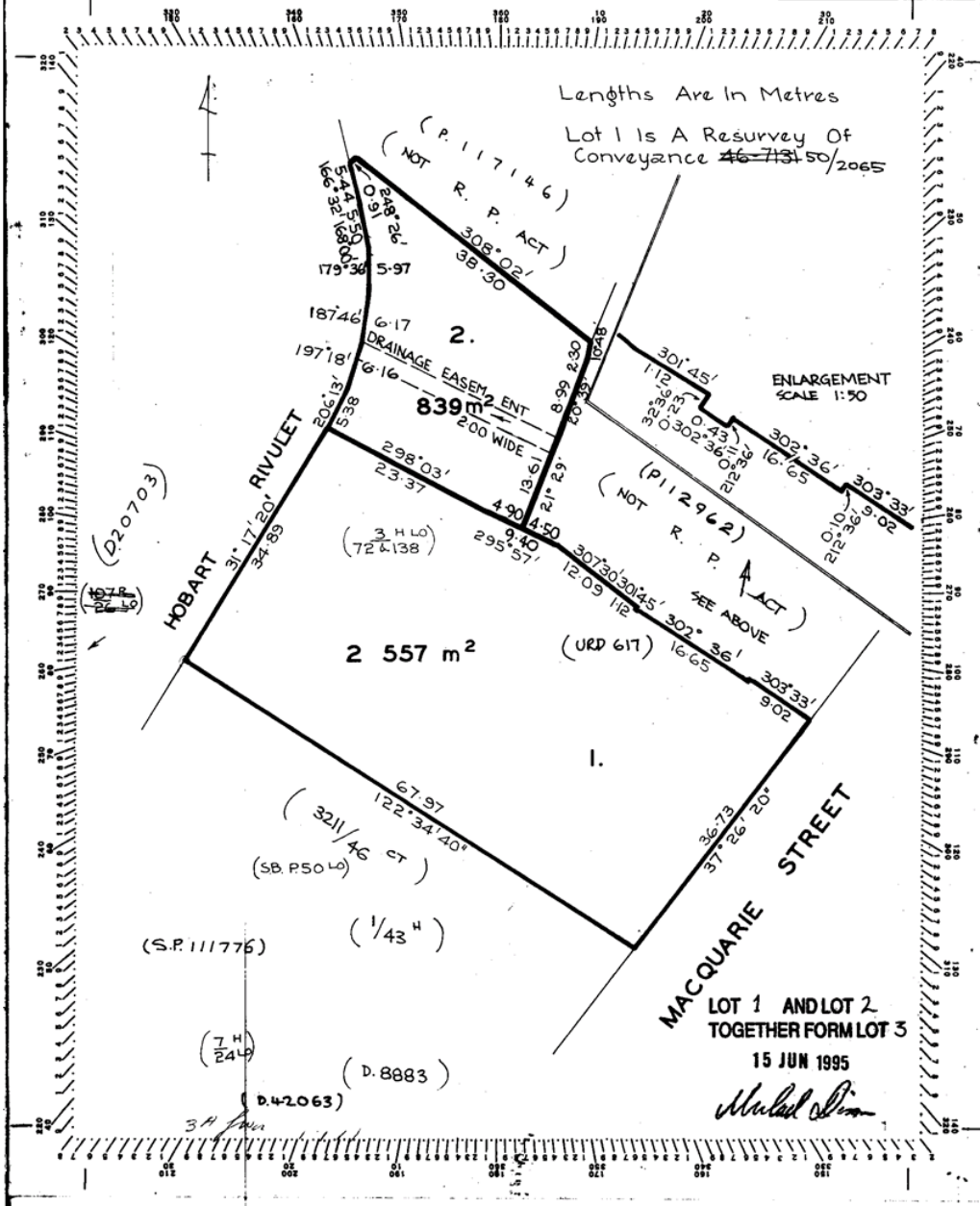
FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



Retirement Benefits Fund Invest. A 55755 SP 9220 5710 - 18/6/76 Owner: Survey Nominees Pty Ltd. & The Victoria League In Tasmania Title Reference: Cons. 46-7131 & 38-4844 50/2065 Grantee: Whole Of 2 ^R 16 ^P And Portion Of 1 ^R 34 ^P Gtd to Thomas Smith		PLAN OF SURVEY by Surveyor G.W. Griggs of land situated in the CITY OF HOBART Scales 1:500 & 1:50	Registered Number: S.P9220 Effective from: 23 JUN 1977 P/I Recorder of titles
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SCHEDULE OF EASEMENTS

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



11

SP

X1771

SCHEDULE OF EASEMENTS

Plan No.

S.P9220

NOTE:—The Town Clerk or Council Clerk must sign the certificate on the back page for the purpose of identification.

The Schedule must be signed by the owners and mortgagees of the land affected. Signatures should be attested.

FENCING PROVISION:— In respect of Lot 2 the Vendor (The Victoria League for Commonwealth Friendship in Tasmania) shall not be required to Fence

COVENANTS:— Lot 2 is subject to a Right of Drainage (applicable to the balance of the land in Indenture No. 38/4844 remaining vested in Vendor at the date of acceptance hereof excluding Lot 2) over the Drainage Easement shown on the plan



THE COMMON SEAL of THE VICTORIA LEAGUE for Commonwealth Friendship was hereunto affixed in the presence of:-

SIGNED by GRAHAM GORDON BLACKWOOD and LEIGH BAILY HODGMAN as Mortgagees by virtue of Indenture of Mortgage No. 45/1824 in the presence of:-

SIGNED by GRAHAM GORDON BLACKWOOD as Attorney for LEIGH BAILY HODGMAN under Power of Attorney No. 20425 who declares that he has not at the date hereof received any notice of revocation of the said Power of Attorney in the presence of:-

CHAIRMAN

SECRETARY

TREASURER.



SCHEDULE OF EASEMENTS

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



9220

Certified correct for the purposes of the Real Property Act 1862, as amended.

FINLAY BLACKWOOD MORRIS & SIMPSONPer: 

Subdivider/Solicitor for the Subdivider

This is the schedule of easements attached to the plan of The Victoria League for
(Insert Subdivider's Full Name)Commonwealth Friendship in Tasmania affecting land inIndenture of Conveyance Number 38/1811
(Insert Title Reference)Sealed by THE HOBART CITY COUNCIL on 10 MARCH 1977.

00100


ACTING Council Clerk/Town Clerk

**RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME 111776	FOLIO 1
EDITION 3	DATE OF ISSUE 13-Jul-2018

SEARCH DATE : 17-Jun-2020

SEARCH TIME : 11.26 AM

DESCRIPTION OF LAND

City of HOBART

Lot 1 on Sealed Plan 111776

Derivation : Part of 0-2-36 Granted to D. McPherson

Prior CT 110443/1

SCHEDULE 1M703948 TRANSFER to MWJ PROPERTY PTY LTD Registered
13-Jul-2018 at noonSCHEDULE 2

Reservations and conditions in the Crown Grant if any

SP 111776 EASEMENTS in Schedule of Easements

E143462 MORTGAGE to Australia and New Zealand Banking Group
Limited Registered 13-Jul-2018 at 12.01 PMUNREGISTERED DEALINGS AND NOTATIONS

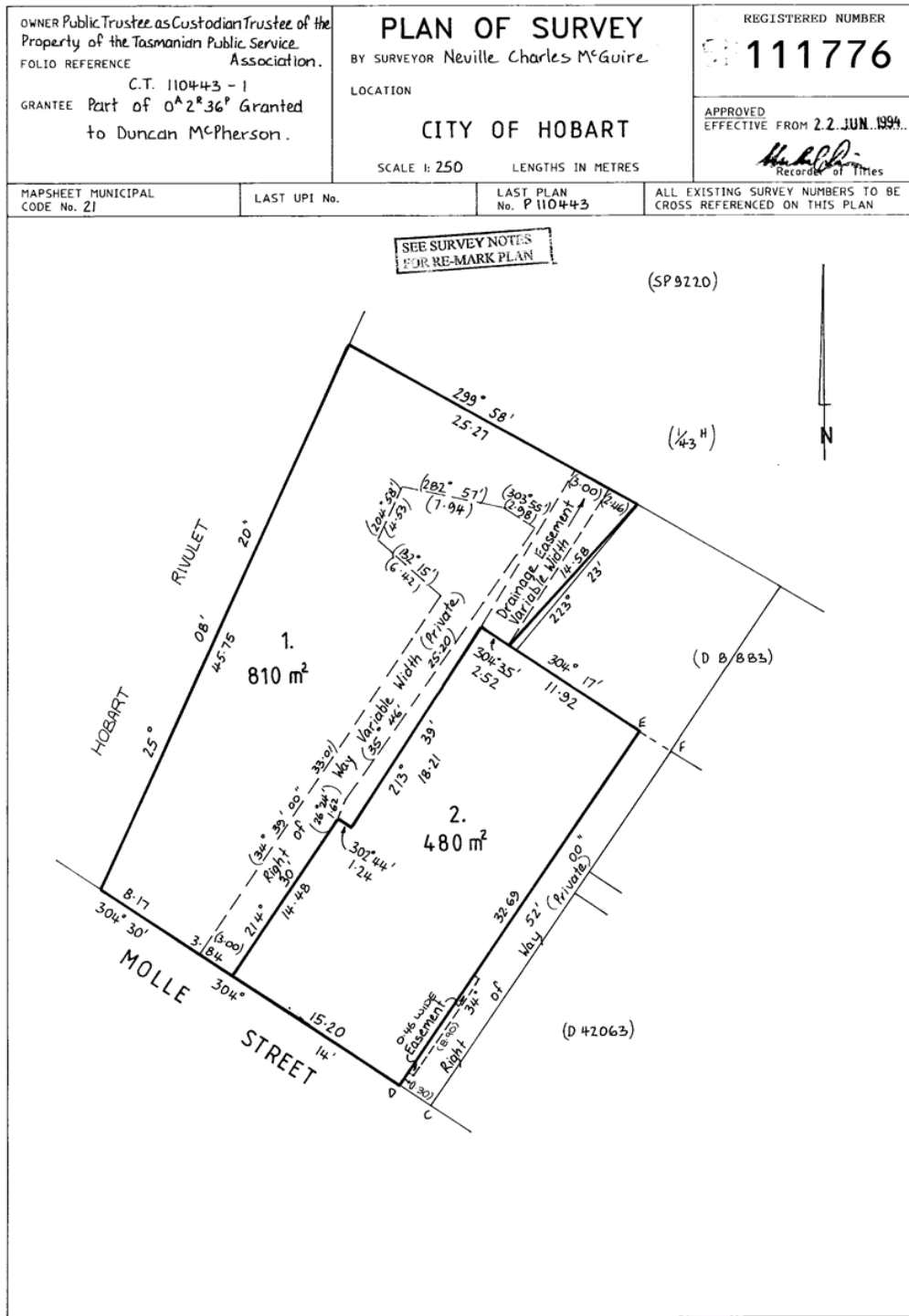
No unregistered dealings or other notations



FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



**SCHEDULE OF EASEMENTS**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



<p align="center">SCHEDULE OF EASEMENTS</p> <p>NOTE: THE SCHEDULE MUST BE SIGNED BY THE OWNERS & MORTGAGEES OF THE LAND AFFECTED. SIGNATURES MUST BE ATTESTED.</p>	<p align="center">REGISTERED NUMBER</p> <p align="center">SP111776</p>
<p align="center">EASEMENTS AND PROFITS</p> <p align="right">PAGE 1 OF PAGES</p> <p>Each lot on the plan is together with:- (1) such rights of drainage over the drainage easements shown on the plan (if any) as may be necessary to drain the stormwater and other surplus water from such lot; and (2) any easements or profits a prendre described hereunder. Each lot on the plan is subject to:- (1) such rights of drainage over the drainage easements shown on the plan (if any) as passing through such lot as may be necessary to drain the stormwater and other surplus water from any other lot on the plan; and (2) any easements or profits a prendre described hereunder. The direction of the flow of water through the drainage easements shown on the plan is indicated by arrows.</p> <p><u>SCHEDULE OF EASEMENTS</u></p> <p>LOT 2 is together with a right of drainage over the Drainage Easement (Variable Width) shown on the Plan.</p> <p>LOT 1 is subject to a right of drainage (appurtenant to Lot 2 on the Plan) over the Drainage Easement (Variable Width) shown on the Plan.</p> <p>LOT 2 is together with the right to overhang eaves of the building constructed on the said Lot 2 over the land marked "Easement" 0.46 wide on the Plan.</p> <p>LOT 2 is together with the right to go pass and repass over the land marked Right of Way (Private) E.F.C.D. on the Plan.</p> <p>LOT 2 is together with a right of carriageway over the Right of Way (Variable Width) (Private) shown passing through Lot 1 on the Plan.</p> <p>LOT 1 is subject to a right of carriageway (appurtenant to Lot 2 on the Plan) over the Right of Way (Variable Width) (Private) shown passing through the said Lot 1.</p> <p>LOTS 1 AND 2 are each subject to the mill race or watercourse which intersects the said Lots and to the right (if any such be now existing) of the owners tenants and occupiers of the mill with which the said mill race or watercourse is connected to the said mill race or watercourse and to the use of the water flowing along the same and to all such other rights (if any) as they may now be entitled to in respect thereof <u>AND EXCEPTING AND RESERVING</u> unto the said owners such rights (if any) of drainage as are now enjoyed or which may at any time hereafter be reasonably required by the said over through and along the said Lots.</p>	
<p>SUBDIVIDER :</p> <p>FOLIO REF :</p> <p>SOLICITOR & REFERENCE :</p>	<p>PLAN SEALED BY : HOBART CITY COUNCIL DATE : 10-6-1984</p> <p>680.4 REF No. <i>[Signature]</i> FOR General Manager</p>
<p>NOTE: THE COUNCIL GENERAL MANAGER MUST SIGN THE CERTIFICATE FOR THE PURPOSE OF IDENTIFICATION.</p>	

**SCHEDULE OF EASEMENTS**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



SCHEDULE OF EASEMENTS PAGE 2 OF PAGES	Registered Number SP111776
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>SIGNED by the) Public Trustee as) Custodian Trustee) of the property of) the Tasmanian Public) Service Association) in the presence of:-)</p> <p style="margin-top: 20px;"><i>Receptionist Hobart</i></p> </div> <div style="width: 45%; text-align: center;"> <p>THE PUBLIC TRUSTEE BY <i>[Signature]</i> DEPUTY PUBLIC TRUSTEE</p> </div> </div>	



**ENVIRONMENTAL SITE ASSESSMENT
201 Macquarie Street, Hobart**

August 2019

Report for 201 Macquarie Street P/L

Environmental Site Assessment: 201 Macquarie Street, Hobart, August 2019

DOCUMENT CONTROL

Title	Version	Date	Author	Reviewed By
<i>Environmental Site Assessment 201 Macquarie Street, Hobart</i>	Version 1	20 August 2019	M. Downie	S. Joyce

Environmental Site Assessment: 201 Macquarie Street, Hobart, August 2019

EXECUTIVE SUMMARY

This report presents the findings of an Environmental Site Assessment (ESA) undertaken by Geo-Environmental Solutions Pty. Ltd. (GES) at 201 Macquarie Street, Hobart - hereby referred to as 'The Site'. A six-storey residential apartment block is proposed in an area currently being used for carparking, behind the existing house at 201 Macquarie street.

GES was commissioned by 201 Macquarie Street P/L to conduct the site assessment. This ESA has been prepared by a suitably qualified and experience practitioner in accordance with procedures and practices detailed in National Environmental Protection Measure (Assessment of Site Contamination) (NEPM ASC; 2013).

The objective of this ESA was to:

- Conduct an invasive soil investigation to determine the current site conditions and confirm the suitability of the site for the intended use in line with the Hobart City Councils planning requirements from the Hobart Interim Planning Scheme 2015; Potentially Contaminated Land [PLC] 1 – E2.6.2 Excavations);
- The ESA must prove that there is no contamination or that any potential contamination will not adversely impact on human health or the environment during the site redevelopment work.
- The ESA must also confirm that the development must not pose a risk to human health of future users, environmental risk plus specific remediation and/ or protection measures may be required before the proposed use commences.
- A STATEMENT OF SUITABILITY must be provided.

From the desktop assessment, it is concluded that:

- The site has hosted a residential property since around 1900. A paved carpark was instated between 1969 to 1982.
- There are no records of contaminating activities onsite. The adjacent property had a garage/ vehicle workshop in the north-eastern corner close to the Hobart Rivulet.
- The site is zoned Mixed Urban Use under the Tasmanian Interim Planning Scheme (2015).
- Contaminants of concern at the site include Hydrocarbons, PAH's, and heavy metals; none were confirmed.

From the soil assessment, it is concluded that:

- There were no detections of hydrocarbons in any of the soil samples.
- There were some low-level detections of heavy metals and no guideline exceedances.
- No risk to Human Health or the Environment from contamination has been confirmed.

GES recommends the following:

- As manganese exceeded Level 2 Material classification in two samples it is recommended that all soil excavated from the site is stockpiled, sampled by a suitably qualified and experienced environmental consultant and results compared against *IB105* guideline limits.
- If deemed necessary, it is to be transported to a Level 2 waster facility (Copping). A permit to transport the waste (obtained through the EPA) will be required.

Statement of Suitability

The findings from the desktop investigation and results from the invasive soil investigation confirm that there is no contamination at the site and no risk to Human Health or the Environment has been confirmed. Therefore, the planned excavation works will not adversely impact on human health or the environment. No contamination remediation or management measures will be required during the site redevelopment works.

*Environmental Site Assessment: 201 Macquarie Street, Hobart, August 2019***Table of Contents**

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*Environmental Site Assessment: 201 Macquarie Street, Hobart, August 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
BTEXN	Benzene Toluene Ethylbenzene Xylene Naphthalene
COA	Certificate of Analysis
COC	Chain of Custody
COPC	Contaminant of Potential Concern
CRC CARE	Corporative Research Centre for Contamination Assessment and Remediation of the Environment
CSM	Conceptual Site Model
DQO	Data Quality Objectives
EOH	End Of Hole
EIL	Ecological Investigation Levels
ESL	Ecological Screening Levels
EPA	Environmental Protection Authority
ESA	Environmental Site Assessment
GDA94	Geocentric Datum of Australia 1994
GES	Geo-Environmental Solutions Pty. Ltd.
HIL	Health Investigation Levels
HSL	Health Screening Levels
IL	Investigation Levels
LOR	Limits of Reporting
MDL	Mean Detection Limit
NATA	National Association of Testing Authorities
NEPM ASC	National Environmental Protection (Assessment of Site Contamination) Measure
NHMRC	National Health and Medical Research Council
NL	Non Limiting
NRMMC	Natural Resource Management Ministerial Council
PAH	Polynuclear Aromatic Hydrocarbons
PCP	Physico-Chemical Parameters
PHC	Petroleum Hydrocarbons
PID	Photo-Ionisation Detector
PPA	Preferential (PVI) Pathways Assessment
PVI	Petroleum Vapour Intrusion
TPH	Total Petroleum Hydrocarbons
TRH	Total Recoverable Hydrocarbons
USCS	Unified Soil Classification System

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1 INTRODUCTION

1.1 General

This report presents the findings of an Environmental Site Assessment (ESA) undertaken by Geo-Environmental Solutions Pty. Ltd. (GES) at 201 Macquarie Street, Hobart - hereby referred to as 'The Site'. The site location is presented in Figure 1 and the aerial photograph is presented in Figure 2. GES was commissioned by 201 Macquarie Street P/L to conduct the site assessment.

This ESA has been prepared by a suitably qualified and experience practitioner in accordance with procedures and practices detailed in National Environmental Protection Measure [Assessment of Site Contamination] (NEPM ASC; 2013) guidelines and key regulations and policies identified in the References section of this document. Personnel engaged in preparing this ESA are listed in Appendix 1 along with their relevant qualifications and years of experience.

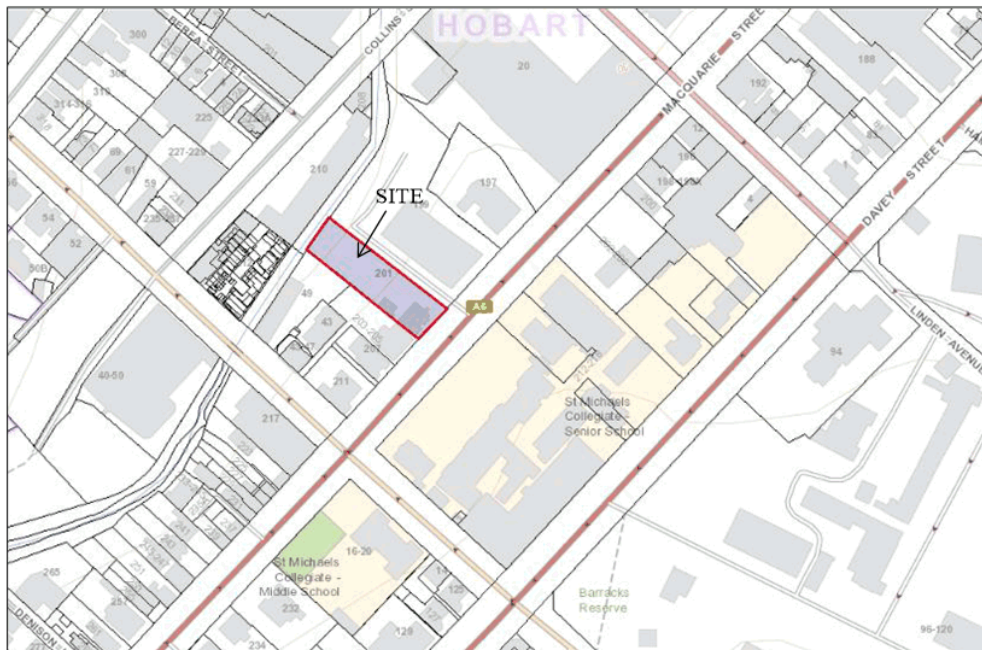


Figure 1 Site Location (Image C/O the LIST)

1.2 Site Layout

An aerial image of the existing site layout is presented in Figure 2.

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Figure 2 Existing Site Layout

1.3 Site Details

Site details are presented in Table 1.

Table 1 Site Details

SITE LOCATION: 201 Macquarie Street, Hobart.
INVESTIGATION AREA Lower majority of the site, excluding the existing house, area where the extension will be located
SITE ELEVATION & GRADIENT Approximately 25-35 m AHD with 7-10° fall to the North West
SITE SURFACING The surface of the site is paved by asphalt
TITLE REFERENCES The title references: CT 249597/1; PID 5668368
SITE OWNER 201 Macquarie Street PTY LTD
PREVIOUS LANDUSE Residential Property, Car Parking
SITE SURROUNDING LAND ZONING <i>Tasmanian Interim Planning Scheme 2015 – Urban Mixed Use</i>
SITE LAND USE Urban Mixed Use
PROPOSED LAND USE Unchanged - Residential
SURROUNDING LAND USE: Consistent with Zoning of Mixed Urban with residential, retail, offices and school all nearby.

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Figure 3 Street View of The Site, (Image courtesy of Google Earth).

1.4 Investigation Objectives

The objective of this ESA was to:

- Conduct an invasive soil investigation to determine the current site conditions and confirm the suitability of the site for the intended use in line with the Hobart City Councils planning requirements from the Hobart Interim Planning Scheme 2015; Potentially Contaminated Land [PLC] 1 – E2.6.2 Excavations);
- The ESA must prove that there is no contamination or that any potential contamination will not adversely impact on human health or the environment during the site redevelopment work.
- The ESA must also confirm that the development must not pose a risk to human health of future users, environmental risk plus specific remediation and/ or protection measures may be required before the proposed use commences.
- A STATEMENT OF SUITABILITY must be provided.

1.5 Scope of Works

The scope of works of this ESA was to:

- Review any historical contaminated site assessment reports or documents which may indicate previous land use which may have had involved contaminating activities;
- Conduct an invasive soil investigation at the site;
- Drill a total of three (3) soil bores and collect seven (7) primary samples; the primary samples were sent for analysis of total recoverable hydrocarbons (TRH) Benzene Toluene Ethylbenzene Xylene Naphthalene (BTEXN), Polynuclear Aromatic Hydrocarbons (PAH) and Heavy Metals to a National Association of Testing Authorities (NATA) accredited laboratory;
- Samples were sent with quality assurance/ quality control (QA/QC) samples including one rinsate blank, one duplicate sample and one interlaboratory duplicate split sample;
- Determine the absence or presence and if present the level of site contamination;
- Compare soil results against the relevant guidelines; and
- Address Hobart City Councils Potentially Contaminated Land [PLC] 1 – E2.6.2 Excavations and detail specific onsite human health or environmental risk which may source from any contamination.

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2 PLANNING

2.1 Overview

The development application is for a six-storey apartment block, with three-level basement, at the site which will involve excavation works. The history of the site does not suggest potentially contaminating activities may have taken place at the site. The adjacent property at 199 Macquarie Street is listed as having possible contaminants from “gas cylinder/tank” during date of operation by Forestry Tasmania 1977-1986.

The client is required to address the Potentially Contaminated Land Code of the Interim Planning Scheme 2015 under section 54 of the Land Use Planning and Approvals Act 1993. Due to the site being adjacent to a potentially contaminated site.

2.2 Acceptable Solutions

As the history of the site suggests that potentially contaminating activities may have taken place on the adjacent property and there is proposed *excavation works* at the site, there are no acceptable solutions to proposed works, and therefore E2.6.2 P1 performance criteria are to be addressed.

2.3 Excavation Works E2.6.2 P1

As there is proposed excavation works at the site, there are no acceptable solutions to proposed works, E2.6.2 P1 performance criteria are to be addressed. The performance criteria identify that the excavation works must not adversely impact on health and the environment, having regard to:

- (a) an environmental site assessment that demonstrates there is no evidence the land is contaminated; or
- (b) a plan to manage contamination and associated risk to human health and the environment that includes:
 - i. an environmental site assessment;
 - 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.

2.4 Proposed Site Re-Development Works

It is proposed that the area to the rear of the existing building will be excavated, and a new six storey apartment block to be constructed, with a basement up to three stories, see Appendix 2 for relevant plans for this investigation. Finished floor level of the basement of the proposed development will be RL 21.85 FFL, and excavation is proposed to be to RL 21.35m. The cross section of the proposed development is illustrated in **Figure 4**.

The land surrounding the existing extension ranges from 25m through to 35m AHD. So excavations of most regolith to bedrock will occur in the proposed footprint, and this material will be removed from the site.

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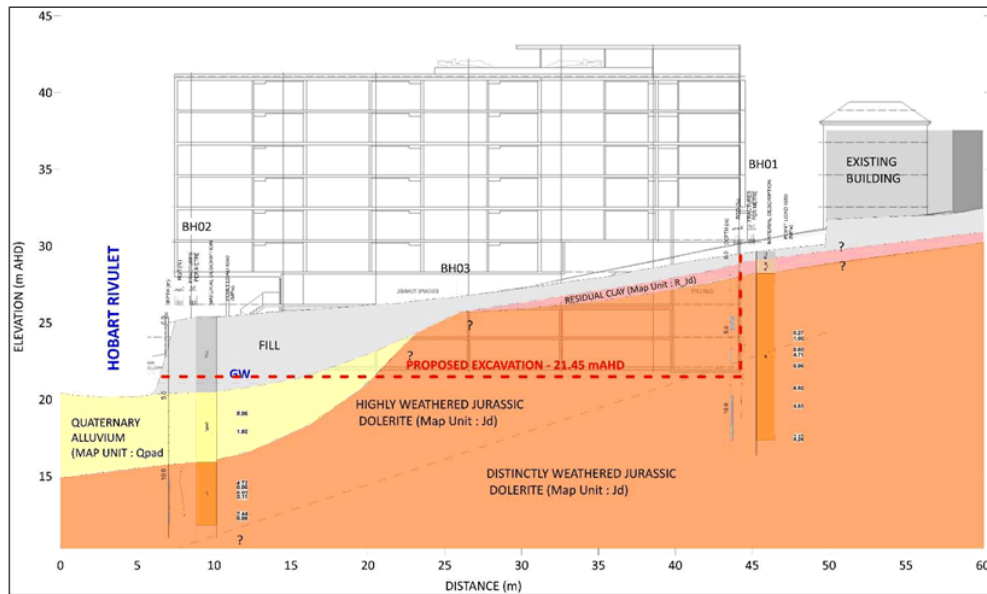


Figure 4 Cross section of proposed development

3 DESKTOP STUDY

3.1 Site Zoning

The site is zoned Urban Mixed Use under the Tasmanian Interim Planning Scheme of 2015. The land use surrounding the site is of the same zoning (Figure 5). The surrounding area includes residential dwellings, offices, shopfronts, a school, and the north west boundary of the site borders onto Hobart rivulet. The site is therefore to be assessed against land use Class A for low to medium density residential land use.

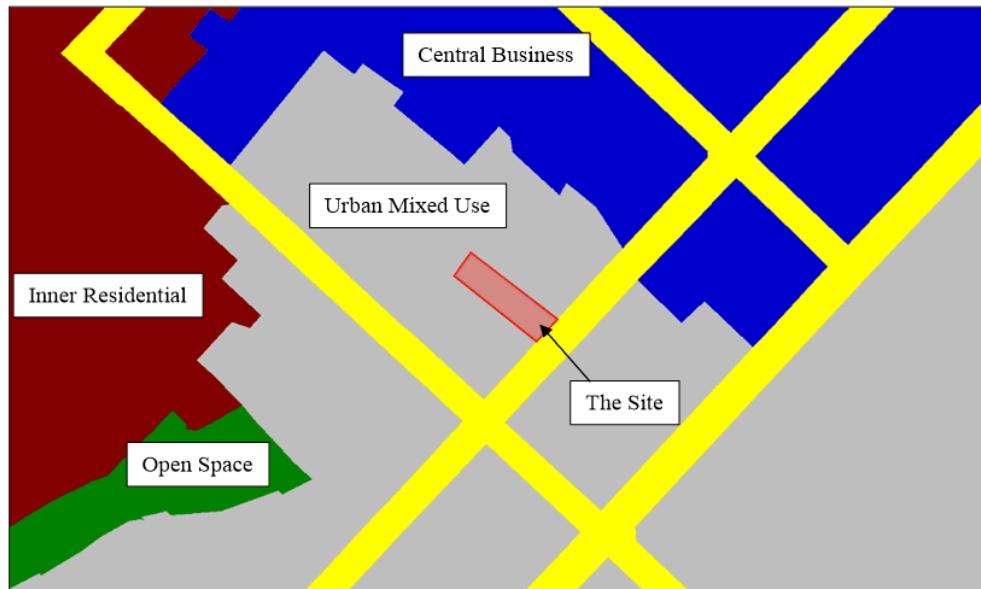


Figure 5 Tasmanian Interim Planning Scheme Zones (2015)

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3.2 Site Walkover

The site was investigated by GES staff on the 5th February 2019, with borehole drilling and soil sampling occurring over 5th and 6th February in the presence of an engineering geologist from GES. An image of the current site conditions are presented in Plate 1 and additional photographs are presented in Appendix 3.

3.3 Surface Coverings and Signs of Contamination

The pavement surrounding the existing extension to the rear of the main building was observed for signs of oil staining or storage of material which may present a potential hazard. There were no signs of potential contamination.

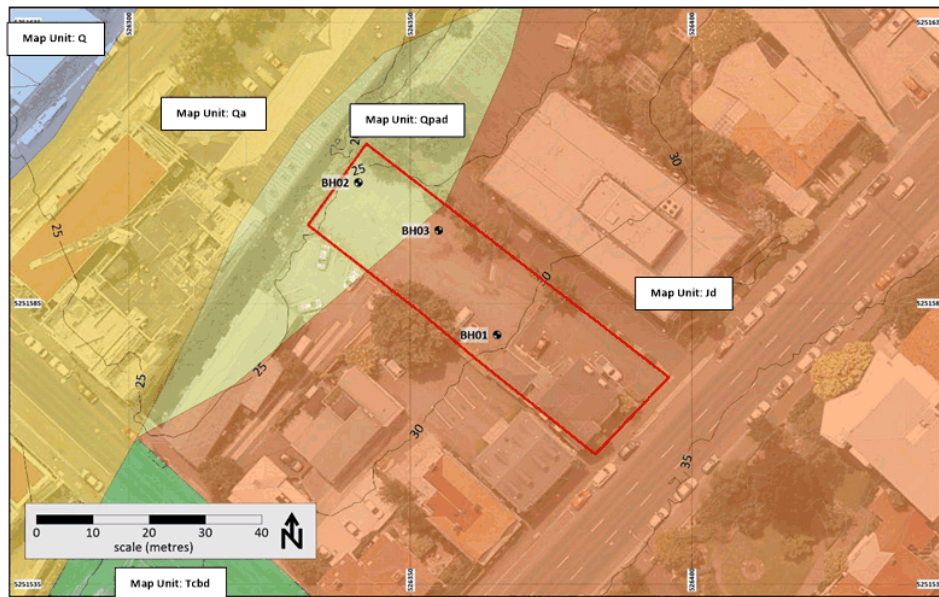


Plate 1 Current Site conditions, view to the north west.

3.4 MRT Geology Mapping

The 1:25,000 scale geology map of Hobart, see Figure 6; indicates the site is mostly underlain with Jurassic dolerite, with Quaternary alluvial deposits of predominantly dolerite on the lower part of the site.

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Tcbd – Tertiary poorly sorted boulder to pebble grade deposits with boulders up to 3 m length, clasts generally dominantly of dolerite with traces to rarely dominant amounts of Upper Parmeener mudstone and other rocks and less commonly Lower Parmeener rocks, clayey matrix.
Jd – Jurassic dolerite and related rocks.
Qpad – Quaternary older alluvium of river terrace, predominantly dolerite derived.
Qa – Quaternary alluvial gravel, sand and clay.
Q – Undifferentiated Quaternary sediments.

Figure 6 Mineral Resources Tasmania 1:25,000 Scale Mapping (The LIST).

3.5 Site Topography, Drainage & Hydrogeology

The site has a 13% gradient to the north-west, with peak gradient at 21%. The north west part of the site is adjacent to Hobart Rivulet, which flows in a north-easterly direction. although the water table may have more of a northerly to north-easterly trend.



Figure 7 Inferred Groundwater flow and Surface flow direction

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3.6 Historical Aerial Photography Interpretation

The 2017, 2008, 1990, 1982, 1969 and 1957 historical aerial photograph were viewed as part of this ESA. Table 2 presents a summary of alterations to the site between photo events and the individual aerial photos are presented in Plate 2 to 7.

Table 2 Historical Aerial Photograph Review

Photo	Observations
2017	<ul style="list-style-type: none"> There is very little change since 1982
1990	<ul style="list-style-type: none"> Former Service Station at 202-206 Macquarie Street.
1982	<ul style="list-style-type: none"> The dwelling has not altered, the parking area behind the dwelling is sealed between 1969 and 1982, a new large building is visible at 199 Macquarie Street (formally Forestry Tasmania) during the same time period. Note that sheds being the potential workshops are at the north-east part of the block of 199 Macquarie Street, which is both furthest away and downgradient of 201 Macquarie street.
1969	<ul style="list-style-type: none"> Vegetation including trees is visible behind the dwelling, and also behind the dwelling at 199 Macquarie Street.
1957	<ul style="list-style-type: none"> There is very little change from 1957 to 1969.

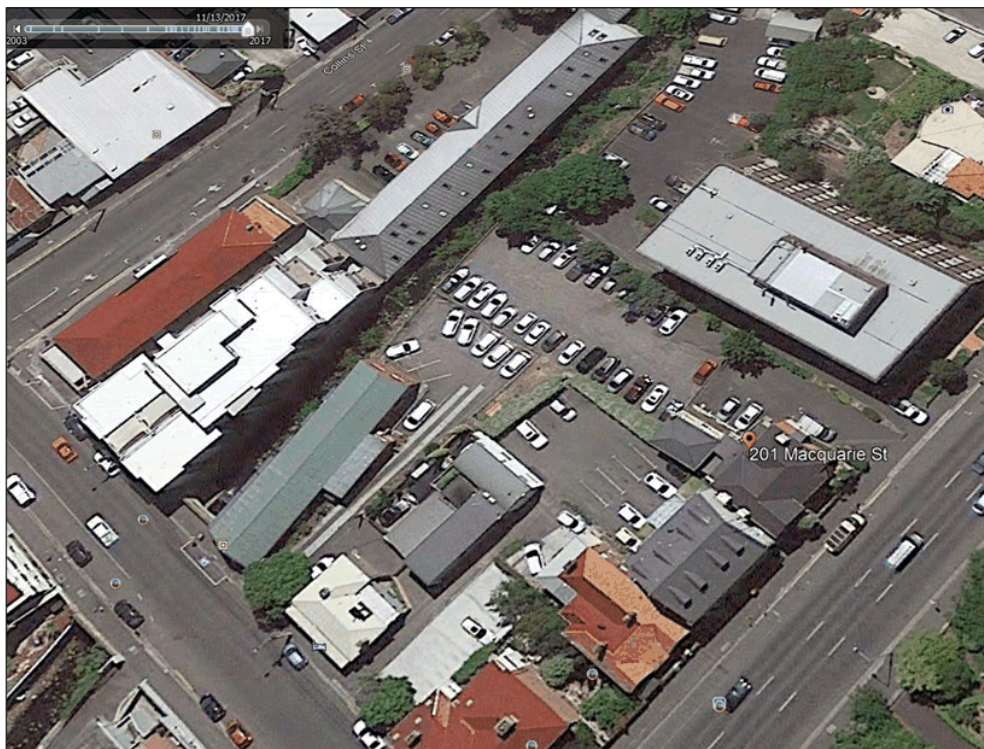


Plate 2 The 2017 Aerial Photograph of the site (c/o Google)

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Plate 3 The 2008 Aerial Photograph of the site (c/o Google)



Plate 4 The 1990 Historical Aerial Photograph of the site

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Plate 5 The 1982 Historical Aerial Photograph of the site



Plate 6 The 1969 Historical Aerial Photograph of the site

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Plate 7 The 1957 Historical Aerial Photograph of the site

3.7 Dangerous Goods Records (WorkSafe Tasmania)

A property information request (PIR) search was not conducted due to time constraints of reporting and given the lack of industrial use of the site, as observed in the historical aerial photographs, the unlikelihood of records existing is very low.

3.8 Previous Site Investigations

A full site Heritage Assessment, currently in draft form has been completed by Praxis which confirms that since construction of the residential buildings onsite the site has only been used for residential purposes. No documented commercial or industrial activities have ever taken place on the site.

3.9 Council Environmental Records

The Hobart City Council has the following information about the site, paraphrased from an email addressed to Sarah Joyce at GES.

Hi Sarah

The information that you are after is below:

The adjacent property that has been listed as potentially contaminated is: Address - 199 Macquarie Street.

Names associated with site – Forestry Department

Date of operation – 1977-1986

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Possible Contaminant – Gas cylinder / tank

I do note that the gas cylinder/tanks are no longer pulled up as a part of the PCL and this is one of the ones we need to take off our overlay and list.

Thanks Simone

*Simone Salter | Senior Environmental Health Officer | Environmental Health
6238 2738*

The Hobart City Council does not consider 201 Macquarie Street as potentially contaminated but is adjacent to site that is potentially contaminated.

3.10 Groundwater

3.10.1 Potential Up-Gradient Contamination Sources

There are no known up-gradient contamination sources. There was a former Mobil Service Station at 202-206 Macquarie Street. Groundwater from that site is likely to be traveling down Macquarie Street and unlikely to be impacting the site.

3.10.2 Downgradient Ecosystem Receptors

Downgradient ecosystems are not considered to be of concern in this investigation given there is no known evidence of contaminating activities at this site, and any potential contaminating activity appears to be associated with the neighbouring downgradient site.

3.10.3 Registered Water Bores

The site is in close proximity to the Hobart Rivulet. The nearest groundwater bores are 1.5k away and in the catchment of Sandy Bay Rivulet. Registered Water Bore 17284 drilled by KMR Drilling is present 2.5k up-gradient from the site. These bores are considered not applicable to the site and have not been considered for this investigation.

3.11 Potential Contaminating Activities

3.11.1 Areas of Potential Concern

No areas of potential concern have been identified on site.

The following neighbouring sites have been identified as hosting potentially contaminating activities:

- A vehicle servicing workshop 199 Macquarie street – northeast and down gradient of the site
- Former Mobile Service Station – 202-206 Macquarie Street, groundwater inferred to travel down Macquarie Street and away from the current site.

There may be other areas on the site (highlighted in yellow) where potentially contaminating activities have occurred. This investigation is contained by the available historical information.

3.11.2 Contaminants of Potential Concern

Despite the unlikely possibility that Contaminants Of Potential Concern (COPC), based on identified AOPC's on the neighbouring sites are impacted the site the following contaminants have been selected for analysis during this investigation:

- Total Petroleum/Recoverable Hydrocarbons (TPH/TRH);
- Mono Aromatic hydrocarbons: Benzene, Toluene, Ethylbenzene, Xylene, Naphthalene (BTEXN);
- Polynuclear Aromatic Hydrocarbons (PAHs); and
- Up to 15 Metals.

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4 FIELD INVESTIGATION PROCEDURES

4.1 Works Summary

Site investigation works occurred on 5th and 6th February 2019, and comprised of soil bore drilling which is summarised in Table 3 and Figure 8.

Table 3 Summary of Site Investigation

Borehole Location ID	Approximate Coordinates *		Estimated Ground Surface Level (m AHD) ^	Termination Depth below ground surface level (m)
	Easting (m)	Northing (m)		
BH01	526,365	5,251,579	29.6	12.0
BH02	526,341	5,251,606	25.4	13.16
BH03	526,355	5,251,598	26.8	1.0

Notes:

*Coordinates are provided in GDA94 MGA Zone 55 coordinate system.

^Australian Height Datum (m AHD) has been estimated based on survey data provided due to the low reliability of the GOS elevation data and has been estimate using surface contouring.



Figure 8 Borehole Plan (BH1 to BH3)

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4.2 Soil Investigation

4.2.1 Borehole Drilling

At each of the bore locations, the following precautions were put in place where required to avoid disrupting underground service assets:

- Dial Before You Dig plans were obtained; and
- Where practical, the first meter of the bore was cleared with a hand auger.

A total of three (3) 65 mm diameter soil bores were drilled for assessing site geology and sampling for contamination impact. The boreholes were drilled using a truck mounted Drillmac Explorer 500 drilling rig operated by Tasmanian Drilling Services Pty Ltd using a 159 mm diameter soil bore using a hollow flight auger within soil and HQ3 sized core barrel within bedrock with a borehole diameter of 96 mm. Soil samples were collected from the cores in accordance with procedures set out in Table 4.

4.2.2 Soil Sampling

Soil bore 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"> • Dial Before You Dig plans were obtained; and • Where practical, the first meter of the bore was cleared with a hand auger.
Soil sample collection	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	Quantum Clean Laboratory Detergent (R213) was used to decontaminate reusable sampling equipment.
Soil Screening	In accordance with AS4482.2. Individual soil samples were collected from the core tray at 0.5 intervals below ground surface (bgs) and/or change in geology. Collected samples were 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. Equipment calibration certificates are presented in Appendix 4.
Laboratory Soil Sample Collection	In accordance with AS4482.1 (2005) All samples were collected using disposable nitrile gloves. Samples were selected for laboratory analysis: <ul style="list-style-type: none"> • where PID values exceeded a nominal value • at least every metre • in the case where hydrocarbons were not detected in individual bores using the PID, select samples were collected from representative horizons and submitted for analysis. A minimum number of samples were carefully selected which would provide sufficient information to delineate 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 ASC B3-2013) from collection to extraction.

4.2.3 Soil Analysis

Primary and QC samples were submitted to Analytical Laboratory Services (ALS), Springvale, Melbourne for analysis. A total of seven primary samples were selected for analysis. Inter lab split (triplicate) sample were sent to ALS Environmental, located in Smithfield, NSW. Chain of Custody (COC) documentation was completed and is provided in Appendix along with the Sample Receipt Notification (SRN) for each batch. Table 5 presents a summary of the laboratory analyses undertaken.

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Table 5 Overview of Soil Analysis and Quality Control

Analytes	Primary Samples	Duplicates ^a	Rinse Blank ^b	Triplicate ^c
TPH/TRH	7	1	1	1
BTEXN	7	1	1	1
PAH*	7	1	1	1
Suite 15 Metals	7	1	1	1

Sampling Quality Control Standards (AS4482):

A + C – One (1) in twenty (20) inter laboratory duplicate samples and One (1) in twenty (20) intra laboratory split (triplicate) samples

b - Single rinse sample per piece of equipment per day

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5 QUALITY CONTROL

All Field and laboratory Quality Assurance and Quality Control (QA/QC) details and outputs are presented in Appendix 6.

5.1 Field

It is standard to expect up to 10% error in field duplication and up to 10% laboratory error. Therefore, in theory up to 20% error can be assumed on duplicate analysis. Some variation may exist in soil and groundwater because even though all efforts are made to split samples homogeneously, fragments of materials may bias samples in certain elements.

Relative Percentage Differences (RPDs) for the duplicate sample where applicable are calculated using the method outlined below.

The acceptance criteria used for the RPDs depend on the levels of contaminants detected and the laboratory's Method Detection Limits. The closer the levels detected are to the MDL the greater the acceptable RPD. RPDs are calculated as follows:

- RPD <50% for low level results (<20 * MDL)
- RPD <30% for medium level results (20-100 * MDL)
- 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	Completed	Comments
Appropriate sampling strategy used and representative samples collected	Yes	Sampling program was undertaken in accordance with AS4482.1-2005
Appropriate and well documented sample collection, handling, logging and transportation procedures.	Yes	Appropriate and well documented
Decontamination	Yes	Appropriate decontamination such as cleaning tools before sampling and between sample locations was undertaken
Chain-of-custody documentation completed	Yes	COC were completed in accordance with NEPM ASC Schedule B2, Section 5.4.5 and transported under strict COC procedures. The signed COC documents are included in this report, which includes the condition report on arrival of samples to the Laboratory, cross checking of sample identification and paperwork and preservation method.
Required number of splits: Duplicate & inter-lab splits: 1 per 20 primary samples	Yes	A single duplicate and a single inter-lab split sample was collected from 7 primary samples.
QA/QC samples reported method detection limits within indicated guidelines.	No	For BH02 1.5-1.6 and Duplicate pairs, 98% of analytes complied. Non compliances include: an RPD of 51% for Lead where <50% was expected; For BH02 1.5-1.6 and TRIPLICATE pairs, there were no non-compliances.
Required numbers of rinse blank samples collected	Yes	One rinse blank was collected as per AS4482.1-2005.
Samples delivered to the laboratory within sample holding times and with correct preservative	Yes	All samples were sent to the laboratory within holding times and correct preservative.

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5.2 Laboratory

Soil laboratory QA/QC procedures and compliance are summarised in Table 7.

Table 7 Soil Laboratory QA/QC Procedures and Compliance

QA/QC Requirement	Compliance	Comments
All analyses NATA accredited	Yes	ALS Laboratories is NATA Accredited. Appropriate analytical methods used, in accordance with Schedule B(3) of the NEPM ASC 2013. Acceptable laboratory limits of reporting (LORs) adopted.
Method Blanks: zero to <Practical Quantitation Limit (PQL)	Yes	There were no method blank value outliers in the QC1 report.
Laboratory Control Samples: 70% to 130% recovery for soil.	Yes	There were no laboratory control outliers in the QC1 report.
Matrix spikes: 70% to 130% recovery for organics or 80%-120% recovery for inorganics	No	There were two matrix spike outliers in the QC1 report, with background level greater than or equal to 4x spike level; Manganese in BH1 0.5-0.6, and Manganese in Rinse Blank.
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 the QC1 report.
Analysis holding time outliers	Yes	No hold-time outliers exist for the QC1 report.
Quality Control Sample Frequency Outliers	No	The following duplicate frequency outliers were identified: PAH/Phenols (GC/MS - SIM) with 0% and 10% expected TRH - Semivolatile Fraction with 0% and 10% expected The following matrix spike frequency outliers were identified: PAH/Phenols (GC/MS - SIM) with 0% and 5% expected TRH - Semivolatile Fraction with 0% and 5% expected

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6 FIELD INVESTIGATION FINDINGS

6.1 Soil Bores

6.1.1 Geological Interpretation

The geology of the site is split into two regions, the dolerite soil featuring residual clays found upslope as summarised in Table 8, and the alluvial soil deposits overlying dolerite found downslope as summarised in Table 9.

Table 8 Typical Upslope Site Soil Profile (from BH1)

From	To	Description	USCS
0	0.05	FILL : ASPHALT	P
0.05	0.35	FILL : Silty sandy GRAVEL	GM
0.35	0.5	FILL: Silty sandy CLAY	CH
0.5	1.1	Sandy CLAY	CH
1.1	1.4	Silty sandy CLAY	CI
1.4	8.0	DOLERITE, extremely weathered	R
8.0	12.0	DOLERITE, distinctly weathered	R

Table 9 Typical Downslope Site Soil Profile (from BH2)

From	To	Description	USCS
0	0.05	FILL : ASPHALT	P
0.05	0.2	FILL : Silty GRAVEL	GM
0.2	0.6	FILL : Sandy gravelly CLAY	CI
0.6	2.6	FILL : Silty SAND trace gravels	SM
2.6	4.8	FILL : Sandy gravelly SILT, some cobbles at depth	ML
4.8	6.85	GRAVEL AND COBBLES	GP
6.85	8.2	Clayey sandy GRAVEL and COBBLES	GC
8.2	8.6	CORE LOSS : Inferred as firm high plasticity sandy CLAY	CI
8.6	9.2	Sandy CLAY with gravels	CH
9.2	13.16	DOLERITE, highly weathered	R

6.1.2 Grain & Depth Class Interpretation

Grain size classifications are applied to all soils at the site to determine threshold screening level concentrations for hydrocarbons (and chromium) to assess soil ecological and human health risks.

Grain class threshold values are determined based on either the:

- sample grain size (in the case of ecological screening levels or chromium limits); or
- average grain class overlying the sample point (when assessing petroleum vapour screening levels) relative to the proposed finished floor level.

The corresponding depth class from which the sample is collected is also adjusted and revised based on the proposed development finished floor levels. Where the fields are left blank, a class is not assigned given the sample was collected from within the proposed excavation. Pavement is assigned a clay class by default.

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Table 10 provides a summary of the grain class averages for material overlying the sample (excluding the excavated materials). It should be noted that most of the site will be excavated, so the risk of dermal and vapour contact is during excavation, with minimal risk during or after construction.

Table 10 Summary of Grain Class Based on USCS Classification

Sample	Footing Excavation Depth ^A - Red Fill Thickness ^A - Green	Sample PVI Depth (m) Relative to Slab/Cut Depth	Soil Grain Size Class Averaging Above Soil Sample																			Attenuation		HSL Grain Class ^B	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	Biodegradation		
BH01 0.5-0.6	7.3	4.8															4.7		NA	0.1	1.0	1.0	CLAY	CH	
BH01 1.5-1.6	7.3	4.8															4.7		NA	0.1	1.0	1.0	CLAY	R	
BH02 0.5-0.6	3.0	9.6		2.1	1.4					1.2				0.6	0	4.0		NA	0.1	1.0	1.0	1.0	CLAY	CI	
BH02 1.5-1.6	3.0	9.6		2.1	1.4					1.2				0.6	0	4.0		NA	0.1	1.0	1.0	1.0	CLAY	SM	
BH02 2.5-2.6	3.0	9.6		2.1	1.4					1.2				0.6	0	4.0		NA	0.1	1.0	1.0	1.0	CLAY	SM	
BH02 3.5-3.6	3.0	9.5		2.1	1.4					1.0				0.6	0	4.0		NA	0.1	1.0	1.0	1.0	CLAY	ML	
BH03 0.5-0.6	4.5	<																NA	0.1	1.0	1.0	1.0	CLAY	CH	

6.1.3 Soil Contamination Observations

Soil samples were screened with a PID; analysis information presented in Table 11. All soil samples had PID values (measured in ppm) were below 0.4 which indicates that there is a low probability of hydrocarbon contamination are present at the site.

Table 11 Summary of PID Screening Results

Soil Bore	Depth (m)	PID Value (ppm)
BH01	0.2-0.3	0.2
BH01	1.0-1.1	0.4
BH02	0.2-0.3	0.3
BH02	1.0-1.1	0.0
BH03	0.2-0.3	0.2
BH03	1.0-1.1	0.3

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7 SOIL ECOLOGICAL IMPACT ASSESSMENT

7.1 Protected Environmental Values

The requirement for protecting soil from contaminated activities in Tasmania is managed under the Environmental Management and Pollution Control Act 1994 (EMPCA) which states in Part 5A:

(2) An area of land is a contaminated site if –

(a) there is in, on or under that area of land a pollutant in a concentration that –

(i) is above the background concentration; and

(ii) is causing or is likely to be causing serious or material environmental harm or environmental nuisance, or is likely to cause serious or material environmental harm or environmental nuisance in the future if not appropriately managed;

Potential soil impact at the site is assessed through application of the following environmental investigation guidelines.

7.2 NEPM ASC (2013) Guidelines

The following ecological investigation guidelines are to be addressed in order to assess acceptable levels of risk to terrestrial ecosystems:

- NEPM ASC (2013) Ecological Investigation Levels (EIL's) – have been developed for selected metal and organic substances. EIL's depend on specific soil and physicochemical properties and land use scenarios and generally apply to the top two (2) metres of the soil profile (NEPM ASC 2013);
- NEPM ASC (2013) Ecological Screening Levels (ESL's) – have been developed for selected petroleum hydrocarbon compounds and total petroleum hydrocarbon fractions. ESL's broadly apply to coarse- and fine-grained soils and various land use scenarios within the top two (2) metres of the soil profile (NEPM ASC 2013).

Soil analytical results are compared against Ecological Screening Levels (ESL's) and EIL's limits presented in Table 12.

Table 12 Summary of Soil Contaminates Considered as part of this investigation, based on NEPM (2013) ASC

Investigation Levels (IL)	Analytes Investigated						
	Hydrocarbons				Metals		DDT
	BTEX	TRH (F1 to F4)	Benzo(a) pyrene (PAH)	Naphthalene (PAH)	Zn, Cu, Cr(III), Ni & As	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 ASC (2013) Ecological Screening Levels (ESL's):

- BTEX;
- F1 to F4 TRH; and
- Benzo(a)pyrene (PAH)

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Selection of ESL threshold investigation limits are set out in the NEPM ASC (2013) guidelines and require classification of the soil according to:

- Land use sensitivity:
 - Areas of ecological significance
 - Urban residential and public open space; and
 - Commercial and industrial.
- Dominant particle size passing through a 2 mm sieve into:
 - Coarse – sand sizes and greater; and
 - Fine – clay and silt sizes.

Adopted NEPM ASC (2013) soil and land use classifications are presented below.

7.3.2 Ecological Investigation Levels

The following compounds were compared against Environmental Investigation Levels:

- Lead;
- Nickel;
- Chromium;
- Zinc;
- Copper;
- Arsenic; and
- Naphthalene.

There was a requirement to classify the soil according to physicochemical properties 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 scenarios presented in Table 13.

Table 13 Adopted Land Use Scenario for the Soil Bores

Land Use Scenario	Applicable Soil Bores
Areas of Ecological Significance	
Urban Residential & Public Open Space	<i>All soil bores</i>
Commercial & Industrial	

Based on a preliminary assessment of site soil conditions, the following physicochemical properties are applied to assess guideline EIL's:

- Clay content consistent with field observations;
- A soil pH and cation exchange capacity (CEC) consistent with Table 14.

Table 14 Cation Exchange and Clay content, Adopted For the Site

USCS	Clay %	CEC	pH
R	100	10	6.0
GW	0	10	6.0
GP	0	10	6.0
GM	10	15	6.0
GC	30	20	6.0
SW	0	10	6.0
SP	0	10	6.0
SM	10	15	6.0
SC	20	20	6.0
ML	30	20	6.0
CL	100	35	6.0
OL	50	35	6.0
MH	30	35	6.0
CH	100	45	6.0
OH	100	60	6.0
PT	100	80	6.0
P	0	0	6.0
CL	100	35	6.0
CI	100	35	6.0

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7.4 Findings

7.4.1 Ecological Screening Levels

Laboratory analytical results are presented in Appendix 7. Table 15 compares soil analytical results against relevant NEPM ASC (2013) ESL's. Concentrations which exceeded laboratory limit of reporting (LOR) would be highlighted in bold, ESL exceedances would be highlighted with a coloured cell, and samples within the proposed excavation zone are marked with an X. Note all samples will be excavated and the site resurfaced.

There were no laboratory detections and there were no ESL guideline exceedances. Therefore, no risk to ecological receptors regarding potential hydrocarbon contamination has been identified.

Table 15 Summary of Soil Analytical Results Compared with ESL's

NEPM Ecological Screening Levels for Soil				BTEX				PAH	TRH			
Bold - Indicates LOR Exceedances X - Indicates Sample Within Inferred Excavation Colour Shading - Indicates ESL Exceedances: >1 x, * 2-5 x, ** 5-20 x, *** 20-50 x, **** >50 x				Benzene	Toluene	Ethylbenzene	Xylenes	Benz(a)pyrene	F1 (C5 - C10)	F2 (>C10 - C15)	F3 (>C15 - C34)	F4 (>C34 - C40)
Sample ID	Sample Date	Soil Texture Class (fine / coarse)	Land Use	mg/kg LOR 0.2	mg/kg LOR 0.5	mg/kg LOR 0.5	mg/kg LOR 0.5	mg/kg LOR 0.5	mg/kg LOR 10	mg/kg LOR 50	mg/kg LOR 100	mg/kg LOR 100
BH01 0.5-0.6 X	26/2/19	F	URBAN	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH01 1.5-1.6 X	26/2/19	F	URBAN	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH02 0.5-0.6 X	26/2/19	F	URBAN	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH02 1.5-1.6 X	26/2/19	C	URBAN	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH02 2.5-2.6 X	26/2/19	C	URBAN	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH02 3.5-3.6 X	26/2/19	C	URBAN	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH03 0.5-0.6 X	26/2/19	F	URBAN	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100

7.4.2 Ecological Investigation Levels

Table 16 compares soil analytical results against relevant EIL's. Concentrations which exceeded laboratory LOR are reported in the table, EIL exceedances would be highlighted with a coloured cell, and samples within the proposed excavation zone are marked with an X. Note all samples will be excavated and the site resurfaced.

There were no EIL exceedances and therefore no risk to ecological receptors.

Table 16 Soil Analytical Results Compared Against Ecological Investigation Levels

NEPM Ecological Investigation Levels for Soil													
Bold - Indicates LOR Exceedances X - Indicates Sample Within 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)	Copper (CEC)	Copper (pH)	Nickel	Zinc	Chromium III	Lead	Arsenic	Naphthalene
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH01 0.5-0.6 X	26/2/19	URBAN	45	6 (3)	F	36	36	6	75	<2	25	<5	<1
BH01 1.5-1.6 X	26/2/19	URBAN	10	6 (3)	F	73	73	51	25	23	<5	<5	<1
BH02 0.5-0.6 X	26/2/19	URBAN	35	6 (3)	F	70	70	17	30	4	<5	<5	<1
BH02 1.5-1.6 X	26/2/19	URBAN	15	6 (3)	C	8	8	15	41	20	27	<5	<1
BH02 2.5-2.6 X	26/2/19	URBAN	15	6 (3)	C	<5	<5	12	25	7	12	<5	<1
BH02 3.5-3.6 X	26/2/19	URBAN	20	6 (3)	C	16	16	10	19	13	8	<5	<1
BH03 0.5-0.6 X	26/2/19	URBAN	45	6 (3)	F	23	23	32	7	6	<5	<5	<1

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pH Designation:

1) Using 0.01M CaCl₂ extract. Rayment, G.E. and Lyons, D.J. (2011). "Soil Chemical Methods – Australasia", 495+20 pp. CSIRO Publishing, Melbourne.

2) pH_F (1:5). Adjusted by subtracting 0.75 with +/- 0.25 error to calibrate to the CaCl₂ method (per comm. ALS Brisbane Acid Sulphate Soils Laboratory). Methods in accordance with Ahern, C.R., Stone Y., and Blunden B. (1998b). 'Acid Sulfate Soils Assessment Guidelines'. Acid Sulfate Soils Management Advisory Committee, Wollongbar, NSW, Australia.

3) Classified in accordance with parent material typical soil pH as per the Tasmanian soils database

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8 SOIL HUMAN HEALTH DIRECT CONTACT ASSESSMENT

8.1 Guidelines

Guidelines presented herein are based on potential exposure of human receptors to soil impact which may include:

- Trench workers repairing or building services (typically to 1 m bgs). This classification is not dependent on the land use class.
- Onsite inhabitants which may be exposed to potential shallow soil impact in non-paved areas of the site; and
- Onsite excavation works which may include potential swimming pools (up to 3 m bgs); basement carparks; and deep foundations.

8.1.1 Land Use Classification

The NEPM ASC (2013) guidelines have been referenced to ensure that the correct land use and density category has been adopted for the site and the surrounding properties (where applicable). As per NEPM ASC 2013 guidelines, the adopted land use class is dependent on the building density and the opportunity for soil access by site occupants (exposure to potentially impacted soil). Aspects needing to be considered include:

- Whether the site is of sensitive land use such as a childcare centre, preschool, primary school or aged care facility in which case land use Class A is applicable;
- The percentage of paved area to determine direct contact exposure risk and therefore classification as low or high density; and
- Classification based on residential, recreational or commercial/industrial setting.

8.1.2 Adopted Land Use Classification

The adopted land use class is presented in Table 17. Land use class is based on the opportunity for soil access as per NEPM ASC 2013 guidelines.

Table 17 Summary of Land Use Setting and Density for Determining Exposure Risk for post development

Scenario	Land Use Class	Land Use Density	Paved Area	Sensitive Land Use
School Students at St. Michaels Collegiate Senior School.	A	Low Density Residential/ sensitive receptor.	212-218 Macquarie Street. (across the road from the site)	
Users of the Site – Long Term	B	Given medium/high density residential with limited opportunity for access to soil due to slab.		
Workers involved with excavations	D	Commercial workers involved with the demolition works up until concreting stage. Applies to any parts of the site which are disturbed as part of the building works.		
Commercial works Offsite	D	Commercial workers on adjacent commercial properties.		

8.1.3 Health Investigation & Screening Levels

The main exposure pathways and methods for assessing health risk from contaminated soils are presented in Table 18.

Table 18 Summary of Exposure Pathways and Preliminary (Tier 1) Methods for Assessing Human Exposure Risk

Exposure Scenario	Contaminant Type	Tier 1 Assessment Method	Reference
Vapour Inhalation – Indoor (PVI)	Petroleum Hydrocarbons	HSL's (addressed in PVI sections)	NEPM ASC (2013)
Vapour Inhalation – Trench (PVI)			CRC CARE (Friebel & Nadebaum, 2011)
Dermal Contact		HSL's	
Dust Inhalation	Metals PAH's	Health Investigation Levels (HIL's)	NEPM ASC (2013)
Soil Ingestion			

PVI – Petroleum Vapour Intrusion

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8.2 Findings

8.2.1 Dermal Contact - Petroleum Hydrocarbons

Laboratory analytical results are presented in Appendix 7. Table 19 presents soil hydrocarbon analytical results compared against CRC CARE (Friebel & Nadebaum, 2011) HSL guidelines for assessing dermal contact risk. Concentrations which exceeded laboratory LOR would be highlighted in bold, HSL exceedances would be highlighted with a coloured cell indicating the highest HSL land used class which is exceeded and samples within the proposed excavation zone are marked with an X.

There were no guideline exceedances for dermal contact.

Table 19 Soil Analytical Results Compared Against CRC CARE (Friebel & Nadebaum, 2011) 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 ¹										
Units		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR		0.2	0.5	0.5	0.5	1	10	50	100	100
HSL A Low Density Residential		100	14000	4500	12000	1400	4400	3300	4500	6300
HSL B High Density Residential		140	21000	5900	17000	2200	5600	4200	5800	8100
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									
26/02/2019	BH01 0.5-0.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
26/02/2019	BH01 1.5-1.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
26/02/2019	BH02 0.5-0.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
26/02/2019	BH02 1.5-1.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
26/02/2019	BH02 2.5-2.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
26/02/2019	BH02 3.5-3.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
26/02/2019	BH03 0.5-0.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100

Note the following applies:

HIL A – Low density to off site receptors at St. Michaels Collegiate

HIL B – High density to onsite future users

HIL D – Commercial workers and Trench workers during the construction phase of works

8.2.2 Dust Inhalation & Soil Ingestion

Laboratory analytical results are presented in Appendix 7. Soil analytical results are compared against combined dust inhalation and soil ingestion risk is assessed through the application of NEPM ASC (2013) Health Investigation Levels (HILs) for exposure to soil contaminants are presented in Table 20. Concentrations which exceeded laboratory LOR would be highlighted in bold except for the metals, and HIL exceedances would be highlighted with a coloured cell indicating the highest HIL land used class which is exceeded and samples within the proposed excavation zone are marked with an X.

There were no HIL exceedances.

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Table 20 Soil Analytical Results Compared Against NEPM ASC (2013) Health Investigation Levels Guidelines

Bold - Indicates LOR Exceedance in Non Metallic Compounds		EA055: Moisture Content	EG005T: Total Metals by ICP-AES														T: Total Recov	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	Benz[a]anthracene	Chrysene	Benzo[b]fluoranthene	Benzo[k]fluoranthene	Benzo[a]pyrene	Indeno[1,2,3-cd]pyrene	Dibenz[ah]anthracene	Benzo[ghi]perylene	PAH's	Benzo[a]pyrene TEQ (WHO)
Dust Inhalation and Soil Ingestion Assessment																																			
X - Indicates Sample Within Proposed Excavation Zone																																			
Units			%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR		1	5	10	1	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
HIL A Low Density Residential	<input checked="" type="checkbox"/> HIL A		100		60	4500	20		100	6000	300	3800	400	200		7400	40																	300	3
HIL B Medium/High Density Resider	<input checked="" type="checkbox"/> HIL B		500		90	40000	150		600	30000	1200	14000	1200	1400		60000	120																	400	4
HIL D Commercial/Industrial	<input checked="" type="checkbox"/> HIL D		3000		500	3E+05	900		4000	240000	1500	60000	6000	10000		400000	730																	4000	40
Sample date:	Sample ID																																		
26/02/2019	BH01 0.5-0.6 X	2.3	<5	30	<1	<50	<1	<2	15	36	25	463	6	<5	15	75	<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
26/02/2019	BH01 1.5-1.6 X	8.2	<5	120	<1	<50	<1	23	23	73	<5	661	51	<5	69	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
26/02/2019	BH02 0.5-0.6 X	2	<5	80	<1	<50	<1	4	13	70	<5	271	17	<5	41	30	<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
26/02/2019	BH02 1.5-1.6 X	2.5	<5	30	<1	<50	<1	20	14	8	27	176	15	<5	15	41	<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
26/02/2019	BH02 2.5-2.6 X	3.2	<5	20	<1	<50	<1	7	12	<5	12	155	12	<5	9	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
26/02/2019	BH02 3.5-3.6 X	2.8	<5	50	<1	<50	<1	13	13	16	8	276	10	<5	52	19	<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
26/02/2019	BH03 0.5-0.6 X	22.6	<5	50	<1	<50	<1	6	82	23	<5	606	32	<5	59	7	<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

Note the following applies:

HIL A – Low density to off site receptors at St. Michaels Collegiate

HIL B – High density to onsite future users

HIL D – Commercial workers and Trench workers during the construction phase of works

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9 PVI ASSESSMENT FOR INDOOR INHABITANT and TRENCH WORKER

The indoor inhabitant and trench workers vapour risk has not been considered for the following reasons:

- No hydrocarbon detections (above laboratory limit of reporting) have been identified which indicates that a petroleum vapour intrusion risk is not present.

10 SOIL DISPOSAL ASSESSMENT

10.1 Guidelines

Soil which is excavated from the site for landfill disposal is to be assessed against Information Bulletin 105 (IB105) for Classification and Management of Contaminated Soil for Disposal. The EPA uses four categories to classify contaminated soil, as per Table 21:

- (Level 1) Fill Material;
- (Level 2) Low Level Contaminated Soil;
- (Level 3) Contaminated Soil; and
- (Level 4) Contaminated Soil.

Fixed numerical values are presented for soil concentrations and leachable fraction concentrations.

Table 21 Summary of IB105 Classification Guidelines

	Classification (with reference to Table 2)	Controlled Waste¹	Comments
Fill Material² (Level 1)	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.
Low Level Contaminated Soil (Level 2)	Soil that exhibits levels of contaminants above the limits defined under <i>Fill Material</i> but below the limits defined under <i>Low Level Contaminated Soil</i> in Table 2.	Likely	Where leachable concentrations have not been prescribed, maximum total concentrations will be used to classify the soil.
Contaminated Soil (Level 3)	Soil that exhibits levels of contaminants above the limits defined under <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.
Contaminated Soil for Remediation (Level 4)	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 not 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> .
¹ Controlled Waste is defined in the <i>Environmental Management and Pollution Control Act 1994</i> .			
² 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> .			

10.2 Findings

The soil samples have been compared against IB105 guidelines for future soil disposal, see Table 22. The following conclusions can be made:

- Manganese exceeds Level 2 classification in two samples; BH01 1.5-1.6 and BH3 0.5-0.6.

Environmental Site Assessment: 201 Macquarie Street, Hobart, August 2019

Table 22 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
26/02/2019	BH01 0.5-0.6 X	<5	30	<1	<1	<2	36	15	25	463	<0.1	6	<5	75	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
26/02/2019	BH01 1.5-1.6 X	<5	120	<1	<1	23	73	23	<5	661	<0.1	51	<5	25	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
26/02/2019	BH02 0.5-0.6 X	<5	80	<1	<1	4	70	13	<5	271	<0.1	17	<5	30	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
26/02/2019	BH02 1.5-1.6 X	<5	30	<1	<1	20	8	14	27	176	<0.1	15	<5	41	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
26/02/2019	BH02 2.5-2.6 X	<5	20	<1	<1	7	<5	12	12	155	<0.1	12	<5	25	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
26/02/2019	BH02 3.5-3.6 X	<5	50	<1	<1	13	16	13	8	276	<0.1	10	<5	19	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
26/02/2019	BH03 0.5-0.6 X	<5	50	<1	<1	6	23	82	<5	606	<0.1	32	<5	7	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5

Environmental Site Assessment: 201 Macquarie Street, Hobart, August 2019

11 CONCEPTUAL SITE MODEL

It should be noted that the area onsite investigated was limited to the areas tested, which reflects the footprint of the proposed building.

11.1 Potential & Identified Sources of Contamination

11.1.1 Potential Onsite Contamination

The primary potential sources of contamination impact in the investigation area includes the following:

- The urban setting – leaded fuel exhaust fallout
- Historical buildings – leaded paint and heating oil tanks
- Fill on site of unknown origins

Given the historical use of the site there may have been other areas at the site where potentially contaminating activities have occurred. GES is not aware of any other such activities at the time this report was written.

11.1.2 Potential Offsite Contamination

Potentially contaminating activities may have occurred at the following locations:

- Gas Tank and workshop on neighbouring property at 199 Macquarie Street - movement of hydrocarbons from neighbouring property – unlikely as it is down gradient from the site.

Given the site has been in an urban setting for over 150 years, there may be residual contamination from building and or road surfacing materials such as paints and asphalt mix as well as contamination from leaded fuel exhaust fallout.

11.1.3 Identified Primary Sources

No confirmed primary sources of contamination have been identified.

11.1.4 Identified Secondary Sources

No confirmed secondary sources of contamination have been identified.

11.2 Potential Receptors

The following presents a summary of all potential receptors considered in the assessment.

11.2.1 Potential Future Onsite Receptors

Potential future onsite receptors are presented in Table 23. All onsite receptors have been ruled out as no contamination was identified.

Table 23 Summary of Potential Future Onsite Receptors

Specific Onsite Receptor	Phase	Receptor Land Use Class
Trench workers	During construction works/ Post construction	Commercial/ Industrial land use HSL D/ HIL D
Ecosystem	During construction works	Urban Residential
Future onsite inhabitants	Post construction works	Residential B

11.2.2 Potential Future Offsite Receptors

Potential future offsite receptors are presented in Table 24.

Table 24 Summary of Potential Future Offsite Receptors

Specific Onsite Receptor	Phase	Receptor Land Use Class
Neighbouring Commercial works	During construction works/ Post construction works	Commercial/ Industrial (Class D)
Neighbouring School	During construction works/ Post construction works	Residential (Class A) (most conservative values for sensitive receptors.
Ecosystem	During construction works	Urban

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11.3 Transport Mechanisms and Exposure Routes

11.3.1 Incomplete Contaminant Exposure Pathways

Incomplete contaminant exposure pathways relate to present unmanaged risk. Table 25 presents a summary of potential receptors identified in desktop assessment of the site, with incomplete exposure pathways deducted based on the soil investigations.

Table 25 Summary of Incomplete Contaminant Exposure Pathways

Medium	Specific Receptor	Pathways Ruled Out	Basis
Shallow Soil (<1.0 m)	Future residents living onsite	Dermal contact Dust inhalation Soil Ingestion	No HSL, HIL or CRC CARE guideline exceedance; plus paved surface with negligible chance of exposure to underlying soils.
		Vapour Intrusion	No volatile vapour intrusion risk identified plus the two lower levels of the new building will be carparking which would act as a barrier for any potential vapours.
	Onsite & offsite ecosystem	Soil erosion - waterways	No ESL or EIL exceedances.
	Students at St. Michaels Collegiate Senior School – off site – during construction	Dermal contact Dust inhalation Soil Ingestion	No HSL, HIL or CRC CARE guideline exceedance.
	Trench worker	Dermal contact Dust inhalation Soil Ingestion Vapour risk to trench workers	No HSL, HIL or CRC CARE guideline exceedance or hydrocarbon detections.
Deep Soil (>1.0m)	Future residents living onsite	Dermal contact Dust inhalation Soil Ingestion	No HSL, HIL or CRC CARE guideline exceedance; plus paved surface with negligible chance of exposure to underlying soils.
	Students at St. Michaels Collegiate Senior School – off site – during site redevelopment	Dermal contact Dust inhalation Soil Ingestion	No HSL, HIL or CRC CARE exceedances.
	Trench worker	Dermal contact Dust inhalation Soil Ingestion Vapour risk to trench workers	No HSL, HIL or CRC CARE guideline exceedance or hydrocarbon detections.
Groundwater	Proposed Residential building	Vapour inhalation	No hydrocarbons detected in soil samples plus the two lower levels of the new building will be carparking which would act as a barrier for any potential vapours.
	Ecosystem receptors	Groundwater discharge into marine ecosystem	No ESL or EIL exceedances / no groundwater intersected in any of the bore holes.

11.3.2 Potential Pathways

No potential pathways have been identified.

11.3.3 Plausible Contaminant Exposure Pathway Details

No plausible contaminant exposure pathways have been identified.

11.4 Conceptual Site Model

Figure 9 illustrates potential risks may be associated with potential site contamination. In this instance no soil or groundwater contamination has been identified at the site.

Environmental Site Assessment: 201 Macquarie Street, Hobart, August 2019

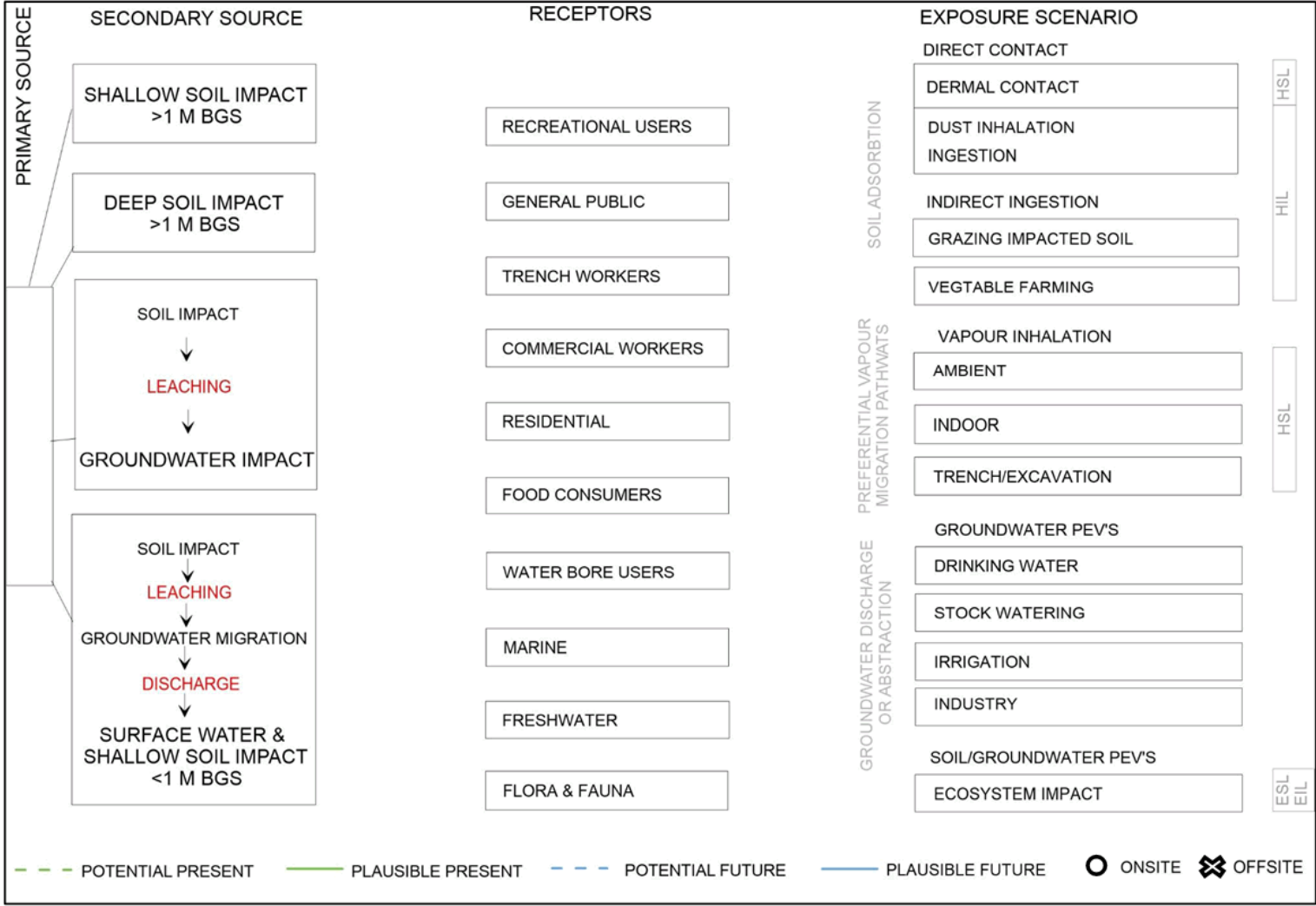


Figure 9 Conceptual Site Model Identifying Potential Contamination Source, Receptors and Transport Mechanisms/Exposure Routes

Environmental Site Assessment: 201 Macquarie Street, Hobart, August 2019

12 CONCLUSIONS

12.1 Desktop Assessment

From the desktop assessment, it is concluded that:

- The site has hosted a residential property since around 1900. A paved carpark was instated between 1969 to 1982.
- There are no records of contaminating activities onsite.
- The site is zoned Mixed Urban Use under the Tasmanian Interim Planning Scheme 92015)
- Contaminants of concern at the site include Hydrocarbons, PAH's, and heavy metals; none were confirmed.

12.2 Adopted Guideline Settings

The following investigation limits were adopted for the site:

- Ecosystem – Urban land use;
- Future land users soil direct contact risk– limited soil access (all paved) therefore:
 - HIL B for soil ingestion and dust inhalation risk to residents
 - CRC CARE Dermal Contact
- Future land users vapour inhalation risk –
 - No Hydrocarbons detected – no risk confirmed
- Site development works:
 - Land Use D for assessing vapour intrusion, dust inhalation, soil ingestion and dermal contact risk to trench workers and offsite commercial workers; and
 - Land Use A for assessing dust inhalation, soil ingestion and dermal contact risk to offsite sensitive receptors at the school.

12.3 Soil Assessment

From the soil assessment, it is concluded that:

- There were no detections of hydrocarbons in any of the soil samples.
- There were some low-level detections of metals and no guideline exceedances.
- No risk to Human Health or the Environment from contamination has been confirmed.

Environmental Site Assessment: 201 Macquarie Street, Hobart, August 2019

13 RECOMMENDATIONS

GES recommends the following:

- As manganese exceeded Level 2 Material classification in two samples it is recommended that all soil excavated from the site is stockpiled, sampled by a suitably qualified and experienced environmental consultant and results compared against *IB105* guideline limits.
- If deemed necessary, it is to be transported to a Level 2 waster facility (Copping). A permit to transport the waste (obtained through the EPA) will be required.

13.1 Statement of Suitability

The findings from the desktop investigation and results from the invasive soil investigation confirm that there is no contamination at the site and no risk to Human Health or the Environment has been confirmed. Therefore, the planned excavation works will not adversely impact on human health or the environment. No contamination remediation or management measures will be required during the site redevelopment works.

Yours faithfully,



Sarah Joyce BSc (Hons)
Environmental Scientist

Environmental Site Assessment: 201 Macquarie Street, Hobart, August 2019

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NEPM, 1999. Guideline on Investigation Levels for Soil and Groundwater, Schedule B (1), National Environmental 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)

Environmental Site Assessment: 201 Macquarie Street, Hobart, August 2019

LIMITATIONS STATEMENT

This Environmental Site Assessment Report has been prepared in accordance with the scope of services between Geo-Environmental Solutions Pty. Ltd. (GES) and 201 Macquarie Street P/L ('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.

It should be noted that the area onsite investigated was limited to the areas tested, which reflects the footprint of the proposed building.

This report does not purport to provide legal advice. Readers of the report should engage professional legal practitioners for this purpose as required.

No responsibility is accepted for use of any part of this report in any other context or for any other purpose by third party.

Environmental Site Assessment: 201 Macquarie Street, Hobart, August 2019

Appendix 1 GES Staff

Geo-Environmental Solutions (GES) is a specialist geotechnical and environmental consultancy providing advice on all aspects of soils, geology, hydrology, and soil and groundwater contamination across a diverse range of industries.

Geo Environmental Solutions Pty Ltd:

- ACN – 115 004 834
- ABN – 24 115 004 834

GES STAFF - ENGAGED IN SITE INVESTIGATION WORKS

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)

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
- 12 years' experience in environmental contamination assessment and site remediation.

Mr Mark Downie B.Agr.Sc (Hons)

- Soil Scientist
- 8 Year experience in contamination assessment and reporting of soils and groundwater.

Ms Sarah Joyce BSc (Hons)

- Senior Environmental Scientist
- 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
- Attendance to recent relevant workshops by ALGA – Risk Assessment 101 (May 2018); Vapour Intrusion Workshop (Part A) – Petroleum Hydrocarbons (July 2017)

Mr Aaron Plummer (Cert. IV)

- Soil Technician
- 5 years' experience in hydrocarbon and heavy metal contamination sampling of soils and groundwater.

GES STAFF – CONTAMINATED SITES EXPERIENCE

Mr Sam Rees B.Agr.Sc (Phd)

- Soil & Environmental Scientist
- 6 years' experience in hydrocarbon and heavy metal contamination assessment and reporting of soils and groundwater.

Mr Matthew Temlett

- Engineering Geologist
- Masters in Applied Environmental Geology
- 10 years working as an Engineer and two years experience in contaminated sites; soil, groundwater and conceptual site models.

Mr Grant McDonald (Adv. cert. hort.)

- Soil Technician
- 10 years' experience in hydrocarbon and heavy metal contamination sampling of soils and groundwater.

Ms Peri Lucas B.Agr.Sc (Hons)

- Soil Scientist
- 2 Year experience in contamination assessment and reporting of soils and groundwater.

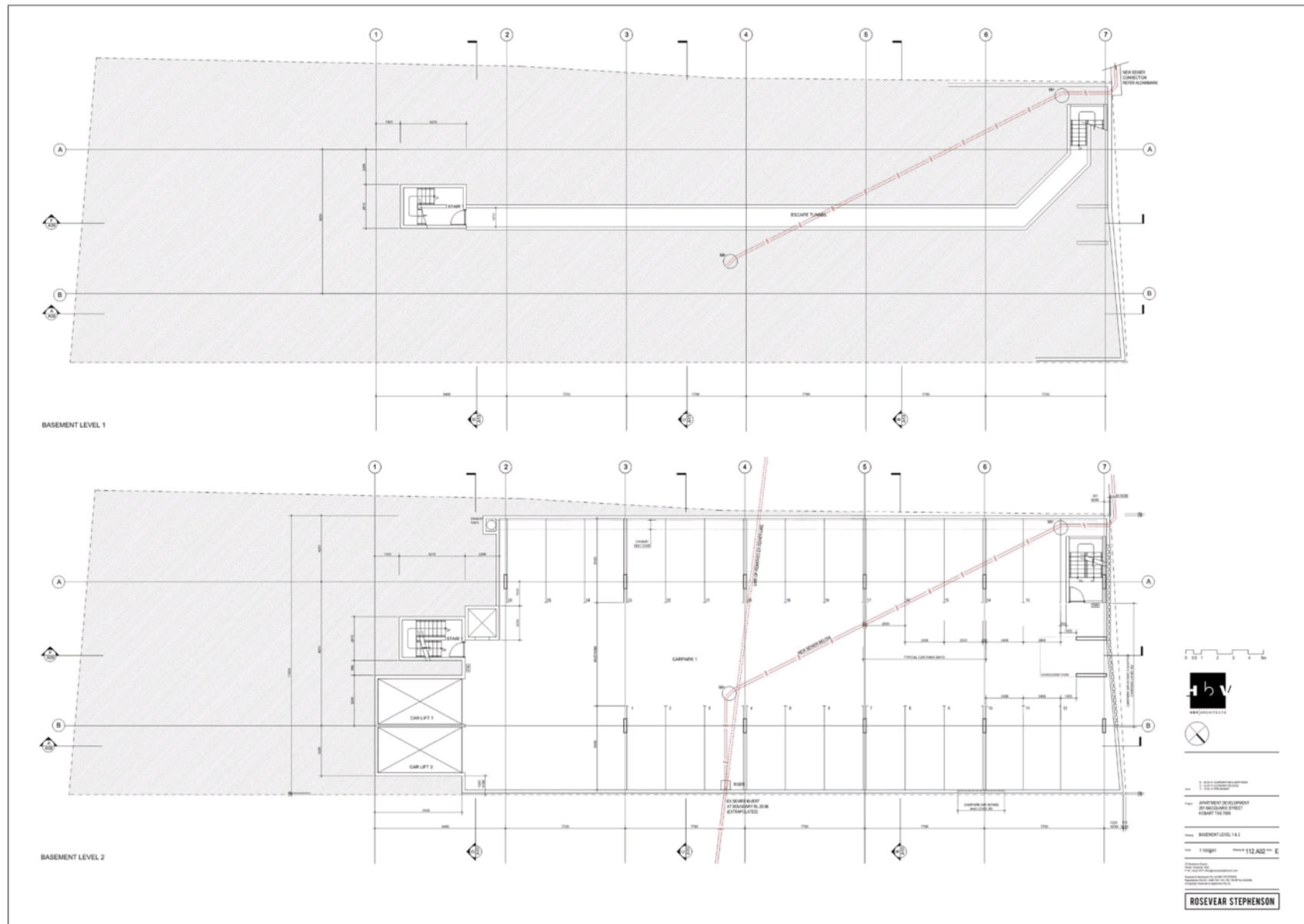
Appendix 1 GES Staff

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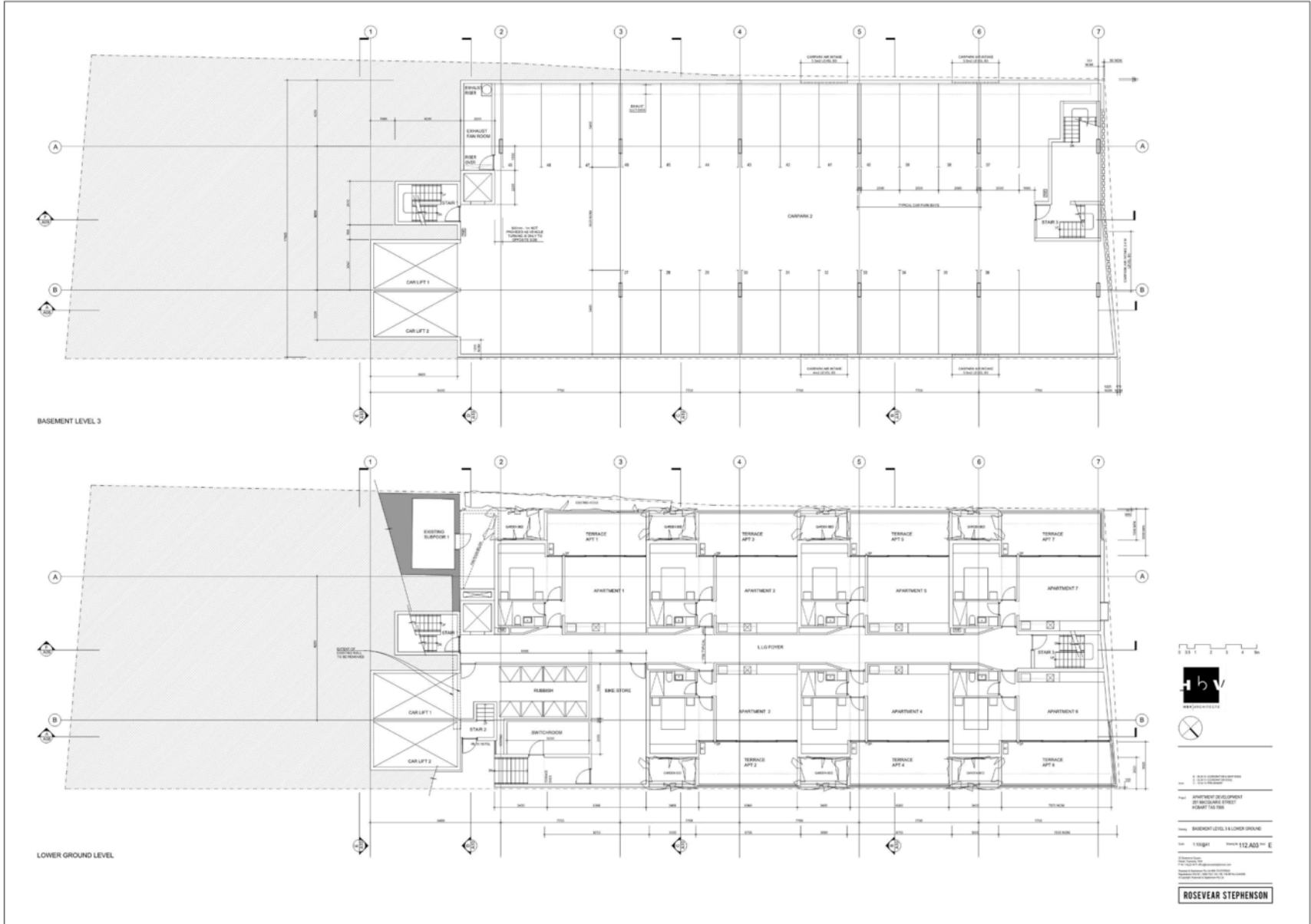
Appendix 2 Architects Plans



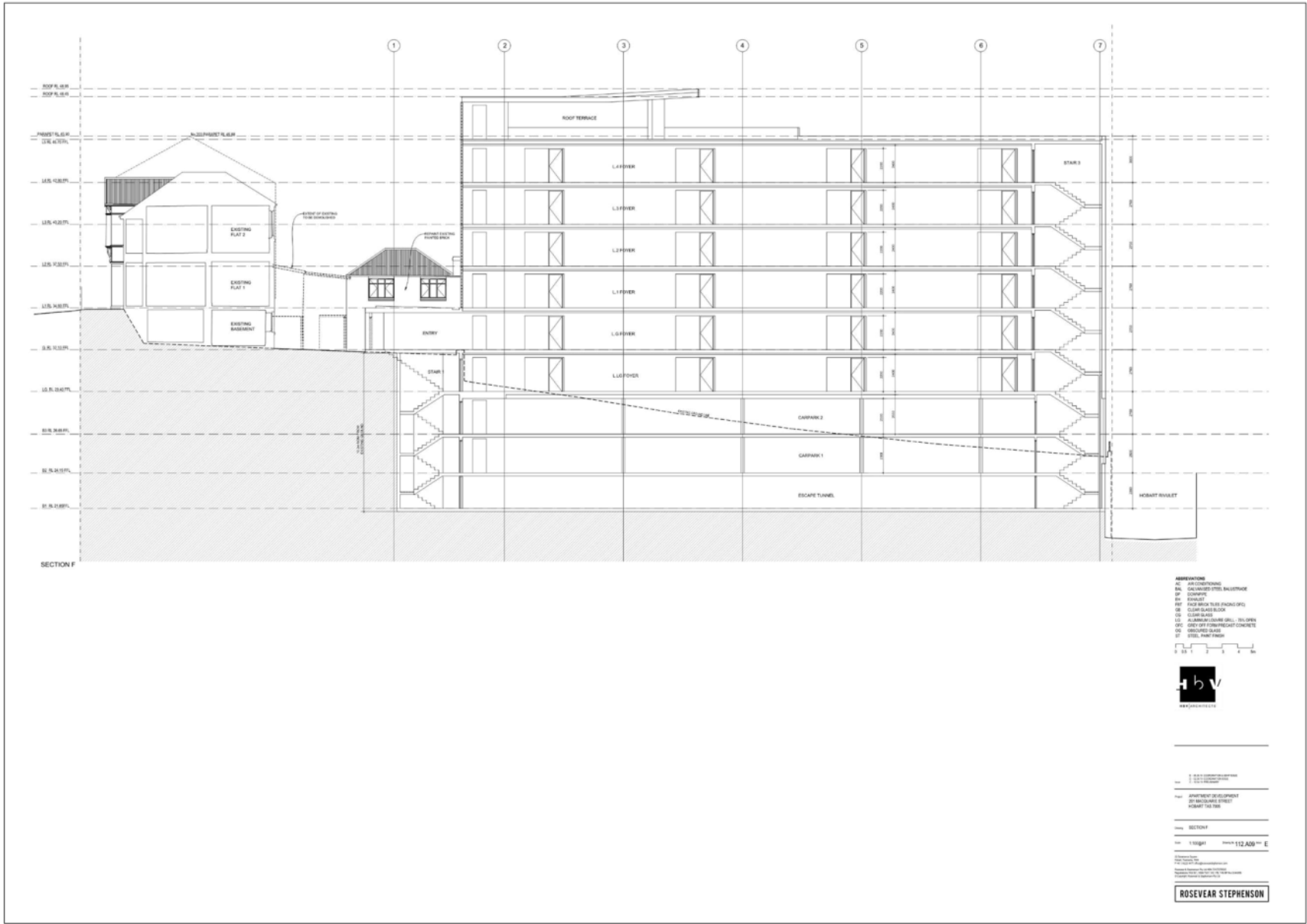
Environmental Site Assessment: 201 Macquarie Street, Hobart, August 2019



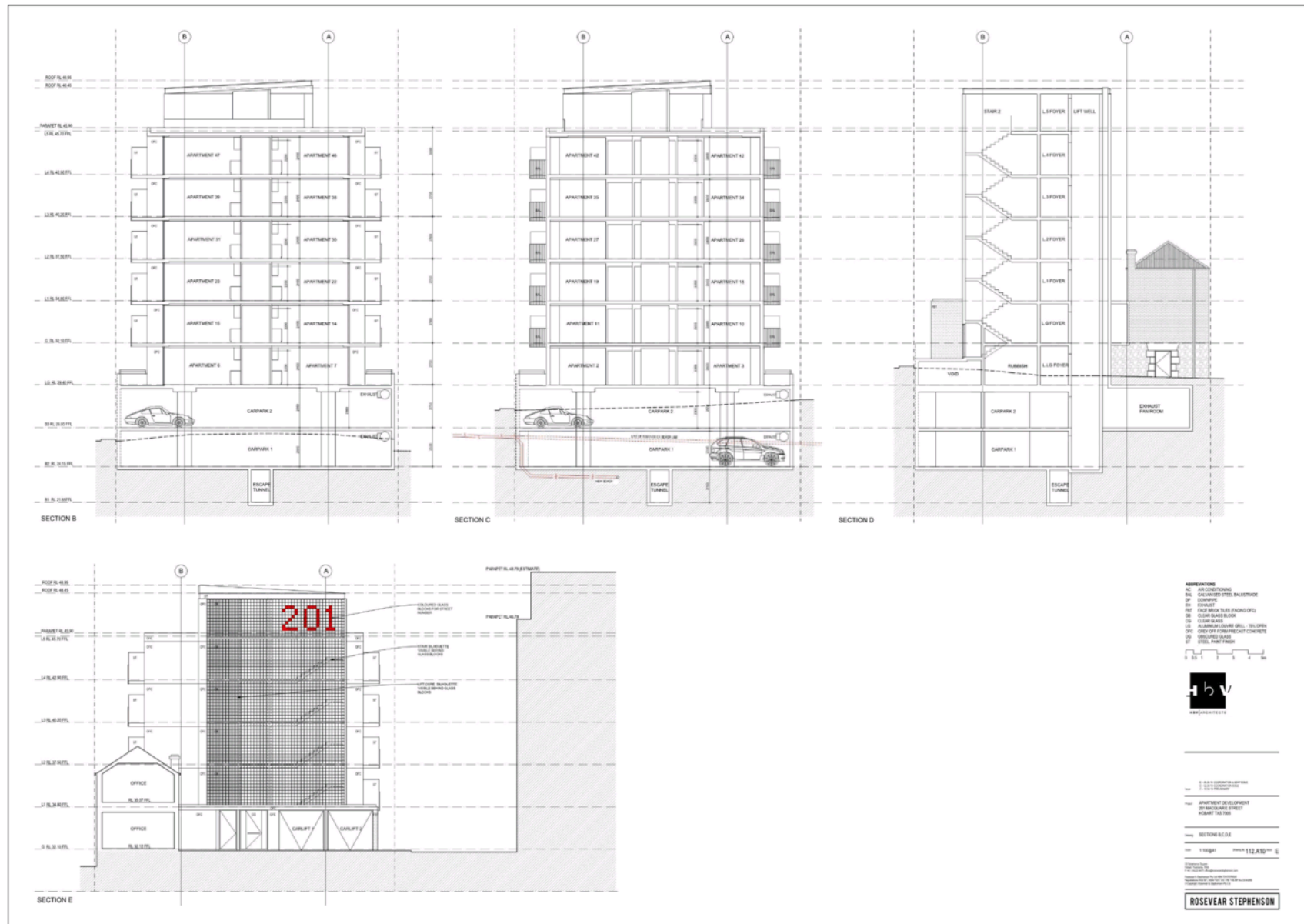
Environmental Site Assessment: 201 Macquarie Street, Hobart, August 2019



Environmental Site Assessment: 201 Macquarie Street, Hobart, August 2019



Environmental Site Assessment: 201 Macquarie Street, Hobart, August 2019



Environmental Site Assessment: 201 Macquarie Street, Hobart, August 2019



Environmental Site Assessment: 201 Macquarie Street, Hobart, August 2019

Appendix 3 Site Photographs



Environmental Site Assessment: 201 Macquarie Street, Hobart, August 2019




Hobart Rivulet



Environmental Site Assessment: 201 Macquarie Street, Hobart, August 2019

Appendix 4 Equipment PID Calibration Certificate



Imbros Pty Ltd
 ABN 29 009 525 053
 1059 Cambridge Road, Cambridge
 Tasmania Australia 7170

Phone (03) 6216 1500
 Fax (03) 6216 1555
 info@imbros.com.au

Calibration Test Certificate
 29/01/2019 16:05:00 PM

Device					
Serial Number:	590-902123	Device Type:	MiniRAE Lite		
Manufacturer:	RAE Systems	Next Cal Due:	28/07/2019		
Test Result	Pass				
Sensors					
Type:	ISO				
Result:	Pass				
Final Reading:	50%				
Next Calibration Due:	28/07/2019				
Set Points					
Type:	ISO				
High Alarm:	10.00%				
Low Alarm:	5.00%				
TWA Alarm:					
STEL Alarm:					
Options					
Datalog Interval:	15 seconds	Unit Programmed:	N/A		
H2S STEL Period:	15 minutes	CO STEL Period:	15 minutes		
Test Station					
Dock Serial Number:	Z309-002181	Dock Location:	Imbros Cal Lab		
Used:	Inlet 1: Yes	Inlet 2: Yes	Inlet 3: No	Inlet 4: No	Inlet 5: No
Concentration:	20.9%	100ppm			
Type:	Purge	ISO 100ppm by volume			
Notes:	NOTE: Calibration all Ok.				

Technology for Laboratory and Marine Science

Environmental Site Assessment: 201 Macquarie Street, Hobart, August 2019



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

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SERVICE / REPAIR REPORT

Customer:

Cash Sales

Aaron Plummer

0400 821 977

aplummer@geosolutions.net.au

Job No: 3825

Cust ABN:

Date: 30/01/2019

Service Engineer: Blackwell, Damian

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.

Environmental Site Assessment: 201 Macquarie Street, Hobart, August 2019

Appendix 5 Laboratory Chain of Custody (COC) and Sample Receipt Notification (SRN)

[illegible]

Environmental

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : EM1902957

Client : GEO-ENVIRONMENTAL SOLUTIONS
Contact : DR JOHN PAUL CUMMING
Address : 29 KIRKSWAY PLACE
BATTERY POINT TASMANIA,
AUSTRALIA 7004

Laboratory : Environmental Division Melbourne
Contact : Shirley LeCornu
Address : 4 Westall Rd Springvale VIC Australia
3171

E-mail : jcumming@geosolutions.net.au
Telephone : +61 03 6223 1839
Facsimile : +61 03 6223 4539

E-mail : shirley.lecornu@Alsglobal.com
Telephone : +6138549 9630
Facsimile : +61-3-8549 9626

Project : 201 Macquarie St
Order number : 2011
C-O-C number : 2011
Site : 2011
Sampler : GM

Page : 1 of 3
Quote number : EB2017GEOENVOL0001 (EN/222)
QC Level : NEPM 2013 B3 & ALS QC Standard

Dates

Date Samples Received : 01-Mar-2019 09:15
Client Requested Due Date : 08-Mar-2019

Issue Date : 01-Mar-2019
Scheduled Reporting Date : 08-Mar-2019

Delivery Details

Mode of Delivery : Carrier
No. of coolers/boxes : 1
Receipt Detail :

Security Seal : Intact.
Temperature : 12.5°C - Ice Bricks present
No. of samples received / analysed : 9 / 9

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- Please direct any queries related to sample condition / numbering / breakages to Client Services.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months) from receipt of samples.
- Analytical work for this work order will be conducted at ALS Springvale.
- Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis required.

RIGHT SOLUTIONS | RIGHT PARTNER

Environmental Site Assessment: 201 Macquarie Street, Hobart, August 2019

Issue Date : 01-Mar-2019
 Page : 2 of 3
 Work Order : EM1902957 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 - E4055-103 Moisture Content	SOIL - S-01	SOIL - S-07
EM1902957-001	26-Feb-2019 00:00	BH01 0.5-0.6	✓	✓	✓
EM1902957-002	26-Feb-2019 00:00	BH01 1.5-1.6	✓	✓	✓
EM1902957-003	26-Feb-2019 00:00	BH02 0.5-0.6	✓	✓	✓
EM1902957-004	26-Feb-2019 00:00	BH02 1.5-1.6	✓	✓	✓
EM1902957-005	26-Feb-2019 00:00	BH02 2.5-2.6	✓	✓	✓
EM1902957-006	26-Feb-2019 00:00	BH02 3.5-3.6	✓	✓	✓
EM1902957-007	26-Feb-2019 00:00	BH03 0.5-0.6	✓	✓	✓
EM1902957-008	26-Feb-2019 00:00	Duplicate	✓	✓	✓

Matrix: **WATER**

Laboratory sample ID	Client sampling date / time	Client sample ID	WATER - W-03 15 Metals (NEPM Suite)	WATER - W-07 17 Metals (NEPM Suite)
EM1902957-009	26-Feb-2019 00:00	Rinsate	✓	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Issue Date : 01-Mar-2019
 Page : 3 of 3
 Work Order : EM1902957 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) Email jcumming@geosolutions.net.au
 - *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email jcumming@geosolutions.net.au
 - *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) Email jcumming@geosolutions.net.au
 - A4 - AU Sample Receipt Notification - Environmental HT (SRN) Email jcumming@geosolutions.net.au
 - A4 - AU Tax Invoice (INV) Email jcumming@geosolutions.net.au
 - Attachment - Report (SUBCO) Email jcumming@geosolutions.net.au
 - Chain of Custody (CoC) (COC) Email jcumming@geosolutions.net.au
 - EDI Format - ENMRG (ENMRG) Email jcumming@geosolutions.net.au
 - EDI Format - XTab (XTAB) Email jcumming@geosolutions.net.au

MIRAN

- A4 - AU Tax Invoice (INV) Email miran@geosolutions.net.au

SARAH JOYCE

- *AU Certificate of Analysis - NATA (COA) Email sjoyce@geosolutions.net.au
 - *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email sjoyce@geosolutions.net.au
 - *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) Email sjoyce@geosolutions.net.au
 - A4 - AU Sample Receipt Notification - Environmental HT (SRN) Email sjoyce@geosolutions.net.au
 - A4 - AU Tax Invoice (INV) Email sjoyce@geosolutions.net.au
 - Attachment - Report (SUBCO) Email sjoyce@geosolutions.net.au
 - Chain of Custody (CoC) (COC) Email sjoyce@geosolutions.net.au
 - EDI Format - ENMRG (ENMRG) Email sjoyce@geosolutions.net.au
 - EDI Format - XTab (XTAB) Email sjoyce@geosolutions.net.au

Environmental Site Assessment: 201 Macquarie Street, Hobart, August 2019

[illegible]

Environmental

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order	: ES1906616		
Client	: GEO-ENVIRONMENTAL SOLUTIONS	Laboratory	: Environmental Division Sydney
Contact	: DR JOHN PAUL CUMMING	Contact	: Shirley LeComu
Address	: 29 KIRKSWAY PLACE	Address	: 277-289 Woodpark Road Smithfield
	BATTERY POINT TASMANIA,		NSW Australia 2164
	AUSTRALIA 7004		
E-mail	: jcumming@geosolutions.net.au	E-mail	: shirley.lecomu@alsglobal.com
Telephone	: +61 03 6223 1839	Telephone	: +6138549 9630
Facsimile	: +61 03 6223 4539	Facsimile	: +61-2-8784 8500
Project	: 201 Macquarie St	Page	: 1 of 2
Order number		Quote number	: EB2017GEOENV/SOL0001 (EN/222)
C-Q-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: GM		

Dates

Date Samples Received	: 05-Mar-2019 10:30	Issue Date	: 05-Mar-2019
Client Requested Due Date	: 12-Mar-2019	Scheduled Reporting Date	: 12-Mar-2019

Delivery Details

Mode of Delivery	: Undefined	Security Seal	: Not Available
No. of coolers/boxes	: 1	Temperature	: 4.4°C - Ice present
Receipt Detail	:	No. of samples received / analysed	: 1 / 1

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please 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 direct any queries you have regarding this work order to the above ALS laboratory contact.
- Analytical work for this work order will be conducted at ALS Sydney.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months \pm 1 week) from receipt of samples.

Environmental Site Assessment: 201 Macquarie Street, Hobart, August 2019

Issue Date : 05-Mar-2019
Page : 2 of 2
Work Order : ES1906616 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 - E4055-103 Moisture Content	SOIL - S-01	15 Metals (MEPM 2013 Suite - Incl. Digestion)	SOIL - S-07
ES1906616-001	26-Feb-2019 00:00	TRIPLICATE	✓	✓	✓	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

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 QC Rep) (QCI)
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- A4 - AU Tax Invoice (INV)
- 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

MIRAN

- A4 - AU Tax Invoice (INV)

Email: miran@geosolutions.net.au

SARAH JOYCE

- *AU Certificate of Analysis - NATA (COA)
- *AU Interpretive QC Report - DEFAULT (Anon QC Rep) (QCI)
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- A4 - AU Tax Invoice (INV)
- Chain of Custody (CoC) (COC)
- EDI Format - ENMRG (ENMRG)
- EDI Format - XTab (XTAB)

Email: sjoyce@geosolutions.net.au
Email: sjoyce@geosolutions.net.au
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Email: sjoyce@geosolutions.net.au

Environmental Site Assessment: 201 Macquarie Street, Hobart, August 2019



Environmental

QUALITY CONTROL REPORT

Work Order	: EM1902957	Page	: 1 of 13
Client	: GEO-ENVIRONMENTAL SOLUTIONS	Laboratory	: Environmental Division Melbourne
Contact	: DR JOHN PAUL CUMMING	Contact	: Shirley LeComu
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	: 201 Macquarie St	Date Samples Received	: 01-Mar-2019
Order number	: ---	Date Analysis Commenced	: 04-Mar-2019
C-O-C number	: ---	Issue Date	: 07-Mar-2019
Sampler	: GM		
Site	: ---		
Quote number	: EN222		
No. of samples received	: 9		
No. of samples analysed	: 9		



Accreditation No. 421
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 Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

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.

Signature	Position	Accreditation Category
Diana Fernando	Senior Inorganic Chemist	Melbourne Inorganics, Springvale, VIC
Eric Chau	Metals Team Leader	Melbourne Inorganics, Springvale, VIC
Nikki Stepniwski	Senior Inorganic Instrument Chemist	Melbourne Inorganics, Springvale, VIC
Xing Lin	Senior Organic Chemist	Melbourne Organics, Springvale, VIC

RIGHT SOLUTIONS | RIGHT PARTNER

Page : 2 of 13
 Work Order : EM1902957
 Client : GEO-ENVIRONMENTAL SOLUTIONS
 Project : 201 Macquarie St



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

Key: Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 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
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: SOIL						Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method/Comment	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 2214476)											
EM1902919-004	Anonymous	EA055: Moisture Content	---	0.1	%	10.7	9.6	10.9	0% - 50%		
EM1902963-002	Anonymous	EA055: Moisture Content	---	0.1	%	8.1	8.6	5.85	No Limit		
EG005T: Total Metals by ICP-AES (QC Lot: 2214648)											
EM1902963-001	Anonymous	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.00	No Limit		
		EG005T: Cadmium	7440-43-9	1	mg/kg	1	<1	0.00	No Limit		
		EG005T: Barium	7440-39-3	10	mg/kg	80	80	0.00	No Limit		
		EG005T: Chromium	7440-47-3	2	mg/kg	20	28	34.1	0% - 50%		
		EG005T: Cobalt	7440-48-4	2	mg/kg	19	22	13.5	0% - 50%		
		EG005T: Nickel	7440-02-0	2	mg/kg	8	8	0.00	No Limit		
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.00	No Limit		
		EG005T: Copper	7440-50-8	5	mg/kg	30	23	25.1	No Limit		
		EG005T: Lead	7439-92-1	5	mg/kg	84	83	1.31	0% - 50%		
		EG005T: Manganese	7439-96-5	5	mg/kg	426	467	9.36	0% - 20%		
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.00	No Limit		
		EG005T: Vanadium	7440-62-2	5	mg/kg	230	224	2.73	0% - 20%		
		EG005T: Zinc	7440-66-6	5	mg/kg	47	44	5.81	No Limit		
		EG005T: Boron	7440-42-8	50	mg/kg	<50	<50	0.00	No Limit		
		EM1902919-004	Anonymous	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.00	No Limit
				EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
				EG005T: Barium	7440-39-3	10	mg/kg	50	50	0.00	No Limit
EG005T: Chromium	7440-47-3			2	mg/kg	26	30	14.1	0% - 50%		
EG005T: Cobalt	7440-48-4			2	mg/kg	8	8	0.00	No Limit		
EG005T: Nickel	7440-02-0			2	mg/kg	7	6	0.00	No Limit		
EG005T: Arsenic	7440-38-2			5	mg/kg	<5	<5	0.00	No Limit		
EG005T: Copper	7440-50-8			5	mg/kg	8	8	0.00	No Limit		

Appendix 6 Quality Assurance and Quality Control

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Environmental Site Assessment: 201 Macquarie Street, Hobart, August 2019

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 Work Order : EM1902957
 Client : GEO-ENVIRONMENTAL SOLUTIONS
 Project : 201 Macquarie St



Sub-Matrix: SOIL		Method: Composite		Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Composite	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG005T: Total Metals by ICP-AES (QC Lot: 2214688) - continued									
EM1902919-004	Anonymous	EG005T: Lead	7439-92-1	5	mg/kg	14	18	25.5	No Limit
		EG005T: Manganese	7439-96-5	5	mg/kg	240	257	6.54	0% - 20%
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Vanadium	7440-62-2	5	mg/kg	37	46	22.3	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	17	14	21.3	No Limit
		EG005T: Boron	7440-42-8	50	mg/kg	<50	<50	0.00	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2214689)									
EM1902919-004	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2214470)									
EM1902918-003	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	1.4	1.4	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo[a]anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo[b]fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
			205-82-3						
		EP075(SIM): Benzo[k]fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo[a]pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno[1,2,3-cd]pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EM1902918-059	Anonymous	EP075(SIM): Dibenzo[a,h]anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo[g,h,i]perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo[a]anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo[b]fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
			205-82-3						
		EP075(SIM): Benzo[k]fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

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 Work Order : EM1902957
 Client : GEO-ENVIRONMENTAL SOLUTIONS
 Project : 201 Macquarie St



Sub-Matrix: SOIL					Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method: Composite	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2214470) - continued									
EM1902918-059	Anonymous	EP075(SIM): Indeno[1,2,3-cd]pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Dibenzo[a,h]anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo[g,h,i]perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2214472)									
EM1902903-006	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo[a]anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo[b]fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
			205-82-3						
		EP075(SIM): Benzo[k]fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo[a]pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno[1,2,3-cd]pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EM1902903-066	Anonymous	EP075(SIM): Dibenzo[a,h]anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo[g,h,i]perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo[a]anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo[b]fluoranthene	205-99-2	0.5	mg/kg	0.8	0.5	51.9	No Limit
			205-82-3						
		EP075(SIM): Benzo[k]fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo[a]pyrene	50-32-8	0.5	mg/kg	0.8	<0.5	45.7	No Limit
		EP075(SIM): Indeno[1,2,3-cd]pyrene	193-39-5	0.5	mg/kg	0.7	0.5	36.5	No Limit
		EP075(SIM): Dibenzo[a,h]anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo[g,h,i]perylene	191-24-2	0.5	mg/kg	1.1	0.9	24.6	No Limit
EP080(071): Total Petroleum Hydrocarbons (QC Lot: 2214619)									
EM1902818-007	Anonymous	EP080: C6 - C9 Fraction	---	10	mg/kg	<10	<10	0.00	No Limit

Appendix 6 Quality Assurance and Quality Control

Environmental Site Assessment: 201 Macquarie Street, Hobart, August 2019

Page : 5 of 13
 Work Order : EM1902957
 Client : GEO-ENVIRONMENTAL SOLUTIONS
 Project : 201 Macquarie St



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2214619) - continued									
EM1902818-050	Anonymous	EP080: C6 - C9 Fraction	---	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2216471)									
EM1902918-003	Anonymous	EP071: C15 - C28 Fraction	---	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C29 - C36 Fraction	---	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	---	50	mg/kg	<50	<50	0.00	No Limit
		EP071: C10 - C36 Fraction (sum)	---	50	mg/kg	<50	<50	0.00	No Limit
EM1902918-059	Anonymous	EP071: C15 - C28 Fraction	---	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C29 - C36 Fraction	---	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	---	50	mg/kg	<50	<50	0.00	No Limit
		EP071: C10 - C36 Fraction (sum)	---	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2216473)									
EM1902903-006	Anonymous	EP071: C15 - C28 Fraction	---	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C29 - C36 Fraction	---	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	---	50	mg/kg	<50	<50	0.00	No Limit
		EP071: C10 - C36 Fraction (sum)	---	50	mg/kg	<50	<50	0.00	No Limit
EM1902903-066	Anonymous	EP071: C15 - C28 Fraction	---	100	mg/kg	<100	110	13.7	No Limit
		EP071: C29 - C36 Fraction	---	100	mg/kg	<100	130	29.1	No Limit
		EP071: C10 - C14 Fraction	---	50	mg/kg	<50	<50	0.00	No Limit
		EP071: C10 - C36 Fraction (sum)	---	50	mg/kg	<50	240	131	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 2214619)									
EM1902818-007	Anonymous	EP080: C6 - C10 Fraction	C6, C10	10	mg/kg	<10	<10	0.00	No Limit
EM1902818-050	Anonymous	EP080: C6 - C10 Fraction	C6, C10	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 2216471)									
EM1902918-003	Anonymous	EP071: >C16 - C34 Fraction	---	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C10 - C16 Fraction	---	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C10 - C16 Fraction	---	50	mg/kg	<50	<50	0.00	No Limit
		EP071: >C10 - C40 Fraction (sum)	---	50	mg/kg	<50	<50	0.00	No Limit
EM1902918-059	Anonymous	EP071: >C16 - C34 Fraction	---	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C34 - C40 Fraction	---	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C10 - C16 Fraction	---	50	mg/kg	<50	<50	0.00	No Limit
		EP071: >C10 - C40 Fraction (sum)	---	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 2216473)									
EM1902903-006	Anonymous	EP071: >C16 - C34 Fraction	---	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C34 - C40 Fraction	---	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C10 - C16 Fraction	---	50	mg/kg	<50	<50	0.00	No Limit
		EP071: >C10 - C40 Fraction (sum)	---	50	mg/kg	<50	<50	0.00	No Limit
EM1902903-066	Anonymous	EP071: >C16 - C34 Fraction	---	100	mg/kg	140	220	44.1	No Limit
		EP071: >C34 - C40 Fraction	---	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C10 - C16 Fraction	---	50	mg/kg	<50	<50	0.00	No Limit
		EP071: >C10 - C40 Fraction (sum)	---	50	mg/kg	<50	<50	0.00	No Limit

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Sub-Matrix: SOIL			CAS Number	Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 2216473) - continued									
EP1902903-066	Anonymous	EP071: >C10 - C40 Fraction (sum)	---	50	mg/kg	140	220	44.4	No Limit
EP080: BTEXN (QC Lot: 2214619)									
EM1902818-007	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EM1902818-050	Anonymous	EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit
		EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit
Sub-Matrix: WATER									
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG020F: Dissolved Metals by ICP-MS (QC Lot: 2219070)									
EM1902170-001	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	0.002	0.002	0.00	No Limit
		EG020A-F: Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-F: Barium	7440-39-3	0.001	mg/L	0.079	0.082	4.13	0% - 20%
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	0.002	0.001	0.00	No Limit
		EG020A-F: Cobalt	7440-48-4	0.001	mg/L	0.011	0.012	0.00	0% - 50%
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.023	0.024	0.00	0% - 20%
		EG020A-F: Lead	7439-92-1	0.001	mg/L	0.002	0.002	0.00	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	1.18	1.18	0.00	0% - 20%
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.074	0.076	2.12	0% - 20%
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.169	0.177	4.80	0% - 20%
		EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.00	No Limit
		EG020A-F: Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	0.00	No Limit
		EG020A-F: Boron	7440-42-8	0.05	mg/L	3.81	3.92	2.80	0% - 20%
EM1902969-001	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	0.003	0.003	0.00	No Limit
		EG020A-F: Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-F: Barium	7440-39-3	0.001	mg/L	0.013	0.013	0.00	0% - 50%
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-F: Cobalt	7440-48-4	0.001	mg/L	0.003	0.003	0.00	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.004	0.004	0.00	No Limit

Appendix 6 Quality Assurance and Quality Control

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Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	Recovery Limits (%)
EG020F: Dissolved Metals by ICP-MS (QC Lot: 2216970) - continued								
EM1902959-001	Anonymous	EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.00
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.134	0.131	0% - 20%
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.012	0.013	0% - 50%
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.055	0.056	0% - 50%
		EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	No Limit
		EG020A-F: Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	No Limit
		EG020A-F: Boron	7440-42-8	0.05	mg/L	0.23	0.23	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 2219069)								
EM1902170-001	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.00
EM1902669-001	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.00
EP080071: Total Petroleum Hydrocarbons (QC Lot: 2214111)								
EM1902933-001	Anonymous	EP080: C6 - C9 Fraction	---	20	µg/L	<20	<20	0.00
EM1902951-009	Anonymous	EP080: C6 - C9 Fraction	---	20	µg/L	20	20	0.00
EP080071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 2214211)								
EM1902933-001	Anonymous	EP080: C6 - C10 Fraction	C6, C10	20	µg/L	<20	<20	0.00
EM1902951-009	Anonymous	EP080: C6 - C10 Fraction	C6, C10	20	µg/L	30	30	0.00
EP080: BTEX (QC Lot: 2214211)								
EM1902933-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.00
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.00
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.00
		EP080: meta- & para-Xylene	106-38-3	2	µg/L	<2	<2	0.00
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.00
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.00
EM1902951-009	Anonymous	EP080: Benzene	71-43-2	1	µg/L	5	4	0.00
		EP080: Toluene	108-88-3	2	µg/L	14	13	0.00
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.00
		EP080: meta- & para-Xylene	106-38-3	2	µg/L	6	6	0.00
		EP080: ortho-Xylene	95-47-6	2	µg/L	2	2	0.00
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.00

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Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Spike (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: SOIL				Method Blank (MB) Report				
Method/Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Laboratory Control Spike (LCS) Report	Recovery Limits (%)	
						LCS	Low	High
EG005T: Total Metals by ICP-AES (QC Lot: 2214668)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	94.6	78	107
EG005T: Barium	7440-39-3	10	mg/kg	<10	143 mg/kg	104	76	110
EG005T: Beryllium	7440-41-7	1	mg/kg	<1	5.63 mg/kg	100	84	113
EG005T: Boron	7440-42-8	50	mg/kg	<50	33.2 mg/kg	102	84	126
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	89.4	76	106
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	98.2	78	110
EG005T: Cobalt	7440-48-4	2	mg/kg	<2	16 mg/kg	92.1	78	112
EG005T: Copper	7440-50-8	5	mg/kg	<5	32 mg/kg	92.7	78	108
EG005T: Lead	7439-92-1	5	mg/kg	<5	40 mg/kg	94.5	78	106
EG005T: Manganese	7439-96-5	5	mg/kg	<5	130 mg/kg	97.1	81	110
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55 mg/kg	97.8	80	109
EG005T: Selenium	7782-49-2	5	mg/kg	<5	5.37 mg/kg	101	92	110
EG005T: Vanadium	7440-62-2	5	mg/kg	<5	29.6 mg/kg	94.1	78	106
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	99.4	79	110
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2214689)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	85.8	77	104
EP075(SIM): Polynuclear Aromatic Hydrocarbons (QC Lot: 2216479)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	3 mg/kg	115	77	129
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	3 mg/kg	113	74	130
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	3 mg/kg	115	78	129
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	3 mg/kg	113	78	128
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	3 mg/kg	117	83	130
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	3 mg/kg	120	76	129
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	3 mg/kg	119	79	134
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	3 mg/kg	124	84	135
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	3 mg/kg	118	72	125
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	3 mg/kg	122	76	135
EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	3 mg/kg	101	69	123
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	3 mg/kg	110	77	131
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	3 mg/kg	103	65	116
EP075(SIM): Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	3 mg/kg	106	65	124
EP075(SIM): Dibenzo(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	3 mg/kg	107	66	127
EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	3 mg/kg	106	65	124

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Sub-Matrix: SOIL				Method Blank (MB)	Laboratory Control Spike (LCS) Report			
Method/Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)	Recovery Limits (%)	
						LCS	Low	High
EP075(SIMB): Polynuclear Aromatic Hydrocarbons (QCLot: 2216472)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	3 mg/kg	123	77	129
EP075(SIM): Acenaphthylene	209-96-8	0.5	mg/kg	<0.5	3 mg/kg	115	74	130
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	3 mg/kg	120	78	129
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	3 mg/kg	121	78	128
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	3 mg/kg	129	83	130
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	3 mg/kg	125	76	129
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	3 mg/kg	125	79	134
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	3 mg/kg	126	84	135
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	3 mg/kg	109	72	125
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	3 mg/kg	119	76	135
EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	3 mg/kg	99.0	69	123
EP075(SIM): Benzo(k)fluoranthene	205-82-3	0.5	mg/kg	<0.5	3 mg/kg	113	77	131
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	3 mg/kg	103	65	116
EP075(SIM): Indeno(1,2,3-cd)pyrene	193-39-9	0.5	mg/kg	<0.5	3 mg/kg	101	65	124
EP075(SIM): Dibenzo(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	3 mg/kg	98.8	66	127
EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	3 mg/kg	108	65	124
EP080(071): Total Petroleum Hydrocarbons (QCLot: 2214619)								
EP080: C6 - C9 Fraction	---	10	mg/kg	<10	36 mg/kg	90.5	61	127
EP080(071): Total Petroleum Hydrocarbons (QCLot: 2216471)								
EP071: C10 - C14 Fraction	---	50	mg/kg	<50	806 mg/kg	81.0	72	122
EP071: C15 - C28 Fraction	---	100	mg/kg	<100	3006 mg/kg	95.8	84	123
EP071: C29 - C36 Fraction	---	100	mg/kg	<100	1584 mg/kg	89.4	79	119
EP071: C10 - C36 Fraction (sum)	---	50	mg/kg	<50	---	---	---	---
EP080(071): Total Petroleum Hydrocarbons (QCLot: 2216473)								
EP071: C10 - C14 Fraction	---	50	mg/kg	<50	806 mg/kg	106	72	122
EP071: C15 - C28 Fraction	---	100	mg/kg	<100	3006 mg/kg	113	84	123
EP071: C29 - C36 Fraction	---	100	mg/kg	<100	1584 mg/kg	102	79	119
EP071: C10 - C36 Fraction (sum)	---	50	mg/kg	<50	---	---	---	---
EP080(071): Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2214619)								
EP080: C6 - C10 Fraction	C6, C10	10	mg/kg	<10	45 mg/kg	84.0	60	125
EP080(071): Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2216471)								
EP071: <C10 - C16 Fraction	---	50	mg/kg	<50	1160 mg/kg	85.5	77	121
EP071: <C16 - C34 Fraction	---	100	mg/kg	<100	3978 mg/kg	95.2	83	121
EP071: <C34 - C40 Fraction	---	100	mg/kg	<100	313 mg/kg	74.8	65	123
EP071: <C10 - C40 Fraction (sum)	---	50	mg/kg	<50	---	---	---	---
EP080(071): Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2216473)								
EP071: <C10 - C16 Fraction	---	50	mg/kg	<50	1160 mg/kg	116	77	121

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Sub-Matrix: WATER				Method Blank (MB)	Laboratory Control Spike (LCS) Report			
Method/Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)	Recovery Limits (%)	
						LCS	Low	High
EG020F: Dissolved Metals by ICP-MS (QCLot: 2219079)								
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	95.4	91	107
EG020A-F: Beryllium	7440-41-7	0.001	mg/L	<0.001	0.1 mg/L	98.4	82	113
EG020A-F: Barium	7440-39-3	0.001	mg/L	<0.001	0.1 mg/L	90.9	84	106
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	88.1	84	104
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	91.0	83	103
EG020A-F: Cobalt	7440-48-4	0.001	mg/L	<0.001	0.1 mg/L	93.7	83	106
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	91.8	82	103
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	91.1	83	105
EG020A-F: Manganese	7439-96-5	0.001	mg/L	<0.001	0.1 mg/L	94.8	83	105
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	93.1	82	106
EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	0.1 mg/L	97.9	82	109
EG020A-F: Vanadium	7440-62-2	0.01	mg/L	<0.01	0.1 mg/L	95.3	83	106
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	96.1	85	109
EG020A-F: Boron	7440-42-8	0.05	mg/L	<0.05	0.5 mg/L	100	84	116
EG035F: Dissolved Mercury by FIMS (QCLot: 2219069)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	81.4	76	114
EP075(SIMB): Polynuclear Aromatic Hydrocarbons (QCLot: 2213773)								
EP075(SIM): Naphthalene	91-20-3	1	µg/L	<1.0	5 µg/L	104	48	110
EP075(SIM): Acenaphthylene	208-96-8	1	µg/L	<1.0	5 µg/L	98.4	50	117
EP075(SIM): Acenaphthene	83-32-9	1	µg/L	<1.0	5 µg/L	108	53	117
EP075(SIM): Fluorene	86-73-7	1	µg/L	<1.0	5 µg/L	112	54	118
EP075(SIM): Phenanthrene	85-01-8	1	µg/L	<1.0	5 µg/L	111	59	119
EP075(SIM): Anthracene	120-12-7	1	µg/L	<1.0	5 µg/L	107	51	113

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Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
Method/Compound	CAS Number	LOD	Unit	Result	Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low High	
EP075(SIM): Polynuclear Aromatic Hydrocarbons (QCLot: 2213073) - continued								
EP075(SIM): Fluoranthene	206-44-0	1	µg/L	<1.0	5 µg/L	111	61	120
EP075(SIM): Pyrene	129-00-0	1	µg/L	<1.0	5 µg/L	106	56	120
EP075(SIM): Benz(a)anthracene	56-55-3	1	µg/L	<1.0	5 µg/L	107	53	120
EP075(SIM): Chrysene	218-01-9	1	µg/L	<1.0	5 µg/L	114	57	122
EP075(SIM): Benzo(b)fluoranthene	205-99-2	1	µg/L	<1.0	5 µg/L	116	56	131
EP075(SIM): Benzo(k)fluoranthene	205-82-3	1	µg/L	<1.0	5 µg/L	120	59	124
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	5 µg/L	121	54	124
EP075(SIM): Indeno(1,2,3-cd)pyrene	193-39-5	1	µg/L	<1.0	5 µg/L	109	55	124
EP075(SIM): Dibenzo(a,h)anthracene	53-70-3	1	µg/L	<1.0	5 µg/L	110	54	124
EP075(SIM): Benzo(g,h)perylene	191-24-2	1	µg/L	<1.0	5 µg/L	104	56	124
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2213072)								
EP071: C10 - C14 Fraction	---	50	µg/L	<50	4030 µg/L	88.0	50	129
EP071: C15 - C28 Fraction	---	100	µg/L	<100	15600 µg/L	97.0	55	132
EP071: C29 - C36 Fraction	---	50	µg/L	<50	7820 µg/L	96.2	55	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2214211)								
EP080: C6 - C9 Fraction	---	20	µg/L	<20	360 µg/L	70.2	65	126
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2213072)								
EP071: <C10 - C16 Fraction	---	100	µg/L	<100	5960 µg/L	87.2	53	129
EP071: >C16 - C34 Fraction	---	100	µg/L	<100	20700 µg/L	93.5	56	131
EP071: >C34 - C40 Fraction	---	100	µg/L	<100	1520 µg/L	113	53	136
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2214211)								
EP080: C6 - C10 Fraction	C6, C10	20	µg/L	<20	450 µg/L	70.6	64	124
EP080: BTEXN (QCLot: 2214211)								
EP080: Benzene	71-43-2	1	µg/L	<1	20 µg/L	73.2	69	123
EP080: Toluene	108-88-3	2	µg/L	<2	20 µg/L	79.8	73	124
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	20 µg/L	84.6	71	125
EP080: meta- & para-Xylene	108-38-3	2	µg/L	<2	40 µg/L	79.7	72	129
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	20 µg/L	84.7	76	129
EP080: Naphthalene	91-20-3	5	µg/L	<5	5 µg/L	95.7	70	125

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Matrix Spike (MS) Report		
Spike	Spike/Recovery (%)	Recovery Limits (%)

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Sub-Matrix: SOIL			Matrix Spike (MS) Report					
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	Spike Concentration	MS Spike/Recovery(%)	Recovery Limits (%)		
							Low	High
EQ005T: Total Metals by ICP-AES (QCLot: 2214688)								
EM1902957-001	BH01 0.5-0.6	EQ005T: Arsenic	7440-38-2	50 mg/kg	92.8	78	124	
		EQ005T: Barium	7440-39-3	50 mg/kg	81.1	71	135	
		EQ005T: Beryllium	7440-41-7	50 mg/kg	86.6	85	125	
		EQ005T: Cadmium	7440-43-9	50 mg/kg	97.9	84	116	
		EQ005T: Chromium	7440-47-3	50 mg/kg	79.9	79	121	
		EQ005T: Copper	7440-50-8	50 mg/kg	91.6	82	124	
		EQ005T: Lead	7439-92-1	50 mg/kg	99.5	76	124	
		EQ005T: Manganese	7439-96-5	50 mg/kg	# Not Determined	68	136	
		EQ005T: Nickel	7440-02-0	50 mg/kg	79.5	76	120	
		EQ005T: Selenium	7782-49-2	50 mg/kg	96.8	71	125	
		EQ005T: Vanadium	7440-62-2	50 mg/kg	82.8	76	124	
		EQ005T: Zinc	7440-66-6	50 mg/kg	93.5	74	128	
EQ035T: Total Recoverable Mercury by FIMS (QCLot: 2214689)								
EM1902957-001	BH01 0.5-0.6	EQ035T: Mercury	7439-97-6	0.5 mg/kg	92.7	76	116	
EP075(SIM): Polynuclear Aromatic Hydrocarbons (QCLot: 2216479)								
EM1902918-003	Anonymous	EP075(SIM): Acenaphthene	83-32-9	3 mg/kg	102	67	117	
		EP075(SIM): Pyrene	129-00-0	3 mg/kg	112	52	148	
EP075(SIM): Polynuclear Aromatic Hydrocarbons (QCLot: 2216472)								
EM1902903-007	Anonymous	EP075(SIM): Acenaphthene	83-32-9	3 mg/kg	104	67	117	
		EP075(SIM): Pyrene	129-00-0	3 mg/kg	114	52	148	
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2214619)								
EM1902818-011	Anonymous	EP080: C6 - C9 Fraction	---	28 mg/kg	77.5	42	131	
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2216471)								
EM1902918-004	Anonymous	EP071: C10 - C14 Fraction	---	806 mg/kg	74.4	53	123	
		EP071: C15 - C28 Fraction	---	3006 mg/kg	92.7	70	124	
		EP071: C29 - C36 Fraction	---	1584 mg/kg	87.0	64	118	
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2216473)								
EM1902903-021	Anonymous	EP071: C10 - C14 Fraction	---	806 mg/kg	99.9	53	123	
		EP071: C15 - C28 Fraction	---	3006 mg/kg	106	70	124	
		EP071: C29 - C36 Fraction	---	1584 mg/kg	96.7	64	118	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2214619)								
EM1902818-011	Anonymous	EP080: C6 - C10 Fraction	C6, C10	33 mg/kg	72.5	39	129	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2216471)								
EM1902918-004	Anonymous	EP071: <C10 - C16 Fraction	---	1160 mg/kg	80.3	65	123	
		EP071: >C16 - C34 Fraction	---	3978 mg/kg	92.6	67	121	

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Sub-Matrix: SOIL				Matrix Spike (MS) Report			
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	Concentration	MS	Recovery Limits (%)	
						Low	High
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2216471) - continued							
EM1902918-004	Anonymous	EP071: >C34 - C40 Fraction	---	313 mg/kg	68.4	44	126
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2216473)							
EM1902903-021	Anonymous	EP071: >C10 - C16 Fraction	---	1160 mg/kg	109	65	123
		EP071: >C16 - C34 Fraction	---	3978 mg/kg	99.7	67	121
		EP071: >C34 - C40 Fraction	---	313 mg/kg	104	44	126
EP080: BTEXN (QCLot: 2214619)							
EM1902818-011	Anonymous	EP080: Benzene	71-43-2	2 mg/kg	98.0	50	136
		EP080: Toluene	108-88-3	2 mg/kg	103	56	139
Sub-Matrix: WATER				Matrix Spike (MS) Report			
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	Concentration	MS	Recovery Limits (%)	
						Low	High
EG020F: Dissolved Metals by ICP-MS (QCLot: 2219070)							
EM1902170-001	Anonymous	EG020A-F: Arsenic	7440-38-2	0.2 mg/L	95.6	85	131
		EG020A-F: Beryllium	7440-41-7	0.2 mg/L	84.9	73	141
		EG020A-F: Barium	7440-39-3	0.2 mg/L	92.6	75	127
		EG020A-F: Cadmium	7440-43-9	0.05 mg/L	87.1	81	133
		EG020A-F: Chromium	7440-47-3	0.2 mg/L	75.8	71	135
		EG020A-F: Cobalt	7440-48-4	0.2 mg/L	90.7	78	132
		EG020A-F: Copper	7440-50-8	0.2 mg/L	83.0	76	130
		EG020A-F: Lead	7439-92-1	0.2 mg/L	89.8	75	133
		EG020A-F: Manganese	7439-96-5	0.2 mg/L	# Not Determined	64	134
		EG020A-F: Nickel	7440-02-0	0.2 mg/L	88.4	73	131
		EG020A-F: Vanadium	7440-62-2	0.2 mg/L	80.1	73	131
		EG020A-F: Zinc	7440-66-6	0.2 mg/L	83.5	75	131
EG035F: Dissolved Mercury by FIMS (QCLot: 2219069)							
EM1902170-002	Anonymous	EG035F: Mercury	7439-97-6	0.01 mg/L	84.4	70	120
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2214211)							
EM1902933-002	Anonymous	EP080: C6 - C9 Fraction	---	280 µg/L	59.3	43	125
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2214211)							
EM1902933-002	Anonymous	EP080: C6 - C10 Fraction	C6, C10	330 µg/L	55.4	44	122
EP080: BTEXN (QCLot: 2214211)							
EM1902933-002	Anonymous	EP080: Benzene	71-43-2	20 µg/L	77.0	68	130
		EP080: Toluene	108-88-3	20 µg/L	83.3	72	132



Environmental

QA/QC Compliance Assessment to assist with Quality Review

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Client : GEO-ENVIRONMENTAL SOLUTIONS	Laboratory : Environmental Division Melbourne
Contact : DR JOHN PAUL CUMMING	Telephone : +6138549 9630
Project : 201 Macquarie St	Date Samples Received : 01-Mar-2019
Site : ---	Issue Date : 07-Mar-2019
Sampler : GM	No. of samples received : 9
Order number :	No. of samples analysed : 9

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.

- **NQ** Method Blank value outliers occur.
- **NQ** Duplicate outliers occur.
- **NQ** Laboratory Control outliers occur.
- Matrix Spike outliers exist - please see following pages for full details.
- For all regular sample matrices, **NQ** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NQ** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- Quality Control Sample Frequency Outliers exist - please see following pages for full details.

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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	Date	Limits	Comment
Matrix Spike (MS) Recoveries							
EG005T: Total Metals by ICP-AES	EM1902957-001	BH01 0.5-0.6	Manganese	7439-96-5	Not Determined	---	MS recovery not determined, background level greater than or equal to 4x spike level.

Matrix: WATER

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Date	Limits	Comment
Matrix Spike (MS) Recoveries							
EG020F: Dissolved Metals by ICP-MS	EM1902170-001	Anonymous	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
	QC	Regular	Actual	Expected	
Laboratory Duplicates (LDR)					
PAH/Phenols (GC/MS - SIM)	0	1	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	14	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	14	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 summarises 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 and other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters. Holding times for VOCs 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 as Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: SOIL

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EAS55: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EAS55)							
BH01 0.5-0.6, BH02 0.5-0.6, BH02 2.5-2.6, BH03 0.5-0.6	BH01 1.5-1.6, BH02 1.5-1.6, BH02 3.5-3.6, Duplicate	26-Feb-2019	---	---	---	04-Mar-2019	12-Mar-2019 ✓

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Matrix: SOIL

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG005T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
BH01 0.5-0.6, BH02 0.5-0.6, BH02 2.5-2.6, BH03 0.5-0.6	BH01 1.5-1.6, BH02 1.5-1.6, BH02 3.5-3.6, Duplicate	26-Feb-2019	04-Mar-2019	25-Aug-2019 ✓	04-Mar-2019	25-Aug-2019	✓
EG035T: Total Recoverable Mercury by XMS							
Soil Glass Jar - Unpreserved (EG035T)							
BH01 0.5-0.6, BH02 0.5-0.6, BH02 2.5-2.6, BH03 0.5-0.6	BH01 1.5-1.6, BH02 1.5-1.6, BH02 3.5-3.6, Duplicate	26-Feb-2019	04-Mar-2019	26-Mar-2019 ✓	05-Mar-2019	26-Mar-2019	✓
EP075(SIM)/B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM))							
BH01 0.5-0.6, BH02 0.5-0.6, BH02 2.5-2.6, BH03 0.5-0.6	BH01 1.5-1.6, BH02 1.5-1.6, BH02 3.5-3.6, Duplicate	26-Feb-2019	04-Mar-2019	12-Mar-2019 ✓	05-Mar-2019	13-Apr-2019	✓
EP080(SIM): Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080)							
BH01 0.5-0.6, BH02 0.5-0.6, BH02 2.5-2.6, BH03 0.5-0.6	BH01 1.5-1.6, BH02 1.5-1.6, BH02 3.5-3.6, Duplicate	26-Feb-2019	04-Mar-2019	12-Mar-2019 ✓	04-Mar-2019	12-Mar-2019	✓
Soil Glass Jar - Unpreserved (EP071)							
BH01 0.5-0.6, BH02 0.5-0.6, BH02 2.5-2.6, BH03 0.5-0.6	BH01 1.5-1.6, BH02 1.5-1.6, BH02 3.5-3.6, Duplicate	26-Feb-2019	04-Mar-2019	12-Mar-2019 ✓	05-Mar-2019	13-Apr-2019	✓
EP080(SIM): Total Recoverable Hydrocarbons - NEPM 2013 Fraction							
Soil Glass Jar - Unpreserved (EP080)							
BH01 0.5-0.6, BH02 0.5-0.6, BH02 2.5-2.6, BH03 0.5-0.6	BH01 1.5-1.6, BH02 1.5-1.6, BH02 3.5-3.6, Duplicate	26-Feb-2019	04-Mar-2019	12-Mar-2019 ✓	04-Mar-2019	12-Mar-2019	✓
Soil Glass Jar - Unpreserved (EP071)							
BH01 0.5-0.6, BH02 0.5-0.6, BH02 2.5-2.6, BH03 0.5-0.6	BH01 1.5-1.6, BH02 1.5-1.6, BH02 3.5-3.6, Duplicate	26-Feb-2019	04-Mar-2019	12-Mar-2019 ✓	05-Mar-2019	13-Apr-2019	✓

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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: BTEXN								
Soil Glass Jar - Unpreserved (EP080)								
BH01 0.5-0.6,	BH01 1.5-1.6,	26-Feb-2019	04-Mar-2019	12-Mar-2019	✓	04-Mar-2019	12-Mar-2019	✓
BH02 0.5-0.6,	BH02 1.5-1.6,							
BH02 2.5-2.6,	BH02 3.5-3.6,							
BH03 0.5-0.6,	Duplicate							
Matrix: WATER								
Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EQ020F: Dissolved Metals by ICP-MS								
Clear Plastic Bottle - Filtered; Lab-acidified (EQ020A-F)		26-Feb-2019	---	---	---	06-Mar-2019	25-Aug-2019	✓
Rinsate								
EQ035F: Dissolved Mercury by FIMS								
Clear Plastic Bottle - Filtered; Lab-acidified (EQ035F)		26-Feb-2019	---	---	---	06-Mar-2019	26-Mar-2019	✓
Rinsate								
EP075(SIM): Polynuclear Aromatic Hydrocarbons								
Amber Glass Bottle - Unpreserved (EP075(SIM))		26-Feb-2019	04-Mar-2019	05-Mar-2019	✓	04-Mar-2019	13-Apr-2019	✓
Rinsate								
EP080(B): Total Petroleum Hydrocarbons								
Amber Glass Bottle - Unpreserved (EP080)		26-Feb-2019	04-Mar-2019	05-Mar-2019	✓	04-Mar-2019	13-Apr-2019	✓
Rinsate								
Amber VOC Vial - Sulfuric Acid (EP080)								
Rinsate		26-Feb-2019	04-Mar-2019	12-Mar-2019	✓	04-Mar-2019	12-Mar-2019	✓
EP080(B): Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
Amber Glass Bottle - Unpreserved (EP080)		26-Feb-2019	04-Mar-2019	05-Mar-2019	✓	04-Mar-2019	13-Apr-2019	✓
Rinsate								
Amber VOC Vial - Sulfuric Acid (EP080)								
Rinsate		26-Feb-2019	04-Mar-2019	12-Mar-2019	✓	04-Mar-2019	12-Mar-2019	✓
EP080: BTEXN								
Amber VOC Vial - Sulfuric Acid (EP080)		26-Feb-2019	04-Mar-2019	12-Mar-2019	✓	04-Mar-2019	12-Mar-2019	✓
Rinsate								

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Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: SOIL		Evaluation: * = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.						
Quality Control Sample Type	Method	Count		Rate (%)		Quality Control Specification		
Analytical Methods		QC	Recover	Actual	Expected	Evaluation		
Laboratory Duplicates (DUP)								
Moisture Content	EA055	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard	
PAH/Phenols (SIM)	EP075(SIM)	4	36	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard	
Total Mercury by FIMS	EQ035T	1	9	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard	
Total Metals by ICP-AES	EQ005T	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard	
TRH - Semivolatile Fraction	EP071	4	34	11.76	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 (SIM)	EP075(SIM)	2	36	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard	
Total Mercury by FIMS	EQ035T	1	9	11.11	5.00	✓	NEPM 2013 B3 & ALS QC Standard	
Total Metals by ICP-AES	EQ005T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard	
TRH - Semivolatile Fraction	EP071	2	34	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard	
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard	
Method Blanks (MB)								
PAH/Phenols (SIM)	EP075(SIM)	2	36	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard	
Total Mercury by FIMS	EQ035T	1	9	11.11	5.00	✓	NEPM 2013 B3 & ALS QC Standard	
Total Metals by ICP-AES	EQ005T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard	
TRH - Semivolatile Fraction	EP071	2	34	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard	
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard	
Matrix Spikes (MS)								
PAH/Phenols (SIM)	EP075(SIM)	2	36	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard	
Total Mercury by FIMS	EQ035T	1	9	11.11	5.00	✓	NEPM 2013 B3 & ALS QC Standard	
Total Metals by ICP-AES	EQ005T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard	
TRH - Semivolatile Fraction	EP071	2	34	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard	
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard	
Matrix: WATER								
Quality Control Sample Type	Method	Count		Rate (%)		Quality Control Specification		
Analytical Methods		QC	Recover	Actual	Expected	Evaluation		
Laboratory Duplicates (DUP)								
Dissolved Mercury by FIMS	EQ035F	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard	
Dissolved Metals by ICP-MS - Suite A	EQ020A-F	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard	
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	1	0.00	10.00	✗	NEPM 2013 B3 & ALS QC Standard	
TRH - Semivolatile Fraction	EP071	0	14	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)								
Dissolved Mercury by FIMS	EQ035F	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard	

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Matrix: WATER		Evaluation: * = Quality Control frequency not within specification; ✓ = Quality Control frequency within specification					
Quality Control Sample Type	Method	Count	QC	Residual	Actual	Expected	Quality Control Specification
Analytical Methods							
Laboratory Control Samples (LCS) - Continued							
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Descriptions (MS)							
Dissolved Mercury by FIMS	EG035F	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Dissolved Mercury by FIMS	EG035F	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	1	0.00	5.00	✗	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	14	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

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Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In-house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM (2013) Schedule B(3) Section 7.1 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 ICP-AES 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 ₂) (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 ₂ 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.
Dissolved Metals by ICP-MS - Suite A	EG020A-F	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-ENEG020. Samples are 0.45µm filtered prior to analysis. 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.
Dissolved Mercury by FIMS	EG035F	WATER	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl ₂)(Cold Vapour generation) AAS) Samples are 0.45µm filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl ₂ which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (2013) Schedule B(3).
TRH - Semivolatile Fraction	EP071	WATER	In house: Referenced to USEPA SW 846 - 8015A. The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with the QC requirements of NEPM (2013) Schedule B(3).
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	WATER	In house: Referenced to USEPA SW 846 - 8270D. Sample extracts are analysed by Capillary GC/MS in SIM Mode and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3).

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Analytical Methods	Method	Matrix	Method Description
TRH Volatiles/BTEX	EP880	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 GC/MS analysis. This method is compliant with the QC requirements of NEPM (2013) Schedule B(3).
Preparation Methods	Method	Matrix	Method Description
Hot Block Digest for metals in soils, sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion. 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM (2013) Schedule B(3) (Method 202).
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510B. 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM (2013) Schedule B(3). ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for sparging.

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Environmental

QUALITY CONTROL REPORT

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Client	: GEO-ENVIRONMENTAL SOLUTIONS	Laboratory	: Environmental Division Sydney
Contact	: DR JOHN PAUL CUMMING	Contact	: Shirley LeComu
Address	: 29 KIRKSWAY PLACE BATTERY POINT TASMANIA, AUSTRALIA 7004	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: +61 03 6223 1639	Telephone	: +61 38549 9630
Project	: 201 Macquarie St	Date Samples Received	: 05-Mar-2019
Order number	:	Date Analysis Commenced	: 05-Mar-2019
C-O-C number	: ---	Issue Date	: 08-Mar-2019
Sampler	: GM		
Site	: ---		
Quote number	: EN222		
No. of samples received	: 1		
No. of samples analysed	: 1		



Accreditation No. 823
Accredited for compliance with
ISO/IEC 17023 - 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 Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

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
Edwandy Fajdar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fajdar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW

RIGHT SOLUTIONS | RIGHT PARTNER

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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 result is higher than the LOR, this may be due to primary sample extractions/digestion and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high

Key: Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot.
 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
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit, Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Lab-Matrix: SOIL						Laboratory Duplicate (DUP) Report			
Laboratory sample ID	Client sample ID	Method/Comment	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EA955: Moisture Content (Dried @ 105-110°C) (QC Lot: 2220320)									
ES1906611-009	Anonymous	EA955: Moisture Content	---	0.1	%	10.5	10.8	2.00	0% - 50%
EW1900938-001	Anonymous	EA955: Moisture Content	---	0.1	%	26.6	26.3	1.36	0% - 20%
EQ005T: Total Metals by ICP-AES (QC Lot: 2218111)									
ES1906600-028	Anonymous	EQ005T: Beryllium	7440-41-7	1	mg/kg	1	1	0.00	No Limit
		EQ005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EQ005T: Barium	7440-39-3	10	mg/kg	130	130	0.00	0% - 50%
		EQ005T: Chromium	7440-47-3	2	mg/kg	37	38	0.00	0% - 50%
		EQ005T: Cobalt	7440-48-4	2	mg/kg	13	14	11.7	No Limit
		EQ005T: Nickel	7440-02-0	2	mg/kg	19	18	0.00	No Limit
		EQ005T: Arsenic	7440-38-2	5	mg/kg	11	10	0.00	No Limit
		EQ005T: Copper	7440-50-8	5	mg/kg	27	26	4.92	No Limit
		EQ005T: Lead	7439-92-1	5	mg/kg	93	84	10.1	0% - 50%
		EQ005T: Manganese	7439-96-5	5	mg/kg	352	381	7.91	0% - 20%
		EQ005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.00	No Limit
		EQ005T: Vanadium	7440-62-2	5	mg/kg	56	54	2.72	0% - 50%
		EQ005T: Zinc	7440-66-6	5	mg/kg	153	148	3.94	0% - 20%
		EQ005T: Boron	7440-42-8	50	mg/kg	<50	<50	0.00	No Limit
		EW1900836-001	Anonymous	EQ005T: Beryllium	7440-41-7	1	mg/kg	<1	<1
EQ005T: Cadmium	7440-43-9			1	mg/kg	<1	<1	0.00	No Limit
EQ005T: Barium	7440-39-3			10	mg/kg	70	70	0.00	No Limit
EQ005T: Chromium	7440-47-3			2	mg/kg	11	11	0.00	No Limit
EQ005T: Cobalt	7440-48-4			2	mg/kg	9	9	0.00	No Limit
EQ005T: Nickel	7440-02-0			2	mg/kg	7	7	0.00	No Limit
EQ005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.00	No Limit		
EQ005T: Copper	7440-50-8	5	mg/kg	9	9	0.00	No Limit		

Appendix 6 Quality Assurance and Quality Control

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Sub-Matrix: SOIL		Laboratory Duplicate (DUP) Report									
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOI	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
EG003T: Total Metals by ICP-AES (QC Lot: 2218115) - continued											
EW1900836-001	Anonymous	EG003T: Lead	7439-92-1	5	mg/kg	8	8	0.00	No Limit		
		EG003T: Manganese	7439-96-5	5	mg/kg	508	506	0.472	0% - 20%		
		EG003T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.00	No Limit		
		EG003T: Vanadium	7440-62-2	5	mg/kg	25	26	0.00	No Limit		
		EG003T: Zinc	7440-66-6	5	mg/kg	21	21	0.00	No Limit		
		EG003T: Boron	7440-42-8	50	mg/kg	<50	<50	0.00	No Limit		
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2218116)											
ES1906600-028	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit		
EW1900836-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit		
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2217419)											
ES1906602-013	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit		
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit		
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit		
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit		
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit		
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit		
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit		
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit		
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit		
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit		
		EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit		
		EP075(SIM): Benzo(k)fluoranthene	205-82-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit		
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit		
		EP075(SIM): Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit		
		EP075(SIM): Dibenzo(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit		
		EP075(SIM): Benzo(g,h)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit		
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg	<0.5	<0.5	0.00	No Limit		
		ES1906382-001	Anonymous	EP075(SIM): Benzo(a)pyrene TEQ (zero)	---	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
				EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
				EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
				EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
				EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
				EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
				EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
				EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	1.0	0.6	43.8	No Limit
				EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	0.9	0.6	42.1	No Limit
				EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
				EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

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Sub-Matrix: SOIL		Laboratory Duplicate (DUP) Report							
Laboratory sample ID	Client sample ID	Method, Compound	CAS Number	LOI	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2217419) - continued									
ES1906382-001	Anonymous	EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(k)fluoranthene	205-82-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Dibenzo(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(g,h)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg	1.9	1.2	45.2	No Limit
EP075(SIM): Benzo(a)pyrene TEQ (zero)	---	0.5	mg/kg	<0.5	<0.5	0.00	No Limit		
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2217419)									
ES1906602-013	Anonymous	EP071: C15 - C28 Fraction	---	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C29 - C36 Fraction	---	100	mg/kg	<100	<100	0.00	No Limit
ES1906382-001	Anonymous	EP071: C10 - C14 Fraction	---	50	mg/kg	<50	<50	0.00	No Limit
		EP071: C15 - C28 Fraction	---	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C29 - C36 Fraction	---	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	---	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2217785)									
ES1905870-001	Anonymous	EP080: C6 - C9 Fraction	---	10	mg/kg	<10	<10	0.00	No Limit
ES1906627-002	Anonymous	EP080: C6 - C9 Fraction	---	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 2217419)									
ES1906602-013	Anonymous	EP071: <C18 - C34 Fraction	---	100	mg/kg	<100	<100	0.00	No Limit
		EP071: <C34 - C40 Fraction	---	100	mg/kg	<100	<100	0.00	No Limit
		EP071: <C10 - C16 Fraction	---	50	mg/kg	<50	<50	0.00	No Limit
ES1906382-001	Anonymous	EP071: <C16 - C34 Fraction	---	100	mg/kg	<100	<100	0.00	No Limit
		EP071: <C34 - C40 Fraction	---	100	mg/kg	<100	<100	0.00	No Limit
		EP071: <C10 - C16 Fraction	---	50	mg/kg	<50	<50	0.00	No Limit
		EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 2217785)							
ES1905870-001	Anonymous	EP080: C6 - C10 Fraction	C6, C10	10	mg/kg	<10	<10	0.00	No Limit
ES1906627-002	Anonymous	EP080: C6 - C10 Fraction	C6, C10	10	mg/kg	<10	<10	0.00	No Limit
EP080: BTEXN (QC Lot: 2217785)									
ES1905870-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	106-38-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit
ES1906627-002	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit

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Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report				
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP080: BTEXN (QC Lot: 2217785) - continued								
ES1906627-002	Anonymous	EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.00
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00

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Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Spike (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: SOIL				Method Report (MR)		Laboratory Control Spike (LCS) Report			
Method: Compend				Report	Spike	Spike Recovery (%)		Recovery Limits (%)	
				Result	Concentration	LCS	Low	High	
EQ005T: Total Metals by ICP-AES (QC Lot: 2218115)									
EQ005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	103	86	126	
EQ005T: Barium	7440-39-3	10	mg/kg	<10	143 mg/kg	104	85	115	
EQ005T: Beryllium	7440-41-7	1	mg/kg	<1	5.63 mg/kg	113	90	113	
EQ005T: Boron	7440-42-8	50	mg/kg	<50	—	—	—	—	
EQ005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	105	83	113	
EQ005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	104	76	128	
EQ005T: Cobalt	7440-48-4	2	mg/kg	<2	16 mg/kg	111	88	120	
EQ005T: Copper	7440-50-8	5	mg/kg	<5	32 mg/kg	115	86	120	
EQ005T: Lead	7439-92-1	5	mg/kg	<5	40 mg/kg	102	80	114	
EQ005T: Manganese	7439-96-5	5	mg/kg	<5	130 mg/kg	111	85	117	
EQ005T: Nickel	7440-02-0	2	mg/kg	<2	55 mg/kg	112	87	123	
EQ005T: Selenium	7782-49-2	5	mg/kg	<5	5.37 mg/kg	106	75	131	
EQ005T: Vanadium	7440-62-2	5	mg/kg	<5	29.6 mg/kg	111	92	122	
EQ005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	116	80	122	
EQ035T: Total Recoverable Mercury by FIMS (QC Lot: 2218116)									
EQ035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	97.5	70	105	
EP075(SIM): Polynuclear Aromatic Hydrocarbons (QC Lot: 2217419)									
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	107	77	125	
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	104	72	124	
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	94.6	73	127	
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	101	72	126	
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	103	75	127	
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	106	77	127	
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	104	73	127	
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	105	74	128	
EP075(SIM): Benzo(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	98.8	69	123	
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	96.9	75	127	
EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	6 mg/kg	96.2	68	116	
EP075(SIM): Benzo(k)fluoranthene	205-85-3	0.5	mg/kg	<0.5	6 mg/kg	108	74	126	
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	100	70	126	
EP075(SIM): Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	95.2	61	121	
EP075(SIM): Dibenzo(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	94.2	62	118	
EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	94.8	63	121	

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Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spikes (LCS) Report			
Method/Compound	CAS Number	LOD	Unit	Result	Spike Concentration	Spike Recovery (%)	Recovery Limits (%)	
							Low	High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2217418)								
EP071: C10 - C14 Fraction	---	50	mg/kg	<50	300 mg/kg	93.5	75	129
EP071: C15 - C28 Fraction	---	100	mg/kg	<100	450 mg/kg	102	77	131
EP071: C29 - C36 Fraction	---	100	mg/kg	<100	300 mg/kg	90.8	71	129
EP080/074: Total Petroleum Hydrocarbons (QCLot: 2217785)								
EP080: C6 - C9 Fraction	---	10	mg/kg	<10	26 mg/kg	90.2	68	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2217418)								
EP071: >C10 - C16 Fraction	---	50	mg/kg	<50	375 mg/kg	97.8	77	125
EP071: >C16 - C34 Fraction	---	100	mg/kg	<100	525 mg/kg	98.4	74	138
EP071: >C34 - C40 Fraction	---	100	mg/kg	<100	225 mg/kg	72.2	63	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2217785)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	90.5	68	128
EP080: BTEX (QCLot: 2217785)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	95.3	62	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	90.1	67	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	87.6	65	117
EP080: meta- & para-Xylene	106-42-3	0.5	mg/kg	<0.5	2 mg/kg	86.6	66	118
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	87.9	68	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	89.9	63	119

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: SOIL

Sub-Matrix: SOIL					Matrix Spike (MS) Report			
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	Spike Concentration	MS Recovery (%)	Recovery Limits (%)		
EG005T: Total Metals by ICP-AES (QCLot: 2218115)								
ES1906600-028	Anonymous	EG005T: Arsenic	7440-39-2	50 mg/kg	95.2	70	130	
		EG005T: Cadmium	7440-43-9	50 mg/kg	103	70	130	
		EG005T: Chromium	7440-47-3	50 mg/kg	96.4	70	130	
		EG005T: Copper	7440-50-8	250 mg/kg	103	70	130	
		EG005T: Lead	7439-92-1	250 mg/kg	91.5	70	130	
		EG005T: Nickel	7440-02-0	50 mg/kg	99.4	70	130	
		EG005T: Zinc	7440-66-6	250 mg/kg	90.3	70	130	
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2218116)								
ES1906600-028	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	115	70	130	

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Sub-Matrix: SOIL				Matrix Spike (MS) Report				
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	Spike Concentration	Spike/Recovery(%)	Recovery Limits (%)		
					MS	Low	High	
EP075(SIM): Polynuclear Aromatic Hydrocarbons (QCLot: 2217419)								
ES1906382-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	95.7	70	130	
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	107	70	130	
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2217418)								
ES1906382-001	Anonymous	EP071: C10 - C14 Fraction	---	523 mg/kg	103	73	137	
		EP071: C15 - C28 Fraction	---	2319 mg/kg	118	53	131	
		EP071: C29 - C36 Fraction	---	1714 mg/kg	117	52	132	
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2217785)								
ES1906382-001	Anonymous	EP080: C6 - C9 Fraction	---	32.5 mg/kg	80.7	70	130	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2217418)								
ES1906382-001	Anonymous	EP071: >C10 - C16 Fraction	---	860 mg/kg	105	73	137	
		EP071: >C16 - C34 Fraction	---	3223 mg/kg	124	53	131	
		EP071: >C34 - C40 Fraction	---	1058 mg/kg	114	52	132	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2217785)								
ES1906382-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	80.4	70	130	
EP080: BTEX (QCLot: 2217785)								
ES1906382-001	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	79.7	70	130	
		EP080: Toluene	108-88-3	2.5 mg/kg	80.3	70	130	
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	79.6	70	130	
		EP080: meta- & para-Xylene	106-38-3	2.5 mg/kg	77.6	70	130	
		EP080: ortho-Xylene	106-42-3	2.5 mg/kg	78.9	70	130	
		EP080: Naphthalene	91-20-3	2.5 mg/kg	83.6	70	130	

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QA/QC Compliance Assessment to assist with Quality Review

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Client	GEO-ENVIRONMENTAL SOLUTIONS	Laboratory	Environmental Division Sydney
Contact	DR JOHN PAUL CUMMING	Telephone	+6138549 9630
Project	201 Macquarie St	Date Samples Received	05-Mar-2019
Site	---	Issue Date	08-Mar-2019
Sampler	GM	No. of samples received	1
Order number	---	No. of samples analysed	1

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.

- **NQ** Method Blank value outliers occur.
- **NQ** Duplicate outliers occur.
- **NQ** Laboratory Control outliers occur.
- **NQ** Matrix Spike outliers occur.
- For all regular sample matrices, **NQ** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NQ** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NQ** Quality Control Sample Frequency Outliers exist.

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Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results. This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 190 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 as Vinyl Chloride and Styrene are not key analytes of interest/concern.

Method	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA555: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA555)	26-Feb-2019	---	---	---	06-Mar-2019	12-Mar-2019	✓
TRIPLICATE							
EQ005T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EQ005T)	26-Feb-2019	05-Mar-2019	25-Aug-2019	✓	06-Mar-2019	25-Aug-2019	✓
TRIPLICATE							
EQ051T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EQ051T)	26-Feb-2019	05-Mar-2019	26-Mar-2019	✓	07-Mar-2019	26-Mar-2019	✓
TRIPLICATE							
EP075(SIM): Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM))	26-Feb-2019	05-Mar-2019	12-Mar-2019	✓	06-Mar-2019	14-Apr-2019	✓
TRIPLICATE							
EP080(PT): Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080)	26-Feb-2019	05-Mar-2019	12-Mar-2019	✓	05-Mar-2019	12-Mar-2019	✓
TRIPLICATE							
Soil Glass Jar - Unpreserved (EP071)	26-Feb-2019	05-Mar-2019	12-Mar-2019	✓	06-Mar-2019	14-Apr-2019	✓
TRIPLICATE							
EP080(PT): Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP080)	26-Feb-2019	05-Mar-2019	12-Mar-2019	✓	05-Mar-2019	12-Mar-2019	✓
TRIPLICATE							
Soil Glass Jar - Unpreserved (EP071)	26-Feb-2019	05-Mar-2019	12-Mar-2019	✓	06-Mar-2019	14-Apr-2019	✓
TRIPLICATE							
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080)	26-Feb-2019	05-Mar-2019	12-Mar-2019	✓	05-Mar-2019	12-Mar-2019	✓
TRIPLICATE							

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Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was/were processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: SOIL

Evaluation: * = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Actual	Expected	Evaluation	Quality Control Specification
		QC	Residual				
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	17	11.76	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	16	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	16	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	17	11.76	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard

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Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM (2013) Schedule B(3) Section 7.1 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 ICP-AES 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 ₂) 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 ₂ 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.
Preparation Methods			
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM (2013) Schedule B(3) (Method 202).
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na ₂ SO ₄ 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.

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Appendix 7 Certificate of Analysis

 **Environmental**

CERTIFICATE OF ANALYSIS

Work Order	EM1902957	Page	: 1 of 12
Client	GEO-ENVIRONMENTAL SOLUTIONS	Laboratory	: Environmental Division Melbourne
Contact	DR JOHN PAUL CUMMING	Contact	: Shirley LeComu
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	201 Macquarie St	Date Samples Received	: 01-Mar-2019 09:15
Order number		Date Analysis Commenced	: 04-Mar-2019
C-O-C number	: ---	Issue Date	: 07-Mar-2019 17:46
Sampler	: GM		
Site	: ---		
Quote number	: EN222		
No. of samples received	: 9		
No. of samples analysed	: 9		

Accreditation No. 621
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
Diani Fernando	Senior Inorganic Chemist	Melbourne Inorganics, Springvale, VIC
Eric Chau	Metals Team Leader	Melbourne Inorganics, Springvale, VIC
Naki Stępniewski	Senior Inorganic Instrument Chemist	Melbourne Inorganics, Springvale, VIC
Xing Lin	Senior Organic Chemist	Melbourne Organics, Springvale, VIC

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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
- a = ALS is not NATA accredited for these tests.
- = Indicates an estimated value.

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benzo(a)anthracene (0.1), Chrysene (0.01), Benzo(b)fluoranthene (0.1), Benzo(k)fluoranthene (0.01), 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 1/2 LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2 LOR 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.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benzo(a)anthracene (0.1), Chrysene (0.01), Benzo(b)fluoranthene (0.1), Benzo(k)fluoranthene (0.01), 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.

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Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID				
Client sampling date / time				26-Feb-2019 00:00				
Compound				EM1902957-001				
CAS Number				Result				
LOR				Result				
Unit				Result				
E0055: Moisture Content (Dried @ 105-110°C)				Result				
Moisture Content				Result				
---	1.0	%		2.3	8.2	2.0	2.5	3.2
E0005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	<5
Barium	7440-39-3	10	mg/kg	30	120	80	30	20
Beryllium	7440-41-7	1	mg/kg	<1	<1	<1	<1	<1
Boron	7440-42-8	50	mg/kg	<50	<50	<50	<50	<50
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	<2	23	4	20	7
Cobalt	7440-48-4	2	mg/kg	15	23	13	14	12
Copper	7440-50-8	5	mg/kg	30	73	70	8	<5
Lead	7439-92-1	5	mg/kg	25	<5	<5	27	12
Manganese	7439-96-5	5	mg/kg	463	661	271	176	155
Nickel	7440-02-0	2	mg/kg	6	51	17	15	12
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5
Vanadium	7440-62-2	5	mg/kg	15	69	41	15	9
Zinc	7440-66-6	5	mg/kg	75	25	30	41	25
E0035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP075(SIMB): Polynuclear Aromatic Hydrocarbons								
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	85-01-6	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
Benzo(a)anthracene	125-55-3	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)fluoranthene	205-99-2	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	183-39-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5

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Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID							
Client sampling date / time				26-Feb-2019 00:00		26-Feb-2019 00:00		26-Feb-2019 00:00		26-Feb-2019 00:00	
Compound				EM1902957-001		EM1902957-002		EM1902957-003		EM1902957-004	
CAS Number				Result		Result		Result		Result	
LOR				Result		Result		Result		Result	
Unit				Result		Result		Result		Result	
EP075(SIMB): Polynuclear Aromatic Hydrocarbons - Continued											
Benzo(a,h)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<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	<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	<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	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	1.2	1.2	1.2
EP080(971): Total Petroleum Hydrocarbons											
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50	<50	<50	<50
EP080(971): Total Recoverable Hydrocarbons - NEPM 2013 Fractions											
C6 - C10 Fraction	C6, C10	10	mg/kg	<10	<10	<10	<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6, C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	<50	<50	<50	<50
EP080: BTEXN											
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<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	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<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	<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	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	<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	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1	<1	<1	<1
EP075(SIMB): Phenolic Compound Surrogates											
Phenol-d5	13127-86-3	0.5	%	106	105	107	104	104	104	104	104
2-Chlorophenol-D4	93951-73-6	0.5	%	104	103	106	102	103	103	103	103
2,4,6-Tribromophenol	118-79-6	0.5	%	86.6	89.1	92.2	86.5	84.6	84.6	84.6	84.6

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Analytical Results

Sub-Matrix: SOL (Matrix: SOL)				Client sample ID				
				Client sampling date / time				
Compound				CAS Number	LOR	Unit	Result	Result
							EM1902957-001	EM1902957-002
							Result	Result
EP075(SIM)T: PAH Surrogates								
2-Fluorebiphenyl	321-60-8	0.5	%				105	108
Anthracene-d10	1719-06-8	0.5	%				116	120
6-Terphenyl-d14	1718-51-0	0.5	%				113	118
EP003 TPA(V)BTEX Surrogates								
1,3-Dichloroethane-D4	1706-07-0	0.2	%				67.9	72.8
Toluene-D8	2037-26-5	0.2	%				56.0	64.1
4-Bromofluorobenzene	460-00-4	0.2	%				76.9	87.9

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Analytical Results

Sub-Matrix: SOL (Matrix: SOL)				Client sample ID				
				Client sampling date / time				
Compound				CAS Number	LOR	Unit	Result	Result
							EM1902957-006	EM1902957-007
							Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	---	1.0	%				2.8	22.6
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg				<5	<5
Barium	7440-39-3	10	mg/kg				50	50
Beryllium	7440-41-7	1	mg/kg				<1	<1
Boron	7440-42-8	50	mg/kg				<50	<50
Cadmium	7440-43-9	1	mg/kg				<1	<1
Chromium	7440-47-3	2	mg/kg				13	17
Cobalt	7440-48-4	2	mg/kg				13	13
Copper	7440-50-8	5	mg/kg				16	23
Lead	7439-92-1	5	mg/kg				8	<5
Manganese	7439-96-5	5	mg/kg				276	606
Nickel	7440-02-0	2	mg/kg				10	32
Selenium	7782-49-2	5	mg/kg				<5	<5
Vanadium	7440-62-2	5	mg/kg				52	59
Zinc	7440-66-6	5	mg/kg				19	7
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg				<0.1	<0.1
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg				<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg				<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg				<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg				<0.5	<0.5
Phenanthrene	85-01-6	0.5	mg/kg				<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg				<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg				<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg				<0.5	<0.5
Benzo(a)anthracene	56-55-3	0.5	mg/kg				<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg				<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg				<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg				<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg				<0.5	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg				<0.5	<0.5
Dibenzo(a,h)anthracene	53-70-3	0.5	mg/kg				<0.5	<0.5

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Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID		BH02 3.5-3.6	BH03 0.5-0.6	Duplicate	---	---
Client sampling date / time						26-Feb-2019 00:00	26-Feb-2019 00:00	26-Feb-2019 00:00	---	---
Compound		CAS Number	LOR	Unit		EM1902957-006	EM1902957-007	EM1902957-008	---	---
						Result	Result	Result	---	---
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued										
Benzo(g,h,i)perylene		191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	---	---
^ Sum of polycyclic aromatic hydrocarbons		---	0.5	mg/kg	<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	---	---
^ Benzo(a)pyrene TEQ (half LOR)		---	0.5	mg/kg	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	---	---
EP080/071: Total Petroleum Hydrocarbons										
C6 - C9 Fraction		---	10	mg/kg	<10	<10	<10	<10	---	---
C10 - C14 Fraction		---	50	mg/kg	<50	<50	<50	<50	---	---
C15 - C28 Fraction		---	100	mg/kg	<100	<100	<100	<100	---	---
C29 - C36 Fraction		---	100	mg/kg	<100	<100	<100	<100	---	---
^ C10 - C36 Fraction (sum)		---	50	mg/kg	<50	<50	<50	<50	---	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions										
C6 - C10 Fraction		C6_C10	10	mg/kg	<10	<10	<10	<10	---	---
^ C6 - C10 Fraction minus BTEX (F1)		C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	---	---
>C10 - C16 Fraction		---	50	mg/kg	<50	<50	<50	<50	---	---
>C16 - C34 Fraction		---	100	mg/kg	<100	<100	<100	<100	---	---
>C34 - C40 Fraction		---	100	mg/kg	<100	<100	<100	<100	---	---
^ >C10 - C40 Fraction (sum)		---	50	mg/kg	<50	<50	<50	<50	---	---
^ >C10 - C16 Fraction minus Naphthalene (F2)		---	50	mg/kg	<50	<50	<50	<50	---	---
EP080: BTEXN										
Benzene		71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	---	---
Toluene		108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	---	---
Ethylbenzene		100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	---	---
meta- & para-Xylene		108-38-3 106-42-3	0.5	mg/kg	<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	---	---
^ Sum of BTEX		---	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	---	---
^ Total Xylenes		---	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	---	---
Naphthalene		91-20-3	1	mg/kg	<1	<1	<1	<1	---	---
EP025(SIM)S: Phenolic Compound Surrogates										
Phenol-d6		13127-88-3	0.5	%	101	99.0	113	---	---	---
2-Chlorophenol-D4		93951-73-6	0.5	%	99.9	97.2	107	---	---	---
2,4,6-Tribromophenol		118-79-6	0.5	%	84.4	80.5	80.1	---	---	---

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Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)		Client sample ID			BH02 3.5-3.6		BH03 0.5-0.6		Duplicate		----	----
		Client sampling date / time			26-Feb-2019 00:00		26-Feb-2019 00:00		26-Feb-2019 00:00		----	----
Compound		CAS Number	LOR	Unit	EM1902957-006		EM1902957-007		EM1902957-008		----	----
					Result		Result		Result		----	----
EP075(SIM)T: PAH Surrogates												
2-Fluorobiphenyl		321-60-8	0.5	%	103		98.9		110		----	----
Anthracene-d10		1719-06-8	0.5	%	114		111		114		----	----
4-Terphenyl-d14		1718-51-0	0.5	%	112		107		119		----	----
EP080S: TPH(V)/BTEX Surrogates												
1,2-Dichloroethane-D4		17060-07-0	0.2	%	81.0		76.6		75.6		----	----
Toluene-D8		2037-26-5	0.2	%	66.1		63.2		61.0		----	----
4-Bromofluorobenzene		460-00-4	0.2	%	84.3		65.1		70.1		----	----

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Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	Rinsate				
				Client sampling date / time	26-Feb-2019 00:00				
Compound	CAS Number	LOR	Unit	EM1902957-009	Result				
EQ020F: Dissolved Metals by ICP-MS									
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	7439-96-5	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	7440-66-6	0.005	mg/L	<0.005	---	---	---	---	---
EQ035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L	<0.0001	---	---	---	---	---
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
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)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	50-32-6	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	---	---	---	---	---
^A Sum of polycyclic aromatic hydrocarbons	---	0.5	µg/L	<0.5	---	---	---	---	---

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 Work Order : EM1902957
 Client : GEO-ENVIRONMENTAL SOLUTIONS
 Project : 201 Macquarie St



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	Rinsate				
				Client sampling date / time	26-Feb-2019 00:00				
Compound	CAS Number	LOR	Unit	EM1902957-009	Result				
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
^A Benzo(a)pyrene TEQ (zero)	---	0.5	µg/L	<0.5	---	---	---	---	---
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	---	20	µg/L	<20	---	---	---	---	---
C10 - C14 Fraction	---	50	µg/L	<50	---	---	---	---	---
C15 - C29 Fraction	---	100	µg/L	<100	---	---	---	---	---
C29 - C36 Fraction	---	50	µg/L	<50	---	---	---	---	---
^A C10 - C36 Fraction (sum)	---	50	µg/L	<50	---	---	---	---	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6, C10	20	µg/L	<20	---	---	---	---	---
^A 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	---	---	---	---	---
^A >C10 - C40 Fraction (sum)	---	100	µg/L	<100	---	---	---	---	---
^A >C10 - C16 Fraction minus Naphthalene (F2)	---	100	µg/L	<100	---	---	---	---	---
EP080: BTEXN									
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	95-47-6	2	µg/L	<2	---	---	---	---	---
^A Total Xylenes	---	2	µg/L	<2	---	---	---	---	---
^A Sum of BTEX	---	1	µg/L	<1	---	---	---	---	---
Naphthalene	91-20-3	5	µg/L	<5	---	---	---	---	---
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	1.0	%	22.6	---	---	---	---	---
2-Chlorophenol-D4	93951-73-6	1.0	%	52.1	---	---	---	---	---
2,4,6-Trichlorophenol	118-79-6	1.0	%	57.1	---	---	---	---	---
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-80-8	1.0	%	62.8	---	---	---	---	---
Anthracene-d10	1719-06-8	1.0	%	72.8	---	---	---	---	---
4-Terphenyl-d14	1718-51-0	1.0	%	75.6	---	---	---	---	---

Environmental Site Assessment: 201 Macquarie Street, Hobart, August 2019

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 Project : 201 Macquarie St



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	Rinsate				
Compound				CAS Number	LOR	Unit	Client sampling date / time	26-Feb-2019 00:00	
							EM1902957-009		
							Result		
EP0805: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	2	%				85.8		
Toluene-D8	2037-26-5	2	%				82.3		
4-Bromofluorobenzene	460-00-4	2	%				93.5		

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Surrogate Control Limits

Sub-Matrix: SOIL				Recovery Limits (%)	
Compound	CAS Number			Low	High
EP075(SIM)S: Phenolic Compound Surrogates					
Phenol-d6	13127-88-3			54	125
2-Chlorophenol-D4	93951-73-6			65	123
2,4,6-Tribromophenol	116-79-6			34	122
EP075(SIM)T: PAH Surrogates					
2-Fluorobiphenyl	321-60-8			61	125
Anthracene-d10	1719-06-8			62	130
4-Terphenyl-d14	1718-51-0			67	133
EP0805: TPH(V)/BTEX Surrogates					
1,2-Dichloroethane-D4	17060-07-0			51	125
Toluene-D8	2037-26-5			55	125
4-Bromofluorobenzene	460-00-4			56	124
Sub-Matrix: WATER				Recovery Limits (%)	
Compound	CAS Number			Low	High
EP075(SIM)S: Phenolic Compound Surrogates					
Phenol-d6	13127-88-3			10	46
2-Chlorophenol-D4	93951-73-6			23	104
2,4,6-Tribromophenol	116-79-6			28	130
EP075(SIM)T: PAH Surrogates					
2-Fluorobiphenyl	321-60-8			36	114
Anthracene-d10	1719-06-8			51	119
4-Terphenyl-d14	1718-51-0			49	127
EP0805: TPH(V)/BTEX Surrogates					
1,2-Dichloroethane-D4	17060-07-0			73	129
Toluene-D8	2037-26-5			70	125
4-Bromofluorobenzene	460-00-4			71	129

Environmental Site Assessment: 201 Macquarie Street, Hobart, August 2019



Environmental

CERTIFICATE OF ANALYSIS

Work Order	: ES1906616	Page	: 1 of 6
Client	: GEO-ENVIRONMENTAL SOLUTIONS	Laboratory	: Environmental Division Sydney
Contact	: DR JOHN PAUL CUMMING	Contact	: Shirley LeComu
Address	: 29 KIRKSWAY PLACE BATTERY POINT TASMANIA, AUSTRALIA 7004	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: +61 03 6223 1839	Telephone	: +61 35549 9630
Project	: 201 Macquarie St	Date Samples Received	: 05-Mar-2019 10:30
Order number	:	Date Analysis Commenced	: 05-Mar-2019
C-O-C number	: ---	Issue Date	: 08-Mar-2019 10:28
Sampler	: GM		
Site	: ---		
Quote number	: EN222		
No. of samples received	: 1		
No. of samples analysed	: 1		



Accreditation No. 829
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
Edwandy Fadjjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW

RIGHT SOLUTIONS | RIGHT PARTNER

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Project	: 201 Macquarie St



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

o = ALS is not NATA accredited for these tests

= = Indicates an estimated value.

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benzo(a)anthracene (0.1), Chrysene (0.01), Benzo(b)fluoranthene (0.1), Benzo(k)fluoranthene (0.1), Indeno(1,2,3-cd)pyrene (0.1), Dibenzo(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.

Environmental Site Assessment: 201 Macquarie Street, Hobart, August 2019

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Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	TRIPLICATE				
				Client sampling date / time	26-Feb-2019 00:00				
Compound	CAS Number	LOR	Unit		ES1906616-001				
					Result				
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content		1.0	%		1.5				
EQ005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5				
Barium	7440-39-3	10	mg/kg		30				
Beryllium	7440-41-7	1	mg/kg		<1				
Boron	7440-42-8	50	mg/kg		<50				
Cadmium	7440-43-9	1	mg/kg		<1				
Chromium	7440-47-3	2	mg/kg		25				
Cobalt	7440-48-4	2	mg/kg		15				
Copper	7440-50-8	5	mg/kg		10				
Lead	7439-92-1	5	mg/kg		23				
Manganese	7439-96-5	5	mg/kg		176				
Nickel	7440-02-0	2	mg/kg		16				
Selenium	7782-49-2	5	mg/kg		<5				
Vanadium	7440-62-2	5	mg/kg		18				
Zinc	7440-66-6	5	mg/kg		42				
EQ005T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1				
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
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	85-01-4	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)fluoranthene	205-99-2	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				

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Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	TRIPLICATE				
				Client sampling date / time	26-Feb-2019 00:00				
Compound	CAS Number	LOR	Unit		ES1906616-001				
					Result				
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
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				
EP080/071: Total Petroleum Hydrocarbons									
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				
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
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				
EP080: BTEXN									
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	106-38-3 106-42-3	0.5	mg/kg		<0.5				
ortho-Xylene	95-47-6	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				
EP075(SIM)B: Phenolic Compound Surrogates									
Phenol	13127-89-3	0.5	%		67.4				
2-Chlorophenol-D4	93951-73-6	0.5	%		76.1				
2,4,6-Tribromophenol	118-79-6	0.5	%		44.4				

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Analytical Results

Sub-Matrix: SOIL				Client sample ID	TRIPLICATE				
(Matrix: SOIL)									
				Client sampling date / time	26-Feb-2019 00:00				
Compound	CAS Number	LOR	Unit	ES1906616-001					
				Result					
EP075(SIM): PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%	80.3					
Anthracene-d10	1719-06-8	0.5	%	79.8					
4-Terphenyl-d14	1718-51-0	0.5	%	75.3					
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.2	%	96.0					
Toluene-D8	2037-26-5	0.2	%	91.8					
4-Bromofluorobenzene	460-00-4	0.2	%	87.1					

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Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP075(SIM): Phenolic Compound Surrogates			
Phenol-d6	13127-48-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2,4,6-Tribromophenol	118-79-6	40	138
EP075(SIM): PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	73	133
Toluene-D8	2037-26-5	74	132
4-Bromofluorobenzene	460-00-4	72	130



GEOTECHNICAL ASSESSMENT

201 Macquarie Street, HOBART

CLIENT

201 Macquarie Street Pty Ltd

Updated July 2020

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1 INTRODUCTION

Geo-Environmental Solutions Pty Ltd (GES) were engaged by 201 Macquarie Street Pty Ltd, to carry out a geotechnical investigation of the proposed multi-storey residential development including rooftop garden and car parking facilities on the lower levels at 201 Macquarie Street, Hobart – hereby referred to as ‘The Site’.

The site is currently being used as a car parking facility, with existing retaining walls to the front of the property and to the rear along Hobart Rivulet.

The site is located is presented in Figure 1 and Figure 2.

This report outlines the key findings of the geotechnical investigation, which comprised 3 no. boreholes drilled using a combination of 150 mm diameter auger within soil and HQ-sized rotary coring through rock to facilitate the collection of rock samples. Undisturbed and disturbed samples were collected and Standard Penetration Testing (SPT) were carried out within the soil units.

1.1 Proposed Development

It is understood that the proposed new development is a 6-storey residential building comprising the following:

- Car Park Level (Basement) – 3 Level Basement Car parking (accessed via a car lift);
- Level 1 to 6 – Residential Apartments; and
- Level 7 – Rooftop Outdoor area.

2 OBJECTIVES AND SCOPE OF WORK

2.1 Project Objectives

Based on our understanding of the project and the information provided by the client, the following outlines the main objectives of the preliminary geotechnical investigation:

- Assess the subsurface conditions at the site relevant to the proposed development;
- Provide preliminary advice on suitable footing systems to support the proposed structures;
- Assess soil/rock allowable bearing capacity at the basement level (m AHD);
- Provide information on likely depth to rock and assess likely excavability;
- Comment on expected depth of groundwater;
- Assessing safe batter angles and provide retention design parameters;
- Provide any necessary geotechnical recommendations and construction considerations.

2.2 Scope of Work

The scope of work for the geotechnical investigation is as follows:

- Carry out geotechnical drilling at three (3) locations across the site to a depth of up to 13.16 m below the ground surface (bgs). Fill material and surficial soil is to be augered to bedrock and rotary core the underlying bedrock;
- Collect disturbed and undisturbed soil samples from cohesive soil materials for laboratory testing (if required); and

- Provide a suitably qualified engineer to log photograph and sample core and direct *in-situ* testing onsite.

3 INFORMATION PROVIDED

3.1 Client Supplied Information

GES has been provided with the following information in relation to the project:

- Preliminary concept plan drawings by HBV Architects, dated 12th April 2019 and updated March 2020 (Drawing No: 112.A01 to 112.A13).

3.2 Previous Investigations

No previous investigations have been completed at the site.

4 GEOLOGICAL CONTEXT

4.1 Site Details and Setting

The proposed development covers an area of approximately 795 m² and is bound to the northwest by Hobart Rivulet, to the east by a commercial property (199 Macquarie Street), to the south by Macquarie Street and to the east by additional commercial properties. The site is rectangular in shape, orientated northwest-southeast and is located on a moderately sloping hillside dipping to the northwest by between 7 to 10°. The site has an elevation ranging between 34.6 m AHD to the east and southeast and 25.2 m AHD to the northwest, with the base of the Hobart Rivulet at 20 m AHD. The site is surfaced in asphalt, with a sandstone retaining wall to the east, with existing building to the southeast of the site. A ~5 m high concrete and sandstone retaining wall is also present on the north western site boundary, with a smaller retaining wall ~2 m in height along the northern/north-eastern site boundary.

4.2 Geological Setting

Based on a review of the published geology map of Hobart (1:25,000 Digital Geological Atlas, sheet no. 5225) indicates the following surficial geological units underlie the site:

- Map Symbol **Qpad** - Older alluvium of river terrace, predominantly dolerite derived; and
- Map Symbol **Jd** – Dolerite and related rocks.

The geology map has been presented in Figure 5. The east of the site is indicated to be underlain by Jurassic-aged Dolerite, which forms a northeast southwest orientated ridgeline along Macquarie Street. The western portion of the site and surrounding area is underlain by a Quaternary-aged dolerite derived alluvial deposits around Hobart Rivulet (Map Units : Qpad, Qa and Q).

4.3 Groundwater

During the geotechnical investigation, groundwater was initially encountered in BH02 at 4.1 m depth (approximately 21.3 m AHD). Immediately northwest of the site is Hobart Rivulet, with surface water present at approximately 19.9 to 20.2 m AHD.

4.4 Landslide hazard mapping

Part of the site is overlain by a medium landslide hazard overlay for rockfall (see figure 6).

5 GEOTECHNICAL INVESTIGATION

5.1 Field Investigations

The fieldwork was performed in the presence of an engineering geologist from GES who located the boreholes, nominated sampling and testing, recovered samples, photographed the core and prepared engineering logs.

The fieldwork was performed between the 5th and 6th February 2019 and involved the drilling of three (3) boreholes, designated BH01 to BH03 at locations shown on Figure 1. The investigation locations were designed to be in general accordance with the locations as per the scope of works.

The following activities were carried out during the investigation:

- All boreholes were drilled using a track mounted Hanjun D & B – 8D drilling rig operated by Tasmanian Drilling Services Pty Ltd;
- The drilling was performed using hollow flight augers to advance through fill material and cohesive soils using a split spoon sampler to retrieve soil samples and HQ diamond coring in rock. The boreholes were all initiated from the current surface level and were drilled up to 13.16 m depth below ground surface level (bgs);
- Boreholes were terminated on reaching their target depth based on achieving adequate rock quality;
- All fieldwork was carried out in accordance with AS1726 – 2017 ‘Geotechnical Site Investigation’;
- Dial Before You Dig (DBYD) plans were obtained;
- All boreholes were logged by visual assessment and in general accordance with AS1726-2017. The photographs were taken for each borehole; and
- On completion of the boreholes, each location was surveyed using a Garmin hand-held GPS (horizontal accuracy ± 3 m).

Borehole logs and core photographs have been presented in Appendix 1 and 2 of this report, respectively.

Table 1 below presents a summary of the fieldwork carried out, including coordinates, borehole locations, termination depths and estimated ground surface level.

Table 1 Summary of Fieldwork

Borehole Location ID	Approximate Coordinates *		Estimated Ground Surface Level (m AHD)^	Termination Depth below ground surface level (m)
	Easting (m)	Northing (m)		
BH01	526,365	5,251,579	29.6	12.0
BH02	526,341	5,251,606	25.4	13.16
BH03	526,355	5,251,598	26.8	1.0

Notes:

*Coordinates are provided in GDA94 MGA Zone 55 coordinate system.

^Australian Height Datum (m AHD) has been estimated based on survey data provided due to the low reliability of the GOS elevation data and has been estimate using surface contouring.

5.2 Field Geotechnical Testing

5.2.1 Standard Penetration Testing

Standard Penetration Testing (SPT) was undertaken in accordance with AS 1289.6.3.1 (2000). Testing was carried out within clay-rich materials to collect samples using a split-spoon sampler. A summary of the results of the testing can be found in the engineering logs in Appendix 1.

5.2.2 Point Load Index Testing

PLSI testing conducted on the HQ3 core was converted to IS(50). Bad breaks through healed defects were not included in the results. A summary of the results of the tests can be found in the engineering logs in Appendix 1. Details of the test results have also been presented in Appendix 3.

5.1 Laboratory Geotechnical Testing

No laboratory testing has been carried out on this project.

6 RESULTS

6.1 Sub-surface Conditions

In general, the Mineral Resources Tasmania (MRT) geological mapping was consistent with the ground conditions encountered during the investigation.

Table 2 provides a summary of ground conditions encountered during the investigation. Below is a summary of each sub-surface layer encountered:

- **FILL** – All investigation locations encountered a 50 mm cover of asphalt. Fill material thickness and composition under the asphalt varies from BH01 to BH02. BH01 encountered approximately 0.5 m thickness of fill material comprising a mixture of pale brown/orangish brown low to non-plastic, medium dense to dense ‘silty sandy GRAVEL/silty GRAVEL trace sand’ and black to dark brown, medium to high plasticity ‘silty sandy CLAY’. At BH02, the fill thickness increases to approximately 4.8 m. Similar material to BH02 was encountered within the top 0.6 m depth. Below 0.6 m depth, a yellow and orange brown, non plastic, dense ‘silty SAND trace gravel’ was encountered to 2.6 m depth, likely to represent a controlled backfill material adjacent to the rivulet retaining wall. Below 2.6 m depth, pale grey brown/black non to medium plasticity ‘sandy SILT trace gravel/sandy gravelly SILT’ was encountered, which contained fragments of coal and prick throughout to 4.3 m depth. Towards the base of the fill dolerite cobbles and a sandstone block were encountered, which are likely to represent the foot of the retaining wall;
- **QUATERNARY ALLUVIAL DEPOSITS (Map Unit : Qpad)** – Quaternary alluvial deposits were encountered in BH02 to a depth of 9.2 m comprising ‘GRAVEL and COBBLES’ to 6.85 m depth becoming clayey to 8.2 m depth and underlain by ‘sandy CLAY with gravels’ to 9.2 m depth. Clay within the alluvial deposits is generally medium to high plasticity, firm to stiff and pale yellow brown/orange brown;
- **RESIDUALLY WEATHERED DOLERITE (Map Unit : R_Jd)** – Residually weathered dolerite was encountered only in BH01 described as orangish brown/yellow brown, medium to high plasticity, firm to stiff ‘sandy CLAY/silty sandy CLAY’, which was present between 0.52 m to 1.4 m depth; and
- **JURASSIC DOLERITE (Map Unit: Jd)** – Jurassic Dolerite was encountered within all boreholes. Within BH01, the dolerite was extremely weathered to a depth of 3.45 m (recovered as highly fractured gravels and cobbles), which was underlain by a sequence of alternating and variable low to high strength, highly to slightly weathered, highly fractured

(sub-vertical fractures throughout) dolerite to 7.65 m depth. Fractures were infilled with clay (up to 12 mm) and travertine. Between 7.15 to 7.65 m a band of pale cream/yellow low strength travertine was encountered. Below 7.65 m depth, medium to high strength, distinctly to slightly weathered dolerite was encountered with a reduction of fracture frequency and jointing infilling. Dolerite within BH02 was found to be highly weathered and generally of a very low to low strength (locally high strength) and highly fractured. The dolerite to the north of the site contained quartz veining throughout and appeared brecciated, a characteristic of corestone weathering characteristic of dolerite, where the rock possesses dual strength properties (corestones are slightly weathered and high strength and dolerite surrounding corestones are highly weathered and very low to low strength).

Table 2 Summary of Subsurface Borehole Geology (depths in metres)

Material / Unit	BH01	BH02	BH03
ASPHALT	0.0 – 0.05	0.0 – 0.05	0.0 – 0.05
FILL : Silty sandy GRAVEL/silty GRAVEL trace sand : Orangish brown to pale brown, non to low plasticity, medium dense, dry. Gravel comprises fine to coarse angular dolerite.	0.05 – 0.35	0.05 – 0.2	0.05 – 0.4
FILL: Silty sandy CLAY/sandy CLAY : Black to dark brown, medium to high plasticity, stiff, moist.	0.35 – 0.52	0.2 – 0.6	0.4 – 1.0*
FILL : Silty SAND trace gravels : Yellow and orange and brown, non-plastic, dense, dry. Sand is fine grained. Gravel comprises fine to coarse sub-rounded sandstone.	-	0.6 – 2.6	
FILL : Sandy SILT trace gravel/Sandy gravelly SILT : pale grey brown/black, non-plastic, stiff, moist. Contains fine to medium gravels of coal, brick and dolerite.	-	2.6 – 4.8	
QUATERNARY ALLUVIUM : Sandy CLAY with gravel/Clayey sandy GRAVEL and COBBLES : Pale yellow brown, medium plasticity, stiff, moist. Gravels and cobbles <100 mm subangular dolerite. Band of clay up to 100 mm thickness throughout of residually weathered dolerite.		-	
(RESIDUALLY WEATHERED DOLERITE) Silty sandy CLAY : Brown and yellow brown, medium plasticity, stiff, moist. Sand is fine to coarse grained extremely weathered dolerite	0.52 – 2.4	4.8 – 9.2	
DOLERITE : Brownish grey/grey, very low to high strength, highly weathered. Highly fractured with travertine infilling and clay.	2.4 - 7.65	9.2 – 10.76	-
BRECCIATED DOLERITE: Dark green grey, highly weathered, very low to low strength. Contains localised low strength crushed zones.	-	10.76 – 13.16*	-
DOLERITE : Grey, crystalline, medium to high strength, distinctly to slightly weathered. Frequent 55 degree to sub-vertical joints throughout infilled with clay and travertine.	7.65 – 12.0*	-	-

Note : * Boreholes were terminated on reaching target depth.

-Cobbles and boulders encountered between 4.4 to 4.8 m.

6.2 Geotechnical Testing Summary

6.2.1 Standard Penetration Testing

Findings from the SPT testing are presented in Appendix 1 and have been summarised in Table 3. Readings were predominantly collected within the residually weathered dolerite and fill material.

Table 3 Summary of SPT Test Results

<i>Borehole ID</i>	<i>Depth Test Interval (m)</i>	<i>SPT N-Value</i>	<i>Refusal</i>	<i>Density/Consistency</i>
BH01	1.0 – 1.45	13	No	Stiff
BH02	3.0 – 3.45	8	No	Firm to Stiff

6.2.2 Point Load Strength Index

PLSI testing conducted on the HQ3 core was converted to IS(50). Bad breaks through healed defects were not included in the results. Seventeen (17) PLSI tests were carried out on dolerite bedrock samples and the results are summarised in Table 4.

Table 4 Summary of Point Load Strength Index Test Results

<i>Strength Classification IS(50) (MPa)</i>	<i>Class</i>	<i>Number of test results within this strength classification</i>	
		<i>BH01</i>	<i>BH02</i>
0 to 0.03	Extremely Low	-	1
0.03 to 0.1	Very Low	1	2
0.1 to 0.3	Low	1	1
0.3 to 1	Medium	1	-
1 to 3	High	2	2
3 to 10	Very High	4	2
>10	Extremely High	-	-

The results indicate the dolerite rock is highly variable. Within BH01, rock strength ranges from very low to medium strength to 7.5 m depth, increasing to high to very high strength below 7.5 m depth. Within BH02, the rock strength is highly variable within the dolerite breccia, with slightly weathered clasts displaying rock strengths of high to very high strength within highly weathered dolerite of extremely low to low strength.

The results of the PLSI are presented on the engineering logs in Appendix 1.

It should be noted the PLSI results provide an indication of the strength of the rock that was encountered during the investigation and that rock with higher or lower strengths than tested may be present at the site.

7 DISCUSSION AND RECOMMENDATIONS

7.1 Geotechnical Design Parameters

The following design parameters have been assigned based on laboratory test results, available published literature and engineering judgement and are summarised below in Table 5.

Table 5 Geotechnical Design Parameters

Layers/Units	Consistency / Density / Strength	Unit Weight (kN/m ³)	Effective Friction Angle (°)	Cohesion (kPa)	Uniaxial Compressive Strength (MPa)	Elastic Modulus (MPa)	Deformation Modulus (GPa)	Poisson's Ratio
FILL : Silty sandy GRAVEL / silty GRAVEL trace sand	Dense	17	36	10	-	80	-	0.3
FILL: Silty sandy CLAY	Firm to stiff	16	26	5	-	8	-	0.3
QUATERNARY ALLUVIUM : Sandy CLAY with gravel/Clayey sandy GRAVEL and COBBLES :	Stiff	16	26	5	-	10	-	0.3
(RESIDUALLY WEATHERED DOLERITE) Silty sandy CLAY : Medium plasticity.	Stiff	17	25	2	-	10	-	0.3
DOLERITE : Brownish grey/grey, highly weathered	Very Low to High	25	30	220	2.2	-	35	0.2
BRECCIATED DOLERITE: Greenish grey, highly weathered	Very Low to Low	23	25	45	1.2	-	45	0.2
DOLERITE : Grey, slightly weathered	Medium to High	28	36	5,000	90	-	14,200	0.2

Note : Rock strength parameters have been estimated based on rock mass properties using RocScience RocLab 1.0 software

7.2 Building Foundations

It is understood the proposed development comprises a six-storey residential building, with three-level car parking access from Macquarie Street, indicating a basement/car park finished floor level of approximately 21.45 m AHD. In order to achieve the proposed design level, the existing retaining wall along the northern site boundary (along the Hobart Rivulet) will require partial removal along with the existing fill material will be required. A new retaining wall with footings extending to below the Hobart Rivulet will be required. Based on the ground conditions encountered during the investigations, a cross-section has been developed and presented in Figure , which runs south to north across the site.

The cross-section indicates the majority of the site is underlain by highly weathered dolerite bedrock at a depth of 27.2 m AHD to the south (although due to poor recovery and rock mass, this depth should be assumed 26.2 m AHD), reducing to 16.3 m AHD to the north. To the south of the site, overlying fill material and residually weathered dolerite material is relatively thin (<1.5 m thickness). To the north of the site, fill material increases to 3.5 m thickness, underlain by highly variable alluvial deposits to 9.2 m depth.

Based on the presence of the shallow bedrock to the south of the site and deep fill and alluvial materials to the north of the site, GES recommend to place the foundations of the proposed development on highly weathered dolerite. It should be noted that due to the spacing of the deeper investigation boreholes, lateral and vertical variability in ground conditions may be

expected in depth of rock, particularly along the inclined contact between the alluvial deposits and the underlying highly weathered dolerite at the location of Hobart Rivulet.

In order to avoid excavation works below the Hobart Rivulet level (approximate RL of 20 m AHD) or loading low strength materials (quaternary alluvial deposits), it is recommended to offset the loads of the south of the site.

7.2.1 Pad Footings

Table 6 presents the estimated allowable bearing capacities for pad footings, assuming a 1 m by 1 m wide pad, with a 1 m embedment depths various material types encountered across the site. GES are not recommending founding the pads within fill material, which should be removed during excavation works. The bearing capacities have been estimated based on point load (PLSI) results and a Factor of Safety (FOS) of 2.5 has been applied.

Table 6 Estimated Bearing Capacities for Pad Footings

<i>Material</i>	<i>BH01 Typical top of layer elevation (m AHD)</i>	<i>BH02 Typical top of layer elevation (m AHD)</i>	<i>Allowable Bearing Capacity (kPa)*</i>
Quaternary Alluvial Deposits	-	20.6 - 16.2	120
Highly Weathered BRECIATED DOLERITE	-	16.2 – 12.2	285
Highly Weathered DOLERITE	26.2 – 21.6	-	325
Distinctly to slightly Weathered DOLERITE	21.6 – 18.2	-	4800

Note: Allowable bearing capacities have been calculated using rock mass characteristics & point load index strength test results using a IS50 to UCS conversion factor of 20 and an allowable safety factor of 2.5

Based on the allowable bearing capacities and pad founding depths outlined in Table 6, for 1 m square pad footings, settlement of less than 25 mm is expected. However, settlements of pads depend on the actual pad type and pad layout (pad diameter, founding depths, etc.) and rock mass condition encountered. At this stage, no detailed settlement analysis has been carried out.

7.2.2 Strip Footings

An allowable bearing capacity of 110 kPa is considered suitable for light-load elements of the proposed development placed on strip footings, within residually weathered dolerite clay material to a depth of approximately 3.5 m to the south of the site.

7.2.3 Pile foundations

Where pad foundations are not suitable at the site, bored piles are recommended to extend below the quaternary alluvial deposits and socketed into slightly weathered dolerite to the south of the site using permanently cased piles through the unstable alluvial deposits. Within Slightly weathered Dolerite material, an allowable bearing capacity of 2.4 MPa is expected, assuming 900 mm diameter piles socketed a minimum of 3 pile diameters into slightly weathered bedrock. If shallow piles are socketed into the highly weathered dolerite breccia to the south of the site, an allowable bearing capacity of 280 kPa can be expected.

7.3 Construction Considerations and Recommendations

7.3.1 Earthworks Recommendations

During construction, the following earthworks recommendations should be adhered to:

- Uncontrolled, contaminated fill and organic materials at footing and subgrade locations should be stripped and removed appropriately from site. This may require multiple stockpiles to separate contaminated and non-contaminated fill materials; and
- Earthworks are to be carried out in accordance with methods outlined in AS 3798-2007.
- Clay or low strength rock encountered below the proposed basement levels should be stripped prior to construction;

7.3.2 Site Excavation Considerations

- It is recommended for earthworks activities to be carried out during drier periods of the year. If this is carried out, the risk of water ponding, trafficability and clay softening (reducing shear strength of foundation material) will be reduced;
- Care should be taken to ensure that the base of the pad excavation is clear of any loose material, water or clay smear prior to pouring concrete;
- Consideration should be made for encountering shallow groundwater, as per the ground conditions encountered during the geotechnical investigation with initial groundwater strikes recorded at 21.3 mAHD to the south of the site, adjacent to the Hobart Rivulet;
- All surface water should be diverted away from the excavations;
- Excavation of fill materials and natural soils to required depths at all locations is likely to be achieved with relative ease with conventional hydraulic excavation machinery;
- Excavation works to the south of the site within slightly weathered dolerite bedrock below ~ 22 m AHD will likely require hydraulic breaking and potentially slow excavation expected;
- Care should also be taken due to the underground services which are likely to be present below the surface fill on site;
- During the investigation boulder and cobbles were encountered within the fill and quaternary alluvial materials, which were found to be highly variable. On encountering oversized materials, these should be removed from site;
- Construction contractors should be made aware of the fill that covers much of the site. Soil dermal contact, ingestion and dust inhalation risks have not been identified at the site. However, there remains the possibility that residual secondary hydrocarbons are present in soil and groundwater at the site from the former underground storage tanks, and as such ambient air in excavations will need to be screened for vapour inhalation and explosive risk by GES. Excavation spoil may contain contaminants including hydrocarbons and heavy metals, such that any excavated material must be tested and classified according to EPA IB105 prior to removal from site. When considering such earthworks activities, refer to GES's ESA report; and
- It is recommended that excavations be observed by a Geotechnical Engineer/Geologist during construction to ensure that founding conditions are consistent with those on which the design recommendations are based.

7.3.3 Unsupported Batters and Earth Retaining Systems

Based on the drawings provided, it is estimated the proposed retaining wall structure will be constructed along all site boundaries. The most significant walls will be on the southern boundary of the site adjacent to an existing building (201 Macquarie Street) along the southern site boundary and to the north of the site (along the Hobart Rivulet). The retaining wall will be excavated up to 7.5 m below the existing ground surface towards the south of the site and 2.0 m depth to the north of the site. At these locations, the following preliminary safe slope batter angles can be recommended within each subsurface unit (assuming batter slope for less than 1 month):

- Fill and Alluvial Material – 1.5V:2H;
- Residually Weathered Dolerite/CLAY – 1.5V:2H;
- Highly Weathered Dolerite – 2V:1.5H; and
- Slightly Weathered Dolerite – 3V:1H.

However, due to the height of the cuttings and proximity of cuttings to adjacent buildings and property boundaries, it is not recommended for cuttings onsite to be unsupported. Table 7 presents the expected lateral earth pressures expected for retention works at this site.

Table 7 Lateral Earth Pressures and Unsupported Safe Batter Slopes

Material Type	Dry Density (kN/m ³)	Internal Friction Angle ϕ'	Cohesion c' (kPa)	Coefficient of At Rest Earth Pressure (K_0)	Coefficient of Active Earth Pressure (K_a)*	Coefficient of Passive Earth Pressure (K_p)*
FILL – Highly variable and Alluvial Material	16	26	5	0.56	0.39	2.55
Residually weathered Dolerite (CLAY)	17	25	2	0.58	0.41	2.45
Highly Weathered Dolerite	23-25	30	30	0.50	0.33	3.00
Slightly Weathered Dolerite	28	65	830	0.09	0.05	20.35

Note - *Vertical Dry Frictionless Wall Supporting Horizontal Soil

^ Parameters differ from Table 9 of the report to consider slope effects.

7.3.4 Pad Footing Construction Considerations

Water inflows may also be encountered during excavation which may cause softening of the founding material. Therefore, it is recommended that all clayey, loose or water affected material be removed from the base of all excavations prior to construction (as much as practically possible). Pads should be socketed into the mudstone/sandstone with an equal embedment depth to width ratio.

It is also recommended that the foundation/pavement excavations be inspected by a suitably qualified professional in order confirm the foundations conditions are consistent with engineering design parameters and foundation embedment depths outlined above are suitable.

It is recommended that:

- Levelling and compaction of footprints with either natural rock fill or imported Class 1 fill should follow AS 1289 5.1.1;
- All earthworks onsite be compliant with AS3798-2007 “Guidelines for Earthworks on commercial and residential subdivision”;
- Stormwater be connected as soon as any roofing is sealed; and
- Drainage of the ground surface and pavements be designed to flow away from footing areas and towards stormwater discharge points.

7.3.5 Bore Pile Design Factors

In order to assess pile capacity, a Geotechnical Strength Reduction Factor as required by AS 2159-2009 should be applied to the unit stress outlined in Section 7.2.3. For preliminary bored pile design, $\Phi_g = 0.42$ is recommended. However, designers should make their own assessment of appropriate Φ_g values based on the particular risk circumstances, experience and testing regime appropriate for their design and a different value may apply. Should load testing be undertaken on constructed piles, then a higher Φ_g value may be adopted in accordance with the procedures of AS2159-2009. The Basic Geotechnical Strength Reduction Factor Φ_{gb} should be determined which can be affected by factors including:

- Boring method;
- Design experience and methods adopted;
- Level of construction control and performance monitoring; and
- Level of testing during installation;

It is recommended that skin friction from the encountered fill be neglected in calculating pile capacity. Skin friction should only be considered for piles that penetrate at least one (1) pile diameter into the competent bedrock.

7.3.6 Pile Construction Recommendations

It is recommended bored pile excavations be observed by an Engineering Geologist from GES during construction to ensure that founding conditions are consistent with those on which the design recommendations are based. Such observations should involve a full-time presence by GES during excavation, to assess materials encountered, and to allow the refinement of actual pile depths to achieve design loads.

Care should be taken to ensure that the base and sides of each pile excavation is clear of any loose material, water or clay smear prior to pouring concrete. Considering the possible difficulties in achieving thorough machine cleaning of the pile base and ability to undertake observations to confirm cleanliness, it is recommended that the bored pile designers consider a construction reduction factor, unless the piling contractor can demonstrate that a higher level of cleanliness can be achieved.

Groundwater may be as shallow as 21.3 m AHD. An allowance for encountering shallow groundwater should be accounted for by the piling contractor.

7.3.7 Foundation Maintenance

Optimal foundation maintenance is concerned with keeping soils in the founding zone at low and constant moisture contents to limit ground surface movement.

Ground surface movement associated with endemic soils on site have long term implications for footing maintenance and it is recommended that:

- Adequate consideration be given to drainage around the building as well as the entire site to prevent surface and subsurface moisture accumulation around footings;
- Stormwater be connected as soon as the roof is sealed; and
- Drainage of the ground surface and pavements be designed to flow away from footing areas and towards stormwater discharge points.

7.3.8 Site Seismic Factor

Based on the subsurface conditions encountered and the location of the site, it is considered that a site subsoil classification of Class Be – Rock site and a Site Hazard Factor (Z) of 0.03 is applicable in accordance with Section 4 of AS1170.4-2007 “Structural Design Actions Part:4 Earthquake actions in Australia”.

7.4 Landslide hazard risk assessment

As part of the site is overlain by a landslide hazard overlay, namely a medium rockfall hazard overlay on a small area of the site immediately adjacent to the Hobart rivulet (see figure 6). The overlay may be a mapping artefact as no exposed rock faces or steep scarps are present in the area, the material examined on that part of the site was a mixture of fill and alluvial sediments retaining by the existing retaining wall. Based upon the detailed geotechnical assessment undertaken of the materials on site the risk is deemed to be low and acceptable. Excavation in the area of the overlay will involve greater than 100m³ of excavation and such the proposal must demonstrate compliance with performance criteria E3.7.1P1 and E3.7.3 P1 of the interim planning scheme. Risk assessment and compliance with the scheme performance criteria can be found in appendix 3.

8 RECOMMENDATIONS

The following recommendations have been made by GES for further geotechnical investigation and analysis:

- GES recommends pad footings to be used to the south of the site, where slightly weathered dolerite bedrock is expected at the base of excavations. To the north of the site, where the quaternary alluvial deposits are encountered to 15.9 m AHD, bored pile foundations are recommended to place footings into the underlying weathered dolerite;
- Due to the height of the cuttings and proximity of cuttings to adjacent buildings and property boundaries, it is not recommended for cuttings onsite to be unsupported; and
- GES recommend an Engineering Geologist should observe foundation excavations during construction to ensure that founding conditions are consistent with those on which the design recommendations are based.

9 LIMITATIONS STATEMENT

This Assessment Report has been prepared in accordance with the scope of services between Geo-Environmental Solutions Pty. Ltd. (GES) and the 201 Macquarie Street 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 discussed 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 geotechnical parameter or soil contaminant over the whole area of the site. Soil and rock samples collected from the investigation area are assumed to be representative of the areas from where they were collected and not indicative of the entire site. The conclusions discussed within this report are based on observations and/or testing at these investigation points.

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.

10 REFERENCES

AS4133.4.1 (1993). Australian Standard. Method 4133.4.1 Rock strength tests—Determination of the point load strength index. Methods of testing rocks for engineering purposes. Published by Standards Australia (Standards Association of Australia) 1 The Crescent, Homebush, NSW 2140.

AS1289 (2000). Australian Standard. Various methods as Prepared by Committee CE/9, Testing of Soils for Engineering Purposes. Approved on behalf of the Council of Standards Australia on 3 December 1999 and published on 28 February 2000.

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AS1726 (2017). Australian Standard. Geotechnical site investigations. Prepared by Committee CE-015, Site Investigations. Approved on behalf of the Council of Standards Australia on 7 April 2017 and published on 2 May 2017.

FORSYTH, S.M. and CLARKE, M.J. (compilers) 1999. Digital Geological Atlas 1:25,000 Scale Series. Sheet 5225 Hobart. Mineral Resources Tasmania.

11 FIGURES

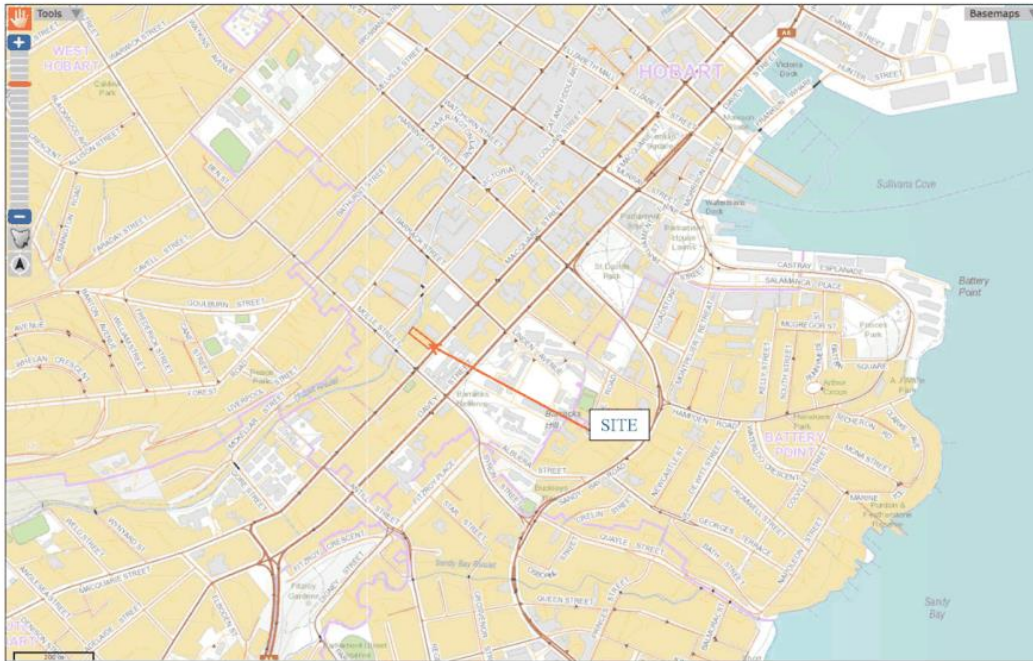


Figure 1 Site Location, 1:7000 scale, image sourced from the LIST. Site outlined in red

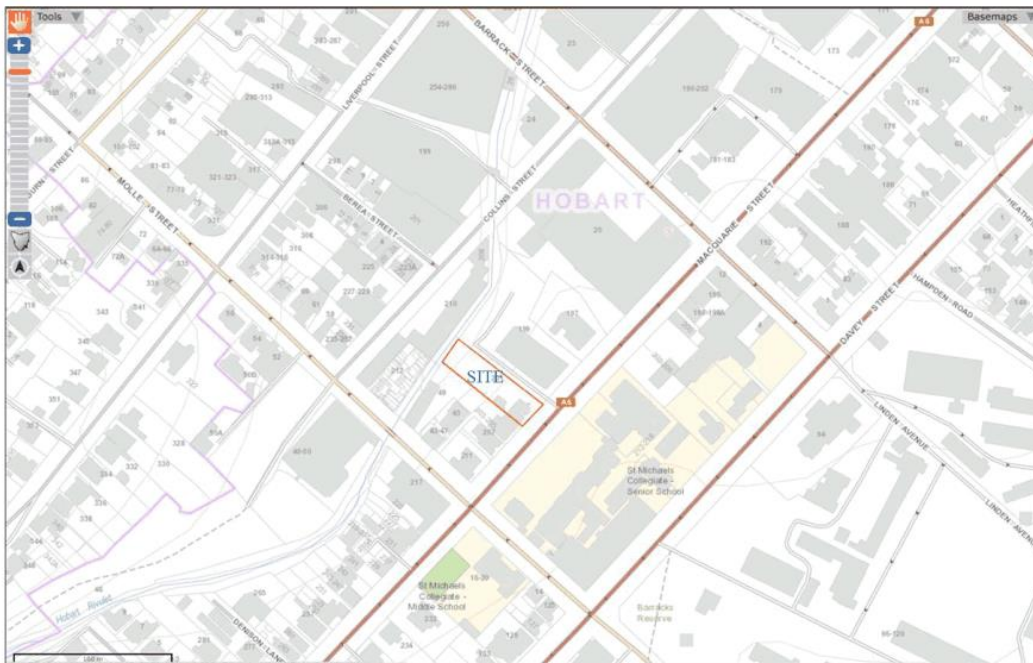


Figure 2 Site Location, 1:1700 scale, image sourced from the LIST



Figure 3 Borehole Layout Plan
(Coordinate System: GDA94 MGA Zone 55)



Figure 4 Proposed Design
(Coordinate System: GDA94 MGA Zone 55)

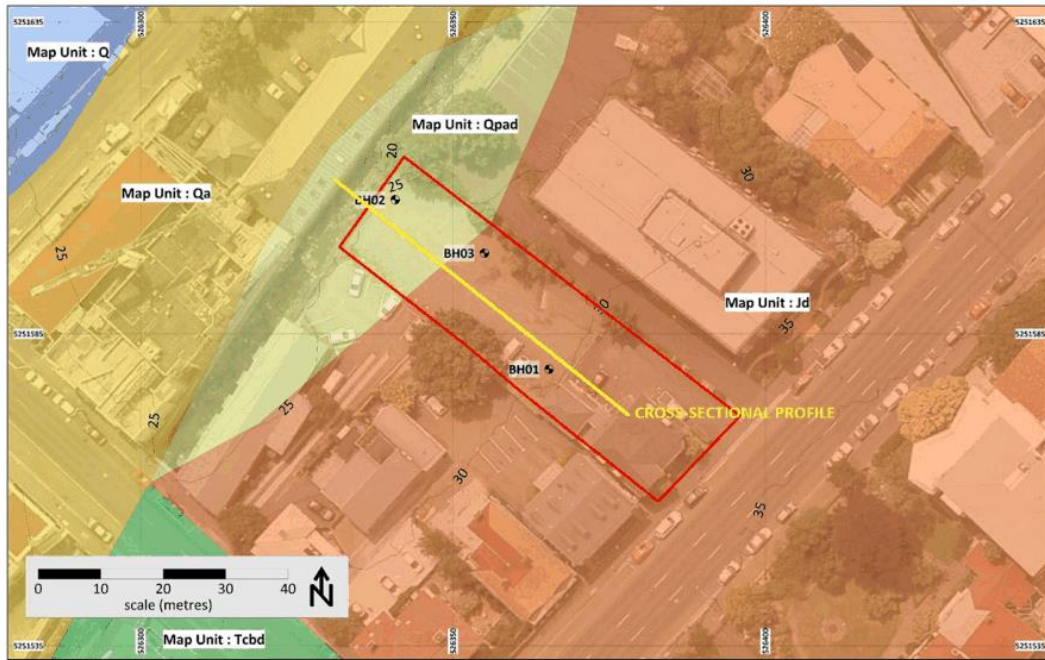


Figure 5 Site Geology

(Coordinate System: GDA94 MGA Zone 55)

Note : **Map Unit : Jd** - Dolerite and related rocks; **Map Unit : Qpad** - Older alluvium of river terraces, predominantly dolerite derived; **Map Unit : Qa** - Alluvial gravel, sand and clay; **Map Unit : Q** - Undifferentiated Quaternary sediments; and **Map Unit : Tcbd** - Poorly sorted boulder to pebble grade deposits with boulders up to 3 m length, clasts generally dominantly of dolerite with traces to rarely dominant amounts of Upper Permian mudstone and other rocks and less commonly Lower Permian rocks, clayey material.

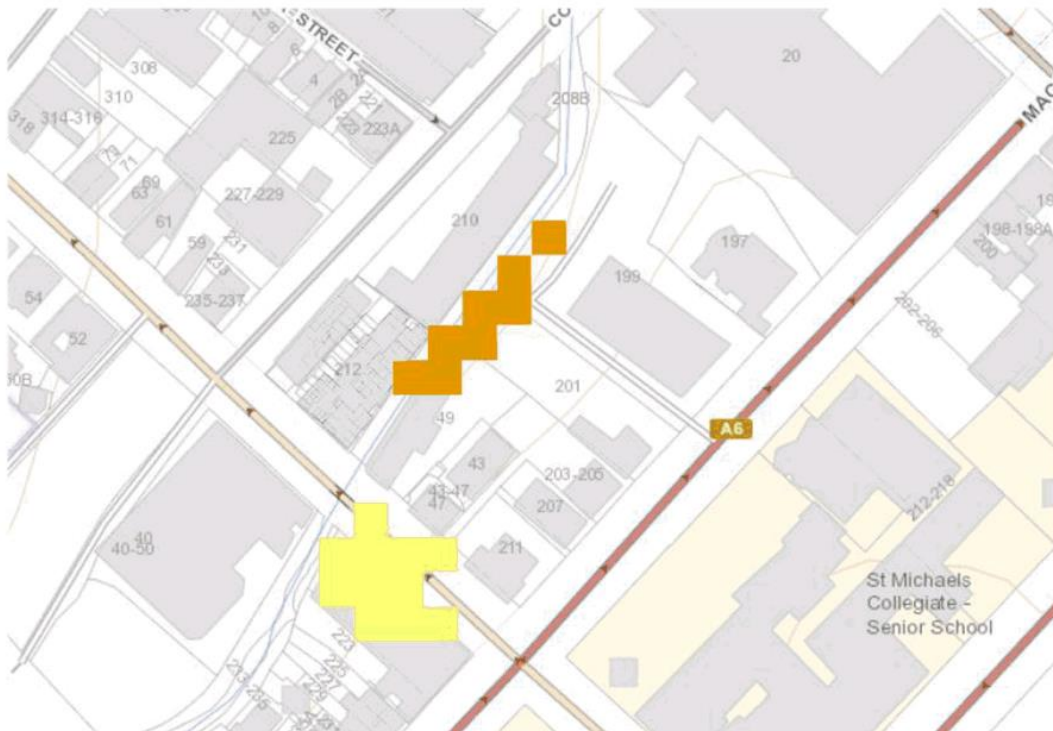


Figure 6 Landslide hazard planning overlay - orange hatching indicating medium rockfall hazard on lower area of site

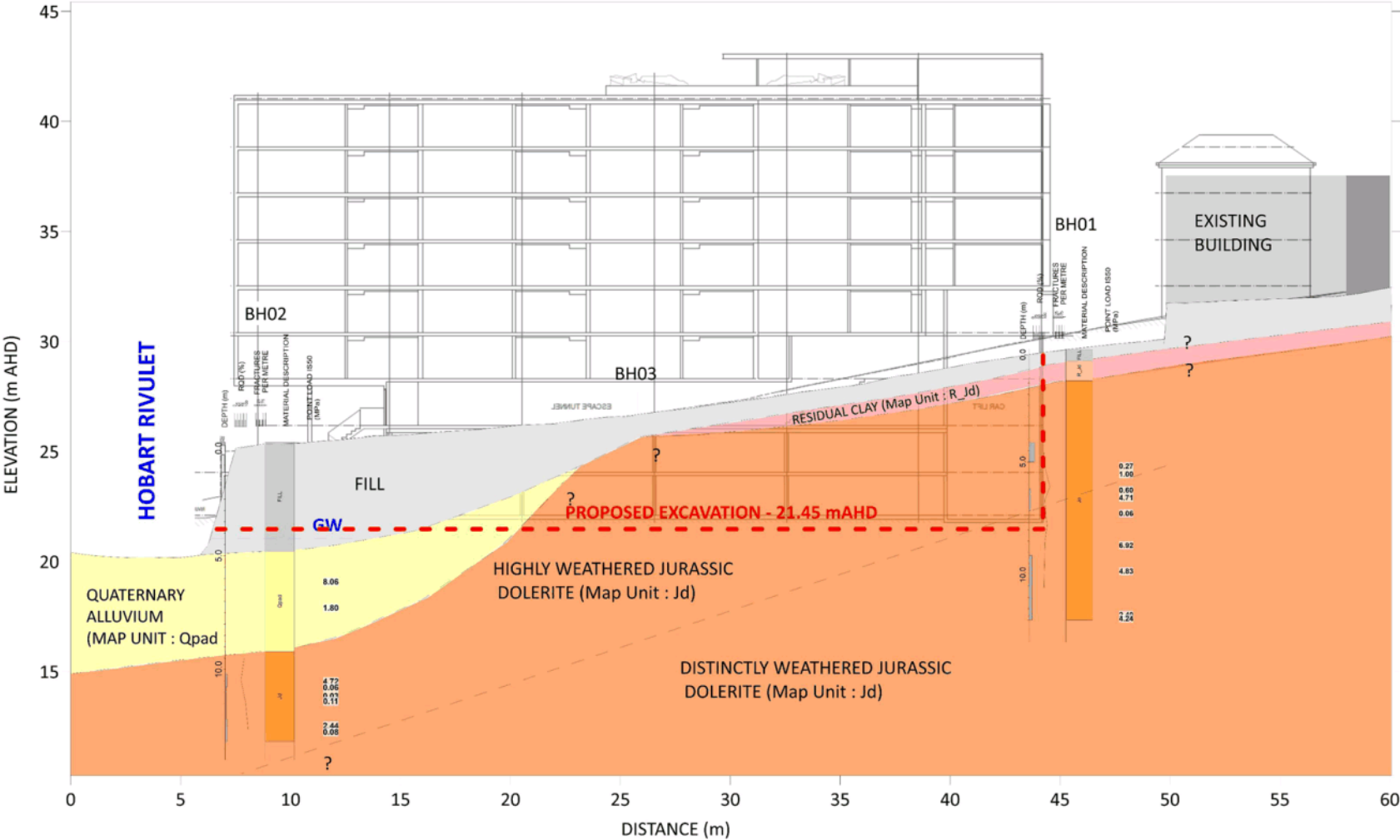



Figure 7 Cross Section

APPENDIX 1 – ENGINEERING LOGS & GES EXPLANATORY NOTES

 GEO-ENVIRONMENTAL SOLUTIONS		PROJECT: 201 Macquarie Street,	Log of BH01	
CLIENT: Rosevear Stephenson		EASTING (GDA94): 526365		
LOCATION: Hobart		NORTHING (GDA94): 5251579		
SAMPLING METHOD:	AZIMUTH:	INCLINATION: -90	ELEVATION (m ~AHD): 29.6	TOTAL DEPTH (m): 12
CONTRACTOR:	Tasmanian Drilling Services		WATER TABLE (m BGS):	
DRILL RIG:	Hanjun D & B - 8D		LOGGED BY: M. Temlett	NATURAL GROUND (m): 0.52
METHOD/INTERVAL:	Split Spoon Auger to 1.6 m depth		DATE STARTED: 05.02.19	DATE FINISHED: 05.02.19
		PQ Rotary Coring below 1.6 m.		
DEPTH (m)	STRENGTH INDEX SOIL ROCK	SPT BLOWS (N)	USCS / JOINT SET #	DESCRIPTION
0.0	V LOOSE / V SOFT V MEDIUM / V FIRM V DENSE / V STIFF V VERY DENSE / V HARD EXTREMELY LOW LOW MEDIUM HIGH EXTREMELY HIGH	0 10 20 30	GM CH CI CW DW	FILL : ASPHALT FILL : Silty sandy GRAVEL : Orangish brown, low plasticity, medium dense, dry. Gravel comprises fine to coarse angular dolerite. FILL : Silty GRAVEL trace sand : Pale brown, non-plastic, dense, dry. Gravel is fine to coarse sub-angular dolerite. FILL : Silty sandy CLAY : Black to dark brown, medium to high plasticity, stiff, moist. Sandy CLAY : Orangish brown, high plasticity, firm, moist. Sand is fine to coarse grained. Silty sandy CLAY : Brown and yellow brown, medium plasticity, stiff, moist. Sand is fine to coarse grained extremely weathered dolerite (Residually weathered Dolerite). EXTREMELY WEATHERED DOLERITE : Grey and brownish grey, crystalline, very low strength, extremely weathered, highly fractured. CORE LOSS : Inferred as extremely weathered Dolerite with high clay content. DOLERITE : Grey and brownish grey, crystalline, very low strength, extremely weathered, highly fractured. Recovered as dolerite cobbles, within clay matrix. CORE LOSS : Inferred as extremely weathered Dolerite with high clay content. DOLERITE : Grey and brownish grey, crystalline, low strength, highly weathered, highly fractured. Non intact. Multiple vertical fractures throughout.
1.0		2 5 8 13		
2.0				
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 GEO-ENVIRONMENTAL SOLUTIONS		PROJECT: 201 Macquarie Street,		Log of BH02																							
		CLIENT: Rosevear Stephenson		EASTING (GDA94): 526340																							
		LOCATION: Hobart		NORTHING (GDA94): 5251606																							
SAMPLING METHOD:		AZIMUTH:		INCLINATION: -90																							
				ELEVATION (m ~AHD): 25.39 TOTAL DEPTH (m): 13.16																							
CONTRACTOR:		Tasmanian Drilling Services		WATER TABLE (m BGS): 4.4																							
DRILL RIG:		Hanjun D & B - 8D		LOGGED BY: M. Temlett NATURAL GROUND (m): 3.62																							
METHOD/INTERVAL:		Split Spoon Auger to 4.3 m depth		DATE STARTED: 05.02.19 DATE FINISHED: 06.02.19																							
		PQ Rotary Coring below 4.3 m.																									
DEPTH (m)	STRENGTH INDEX		SPT BLOWS (N)	DCP Bearing Cap. (FS 2)	Point Load Is(50)	SHEAR VANE Cu (FS 2)	Undrained Shear Strength (kPa)	UCS (kPa)	WEATHERING	USCS / JOINT SET #	% CORE RECOVERY	% RQD	FRACTURES SPACING (cm)	# DEFECTS	DEFECT TYPE	ROUGHNESS	ALTERATION	APPETURE (mm)	ALPHA*	BETA*	INFILL TYPE	INFILL THICKNESS (mm)	DESCRIPTION	DEPTH (m)	GEOLOGICAL UNIT	STAND PIPE DETAILS	ELEVATION (m AHD)
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0.2	M DENSE / FIRM		20																								
0.3	V DENSE / STIFF		30																								
0.4	L DENSE / STIFF		40																								
0.5	HARD		50																								
0.6	EXTREMELY LOW		60																								
0.7	VERY LOW		70																								
0.8	LOW		80																								
0.9	MEDIUM		90																								
1.0	VERY HIGH		100																								
1.1	EXTREMELY HIGH		110																								
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 GEO-ENVIRONMENTAL SOLUTIONS		PROJECT: 201 Macquarie Street,		Log of BH02	
		CLIENT: Rosevear Stephenson		EASTING (GDA94): 526340	
		LOCATION: Hobart		NORTHING (GDA94): 5251606	
SAMPLING METHOD:		AZIMUTH:	INCLINATION: -90	ELEVATION (m ~AHD): 25.39	TOTAL DEPTH (m): 13.16
CONTRACTOR:		Tasmanian Drilling Services		WATER TABLE (m BGS): 4.4	
DRILL RIG:		Hanjin D & B - 8D		LOGGED BY: M. Temlett NATURAL GROUND (m): 3.62	
METHOD/INTERVAL:		Split Spoon Auger to 4.3 m depth		PQ Rotary Coring below 4.3 m.	
				DATE STARTED: 05.02.19	DATE FINISHED: 06.02.19

DEPTH (m)	STRENGTH INDEX		SPT BLOWS (N)	DCP Bearing Cap. (FS 2)	Point Load Is(50)	SHEAR VANE Cu (FS 2)	Undrained Shear Strength (kPa)	UCS (kPa)	WEATHERING	USCS / JOINT SET #	% CORE RECOVERY	% RQD	FRACTURES SPACING (cm)	DEFECTS	DEFECT TYPE	ROUGHNESS	ALTERATION	APPETURE (mm)	ALPHA*	BETA*	INFILL TYPE	INFILL THICKNESS (mm)	DESCRIPTION	DEPTH (m)	GEOLOGICAL UNIT	STAND PIPE DETAILS	ELEVATION (m AHD)
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9.0	V DENSE / V STIFF																										
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EXPLANATORY NOTES FOR GEOTECHNICAL REPORTING

Introduction

These notes have been provided to assist in the interpretation of this geotechnical report in regards to classification methods, field procedures and terminology.

Geotechnical reporting is based on information gained from limited subsurface test boring and sampling, integrated with knowledge of local geology and geotechnical engineering experience. For this reason, these reports must be regarded as interpretive rather than factual documents, limited by the scope of data on which they rely.

Description and Classification Methods

The methods of description and classification of soils and rocks used in this report are based largely on Australian Standard 1726 – Geotechnical Site Investigations (AS 1726), with reference to Australian Standard 1289 – Methods for testing soils for engineering purposes (AS 1289).

Soil Classification	Particle Size
Clay	Less than 0.002mm
Silt	0.002 – 0.06mm
Fine/Medium Sand	0.06 – 2.0mm
Coarse Sand	2.0mm – 4.75mm
Gravel	4.75mm – 60.00mm

Grain size analysis is performed by two processes depending on particle size. Sand silt and clay particles are assessed using a standardised hydrometer test, and coarse sand and larger is assessed through sieving by USCS certified sieves. For more detail see the following section.

Sampling

Sampling is carried out during drilling to allow engineering examination (and laboratory testing where required) of the soil and rock. Disturbed samples taken during drilling provide information on colour, lithology, grain sizes, horizon, rock unit etc. as well as some information on strength and structure.

Undisturbed samples are taken by pushing a thin walled sample tube into the soil and removing a sample of soil in a relatively undisturbed state. These samples provide information on soil bulk density, structure, strength, and are necessary for laboratory testing of linear shrinkage and atterburg limits where appropriate.

Drilling Methods

The following is a brief summary of drilling methods currently in use by Geo Environmental Solutions, along with some comments on their uses and applications.

Test Pits – These are excavated with a backhoe or a tracked excavator allowing close examination of the in-situ soils if it safe to do so. Any excavation over 1.5m deep is benched to ensure consultant safety. Test pitting allows for easy access to soil horizons of interest and ease of associated shear vane, DCP or PSP testing.

Hydraulic Direct Push Tube Sampling – A 1200mm solid push tube with a plastic inner liner is advanced into the ground by a hydraulic percussion hammer drill, and removed to extrude the sample. This is a highly reliably drilling method as the core of soil remains intact, and thus soil moisture and structure remains largely unchanged. The rig is mounted on a 4WD Nissan Patrol is highly mobile and simultaneously very capable.

Continuous Spiral Flight Augers – The hole is advanced using a 90-115mm diameter continuous spiral auger which can be withdrawn at intervals to allow sampling or in-situ testing. This is a relatively economical means of drilling in cohesive soils. Augering in non-cohesive soils, and in particular below any water table is ineffective with this drilling method. Samples returned are highly disturbed and as such make assessment of soil structure difficult. Information from the drilling is of relatively lower reliability due to remoulding, contamination or softening of samples by groundwater.

Rotary Air Blast Drilling – The hole is advanced by a rotary bit, with air being pumped down the drill rods and returned up the annulus, carrying the drill cuttings. Only significant changes in stratification can be determined from the cuttings, together with some information from rate of penetration and drilling resistance.

Diamond Core Drilling – A continuous core samples is obtained using a diamond tipped core barrel, 62mm internal diameter. Providing full core recovery is achieved (which is not always possible in very weak rocks and granular or non-cohesive soils), this technique provides a very reliable method of investigation. A number of various geotechnical tests may be carried out on the core, such as point load testing of recovered material. The only downfall of this technique is that it is relatively expensive method of drilling.

Standard Penetration Tests – Standard penetration tests (SPT) are used in most soils types as a means of determining density of strength, however samples that are collected are often disturbed. The test procedure is described in AS 1289 Test 6.3.1.



GENERAL SITE INVESTIGATION NOTES

The test is carried out in a borehole by driving a 50mm diameter split tube under the impact of a 63kg hammer with a free fall of 760mm. It is normal for the tube to be driven in three successive 150mm increments and 'N' value is taken as the number of blows for the last 300mm. In dense sands, very hard clays or weak rock, the full 450mm may not be practicable, and the test is discontinued – indicated by 'Ref' on the logs.

SPT results are commonly displayed in two ways. In the case where full penetration is obtained with successive blow counts an N is provided in the logs. In the case where the test is discontinued short of full penetration an N value is replaced with 'Ref'. The results of the tests can be related empirically to the engineering properties of the soil.

Shear Vane Testing – This test is used for determining the shear strength of soils in the field by measuring the torque required to cause a vane of cruciform section to shear the soil, in accordance with AS 1289, method 6.2.1. The method is used for very soft to firm non-fissured clays. The advantage of this test is that it can be performed at any depth, in situ, in association with push tube sampling.

Point Load Testing – This test is used to determine the point load strength index of rock cores. This index test is performed by subjecting a rock specimen to an increasingly concentrated load until failure occurs by splitting the specimen. The concentrated load is applied through coaxial, truncated conical platens. The failure load is used to calculate the point load strength index and to estimate the uniaxial compressive strength.

DCP and PSP weighted penetrometer tests – Dynamic Cone Penetrometer (DCP) and Perth Sand Penetrometer (PSP) tests are carried out by driving a rod into the ground with a falling weight hammer and measuring the blows for successive 150mm increments of penetration. Normally, there is a depth limitation of 1.2m but this may be extended in certain conditions by the use of extension rods. The methods for the two tests are quite similar.

- Dynamic Cone Penetrometer – a 16mm rod with a 20mm diameter cone end is driven with a 9kg hammer dropping 510mm (AS 1289, Test 6.3.2).
- Perth Sand Penetrometer – a 16mm diameter flat-ended rod is driven with a 9kg hammer, dropping 600mm (AS 1289 Test 6.3.3). This test was developed for testing the density of sands and is mainly used in granular soils and filling.

Bore Logs – The Bore Logs presented herein are an engineering and/or geological interpretation of the subsurface condition, and their reliability will depend to some extent on frequency of sampling and the method of drilling. The units are defined according to the geological map sheet referenced in the geology section of this

report. Regardless of drilling process used, it is important to note that boreholes represent only a very small sample of the total subsurface profile. Interpretation of the information and its application to design and construction should therefore take into account the spacing of boreholes, the frequency of sampling and the possibility of other than 'straight line' variations between the boreholes.

Groundwater – Where groundwater levels are measured in boreholes, there are several potential problems;

- In low permeability soils, ground water although present, may enter the hole slowly or perhaps not at all during the time is left open.
- A localised perched water table may lead to an erroneous indication of the true water table.
- Water table levels will vary from time to time with seasons or recent weather changed. They may not be the same at the time of construction as are indicated in the report.
- The use of water or mud as a drilling fluid will mask any groundwater inflow. Water has to be blown out of the hole and drilling mud must first be washed out of the hole is water observations are to be made.

More reliable measurements can be made by installing standpipes which are read at intervals over several days, or perhaps weeks for low permeability soils. Piezometers, seal in a particular stratum, may be advisable in low permeability soils or where there may be interference a perched water table.

Engineering Results – Engineering reports are prepared by qualified personnel and are based on the information obtained and on current engineering standards of interpretation and analysis. Where the report has been prepared for a specific design proposal (eg a three story building), the information and interpretation may not be relevant if the design proposal is changed (eg to a twenty story building).

Every care is taken with the report as it relates to interpretation of subsurface condition, discussion of geotechnical aspects and recommendations or suggestions for design and construction. However, Geo-Environmental Solutions cannot always anticipate or assume responsibility for:

- Unexpected variations in ground conditions – the potential for this will depend partly on bore spacing and sampling frequency.
- Changes in policy or interpretation of policy by statutory authorities.
- The actions of contractors responding to commercial pressures.

If these occur, Geo Environmental Solutions will be pleased to assist in investigation or advice to resolve the matter.



GENERAL SITE INVESTIGATION NOTES

Site Anomalies – In the event conditions encountered on site during construction appear to vary from those which were expected from the information contained in the report, Geo Environmental Solutions requests that it be immediately notified.

Reproduction of Information for Contractual Purposes

Attention is drawn to the document "Guidelines for the Provision of Geotechnical Information in Tender Documents", published by the Institution of Engineers, Australia. Where information obtained from this investigation is provided for tendering purposes, it is recommended that all information, including the written report and discussion be made available. In circumstances where the discussion or comments section is not relevant to the contractual situation, it may be appropriate to prepare a specially edited document. Geo Environmental Solutions would be pleased to assist in this regard and/or to make additional report copies available for contract purposes at a nominal charge.

Site Inspection – Geo Environmental Solutions will provide engineering inspection services for geotechnical aspects of work to which this report is related. This could range from a site visit to confirm that conditions exposed are as expected, to full time engineering presence on site.



SOIL CLASSIFICATION FOR ENGINEERING PURPOSES

NON COHESIVE - SAND							
Description	Code	Field Test	Relative Density	Dynamic Cone Penetrometer blows/150 mm	Perth Sand Penetrometer blows/150 mm	SPT, N blows/300 mm	CPT Resistance MPa
Very loose sand	NVLO	Easily penetrated with 13 mm reinforcing rod pushed by hand.	0 - 15	0 - 1.5	0 - 1	0 - 5	0 - 2
Loose sand	NLO	Easily penetrated with 13 mm reinforcing rod pushed by hand. Can be excavated with a spade; 50 mm wooden peg can be easily driven.	15 - 35	1.5 - 4.5	1-3	5-10	2-5
Medium dense sand	NMDE	Penetrated 300 mm with 13 mm reinforcing rod driven with 2 kg hammer, - hard shovelling.	35 - 65	4.5 - 12.0	3-4	10-30	5-15
Dense sand	NDE	Penetrated 300 mm with 13 mm reinforcing rod driven with 2 kg hammer, requires pick for excavation: 50 mm wooden peg hard to drive.	65 - 85	12.0 - 22.5	4-8	30 - 50	15 - 25
Very dense sand	NVDE	Penetrated only 25 - 50 mm with 13 mm reinforcing rod driven with 2 kg hammer.	85 - 100	>22.5	>8	>50	>25

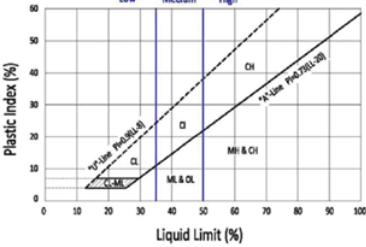
COHESIVE - SILT & CLAY							
Consistency	Code	Field Test	Undrained Shear Strength	Unconfined Compressive Strength	Dynamic Cone Penetrometer blows/150 mm *	SPT, N blows/300 mm	CPT Resistance MPa
			c_u	q_u			
			Torvane (kPa)	Pocket Penetrometer (kPa) **			
Very soft	CVSO	Easily penetrated >40 mm by thumb. Exudes between thumb and fingers when squeezed in hand.	<12	<25	<1.5	0 - 2	<0.2
Soft	CSO	Easily penetrated 10 mm by thumb. Moulded by light finger pressure	12-25	25 - 50	1.5 - 3.0	2 - 4	0.2 - 0.4
Firm	CFI	Impression by thumb with moderate effort. Moulded by strong finger pressure	25 - 50	50 - 100	3.0 - 5.0	4 - 8	0.4 - 0.8
Stiff	CST	Slight impression by thumb cannot be moulded with finger.	50 - 100	100 - 200	5.0 - 10.0	8 - 15	0.8 - 1.5
Very Stiff	CVST	Very tough. Readily indented by thumbnail.	100 - 200	200 - 400	10.0 - 19.0	15 - 30	1.5 - 3.0
Hard	CHARD	Brittle. Indented with difficulty by thumbnail.	>200	>400	>19.0	>30	>3.0

NON COHESIVE - GRAVEL				
Description	Code	Field Test	SPT	CPT Resistance
Loose	NLO	By inspection of voids and particle packing	See sand	Divide result by 2 and use sand
Dense	NDE			



SOIL CLASSIFICATION FOR ENGINEERING PURPOSES

SOIL MOISTURE	
Code	Description
W	Wet
M	Moist
SM	Slightly Moist
D	Dry

Major Divisions		Particle size mm	USCS Group Symbol	Typical Names	Laboratory Classification					
COARSE GRAINED SOILS (more than half of material less than 63 mm is larger than 0.075 mm)	BOULDERS	_____200			% < 0.075 mm (2)	Plasticity of fine fraction	$C_u = \frac{D_{60}}{D_{10}}$	$C_c = \frac{(D_{30})^2}{(D_{10})(D_{60})}$	NOTES	
	COBBLES	_____63								
	GRAVELS (more than half of coarse fraction is larger than 2.36 mm)	coarse	_____20	GW	Well graded gravels and gravel-sand mixtures, little or no fines	0-5	—	>4	Between 1 and 3	(1) Identify fines by the method given for fine-grained soils.
				GP	Poorly graded gravels and gravel-sand mixtures, little or no fines, uniform gravels	0-5	—	Fails to comply with above		
		medium	_____6	GM	Silty gravels, gravel-sand-silt mixtures (1)	12-50	Below 'A' line or $P_i < 4$	—	—	(2) Borderline classifications occur when the percentage of fines (fraction smaller than 0.075 mm size) is greater than 5% and less than 12%. Borderline classifications require the use of SP-SM, GW-GC.
		fine	_____2.36	GC	Clayey gravels, gravel-sand-clay mixtures (1)	12-50	Above 'A' line and $P_i > 7$	—	—	
	SANDS (more than half of coarse fraction is smaller than 2.36 mm)	coarse	_____0.6	SW	Well graded sands and gravelly sands, little or no fines	0-5	—	>6	Between 1 and 3	
				SP	Poorly graded sands and gravelly sands, little or no fines	0-5	—	Fails to comply with above		
		medium	_____0.2	SM	Silty sands, sand silt mixtures (1)	12-50	Below 'A' line or $P_i < 4$	—	—	
		fine	0.075	SC	Clayey sands, sand-clay mixtures (1)	12-50	Above 'A' line and $P_i > 7$	—	—	
FINE GRAINED SOILS (more than half of material less than 63 mm is smaller than 0.075 mm)	SILTS & CLAYS (Liquid Limit ≤50%)	ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity	<div>Plasticity Chart</div> <div>For classification of fine grained soils and fine fraction of coarse grained soils.</div> 						
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays							
		OL	Organic silts and clays of low plasticity							
	SILTS & CLAYS (Liquid Limit >50%)	MH	Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts							
		CH	Inorganic clays of high plasticity, fat clays							
		OH	Organic silts and clays of high plasticity							
	HIGHLY ORGANIC SOILS	PT	Peat and other highly organic soils							

Use the gradation curve of material passing 63 mm for classification of fractions according to the criteria given in 'Major Divisions'



ROCK CLASSIFICATION FOR ENGINEERING PURPOSES

Degree of Weathering

Code	ISRM GRADE	Description	Decolourant Extent	Fracture Condition	Surface Characteristics
F	1	FRESH , Rock shows no sign of decomposition or staining.	None	Closed or discoloured	Unchanged
SW	2	SLIGHTLY WEATHERED , Rock is slightly discoloured but shows little or no change of strength from fresh rock.	<50% has modest discolouration	Discoloured may contain thin filling	Partial discolouration
MW	3	MODERATLY WEATHERED , Modest discolouration is evident throughout the rock fabric, often with some change in the constituent minerals. The intact rock strength is usually noticeably weaker than that of the fresh rock.	Distinctly Weathered >50% has modest discolouration	Discoloured may contain thick filling	Partial to complete discolouration, not friable except poorly cemented rocks
HW	4	HIGHLY WEATHERED , Strong discolouration is evident throughout the rock mass, often with significant change in the constituent minerals. The intact rock strength is generally much weaker than that of the fresh rock.		Filled with alteration minerals	Friable and possible pitted
XW	5	EXTREMELY WEATHERED , Rock is weathered to such an extent that it has 'soil' properties, i.e. it either disintegrates or can be remoulded in water, but substance fabric and rock structure still recognisable.	100% has strong discolouration	Filled with alteration minerals	Resembles soil
RS	6	RESIDUAL SOIL , All rock material is converted to soil. The mass structure and material fabric are destroyed. There is a large change in volume, but the soil has not been significantly transported.	100% has strong discolouration	N/A	Resembles soil

Rock Strength

Term	Symbol	Field Guide*	Point Load Index [Is(50)] MPa	Approx Unconfined Compressive Strength (qu)
Extremely Low	EL	Easily remoulded by hand to a material with soil properties.	<0.03	<0.6
Very Low	VL	Material crumbles under firm blows with sharp end of geological pick; can be peeled with a knife; too hard to cut a triaxial sample by hand. SPT will refuse. Pieces up to 30mm thick can be broken by finger pressure.	0.03 – 0.1	0.6 – 2
Low	L	Easily scored with a knife; indentations 1mm to 3mm show in the specimen with firm blows of the geological pick point; has dull sound under hammer. A piece of core 150mm long by 40mm diameter may be broken by hand. Sharp edges of core may be friable and break during handling.	0.1 – 0.3	2 – 6
Medium	M	Readily scored with a knife; a piece of core 150mm long by 50mm diameter can be broken by hand with difficulty.	0.3 – 1	6 – 20
High	H	A piece of core 150mm long by 50mm diameter cannot be broken by hand but can be broken with geological pick with a single firm blow; rock rings under hammer.	1 – 3	20 – 60
Very High	VH	Hand specimen breaks with geological pick after more than one blow; rock rings under hammer.	3 – 10	60 – 200
Extremely High	EH	Specimen requires many blows with geological pick to break through intact material; rock rings under hammer.	>10	>200

Note that these terms refer to strength of rock and not to the strength of the rock mass, which may be considerably weaker due to rock defects.

* The field guide visual assessment of rock strength may be used for preliminary assessment or when point load testing is not able to be done.

** AS1726

*** The approximate unconfined compressive strength (qu) shown in the table is based on an assumed ratio to the point load index (PLI) of 20:1. This ratio may vary widely. This ratio applies unless specific rock calibration studies have been conducted for the site.



ROCK CLASSIFICATION FOR ENGINEERING PURPOSES

Degree of Fracturing

This classification applies to diamond drill cores and refers to the spacing of all types of natural fractures along which the core is discontinuous. These include bedding plane partings, joints and other rock defects, but exclude known artificial fractures such as drilling breaks. The orientation of rock defects is measured as an angle relative to a plan perpendicular to the core axis.

Note the recording of actual spacing and range of spacing is preferred in place of the terms below.

Term	Description
Fragmented	The core is comprised primarily of fragments of length less than 20mm, and mostly of width less than the core diameter.
Highly fractured	Core lengths are generally less than 20mm to 40mm with occasional fragments.
Fractured	Core lengths are mainly 30mm to 100mm with occasional shorter and longer sections.
Slightly fractured	Core lengths are generally 300mm to 1000mm with occasional longer sections and occasional sections of 100mm to 300mm.
Unbroken	The core does not contain any fracture.

Rock Quality Designation (RQD)

This is defined as the ratio of sound (ie low strength or better) core in lengths of greater than 100mm to the total length of the core, expressed in percent. If the core is broken by handling or by the drilling process (i.e. fracture surfaces are fresh, irregular breaks rather than joint surfaces), the fresh broken pieces are fitted together and counted as one piece.

Bedding/Foliation Spacing

Code	Term	Spacing
VWB	Very Widely Bedded/Foliated	>2m
WB	Widely Bedded/Foliated	0.6 – 2m
MB	Moderately Bedded/Foliated	0.2 – 0.6m
CB	Closely Bedded/Foliated	0.06 – 0.2m
VCB	Very Closely Bedded/Foliated	20mm – 60mm
L	Laminated	6mm – 20mm
CL	Closely Laminated	<6mm



ROCK CLASSIFICATION FOR ENGINEERING PURPOSES

Defect Type

Code	Structure
FO	Natural foliation parting or fracture.
BD	Natural bedding plane fracture.
JT	Natural geological joint.
FT	Geological fault with slickensides.
VN	Vein cemented with infill.
CO	Geological contact.
SH	Shear zone (zone of closely spaced shear fractures not classed as FT).
XX	Zone of multiple core breaks induced by drilling.

Defect Roughness

Code	Description	Jr	JRC	Amplitude
PP	Planar – Polished/Slickensided	0.5	0.5	0.1%
PS	Planar – Smooth	1	1.5	0.4%
PR	Planar – Rough	1.5	2.5	0.5%
UP	Undulating – Polished/Slickensided	1.5	7	1.5%
US	Undulating – Smooth	2	11	2.0%
UR	Undulating – Rough	3	14	3.0%
SP	Stepped – Polished/Slickensided	2	11	2.0%
SS	Stepped – Smooth	3	14	3.0%
SI	Stepped - Irregular	4	20	4.5%



ROCK CLASSIFICATION FOR ENGINEERING PURPOSES

Defect Alteration

Code		Description	J _a	
A		Tightly healed, hard, non softening, impermeable filling eg. Quartz, carbonate, epidote	0.75	
B		Unaltered/Fresh joint walls, or surface staining only	1	
C		Slightly altered joint walls (one grade higher than intact rock)	2	
D		Frictional materials: sand, silt, calcite, clayey-silt, or clayey-sand coating (small clay fraction), non softening	3	
E		Altered joint walls (two grades higher than intact rock). Cohesive materials: softening or low friction clay mineral coatings, ie. kaolinite, mica, chlorite, talc, gypsum, graphite	2	
<5mm	>5mm		<5mm	>5mm
F1	F2	Frictional materials. (Sandy particles, clay free, disintegrated rock (non softening)	4	8
G1	G2	Hard cohesive materials. (Strongly over consolidated non softening clay)	6	10
H1	H2	Soft cohesive materials, (Medium to low over consolidated, softening clay)	8	12
J1	J2	Swelling clays, eg. montmorillonite	12	20

Defect Mineral Infill

Code	Structure
N	No Infill
S	Generic Soft Infill
H	Generic Hard Infill
CY	Clay or Silty Clay
RK	Rock
SI	Silt
FE	Ferruginous
OZ	Quartzite
MI	Micaceous
SP	Serpentinised
CA	Calcite Infill
TR	Travertine
OL	Olivine

Reference

International Society of Rock Mechanics, Suggested Method for Determining the Point Load Strength, 1985.
 Australian Standard 1289 – Methods of testing soils for engineering purposes, 1997.
 Australian Standard 1726 – Geotechnical Site Investigations Code, 1993
 Hoek E & Brown ET, Underground Excavations in Rock, E& FN SPON, 527p,1990
 Hoek E, Kaiser PK & Bawden WF, Support of Underground Excavations in Rock, AA Balkema, 215p, 195
 Marinos V, Marinos P & Hoek E " The geological strength index: application and limitations" Bulletin on Engineering Geology and Environment, Vol. 64, No 1, pp. 55-65, April 2005

APPENDIX 2 – CORE PHOTOGRAPHS

BOREHOLE ID: BH01

DEPTH: 0.0 to 4.0 m



BOREHOLE ID: BH01

DEPTH: 4.0 to 8.0 m



BOREHOLE ID: BH01

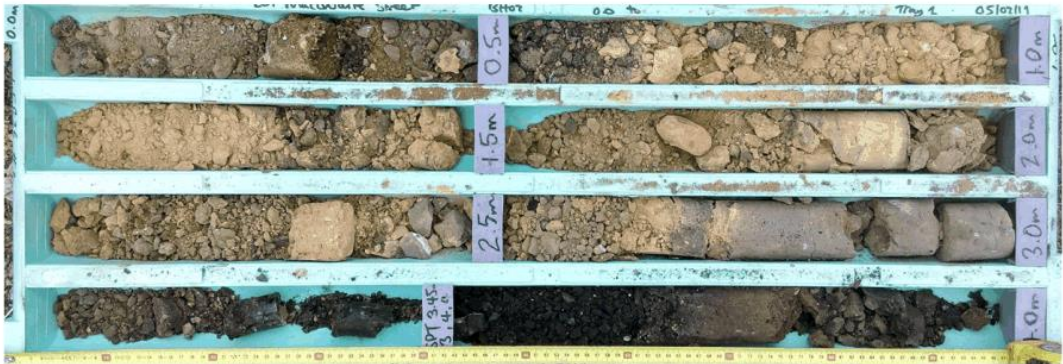
DEPTH: 7.8 to 11.6 m



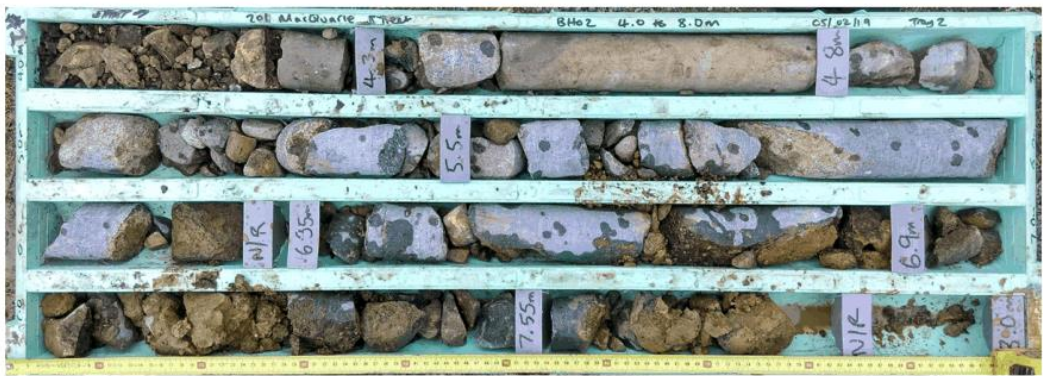
BOREHOLE ID: BH01
DEPTH: 11.6 to 12.0 m EOH



BOREHOLE ID: BH0202
DEPTH: 3.8 to 7.3 m



BOREHOLE ID: BH02
DEPTH: 4.0 to 8.0 m



BOREHOLE ID: BH02

DEPTH: 8.0 to 12.0 m



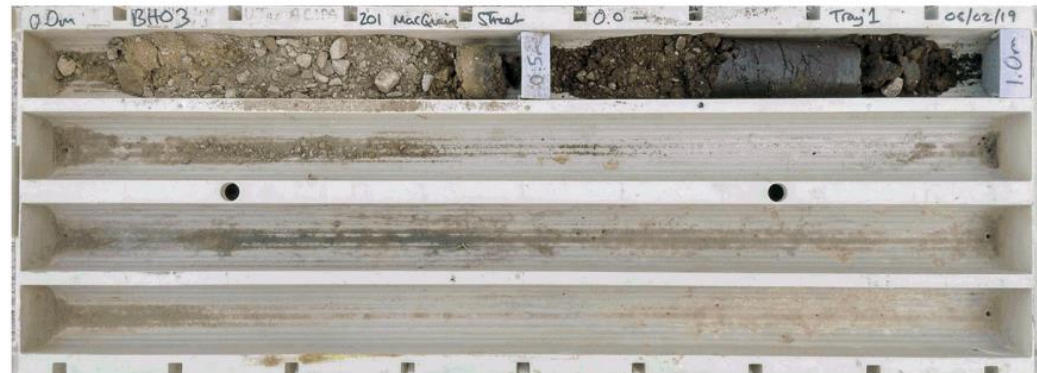
BOREHOLE ID: BH02

DEPTH: 12.0 to 13.16 m EOH



BOREHOLE ID: BH03

DEPTH: 0.0 to 1.0 m EOH



APPENDIX 3 – Landslide Risk Assessment

Likelihood & Consequence Index

QUALITATIVE MEASURES OF LIKELIHOOD

Approximate Annual Probability		Implied Indicative Landslide Recurrence Interval		Description	Descriptor	Level
Indicative Value	Notional Boundary					
10^{-1}	5×10^{-2}	10 years	20 years	The event is expected to occur over the design life.	ALMOST CERTAIN	A
10^{-2}		100 years		The event will probably occur under adverse conditions over the design life.	LIKELY	B
10^{-3}	5×10^{-3}	1000 years	200 years	The event could occur under adverse conditions over the design life.	POSSIBLE	C
10^{-4}		10,000 years		The event might occur under very adverse circumstances over the design life.	UNLIKELY	D
10^{-5}	5×10^{-5}	100,000 years	20,000 years	The event is conceivable but only under exceptional circumstances over the design life.	RARE	E
10^{-6}		1,000,000 years		The event is inconceivable or fanciful over the design life.	BARELY CREDIBLE	F

Note: (1) The table should be used from left to right; use Approximate Annual Probability or Description to assign Descriptor, not *vice versa*.

QUALITATIVE MEASURES OF CONSEQUENCES TO PROPERTY

Approximate Cost of Damage		Description	Descriptor	Level
Indicative Value	Notional Boundary			
200%	100%	Structure(s) completely destroyed and/or large scale damage requiring major engineering works for stabilisation. Could cause at least one adjacent property major consequence damage.	CATASTROPHIC	1
60%		Extensive damage to most of structure, and/or extending beyond site boundaries requiring significant stabilisation works. Could cause at least one adjacent property medium consequence damage.	MAJOR	2
20%	40%	Moderate damage to some of structure, and/or significant part of site requiring large stabilisation works. Could cause at least one adjacent property minor consequence damage.	MEDIUM	3
5%		Limited damage to part of structure, and/or part of site requiring some reinstatement stabilisation works.	MINOR	4
0.5%	10% 1%	Little damage. (Note for high probability event (Almost Certain), this category may be subdivided at a notional boundary of 0.1%. See Risk Matrix.)	INSIGNIFICANT	5

Notes: (2) The Approximate Cost of Damage is expressed as a percentage of market value, being the cost of the improved value of the unaffected property which includes the land plus the unaffected structures.

(3) The Approximate Cost is to be an estimate of the direct cost of the damage, such as the cost of reinstatement of the damaged portion of the property (land plus structures), stabilisation works required to render the site to tolerable risk level for the landslide which has occurred and professional design fees, and consequential costs such as legal fees, temporary accommodation. It does not include additional stabilisation works to address other landslides which may affect the property.

(4) The table should be used from left to right; use Approximate Cost of Damage or Description to assign Descriptor, not *vice versa*

Qualitative Risk Matrix

QUALITATIVE RISK ANALYSIS MATRIX – LEVEL OF RISK TO PROPERTY

LIKELIHOOD		CONSEQUENCES TO PROPERTY (With Indicative Approximate Cost of Damage)				
	Indicative Value of Approximate Annual Probability	1: CATASTROPHIC 200%	2: MAJOR 60%	3: MEDIUM 20%	4: MINOR 5%	5: INSIGNIFICANT 0.5%
A – ALMOST CERTAIN	10 ⁻¹	VH	VH	VH	H	M or L (5)
B – LIKELY	10 ⁻²	VH	VH	H	M	L
C – POSSIBLE	10 ⁻³	VH	H	M	M	VL
D – UNLIKELY	10 ⁻⁴	H	M	L	L	VL
E – RARE	10 ⁻⁵	M	L	L	VL	VL
F – BARELY CREDIBLE	10 ⁻⁶	L	VL	VL	VL	VL

Notes: (5) For Cell A5, may be subdivided such that a consequence of less than 0.1% is Low Risk.
 (6) When considering a risk assessment it must be clearly stated whether it is for existing conditions or with risk control measures which may not be implemented at the current time.

RISK LEVEL IMPLICATIONS

Risk Level		Example Implications (7)
VH	VERY HIGH RISK	Unacceptable without treatment. Extensive detailed investigation and research, planning and implementation of treatment options essential to reduce risk to Low; may be too expensive and not practical. Work likely to cost more than value of the property.
H	HIGH RISK	Unacceptable without treatment. Detailed investigation, planning and implementation of treatment options required to reduce risk to Low. Work would cost a substantial sum in relation to the value of the property.
M	MODERATE RISK	May be tolerated in certain circumstances (subject to regulator's approval) but requires investigation, planning and implementation of treatment options to reduce the risk to Low. Treatment options to reduce to Low risk should be implemented as soon as practicable.
L	LOW RISK	Usually acceptable to regulators. Where treatment has been required to reduce the risk to this level, ongoing maintenance is required.
VL	VERY LOW RISK	Acceptable. Manage by normal slope maintenance procedures.

Note: (7) The implications for a particular situation are to be determined by all parties to the risk assessment and may depend on the nature of the property at risk; these are only given as a general guide.

Qualitative Risk Assessment

Performance Criteria E3.7.1 P1 Buildings and works must satisfy all of the following:	Relevance	Management Options	Managed (treated) Risk Assessment			Further Assessment Required
			Consequence	Likelihood	Risk	
(a) no part of the buildings and works is in a High Landslide Hazard Area;	NA					
<p>(b) the landslide risk associated with the buildings and works is either:</p> <p>(i) acceptable risk (means a risk society is prepared to accept as it is. That is, without management or treatment); or</p> <p>(ii) capable of feasible and effective treatment through hazard management measures, so as to be tolerable risk.</p> <p>The residual tolerable risk may be assessed using either qualitative or qualitative methods in the landslide risk assessment either:</p> <p>(a) if using the AGS qualitative risk assessment method apply the "As Low As Reasonably Possible (ALARP)" principle with the residual tolerable risk level no higher than a "moderate" risk level under the AGS 2007(c) risk method; or</p> <p>(b) if using the AGS quantitative risk assessment method then the tolerable loss of life for the person most at risk as suggested by the AGS 2007(c) to be:</p> <p>(i) if existing slope / existing development: 10-4 / annum;</p> <p>(ii) if new constructed slope / new development / existing landslide: 10-5 / annum.</p>	Acceptable	<p>Retainment on Rivulet boundary to be maintained. Any new works on the rivulet boundary to ensure adequate piling depths, and temporary shoring during works. Piles should be socketed into the Tertiary breccia or dolerite units and adequately designed in accordance with the good hillside construction practices as outlined in the Australian Geomechanics Society (AGS) Geoguide LR8. Further geotechnical investigation will be necessary to provide parameters for retaining wall design or design of other protection works such as soil nails.</p>	Medium	Rare	Low	Detailed protection works design required.

Performance Criteria E3.7.3 P1 Major works must satisfy all of the following (same as 3.7.1P3):	Relevance	Management Options	Managed (treated) Risk Assessment			Further Assessment Required
			Consequence	Likelihood	Risk	
<p>(a) no part of the works is in a High Landslide Hazard Area;</p> <p>(b) the landslide risk associated with the works is either:</p> <p>(i) acceptable risk; or</p> <p>(ii) capable of feasible and effective treatment through hazard management measures, so as to be tolerable risk.</p>	Acceptable risk	<p>Retainment on Rivulet boundary to be maintained. Any new works on the rivulet boundary to ensure adequate piling depths, and temporary shoring during works. Piles should be socketed into the Tertiary breccia or dolerite units and adequately designed in accordance with the good hillside construction practices as outlined in the Australian Geomechanics Society (AGS) Geoguide LR8. Further geotechnical investigation may be necessary to provide parameters for retaining wall design design of other protection works such as soil nails.</p>	Medium	Rare	Low	Detailed protection works design required.

12.1 Hazard Analysis

12.1.1 Landslide Characteristics

Based on the slope characteristics including site geology, slope geometry and slope angles, MRT landslide mapping/inventory and site observations, the following scenario has been identified as potential slope failure mechanisms for the site:

- **Scenario 1** – Shallow slide or flow failure within the fill and alluvial materials. Depth up to 4 m. Failure is unlikely to occur but would likely consist of debris slump in excavation in the lower area of the site.

The scenario addresses the typical slope failure plane of a shallow rotational slip occurring directly adjacent to the proposed site excavation of the proposed development. The failure would initiate from the edge of the neighbouring property upslope of the proposed development and would likely follow contacts between contrasting geological materials.

12.2 Risk Analysis

12.2.1 Risk to Property

Risk has been considered for the proposed development pre and post construction. Without the provision of a suitable retaining structure prior to excavation of the site during construction, the site is considered moderate risk. Treated risk with a suitably designed protections works will reduce the risk to low.

Consequence analysis for landslide hazards

Scenario	Issue	Current Risks (During Construction)			Recommended risk treatment	Residual Risks following implementation of risk treatment		
		Likelihood of occurrence	Consequence to property	Level of risk to property		Likelihood of occurrence	Consequence to property	Level of risk to property
Scenario 1	Shallow Rotational Failure	Unlikely	Medium	Moderate Risk	Protection works to be adequately designed and implemented prior to excavation works.	Rare	Medium	Low

12.2.2 Risk to Life

The risk to life has been assessed for two levels of treatment, one assuming no intervention and the second for the construction of suitably designed protection works prior to commencing bulk excavation works. Based on the risk matrix, the risk to life is considered tolerable without implementing the recommended risk treatments. The risk to life is generally considered low and acceptable given the likelihood and consequence of a shallow rotational failure within the unconsolidated soil material and quaternary deposits with protection works. The risk for scenario 1 is estimated on the likelihood of 2 occupants being in the ground floor parking area at the time of. The risk for scenario 2 is estimated based on 5 construction workers spending 4 hours per day directly underneath the supported cutting.

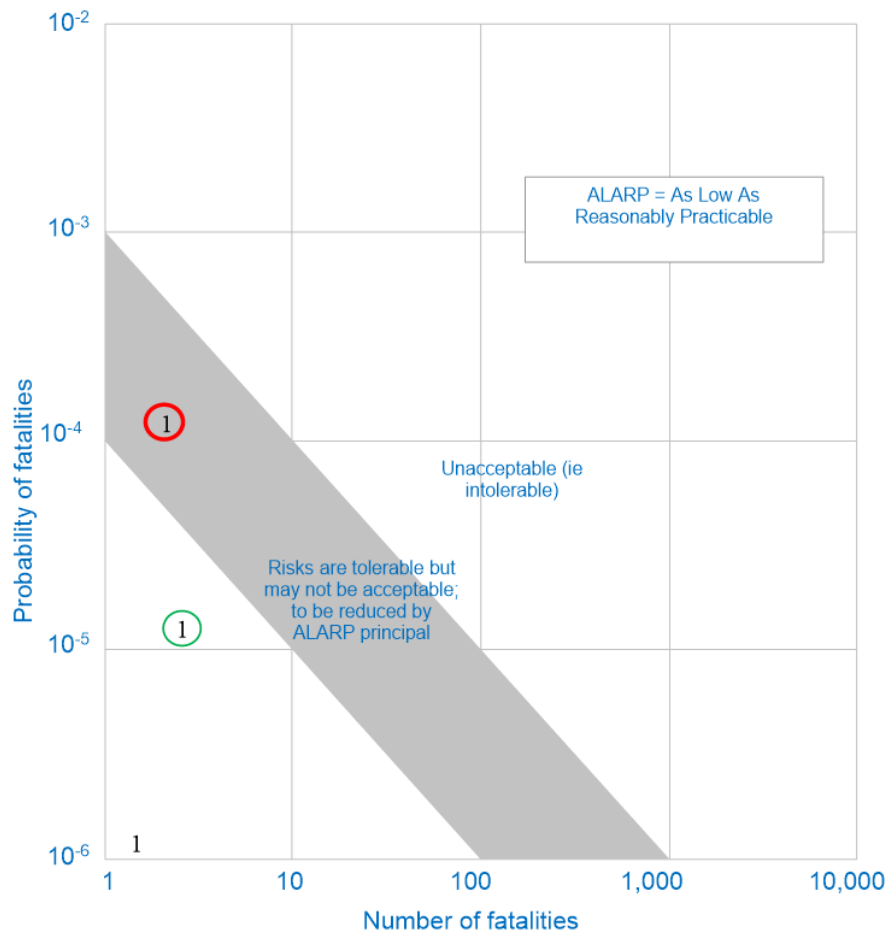
Consequence analysis for landslide hazards – Life – No Treatment

Hazard	Scenario 1
Factor	Shallow Rotational Failure
Likelihood	Unlikely
Indicative Annual Probability	0.001
Use of Affected Structure/Site	Site proximal to retaining wall (within 5 m from base of cutting)
Probability of Spatial Impact	0.5
Occupancy Number of People	5
Proportion of Time	0.3
Probability of Not Evacuating	1
Vulnerability	1
Risk for Person Most at Risk	0.5
Total Risk	3.8×10^{-4}
Risk Evaluation	Tolerable

Consequence analysis for landslide hazards – Life – Treated Risk

Hazard	Scenario 1
Factor	Shallow Rotational Failure
Likelihood	Rare
Indicative Annual Probability	0.0001
Use of Affected Structure/Site	Site proximal to retaining wall (within 10 m from base of cutting)
Probability of Spatial Impact	0.5
Occupancy Number of People	5
Proportion of Time	0.3
Probability of Not Evacuating	1
Vulnerability	1
Risk for Person Most at Risk	0.5
Total Risk	3.8×10^{-5}
Risk Evaluation	Acceptable

The Societal Risk Graph plot presented showing the estimated individual risks for scenarios as presented in the previous tables (outlined in the AGS 'Landslide Risk Management Concepts and Guidelines', 2007).



Societal Risk Graph of Probability of fatalities vs Number of fatalities (untreated risk in red & treated risk in green)



TRAFFIC IMPACT ASSESSMENT

**PROPOSED
RESIDENTIAL APARTMENT
DEVELOPMENT**

**201 MACQUARIE STREET
HOBART**

JANUARY 2021



TRAFFIC IMPACT ASSESSMENT

PROPOSED RESIDENTIAL APARTMENT DEVELOPMENT

201 MACQUARIE STREET
HOBART

JANUARY 2021

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ATTACHMENTS:

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

Attachment B - Drawings of civil design and access management

Attachment C - Calculations of car lift operation and queueing

Attachment D - Details of waste collection proposal and service vehicle

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
- Australian Standard AS 2890 – Parking Facilities, Part 6 – Off-street parking for people with disabilities
- Hobart Interim Planning Scheme 2015

1. INTRODUCTION

A multi-storey residential apartment development is proposed for the property 201 Macquarie 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 Macquarie 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 Macquarie Street.

Consideration is given to the access arrangements and available sight distances along Macquarie 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 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 northern side of Macquarie Street and around 70m to the east of the Molle Street intersection.

The site lies within the Urban Mixed Use Zone in the Hobart municipality. The surrounding development is quite mixed with commercial, office, visitor accommodation as well as school uses.

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

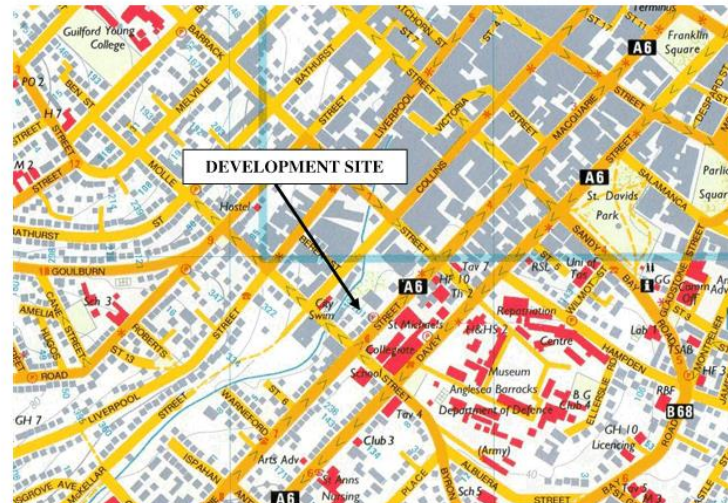


Figure 2.1: Extract of street atlas showing location of proposed apartment development site

3. DEVELOPMENT PROPOSAL

The proposed development at 201 Macquarie Street is for the construction of a multi-storey building that will have 45 residential apartments.

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



**Photograph 3.1: View of development site and access
from Macquarie Street**

There will be five floor levels with apartments and two levels of car parking. 43 apartments will have one bedroom and there will be two apartments with two bedrooms.

Two car lifts will provide access from the Ground Floor Level to the car parking spaces on the two Basement Levels. There will be 24 car parking spaces on Basement Level 2 and 25 car parking spaces on Basement Level 3 – a total of 50 car parking spaces.

One further car parking space will be located next to the office building.

With the multilevel apartment building there will also be four motorcycle parking spaces on the Basement Level 3 and at least 8 bicycle parking spaces in a secured room on the Lower Ground Floor Level.

There are two buildings at the front part of the development site. The two storey building at the frontage boundary has a 2-bedroom flat on each level. The smaller building behind this also has two levels with a 1-bedroom flat on each level. This rear building will be converted to an office which will have a total floor area of around 68m², slightly less when excluding the stairs.

The vehicle access to the on-site car parking area will be via the existing driveway off Macquarie Street along the eastern side of the site, which has a width of 6.0m at the narrowest point, next to the existing building and up to 7m at other sections. This driveway width will be shared with pedestrian walkway to/from Macquarie Street.

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 apartment development with respect to vehicular traffic is Macquarie Street.

In the area of the development site, Macquarie Street has a straight horizontal alignment on a fairly flat grade.

It is a one-way street with three marked traffic lanes carrying eastbound traffic and parking along both sides of the street, except for a section of no parking along the southern or opposite side of Macquarie Street to the development site, between the development site and Molle Street.

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

A view of the geometric character of Macquarie Street in the area of the development site is seen in Photograph 4.1.



Photograph 4.1: View to east along Macquarie Street with development site ahead on left

4.2 Traffic Activity

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

The vehicle volume data are from the traffic signal loop detectors in each lane in Macquarie Street at the Barrack Street intersection with the volumes

recorded on Thursday 27 September 2018.

The peak hour traffic volumes in each lane during the 8:00am – 9:00am and 4:00 – 5:00pm periods have been detailed in Figures 4.1 and 4.2.

The traffic volume along Macquarie Street in the near or northern traffic lane at the Barrack Street intersection was 800-900 vehicles/hour during the afternoon and morning peak hour period, respectively.

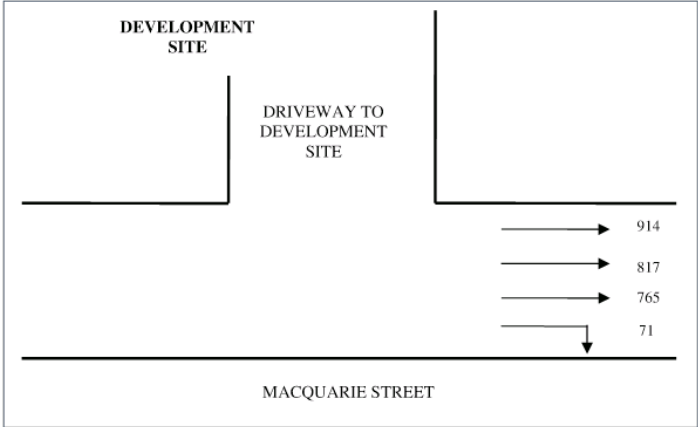


Figure 4.1: Traffic volumes along Macquarie Street past development site driveway - 8:00am to 9:00am

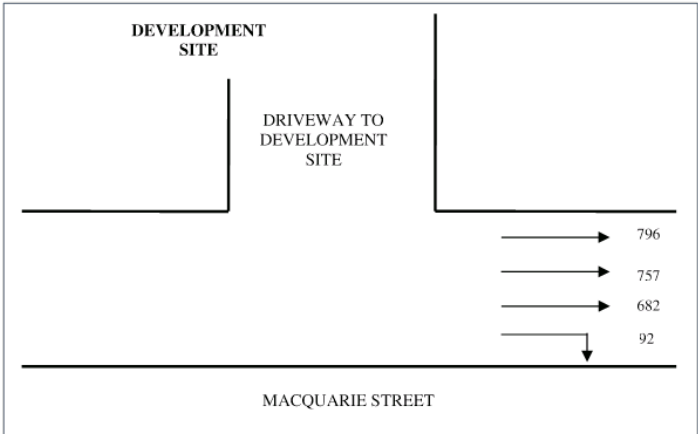


Figure 4.2: Traffic volumes along Macquarie Street past development site driveway - 4:00pm to 5:00pm

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 Macquarie Street between Molle Street and Barrack Street, including the intersections at each end, over the five and half year period since January 2014.

Advice has been received that the crash database has record of 67 reported crashes along this section of Macquarie Street.

Of these crashes, a very high 30 crashes have occurred at the Macquarie Street/Barrack Street intersection compared with only seven at the Macquarie Street/Molle Street intersection.

At the Macquarie Street/Barrack Street intersection, 20 crashes have been angle collisions between vehicles proceeding straight ahead from adjacent legs of the intersection, with around 5-6 such crashes each year.

These crashes would be due to red light running and one third of these crashes resulted in injury. A further seven of these 20 crashes were rear end or side swipe collisions.

With the seven reported collisions at the Macquarie Street/Barrack Street intersection - three collisions were between vehicles heading straight ahead from adjacent legs of the intersection, one resulted in injury and the other four collisions were rear end or side swipe collisions.

Of the 30 midblock collisions, 14 crashes were rear end collisions and 10 crashes were due to lane change/side swipe incidents. Only two of the midblock collisions resulted in injury.

Only four of the collisions were parking incidents and there have been no collisions involving vehicles entering from property driveways.

With this crash record, there is a need to undertake detailed investigations into required improvements or crash countermeasures at the Macquarie Street/Barrack Street intersection.

5. TRAFFIC GENERATION BY THE DEVELOPMENT

As outlined in Section 3 of this report, the proposed development under consideration is the construction of 45 residential apartments in a multistorey building on the site at 201 Macquarie Street. All but two of the residential apartments will have one bedroom; two apartments will have two bedrooms.

There are two existing buildings on the site that will remain. One building has two 2-bedroom residential flats, the other building will be converted to an office use with a total floor area of 68m².

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:

- 43 of the 45 proposed apartments will have one bedroom and these will have one car parking space on-site;
- the development site is very close to the Hobart CBD (just over 600m walking distance to Centrepoin);
- the development site is very close to the 'all routes' central bus station around the Elizabeth Street/Macquarie Street intersection (around 600m walking distance).

The proposed apartments are expected to generate less traffic activity than the Grosvenor Square apartments with the target market being single professionals and students.

For the purpose of this assessment, a traffic generation rate of 2.8 vehicles/apartment/day will be assumed.

Applying this trip generation rate to the 47 residential apartments/flats, the traffic generation is expected to be around 132 vehicles/day. The traffic generation by the office will be around 6 vehicles/day.

The total traffic use of the driveway to the development site will therefore be around 140 vehicles/day and around 14 vehicles/hour during peak traffic periods, based on the peak hour traffic being the typical 10% of the daily traffic volume.

6. TRAFFIC ASSESSMENT AND IMPACT

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

An assessment has been made of the adequacy of available intersection sight distance along Macquarie 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 apartment development is expected to generate around 140 vehicles/day and 14 vehicles/hour at peak traffic times of the day.

There will not be any major change or increase in the level of traffic activity and impact on the Macquarie Street traffic flow during peak hour periods as a result of the traffic activity generated by the proposed development.

The future traffic volume that will use the driveway to the development site during peak hour periods would be less than the current traffic volume. The development site currently is predominantly used as a car park with some 28 car parking spaces. Therefore, peak hour traffic movement would currently be around 20 vehicles/hour, but with the directional split in the movement in the future being somewhat opposite to the present.

Vehicles turning movements are and will in the future be to and from the left-hand traffic lane in Macquarie Street which carries up to 900 vehicles/hour in peak traffic periods.

Normally traffic volumes up to 1,500 vehicles/hour can generally be accommodated between conflicting traffic streams at intersections or junctions before traffic problems can begin to arise. The conflicting traffic volume will be around 60% of this volume.

However, traffic on Macquarie Street passes the development site in platoons and vehicles will wait for the platoons to pass before entering Macquarie Street. Once the platoon passes there are more than sufficient opportunities and time to enter Macquarie Street (during intergreen periods at the Molle Street/Macquarie Street intersection).

6.2 Assessment of Available Sight Distances

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

The view along Macquarie Street for motorists entering from the location of the proposed driveway are seen in Photograph 6.1.

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.

Free vehicle speeds in Macquarie Street past the development site would be around 50 - 55km/h. The desirable driveway sight distance is 69m for approach vehicle speeds of 50km/h from a point 2.5m back from the edge of road (which is forward of the property boundary), and 77m for approach vehicle speeds of 55km/h.

A driver exiting the site will be able to see much further than 77m along Macquarie Street with the advantage of a 6m long ‘no stopping zone’ immediately to the west of the driveway followed by only two car parking spaces and then a bus zone just beyond, the bus stop being mostly vacant.

As can be appreciated from the view in Photograph 6.1, it should normally be possible to see well beyond the Molle Street intersection, distances of over 150m along Macquarie Street, or by encroachment into the parking lane, a clear view also of the slower traffic turning from Molle Street into Macquarie Street.



Photograph 6.1: View to west along Macquarie Street from driveway to development site

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, the circulation area and parking arrangements which will service the apartments are shown on the development site architectural layout drawings in Attachment A and civil design drawings in Attachment B.

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

Access driveway and traffic circulation and on-site turning considerations

There will be one driveway servicing access to the proposed off-street vehicle parking in the apartment block as well as the one car parking spaces at the office building.

The driveway will have a width of around 7.0m from the frontage boundary into the property, narrowing to around 6.0m beside the existing residential building and then widening significantly to the access at the office building and adjacent car parking space and access to the car lifts to the proposed new building .

The driveway will be regraded to have a continuous varying grade into the property from around a 1% upgrade at the property boundary, increasing to a maximum downgrade of around 20% then reducing to around 7% for the 6m length before the entry point to the car lifts.

The proposed maximum grade of 20% will be less than the maximum grade of 25% for a private car park and continuous curve finish will have sufficient transition to meet AS 2890.1 requirements, i.e. grade changes of not more than 12% for the crest and 15% for the sag over 2m lengths.

The driveway width is sufficient to allow vehicles to simultaneously enter and exit the driveway to/from Macquarie Street as well as passing one another along the driveway, with the width being sufficient to also allow pedestrian movements along the side of the driveway.

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

For multiple dwelling developments, Clause E6.6.1 of the Hobart City Council Interim Planning Scheme requires 2 car parking spaces per apartment that has two or more bedrooms and 1 car parking space for apartments with one bedroom, plus 1 visitor parking space per 4 apartments.

In addition, the planning scheme requires 1 car parking space for each 30m² of floor area in office developments.

Based on the planning scheme, the required car parking supply would be 51 resident car parking spaces and 12 visitor parking spaces for the 43 one-bedroom apartment and 4 two-bedroom apartment/flat development, plus 2 parking spaces for the office.

There will be 50 car parking spaces on the site for the residents of the apartments and the office. There will also be 4 motorcycle parking spaces and a bicycle storage area for at least eight bicycles.

One car parking space will be allocated to each one-bedroom apartment and two spaces to each two-bedroom apartment in the new building, which meets the planning scheme requirements. Each of the two flats in the existing building will also have access to one car parking space, which is the current arrangement, but these will be in the car park within the new building. The one standard car parking space between the two existing buildings on the site will be for the office employee use.

On-street parking spaces can be readily found along Macquarie Street and Molle Street, or even Collins Street, throughout the day, within 250m walking distance of the development site, in sufficient numbers to meet any peak visitor parking demand (which would be outside normal business hours when most of the kerbside parking becomes vacant, including if the current available parking along Macquarie Street in the immediate area of the development site was lost to accommodate other traffic needs).

Car lift operation

Advice has been received through discussions with Australian suppliers of car lifts that the travel speed of the car lift between floor levels depend on the cost outlay; it can vary from 6 metres/minute to 15 metres/minute. The developer has decided to have lifts which will operate at the highest speed of 15 metres/minute.

The service rate will also depend on the location of the lift (what level it is at the time of demand by an arriving vehicle). The lift operation can be programmed to be waiting at Basement Levels in the morning peak hour and Ground Floor Level during the afternoon peak hour to best service the peak direction vehicle movements; this will occur for this development.

The lift travel time will be:

- 33 seconds between Basement Level 2 and the Ground Floor Level; and
- 23 seconds between Basement Level 3 and the Ground Floor Level.

The suppliers of the lifts have also confirmed:

- time for door to open = 5 seconds;
- time of car to either enter or exit lift = 5 seconds;
- time for door to close = 5 seconds.

The lifts will take:

- between 63 and 96 seconds to travel between Ground Floor Level and Basement Level 2 (or vice versa), depending on whether the lift is waiting at the level of car entry of the other floor level; and
- between 53 and 86 seconds to travel between Ground Floor Level and Basement Level 3 (or vice versa), depending on whether the lift is waiting at the level of car entry of the other floor level.

At the above worst-case situation, each lift would service cars at a rate of around 33 and with two lifts, the average service rate would be 67 vehicles/hour, but with return of the lift to the peak arrival level, the service rate would be around 40 vehicles/hour/lift.

The traffic generation by the development is expected to be only 14 vehicles/hour.

The two lifts will therefore efficiently service the car arrival of departure rate with the queueing/service rate calculations. Attachment C provides calculations of delays and queueing based on the more conservative service rate of 33 vehicles/hour/lift.

For the peak hour traffic movements, the calculations show the average waiting time with two lifts and the lift return operation, the average waiting time will be a few seconds, and the 99th percentile queue will be 1.30 vehicles, less than two vehicles.

With a one lift operation, the average waiting time will be 40 seconds, the average queue will be 0.37 vehicles and the 99th percentile queue will be 1.99, i.e. not exceed two vehicles.

Therefore, the lift operation will not have any impact at all on Macquarie Street traffic.

With the average waiting time under normal lift operation being a few seconds, the impact on access to parking bays in the car park, will be minimal. The few seconds of delay can be managed by drivers waiting for the lift repositioning the vehicle. There is no issue if a car is leaving the parking space as it is effectively joining the queue, if this was to ever occur with this high service rate that will be available.

Council should be aware of other such car lifts in service within the Hobart Municipality through its approval processes, and the success of such facilities.

On-site parking area design

All the resident and office 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, and B99 where required.

The specific dimensions that have been assessed include the following:

- All standard parking spaces will be 5.4m long and 2.4m wide in accordance with User Class 1A for residential parking (as detailed in Figure 2.2 of AS 2890.1 for 90-degree parking);
- The two small car parking spaces will be 5.0m long and 2.3m wide, in accordance with Section 2.4.1 (a) (iii) of AS 2890.1;
- There will be at least a 300mm clearance to the side walls and columns will be positioned correctly for door opening and manoeuvring (as detailed in Figure 2.2 and Figure 5.2 of AS 2890.1);
- The width of the parking aisle will be 6.6m, more than the minimum 5.8m (as required in Figure 2.2 of AS 2890.1 for Class 1A 90-degree parking);
- There will be at least a 1.0m extension to the ends of the parking aisle for cars to reverse out of parking spaces (as detailed in Figure 2.3 of AS 2890.1);
- The motorcycle parking spaces will be 2.5m long and 1.2m wide (as detailed in Figure 2.7 of AS 2890.1);
- The height clearance will be well over the required minimum of 2.2m in all trafficable areas except:
 - Under the exhaust ducts located above the front of car parking spaces for some of the car parking spaces on both sides and on both car parking levels. The height clearance below the exhaust ducts will be 2.175m for a distances of 0.8m out from the wall;
 - Above car parking space No.4. The height clearance above this car parking space will be more than 2.2m for the initial 1.7m from the back of the bay, then progressively reduce over the remainder of the bay to 2.14m at the front of the bay;
- The reduced height clearance by 25-60mm in these situations and locations will not cause any issue for cars to park in these bays. This will be consistent with the requirements of Clause 5.3 in AS 2890.1 and in particular as demonstrated in Figure 2.7 in AS 2890.6 which would require more demanding height clearances for disabled parking spaces (SUV vehicles are generally less than 1.8m high while small cars are around 1.5m high);
- The grade within the two basement floor level parking areas will be no more than around 1% except for part of Basement Level 3 which will

have a grade of 2.9% which is less than the acceptable maximum with the grade not affecting the required minimum height clearance;

- The office car parking space will be on a fairly flat grade (less than 5%) and the manoeuvring space will accommodate a B99 car with the car on a grade of around 7% at the reverse turn location to exit the site.

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.

On-street infrastructure

The existing driveway over the footpath and the gutter crossover to the development site is sufficient to service full access to the development site.

No changes are proposed to the gutter crossover or footpath outside of the development site.

Pedestrian Traffic

There will be pedestrian access to the apartment block directly from Macquarie Street alongside of the driveway.

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

The available sight triangles on each side will be greater than required as there is an adjacent driveway to the neighbouring property immediately to the east, and with the 7m width of the development site driveway, it ensures that to the west pedestrians are at least 3m away from the exiting vehicle, as seen in Photographs 6.2 and 6.3.

As mentioned earlier, the driveway width is sufficient to allow two way vehicles passing along the driveway as well as allow pedestrian movements along the side of the driveway.

While a 1:14 grade is required for a pathway to accommodate disabled people, this development is not one that will attract such persons at random. Therefore, the 20% grade of the driveway under the circumstances is not considered as excessive for general pedestrian access.

If a resident is to receive a disabled person, vehicle access into the car park would be possible by the resident.

A vehicle movement of only up to 14 vehicles/hour is very low, so that the passage of this volume of vehicles passing a number of pedestrians each hour will not result in any safety issues; the driveway to the building will function as a safe shared zone area at all times.



Photograph 6.2: View to east along the Macquarie Street footpath from vehicle exiting the development site driveway



Photograph 6.3: View to west along Macquarie Street footpath from vehicle exiting the development site driveway

Waste collection/servicing

The collection of domestic waste will be undertaken by arrangements with Veolia.

There have been discussions with Veolia about the servicing of the development site. Following a site inspection by Veolia management, written advice has been provided by the company about the servicing operation that

would be undertaken at this site. This advice, with details of the operation and vehicle that would be used, is included with this report as Attachment D.

Veolia has confirmed the width, length, and grade of the access driveway into the site and to the proposed building is not a concern for reversing of a small waste collection vehicle from Macquarie Street to the lift from where waste bins will be wheeled to the vehicle.

Further discussion with the author of the advice from Veolia confirmed the waste collection would occur twice a week between 6am and 7am, but earlier in the morning if no time restrictions related to noise were applicable to the waste collection at this site.

Subsequent to the above, Veolia confirmed they can bring the bins in lift themselves and load into truck directly such that there is not a need for temporary bin storage area in the loading area, nor the use of 'bin tugs'. This will avert the need for any storage of bins in the driveway area.

The swept path of a standard (8.8m long) service vehicle reversing from Macquarie Street to the lift and then exiting the site is shown on Sheet C1.03 in Attachment B. However, it should be noted that the garbage truck to be used to service the proposed development will be smaller than this (as detailed in Attachment D) and hence have a significantly smaller swept path.

The garbage/waste room has been designed to align with/have access to car lift No.1. Therefore, the reversing truck to the car lift will follow a path more along the western side of the driveway (compared with the above plot), which will align the parked truck with that lift, allowing the bins to be wheeled straight between the lift and the back of the truck.

This will also ensure any required use of a car lift during this time will not block such access to and from car lift 2.

As indicated in the Veolia advice in Attachment D, the waste collection will occur well outside the significant or even moderate pedestrian and car activity times of the day for the proposed development, the truck will have various warning devices when using the driveway, the driveway will be wide enough to accommodate opposite or passing vehicle movements and the waste collection contractor has vast experience in servicing private developments.

All these factors ensure that waste collection from the development site can occur while maintaining access for other driveway users and will occur without compromising the safety of those users.

6.4 Public Transport Services

Metro Tasmania currently operates regular route bus services along Macquarie Street (inbound) and Davey Street (outbound).

The central city bus station is located around the Elizabeth Street/Macquarie Street intersection which is around 800m walking distance from the development site.

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 45 apartments at 201 Macquarie Street in Hobart and conversion of an existing building from two flats to an office use.

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

In the area of the development site, Macquarie Street is a one-way street with three marked traffic lanes carrying eastbound traffic and 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 Macquarie Street are around 800-900 vehicles/hour in the near of northern traffic lane (2,500 vehicles/hour in all lanes).

The crash database has record of 67 reported crashes along Macquarie Street between Barrack Street and Molle Street over the last five and a half years since January 2014.

Of these crashes, a very high 30 crashes have occurred at the Macquarie Street/Barrack Street intersection compared with only seven at the Macquarie Street/Molle Street intersection.

Of the 30 midblock collisions, 14 crashes were rear end collisions and 10 crashes were due to lane change/side swipe incidents. Only two of the midblock collisions resulted in injury. Only four of the collisions were parking incidents and there have been no collisions involving vehicles entering from property driveways.

With this crash record, there is a need to undertake detailed investigations into required improvements or crash countermeasures at the Macquarie Street/Barrack Street intersection.

It has been estimated that the proposed development, with 45 apartments plus the two flats and office space, when fully developed and occupied, will generate some 140 vehicles/day and around 14 vehicles/hour during peak traffic periods, based on the peak hour traffic being the typical 10% of the daily traffic volume.

The future traffic volume that will use the driveway to the development site during peak hour periods will be less than the current traffic volume.

Vehicle turning movements are and will in the future be to and from the left-hand traffic lane in Macquarie Street which carries up to 900 vehicles/hour in peak traffic periods.

However, traffic on Macquarie Street passes the development site in platoons and vehicles will wait for the platoons to pass before entering Macquarie

Street. Once the platoon passes there are more than sufficient opportunities and time to enter Macquarie Street (during intergreen periods at the Molle Street/Macquarie Street intersection).

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

It is possible to see to the west along Macquarie Street for a distance of over 150m, subject to the level of parking along Macquarie Street. Exiting drivers could safely continue to exit the site up to the outer edge of the parking lane to obtain sufficient sight distance along Macquarie Street, including the slower traffic turning from Molle Street, before moving into the traffic stream.

The sight triangle between motorists exiting the driveway and pedestrians approaching along the Macquarie Street footpath will be greater than required.

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 Hobart City Council Interim Planning Scheme requires 2 car parking spaces per two-bedroom apartment and 1 car space per one-bedroom apartment and 1 dedicated visitor parking space per 4 dwellings, plus 1 car parking space per 30m² of office floor area.

The required car parking supply is 51 resident car parking spaces and 12 visitor parking spaces for this apartment development, plus 2 parking spaces for the office.

There will be 50 car parking spaces on the site for the residents of the apartments and the office. There will also be 4 motorcycle parking spaces and a bicycle storage area for at least eight bicycles.

One car parking space will be allocated to each one-bedroom residential apartment in the new building and to each of the two flats in the existing building, plus two parking spaces to each two-bedroom residential apartment. The office will have one standard car parking space between the two existing buildings on the site.

The required number of car parking spaces for the residents will be provided on-site (the two flats currently have one car parking space each, and this will continue). There will be no resident visitor parking on-site.

However, there is sufficient on-street parking along the surrounding streets throughout the day within 250m walking distance of the development site, and in a sufficient number to meet any peak visitor parking demand (outside normal business hours).

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 office 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 two lifts will efficiently service the car arrival of departure rate with the queueing/service rate calculations indicating the average delay to an arriving vehicle will be around a few seconds and the 99th percentile queue will mostly be no more than one vehicle.

The collection of domestic waste will be undertaken by arrangements with Veolia. The off-street waste collection from the development site can occur while maintaining access for other driveway users and will occur without compromising the safety of those users.

Public transport will be readily accessible with passing service on Macquarie Street and Davey Street as well as the central city bus station which is located around the Elizabeth Street/Macquarie Street intersection, located around 800m walking distance.

Overall, it has been concluded that the proposed apartment 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 development

ATTACHMENT B

Drawings of civil design and access management

CIVIL DRAWINGS
PROPOSED UNIT DEVELOPMENT
201 MACQUARIE STREET,
HOBART, TASMANIA 7000

SHEET	DRAWING	ISSUE	DATE
CD 01	OVERALL PLAN, INDEX AND NOTES	D	1/12/2020
C1 01	DESIGN LEVELS AND GRADING PLAN	D	1/12/2020
C1 02	VEHICLE TURNPATHS	D	1/12/2020
C1 03	VEHICLE TURNPATHS - GARBAGE TRUCK	D	1/12/2020

GENERAL NOTES

1. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS AND THE TRAFFIC ENGINEER'S REPORT. STANDARDS REFERENCED ARE TO BE THE MOST CURRENT VERSION.
2. THESE DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION UNLESS ENDORSED FOR CONSTRUCTION AND AUTHORIZED FOR ISSUES ACCORDINGLY.
3. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH PREVALENT STANDARDS, DRAWINGS AND SPECIFICATIONS, AUSTRALIAN STANDARDS, TIER 1A STANDARD CODE OF AUSTRALIA & WATER SUPPLY CODE OF AUSTRALIA AND TO THE SATISFACTION OF COUNCIL'S DEVELOPMENT ENGINEER.
4. PREVALENT STANDARDS DRAWINGS TO BE READ IN CONJUNCTION WITH COUNCIL EXHIBITION SHEETS T200-011 & T200-012.
5. ALL WORKS ARE TO BE CARRIED OUT IN A SAFE MANNER.
6. CONTRACTOR SHALL ADVISE PRIOR TO THE COMMENCEMENT OF WORKS.
7. CONTRACTOR TO OBTAIN APPROVAL, SERVICE CLEARANCES AND COORDINATE WORK WITH ALL RELEVANT AUTHORITIES PRIOR TO COMMENCEMENT.
8. A STATE OF WORKS NOTICE MUST BE OBTAINED FROM COUNCIL PRIOR TO ANY WORKS COMMENCED.
9. SURVEY DATA UNDERPASSES AND PROVIDED BY ROSSBURGH ENGINEERING.
10. ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS AND PROVIDED BY ROSSBURGH ENGINEERING.
11. FLOOR LEVELS SET BY ARCHITECT. ELEVATION DRAWINGS BASED ON THESE.

WORKPLACE HEALTH & SAFETY NOTES

- BEFORE THE CONTRACTOR COMMENCES WORK THE CONTRACTOR SHALL UNDERSTAND & SITE SPECIFIC PRESENT HAZARD ANALYSIS. USE SAFETY ANALYSIS USE RISK ANALYSIS (DOCUMENTED FORM)
- THE TYPE OF WORK
 - HAZARDS AND RISKS TO HEALTH AND SAFETY
 - THE CONTROL TO BE APPLIED IN ORDER ELIMINATE OR REDUCE THE RISK POSED BY THE IDENTIFIED HAZARDS
 - THE HAZARD RISKING THE RISK CONTROL MEASURES ARE TO BE IMPLEMENTED.
- THESE ARE TO BE SUBMITTED TO THE SUPERVISOR/CLIENT AND/OR OTHER RELEVANT WORKPLACE SAFETY OFFICERS.

- FOR THIS PROJECT POSSIBLE HAZARDS WOULD NOT BE LIMITED TO:
- ERECTION OF ANY TYPE & DEPTH
 - CONFINED SPACES
 - CONSTRUCTION IN PROXIMITY WITH HIGH WATER TABLE
 - FELLING, LOGGING OR REMOVAL OF EXISTING TREES/VEGETATION
 - UNDERGROUND STRUCTURES (TANKS, TUNNELS, ETC)
 - CONFINED SPACES
 - OVERHEAD POWER LINES
 - UNDERGROUND STORAGE TANKS, WATER AND SEWER PIPES
 - TELECOMMUNICATION CABLES, BOTH UNDERGROUND & OVERHEAD
 - ELECTRICAL POWER CABLES, BOTH UNDERGROUND & OVERHEAD
 - WORKERS AT HEIGHTS
 - WORKERS WITH LIMITED COORDINATION/IMPAIRMENT
 - TRAFFIC MANAGEMENT

EARTHWORKS & DRIVEWAY NOTES

1. ALL EARTHWORKS SHALL BE IN ACCORDANCE WITH BEST PRACTICE GUIDELINES FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENT.
2. ALL VIBRATION AND TRENCHING SHALL BE CARRIED OUT IN THE AREA OF PROPOSED WORKS.
3. VIEW OF ACCEPTED DRIVEWAY CONDITIONS SHALL BE IN ACCORDANCE WITH TIER 1A STANDARD DRAWING T200-011 AND MUST BE INSPECTED AND APPROVED BY COUNCIL.
4. EXCAVATED AND IMPORTED MATERIALS SHALL BE TO BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
5. FILL MATERIALS SHALL BE WELL GRADED AND FREE OF Boulders OR CORNERS EXCEEDING 100mm IN DIAMETER UNLESS APPROVED OTHERWISE.
6. FILL REQUIRED TO SUPPORT DRIVEWAYS INCLUDING FILL IN SUBBASEMENTS THAT SUPPORT DRIVEWAYS SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:
 - TOP SOIL AND DRIVEWAY FILL SHALL BE STRENGTHENED TO A MINIMUM OF 100kPa.
 - THE FILL SHALL BE WELL GRADED AND HAVE A MINIMUM BOUNDARY CAPACITY OF 100kPa.
 - FILL IN SUBBASEMENTS SHALL BE NOTED FROM INTO NATURAL GRADE.
 - THE FILL SHALL BE COMPACTED TO A MINIMUM OF 95% OF THE STANDARD PROCTOR DENSITY.
 - EACH LAYER SHALL BE COMPACTED TO A MINIMUM DENSITY RATIO OF 95% ETC. IT IS THE BUILDING RESPONSIBILITY TO VERIFY THAT THIS IS ACHIEVED.
7. WHERE THE ABOVE REQUIREMENTS CANNOT BE ACHIEVED THE ENGINEER SHALL BE CONSULTED AND THE FORMATION SHALL BE PROPOSED UNDER SUPERVISION OF THE ENGINEER TO COMPLY AS APPROVED BASE.
8. CONCRETE PAVEMENTS SHALL BE CURED FOR A MINIMUM OF 28 DAYS USING A CURRENT BEST PRACTICE METHOD.
9. DRIVEWAY EDGES SHALL BE CONSTRUCTED AS SOON AS POSSIBLE WITHOUT HINDERING THE JOINT, GENERALLY THIS SHALL BE WITHIN 24 HOURS.
10. BUTTERS SHALL BE SET TO A SAFE WHOLE OF REPOSE IN ACCORDANCE WITH THE BCA VOL 1 & 2 DATES BELOW.

SOIL TYPE (REFER BCA 32.4)	EMBANKMENT SLOPES H:L	
	COMPACTED FILL	OUT
STABLE ROCK (A1)	2:1	0:1
GRAVEL (A2)	1:2	1:2
CLAY (A3)	1:4	1:4
CLAY	STIFF CLAY	1:1
	SOFT CLAY	NOT SUITABLE
SOFT SOIL (A4)	NOT SUITABLE	NOT SUITABLE

NOTE: WHERE SITE CONDITIONS ARE UNSUITABLE FOR A BUTTERED BANK CONSULT THE ENGINEER FOR A BUTTERED RETENTION WALL DESIGN. ENGINEERS THAT ARE TO BE SET BY ENGINEER MUST BE CARRIED OUT IN CONJUNCTION OF SOIL WORKS TO PREVENT SOIL EROSION.

DRAINAGE AND SERVICES NOTES

1. ALL WORKS ASSOCIATED WITH PUBLIC STORMWATER INFRASTRUCTURE IS TO BE CARRIED OUT IN ACCORDANCE WITH PUBLIC STORMWATER INFRASTRUCTURE AND SPECIFICATION AND TO THE SATISFACTION OF COUNCIL.
2. ALL WORKS ASSOCIATED WITH PUBLIC SEWER AND WATER IS TO BE CARRIED OUT IN ACCORDANCE WITH THE VISA PARTS 10 & 11 JUNCTION AND SEWERAGE CODES OF AUSTRALIA AND TO THE SATISFACTION OF TABERNER.
3. ALL CONNECTIONS TO EXISTING WORKS TO BE CARRIED OUT BY THE RELEVANT AUTHORITY AT COST TO BUILDER UNLESS APPROVED OTHERWISE.
4. ALL PIPES TO BE COORDINATED WITH OTHER SERVICES. MINIMUM LAYOUT AS SHOWN IN NOTIONAL LAYOUT TO BE CONFIRMED ON SITE.
5. ALL EXISTING SERVICES TO BE LOCATED ON SITE PRIOR TO THE COMMENCEMENT OF WORKS.
6. GENERAL LAYOUT SHALL BE INSTALLED IN TRENCHES SHALL COMPLY WITH AUSTRALIAN AND THE TIER 1A STANDARD CODE.
7. INSTALL ALL SERVICES TO THE REQUIREMENTS OF AUSTRALIAN AND PART 3.1.2 OF THE BCA.
8. PAVEMENT AND HAZARDOUS AREAS SHALL BE A MINIMUM OF 110mm TO ACHIEVE APPROVED DRAINAGE POINT.
9. ALL PIPES WORK UNDER PROPOSED AREAS, INCLUDING DRIVEWAYS, IS TO BE BACKFILLED WITH COMPACTED FILL.
10. DRAINAGE PIPES TO BE IN APEX CLASS 100mm PIPES UNDER TYPICAL AREAS TO BE 150mm U/LD.
11. MINIMUM GRADES FOR DRAINAGE PIPES SHALL BE 1:100 FOR STORMWATER AND 1:500 FOR SEWER U/LD.
12. MINIMUM COVER FOR DRAINAGE PIPES SHALL BE 100mm FOR STORMWATER AND 150mm FOR SEWER U/LD.
13. OUTER PIPES TO BE 150mm COVER POLYMER AND 100mm TO BE 100mm COVER U/LD.
14. OUTER CONNECTIONS SHALL BE PROVIDED WITH VENTILATION AND BACKFLOW PREVENTION AS PER TABERNER STANDARDS DRAINAGE T200-011.
15. ALL PIPES TO BE INSPECTED BY COUNCIL PRIOR TO BACKFILL.
16. IF DRAINAGE PIPES HAVE BEEN COVERED BY A MINIMUM COVER, THESE PIPES MUST BE INSPECTED BY COUNCIL PRIOR TO BACKFILL.
17. IF DRAINAGE PIPES HAVE BEEN COVERED BY A MINIMUM COVER, THESE PIPES MUST BE INSPECTED BY COUNCIL PRIOR TO BACKFILL.

DEPTH TO HAZARD OF OUTLET	MINIMUM INTERNAL COVER DEPTH	
	DEPTH	WIDTH
0-100	100	100
100-150	150	150
150-200	200	200
200-250	250	250
250-300	300	300
300-350	350	350
350-400	400	400
400-450	450	450
450-500	500	500
500-550	550	550
550-600	600	600
600-650	650	650
650-700	700	700
700-750	750	750
750-800	800	800
800-850	850	850
850-900	900	900
900-950	950	950
950-1000	1000	1000



THESE DRAWINGS MUST BE APPROVED BY
 COUNCIL & TASFATER PRIOR TO CONSTRUCTION

OVERALL PLAN
 SCALE 1:1000 (A1)



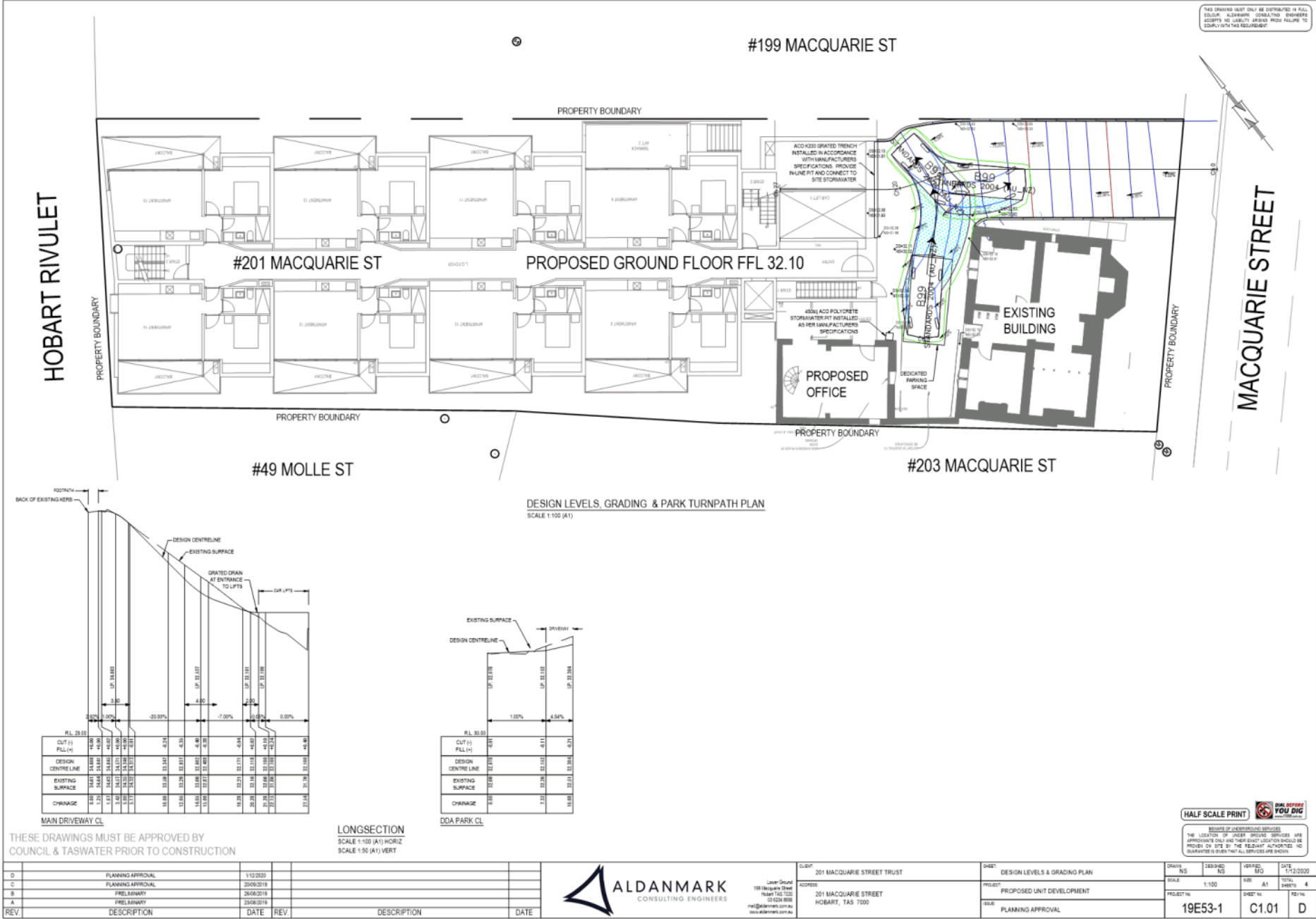
Client: 201 Macquarie Street
 Hobart TAS 7000
 03 6234 8888
 info@aldanmark.com.au
 www.aldanmark.com.au

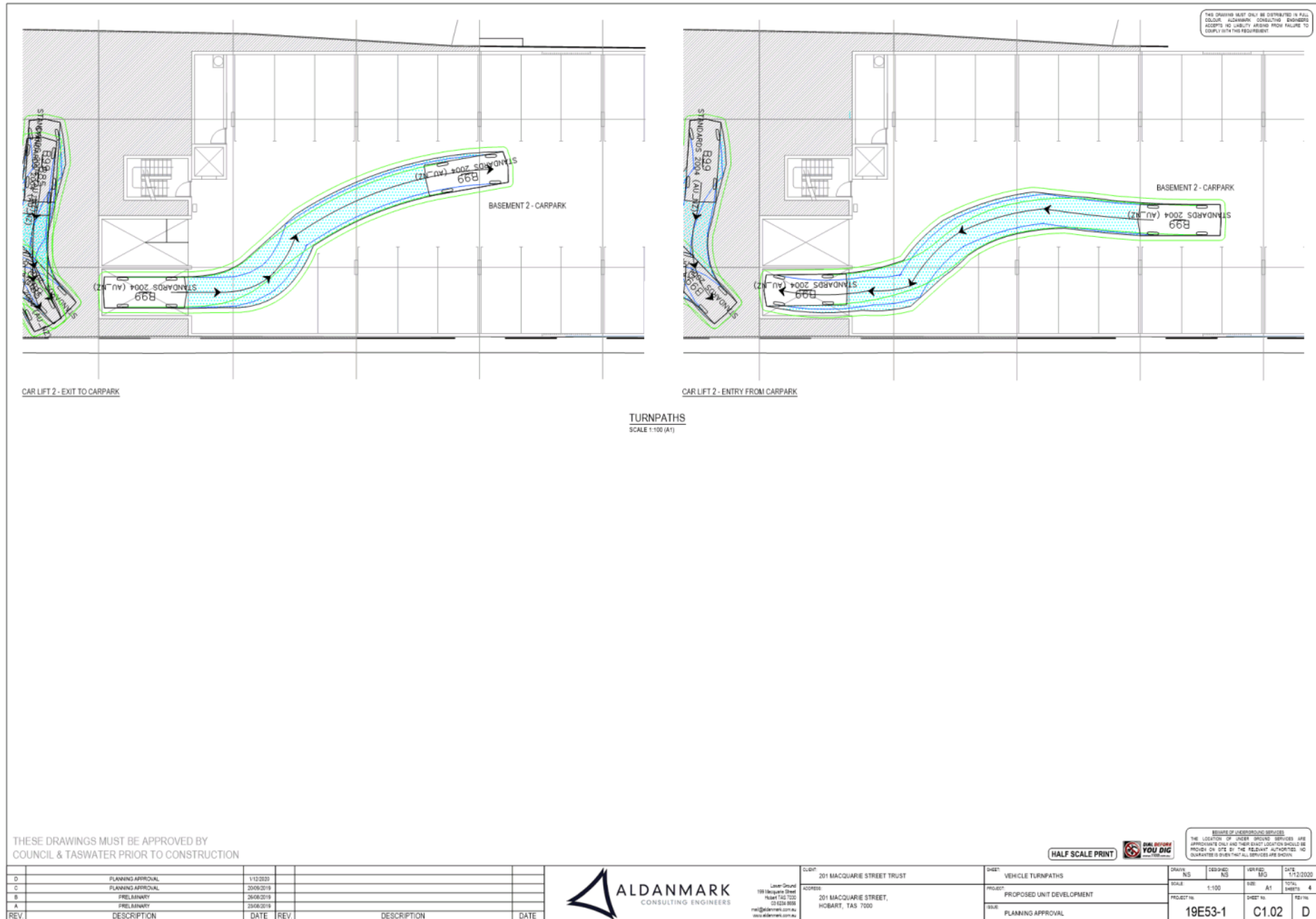
CLIP: 201 MACQUARIE STREET TRUST
 ADDRESS: 201 MACQUARIE STREET,
 HOBART, TAS 7000

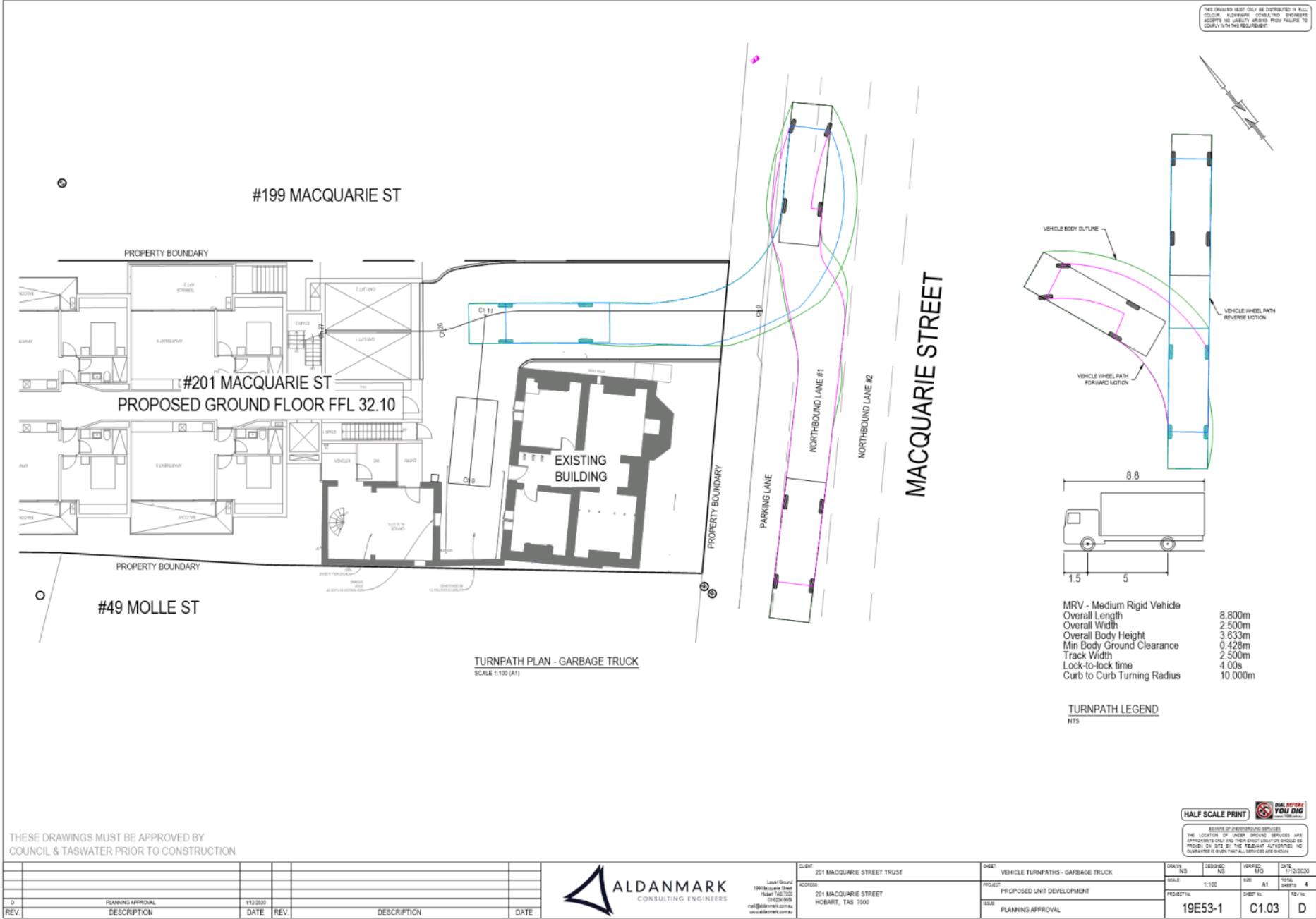
SHEET: OVERALL PLAN, INDEX AND NOTES
 PROJECT: PROPOSED UNIT DEVELOPMENT
 DATE: PLANNING APPROVAL

HALF SCALE PRINT			
REMARKS OF UNDERGROUND SERVICES			
THE LOCATION OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT LOCATION SHOULD BE PROVIDED ON SITE BY THE RELEVANT AUTHORITIES. NO GUARANTEE IS GIVEN THAT ALL SERVICES ARE SHOWN.			
DRAWN	DESIGNED	VERIFIED	CHECKED
NS	NS	MG	NS
SCALE	1:1000	SHEET	A1
PROJECT NO.	19E53-1	SHEET NO.	C0.01
DATE	1/12/2020	REVISED	0

REV	DESCRIPTION	DATE	REV	DESCRIPTION	DATE
D	PLANNING APPROVAL	1/12/2020			
C	PLANNING APPROVAL	20/09/2019			
B	PRELIMINARY	26/08/2019			
A	PRELIMINARY	23/08/2019			







ATTACHMENT C

Calculations of car lift operation and queueing

Queuing Theory Equations***Definition*** λ = Arrival Rate μ = Service Rate $\rho = \lambda / \mu$

C = Number of Service Channels

M = Random Arrival/Service rate (Poisson)

D = Deterministic Service Rate (Constant rate)

M/D/1 case (random Arrival, Deterministic service, and one service channel)Expected average queue length $E(m) = \frac{\rho^2}{2(1-\rho)}$ Expected average total time $E(v) = \frac{\rho}{\mu(1-\rho)}$ Expected average waiting time $E(w) = \frac{\rho}{2\mu(1-\rho)}$ ***M/M/1 case (Random Arrival, Random Service, and one service channel)***The probability of having zero vehicles in the systems $P_0 = 1 - \rho$ The probability of having n vehicles in the systems $P_n = \rho^n P_0$ Expected average queue length $E(m) = \frac{\rho}{(1-\rho)}$ Expected average total time $E(v) = \frac{\rho}{\lambda(1-\rho)}$ Expected average waiting time $E(w) = E(v) - 1/\mu$

M/M/C case (Random Arrival, Random Service, and C service channel)

Note : $\frac{\rho}{c}$ must be < 1.0

The probability of having zero vehicles in the systems

$$P_0 = \left[\sum_{n=0}^{c-1} \frac{\rho^n}{n!} + \frac{\rho^c}{c!(1-\rho/c)} \right]^{-1}$$

The probability of having n vehicles in the systems

$$P_n = P_0 \frac{\rho^n}{n!} \quad \text{for } n < c$$

$$P_n = P_0 \frac{\rho^n}{c^{n-c} c!} \quad \text{for } n > c$$

Expected average queue length

$$E(m) = P_0 \frac{\rho^{c+1}}{c! (1-\rho/c)^2}$$

Expected average number in the systems

$$E(n) = E(m) + \rho$$

Expected average total time $E(v) = E(n) / \lambda$

Expected average waiting time $E(w) = E(v) - 1/\mu$

derivatives of the above probabilities with respect to time, as follows:

$$P_n'(t) = -(r+s) \cdot P_n(t) + r \cdot P_{n-1}(t) + s \cdot P_{n+1}(t) \quad n > 0 \quad (6.54)$$

and
$$P_0'(t) = -r \cdot P_0(t) + s \cdot P_1(t). \quad (6.55)$$

For time-independent steady-state conditions, these derivatives are zero, and we obtain (substituting from (6.49))

$$(1 + \rho) P_n = P_{n+1} + \rho \cdot P_{n-1} \quad n > 0 \quad (6.56)$$

and
$$P_1 = \rho \cdot P_0 \quad (6.57)$$

where P_n is the steady-state probability that the system is in state n .

Letting $n = 1$ in (6.56) and substituting for P_1 from (6.57) leads to the result

$$P_2 = \rho^2 \cdot P_0 \quad (6.58)$$

and in fact it can be shown that the more general result applies:

$$P_n = \rho^n \cdot P_0 \quad (6.59)$$

Now

$$\sum_{n=0}^{\infty} P_n = 1 = P_0 (1 + \rho + \rho^2 + \rho^3 + \dots) = \frac{P_0}{1-\rho} \quad (6.60)$$

so that
$$P_0 = 1 - \rho \quad (6.61)$$

and hence
$$P_n = (1 - \rho) \rho^n \quad (6.62)$$

The mean of this distribution, or the expected number in the system, is determined as

$$E(n) = \sum_{n=0}^{\infty} n \cdot P_n = (1-\rho) \sum_{n=1}^{\infty} n \rho^n = (1-\rho) \cdot \frac{\rho}{(1-\rho)^2}$$

i.e.
$$E(n) = \frac{\rho}{1-\rho} = \frac{r}{s-r} \quad (6.63)$$

The probability of there being more than N items in the queueing system is

$$\Pr(n > N) = \sum_{n=N+1}^{\infty} P_n = (1-\rho) \sum_{n=N+1}^{\infty} \rho^n = \rho^{N+1} \quad (6.64)$$

The mean queue length excluding the unit being serviced is determined as

$$E(m) = \sum_{n=1}^{\infty} (n-1) P_n = \frac{\rho^2}{1-\rho} = \frac{\rho}{1-\rho} - \rho \quad (6.65)$$

Queuing & Service Rate at Lifts

Peak hour traffic movement 14 vehicles/hour
 65/35 directional split
 Worst Case for queuing is Margraive Street = PM peak
 Peak Arrival Rate = \rightarrow 9 vehicles/entering lift for PM
 Peak Departure 8 PM = ~~5~~ 5 veh/hour leaving site

Assume One Lift Operation

λ = arrival rate = 9 vehicles/hour
 μ = service rate = 1 vehicle/108 seconds \rightarrow 33.3 vehicles/hour
 $\rho = \frac{\lambda}{\mu} = \frac{9}{33.3} = 0.27$
 Probability of 0 vehicles in system (unloading lifts)
 $P_0 = 1 - \rho$
 $= 1 - 0.27$
 $= 0.73$ (73%)
 Probability of 1 veh in system $P_1 = \rho^1 P_0$
 $P_1 = 0.27^1 \times 0.73$
 $= 0.197$ 20%
 \rightarrow 2 veh in system $P_2 = 0.27^2 \times 0.73$
 $= 0.05$ 5%

Expected Average Queue Length

$$E_{q,1} = \frac{\rho}{1 - \rho}$$

$$= \frac{0.27}{1 - 0.27}$$

$$= 0.37$$

Expected Average Total Time in system

$$E_{w,1} = \frac{\rho}{\lambda(1 - \rho)}$$

$$= \frac{0.27}{9(1 - 0.27)} \times 3600$$

$$= 148 \text{ seconds}$$

Expected Average Waiting Time

$$E_{w,1} = E_{w,1} - \frac{1}{\mu}$$

$$= 148 - \frac{1 \times 3600}{33.3}$$

$$= 40 \text{ seconds}$$

2.

ONE LIFT (continued)

Queue Storage Space for 95% of TIME.

$$P_r(n > N) = \rho^{N+1} \leq 0.05$$

$$\Rightarrow 0.27^{N+1} \leq 0.05$$

$$(N+1) \log 0.27 \leq \log 0.05$$

$$N \leq \frac{\log 0.05}{\log 0.27} - 1$$

$$\leq 2.29 - 1$$

$$\leq 1.29$$

i.e. queue will not exceed 2 vehicles for 95% of time
with ONE LIFT
DURING AFTERNOON PEAK HOUR

If lift has auto return to service peak arrival
at Hongwan Street

$\mu = 102 / 86 \text{ seconds} \Rightarrow$ serves rate of 42 vehicle/hour

$$\rho = \frac{7}{42} = 0.214$$

Above calculation for 99% of time

$$\rho^{N+1} \leq 0.01$$

$$N \leq \frac{\log 0.01}{\log 0.214} - 1$$

$$\leq 2.987 - 1$$

$$\leq 1.987$$

i.e. Queue will not exceed 2 vehicles
for 99% of the time

(3)

2 lift operation

$$\rho = \frac{\lambda}{\mu} = \frac{9}{33.3} = 0.27 \quad (\text{as before})$$

Probability of
overhead system $P_0 = \left[\sum_{n=0}^{c-1} \frac{\rho^n}{n!} + \frac{\rho^c}{c!(1-\rho/c)} \right]^{-1}$

$$= [1 + 0.27 + 0.042]^{-1}$$

$$= [1.312]^{-1} = 0.762$$

Average Queue Length
 $E_{(n)} = P_0 \times \frac{\rho^{c+1}}{c!} \times \frac{1}{(1-\rho/c)^2}$

$$= 0.762 \times \frac{0.27^3}{2 \times 2!} \times \frac{1}{(1 - \frac{0.27}{2})^2}$$

$$= 0.762 \times 0.0049 \times 1.3365$$

$$= 0.005$$

Average No. cars in system
 $E_{(n)} = E_{(n)} + \rho$

$$= 0.005 + 0.27$$

$$= 0.275 \text{ vehicle}$$

Expected Average Total Time in system
 $E_{(n)} = E_{(n)} / \lambda$

$$= 0.275 \times \frac{3600}{9}$$

$$= 110 \text{ seconds}$$

Expected Average Waiting Time
 $E_{(w)} = E_{(n)} - \frac{1}{\mu}$

$$= 110 - \frac{3600}{33.3}$$

$$= \underline{\underline{2 \text{ seconds}}}$$

(4)

2 Lifts Cont'dQueue Storage space \approx 2 lifts (99% of time)

$$P_r(n \geq N) = \left(\frac{P_c}{c}\right)^{N+1} \leq 0.01$$

$$\left(\frac{0.27}{2}\right)^{N+1} \leq 0.01$$

$$N+1 \leq \frac{\log 0.01}{\log 0.135}$$

$$N \leq 1.3$$

ie $<$ two vehicles

ATTACHMENT D

Details of waste collection proposal and service vehicle



31 July 2020

Site assessment - 201 Macquarie Street Hobart

A site assessment has been conducted at 201 Macquarie Street to determine the most appropriate methodology in relation to provision of a waste and recycling collection service at the above address. The assessment conclusions / recommendations are as follows:

- A small to medium size Rear lift truck is considered the most appropriate truck for provision of the service/s
- Sufficient bins will be provided at the facility to minimise service visits (maximum two days per week)
- The driveway access is sufficiently wide enough for easy access for this size truck
- Visibility is very good at the entry point
- Reversing in off Macquarie Street is the safest method to provide the service, compared to other
- options (reversing out onto Macquarie Street or provision of a kerbside service)
- Trucks will have flashing safety beacon lights operating prior to entry to site
- Trucks will pull over to the kerbside and wait for a sufficient gap in traffic prior to reversing into site
- Peak traffic times will be avoided when providing the collection services
- The access to this site is considered to be much easier than many other sites serviced by Veolia in and around the CBD
- A formal Risk Assessment / Work Instruction will be provided to Veolia operators detailing the
- above requirements and restrictions, prior to commencing the service/s
- Veolia trucks have reversing cameras

Regards

A handwritten signature in black ink, appearing to read 'H. Halton', written over a light blue horizontal line.

Harold Halton
Manager, Commercial Services Southern Region

Veolia Environmental Services (Australia) Pty Ltd ABN: 20 051 316 584
A: 95 Kennedy Drive, Cambridge, TAS, 7170
W: www.veolia.com.au F: (03) 6244 0085





Wheelbase 4350mm

Department of State Growth

Salamanca Building Parliament Square
4 Salamanca Place, Hobart TAS
GPO Box 536, Hobart TAS 7001 Australia
Email permits@stategrowth.tas.gov.au Web www.stategrowth.tas.gov.au
Ref: D19/244145



Martin Stephenson
Rosevear Stephenson
22 Salamanca Square
BATTERY POINT TAS 7004

Dear Mr Stephenson

Crown Landowner Consent Granted – 201 Macquarie Street, Hobart

I refer to your recent request for Crown landowner consent relating to the development application at 201 Macquarie Street, Hobart for the apartment development.

I, Denise McIntyre, Manager Network Planning, State Roads, the Department of State Growth, having been duly delegated by the Minister under Section 52 (1F) of the *Land Use Planning and Approvals Act 1993* (the Act), and in accordance with the provisions of Section 52 (1B) (b) of the Act, hereby give my consent to the making of the application, insofar as it affects the State road network and any Crown land under the jurisdiction of this Department.

The consent given by this letter is for the **making of the application only** insofar as that it impacts Department of State Growth administered Crown land and is with reference to your application dated 23 September 2019, and the documents approved, as follows:

Approved Document Name	Author	Date Received	Notes
Application for Crown Landowner Consent	-	24/9/2019	
Drawings Set – Apartment Development 201 Macquarie Street Hobart Tas 7005, Planning Application Issue F 13.09.19	HBV Architects		
Folio Plan and Text – C/T 249597	-	24/9/2019	Search date: 24 September 2019
Traffic Impact Assessment – Proposed Residential Apartment Development – 201 Macquarie Street, Hobart, September 2019	Milan Prodanovic	24/9/2019	

- 2 -

In giving consent to lodge the subject development application, the Department notes the following applicable advice:

The Planning Scheme calls for 12 visitor parking spaces. The proposed development does not include any visitor parking.

The Traffic Impact Assessment states that there is sufficient on-street parking along Macquarie Street and other nearby streets.

It is noted that the traffic management arrangements along Macquarie Street are subject to review and that the amount of on-street parking may be substantially reduced in the future.

Any works associated with the proposal that require traffic management on Macquarie Street require approval from the Department of State Growth. There is an expectation from State Roads that lane closures on Macquarie Street for construction works should be avoided as much as possible. It is State Roads' preference that any works that do require traffic management on Macquarie Street should be undertaken between 6.30pm and 6.30am.

The Department reserves the right to make a representation to the relevant Council in relation to any aspect of the proposed development relating to its road network and/or property.

Yours sincerely



Denise McIntyre
MANAGER NETWORK PLANNING

Delegate of
Minister for Infrastructure and Transport
Michael Ferguson MP

1 November 2019

cc: General Manager, Hobart City Council

STORMWATER REPORT

201 Macquarie Street
HOBART TAS 7000

Rosevear Stephenson Architects

Aldanmark Reference: **19 E 53 - 1**



Lower Ground
199 Macquarie Street
Hobart TAS 7000

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ABN 79 097 438 714

13/03/2020







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1.

DOCUMENT CONTROL

VERSION	DATE	AUTHOR		APPROVED	
0	6/12/2019	Nathan Morey		Mark Gardner	
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INTRODUCTION AND SCOPE OF ENGAGEMENT

Aldanmark have been engaged to design a stormwater system for the proposed apartment development at 201 Macquarie Street, HOBART. In accordance with E7 of Hobart Interim Planning Scheme 2015 the sites post-development peak discharge must not exceed the pre-development peak discharge for stormwater runoff and the project must incorporate the principles of Water Sensitive Urban Design (WSUD). The following report outlines the methodology and assumptions used to ensure the proposed development complies with the permit conditions.

2. DETENTION MODEL

The following areas were determined from Veris Surveyors and Rosevear Stephenson Architects drawing sets:

Total site area: $\approx 1250 \text{ m}^2$

Pre-development areas:

Roof	$\approx 215 \text{ m}^2$
Asphalt/gravel pavements	$\approx 1005 \text{ m}^2$
Garden	$\approx 30 \text{ m}^2$

Post-development areas:

Existing roofs	$\approx 180 \text{ m}^2$
New Apartment Roof	$\approx 630 \text{ m}^2$
Concrete access	$\approx 205 \text{ m}^2$
Pervious	$\approx 235 \text{ m}^2$

Coefficients of run-off adopted for design are as follows:

Impervious areas

- Roof	$C = 1.0$
- External path	$C = 0.90$
- Gravel parking	$C = 0.80$

Pervious areas

$C = 0.30$

5-minute duration - 5% AEP Hobart (incl. global warming): $I = 100 \text{ mm/hr}$ (BOM IFD)

Calculations have been based on the Modified Rational Method for stormwater run-off:

$$Q = \frac{C \times I \times A}{3600}$$

Where:

Q = Design Volumetric Flow Rate [L/s]

C = Runoff Coefficient

I = Rainfall Intensity [mm/hr] (5 minute - 5% AEP storm)

A = Sum of all equivalent areas [m^2]

Pre-Development Permissible Site Discharge (PSD):

$$Q_{PSD} = \frac{100 \times (1.0 \times 215 + 0.9 \times 1005 + 0.3 \times 30)}{3600} = 31.3 \text{ L/s}$$

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Post-Development:

$$Q_{Post} = \frac{100 \times (1.0 \times 810 + 0.9 \times 205 + 0.3 \times 235)}{3600} = 29.5 \text{ L/s}$$

As shown above the post development flow Q_{Post} is 0.80 L/s less than the permissible site discharge Q_{PSD} and therefore on-site detention (OSD) is not required under the stormwater code of the Hobart Interim Planning Scheme.

3. STATE STORMWATER STRATEGY TARGETS

Due to the limited space available on the site incorporating swales or bioretention systems was deemed impracticable. Therefore, proprietary devices were utilized to meet the water quality targets.

Aldanmark have documented a SPEL Hydrosystem to achieve the stormwater quality targets outlined in the State Stormwater Strategy.

A model for the Urban Stormwater Improvement Conceptualisation (MUSIC) will be provided at detailed Building Approval stage showing:

- 80% reduction in the average annual load of total suspended solids (TSS)
- 45% reduction in the average annual load of total phosphorous (TP)
- 45% reduction in the average annual load of total nitrogen (TN)

4. MAINTENANCE REQUIREMENTS

The recommended maintenance program for SPEL Stormsack and Hydrosystem is shown in Table 1. The maintenance requirements can be carried out by SPEL through a maintenance agreement or by other suitably qualified professionals.

TABLE <<1>>: MAINTENANCE REQUIREMENTS FOR SPEL PRODUCTS

ACTIVITY	FREQUENCY
Visual Inspection SPEL Stormsack – Visual inspection of each sack - pollutants emptied into the onsite waste bins. SPEL Hydrosystem – Visual inspection for sediment accumulation	Year 1 & 2 – Every six months Year 3 -10 – Once per year
Silt Removal SPEL Stormsack – Vacuum truck silt removal SPEL Hydrosystem – Vacuum truck silt removal	This is dictated by silt conditions on the site, detected through the visual inspections approximately every 1-2 years.
Part replacement SPEL Stormsack – Oil boom replace when necessary SPEL Hydrosystem – replacement allowance of one filter change throughout a 10-year period	Once every 1-2 years The life of the SPEL Hydrosystem filter is between 5 – 7 years, subject to silt conditions on the site.

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5. EXISTING STORMWATER INFRASTRUCTURE REVIEW

A desk top calculation was undertaken for the existing 225Ø stormwater main at the rear of 49 Molle Street servicing several adjoining properties and discharging to the Hobart rivulet.

A total hard stand catchment of 3700 square metres has the potential to connect to the identified 225Ø outlet configured as noted below.

Catchment area from 201 Macquarie Street, 1247 square metres generating the following flow rates:

100yr ARI 87mm 29.5 L/s

20yr ARI 120mm 41.90 L/s

Balance of sites connected to the service, 2453 square metres of catchment from 203-205 and 207 Macquarie Street as well as 43, 47 and 49 Molle Street generating the following flow rates:

100yr ARI 87mm 59.75 L/s

20yr ARI 120mm 82.42 L/s

Combined discharge through the existing 225Ø stormwater outlet at the rivulet wall from sites will be:

100yr ARI 87mm 89.25 L/s

20yr ARI 120mm 124.32 L/s

The existing 225Ø stormwater mains current grade is 5.05%, therefore has capacity for up to 154 L/s in its current configuration, based on this figure the existing service will be adequate to service the combined sites.

No records of existing private stormwater services were provided or extensive site investigations undertaken to establish if any of these properties had separate private connections to the rivulet, Macquarie or Molle Streets.

13/03/2020



6. CONCLUSION

This report has demonstrated that the proposed development at 201 Macquarie Street, HOBART complies with the stormwater quantity and quality conditions of the Hobart City Council's planning scheme.

Note:

- No assessment has been undertaken of Council's stormwater infrastructure and its capacity.
- This report assumes the Council stormwater main has capacity for the pre-development peak discharge.
- It is the responsibility of Council to assess their infrastructure and determine the impact (if any) of altered inflows into their stormwater network.

Please contact me at nm@aldanmark.com.au if you require any additional information.

Yours faithfully,

A handwritten signature in blue ink, appearing to read 'Nathan Morey'.

Nathan Morey BEng (Hons)
Civil Engineer



201 Macquarie Street, Hobart Flood Level Analysis Report

Client : Shane Pritchard



Level 4, 116 Bathurst Street
Hobart 7000
TASMANIA- AUSTRALIA

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Prepared by:  Date: 27th February 2020
Mark D. Smith

Reviewed by:  Date: 27th February 2020
John D. Holmes

Authorised by:  Date: 27th February 2020
Max W. Moller

Revision History					
Rev No.	Description	Prepared by	Reviewed by	Authorised by	Date
00	Flood Level Analysis	Mark Smith	John Holmes	Max Moller	27/02/2020

1. Introduction

The proposed multi story development at 201 Macquarie Street, Hobart intends for a 47-unit complex with parking to extend to the rear of the property backing onto the Hobart Rivulet. Although the existing 5-metre-high wall prevents flooding onto 201 Macquarie Street property and the upstream adjacent property, Hobart City Council's stormwater unit has requested a 3.75 metre setback of the proposed lower carpark floor into 201 Macquarie Street to facilitate a potential future rivulet widening.

Council's stormwater unit have allowed the development to extend over the requested setback with provision for a ceiling height to be at or above the 1% plus climate change level with 300mm freeboard. The intrusion into the lower level car park as presently designed is based on a Council provided flood level of 24.3 metres Australian Height Datum (AHD) which we understand came from the Parklyn et al, 1997 Hobart Rivulet Flood Study.

This study is to review the existing HCC, 2013 Hobart Rivulet Flood Study (Entura 2013) and refine the model at the location of 201 Macquarie Street to determine the 1% +CC level to set the flood level for the purpose of building design. The following report outlines the methodology and results of said flood study.

1.1 Objectives and Scope

The objectives of the study are to:

- Provide an assessment of flood levels set out in the 2013 Entura Flood Study at the location of the development.
- Compare changes that have resulted from by the 2019 Australian Rainfall and Runoff revision.
- Provide stable flood level for the 1%+CC, within Hobart Rivulet.

1.2 Limitations

This study is limited to the objectives of the engagement by the client and the the availability and reliability of data, which includes the following limitations:

- The flood model is limited to a 1% AEP + CC worst case temporal design storm
- All parameters have been derived from best practice manuals and available relevant studies in the area.
- The study is limited to determining the flood level within Hobart Rivulet at 201 Macquarie Street, Hobart and should not be used as a flood study into the area without further assessment.

2. Model Build

2.1 Overview of Catchment

Upstream of 201 Macquarie Street has a contributing catchment of approximately 720 ha and is one of three major rivulet catchments within the Hobart municipality. The rivulet extends from Mt Wellington to the outlet at the Derwent River (Macquarie Point), draining from approximately 750 mAHD to water level (Derwent River) 0 mAHD. However, the area of interest occurs upstream of the outlet and predominately upstream of the built-up CBD area, at around 30 mAHD.

The land use within the catchment area is made up predominately of inner/general residential in the lower catchment area and environmental living making up more of the upper catchment. The rivulet is predominantly open river sections with bridges and/or culverts located at most rivulet crossings.

Figure 1 below outlines the approximate contributing catchment for the 201 Macquarie Street development.

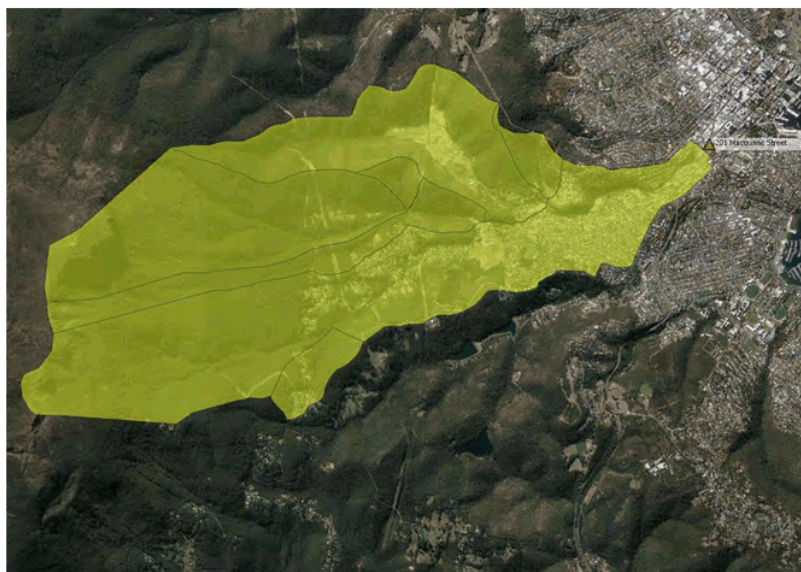


Figure 1. 201 Macquarie Street Contributing Catchment.

2.2 Hydrology

The upper catchment was modelled using Infoworks ICM hydrology (RAFTS) module, which uses the Australian designed Laurenson method to calculate runoff to the open creek channel. The catchment characteristics (% impervious, roughness etc.) were taken from best practice manuals and the Hobart Rivulet Flood Study (Entura, 2013), as these were calibrated to actual storm events at the Gore Street gauge (Entura 2013). The hydrology catchment was connected to the 1D-2D hydraulic open channel model.

2.2.1 Design Rainfall Events

The design storm modelled for the flood event of 1% AEP (100yr ARI) also aligns with the design life for the building development. The design events assessed in this analysis are limited to the 1% AEP + CC storms. Due to the size and grade of the catchment the assessed durations were restricted to between 10min – 72 hrs.

The model ran each duration for the 1% AEP + CC design event against 10 temporal patterns sourced from the ARR data hub. ARR 2019 advises the use of the worst-case duration median temporal pattern to ensure the event is not too conservative. These events were run through a hydrologic model to determine the design storm event. Figure 2 shows the box and whisker output of the model run. The model shows that the 1% + CC 4.5-hour storm, temporal pattern 5 was the worst-case median storm. Therefore, this storm event was used within the hydraulic model.

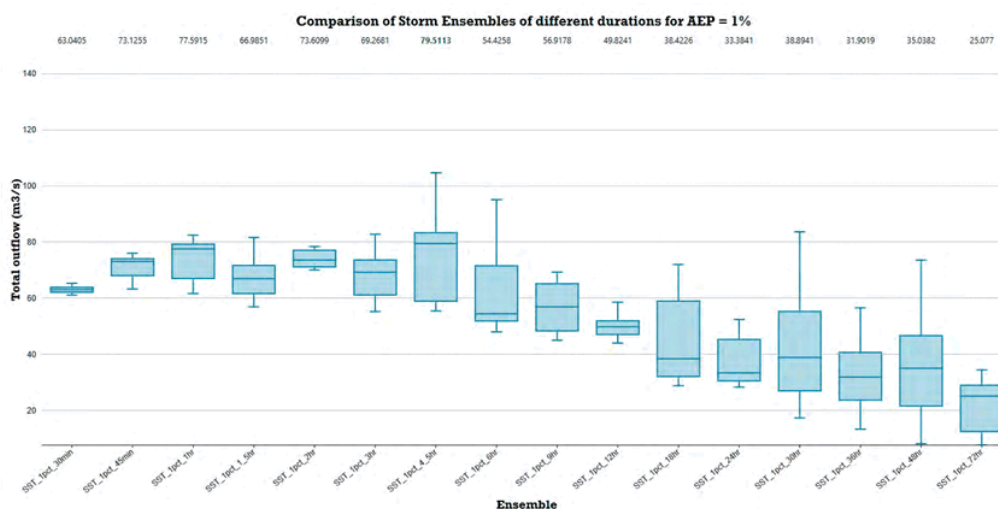


Figure 2. Worst case storm discharge (m³/s), Box and Whisker plot

2.2.2 Climate Change

Council has deemed 1% AEP requirement to represent the life of the structure and therefore requires the addition of a climate change allowance to the 1% AEP design event. As per ARR 2019 Guidelines for an increase in rainfall due to climate change at 2100 it is recommended the use of RCP 8.5. From the ARR data hub for the Hobart Rivulet Catchment gives an increase of 16.3%. However, ARR 2019 recommends that this figure be used in lieu of more accurate data being available.

Climate Futures Tasmania, 2010 (CFT) was a Tasmanian in-depth, entire state study into climate change and therefore meets this “better data” clause. Under the CFT data the increase due to climate change at 2100 is 20.0% and as CFT has been officially endorsed by HCC and previously used in the Entura 2013 study, this figure was adopted in this model.

Table 1. Climate Change Increases

Catchment	CFT increase @ 2100	ARR 8.5 increase @ 2100	Entura 2013 increase
Hobart Rivulet	20.0%	16.3%	20.0%

2.2.3 Losses

ARR 2019 recommends the use of pre-burst depths within a model to accurately represent catchment saturation prior to the main storm event. ARR 2019 suggest several ways of applying this pre-burst amount, the main method being the subtraction of pre-burst from initial loss quantity. However, as this is a gauged catchment, losses have been calibrated against actual storm events (Entura, 2013) and have shown:

- Initial Loss = 5 mm
- Continuing Loss = 2.5 mm/hr

The calibration data has been reviewed for this study and determined to be reliable for use within this model, therefore the Entura 2013 Hobart Rivulet Flood Study figures were adopted within the model, which is considered a reasonable and justifiable approach.

2.3 Hydraulics

A 1D-2D hydraulic model of the Hobart Rivulet was created to determine the flood level through the target area.

2.3.1 Extents and topography

The area of concern is situated in the lower section of the Hobart Rivulet Catchment just above Hobart CBD. The contributing catchment extends from this point up a valley to the upper reaches of Mt Wellington, approximately 740 mAHD higher than the site location and the mainstream has an average gradient of 17%.

2.3.2 Survey

The channel from Molle Street to Collins Street was surveyed by an external surveyor providing 6 cross sections through the target location, together with this, window opening heights of existing buildings directly abutting to the rivulet was surveyed to set building levels.

2.3.3 Roughness (Manning's n)

Roughness values for this model were derived from the ARR 2019 Guidelines. The Manning's values are as follows:

Table 2. Manning's Coefficients (ARR 2019)

Land Use	Manning's n
River Channel	0.035
River Channel Sealed	0.02
Roads	0.018
Urban Yards	0.045
Parks	0.05
Buildings	0.5

2.3.4 Hydraulic Structures

Molle Street Bridge and Collins Street Bridge will be modelled as bridge structures to represent the bridges within the 1D-2D model using ICM.

2.3.5 Walls

Walls within the target study area were included in the 1D model. No 2D wall structures are present.

2.3.6 Buildings

Buildings were represented as mesh polygons with a high Manning's n value within the model. Buildings with unknown floor levels were set with a minimum 300mm, above ground, floor height. Buildings with known floor level were represented in the model.

This method allows for flow through the building if the flood levels/pressure become great enough. The aim is to mimic flow through passageways such as doors and windows.

As the buildings back directly onto Hobart Rivulet the window sills heights in mAHD were surveyed by an external surveyor. Building floor levels were then set to this height with a high Mannings value (0.5) to represent flow restrictions of the building.

Table 3. Surveyed Building Window/Opening Heights

Property	Opening Level mAHD
212 Collins Street, Hobart	26.3
210 Collins Street, Hobart	22.5
49 Molle Street, Hobart	26.5

2.3.7 Calibration/Validation

This catchment has previously been calibrated by Entura in 2013 & Parkyn et al 1997 Hobart Rivulet Flood Study's against gauges located at Gore Street and Collins Street along the Hobart Rivulet. The model parameters used in that study were mimicked in this flood analysis to provide more realistic flooding parameters.

To calibrate/validate the current study discharges against the previous study, results flow (m^3/s), recorded flows at the Gore Street bridge as well as a Flood Frequency Analysis (Entura 2013) and Regional Flood Frequency Estimation (ARR Data Hub 2016) were compared. See table 4 below:

Table 4. Flood calibration at Gore Street Gauge

AEP %	Parkyn et al 1997 Discharge (m^3/s)	Entura 2013 Discharge (m^3/s)	Flussig 2020 Discharge (m^3/s)	FFA Gore Street Discharge (m^3/s)	ARR 2016 RFFE Discharge (m^3/s)
10	26	28	19	23	17.8
5	31	39	29	30	23.9
2	40	52	49	36	33.7
1	48	65	64	39	42.4
0.5	N/A	82	82	48	N/A
0.2	68	100	104	52	N/A

As can be seen from Table 4, the FFA and RFFE show close relation to flows at higher frequency events. This is due to the availability of recorded data at the gauge station although the gauge meets the age requirements for FFA of >30 years (ARR 2019), there are large areas of missing data or unreliable data meaning the gauge itself is less likely to have recorded large events, possibly skewing the results. As a result, Entura 2013 used recorded singular events rerun through their model to calibrate the model parameters. Unfortunately, this study was unable to retrieve singular storm data and therefore opted to review the Entura 2013 study for the acceptability of their findings. This study utilised the parameters of the Entura 2013 study. Table 4 shows the relationship of flows between the studies showing a high degree of compatibility to the 2013 flow.

2.4 Model Results

The 1% +CC design storm was run through the hydraulic model. The following data in Table 5 shows the results at the development site extending from Molle St bridge to the Collins St bridge. All surveyed cross sections between Molle St and Collins Street can be reviewed in appendix A.

Table 5. Tabulated results for the 1%+CC design storm

Cross Section	Elevation (mAHD)	Discharge (m ³ /s)	Depth (m)	Velocity (m/s)
XSB01	23.270	86.086	2.120	9.658
XS004	22.621	86.316	2.480	5.834
XS005	22.493	86.648	2.865	6.176
XSB07	22.18	85.627	3.687	3.873

Figure 3 below shows the entire long section from upstream Molle St Bridge to downstream Collins St that shows a stable hydraulic grade line (blue) through the rivulet section and includes the total head (pink) and left and right bank elevation (grey).

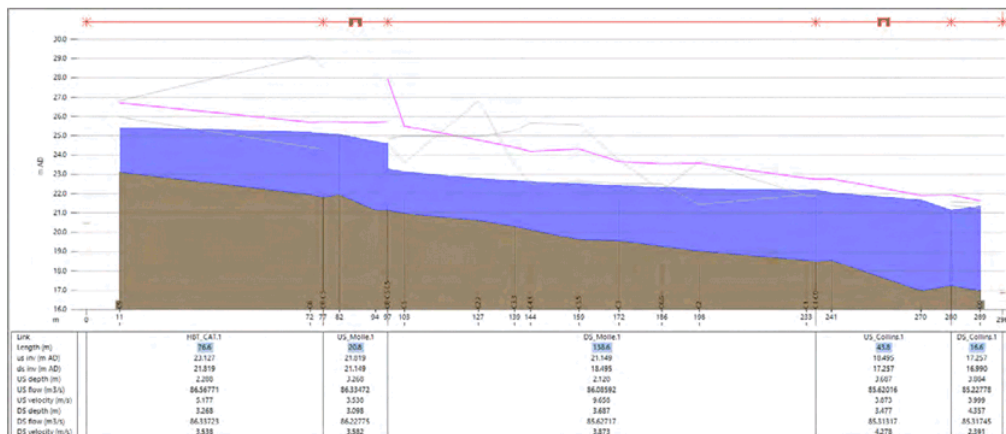


Figure 3. Long Section from upstream Molle Street to downstream Collins Street

The differences between flood levels found between Entura 2013 flood study and the current study can be attributed to some minor improvements in the hydraulic model as well as the best practice manuals. Namely these changes occur mostly due to:

- Increased number of cross sections through the target area, including 2 cross sections through 201 Macquarie Street
- Addition of building levels allowing relief further upstream of Collins Street Bridge
- Changes in temporal patterns from previous design studies brought in by ARR 2019

These changes are well within acceptable parameters considering the macro nature of the Entura flood study and the additional information provided in this study.

3. Summary

This study looks at the flood level along Hobart Rivulet between Molle Street and Collins Street for the purpose of setting a stable flood level for the 1%+CC design storm. The intent of the flood level is to set a minimum height at which a structure could be built over should the extension of an easement 3.75m into 201 Macquarie Street be purchased by Hobart City Council.

The RAFTS Hydrology shows similar flows (m³/s) when compared to the 2013 Hobart Rivulet study conducted by Entura. All inflows from the hydrology study were added to the upstream of the Molle Street Bridge thus allowing for hydraulic losses caused by the bridge to be accounted for in the model.

Infoworks ICM hydraulic model results indicates a maximum flood level for the 1%+CC AEP at 201 Macquarie Street of 22.621 mAHd with a maximum velocity of 6.176 m/s, see figure 4 Below.

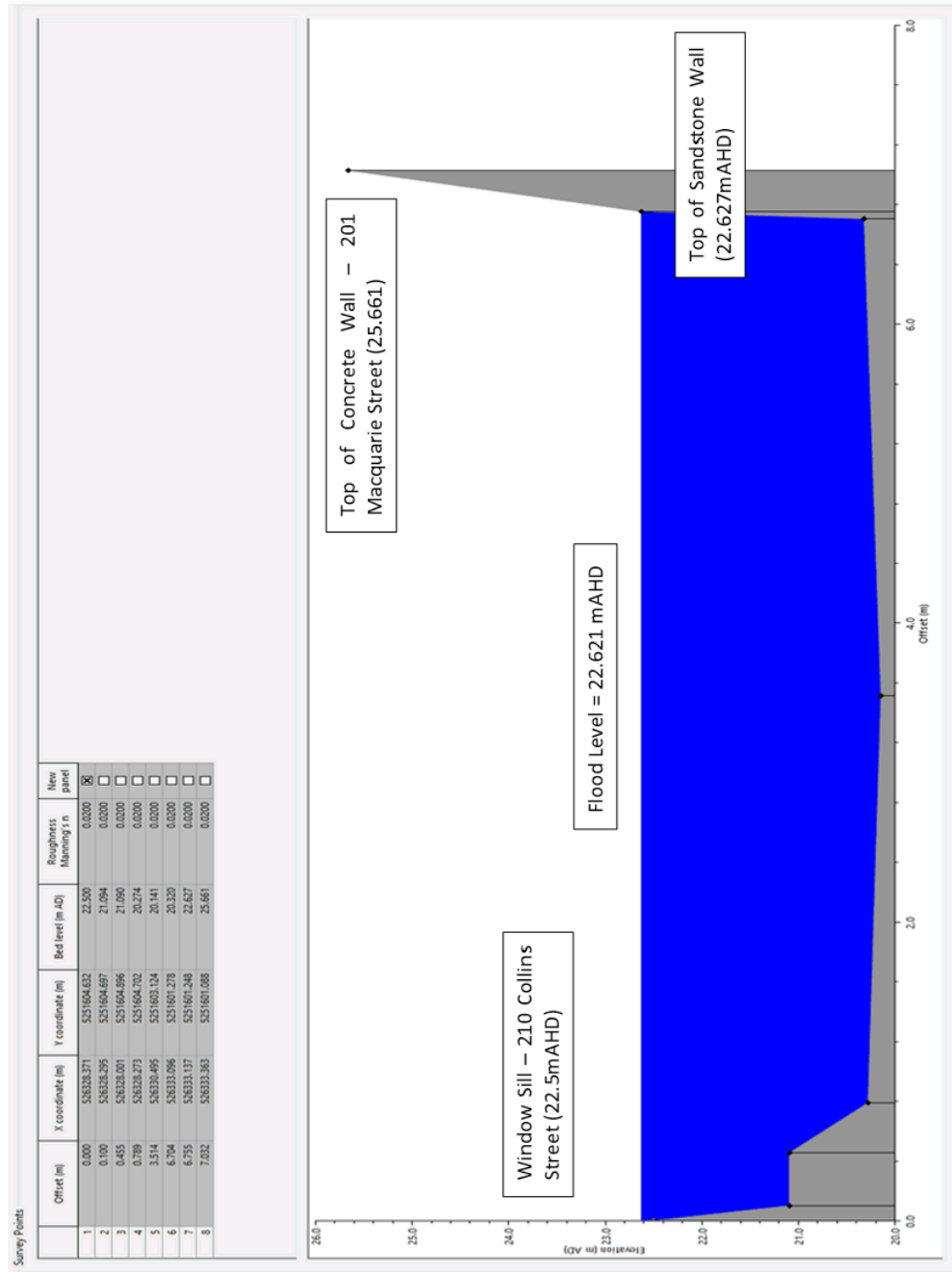


Figure 4, Cross section at 201 Macquarie Street, Hobart

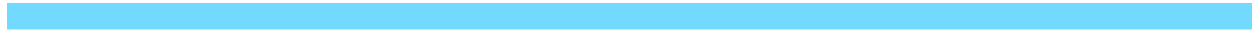
4. References

- Ball J, Babister M, Nathan R, Weeks W, Weinmann E, Retallick M, Testoni I, (Editors), 2019, Australian Rainfall and Runoff: A Guide to Flood Estimation, Commonwealth of Australia
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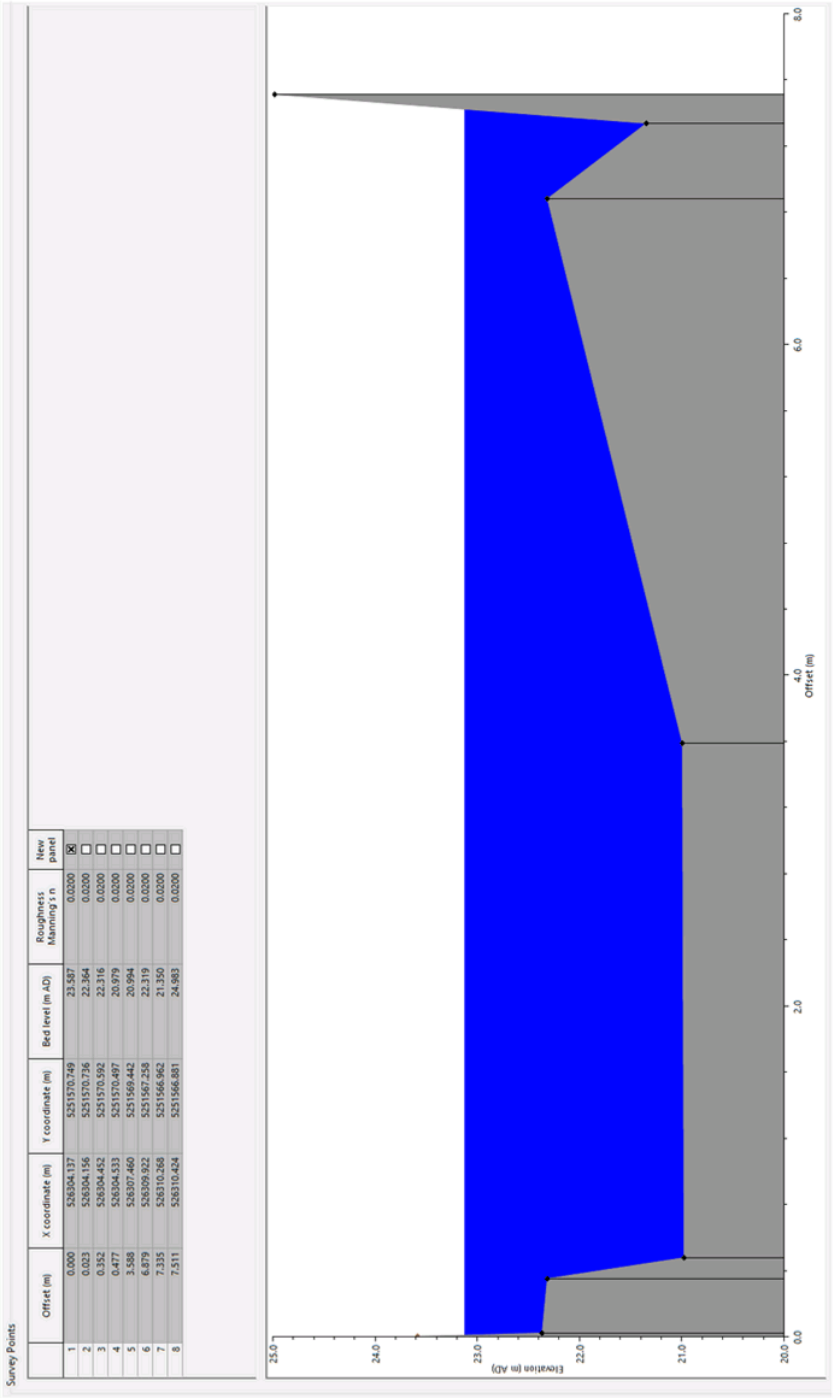
5. Appendices

Appendix A Cross Section Location

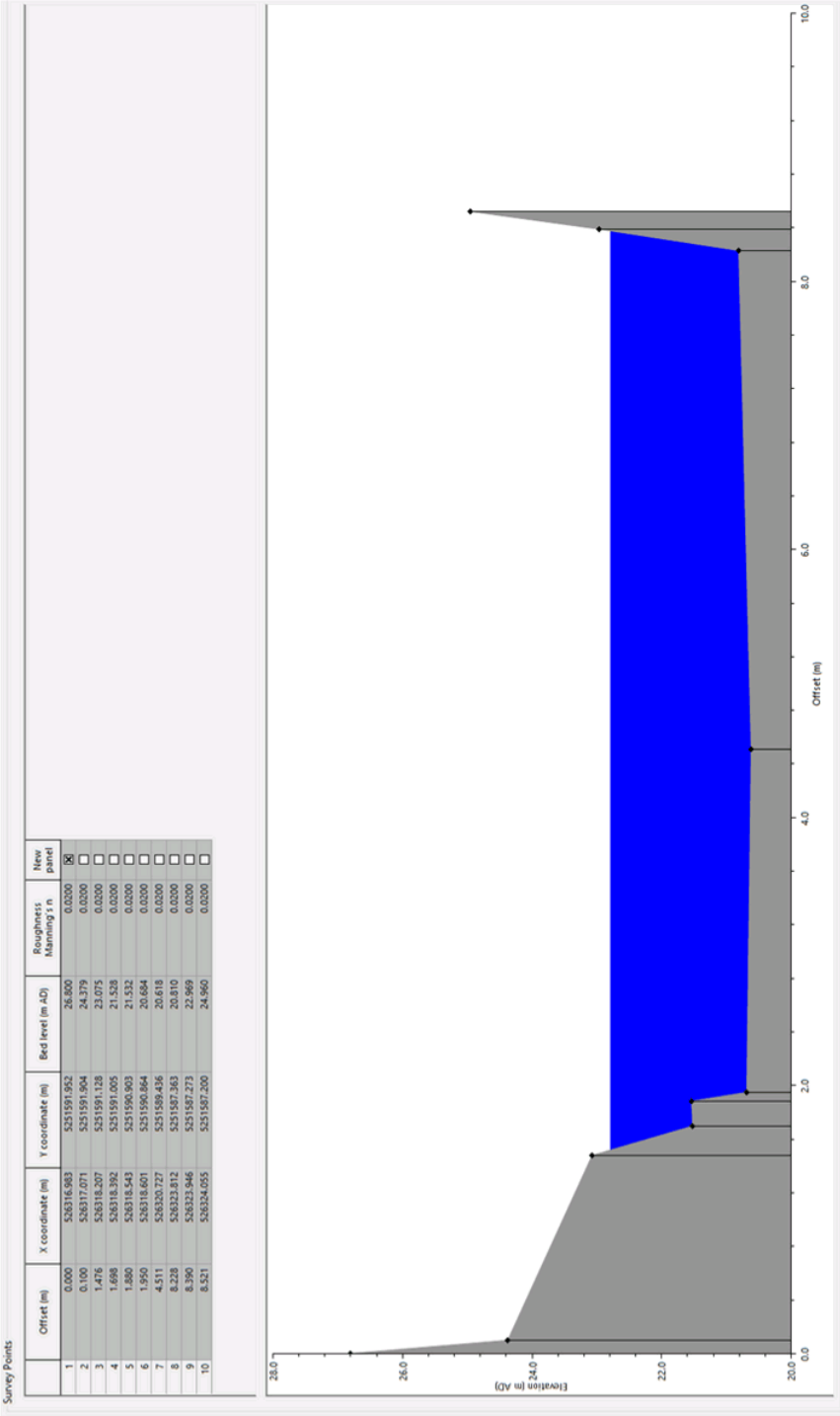




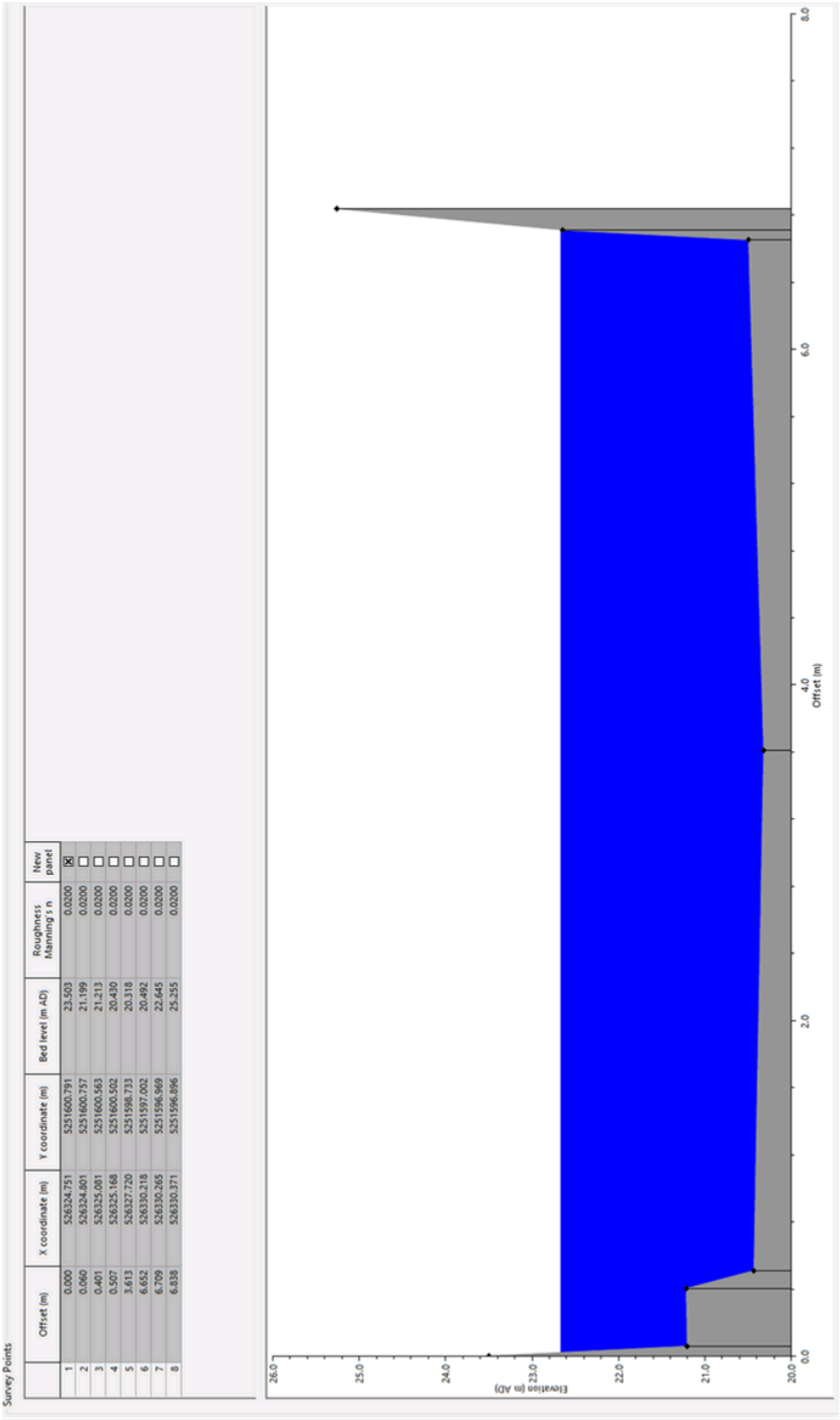
Appendix B Cross Sections

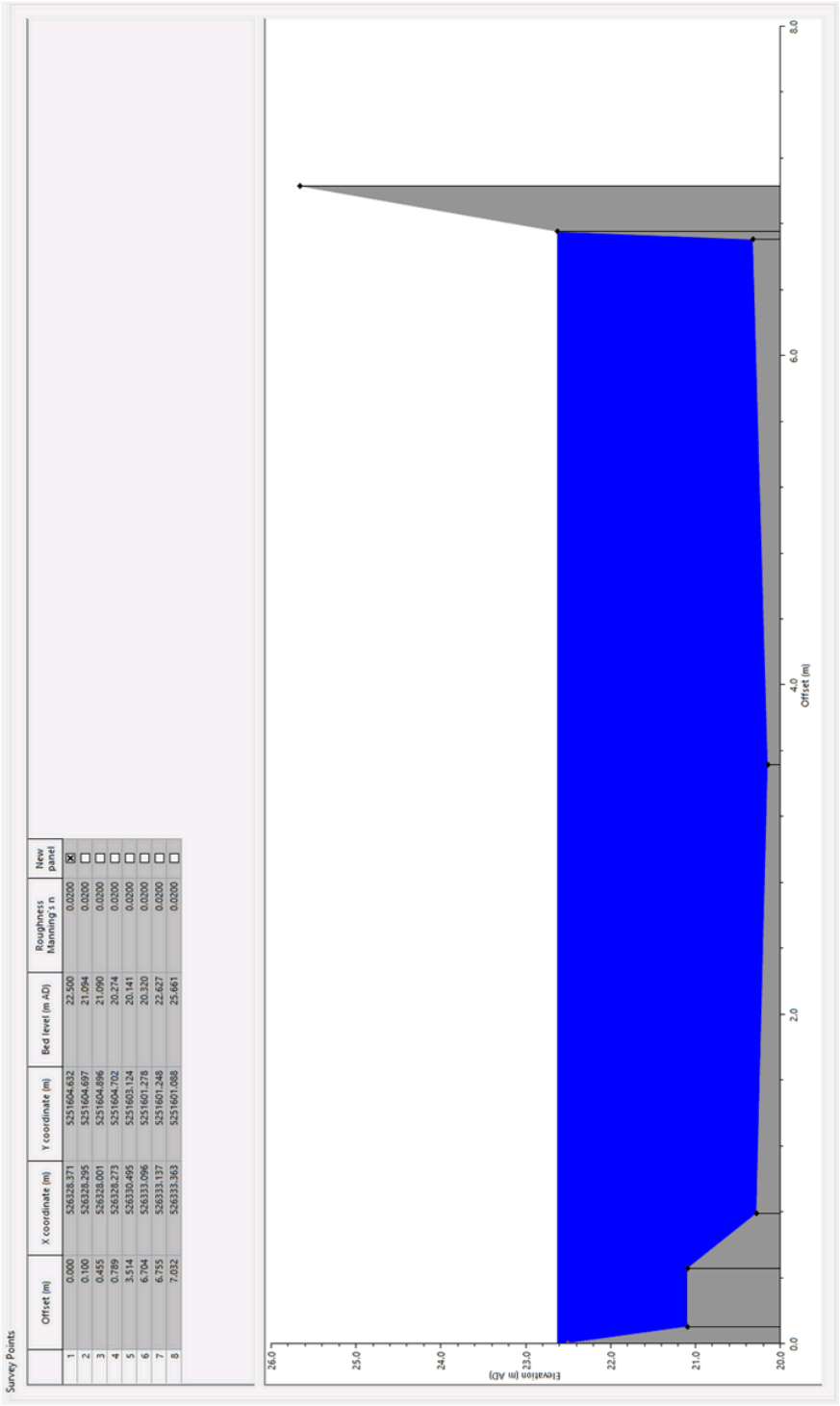


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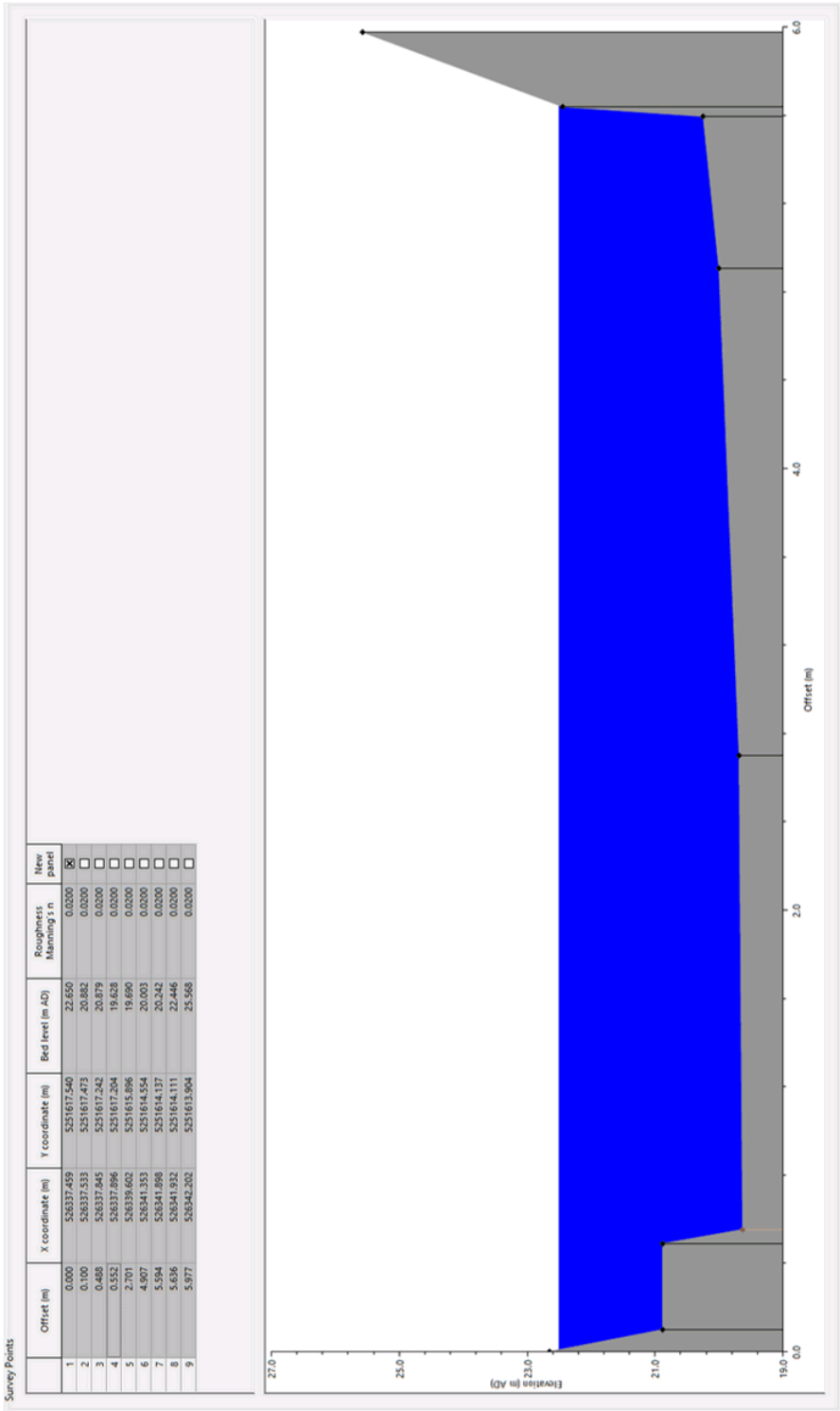


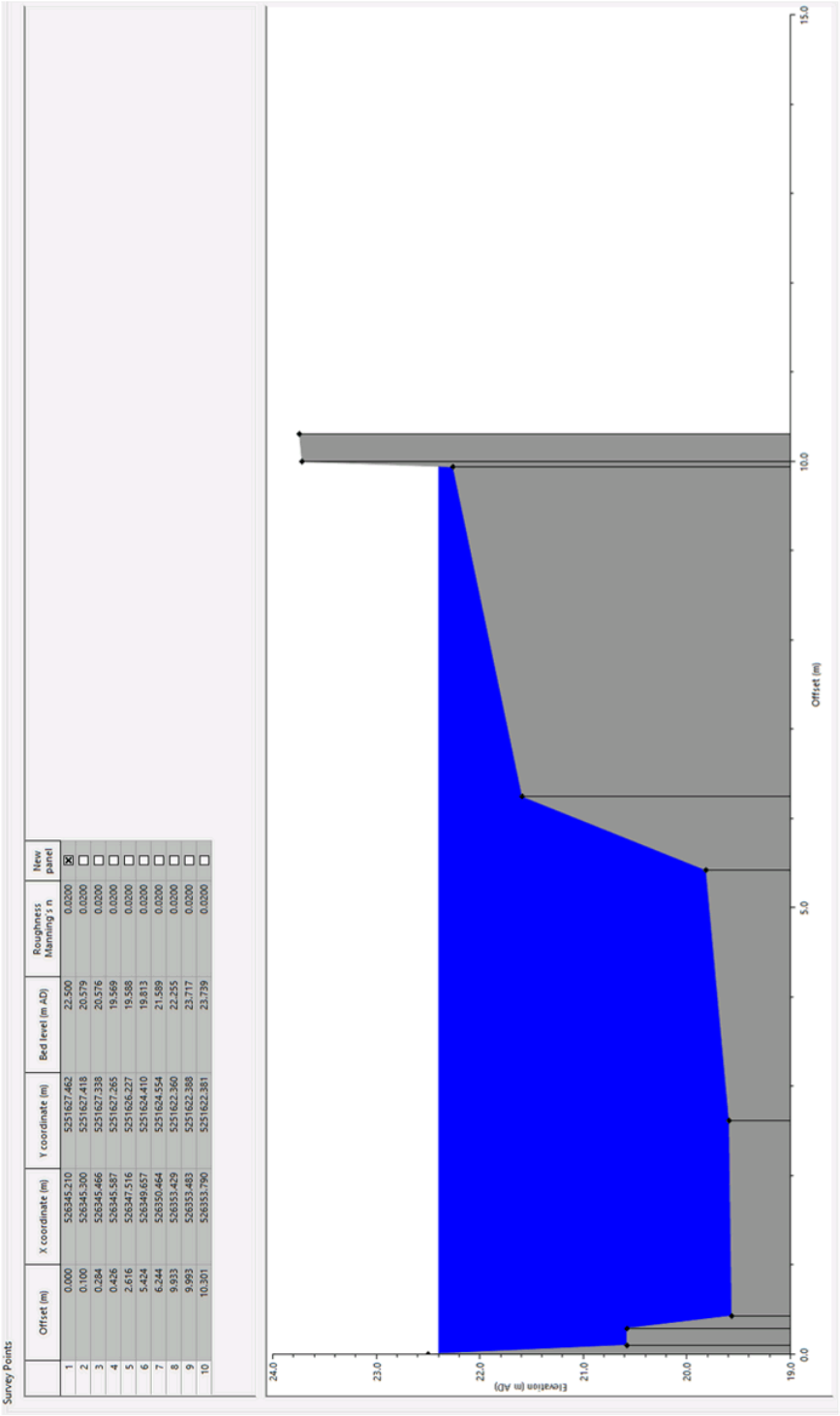
XS002

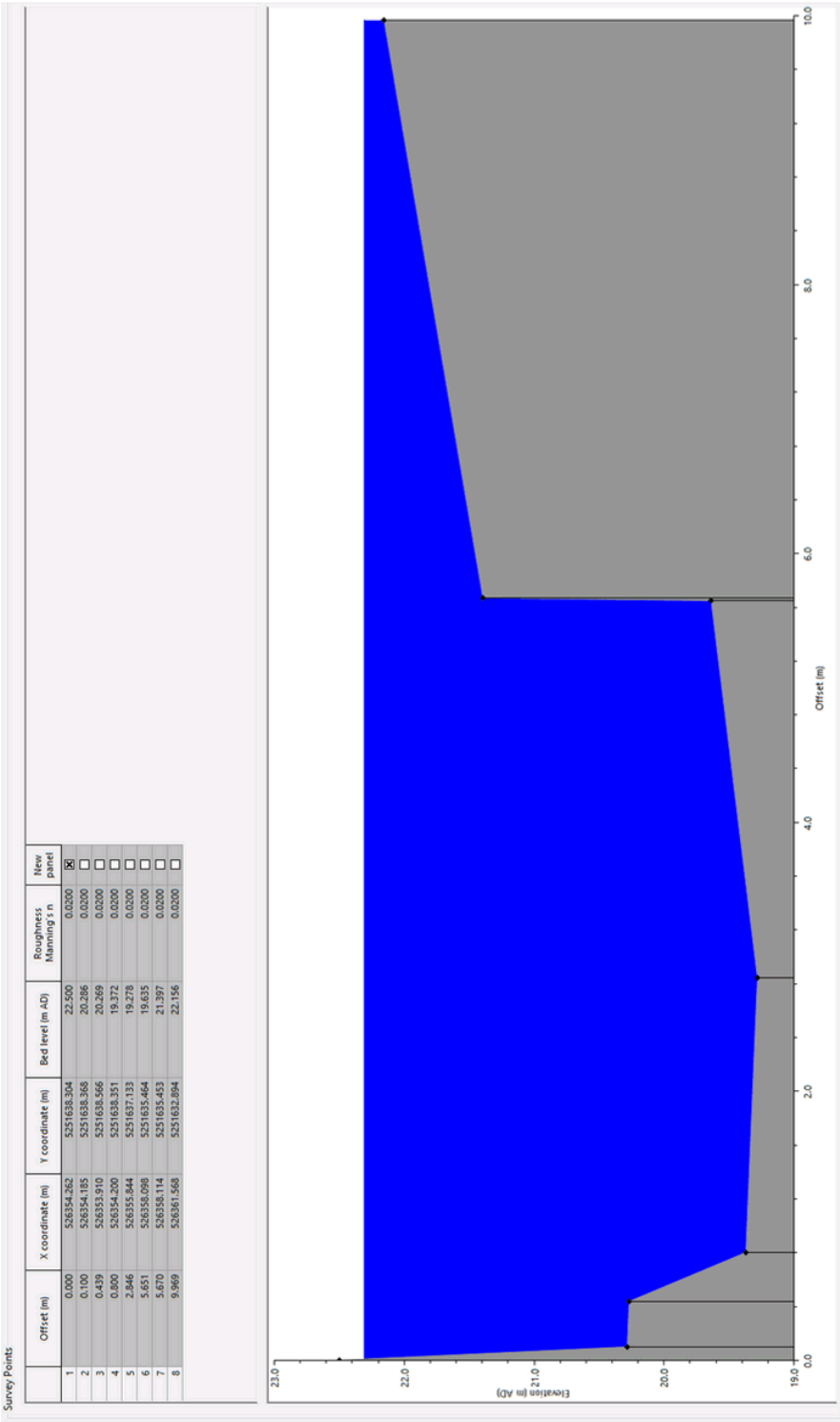


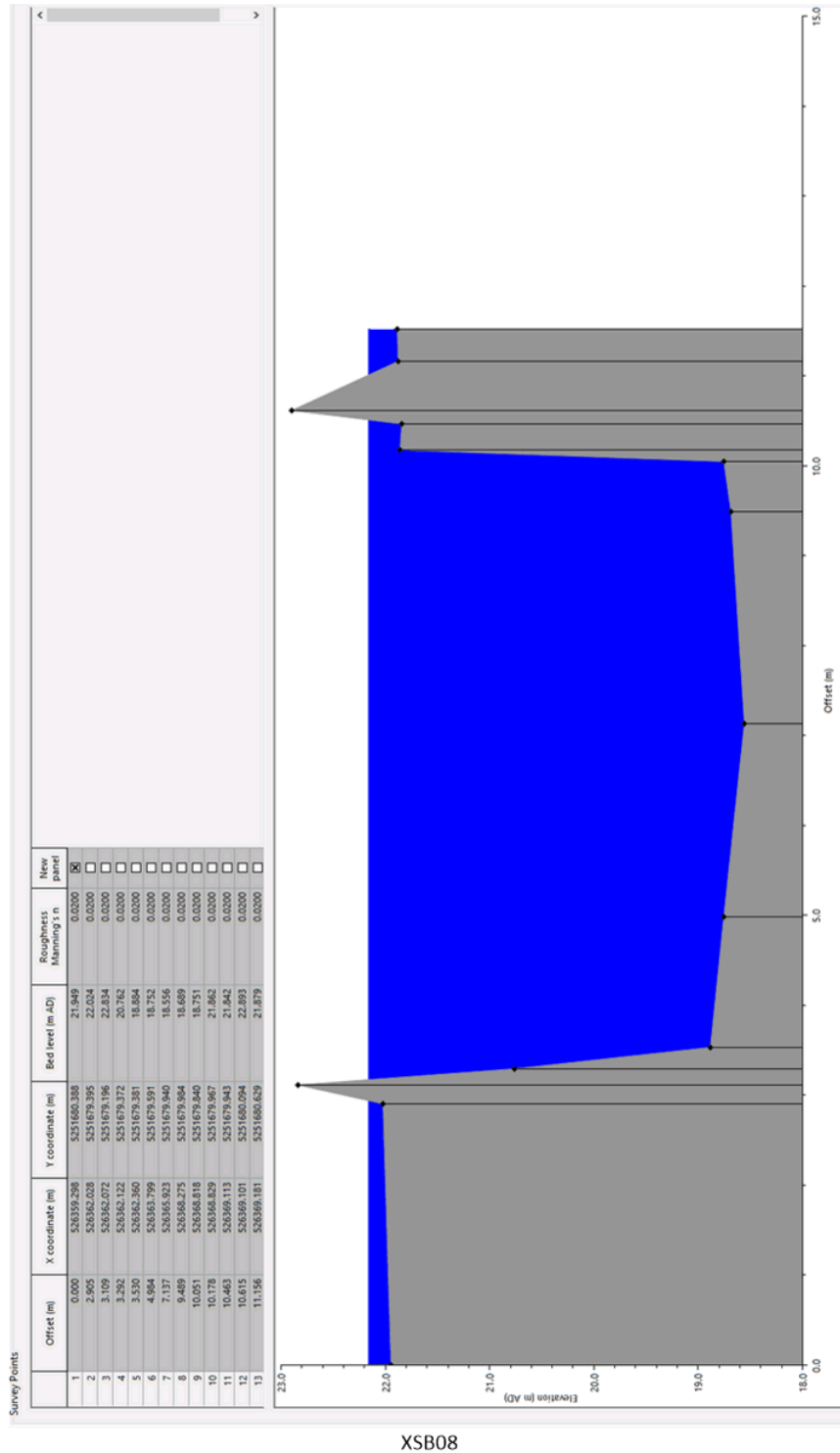


XS004









Contact:

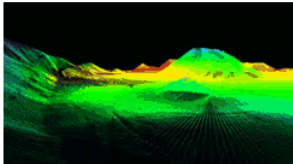
Mark Smith

Senior Hydraulic Modeler

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Enquiries to: City Planning
Phone: (03) 6238 2715
Email: coh@hobartcity.com.au

10 June 2020

Martin Stephenson (Rosevear Stephenson)
54 Sandy Bay Road
BATTERY POINT TAS 7004

<mailto:martin@rosevearstephenson.com>

Dear Sir/Madam

**201 MACQUARIE STREET, HOBART - WORKS ADJACENT TO HOBART RIVULET
NOTICE OF LAND OWNER CONSENT TO LODGE A PLANNING APPLICATION - GMC-
20-35**

Site Address:

201 Macquarie Street, Hobart

Description of Proposal:

Partial Demolition, Alterations, 49 Multiple Dwellings, Signage and Change of Use to Office

Applicant Name:

Martin Stephenson
Rosevear Stephenson

PLN (if applicable):

PLN-19-768

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 as the statutory planning authority.

Hobart Town Hall
50 Macquarie Street
Hobart TAS 7000

Hobart Council Centre
16 Elizabeth Street
Hobart TAS 7000

City of Hobart
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Hobart TAS 7001

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F 03 6234 7109
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 CityofHobartOfficial
ABN 39 055 343 428
Hobart City Council

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:

Plans by HBV Architects and Rosevear Stephenson
Plan Numbers 112.A01 - 112.A13 - Issue K
Plan Number 112.A16 - Issue K

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Conservation Management Policy,
Statement of Archaeological Potential
and Development Impact Assessment

201 Macquarie Street
HOBART TASMANIA

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Heritage Consultant

201 Macquarie Street Pty. Ltd.

February 2019
(Heritage Impact Assessment September 2019)

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Unless otherwise stated, all photographs were taken by Brad Williams, January-February 2019.

Unless otherwise stated, the north point (or approximate) of maps and plans is to the top of the page – project north is designated as the front wall of the building (although technically that wall is the north-western wall).

Cadastral information depicted in this document must not be relied upon without verification by a Surveyor. Rectified aerial imagery has not been used; therefore the actual location as depicted in aerial images may differ to that of actual survey.

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1.1 Introduction, rationale and brief

This report has been commissioned by 201 Macquarie Street. Ltd. (owners), to formulate conservation policy for the building and site situated at 201 Macquarie Street, Hobart to provide a sound conservation planning policy basis for the management of heritage values of the place. A focus of this report is to provide an understanding of the historic cultural heritage significance of the setting, curtilage and streetscape values of the building and site to guide any future development and is considered a critical part of managing the heritage values of the place and its wider setting - particularly given that the building is situated in a prominent location on Macquarie Street and bordering the Hobart Rivulet – the management of heritage values in any development on that allotment is a key consideration in this report.

The place is listed on the Heritage Schedule (Table E13) of the Hobart Interim Planning Scheme 2015 (the *scheme*). It is not within any Heritage Precinct as defined by the scheme. The place is not listed on the Tasmanian Heritage Register.

Accordingly, the owner recognises the responsibility to appropriately manage the heritage values of the place in any forthcoming development. This document aims to:

- Provide a brief overview of the historical development and context of the place.
- Develop a statement of significance for the place and its setting
- Assess the ability of the broad fabric and setting of the place to demonstrate the significance of the place (excluding an interior assessment of the building).
- Undertake a statement of historical archaeological potential
- Develop policies for the future management of the heritage values of the place, based on the physical attributes demonstrated, in-line with the statements of significance with a particular focus on the surrounding built environment and streetscape values.

Whilst the above points have been formulated as a basis for *any* future development of the place, the second part of this document provides a heritage impact assessment for a proposed development in the rear yard of the building, which retains the existing building without alteration (apart from removal of low/no-significance elements) and seeks to add an office block at the rear as an adjunct to the current use of the existing building. **It is important to note that the above assessment of the place has been formulated independently of the proposed development – and the policies of which have then been applied to assess the merits of the proposal – this is consistent with the ICOMOS Australia *Burra Charter* practice, as well as the conservation planning process espoused by J.S. Kerr, which are considered to be sound industry best-practice in understanding and consequently managing historic heritage values.**



Figure 1.1.1 – Aerial photograph of the area (the place denoted in red) Adapted from www.thelist.tas.gov.au



Figure 1.1.2 – Detailed aerial photograph of the place (denoted in red). Adapted from www.thelist.tas.gov.au

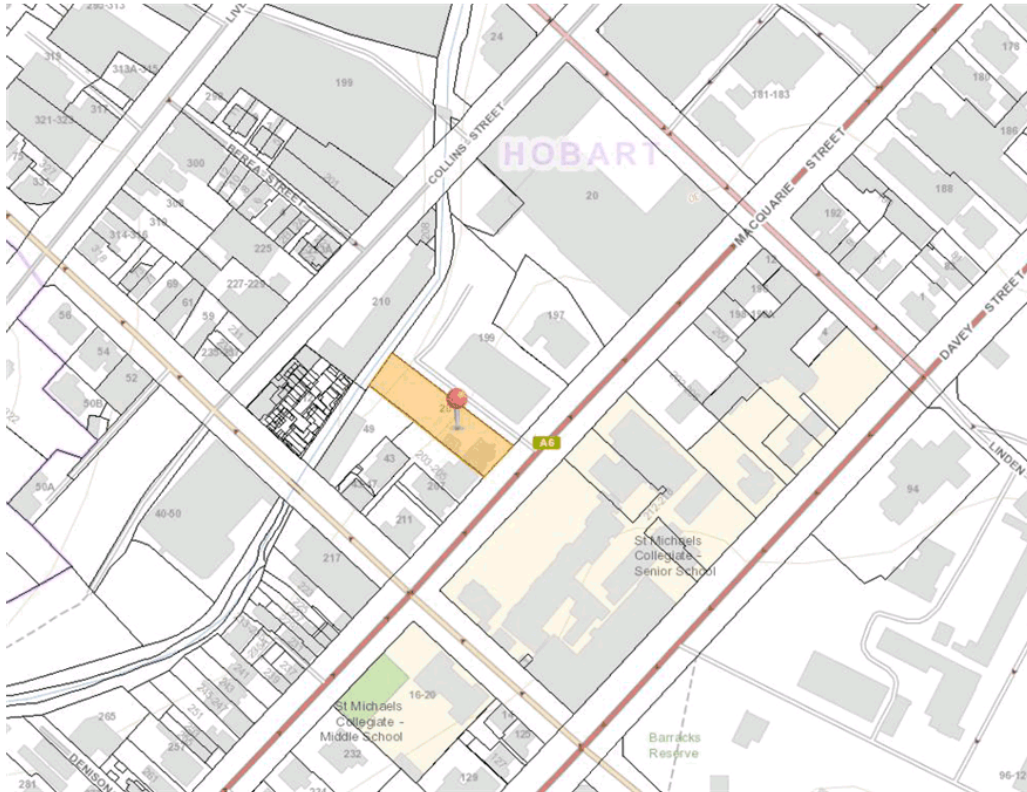


Figure 1.1.3 – Cadastral boundaries of the site (denoted in orange) and wider area. Adapted from www.thelist.tas.gov.au

1.2. Statutory heritage requirements

The following heritage listings and overarching legislative provisions are relevant to the management of the historic cultural heritage values of 201 Macquarie Street, Hobart.

Hobart Interim Planning Scheme 2015

201 Macquarie Street is listed as a *Heritage Place* on Table E13 of the *Hobart Interim Planning Scheme 2015* (the *Scheme*).

Accordingly, any demolition, development or subdivision of the place must be in accordance with the provisions of Part E13.7 of the Scheme (Development Standards for Heritage Places):

	Acceptable Solution	Performance Criteria
E.13.7.1 - Demolition	A1. No Acceptable Solution.	<p><i>Demolition must not result in the loss of significant fabric, form, items, outbuildings or landscape elements that contribute to the historic cultural heritage significance of the place unless all of the following are satisfied;</i></p> <ul style="list-style-type: none"> <i>(a) there are, environmental, social, economic or safety reasons of greater value to the community than the historic cultural heritage values of the place;</i> <i>(b) there are no prudent and feasible alternatives;</i> <i>(c) important structural or façade elements that can feasibly be retained and reused in a new structure, are to be retained;</i> <i>(d) significant fabric is documented before demolition.</i>
E.13.7.2 – Building and Works other than Demolition	A1. No Acceptable Solution.	<p><i>P1. Development must not result in any of the following:</i></p> <ul style="list-style-type: none"> <i>(a) loss of historic cultural heritage significance to the place through incompatible design, including in height, scale, bulk, form, fenestration, siting, materials, colours and finishes;</i> <i>(b) substantial diminution of the historic cultural heritage significance of the place through loss of significant streetscape elements including plants, trees, fences, walls, paths, outbuildings and other items that contribute to the significance of the place.</i>
	A2. No Acceptable Solution.	<p><i>P2. Development must be designed to be subservient and complementary to the place through characteristics including:</i></p> <ul style="list-style-type: none"> <i>(a) scale and bulk, materials, built form and fenestration;</i> <i>(b) setback from frontage;</i>

		<p>(c) <i>siting with respect to buildings, structures and listed elements;</i></p> <p>(d) <i>using less dominant materials and colours.</i></p>
	A3. No Acceptable Solution.	P3. Materials, built form and fenestration must respond to the dominant heritage characteristics of the place, but any new fabric should be readily identifiable as such.
	A4. No Acceptable Solution.	P4. Extensions to existing buildings must not detract from the historic cultural heritage significance of the place.
	A5. New front fences and gates must accord with original design, based on photographic, archaeological or other historical evidence.	P5. New front fences and gates must be sympathetic in design, (including height, form, scale and materials), to the style, period and characteristics of the building to which they belong.
	A6. Areas of landscaping between a dwelling and the street must be retained.	P6. The removal of areas of landscaping between a dwelling and the street must not result in the loss of elements of landscaping that contribute to the historic cultural significance of the place.
E.13.7.3 - Subdivision	A3. No Acceptable Solution.	<p>P1. A proposed plan of subdivision must show that historic cultural heritage significance is adequately protected by complying with all of the following:</p> <p>(a) <i>ensuring that sufficient curtilage and contributory heritage items (such as outbuildings or significant plantings) are retained as part of any title containing heritage values;</i></p> <p>(b) <i>ensuring a sympathetic pattern of subdivision;</i></p> <p>(c) <i>providing a lot size, pattern and configuration with building areas or other development controls that will prevent unsympathetic development on lots adjoining any titles containing heritage values, if required.</i></p>

The place is not within any Heritage Precinct as defined in Table E13.2 and depicted on Map E13.3 of the Scheme, therefore the provisions of Clause E13.8 (1-3) apply to the place.

The place is included in Table E.13.4 (Places of Archaeological Potential), as defined by Figure E.13.4.1 of the scheme, therefore Clause E.13.10.1 of the scheme applies:

	Acceptable Solution	Performance Criteria
E.13.10.1 – Building and Works other than Demolition	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"> 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; <p>(a) measures proposed to preserve significant archaeological evidence 'in situ'.</p>
E.13.10.2 – Subdivision	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"> (a) that no archaeological evidence exists on the land; (b) that there is no significant impact upon archaeological potential.

Further to Clause E13.5.1 of the Scheme, the Planning Authority may require the following to accompany any application for use or development of a Heritage Place:

- (a) a conservation plan;
- (b) photographs, drawings or photomontages necessary to demonstrate the impact of the proposed development on the heritage values of the place;
- (c) a statement of significance;
- (d) a heritage impact statement;
- (e) a statement of compliance;
- (f) a statement of archaeological potential;
- (g) an archaeological impact assessment;
- (h) an archaeological method statement;

Whilst the current document does not constitute a full conservation management plan, it aims to fulfill the baseline requirements of managing the heritage values of the place, and to flag where any further input may be required and to allow the planning authority to make an informed assessment against the performance criteria of the Scheme. Note that as the owner does not foreshadow any changes to the building in the foreseeable future, the scope for the current project only includes the external building envelope (as well as spaces, curtilage, views etc.) in order to gain a context of the overall site.

Historic Cultural Heritage Act 1995

The place is not listed on the Tasmanian Heritage Register; therefore is not subject to the provisions of the *Historic Cultural Heritage Act 1995* (HCHA).

Environment Protection & Biodiversity Conservation Act 1999

The place is not included on the National or Commonwealth Heritage Lists, therefore the historic cultural heritage provisions of the Environment Protection and Biodiversity Conservation Act 1999 are not applicable.

1.3. Assessment methodology

This assessment has been undertaken in accordance with the ICOMOS Australia *Burra Charter*, which is considered to be the Australian heritage industry's benchmark for assessing, understanding and managing heritage values. Figure 1.3.1 depicts this process:

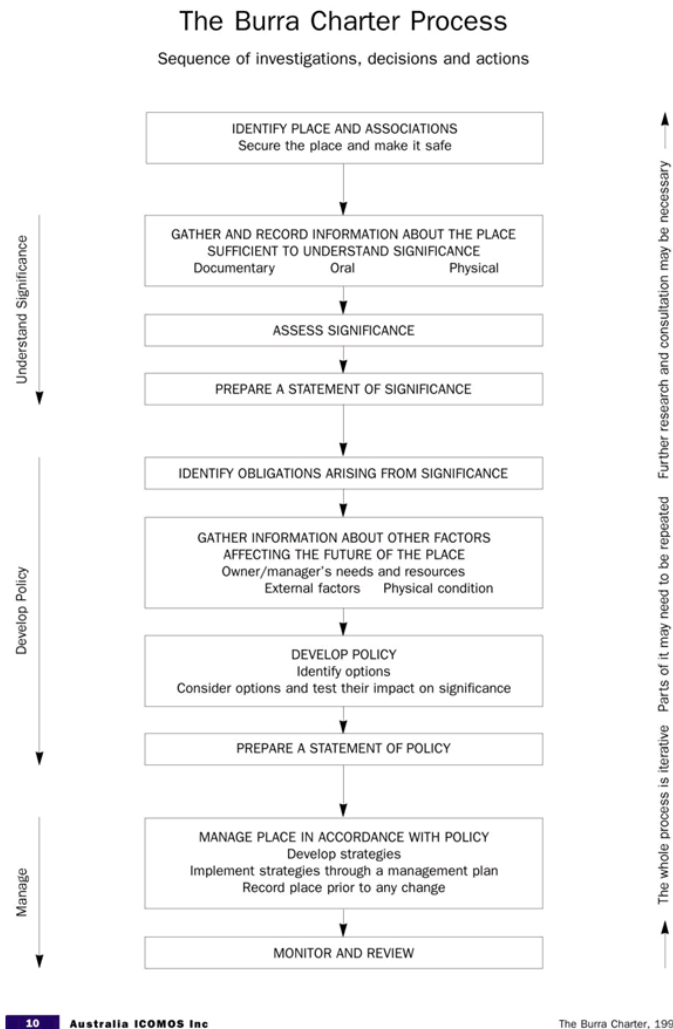


Figure 1.3.1 – The Burra Charter Process. ICOMOS Australia.

The statutory provisions and consequent responsibilities as outlined in Section 1.2 have also been considered in formulating this document.

Whilst this document does not intend to be a comprehensive conservation management plan, it takes the basic principles of conservation planning, as outlined in J.S. Kerr's *The Conservation Plan*¹, in order to develop the policies upon which the conservation of the place (and assessment of development impact) is based. This document has also been developed with regard to the standard content of conservation management plans as detailed by the New South Wales Heritage Office's *A Suggested Table of Contents for a Conservation Management Plan*², as well as the New South Wales Heritage Office guidelines for the preparation of brief conservation management strategies.³ Note that the brief for the current project did not include assessment and consideration of the internal form, spaces and fabric of the building.

It is intended that this document be used by the design team in any forthcoming development of the place and this sets the benchmark of understanding the significance of the place against which a heritage impact assessment for any proposed development can be undertaken. Figure 1.3.2 depicts this process:

¹ KERR, J. (2000): *The Conservation Plan*. National Trust of NSW, Sydney.

² http://www.heritage.nsw.gov.au/docs/cmp_contents2.pdf

³ http://www.heritage.nsw.gov.au/docs/CMS_part1investigation.pdf

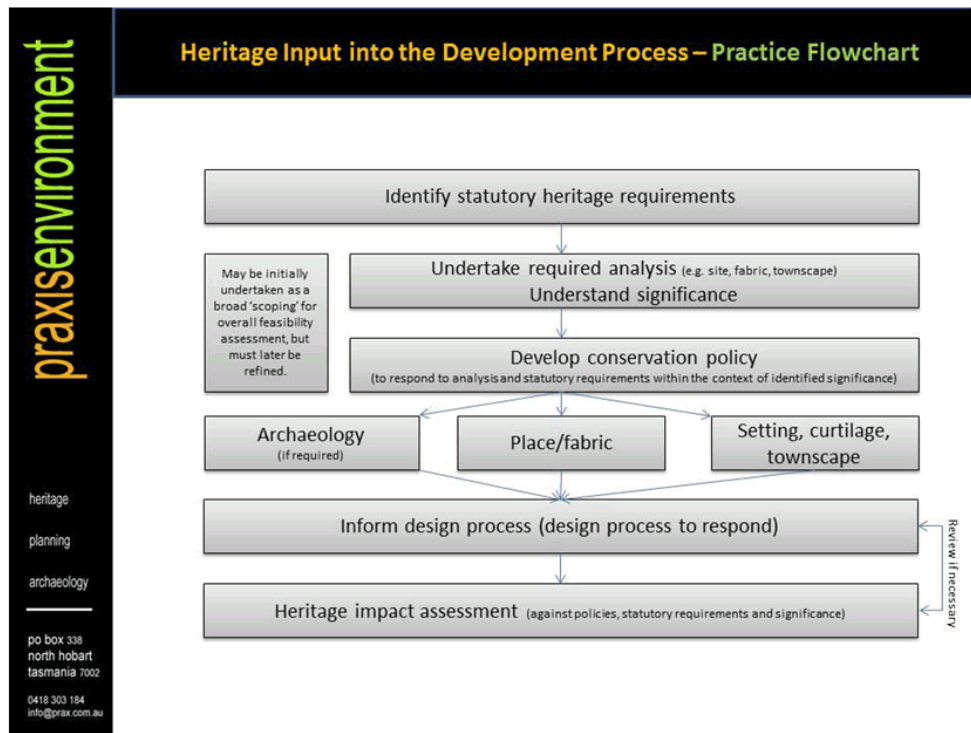


Figure 1.3.2 – Practice flowchart for the application of this conservation planning document.

1.4. Brief overview of the history and historical context of the place

1.4.1. Historical research methodology

As outlined in the methodology in Section 1.3, the key to assessing historic heritage significance is to gain an understanding of the history of the place, the context of it within its surrounds, associated thematic contexts, and other intangible values (e.g. community value, value associated with people, events etc.). Whilst the scope of the current assessment did not allow a full and comprehensive historical research project into the place, it has been commissioned to provide sufficient understanding of the physical context of the building and surrounds upon which decisions regarding the management of heritage values can be made. Where relevant, this document suggests where further research may be required to further clarify or articulate particular points (e.g. associative values).

The following sources were consulted as part of this project, in relation to the place, and wider environs:

- Land Titles Records (Lands Tasmania)
- Newspaper articles, sketches and photographs from a variety of primary (and secondary) sources, including the Tasmanian Archive and Heritage Office (TAHO) cardfile references, Trove (National Library of Australia) etc.
- Early town maps/surveys of Hobart – held by Lands Tasmania and TAHO.
- Aerial photographs – held by Lands Tasmania (Aerial Photograph Division, 134 Macquarie Street, Hobart).
- Hobart Valuation Rolls
- Hobart City Council building files (AE417 series, Tasmanian Archive and Heritage Office).

Previous heritage studies and other secondary source material

There are no known previous conservation planning documents, heritage/streetscape assessments or archaeological investigations specifically regarding the place.

1.4.2. Overview of the history of the place

The land was the home of the Mouheneener people for tens of thousands of years, prior to displacement by European settlers in 1804.

Subsequent to the settlement of Sullivan's Cove in 1804, following the disbandment of the initial European settlement of Ridson Cove, the settlement of Hobart Town began to grow in a somewhat organic matter. Following Governor Macquarie's inspection of 1811, Surveyor James Meehan was engaged to rationalise the layout of the settlement and install a grid-pattern of streets, as seen on his 1811 survey plan (DPIPWE Hobart 131). At this time, Macquarie Street was formalised, however settlement was

concentrated further eastward around the Sullivan's Cove area. In 1817, Thomas Birch lead the charge of development further up Macquarie Street with the construction of Macquarie House (151 Macquarie Street) and soonafter other substantial buildings began to appear further up Macquarie Street (e.g. Hanby Villa, 1819, 197 Macquarie Street).



Figure 1.4.1 – A c1820s survey plan of Hobart Town, showing the allotments subdivided on Macquarie Street. Note that this survey plan only includes major public buildings and does not necessarily mean that the subject site (denoted in red) had not been developed by that time. DPIPWE Hobart 13.

The subject site was known in the early nineteenth century as 31 Macquarie Street⁴, changed to 37 Macquarie Street in 1837. It is unclear from surviving maps and related documents how the land was first alienated from the Crown, although Figure 1.4.1 (above) shows that the plot had been surveyed by the mid to late 1820s. In March 1831, documents were drawn up to vest this land in trustees for Elizabeth Hames, the widow of John Hames, who had left the property to Eliza by his will⁵. Legal arrangements were put in place due to Elizabeth Hames' "intending marriage" to John Sherwin, a settler from the Lower Clyde. Under the terms of the indenture, Elizabeth owned (through two trustees) the Macquarie Street plot and a 500-acre farm in the district of Ulva. The indenture states that these arrangements were made to ensure that Elizabeth would retain both

⁴ DPIPWE The LIST Mem 1/936: Description of the land conveyed specifically mentions "In the Register of the Surveyor General Number 31 Macquarie Street" (March 1831)

⁵ TAHO AD960/1/7 Will of Elizabeth Sherwin, 1862

properties “for her sole and separate use and benefit” regardless of her impending marriage⁶. Elizabeth married John Sherwin in Hobart in March 1831⁷. A masonry building had been constructed on the land by c1832 (see Figure 3.2) which is the original portion of the building which remains on the site. The 1832 survey also shows a mill race running through the site towards the Government Mills which was established on the corner of Barrack and Collins Street in 1817.⁸



Figure 1.4.2 – Excerpt from a c1830s map of Hobart and surrounds, the subject site denoted in red. DPIPWE Map Hobart 5

The first record of the Sherwin's living in Macquarie Street occurs in March 1837, when John Sherwin advertised regarding an unrelated matter⁹. From this point on, there are numerous advertisements which mention John Sherwin's address as 37 Macquarie Street. This house, which forms the bulk of the present day 201 Macquarie Street (see below) was painted by a J Atkinson in 1838 (see Figure 1.4.3 below).

⁶ DPIPWE The LIST Mem 1/936 30th March 1831. Under common law at the time, women's property became vested in their husband upon marriage

⁷ TAHO RGD 36/1/2 Number 1579

⁸ For a history of the Government Mill, see RAYNOR, T. (1988): *The Hobart Rivulet Historical Study*. For Hobart City Council pp16-17.

⁹ *Colonial Times* 21 March 1837



Figure 1.4.3 - 'Residence of John Sherwin, Macquarie Street, Hobart Town' by J. Atkinson, 1838. This image depicts the house at 201 Macquarie Street as originally built, before the c1907 alterations to the frontage. State Library of Tasmania SD_ILS:85125.

The arrangement of house and an outbuilding at rear are clearly shown on Sprent's 1841 survey (see Figure 3.4) – this also depicts the mill race as being more meandering than the earlier depiction and not shown in its entirety. The 1842 Census shows John Sherwin living at 37 Macquarie Street in a completed brick house with 3 other people and a convict domestic servant¹⁰. Subsequent newspaper advertisements list John Sherwin's address as 37 Macquarie Street until his death in 1853¹¹. Elizabeth Sherwin died "in Macquarie Street" in July 1862¹².

¹⁰ TAHO CEN1/1/20

¹¹ TAHO RGD35/1/3 Number 2317

¹² TAHO RGD35/1/6 Number 3420

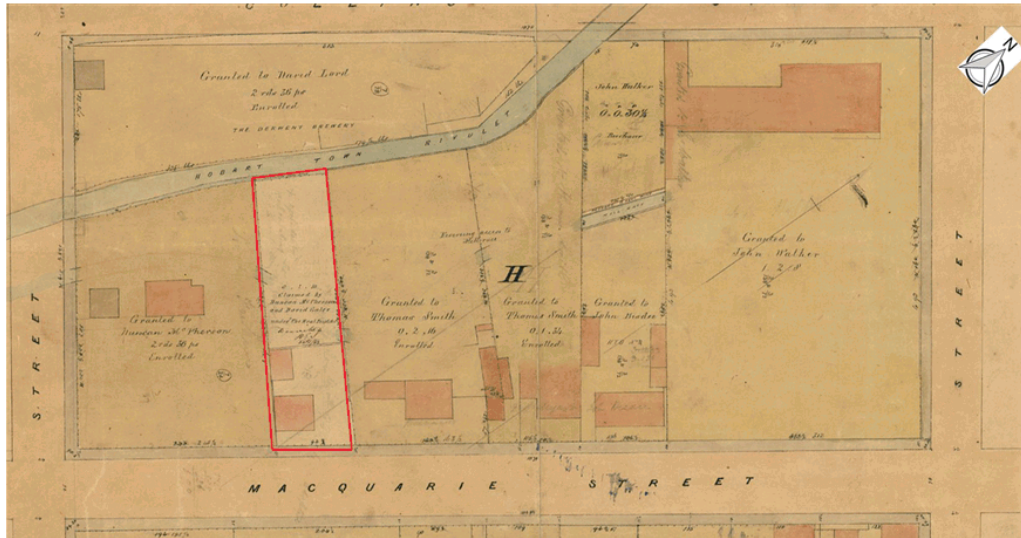


Figure 1.4.4 - Excerpt from Spren's 1841 map of Hobart and surrounds, the subject site denoted in red. (www.thelist.tas.gov.au).

Under the terms of Elizabeth Sherwin's will, the Macquarie Street house passed to her stepdaughter Eliza Roberts (wife or Robert Arthur Roberts) and Eliza's brothers Isaac and George Sherwin in equal shares¹³. At the time of Elizabeth Sherwin's death (1862), the property was valued at £1,050. Eliza made arrangements to buy out her brothers' shares by way of a mortgage on the property¹⁴. In October 1863, the property was transferred from Elizabeth Sherwin's trustees (Duncan Macpherson and David Galer) to Eliza Roberts' trustee, her brother Isaac Sherwin¹⁵. This mechanism effectively gave full ownership to Eliza Roberts.

Eliza's husband Robert Arthur Roberts died in the Macquarie Street house in June 1870¹⁶. Eliza survived her husband by 17 years, dying in the house in August 1887¹⁷. Under the terms of her will, Eliza bequeathed all her estate to her three daughters, Catherine Victoria Roberts, Eliza Mary Lewis and Alice Eliza Roberts. As the property still had the mortgage attached from Eliza's inheritance, it did not pass directly to her daughters, but was intended to be conveyed to Eliza's trustee, Bernard Shaw, an Inspector of Police in Hobart¹⁸. For the next twenty years, the property appears to have been let out to tenants.

¹³ TAHO AD960/1/7 Will of Elizabeth Sherwin

¹⁴ TAHO RGD AD960/1/17 Will of Eliza Roberts

¹⁵ DPIPWE CT2/190

¹⁶ TAHO RGD35/1/7 Number 9296

¹⁷ TAHO AD960/1/17 Will of Eliza Roberts

¹⁸ TAHO AD 960/1/17 Will of Eliza Roberts



Figure 1.4.5 – 'Birds eye view of Hobart' showing the subject site. The Town and Country Journal, 17/11/1894:26-7.

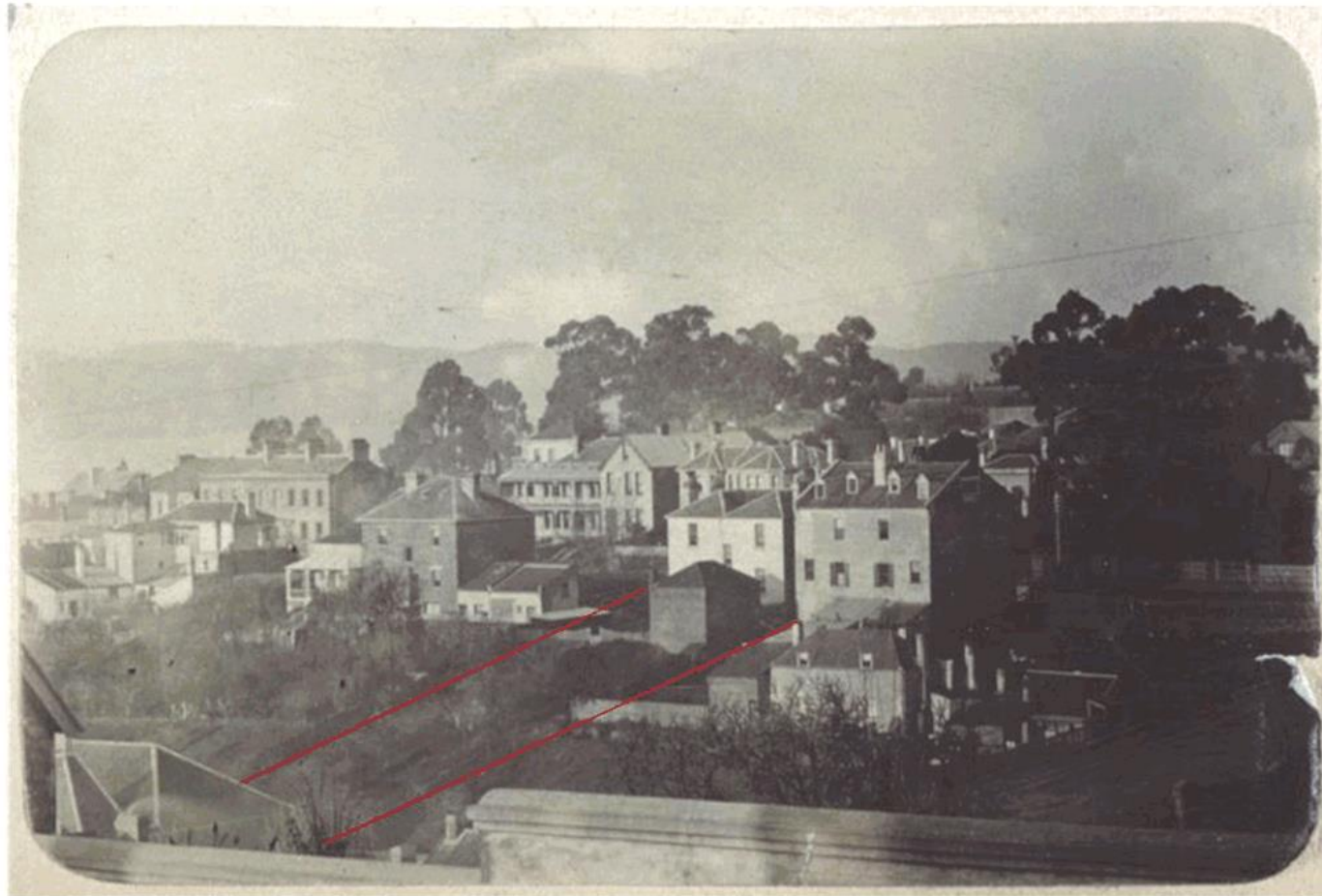


Figure 1.4.6 - C1880s Allport Album of views of Hobart showing the rear of the subject site (outlined in red) – note the very steep descent to the rivulet and what appears to be the line of the mill race. Libraries Tasmania SD_ILS:627158.

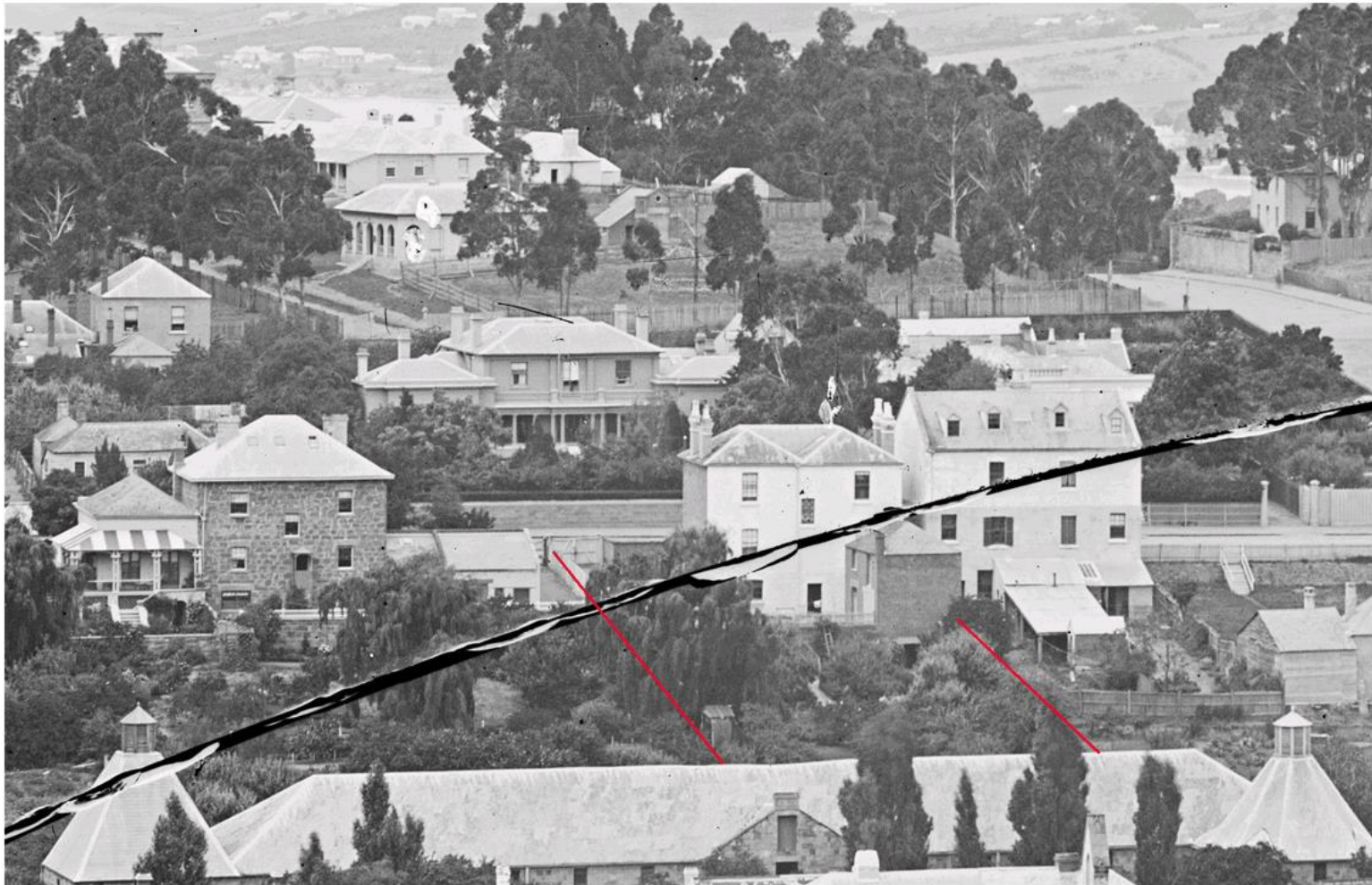


Figure 1.4.7 – Excerpt from a c1890 panorama of Hobart, showing the rear of the subject site (approximately outlined in red). Tasmanian Archive and Heritage Office NS 1013-1-494.

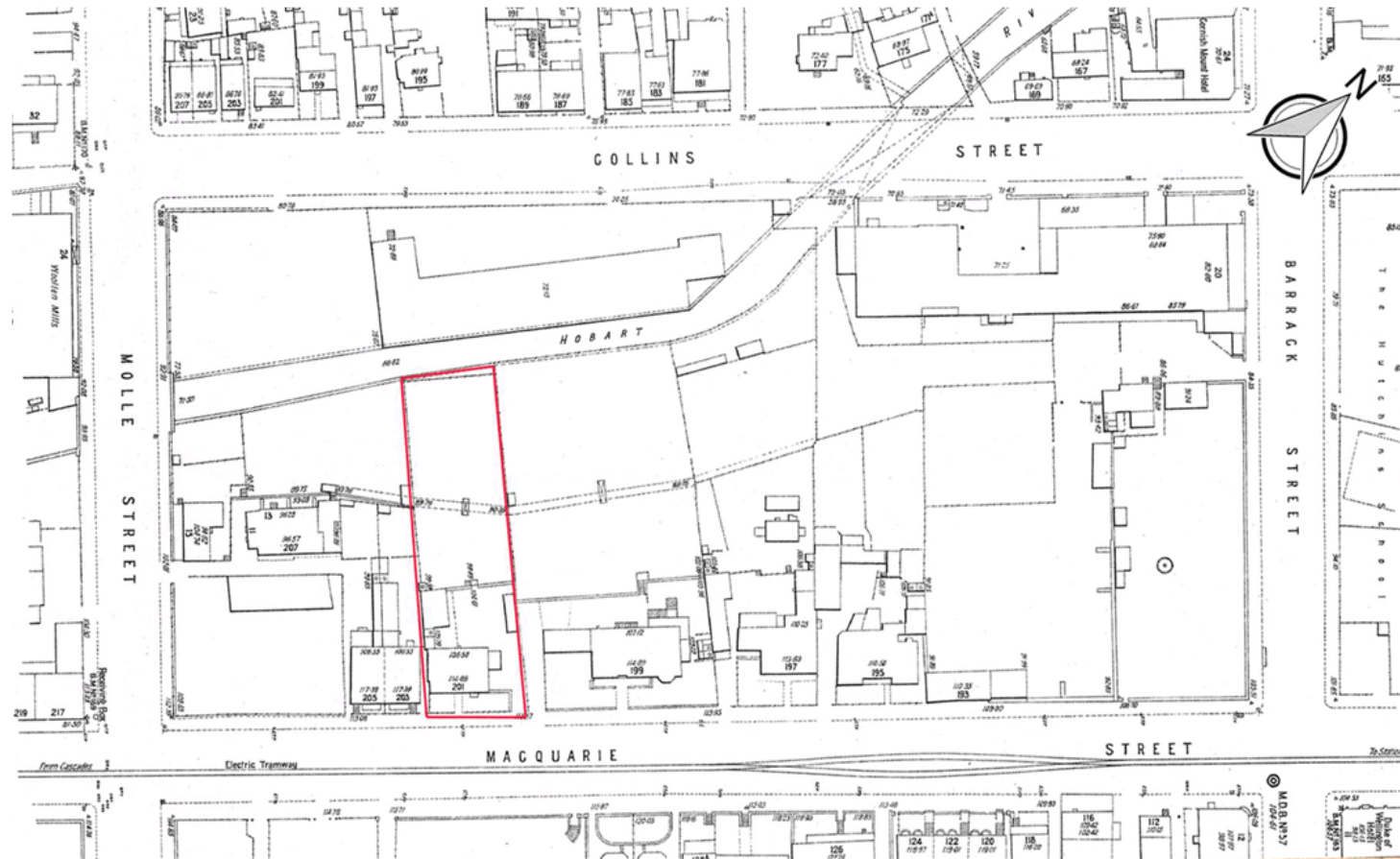


Figure 1.4.8 - Excerpt from a 1907 Metropolitan Drainage Board plan of the Hobart CBD, the subject site denoted by red lines. State Library of Tasmania TL.MAP 881.11 GBD (Map Hobart 9).

Following a dispute over the trusteeship, Bernard Shaw was appointed trustee by the Supreme Court of Tasmania in July 1906¹⁹. Shortly afterwards, Shaw discharged the mortgage on the property, and in October 1907 sold it to Ethel Louise Murdoch for £900²⁰. The sale advertisement described the property as:

*That desirable brick residence, No 201 Macquarie street...containing 12 rooms...The property is situated in the best part of Macquarie Street....there is a nice yard and stable upon the property, and a good garden"*²¹

It appears that the Murdoch family soon set about undertaking works to the property²², and it is possible that the new frontage was added at this time, with a newspaper article reporting in December 1907:

A FIRE IN MACQUARIE STREET.

*Shortly after 8.80 o'clock this afternoon the Fire Brigade received a call from a house in Macquarie street, owned by Mr Murdoch, but on arrival at the scene their services were not required, the flames having been extinguished. The house in question was being repaired, and one of the workmen was boiling a large pot of tar in one of the lower rooms, when the flames spread and caught the mantelpiece and floor. The damage was not very serious."*²³

Figure 1.4.10 depicts the subject site in 1946 showing the extended residence and the outbuilding and wall at rear. Figure 1.4.11 depicts little/no change to 1968.

The property remained in the hands of the Murdoch family until September 2000²⁴.

¹⁹ DPIPWE The LIST CT2/190

²⁰ DPIPWE The LIST CT165/135

²¹ *The Mercury* 6 December 1906 p.8

²² Inspection of valuation rolls for this period has not yielded any indication as to when the frontage was altered.

²³ *The Tasmanian News*, 6/12/1907:6.

²⁴ DPIPWE CT3211/46, see also The LIST Premium Property Report – Volume 249597 Folio 1



Figure 1.4.9 - John Watt Beattie photograph (c1910) showing the rear of the place. Libraries Tasmania SD_ILS:602699.



Figure 1.4.10 – Excerpt from the 1946 aerial run of Hobart, the subject site denoted by red lines (Hobart 1946 Run 1, 10894).



Figure 1.4.10a – Detail from the 1946 aerial photograph.

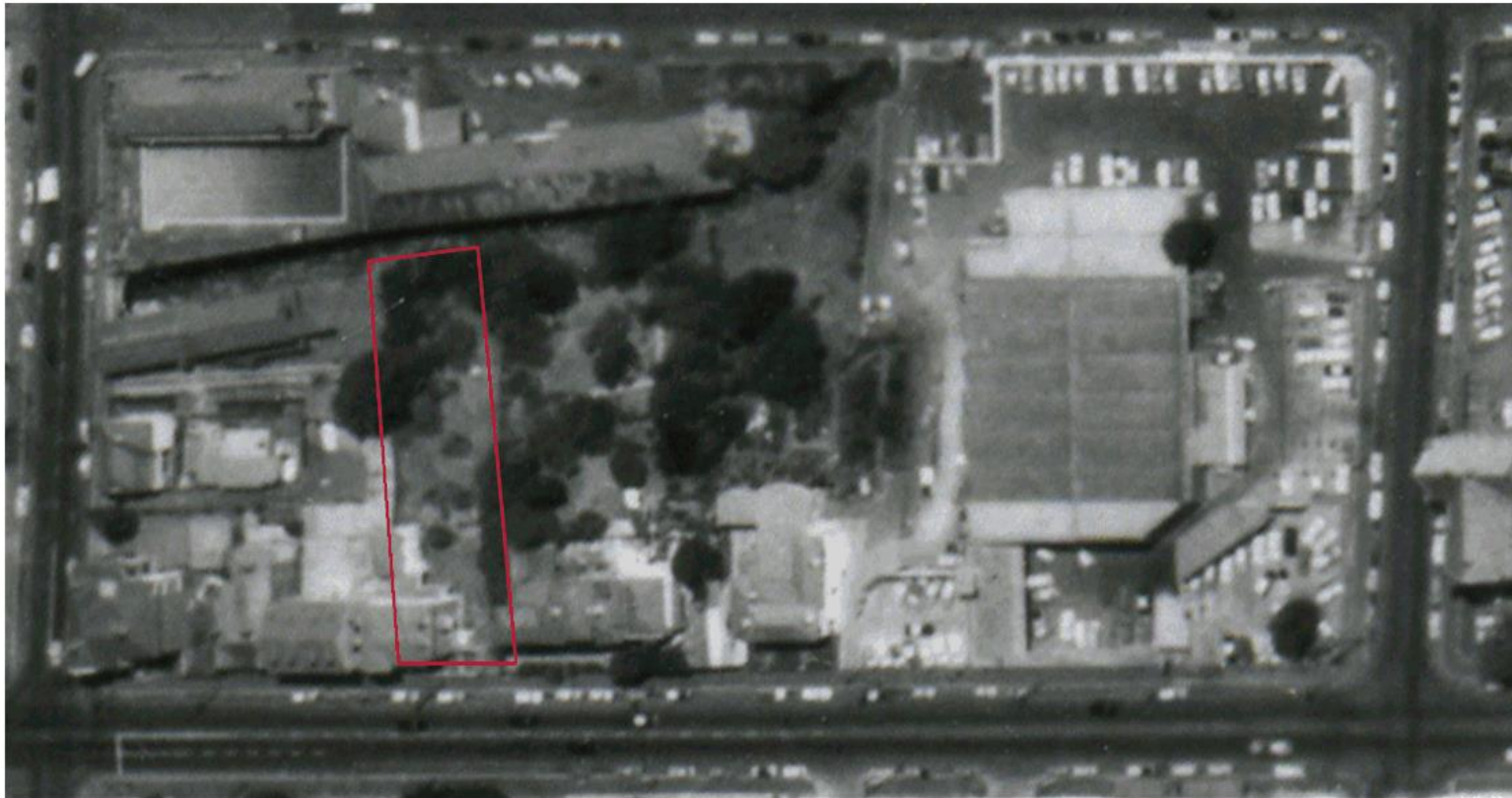


Figure 1.4.11 – Excerpt from the 1968 aerial run of Hobart (Run 6, 153).

The above historical summary shows that:

- The area was surveyed during (or prior to) the 1820s.
- The existing building was constructed prior to c1830, with the outbuilding probably contemporary.
- The building was renovated/extended probably in 1907-8.
- The place has had little change since then, apart from the conversion to apartments (presumably involving internal alterations) and some later additions between the house and outbuilding.
- A mill race ran through the rear of the site from as early as 1817 and was present for the remainder of the c19th. No other development is known to have occurred downslope from the retaining wall.

The following figures show overlay plans of known historic development in relation to the current layout of the site:

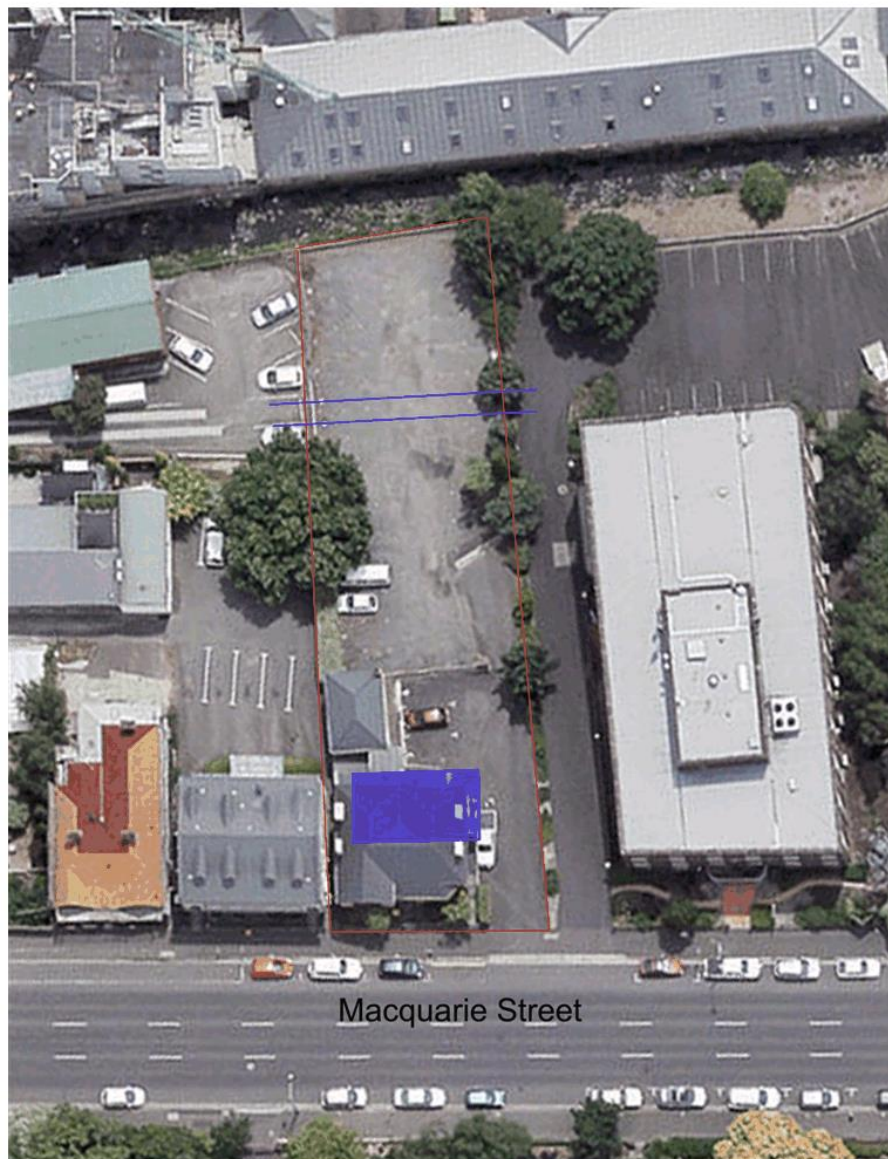


Figure 1.4.12: Footprint of features as depicted on the c1830 survey plan (blue) over a 2016 aerial photograph of the subject site (adapted from www.thelist.tas.gov.au).



Figure 1.4.13: Footprint of features as depicted on the 1843 Sprent survey plan (green) over a 2016 aerial photograph of the subject site (adapted from www.thelist.tas.gov.au).



Figure 1.4.14: Footprint of features as depicted on the 1907 Metropolitan Drainage Board survey plan (yellow) over a 2016 aerial photograph of the subject site (adapted from www.thelist.tas.gov.au).

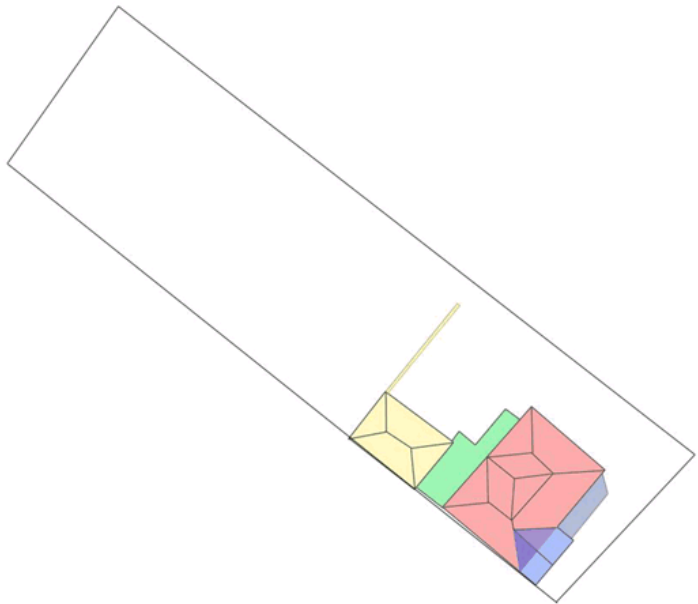


Figure 1.4.15 – Composite overlay of the footprint of all known buildings and site features (colours as per coding above) in relation to the subject site (red outline) over a 2016 aerial photograph of the subject site (adapted from www.thelist.tas.gov.au).

1.5. General description and evolution of the place and surrounds

Whilst the focus of the current document is not the fabric of the existing building, some analysis of that building is required to gain an overall understanding of the significance of the place and its environs so that any decisions on future development may be made with such significance in-mind.

1.5.1 The building itself


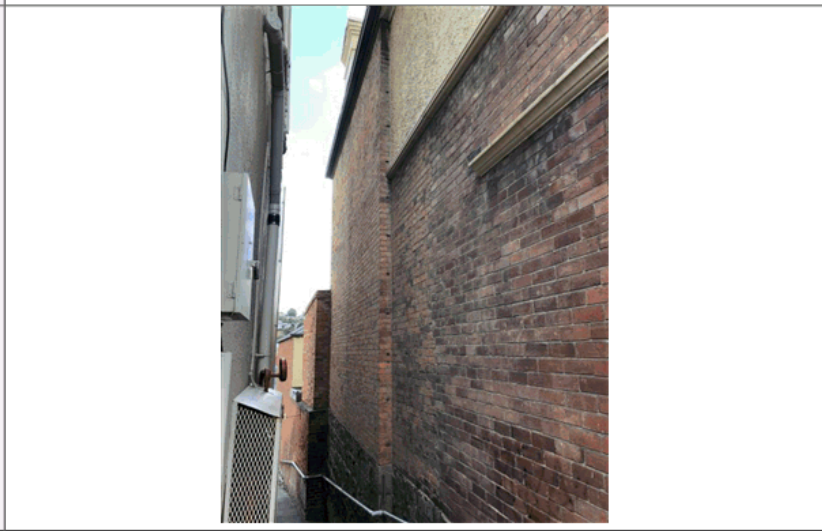
Element	Image	Brief description
Form	 <p>Building phases – Red = Original c1830 residence. Yellow = (early/original) outbuilding/wall. Green = mid-c20th extensions. Blue = c1920 extension.</p>	<p>Original form of the building appears to be a simple Georgian four-room plus hallway configuration on two levels (plus basement). The outbuilding at rear is probably original (if not early) and is also on two levels plus basement.</p> <p>In c1920 the front veranda and projecting bay was added.</p> <p>There are various mid-c20th additions between the original building rear wall and outbuilding.</p> <p>The building is brick of a variety of eras which has some stucco. The original portion of the building has a hipped roof with valley gutter to the rear and the building has four corbelled brick chimneys. The front elevation has a forward facing bay and veranda/balcony (further described below).</p> <p>The former outbuilding is now joined with infill and has a simple hipped roof, painted brick walls, a single chimney and a sandstone foundation which forms the basement walls. The fenestration of this building has been heavily modified.</p> <p>The infill comprises of various weatherboard clad additions and an undercroft area.</p>

**Southern
elevation (street
façade)**

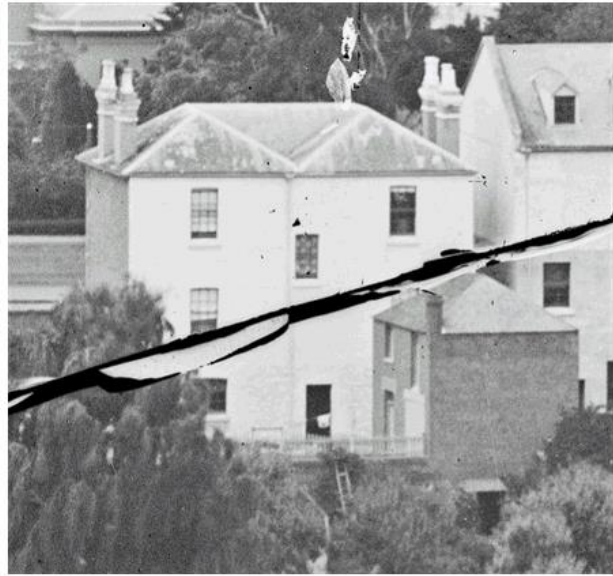


The southern façade (i.e. which addresses Macquarie Street) reads as a substantial Edwardian residence, with a forward projecting bay with a bay window and stuccoed and timbered gable end with timber brackets. The Edwardian veranda has had the upper balcony infilled and features ornate posts and fretwork and an applied gabled portico. The bay is brick at ground level and stuccoed on the upper floor. All windows are timber sashed and the balcony apron is shingled. The ground floor recessed bay also has a bay window.

The only 'hints' as to an earlier building on this elevation is the central doorway with a finely executed gauged brick arch, fluted columns – however the door and fanlight themselves are typically Edwardian. Whilst internal inspection was not undertaken, it is expected that at least three of the original windows have been removed with the Edwardian extension.

<p>Eastern elevation</p>		<p>This elevation was originally blank, with the stairs and door added when the building was divided into flats. The finely executed brickwork is in an early English bond and the streetfront corner features finely tooled sandstone quoins. The foundations are sandstone with a window into the basement.</p> <p>Overall, this elevation is largely original and still represents the 1830s building. Note that the quins are recognizable in the 1838 image and still a notable feature of the building. Oddly the 1830s indicates a stringcourse at first floor level which is absent.</p>
<p>Western elevation</p>		<p>The western elevation is not largely visible, being built to/near the boundary with the adjacent building sited close to the boundary also. It is notable on this elevation that a break in the brickwork indicates the distinctly different phases of the building. The foundations of the Edwardian extension on this elevation are finely tooled sandstone which appear to be recycled sandstone quins from the original corner of the building which would have been removed to build that extension.</p>

Northern (rear)
elevation




The rear elevation largely retains its original form (although partly obscured by infill) and is painted brick of an English bond consistent with the earlier part of the building. The two larger upper window apertures appear original however other windows have been cut into the walls later.

Outbuilding



The original/early outbuilding at the rear of the main building retains its original overall form. Probably a cart-shed and stable, the building has brick walls on a sandstone foundation/basement and a chimney in the north eastern corner. The fenestration of the inward facing wall has been substantially modified.

The interior of the building appears to have a low degree of integrity, although the extent of modern linings make it impossible to determine what extent of original detailing may have survived in the building. The ground floor appears to have some original floorboards (seen from below in the basement) and the basement door appears to be original. It is recommended that in the event that these linings are removed that a further detailed analysis of the interior be undertaken to guide any future development.

Retaining wall		<p>A sandstone retaining wall which appears contemporary with the outbuilding follows the line of the northern wall of that building. This probably enclosed the courtyard space of the buildings – an area probably associated with horse/carriage entry, servicing etc. rather than a more landscaped garden.</p>
Garden (front)		<p>The front garden and fencing represents a neat and modest later c20th garden and reasonably sympathetic modern picket fence of no remarkable merit.</p>

Garden (rear)



The large rear yard is further described in Section 1.8 (statement of archaeological potential) however there are no apparent heritage features below the line of the sandstone retaining wall. The entire yard is graveled for use as a carpark. The retaining wall against the rivulet is concrete with a concrete return wall running part-way along the boundary between the place and 199 Macquarie Street which suggest that there may have been extensive filling of the lower portions of the site in particular.

There are no significant plantings, nor are there any above-ground traces of the former mill race noted on historic plans and the title.



1.5.2. Key views and vistas



Although the place is not within any heritage precinct under the Hobart Interim Planning Scheme 2015, the setting and curtilage of the listed place itself is a key consideration in any further development of the place. Accordingly, it is relevant to consider the key views to and from the place and the wider vistas within which the place is set. As per the Burra Charter process detailed in Figure 1.3.1, in order to understand and measure any possible heritage impact, an understanding of the significance of the setting and streetscape presence of the place is required. The following figure depicts the vey vantage points to the site which will be considered here – both on a nearby lens and on a wider visual catchment. This assessment will consider the importance of any residual historic views to the place and the possible impact that any development may have upon such:





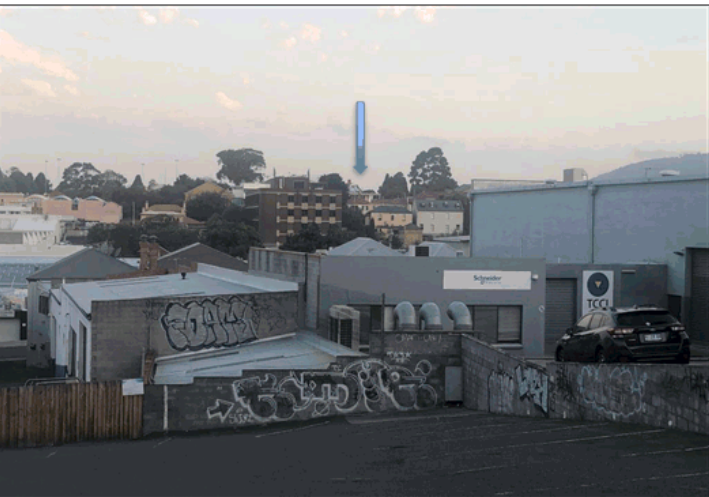
Figure 1.5.1 – Key public vantage points towards 201 Macquarie Street from near environs. Adapted from www.thelist.tas.gov.au



Figure 1.5.2 – Key public vantage points towards 201 Macquarie Street from wider environs. Adapted from www.thelist.tas.gov.au

Point	Importance to the listed place & setting (both historically and current)	Image	Possible impact of any proposed development of the rear of the site
1. From approach in front of 214 Macquarie Street	Whilst the building would once have formed a row of similarly sized and contemporary townhouses, this tenor of consistent development has been impacted by the large form of 199 Macquarie Street which has broken what would have been a cohesive grouping from Hanby Villa (197 Macquarie Street) to the corner of Molle. The significance of these views is largely the relationship between 201 Macquarie and its		Any development allowable under the planning scheme to the rear of the site that had some setback from the rear of the outbuilding associated with 201 Macquarie Street would not be noticeable from this vantage point, being obscured by 199 Macquarie Street and would not impact the streetscape presence of the building nor the important relationship with its other neighbours.
2. Down the laneways between 199 and 201 Macquarie Street	neighbours (203-209) and the scenic backdropping of the West Hobart suburb and Mount Wellington.		Any larger-scale development to the rear would be visible from this vantage point, however the slope of the land would assist in minimising any impacts arising from such. This view is already backdropped by modern development (i.e. the former Tepid Baths development) and from this point the relationship between 201 Macquarie Street and its neighbours is less apparent. Precedent for larger development has been set by 199 Macquarie Street, however it would be important to maintain a setback from the rear wall of the outbuilding so as to retain some 'backyard space' for the building and to maintain some views to the backdropping foothills.

<p>3. From opposite 201 Macquarie Street</p>	<p>It is from this vantage point that the building has the maximum streetscape presence and as per the description of the street façade reads as a substantial Edwardian residence with hints of its earlier origins.</p>		<p>No part of the rear yard is visible from these vantage points and any development allowable under the planning scheme would have no visual impact due to the steep slope rearward and close placement of the existing building to the street which would in any case maintain the streetscape presence of the building.</p>
<p>4. From near the corner of Macquarie and Molle Streets</p>	<p>The prominence of the building in the streetscape is reduced from further up Macquarie Street, with the slightly larger setback of the building behind the front line of its neighbour only retaining some prominence of the Edwardian extension.</p>		

<p>5. From near 314 Liverpool Street</p>	<p>These vantage points (5-7) are the residual points where panoramic views across the city formerly had a high visibility of the course of the rivulet and the slopes down to the rivulet, with the rear areas of the buildings on Macquarie Street being highly visible. Examples are seen in Section 1.4. c20th development has largely obscured these views so that their significance has been mostly diminished, however they are considered here as low significance given the natural evolution of the city and that in any case the prominence of these buildings retain their importance from their front elevations rather than the residual glimpses from across the city.</p>		<p>The rear of the building can only be glimpsed from any point in Liverpool Street therefore any further development at the rear of the site is considered to have no appreciable impact.</p>
<p>6. From near 68 Goulburn Street</p>	<p>Similarly, the distant views of the rear of the site are only available from limited spaces in Goulburn Street, and from areas which are likely to be developed in future and obscure any remaining views, therefore any further development at the rear of the site is considered to have no appreciable impact.</p>		<p>Similarly, the distant views of the rear of the site are only available from limited spaces in Goulburn Street, and from areas which are likely to be developed in future and obscure any remaining views, therefore any further development at the rear of the site is considered to have no appreciable impact.</p>

7. From the corner of Molle and Bathurst Streets			<p>Whilst traditionally visible from the Melville Street ridge, the rear of the site is no longer a prominent part of the viewline, however can be glimpsed from Molle Street near the intersection of Bathurst Street. There has been a precedent in the redevelopment of the rivulet edge spaces along this part of the rivulet with developments such as the Tepid Baths site, 201 Macquarie Street etc. having diminished the legibility of that zone in the landscape. Whilst that area is still visible to the rear of 201 Macquarie Street, its meaning and importance is diminished so as it is considered that any further development is unlikely to have any appreciable heritage impact.</p>
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1.5.3. Description of the townscape development of the area

Whilst the primary objective of this document is to consider the historic heritage significance of 201 Macquarie Street and to provide conservation policy to guide any future development of that place, as part of understanding the townscape and streetscape presence of that building it is necessary that the evolution of that wider place be considered. Further, to understand whether the possibility of infill development on the rear of the site may be appropriate, it is necessary to understand the evolution of the wider environs of the subject site. Accordingly, an understanding of the evolution of the physical attributes of that setting be gained within which the significance of the setting of the place can be better understood.

Section 1.4 has provided an overview history of the site, from which a wider lens can be cast to understand the historical evolution of the immediate surrounds. Figure 1.5.3 depicts an overlay of the 1832 cadastral boundaries of the city block compared to the current cadastral arrangement and Figure 1.5.4 depicts the mid-1840s arrangement. This shows that the block has always been comprised of much larger holdings than the surrounding areas – reflective of the early industrial nature of the area when compared to the finer-grained residential and commercial areas surrounding. By 1907 this arrangement was still maintained. The built form as alluded by the later c19th photographs show this area as a diverse mix of land uses, with larger industrial buildings hugging the rivulet for a source of water for industrial processes such as machinery driving, steam etc. whilst the more gentrified higher slopes along Macquarie Street saw large city 'gentleman's residences' on larger allotments. This early pattern of subdivision is still legible, although having been broken up somewhat during the c20th as industry moved to other parts of the city and relied less on proximity to the rivulet. This has led to later c20th redevelopment of much of the formerly open sites or sites of early industrial buildings (e.g. the area towards Barrack Street has been extensively redeveloped as larger buildings – still on these larger titles).

The natural line of the Hobart Town Rivulet, as well as the line of the mill race has in effect shaped the evolution of this city block by providing two internal barriers to development – it is only during the later c20th that various easements and reservations for the mill race have been relinquished, opening up this central area for further development and reduced the legibility of that central portion of the block as the buffer between streetfront development and the edges of the rivulet.

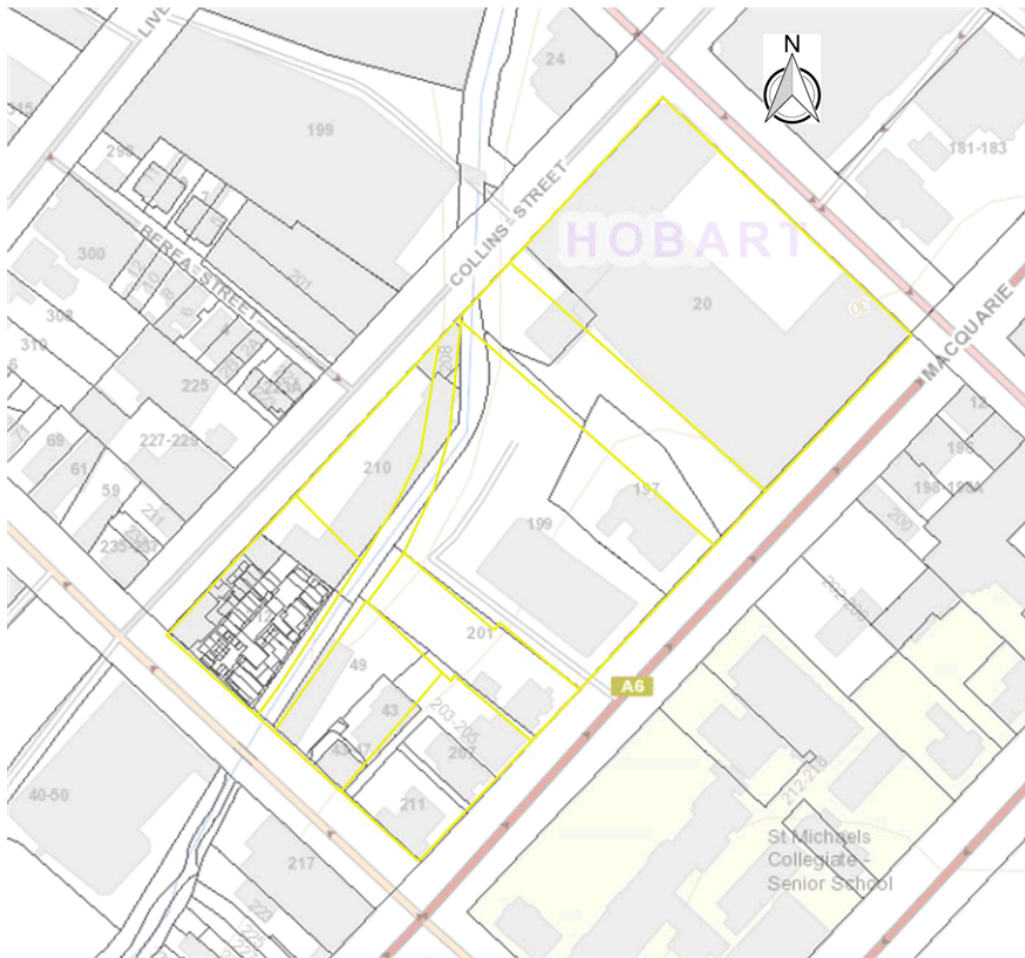


Figure 1.5.3 – Boundary lines of the c1832 survey (yellow lines) in relation to the current cadastral configuration of the area. Adapted from www.thelist.tas.gov.au

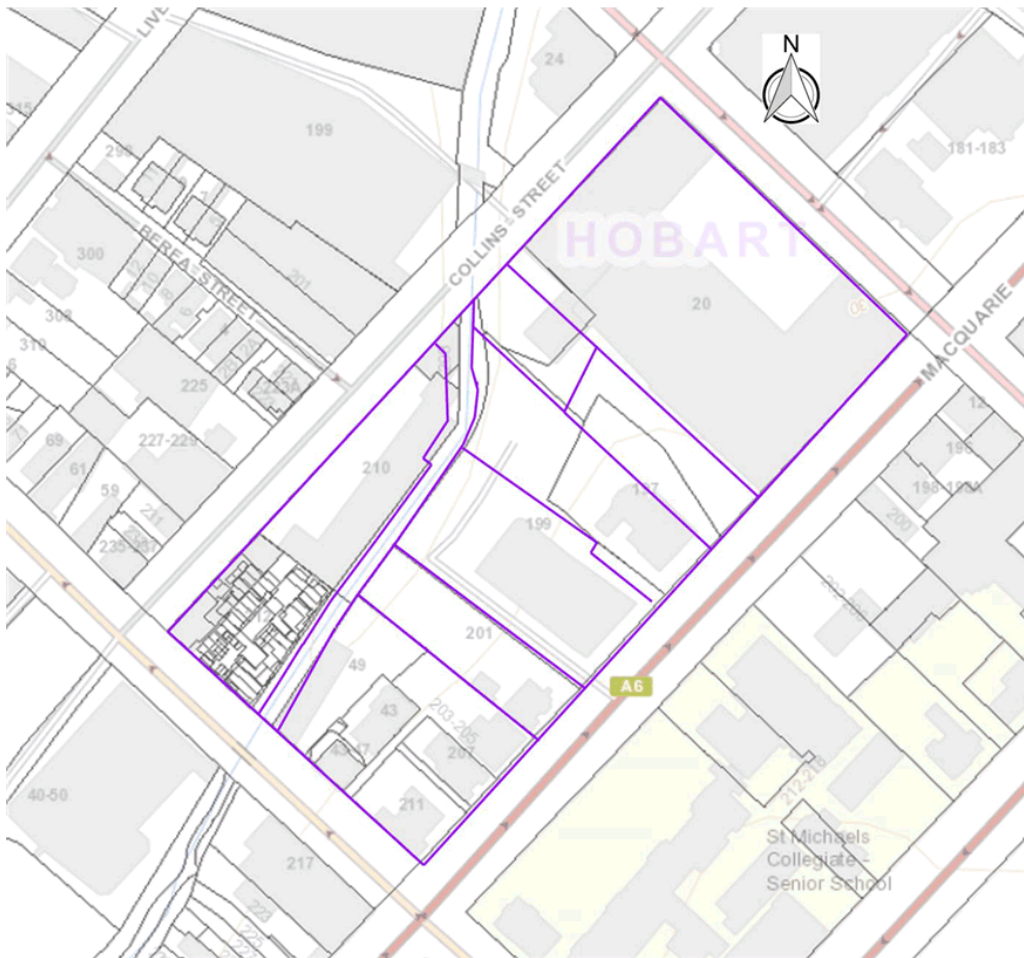


Figure 1.5.4 – Boundary lines of the c1846 Sprent survey (purple lines) in relation to the current cadastral configuration of the area. Adapted from www.thelist.tas.gov.au

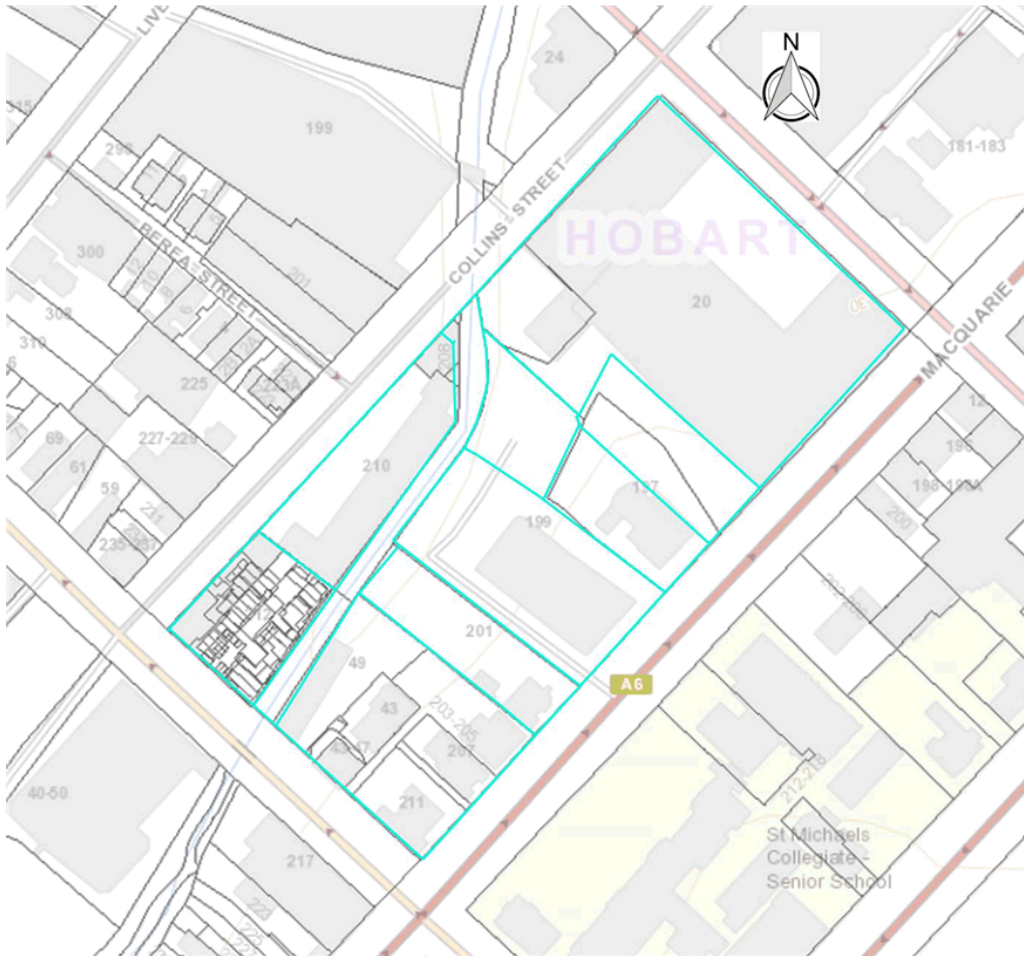


Figure 1.5.5 - Further subdivision of the environs of the subject site by 1907. Based on the 1907 Metropolitan Drainage Board survey (blue lines). Adapted from www.thelist.tas.gov.au



Figure 1.5.6 – Subdivision pattern of the environs of the subject site from the 1907 MDB survey imprinted on the 1946 aerial photograph. Adapted from www.thelist.tas.gov.au.

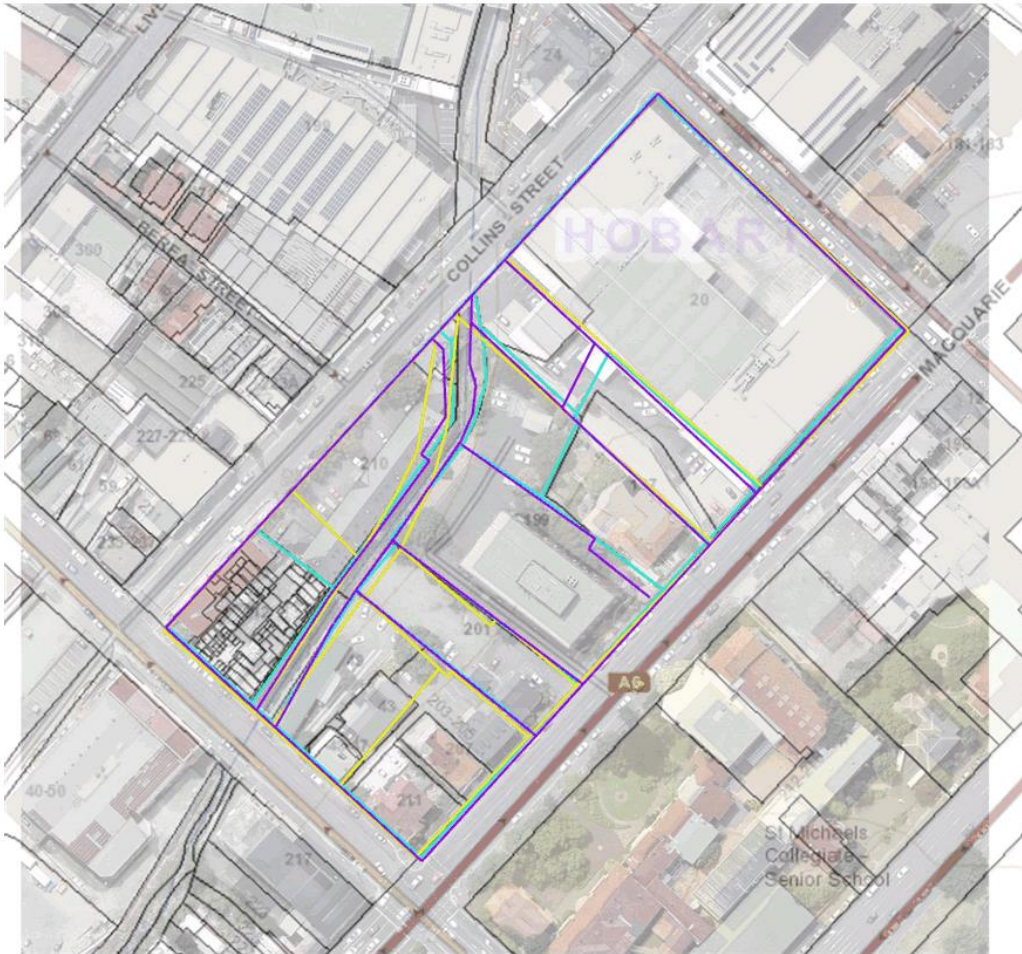


Figure 1.5.7 – Composite overlay of the various boundary evolutions as per historic sources (colour coding as per above). Adapted from www.thelist.tas.gov.au.

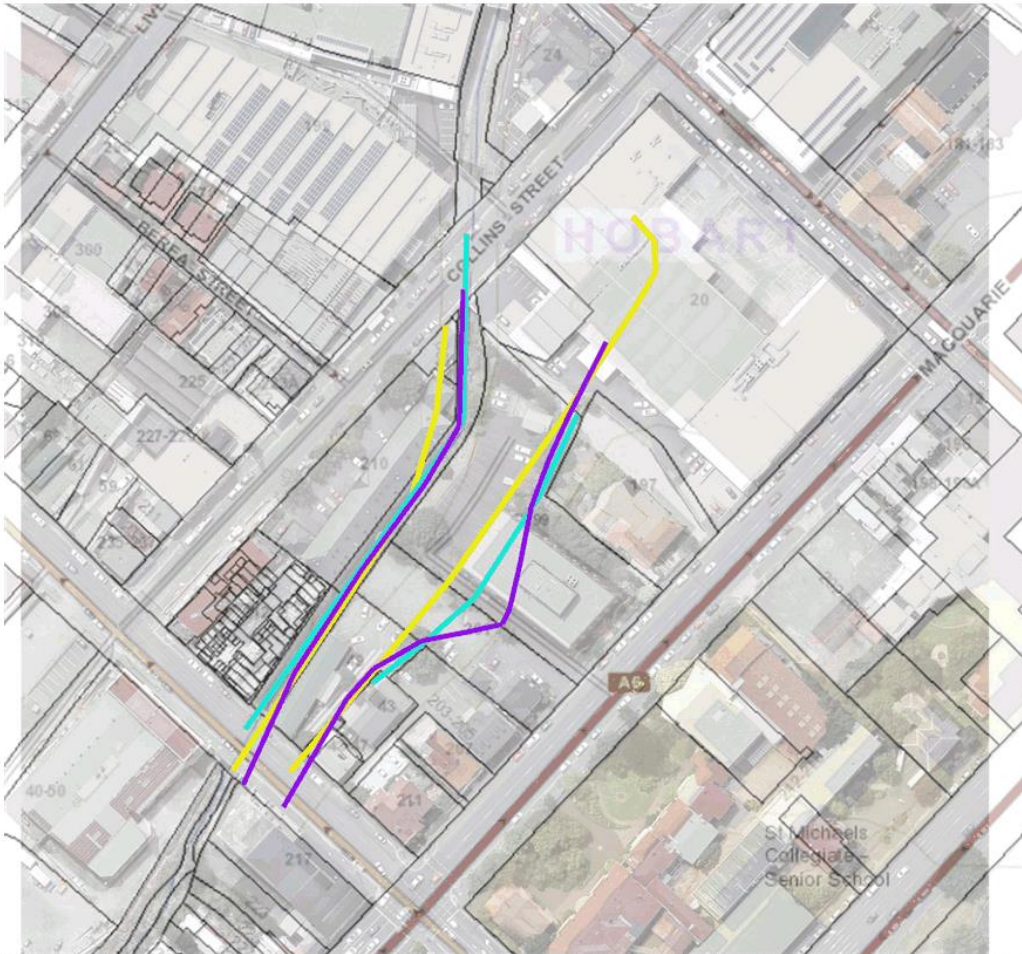


Figure 1.5.6 – Overlay of the three depictions of the Hobart Town Rivulet (left) and the mill race (right) as per early surveys (colour coding as per above).
Adapted from www.thelist.tas.gov.au.

1.5.4. Architectural tenor of the area

That ad-hoc development of wider Battery point has resulted in the suburb representing a diverse range of architectural styles reflecting different periods and scales of subdivision patterns periods – as per the discussion on subdivision and infill development above, the environs of the subject site are an example of that ad-hoc development that has evolved in the way it demonstrates townscape form and architectural character, which is probably demonstrated by the fact that the area is not recognised as any heritage precinct.

This analysis considers the general architectural tenor of the buildings in the surrounding area as defined by Figure 1.5.12 as a means of understanding the wider architectural character of the immediate environs of the subject site. Note that this assessment was done via online sources and observations from public spaces - no private property was accessed and no photographs of private residences were taken.



Figure 1.5.7 - Study area for the 'immediate environs' description below. Adapted from www.thelist.tas.gov.au

Colour	Architectural style/era
Yellow	Later c20th larger-scale apartment/commercial development.
Orange	Later c20th smaller-scale apartment/commercial/residential development.
Blue	Early c20th residential/commercial development.
Green	C19th residential/commercial development.

The analysis of the surrounding built forms, coupled with the analysis of subdivision pattern above, has drawn the following conclusions:

Subdivision pattern:

- This city block, similar to other blocks dissected by the Hobart Town Rivulet is typified by larger landholdings reminiscent of the earlier industrial uses along the rivulet. This earlier subdivision pattern is still legible in the current cadastral layout which contrasts to the finer-grained residential/commercial-scale subdivision pattern of the surrounding city-fringe blocks.
- The constraints in this city block caused by the Hobart Town Rivulet and the former mill race (and associated easements, right-of-ways etc.) has 'squeezed' traditional development closer to the streets, retaining an unusually large central undeveloped zone internal to the block – which has gradually been further developed during the latter c20th.

Built form and architectural styles:

- The area has a diverse representation of building styles, with the subject site surrounded by later c20th and early c21st larger-scale apartment/commercial development.
- Surviving c19th development is sparse in the general vicinity.
- Similarly, c20th infill development is sparse in the general vicinity.
- Overall, there is little cohesive clustering of 'like' building forms, styles etc. in the general vicinity.

Setting:

- The area has no coherent or consistent streetfront setback, and the immediate environs of the subject site are typified by apartment/office development with little/no 'traditional' garden settings.

This evolution of the area is a key principle which will be considered in the following section regarding significance of the subject site and surrounds.

1.6. Statement of historic heritage significance

No detailed statements of significance are known to exist for 201 Macquarie Street. The following statements of significance are based on the national HERCON standard for statements of significance, based on the amount of information currently at-hand. Note that natural history values have not been assessed here, as these are beyond the scope of this assessment. This statement of significance has been based upon the history of the place as outlined above, however could be further refined with more detailed investigations into the site history. The statement has also been formulated with consideration to the detailed fabric analysis in Section 1.7.

A. Importance to the course, or pattern of our cultural or natural history.

As an 1830s city-fringe 'gentleman's residence' and stables building, 201 Macquarie Street represents the settlement of the upper reaches of Macquarie Street and contributes to a collection of such buildings which have survived. Despite being largely renovated c1907, the building retains many of the key features of such a building. The understanding of the townscape development of the place and surrounds is linked to the understanding of development along Macquarie Street and along the Hobart Town Rivulet as the city spread westward during the 1820s-30s.

B. Possession of uncommon, rare or endangered aspects of our cultural or natural history.

Neither 201 Macquarie Street, nor the immediate surrounds are considered to exhibit any uncommon, rare or endangered aspects of our cultural history.

C. Potential to yield information that will contribute to an understanding of our cultural or natural history.

The site is known to have been crossed by the c1820s mill race running parallel to the Hobart Town Rivulet, which was associated with a very early and important industry in the establishment of Hobart Town and representative of the diverse industries that hugged the rivulet. This is further considered in Section 1.8.

D. Important in demonstrating the principal characteristics of a class of cultural or natural places or environments.

201 Macquarie Street is an example of an 1830s larger-scale inner-city Hobart residence, albeit largely modified c1907. The building represents an early building which has been renovated and retains key features of both eras which tell the story of its evolution. The outbuilding is an example of a surviving stables building, albeit largely modified.

E. Importance in exhibiting particular aesthetic characteristics

It is not considered that the place nor the immediate surrounds demonstrate any remarkable aesthetic characteristics.

F. Importance in demonstrating a high degree of creative or technical achievement at a particular period.

201 Macquarie Street, nor the immediate surrounds are considered to demonstrate any high degree of creative or technical achievement.

G. Strong or special association with a particular community or cultural group for social, cultural or spiritual reasons. This includes the significance of a place to Indigenous peoples as part of their continuing and developing cultural traditions.

201 Macquarie Street is not considered to have any strong nor special association with any cultural group for social, cultural or spiritual reasons.

H. Special association with the life or works of a person, or group of persons, of importance in our history.

201 Macquarie Street has no known direct special associations with the life or works of a person or persons of importance in our history.

1.7. Specific description of the place and significance of individual elements

Based on the overall statements of significance outlined in Section 1.6, and the analysis of the evolution of the place as detailed in Section 1.5, individual and collective elements, and other possible heritage values (e.g. intangible values) of the place will be assessed here, in order to assign or rank specific levels of significance, upon which heritage management policies will be formulated in Section 1.8.

Based on the above, the following summary of significance of particular phases of the place is proposed:

- **Elements associated with the original c1830s form and detailing of the buildings and other site features are of high significance.**
- **Elements associated with the 1907 renovations are of low significance**
- **Elements associated with later c20th renovations/infill are of no significant or intrusive.**

Whilst it is noted that the significance of any place need not necessarily be solely embodied in original fabric (i.e. later modifications can contribute to significance through demonstrating the evolution of the place), it is relevant to consider the impact that later modifications may have had on the integrity of more significant elements and whether that has diminished the significance of such. Accordingly, following scale will be used to rank **levels of integrity** of parts of the building within the context of the overall significance of the place:

High: *Elements which are highly intact and readily demonstrate their respective significance.*

Medium: *Elements which subsequent modification have obscured or reduced their ability to readily demonstrate their respective significance, however this may be retrievable through restoration without the need for introduction of substantial new fabric which may reduce or obscure significance.*

Low: *Elements which have lost the ability to demonstrate any significance and could not feasibly be restored without conjecture or substantial addition of new fabric.*

The following scale will be used to rank levels of significance in the table below:

High: *Elements which are of high significance and must be conserved with minimal or no modification.*

Medium: Elements which are of medium significance and should be conserved. A higher extent of modification may be allowable particularly if required for safety, compliance and ongoing functional purposes.

Low: Elements which contribute to an understanding of the evolution of the place, but are not considered to represent an important phase or aspect of the place.

Neutral: Elements which are neither of significance, nor detract from significance. These elements may be retained, modified or removed as desired. Often ascribed to elements which support the ongoing use of a place.

Intrusive: Elements which are of no significance, may detract from significance and should be removed.

The following matrix represents the interplay of integrity and significance and introduces colour coding as used in the following tables:

Significance	Integrity		
	High	Medium	Low
High	Red	Red	Orange
Medium	Red	Orange	Green
Low	Orange	Green	Green
Neutral	Green	Green	Green
Intrusive	Blue	Blue	Blue

Accordingly, the following colour code has been adopted to consider significance in-light of the integrity of that particular element:

- Red – High significance
- Orange – Medium significance
- Green – Low or neutral significance
- Blue - Intrusive

Exterior			
Element/area	Sub-element	Significance	Explanatory note
General building form	Main part of the c1830s building		The form of the main part of the building should remain largely unchanged.
	Veranda, balcony and c1907 additions/renovations		These elements are of low significance, albeit do give the place a distinct character, but which skews the legibility of the higher significance of the earlier building.
	The outbuilding		The outbuilding, although being modified, is an example of an early inner-city stables building.
Walls	Masonry		The masonry walls are intact and are legible in their ability to demonstrate the both the evolution of the building and its original form.
Roof	General form		The roof is largely intact and is legible in its ability to demonstrate the both the evolution of the building and its original form.
	Front bay, veranda etc.		This is a critical part of the streetscape character and 2.5 storey form of the building.
	Cladding and rainwater goods, eaves, fascias etc.		These are likely to not be original but are sympathetic to the detailing of the building.
	Chimneys		The prominent chimneys are a critical part of the form of the building and are part of the original 1830s building.
Windows	Apertures and fenestration pattern		These derive from both phases of the building and later modifications, although probably only the two rear upper-floor apertures are legible remainders of the earlier form of the building.
	Sashes		These are all either associated with the c1907 renovations or have been added later.
Doors	Front door opening and pilasters/lintel		Original opening and pilasters which is a significant remnant of the earlier form of the building.
	Door itself and fanlight glazing		Part of the c1907 renovation.
Landscape elements	Front garden		These are sympathetic later additions of no heritage significance.
	Front fence		
	Plantings		There are no significant landscape elements although the advanced tree in the front yard has some scenic qualities.
	Retaining wall		This is likely to be an original landscape element, if not very early. Note that it has been truncated to form a ramp to the lower levels of the land. The 1908 survey shows a central flight of steps which have been removed.
Views (as per vantage points in Figures 1.5.1 and 1.5.2)	1		This viewline is less significant as the building sits more in isolation from its contemporary neighbours.
	2		It is from these viewpoints that the building has the main streetscape prominence and the evolution of the building is legible.
	3		

	4		The significance of this viewline is diminished by the setback of the front of the building.
	5		These views are not considered significant as their historical prominence and ability to provide a legible edge to the Hobart Town Rivulet have been diminished by c20th development.
	6		
	7		

1.8. Statement of historical archaeological potential.

1.8.1. Statutory requirements for historical archaeology

As the subject site is within a *Place of Archaeological Sensitivity* as defined by Table E. 13.4 of the scheme, Further to Clause E.13.5.1 any development which requires excavation may require:

- (f) *a statement of archaeological potential;*
- (g) *an archaeological impact assessment;*
- (h) *an archaeological method statement;*

1.8.2. 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 site – 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.

1.8.3. Determining general archaeological potential and significance

As per the historical background of the site presented here in Section 1.4, the following is known:

- The existing residence and outbuilding are the only major built items that have ever existed on the site.
- There are depictions of a mill race running through the site, serving the c1817 Government Mill (corner of Collins and Barrack Streets) which has depicted on several historical sources.

These depictions of the historic features are presented in Figure 1.8.1:

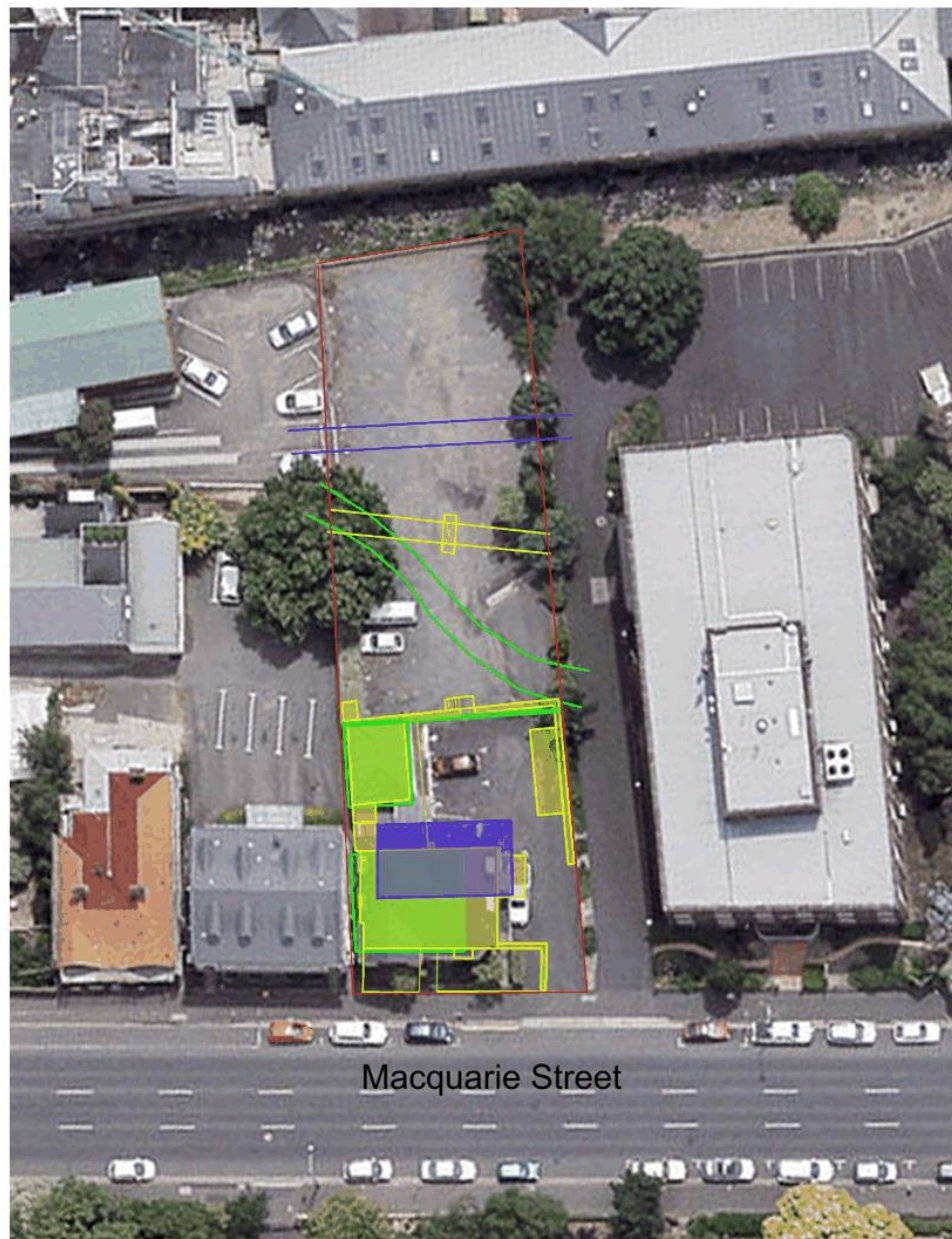


Figure 1.8.1 – Composite overlay of outlines of features from the c1832 survey (blue), Sprent's 1840s survey (green) and 1907 MDB survey (yellow). Note that the c1839 Frankland depiction is not presented here as its accuracy is dubious. Adapted from www.thelist.tas.gov.au

Accordingly, the history of the site indicates that there may be two types of potentially significant archaeological remains on the site:

Remains associated with domestic occupation of the site:

Given that all known buildings that have been on the site are still standing, archaeological investigations have little merit in understanding any further the nature of the built environment of the site. Minor site features such as drains, garden beds, paths etc. may be yielded from archaeological investigations, however these are considered only to be of 'historical interest' rather than of 'archaeological significance'. Similarly, the site may have remains of occupational debris such as rubbish pits, which may yield artifacts which have some diagnostic or interpretive potential in relation to the past users of the site. Again, whilst these are potentially of historical interest, they are not considered to be of a high level of archaeological significance.

Remains associated with the c1817 mill race:

The depictions of the mill race in Figure 1.8.1 are problematic, in that they all show a distinctly different course. The 1907 MDB survey is considered the most accurate in this instance, as that survey is known to be highly accurate, and one of the key foci of that survey was water and servicing infrastructure, so it would be expected that an accurate depiction would arise.

The Sprent survey is also known to be highly accurate, however this shows an unexpected meandering of the race – which does not fit with the known tenor of such infrastructure – by virtue a 'race' should be as straight as possible so as to maximise water velocity. It should be noted that the Sprent survey only included features that were clearly evident from public vantage points, and the survey only shows where the race entered and exited the subject site, therefore in this instance that survey is considered to be of dubious accuracy. Photographic evidence does give additional 'clues' as to the more precise location of the race:

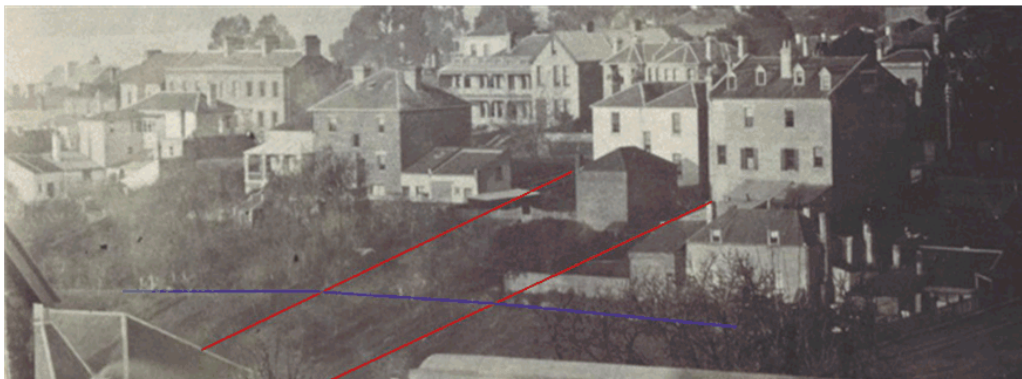


Figure 1.8.2 – Depiction of the race from c1880s. Adapted from Libraries Tasmania AUTAS001126184282W800.

Figure 1.8.2 shows a linear flattened area crossing the subject site which may either be the race itself (e.g. as an excavated trench) or the remnant of a platform that carried an above-ground race. Historical evidence has failed to allow determination of the exact construction nature of the mill race. It may have been simply an earthen ditch, it may have been masonry or timber lined, or it may have been an elevated timber race (there are many historical depictions of such races along the Hobart Town Rivulet from that time). The race was apparently informal in its line – probably weaving around topography, which suggests that it was not a rigidly constructed masonry or timber race, suggesting that it was an earthen ditch excavated around the existing rivulet bank topography – however this cannot be conclusively proven from the documentation at hand. Note that Figure 1.8.2 depicts that the race was aligned to miss adjacent development (e.g. the early 'Fawkner's Cottage' to the right of the image) so it does follow a logical path. In relation to that building (which is clearly marked on the Sprent survey) this depiction indicates that the race followed a line close to that shown on the c1832 survey.

The 1817 Government Mill had ceased operation prior to 1900, however the 1907 MDB survey still depicts the 'race' along a line similar to that of the c1832 survey. The detail of the MDB survey suggests that the infrastructure was run across platforms which suggest raised infrastructure. By this time also is it likely that the mill race had been disbanded, but the line of the race may have been 'recycled' for other water infrastructure (as depicted on the 1907 survey). Note that this survey also depicts that the line of the race had been truncated in several areas and it did not form its formerly continuous depiction as per earlier surveys, which again suggests that the line of the race had been reused for other infrastructure – probably partially underground hence its truncated depiction in 1907. If this were the case, then it is possible that little or no archaeological trace of the race would be evident. If, however, the race were masonry or timber lined, then distinct archaeological traces would be still evident. An image of the nearby Fawkner's Cottage from c1900 shows a line of sandstone running along the approximate line of the race as shown on the c1832 survey. It is possible that this was a retaining wall on the uphill side of the race, which is not clearly evident in this image, but the vegetation growth suggests it may be disused and have been overgrown.



Figure 1.8.3 – Rear of Fawkner's Cottage (right) showing the line of sandstone evident in 1900 (blue arrow). The building on the subject site to the left. Adapted from Tasmanian Archive and Heritage Office PH30-1-4048.

Clues as to the nature of the infrastructure surviving c1910 that are more on the line of the 1907 MDB survey can be gained from the image depicted here in Figure 1.4.9, which shows the yard area of Fawkner's Cottage (the rear of the building in the subject site to the left of the image). This shows what may be the edge of a 'sluice' race – of troughed timber, and some form of structure into which it runs that appears to taper off (to the left) to follow the downhill topography. Given the plant growth, this may indicate that it was redundant at that time. This is also clearly shown on the 1907 MDB survey, hence attesting to the accuracy of that survey:



Figure 1.8.4 – A c1910 photograph of Fawcett's cottage showing what may be the race (blue arrow) and some form of enclosing structure (red arrow). Adapted from Tasmanian Archive and Heritage Office NS1013/1/25.

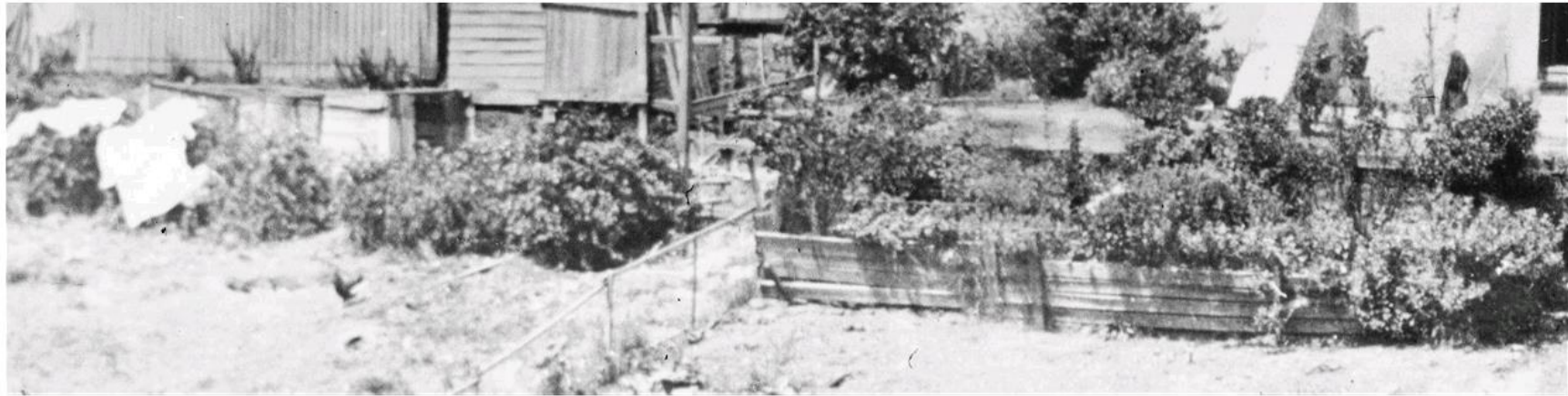


Figure 1.4.3a – Detail from Figure 1.8.3.

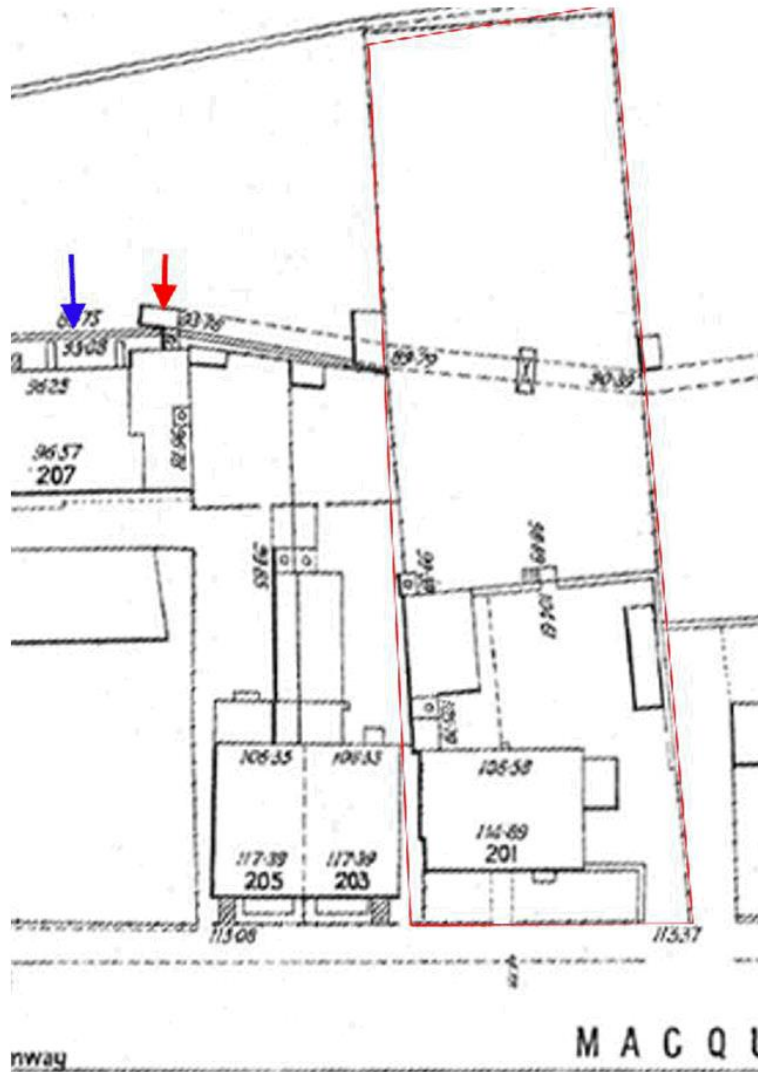


Figure 1.8.5 – Features from Figure 1.8.3 on the 1907 MDB survey (arrow colour as per Figure 1.8.3).

Any remains of the race have the potential to yield information on a very early industry in Hobart – the c1817 Government mill, as well as having the potential to give a better understanding of water resource acquisition, milling technologies, interaction with the Hobart Town Rivulet etc.

1.8.4. Previous investigations of the mill race

The line of the race has been investigated by Praxis Environment on two other occasions:

245 Macquarie Street (January 2016)²⁵: This desktop assessment concluded as per above, that there is no on-ground evidence for the race at that site, however historical sources indicate the line of the race. Recommendations for archaeological mitigation were made as follows:

- ***Prior to the commencement of works, an archaeological test-trench be excavated across the likely line of the mill race (in accordance with the Tasmanian Heritage Council's Practice Note 2 – Managing Historical Archaeological Significance in the Works Application Process) in order to inform development plans of the location, nature and existence of any archaeological remains of the race.***
 - o *Note that if this is not considered cost effective or feasible prior to the commencement of works, then this may occur at the time of works, however the works program will need to consider possible delays resulting from the steps below.*
- ***If the test trench (or excavations at the time of works) fails to find any trace of the race, if the remains have already been substantially disturbed/destroyed, or if it is concluded that the proposed development will not impact upon the remains (e.g. if they are deeper than expected or if it can be concluded that the race was above ground) then the development may proceed without further archaeological input.***
 - o *Note that no archaeological input is necessary for other parts of the proposed building.*
- ***If the test trench (or excavations at the time of works) finds substantial and significant remains of the mill race, then these must be dealt with in accordance with the provisions of the Tasmanian Heritage Council's Practice Note 2 – i.e. controlled archaeological excavation and thorough recording prior to removal (if retention is not possible through design amendment as the preferred option) and prior to the development proceeding.***

That document was used as part of an approved development application, however that has not yet been implemented as yet.

Weld/Wynyard Street (Cuthbertson Bros. Tannery)²⁶: Further to a desktop assessment, archaeological monitoring of the demolition of the former Cuthbertson Bros. Tannery site in South Hobart was undertaken as a contamination testing trench was within a zone which was shown on the Sprent survey as being within close proximity (or within) the line of the race (much further upstream than the current subject site). That excavation was only to 600mm deep and did not find any trace of the

²⁵ Statement of Archaeological Potential, Development Impact Assessment & Archaeological Mitigation Strategy - 245 Macquarie Street HOBART TASMANIA. Praxis Environment, January 2016 (for Adam and Laura Wallace).

²⁶ Report on Archaeological Monitoring, Former Cuthbertson Bros. Tannery, Weld/Wynyard Streets, Hobart, Tasmania. Praxis Environment, May 2014, for Geo Environmental Solutions Pty. Ltd. Obo Cuthbertson Bros.

mill race, however that report concluded that excavations were only within modern fill, and that remains of the race in that location may have been deeper.

With little actual information on the precise nature, location and integrity of any archaeological remains of the mill race, and with the assumption that any such remains are likely to be archaeologically significant in their ability to yield information to better understand the race and its association with the c1817 government mill, it is considered that the *possible* locations of the race site have a high level of archaeological significance.

1.8.5. Site observations

The rear portion of the site (i.e. from the retaining wall at the rear of the outbuilding, to the edge of the rivulet) is currently used as a carpark, with no visible heritage features. It is paved with a combination of gravel and bitumen and gives no indication of any items/area of archaeological interest. It is worthy to note that it appears that the site has been extensively filled, with a concrete retaining wall edge to the rivulet boundary which returns along the north-eastern side of the site (i.e. between this and 199 Macquarie Street) which suggests that the natural lay of the land to the rivulet has been altered (possibly by around 2 metres at highest). Whilst this fill is unlikely to be as thick higher on the site (i.e. towards the retaining wall – as evidenced by the basement door of the outbuilding still being accessible, and when compared to historic photographs ground level in this area appears not to have been significantly built up) it is likely that any archaeological remains are buried deeply – therefore shallow excavations are less likely to cause impact than any deeper excavations on site and if any remains of the mill race had survived it is likely that they have had a better chance of preservation due to protection by this fill. It is likely that the rear part of the site has had minimal disturbance, having always been the residential garden of the building at the front, having been the site of no major development and having been a carpark built-up by fill for several decades.



Figure 1.8.6 – Overview of the carpark area, from near the rear of the buildings.



Figure 1.8.7 – Overview of the carpark area, from near the rivulet wall.

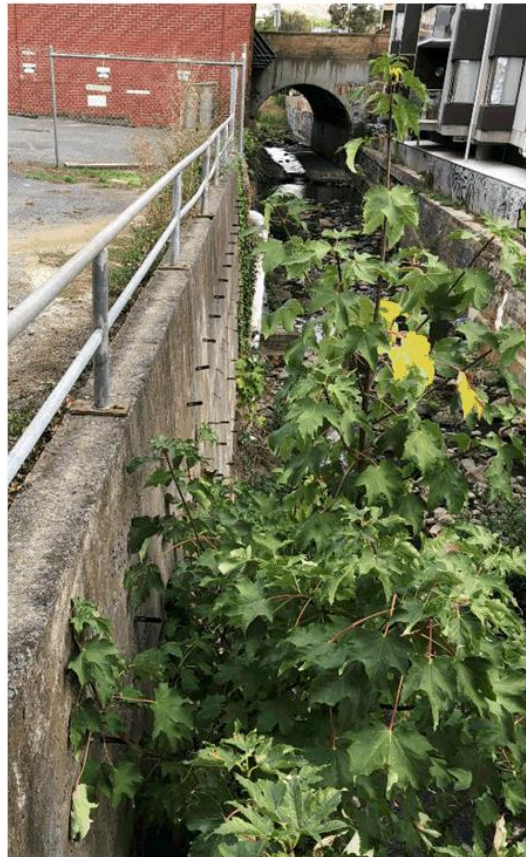


Figure 1.8.8 – The rivulet retaining wall, looking towards the Molle Street Bridge.

1.8.6. Archaeological zoning plan

Given the above discussion, the following archaeological zoning plan for the site is proposed. This is based upon the following:

- That all early major buildings on the site are still extant.
- That the only key historical feature of the site (apart from the standing buildings) that may have archaeological potential/significance is evidence of the c1817 water race.
- That the c1832 and 1907 depictions of the race are likely to be the most accurate (although the area below does include a portion of the race as shown on the Sprent survey, which may test that survey's accuracy).

The 'red' zone on Figure 1.7.9 is proposed as an area of high archaeological potential in its possible ability to yield information on the c1817 water race. The remainder of the site is designated as low/no archaeological potential:

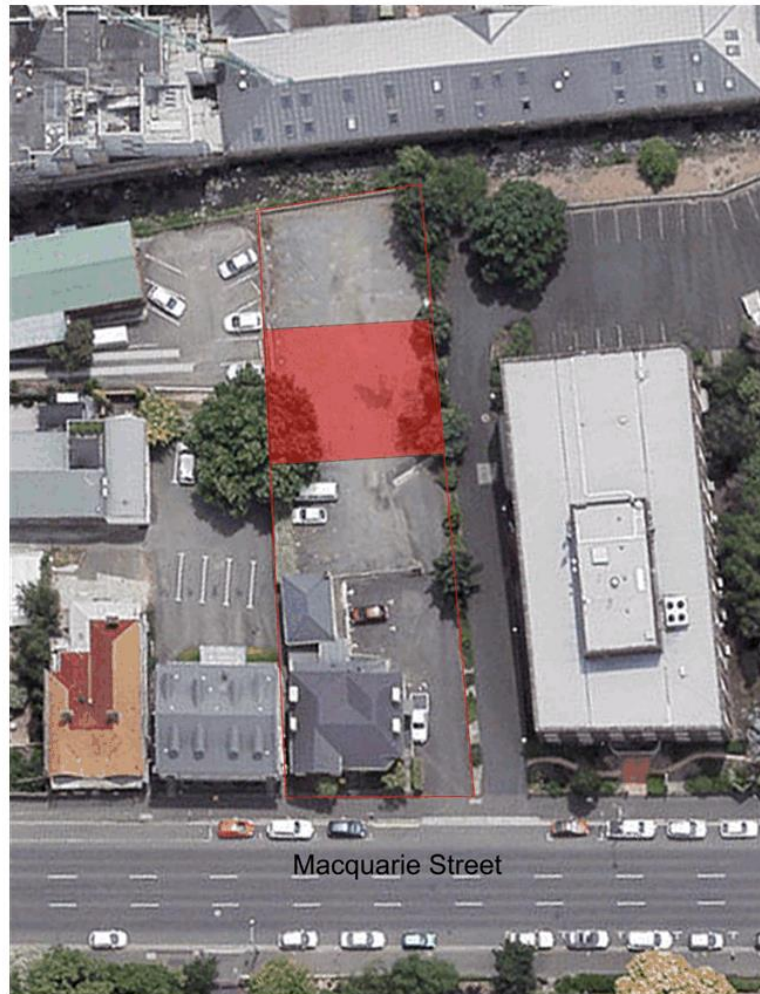


Figure 1.8.9 – Area of high archaeological potential (red). Adapted from www.thelist.tas.gov.au

Section 1.9 will include archaeological management policies further to the discussion above and the archaeological zoning plan.

1.9. Heritage management policies

Based on the statements of significance outlined in Section 1.6, and the relative significance levels attributed to specific parts of the place outlined in Section 1.7, as well as the discussion on archaeological significance in Section 1.8, the following sets policies for the future management of the heritage values of the place.

Policy #	Policy	Reason for policy
General policies		
1.	The approach to managing any works on the place must be guided by the principles of the ICOMOS Australia <i>Burra Charter</i> . ²⁷	To ensure that the future management of the heritage values of the place is undertaken to heritage industry best-practice.
2.	Any use or development of the place must not have any unreasonable adverse heritage impact upon identified values of the place.	To acknowledge that the place has heritage significance and consequent statutory heritage requirements.
The Existing building - Exterior form and fabric		
3.	The original c1830 form and fabric of the original residence should be retained and where opportunity arises the reinstatement of missing elements should occur.	To acknowledge that the building is an early residence but has been modified and lost some original exterior detailing. Whilst this policy is not mandatory it is intended to give scope to such restoration if ever desired.
4.	If ever desired, the c1907 façade could be removed and the 1830s façade reconstructed/restored.	
5.	There is little scope for extensions to the existing building although attachment to any new building could be achieved through highly transparent/ephemeral links.	To retain the simple Georgian plan form of the building.
6.	The outbuilding is to be retained. If desired, the earlier configuration of fenestration should be reinstated.	To acknowledge that the outbuilding is early and of significance but has been modified.
7.	The infill between the rear of the main building and the outbuilding may be modified or removed as desired.	To acknowledge that these parts of the site building have no heritage value.

²⁷ <http://australia.icomos.org/wp-content/uploads/The-Burra-Charter-2013-Adopted-31.10.2013.pdf>

8.	The retaining wall to the rear of the outbuilding is to be retained.	To acknowledge the significance of this wall as an early landscape element.
Interior form, fabric and spaces		
9.	Any future works which may involve major interventions to the interior may require further conservation planning input.	To acknowledge that the brief for the current project did not involve any internal inspection or analysis, and that this may be required in the future.
New buildings, streetscape and townscape development		
10.	Any subdivision of the current title must retain a reasonable curtilage to the existing building, in particular maintaining providing some 'backyard' space. No new buildings should be within 5-metres of the rear line of the outbuilding.	To retain a domestic curtilage around the building and to avoid any future backyard development dominating the existing buildings.
11.	Avoiding visual prominence and impact of any new development to the rear of the existing building should be a primary consideration – i.e. allowing the existing building to be the dominant built element in the streetscape.	To retain the prominence in the streetscape of the existing building.
12.	The overall height of any new building should ideally be lower than that of the roof peak of the existing building, however greater height may be allowable if the setback from the rear of the building is greater.	To retain the prominence in the streetscape of the existing building and to promote the independence of the existing building. Noting however that the building is already backdropped by higher development and the topography of the site is conducive to development at rear without streetscape detriment.
13.	The architectural styling of any new building need not simulate the existing building but be responsive to the tenor of that building or other chosen traditional architectural style in the near environs.	Note that the area has a wide variety of architectural styles and materials palettes that may be 'borrowed' but not necessarily imitate such.
14.	Garden/landscape elements (including fencing) should be sympathetic to the building. Any future replacement front fencing should be of a style similar to earlier examples associated with similar contemporary residences in the area. Open spaces of garden must be	To promote a suitable residential garden setting for the building.

	retained in any development to promote some 'backyard' philosophy for the site but particularly in front of the existing building.	
Archaeology		
15.	Any excavation in the vicinity of the location of the mill race is to be archaeologically monitored and if any significant remains are found these are to be managed in accordance with industry standard.	To ensure that any archaeological research potential is yielded in any development that may disturb significant archaeological remains.

The following tables consider how these policies may be applied in compliance with the performance criteria of the scheme provisions, with additional commentary where necessary. Where possibly relevant to any proposed development of the subject site, the Acceptable Solutions have been included here as initial guidance:

Clause E.13.7 (1-3) – Heritage Place

	Policy Guidance	Performance Criteria
E.13.7.1 - Demolition	<p>Policy 3 – Retain the exterior form of the main portion of the building.</p> <p>Policy 4 – Retain/reinstate significant exterior detailing.</p> <p>Policy 7 – Demolition of the modern extensions if desired</p> <p>Policy 8 – Retain the stone retaining wall.</p> <p>Policy 9 – Further analyse interior of the building if major works are planned.</p>	<p><i>Demolition must not result in the loss of significant fabric, form, items, outbuildings or landscape elements that contribute to the historic cultural heritage significance of the place unless all of the following are satisfied;</i></p> <p><i>(a) there are, environmental, social, economic or safety reasons of greater value to the community than the historic cultural heritage values of the place;</i></p> <p><i>(b) there are no prudent and feasible alternatives;</i></p> <p><i>(c) important structural or façade elements that can feasibly be retained and reused in a new structure, are to be retained;</i></p> <p><i>(d) significant fabric is documented before demolition.</i></p>
E.13.7.2 – Building and Works other than Demolition	<p>Policy 4 – Reinstate original façade if desired</p> <p>Policy 5 – Little scope for extensions although semi-detached may be possible.</p> <p>Policy 9 – Further analyse interior of the building if major works are planned.</p> <p>Policies 11-13 - Bulk, style, form, setback and materials of any new building to the rear.</p>	<p><i>P1. Development must not result in any of the following:</i></p> <p><i>(a) loss of historic cultural heritage significance to the place through incompatible design, including in height, scale, bulk, form, fenestration, siting, materials, colours and finishes;</i></p> <p><i>(b) substantial diminution of the historic cultural heritage significance of the place through loss of significant streetscape elements including plants, trees, fences, walls, paths, outbuildings and other items that contribute to the significance of the place.</i></p> <p><i>P2. Development must be designed to be subservient and complementary to the place through characteristics including:</i></p> <p><i>(a) scale and bulk, materials, built form and fenestration;</i></p> <p><i>(b) setback from frontage;</i></p> <p><i>(c) siting with respect to buildings, structures and listed elements;</i></p>

		<i>(d) using less dominant materials and colours.</i>
	Policy 5 – Little scope for extensions although semi-detached may be possible.	<i>P3. Materials, built form and fenestration must respond to the dominant heritage characteristics of the place, but any new fabric should be readily identifiable as such.</i>
	Policies 11-13 - Bulk, style, form, setback and materials of any new building to the rear.	<i>P4. Extensions to existing buildings must not detract from the historic cultural heritage significance of the place.</i>
	Policy 14 – Landscape elements to be sympathetic to the building and some domestic 'yard' spaces to be maintained.	<i>P5. New front fences and gates must be sympathetic in design, (including height, form, scale and materials), to the style, period and characteristics of the building to which they belong.</i>
		<i>P6. The removal of areas of landscaping between a dwelling and the street must not result in the loss of elements of landscaping that contribute to the historic cultural significance of the place.</i>
E.13.7.3 - Subdivision	Policy 10 – Any further subdivision to retain a sufficient curtilage to the existing building.	<i>P1. A proposed plan of subdivision must show that historic cultural heritage significance is adequately protected by complying with all of the following:</i> <ul style="list-style-type: none"> <i>(a) ensuring that sufficient curtilage and contributory heritage items (such as outbuildings or significant plantings) are retained as part of any title containing heritage values;</i> <i>(b) ensuring a sympathetic pattern of subdivision;</i> <i>(c) providing a lot size, pattern and configuration with building areas or other development controls that will prevent unsympathetic development on lots adjoining any titles containing heritage values, if required.</i>

Part 2 – Proposed development and heritage impact assessment

As per the methodology detailed in Section 1.3, and further to the brief for this project as per Section 1.1, the following heritage impact assessment takes the conservation policies from this document as well as the statutory heritage provisions which apply to the place and applies these to a proposed development for the place.

Again, it is emphasised that the conservation policies were formulated in the absence of any foreshadowed development of the site – and have aimed to take the general characteristics of the site and surrounds and to develop conservation policies which the design process is to respond to in order to align to the relevant statutory heritage provisions. The conservation policies have been used to inform the design process and the heritage impact assessment has measured the performance of the design process in meeting the heritage objectives.

2.1. The proposed development

A proposal has been developed by Heffernan Button Vos Architects in conjunction with Rosevear Stephenson Architects on behalf of 201 Macquarie Street Pty. Ltd. for a propose 47 x 1-bedroom apartment block on the rear section of the subject site. The proposal retains the existing buildings on the site. The development is described in HBV/RS Drawings for *Project Apartment Development 201 Macquarie Street Hobart TAS* Drawing no's 112.A01 to 112.A13 Issue F. These are to be read in conjunction with the planning report by ERA Planning, and the architectural statement by HBV/RS Architects (included in the assessment below).

Broadly, this will involve:

- Bulk excavation of most of the rear of the subject site for subterranean parking on two levels.
- Construction of a 47 x 1-bedroom apartment block on 6 habitable levels.
- Complete retention as-existing of the heritage residence on the front of the site.
- Refurbishment of the existing former stables building as office space and an entry statement for the new development.
- Removal of intrusive modern elements between the existing residence and former stables.
- Demolition of the existing stone retaining wall at the rear of the residence.

Section 2.2 will consider the specific proposed actions against the specific works recommendations and conservation policies developed in Part 1 as a Heritage Impact Assessment, consistent with the Burra Charter approach to understanding heritage impacts (as per the methodology outlined in Section 1.3, and Policy A of this document).

2.2. Heritage & archaeological impact assessment and statement of compliance

This heritage impact assessment will assess the possible impact of the works outlined in Section 2.1 (as detailed on the cited plans), against the specific policies outlined in Section 1.10, aimed at assisting the statutory assessment and determination of the proposal as required by the relevant heritage listings detailed in Section 1.2 (via the assessment against the performance criteria of the planning scheme). This will include a general heritage impact assessment as well as an archaeological impact assessment.

2.2.1 – Archaeological impact assessment

As per the documentation, the entire rear of the site is proposed to be excavated to make way for two levels of subterranean parking. The statement of historical archaeological potential in Section 1.8 depicts an area of archaeological potential at the rear of the site which was the line of the 1810s mill race that once ran parallel to the Hobart Rivulet serving one of Hobart's early mills. This is the only historical development ever to have been on the rear of the site and represents the only possible archaeological structure that may be present. Figure 2.2.1 depicts that zone of archaeological potential. Note that the actual line of the water race is likely to be very narrow (probably less than a metre wide) however the historic depictions of the actual line of the race vary – hence the wider zone of archaeological potential.

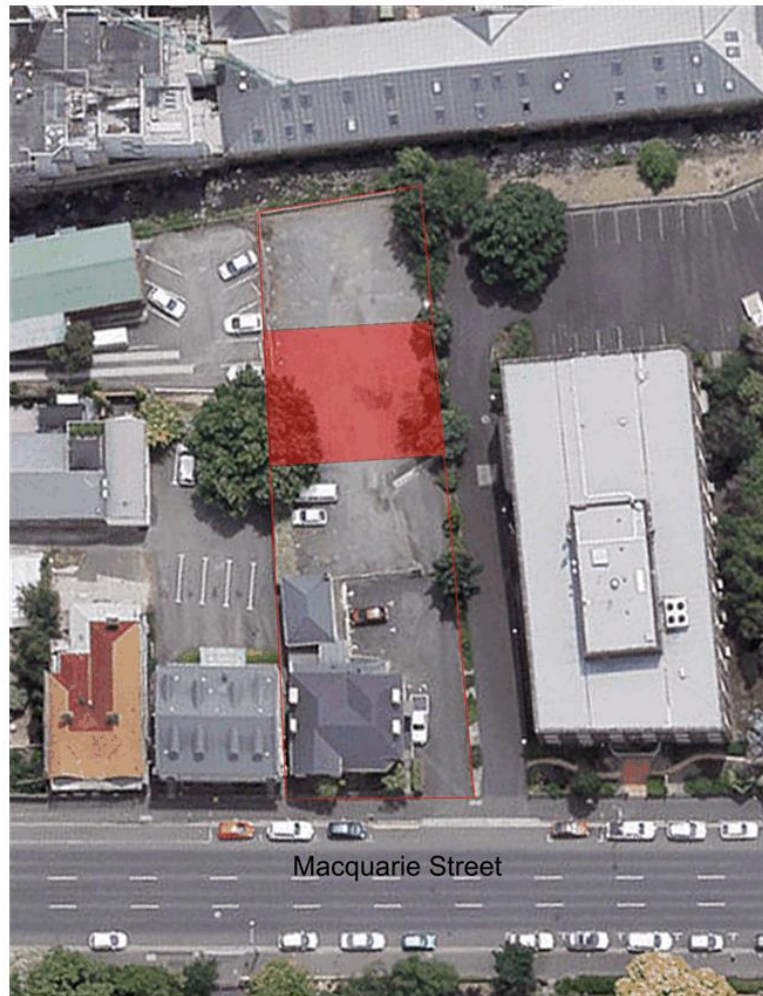


Figure 2.2.1 – Area of high archaeological potential (red). Adapted from www.thelist.tas.gov.au

The proposal requires the entire removal of this area to a depth expected to exceed the basal depth of archaeological deposits and will result in their entire removal within this site. As per the statement of archaeological potential, the nature, depth and integrity of these remains is not known and the archaeological investigation of the remains is a means by which an understanding of the remains can be gained (i.e. the yielding of archaeological potential). Section 1.8.4 has discussed some previous works that have sought to identify (or mitigate impacts) upon other portions of the mill race and have thus far yielded no archaeological information on the race. Investigation as part of this

development has the potential to yield that potential and provide a better understanding of the race that may have implications for better understanding the remnants of the race elsewhere along its former course.

Further to Policy 15 in section 1.9, it is recommended that any excavations on the site be archaeologically monitored in order to yield any archaeological information that may derive from the mill race. As per above, it is proposed that the development necessitates removal in-total of the ground likely to contain such remains, therefore it is proposed that a detailed archaeological reconnaissance be implemented as part of the works program in order to ensure that such data is yielded – in order to offset the physical loss of that archaeological potential resulting from the proposal. This is considered to be an acceptable outcome in balancing the yield of archaeological potential whilst still facilitating the proposed development.

The following section will propose a detailed archaeological method statement in order to mitigate that impact.

2.2.2 – Archaeological method statement

Test trenching

Given the nature of expected archaeological remains being limited to a linear feature (i.e. the mill race) it is proposed that a test trench initially be excavated across the area identified as being of archaeological potential in order to test the likely location of the race (noting the commentary above that the designated area is much wider than the expected width of the mill race – owing to the variation in historical depictions of the line of the race). The test trench will be excavated ahead of the works program in order to better refine the desktop archaeological assessment of the current document – to better understand the nature of remains, whether or not they are present and to narrow the defined area of archaeological potential. This trench will be one metre wide, excavated via the methodology below and be positioned to cross the area of archaeological potential in a location determined in consultation with the property manager so as to minimize disruption to parking on the site.

If the test trench determines the presence and location of the mill race, the methodology will be employed ahead of or during the works process to thoroughly investigate and document the race prior to the bulk excavation of the site.

If no trace of the race is found in this test excavation, the archaeological input shall cease following the testing program.

Excavation methodology

If the test trenching identifies the location and line of the race then the extent of the race will be archaeologically excavated and documented prior to the bulk excavation of the site. Bitumen and non-significant overburden will be removed via mechanical excavator under archaeological supervision to just above the expected depth of the race

structure as determined by the test excavation. The area will be gridded as a linear feature 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 the stratigraphic sequence will be relatively simple, that of a post-race-use fill layer, the race itself and natural ground below (possibly including some disturbance). 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).

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).

Recording

Any structure or significant cultural deposit encountered will be thoroughly recorded (both photographically 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). The first preference will be to keep structural remains in-situ (and covered in geo-fabric, unless removal is necessary to further investigate lower strata (which may bear archaeological remains), or if there is no prudent and feasible

alternative to removal to allow the development to proceed – in which case remains will be removed after thorough recording.

Artifacts

It is expected that the structure of the race itself will be the only item of archaeological interest likely to be encountered in these excavations, however in the unlikely event that any significant artifacts are found during excavations, these 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.

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 photography)
- 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
- Photograph log

A copy of the final report, and project archive, will be deposited with Hobart City Council (and other repositories as listed below) within 6 months of completion of the excavations.

Public benefit

Subject to the exact nature and findings of the archaeological program, the following public benefit program will be implemented during and following the works:

- 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.

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*

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).

2.2.3. Assessment against conservation policy:

As per the methodology outlined in Section 1.3, this document has undertaken an analysis of the form, fabric and spaces of the place in order to refine a statement of historic heritage significance and to formulate conservation policies which align to the statutory heritage requirements in order to maintain that significance in the event of any future development on the site. The proposed development as detailed in the documentation cited above will be assessed in-line with that conservation policy in order to determine the compliance of the proposal with that policy. Where any disparity in compliance occurs, commentary will be made below from the architectural statement whereby a range of other consideration (i.e. not necessarily limited to heritage) will be detailed in order to resolve any non-compliance and to attempt to justify any heritage impacts. Following that discussion against the conservation policies, the proposal will be assessed against the specific statutory heritage requirements of Section 1.2.

Policy #	Policy	Reason for policy	Compliance with policy	Architects' response
General policies				
1	The approach to managing any works on the place must be guided by the principles of the ICOMOS Australia <i>Burra Charter</i> .	To ensure that the future management of the heritage values of the place is undertaken to heritage industry best-practice.	The current document has been formulated to guide the management of the heritage values of the place consistent with the ICOMOS Australia Burra Charter (as per the process detailed in Section 2.	
2	Any use or development of the place must not have any unreasonable adverse heritage impact upon identified values of the place.	To acknowledge that the place has heritage significance and consequent statutory heritage requirements.	The current document has provided input into the planning of the proposed development which seeks to retain the significance of the place and to follow the ICOMOS Australia Burra Charter process as detailed in Section 1.3.	
The Existing building - Exterior form and fabric				
3	The original c1830 form and fabric of the original residence should be retained and where opportunity arises the reinstatement of missing elements should occur.	To acknowledge that the building is an early residence but has been modified and lost some original exterior detailing. Whilst this policy is not mandatory it is intended	The proposal retains the 1830s form and fabric of the original residence and in fact strips back some later accretions to better present that form.	Not required.

4	If ever desired, the c1907 façade could be removed and the 1830s façade reconstructed/restored.	to give scope to such restoration if ever desired.	The current proposal does not include this action but does not preclude it in the future.	Not required.
5	There is little scope for extensions to the existing building although attachment to any new building could be achieved through highly transparent/ephemeral links.	To retain the simple Georgian plan form of the building.	No extension to the building is proposed. In fact modern accretions which distort the form of the building(s) and relationship between the main building and outbuilding are to be removed which will result in a heritage benefit.	Not required.

6	The outbuilding is to be retained. If desired, the earlier configuration of fenestration should be reinstated.	To acknowledge that the outbuilding is early and of significance but has been modified.	<p>The proposal retains the outbuilding and provides for an invigorated use and revelation of original/significant fabric. It is not proposed to reinstate the original fenestrative pattern, however the proposal does not preclude the possibility of that occurring in the future.</p> <p>Whilst the enlargement of one existing opening to a doorway is not ideal, please refer to the architect's response which demonstrates why this is necessary for the scheme.</p> <p>Note that one non-original opening in the upper floor is to be blocked which does reinstate some of the original fenestrative pattern.</p>	<p>Whilst the enlargement of the lower level window to create an entrance is not ideal in the sense that it further changes the heritage fabric, the photo on p.29 of the HIA does suggest an entry was originally in this location. Given this and that it makes logical planning sense to present a door in the proposed location, it was considered reasonable to make the further change to the building</p>
7	The infill between the rear of the main building and the outbuilding may be modified or removed as desired.	To acknowledge that these parts of the site building have no heritage value.	This is proposed for removal in compliance with this policy.	Not required.

8	The retaining wall to the rear of the outbuilding is to be retained.	To acknowledge significance of this wall as an early landscape element.	The majority of the wall is to be removed, which is not in compliance with this policy.	The wall is unfortunately in poor repair and has been substantially altered when ones compares it to the HIA historical photos. Its location is within the proposed footprint of major elements of the new building and hence its full retention is unfeasible. Instead it is proposed to retain the stable end of the wall in situ and as part of the stables base wall such that the original change of topography that required the wall is still read on this side of the development in its original form.
Interior form, fabric and spaces				
9	Any future works which may involve major interventions to the interior may require further conservation planning input.	To acknowledge that the brief for the current project did not involve any internal inspection or analysis, and that this may be required in the future.	<p>No works are proposed in the interior of the main building.</p> <p>It is proposed to stripout the current modern linings in the interior of the outbuilding, which will be subject to a further heritage inspection during the works process to identify and guide the conservation and presentation of any significant heritage fabric.</p>	Not required.

New buildings, streetscape and townscape development				
10	Any subdivision of the current title must retain a reasonable curtilage to the existing building, in particular maintaining providing some 'backyard' space. No new buildings should be within 5-metres of the rear line of the outbuilding.	To retain a domestic curtilage around the building and to avoid any future backyard development dominating the existing buildings.	The proposal retains some 'backyard space' for the existing building which is combined as the entry forecourt to the new building. Whilst the new building is proposed to be closer to the existing building than anticipated by this policy, the advantages of invigorating the outbuilding as an entry statement to the proposed development is considered advantageous.	We considered a 5 metre setback would effectively create a dead zone between the new and old and one which would be of little benefit as far as the public's view of the stables from surrounding streets as any new building of similar height in the proposed location would largely obscure the stables no matter the setback. Instead we proposed to integrate the stables with the one storey entry element of the new building so that the stables are both physically and functionally engaged by the proposed development.
11	Avoiding visual prominence and impact of any new development to the rear of the existing building should be a primary consideration – i.e. allowing the existing building to be the dominant built element in the streetscape.	To retain the prominence in the streetscape of the existing building.	Despite the size of the proposed new building, the natural fall of the land and forward location of the existing building retains a natural streetscape prominence and relationship with contemporary neighbours in the street as evidenced by the photomontages provided as part of the application. The new building is not unprecedented in this area and adds to the layering of the evolution of this part of the site with the historic streetfront development remaining the focal point.	

12	<p>The overall height of any new building should ideally be lower than that of the roof peak of the existing building, however greater height may be allowable if the setback from the rear of the building is greater.</p>	<p>To retain the prominence in the streetscape of the existing building and to promote the independence of the existing building. Noting however that the building is already backdropped by higher development and the topography of the site is conducive to development at rear without streetscape detriment.</p>	<p>Whilst the proposed building will read as approximately two storeys higher than the existing building, the setback and slope of the land (as per above) will allow the existing building to retain a streetfront dominance and the natural slope of the land will reduce the apparent height of the proposed building.</p>	<p>The main bulk of the bulking, (i.e. excluding the lift, stair and roof terrace at level 5,) is on par with 203 Macquarie street and less than a storey higher than the ridge of 201 Macquarie Street. When viewed from the street - either directly or to the west, the proposed development will not be visible behind the original buildings. Only once one passes the 201 original building will one see the new building and then it is read down slope and well set back such that any issue of street front dominance is not applicable.</p>
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13	<p>The architectural styling of any new building need not simulate the existing building but be responsive to the tenor of that building or other chosen traditional architectural style in the near environs.</p>	<p>Note that the area has a wide variety of architectural styles and materials palettes that may be 'borrowed' but not necessarily imitate such.</p>	<p>The proposed building will be clearly modern and is the styling is not considered to be at odds with the architectural merit of the existing building. In fact for a building of this size to attempt to emulate any historic style would be considered tokenistic and not respectful in a failure to truly demonstrate the evolution of this part of the city.</p>	<p>The proposal intends to combine three main elements to create a simple, well proportioned 'background' building that comfortably infills between the surround fabric. These elements are the brick base and entrance in reference to surrounding brick fabric, the off white concrete main body of building accentuated by finer apartment balcony detailing and the lift, stair and roof terrace enclosure presenting a subtle but changing facade to Macquarie Street with the use of minimal glass block facade. Together the intention is to create a subtle modern building that sits back does not compete with the heritage frontage.</p>
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14	Garden/landscape elements (including fencing) should be sympathetic to the building. Any future replacement front fencing should be of a style similar to earlier examples associated with similar contemporary residences in the area. Open spaces of garden must be retained in any development to promote some 'backyard' philosophy for the site but particularly in front of the existing building.	To promote a suitable residential garden setting for the building.	The proposal retains a small backyard space to the existing building as an entry forecourt to the new building. There are no proposed changes to the front fencing or front garden of the existing building.	
Archaeology				
15	Any excavation in the vicinity of the location of the mill race is to be archaeologically monitored and if any significant remains are found these are to be managed in accordance with industry standard.	To ensure that any archaeological research potential is yielded in any development that may disturb significant archaeological remains.	The proposal includes an archaeological impact assessment and archaeological method statement in compliance with this policy that will be implemented ahead of or as part of the early works program.	

2.2.4 - Assessment against E.13.7 Performance Criteria

Clause E.13.7 (1-3) – Heritage Place

	Performance Criteria	Commentary
E.13.7.1 - Demolition	<p><i>Demolition must not result in the loss of significant fabric, form, items, outbuildings or landscape elements that contribute to the historic cultural heritage significance of the place unless all of the following are satisfied;</i></p> <ul style="list-style-type: none"> <i>(e) there are, environmental, social, economic or safety reasons of greater value to the community than the historic cultural heritage values of the place;</i> <i>(f) there are no prudent and feasible alternatives;</i> <i>(g) important structural or façade elements that can feasibly be retained and reused in a new structure, are to be retained;</i> <i>(h) significant fabric is documented before demolition.</i> 	<p>The proposal does not result in the demolition of any significant fabric associated with the heritage buildings themselves (although it is recommended that further analysis of the interior of the stables be undertaken once modern linings are stripped, and that any significant detailing be retained).</p> <p>The demolition of the non-significant fabric of the infill between the existing residence and outbuilding is considered advantageous in the restoration of the earlier form and relationship of those buildings. Demolition of modern internal linings (etc.) of the outbuilding will reveal earlier forms and fabric (subject to further analysis post-demolition) which is likely to also be advantageous in presenting that building as a heritage building.</p> <p>The demolition of the retaining wall will result in the loss of some contributory heritage fabric. The following addresses the specific points in the performance criterion:</p> <ul style="list-style-type: none"> a. Please refer to the architect's statement (above) for the rationale of this demolition regarding the greater value achieved by demolition. b. As above. c. It proposed that the stone be salvaged and reused in landscape elements. d. The wall will be photographically recorded as part of the archaeological site report.
E.13.7.2	<p><i>P1. Development must not result in any of the following:</i></p>	<p>Height: The height of the proposed development is larger than anticipated in the conservation policy however due to the natural slope of the land and setback from the rear of the main heritage building, the existing building will retain its streetscape</p>

	<p>(a) <i>loss of historic cultural heritage significance to the place through incompatible design, including in height, scale, bulk, form, fenestration, siting, materials, colours and finishes;</i></p> <p>(b) <i>substantial diminution of the historic cultural heritage significance of the place through loss of significant streetscape elements including plants, trees, fences, walls, paths, outbuildings and other items that contribute to the significance of the place.</i></p>	<p>prominence and townscape associations as demonstrated in the photomontages accompanying the application.</p> <p>Scale, bulk and form: The scale and bulk of the proposed building is preceded in the area and although acting as a backdrop element to the existing building, the existing building will retain its streetscape prominence and remain legible as a nineteenth-century streetscape element.</p> <p>Fenestration: The proposed building has a clearly modern fenestration pattern and appropriately does not attempt to emulate earlier forms. The new building reading as clearly modern is considered an appropriate response. The clustering of fenestration on the side elevations into vertical groupings are somewhat interpreting of a 'townhouse' style stepping down the hill and will act to break the block-like form of the building. The glass block street elevation will act to give the building a sense of transparency and reduce the apparent mass by promoting visual permeability and softening the backdrop effect that the building will have.</p> <p>Siting: The proposed building will be sited to the rear of the existing building and although closer to the outbuilding than anticipated in the conservation policy allows the outbuilding to be used as an entrance statement to the new building and is considered to be advantageous in enlivening the outbuilding as a transitional element from old to new.</p> <p>Materials, colours and finishes: The proposed wall modern materials palette which is consistent with the precedent of the surrounding modern buildings – e.g. face brick of 199 Macquarie Street and concrete panel as per 212 Collins Street). The heritage buildings of the site and area represent an array of materials and any attempt to emulate one particular material is likely to result in a skewed sense of the evolution of the precinct. The</p>
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		<p>new building reading as clearly modern is considered an appropriate response. See further comment on the materiality of the fenestration discussed above.</p> <p>No significant streetscape elements will be lost with the proposed development.</p>
	<p><i>P2. Development must be designed to be subservient and complementary to the place through characteristics including:</i></p> <ul style="list-style-type: none"> <i>(a) scale and bulk, materials, built form and fenestration;</i> <i>(b) setback from frontage;</i> <i>(c) siting with respect to buildings, structures and listed elements;</i> <i>(d) using less dominant materials and colours.</i> 	<p>Although of a large scale, the proposed building allows the existing heritage building to maintain a streetfront dominance due to the rearward placement and the natural downhill slope. The rear setback of the proposed building from the existing allows a visual separation and the retention of the backyard space of the existing building also supports the maintenance of the existing building's dominance of the street frontage of the site.</p> <p>The street facing wall of glass brick will provide a softer backdrop element which will be visually permeable and considered to be a softer approach than a harder masonry wall which will contrast with the more rugged stone and brick materiality of the existing building again ranking that building as seemingly more permanent and dominant when viewed from the street.</p>
	<p><i>P3. Materials, built form and fenestration must respond to the dominant heritage characteristics of the place, but any new fabric should be readily identifiable as such.</i></p>	<p>The proposed extension will clearly read as a modern element. The vastly different scale, form and bulk of the proposed building means that an attempt to emulate any particular element of the heritage building may result in a confused pastiche of the evolution of the site and it is considered that a clearly modern approach is appropriate in this instance.</p>
	<p><i>P4. Extensions to existing buildings must not detract from the historic cultural heritage significance of the place.</i></p>	<p>The proposal does not involve an extension to existing buildings.</p>
	<p><i>P5. New front fences and gates must be sympathetic in design, (including height, form, scale and materials), to the style, period and characteristics of the building to which they belong.</i></p>	<p>The proposal does not include any new front fencing.</p>

	<i>P6. The removal of areas of landscaping between a dwelling and the street must not result in the loss of elements of landscaping that contribute to the historic cultural significance of the place.</i>	No significant landscaping is proposed for removal.
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12 August 2020

Liz Wilson
City of Hobart
GPO Box 503
HOBART TAS 7001

Dear Liz,

201 MAQUARIE STREET – PLN-19-768
RESPONSE TO REQUEST FOR FURTHER INFORMATION

Please find responses below in relation to Council's request for further information letter dated 17 July 2020.

PLN 1

See attached Amended Traffic Impact Assessment and Amended Architectural Plans. This documentation details how waste management will be undertaken onsite by private contractor, Veolia. Veolia are proposing to reverse in from Macquarie Street, as they do in other circumstances, and thus turning diagrams have not been provided.

PA 7

See attached Amended Traffic Impact Assessment. The previously submitted crown landowner consent from the Department of State Growth remains valid as the operation of the car lift is shown to not impact upon Macquarie Street. A full version of the consent, including the application documents referenced in the consent, is attached.

Sw 1

The previously submitted Amended Hydraulic Services Drawing No.H1.02 references an existing stormwater main and a proposed stormwater main replacement. The existing main will be replaced by the proposed main, ensuring that there is only one connection for the lot.

Yours sincerely,

Mark O'Brien
Senior Planner

Attachments *Amended Traffic Impact Assessment (August 2020)*
 Amended Architectural Plans (August 2020)
 Crown Landowner Consent Including Application Documents



Submission to Planning Authority Notice

Council Planning Permit No.	PLN-19-768	Council notice date	11/11/2019
TasWater details			
TasWater Reference No.	TWDA 2019/01665-HCC	Date of response	07/07/2020
TasWater Contact	Anthony Cengia	Phone No.	0474 933 293
Response issued to			
Council name	HOBART CITY COUNCIL		
Contact details	coh@hobartcity.com.au		
Development details			
Address	201 MACQUARIE ST, HOBART	Property ID (PID)	5668368
Description of development	Partial Demolition, Alterations, Multiple Dwellings x49 Signage and Change of Use to Office		
Schedule of drawings/documents			
Prepared by	Drawing/document No.	Revision No.	Date of Issue
Aldanmark	19E53-1 Sheets H1.01, H2.02, H2.03	4	26/06/2020
HBV	112 Sheets A01 to A16	L	
Conditions			
SUBMISSION TO PLANNING AUTHORITY NOTICE OF PLANNING APPLICATION REFERRAL			
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:			
CONNECTIONS, METERING & BACKFLOW			
<p>1. A suitably sized water supply with metered connections and sewerage system and connection to the development must be designed and constructed to TasWater's satisfaction and be in accordance with any other conditions in this permit.</p> <p>Advice: TasWater will not accept direct fire boosting from the network unless it can be demonstrated that the periodic testing of the system will not have a significant negative effect on our network and the minimum service requirements of other customers serviced by the network. To this end break tanks may be required with the rate of flow into the break tank controlled so that peak flows to fill the tank do not also cause negative effect on the network.</p>			
<p>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.</p>			
<p>3. Prior to commencing construction/use of the development, any water connection utilised for construction/the development must have a backflow prevention device and water meter installed, to the satisfaction of TasWater.</p>			
ASSET CREATION & INFRASTRUCTURE WORKS			
<p>4. Plans submitted with the application for Certificate(s) for Certifiable Work (Building and/or Plumbing) / Engineering Design Approval must, to the satisfaction of TasWater show, all existing, redundant and/or proposed property services and mains.</p>			
<p>5. Prior to applying for a Permit to Construct new infrastructure the developer must obtain from</p>			



TasWater Engineering Design Approval for new TasWater infrastructure. The application for Engineering Design Approval must include engineering design plans prepared by a suitably qualified person showing the hydraulic servicing requirements to TasWater's satisfaction.

6. Prior to works commencing, a Permit to Construct must be applied for and issued by TasWater. All infrastructure works must be inspected by TasWater and be to TasWater's satisfaction.
7. In addition to any other conditions in this permit, all works must be constructed under the supervision of a suitably qualified person in accordance with TasWater's requirements.
8. Prior to the issue of a Certificate of Water and sewerage Compliance (Building and/or Plumbing) all additions, extensions, alterations or upgrades to TasWater's infrastructure required to service the development, are to be constructed at the expense of the developer to the satisfaction of TasWater, with live connections performed by TasWater.
9. After testing to TasWater's requirements, of newly created works, the developer must apply to TasWater for connection of these works to existing TasWater infrastructure, at the developer's cost.
10. At practical completion of the water and sewerage works and prior to TasWater issuing a Certificate of Water and Sewerage Compliance (Building and/or Plumbing), the developer must obtain a Certificate of Practical Completion from TasWater for the works that will be transferred to TasWater. To obtain a Certificate of Practical Completion:
 - a. Written confirmation from the supervising suitably qualified person certifying that the works have been constructed in accordance with the TasWater approved plans and specifications and that the appropriate level of workmanship has been achieved;
 - b. A request for a joint on-site inspection with TasWater's authorised representative must be made;
 - c. Security for the twelve (12) month defects liability period to the value of 10% of the works must be lodged with TasWater. This security must be in the form of a bank guarantee;
 - d. As constructed drawings must be prepared by a suitably qualified person to TasWater's satisfaction and forwarded to TasWater.
11. After the Certificate of Practical Completion has been issued, a 12 month defects liability period applies to this infrastructure. During this period all defects must be rectified at the developer's cost and to the satisfaction of TasWater. A further 12 month defects liability period may be applied to defects after rectification. TasWater may, at its discretion, undertake rectification of any defects at the developer's cost. Upon completion, of the defects liability period the developer must request TasWater to issue a "Certificate of Final Acceptance". The newly constructed infrastructure will be transferred to TasWater upon issue of this certificate and TasWater will release any security held for the defects liability period.
12. The developer must take all precautions to protect existing TasWater infrastructure. Any damage caused to existing TasWater infrastructure during the construction period must be promptly reported to TasWater and repaired by TasWater at the developer's cost.
13. Ground levels over the TasWater assets and/or easements must not be altered without the written approval of TasWater.
14. A construction management plan must be submitted with the application for TasWater Engineering Design Approval. The construction management plan must detail how the new TasWater infrastructure will be constructed while maintaining current levels of services provided by TasWater to the community. The construction plan must also include a risk assessment and contingency plans covering major risks to TasWater during any works. The construction plan must be to the satisfaction of TasWater prior to TasWater's Engineering Design Approval being issued.

**EASEMENTS & ENDORSEMENTS**

15. Pipeline easements, to TasWater's satisfaction, must be created over any existing or proposed TasWater infrastructure and be in accordance with TasWater's standard pipeline easement conditions.
16. Prior to the issue of a Certificate of Water & Sewerage Compliance (Building and or Plumbing) / Certificate of Practical Completion from TasWater, the applicant must submit a copy of the completed Transfer for the provision of a Pipeline and Services Easement(s) over the subject property, 199 MACQUARIE ST (C.T. 9220/3) & 49 MOLLE ST (C.T. 111776/1) to cover proposed TasWater infrastructure.

56W CONSENT

17. Prior to the issue of the Certificate for Certifiable Work (Building) and/or (Plumbing) by TasWater the applicant or landowner as the case may be must make application to TasWater pursuant to section 56W of the Water and Sewerage Industry Act 2008 for its consent in respect of that part of the development which is built within a TasWater easement or over or within two metres of TasWater infrastructure.

DEVELOPMENT ASSESSMENT FEES

18. 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 fee will be indexed, until the date paid to TasWater.

The payment is required within 30 days of the issue of an invoice by TasWater.

Advice**General**

For information on TasWater development standards, please visit <http://www.taswater.com.au/Development/Development-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.

- (a) A permit is required to work within TasWater's easements or in the vicinity of its infrastructure. Further information can be obtained from TasWater
- (b) TasWater has listed a number of service providers who can provide asset detection and location services should you require it. Visit www.taswater.com.au/Development/Service-location for a list of companies
- (c) TasWater will locate residential water stop taps free of charge
- (d) Sewer drainage plans or Inspection Openings (IO) for residential properties are available from your local council.

56W Consent

The plans submitted with the application for the Certificate for Certifiable Work (Building) and/or (Plumbing) will need to show footings of proposed buildings located over or within 2.0m from TasWater pipes and will need to be designed by a suitably qualified person to adequately protect the integrity of TasWater's infrastructure, and to TasWater's satisfaction, be in accordance with AS3500 Part 2.2 Section 3.8 to ensure that no loads are transferred to TasWater's pipes. These plans will need to also include a cross sectional view through the footings which clearly shows;



- (e) Existing pipe depth and proposed finished surface levels over the pipe;
- (f) The line of influence from the base of the footing must pass below the invert of the pipe and be clear of the pipe trench and;
- (g) A note on the plan indicating how the pipe location and depth were ascertained.

Boundary Trap Area

The proposed development is within a boundary trap area and the developer will need to provide a boundary trap that prevents noxious gases or persistent odours back venting into the property's sanitary drain. The boundary trap is to be contained within the property boundaries and the property owner remains responsible for the ownership, operation and maintenance of the boundary trap.

Declaration

The drawings/documents and conditions stated above constitute TasWater's Submission to Planning Authority Notice.

Authorised by

A handwritten signature in black ink, appearing to read "J. Taylor".

Jason Taylor
Development Assessment Manager

TasWater Contact Details

Phone	13 6992	Email	development@taswater.com.au
Mail	GPO Box 1393 Hobart TAS 7001	Web	www.taswater.com.au

Application Referral Cultural Heritage - Response

From:	Sarah Waight
Recommendation:	
Date Completed:	
Address:	201 MACQUARIE STREET, HOBART 49 MOLLE STREET, HOBART 199 MACQUARIE STREET, HOBART ADJACENT RIVULET
Proposal:	Partial Demolition, Alterations, Partial Change of Use to Office and Two Multiple Dwellings, New Building for 45 Multiple Dwellings, Signage and Associated Works
Application No:	PLN-19-768
Assessment Officer:	Ben Ikin,

Referral Officer comments:

This application is for an apartment building located on a heritage place listed in Table E13.1 of the Historic Heritage Code. It is also within a Place of Archaeological Potential. The proposal is immediately adjacent to the Hobart Rivulet Heritage Precinct.



201 Macquarie Street (red brick building). Source: Council image



Rear of subject property taken from a position adjacent to the Hobart Rivulet with a view toward Macquarie Street. Source: Council image

The proposal is for demolition and new work. The proposal must be assessed against the following provisions of the Historic Heritage Code of the Scheme.

E13.7.1 P1 - Demolition - heritage place

E13.7.2 P1, P2, P3, P4 - New work - heritage place

E13.10.1 P1 - Demolition and new work - Place of Archaeological Potential

The proposal is supported by the following documentation:

- *Conservation Management Policy, Statement of Archaeological Potential and Development Impact Assessment by Praxis Environment*, dated February 2019 (Heritage Impact Assessment September 2019).

Representations:

168 representations were received during the advertised period. The following heritage related comments were received.

- "My specific concerns with this proposed development are in relation to the long single heritage building across the rivulet: height and width of the building dominate the heritage building therefore not respectful of the heritage design."
- "Why do these companies spoil so much of our beautiful and historic city?"
- "The style of the proposed development is also completely incompatible with the heritage buildings in the area and the proposed development should be rejected for this reason alone."
- "It should fit in with the heritage values of the area and not present an appearance of a building that could be from anywhere. People come to Hobart in appreciation of its heritage buildings, and the council isn't doing enough to preserve this."
- "This proposal will present a bulk wall to the vista from West Hobart and detract from the view of other heritage buildings in the area."
- "that the city CAN be developed with care and consideration for its unique heritage and not rushed."
- "Totally inappropriate development for this historic area in terms of design, size and aesthetics. It's so ugly!!!"
- "another unimaginative converter apartment block which gives no character to our city of beautiful old sandstone buildings."
- "Too big, not respecting heritage area and buildings at all"
- "Please respect our heritage listed properties by not approving huge overshadowing"

- modern buildings."
- "There is no transition in height between this building and the long single storey heritage building across the rivulet."
- "Totally out of character with the context within the city."
- "This is an early historic area of Hobart and developments need to be sympathetic."
- "Hobart is losing its heritage status are we to become like other mainland cities. why put so many restrictions on tassie residents who buy heritage homes why do big corporations build the altar modern high rise with out much consideration of our beautiful city ."
- "The proposed new building is at the rear of a heritage building and directly across the rivulet is another heritage building. Both of these old red brick building will be dominated by the oblong modern block."
- "It is not designed to be subservient and complementary to the heritage place."
- "The development makes no attempt to acknowledge the sensitive cultural landscape in which it is proposed."
- "the large size and scale of the development which will appear approximately two storeys higher than the existing building from the Macquarie Street frontage and subsequently reduce the legibility of the 19th century built-form elements. The lack of separation between the proposed building and the existing building and outbuilding is considered to diminish the significance of the heritage place by increasing the visual prominence of the modern building. The siting of the proposal is not considered to be sufficiently separated from the heritage place, with no separation from the stable outbuilding. The lack of setback from the existing buildings also does not retain a reasonable curtilage to maintain the provision of a backyard space which was a characteristic of the site and surrounding lots historically. The proposed building has a bulky, rectilinear form that dominates, rather than showing subservience to the existing form of the place. The street facing wall of the brickwork, glass and off form concrete does not provide a soft or visually permeable backdrop to the brick and stone materiality of the existing building."
- The alteration to the outbuilding and partial demolition of the retaining wall will result in the loss of significant fabric that contributes to the historic significance of the place. All subparagraphs of E13.7.1 P1 must be satisfied. specifically subparagraph (b) in that there are prudent and feasible alternatives to carrying out the works. ... the HIA (Heritage Impact Assessment) there is reference to precedent. Any reference to precedent is done in error as there is no precedent in heritage. The proposed development cannot be justified based upon other buildings in proximity to the site that are large in scale because E13 does not provide for such a comparison. ... the proposal involves a design that is incompatible with the heritage place, in terms of height, scale, bulk, form and fenestration. ... when comparing the built forms of the heritage place and the proposed development, the development cannot be said to be either subservient or complementary. "
- "if it goes ahead, will further strip this beautiful little city of its unique character."

Background/history

This site contains two main buildings and landscape elements. There is a two storey building that faces Macquarie Street and to the rear a smaller two storey structure and rear retaining wall both of which appear on Sprent drawings dated c. 1841. Historic maps (c. 1830) show the original building which remains on the site and a mill race running through the site running toward Government Mills in 1817. The building on Macquarie Street (see image above) was renovated and extended in about 1907-8. The house and rear smaller building have had little change since first built with minor alterations to both. The mill race ran across the site as early as 1817 and was present for the remainder of the 19th century. No other development is known to have occurred downslope of the retaining wall with the exception of the sealing of the carpark and fencing and additions to the wall of the rivulet. The following images document the basic chronology/evolution of the site. It demonstrates that very little has changed on the site,

with the exception of minor utilities, service and amenities, carparking, fencing and resurfacing.

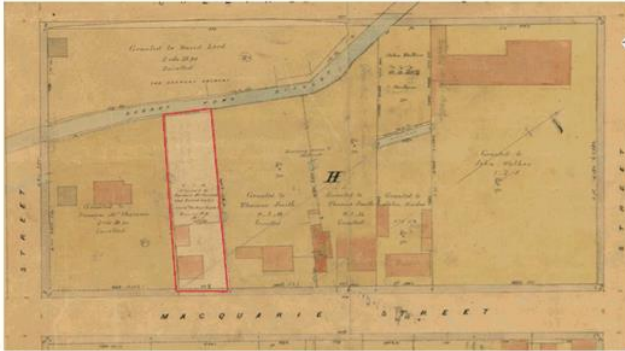
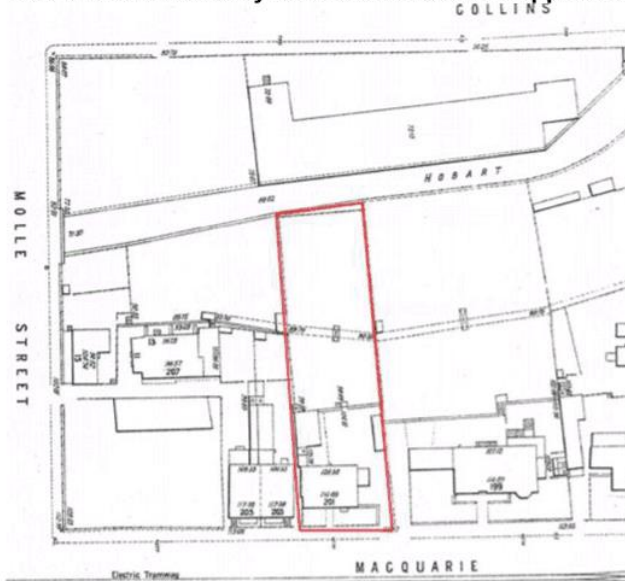


Figure 1.4.4 - Excerpt from Sprent's 1841 map of Hobart and surrounds, the subject site denoted in red. (www.thelist.tas.gov.au)

Subject site as in c.1841 (Sprent drawings) showing the two buildings, wall and mill race that are currently on the site. Source: Applicant's documentation



Subject site showing the two buildings, mill race and retaining wall. Source: Applicant's documentation



Figure 1.4.7 – Excerpt from a c1890 panorama of Hobart, showing the rear of the subject site (approximately outlined in red). Tasmanian Archive and Heritage Office NS 1013-1-494.

Subject site showing the two buildings that are currently on the site. Source: Applicant's documentation

The proposal

No changes to the front building are proposed as part of this application. Change is proposed to the smaller 1830s outbuilding (also called stables) to the rear to add on a bathroom and entry as part of its conversion to an office. Internal demolition is proposed as well as alterations to the north east elevation. The retaining wall shown in the image below (also c.1841) will also be removed.



The rear of the subject site showing the wall and two buildings all c.1841 (Sprent drawings). Source: Council image.



The south west elevation of the historic buildings as viewed from the laneway between the two buildings. Source: Council image



Current north east elevation of c.1841 rear building. Source: Council image.

The application is for an apartment block in the rear yard that straddles the c.1841 rear wall and abuts the rear two storey building shown above. Demolition of heritage fabric is also involved.

Assessment of Demolition

The following assessment is against the provisions of the Historic Heritage Code (clauses E13.7 and E13.10) of the Scheme:

The objective of clause E13.7.1 Demolition is:

To ensure that demolition in whole or part of a heritage place does not result in the loss of historic cultural heritage values unless there are exceptional circumstances.

There are no acceptable solutions and therefore the proposal must be assessed against E13.7.1 P1 which states:

Demolition must not result in the loss of significant fabric, form, items, outbuildings or landscape elements that contribute to the historic cultural heritage significance of the place unless all of the following are satisfied;

- (a) there are, environmental, social, economic or safety reasons of greater value to the community than the historic cultural heritage values of the place;*
- (b) there are no prudent and feasible alternatives;*
- (c) important structural or façade elements that can feasibly be retained and reused in a new structure, are to be retained;*
- (d) significant fabric is documented before demolition*

In consideration of E13.7.1 P1 Demolition, the fabric to be removed includes most of the c.1841 retaining wall, rear outbuildings, stairs to the Macquarie Street facing building and parts of the front wall and internal wall of the c.1841 outbuilding (also called stables) at the rear.

The demolition associated with the Macquarie Street facing building are acceptable because that work removes accretions that have been modified for the purposes of circulation, services and amenities, elements that have no heritage value. These are intrusive elements and do not contribute to the heritage values of the front building. Reinstatement of a single window to match existing is proposed. This is an acceptable outcome.

Modifications to the rear structure are proposed and include demolition of an internal wall and door on the ground floor and first floor as well as the demolition of walls below windows on the ground floor to change into doors/openings. Demolition of a section of floor is also proposed for the installation of a spiral staircase. At the time of a site inspection, this property was not available for an internal inspection due to tenancy matters. However, the author of the HIA, concluded that the rear building is 'probably original (if not early)' and 'retains its original form' and adds the following recommendations: 'the interior of the building appears to have a low degree of integrity, although the extent of modern linings make it impossible to determine what extent of original detailing may have survived in the building. The ground floor appears to have some original floorboards (seen from below in the basement) and the basement door appears to be original. It is recommended that in the event that these linings are removed that a further detailed analysis of the interior be undertaken to guide any future development.'

With such advice, the proposed development of this building would be in conflict with subclause (b) as it has not been determined that 'no prudent and feasible alternatives' have been explored. Clearly without definitively knowing what heritage fabric exists and without the preparation of any further analysis, the proposed works **could** result in the loss of significant fabric. This clause specifically states 'demolition **must not** result in the loss of significant fabric'. On this basis the demolition associated with this part of the proposal fails to satisfy E13.7.1 P1.

The rear building has been modified, however, it is also identified as a building of high significance as an 1830s city fringe residence with stables. It also contributes to a collection of such buildings in this locale which have survived. However, pre-existing modifications is no justification for further demolition, alterations or the addition of accretions. If anything, this building deserves and warrants the highest level of respect and conservation. This cannot be achieved unless further analysis is undertaken. No evidence has been submitted that further conservation input has been provided, accepted and implemented as set out in the following heritage management policies in the Praxis report:

- "Policy 6 - The outbuilding is to be retained. If desired, the earlier configuration of fenestration should be reinstated.", In response, the architect has stated " Whilst the enlargement of the lower level window to create an entrance is not ideal in the sense that it further changes the heritage fabric, the photo on p.29 of the HIA does suggest an entry was originally in this location. Given this and that it makes logical planning sense to present a door in the proposed location, it was considered reasonable to make the further change to the building." This is not an adequate response to the removal of heritage fabric, particularly as no documentation or analysis by a heritage professional has been provided to demonstrate "there are no prudent or feasible alternatives" as is required by the Historic Heritage Code. This is just the architect's own view.
- "Policy 8 - The retaining wall to the rear of the outbuilding is to be retained" See postscript below.
- "Policy 9 - Any future works which may involve major interventions to the interior may require further conservation planning input." In response, it has been acknowledge that internal work will involve the stripout of current modern linings to the interior". This is not an adequate response to the removal of internal walls, of which no documentation or

analysis by a heritage professional has been provided to demonstrate "there are no prudent or feasible alternatives" as is required by the Historic Heritage Code.



The c.1841 retaining wall and basement to the stables. Source: Council image

A total of 7.6 metres of the retaining wall (c.1841) is proposed to be demolished, leaving approximately 2.3 metres immediately adjacent to the rear building, of which only 0.8 metre is visible, the remaining is hidden behind a lift shaft and exhaust column.

The author of the Praxis report notes that 'Elements associated with the original c1830s form and detailing of the buildings and other site features are of high significance.' and 'elements which are of high significance and must be conserved with minimal or no modification', proceeding to describe the retaining wall as having high heritage significance. (see report page 53) In this regard, the applicant's own advice is for the retention of the wall with minimal or no modification with the plans showing more than minimal modification. In this respect, the application does not satisfy E13.7.1 P1.

Postscript to assessment of demolition of wall:

An email received from the applicant has indicated that an additional 3.8 metres of the wall can be reconstructed to be visible in the stair well and corridor and that a condition of permit would be acceptable. In response to this proposition, this would be an acceptable condition should a permit be issued. However, the matter of demolition associated with the rear outbuilding/stables remains problematic and does not comply with the applicant's own conservation policies.

Assessment of new work

The Historic Heritage Code of the Scheme states that the objectives of 'Buildings and Works other than Demolition' in the Historic Heritage Code are:

To ensure that development at a heritage place is:

- (a) undertaken in a sympathetic manner which does not cause loss of historic cultural heritage significance; and*
- (b) designed to be subservient to the historic cultural heritage values of the place and responsive to its dominant characteristics.*

There are no acceptable solutions and therefore the proposal must be assessed against E13.7.2, specifically:

Clause E13.7.2 P1 which states:

Development must not result in any of the following:

(a) loss of historic cultural heritage significance to the place through incompatible design, including in height, scale, bulk, form, fenestration, siting, materials, colours and finishes;
(b) substantial diminution of the historic cultural heritage significance of the place through loss of significant streetscape elements including plants, trees, fences, walls, paths, outbuildings and other items that contribute to the significance of the place.

Clause E13.7.2 P2 which states:

Development must be designed to be subservient and complementary to the place through characteristics including:

- (a) scale and bulk, materials, built form and fenestration;*
- (b) setback from frontage;*
- (c) siting with respect to buildings, structures and listed elements;*
- (d) using less dominant materials and colours.*

Clause E13.7.2 P3 which states:

Materials, built form and fenestration must respond to the dominant heritage characteristics of the place, but any new fabric should be readily identifiable as such.

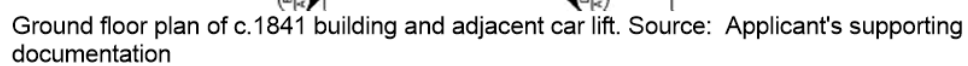
Clauses E13.7.2 P4 which states:

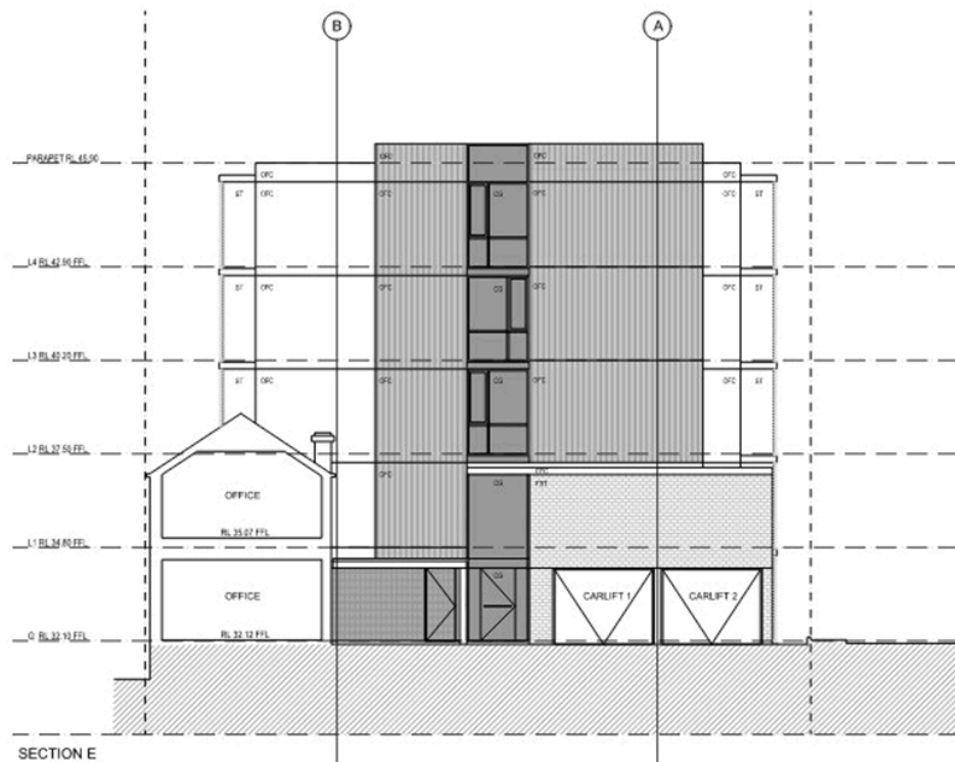
Extensions to existing building must not detract from the historic cultural heritage significance of the place.

Clauses P5 and P6 are not considered relevant.

As outlined above, the proposed works to the rear outbuilding/stables involves demolition and new openings, removal of walls and insertion of a spiral staircase with a new single storey 'link' addition. New works to this building require conservation and interventions to the highest standard, not to mention the further investigations to understand the building in the first instance followed by appropriate sympathetic works. It is not considered that the advice or input of a heritage professional has been obtained to come to these conclusions and the resultant design solution.

The proposed new work when considered against E13.7.2 P1, P2, P3 and P4 involves a single storey addition to the north east elevation with an entry space, equal access toilet and kitchen to serve the office within the 1840s rear outbuilding. In addition, there is a doorway to a stairwell down to the basement and lower ground floor building. Immediately abutting the single storey element is a two storey structure which is the entry to the car lift and plant platform. See proposed drawings below.





Section of c.1841 building and elevation and adjacent car lift. Source: Applicant's supporting documentation

The new single storey element is in close proximity to the c.1841 outbuilding, a building that, in spite of it being to the rear of the front house has always faced outwardly to the north east in an open fashion due to its function as stables and storage with the space in front, an area formed by a retaining wall specifically to create level access.

The new building should be considered in its proximity to the c.1841 building and consideration of the overarching objectives of being subservient and sympathetic to the historic cultural heritage values of the place. Any new buildings should be sited to offer space to provide some degree of physical separation, allowing unobscured views of the north east elevation. By allowing a full and complete view of the structure rather than enclosing it. It would then be seen as an early building, complete with its roof form, chimney, bulk and dimensions and clearly understood as a traditional structure, as well as being part of a wider grouping of traditional buildings along Macquarie Street through to the Molle Street intersection. This single storey 'link' obscures the listed building, diminishing and confusing its value as a separate building.

The rear part of the block on which the apartment block is sited, is an ideal location for higher density of construction, however its success could be better achieved with a greater physical separation from the historic features, and responding to the historic buildings and topography including the leveled area and retaining wall which dates to the 1830-40. If the proposed apartment block, were to be set further downhill on the lower side of the retaining wall, the proposal would be a far more acceptable and appropriate outcome. For example, if the front edge of the car lift were to align with the edge of the historic sandstone wall, the historic features would be given more space and the new apartment would have a more logical relationship to the level access area and the rear of the houses.

As a compromise, a revised design to the entry to the c.1841 outbuilding, utilising the space between it and the rear of the Macquarie Street space would result in a more compatible design solution for a listed place and result in less demolition. Exploration for the utilisation of the space to the south east elevation (where early service structures were once located) would be a logical solution. This is only one option of the proposal that requires deeper and more considered professional heritage input and approach.

If the applicant were in agreement, it would be recommended that a condition be prepared, should a permit be issued, that separates out or removes the outbuilding/stables and the space between it and the car lift, from the application until further fabric analysis has been done. In essence the contentious part of the proposal is removed from the application for further work, leading to a new and separate application for this work. Working with Council Officers on the redesign to this part of the proposal would be a cleaner approach.

If this were not acceptable, the proposed works to the c.1841 building cannot be considered to satisfy E13.7.2 P1, P2, P3 and P4.

The proposed apartment building is set back from Macquarie Street with its height (shown above) responds to and takes its cues from the adjacent scale, height, massing to the adjacent property at 199 Macquarie Street, rather than from other adjacent buildings, in Molle Street and on the other side of Collins Street. Previous suggestions to the applicant have been to acknowledge the topography of the site that falls away down to the Hobart Rivulet by creating a series of descending columns or steps, with a more responsive form that reflects Hobart's undulating landscape. Some modifications to the height and design have been taken on board. However, as recommended by so many of the representations, the removal of another floor would make the proposal more in compliance with Policy 12 of the Heritage Report which states "The overall height of any new building should ideally be lower than that of the roof peak of the existing building, however greater height may be allowable if the setback from the rear of the building is greater." (p.70 Praxis report)

In addition, the subject property is located in a Place of Archaeological Potential. Given excavation is proposed, clause E13.10.1 P1 applies and 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'*

The Praxis report identifies that a 1810 mill race crosses the rear of the site. It was once ran parallel to the Hobart Rivulet serving one of Hobart's early mills. The nature, depth and integrity of these remains are not known and as recommended in Policy 15 that "Any excavation in the vicinity of the location of the mill race is to be archaeologically monitored and if any significant remains are found these are to be managed in accordance with industry standard." In order to mitigate the impact of the proposed excavation that will result in the expected archaeological remains, the Praxis report outlines an approach for an Archaeological Method Statement, including test trenching, excavation methodology and so on.

It is recommended that should a permit be issued, a condition be included that references the recommendations as outlined in the Praxis report.

Other discussion/assessment

Much has been made of pre-application advice. That is all that it is and it should be noted that early consultation with Council Officers occurred in June and July 2019 with the applicants heritage report lodged after that in November 2019 and then relodged in June 2020 because of errors. No assessment of the proposal against the relevant provisions of the Scheme occurred within the early consultation period. This is done within the formal assessment period, after advertising when, and if, representations are received. As mentioned above 168 representations were received during the advertising period in February 2021. It is a requirement of the *Land Use Planning and Appeals Act 1993* to consider matters raised in representations.

Section 51 of LUPAA 1993 states:

(2) In determining an application for a permit, a planning authority –....

(c) must take into consideration the matters set out in representations relating to the application that were made during the period referred to in section 57(5) ;

To reiterate, any early advice or conclusions, would not have considered relevant matters raised within the representations. In regard to this one representation raises the matter of non-compliance with E13.7.1 P1 noting specifically that the applicant must demonstrate all of the subclauses (a) to (d) are satisfied - in particular that there are 'no prudent and feasible alternatives'. As discussed above in relation to the works within the rear building/stables no evidence has been submitted to demonstrate 'that a further detailed analysis of the interior be undertaken to guide any future development.' (as stated in the Praxis report)

Conclusion

In summary, it is concluded that the proposal does not satisfy E13.7.1 P1, E13.7.2 P1, P2, P3 and P4.

Further professional heritage input is required to ensure the demolition and new work does not further compromise or result in the further erosion of heritage value of the c.1841 rear outbuilding. Conservation work of the highest standard is required for this building.

If accepted by the applicant, it is recommended that the single storey extension to the front of the c.1841 outbuilding as well as the internal works be removed from the application to enable further thorough professional heritage analysis and design work to proceed. Council Officers would be willing to work with the applicant to achieve the best possible outcome. This could be achieved by a condition of permit.

It is noted that the applicant has already agreed to a condition that retains a further section of the c.1830-40 wall.

No heritage issues are raised in relation to the apartment building and as such, that part of the application satisfies E13.7.2 P1, P2, P3 and P4.

The heritage values of the listed structures the c.1830-40 wall and rear outbuilding would be better served by the proposed apartment building being sited below the c.1830-40 wall. The option to reduce the height of the apartment block by one floor and to modify the design approach to acknowledge the topography of the site by forming a series of descending columns or steps has already been put to the applicant as a suggested change.

Sarah Waight
Senior Cultural Heritage Officer
17 March 2021

ADDENDUM

Further to the above report, two conditions of approval could be imposed to address concerns and ultimately the recommendation for refusal outlined above.

A condition requiring the retention of an additional 3.8 metres of the c.1830-40 heritage wall.

This would also require careful repair, rebuilding and reconstruction using traditional techniques to retain its traditional character and appearance.

An additional condition removing the works associated with the rear outbuilding/stables which dated to c.1841 to enable further detailed conservation analysis as described above is also recommended. A further application would be required for the works.

These conditions would be as follows:

Condition 1.

This permit does not approve any demolition, building or works to the rear outbuilding/stables.

Advice: It is understood that works to this building will form a separate planning application after further consultation has occurred with Council's Senior Cultural Heritage Officer

Reason for condition

To protect the cultural heritage values of the site.

Condition 2.

A total of 6.3m of the heritage retaining wall adjacent to the rear outbuilding/stables must be retained. This is a further 3.8m in addition to what is shown on plan 112A03 issue N.

Any work to repair the wall must be undertaken by a suitably qualified stonemason and must retain its historic character and appearance.

Reason for condition

To protect the cultural heritage values of the site.

With the above conditions the proposal will satisfy the relevant clauses of the Historic Heritage Code of the Scheme.

Sarah Waight
Senior Cultural Heritage Officer
24 May 2021

Application Referral Development Engineering - Response

From:	Dave Morley reassigned from Cameron Cecil reassigned from Stefan Gebka - Development Engineering
Recommendation:	Proposal is unacceptable.
Date Completed:	
Address:	201 MACQUARIE STREET, HOBART 49 MOLLE STREET, HOBART 199 MACQUARIE STREET, HOBART ADJACENT RIVULET
Proposal:	Partial Demolition, Alterations, Partial Change of Use to Office and Two Multiple Dwellings, New Building for 45 Multiple Dwellings, Signage and Associated Works
Application No:	PLN-19-768
Assessment Officer:	Ben Ikin,

Referral Officer comments:

RESPONSE TO TIA SUBMITTED 12/04/2021

An updated TIA has been provide by Mr Milan Prodanovic.

Assessment after consultation with Council Traffic Engineers have determined that this cannot be accepted based on:

Car lift Operation

The TIA lift timing provide in updated TIA (Figure 1) contradicts the new lift data provided in updated TIA (Figure 2).

The lift travel time will be:

- 33 seconds between Basement Level 2 and the Ground Floor and
- 23 seconds between Basement Level 3 and the Ground Floor

The suppliers of the lifts have also confirmed:

- time for door to open = 5 seconds;
- time of car to either enter or exit lift = 5 seconds;
- time for door to close = 5 seconds.

The lifts will take:

- between 63 and 96 seconds to travel between Ground Floor L Basement Level 2 (or vice versa), depending on whether the car is waiting at the level of car entry of the other floor level; and
- between 53 and 86 seconds to travel between Ground Floor L Basement Level 3 (or vice versa), depending on whether the car is waiting at the level of car entry of the other floor level.

For the above worst-case situation, each lift would service cars at a rate of around 33 and with two lifts, the average service rate will be 67 vehicles/hour but with return of the lift to the peak arrival level, the service rate will be around 40 vehicles/hour/lift.

Figure 1; Page 23 of the Updated TIA

Operation Time Calculator

Safetech Hoist Speed (m/min)	15
Durafast Door Open Time (s)	5

Primary to Level B1	
Products info and specs	
Travel Height (m)	5.75
Operations	Safetech + Durafast
<i>Approach lift, press button</i>	
Door open	5
<i>Enter the lift, press button</i>	5
Door close	5
Average travel time	23
Door open	5
<i>Exit the lift</i>	5
Total Travel Time	48sec

Primary to Level B2	
Products info and specs	
Travel Height (m)	8.25
Operations	Safetech + Durafast
<i>Approach lift, press button</i>	
Door open	5
<i>Enter the lift, press button</i>	5
Door close	5
Average travel time	33
Door open	5
<i>Exit the lift</i>	5
Total Travel Time	58sec

Figure 2: Attachment E of the updated TIA

Section 5 (Traffic Generation By The Development) of the report.

Excerpts and comments of section 5 below:

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 a high density, not low density residential development.

the development site is very close to the 'all routes' central bus station around the Elizabeth Street/Macquarie Street intersection (around 600m walking distance)

All RTA surveys were taken close to public transport

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. 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.

As previously mentioned. This is not a valid comparison and will not be accepted.

The Technical Direction states that for regional sites the traffic generation is around 0.42 vehicles/unit/hour and 0.21 vehicles/bedroom/hour during peak hour periods for the road network. The assessed sites have a mix of one, two and three bedroom units.

AM and PM rates are not provided.

Having regard to all the above considerations and findings, a traffic generation rate of 2.8 vehicles/apartment/day will be assumed for the proposed development. This is slightly higher than indicated in the Technical Direction for the high density regional developments as well as was found for the site at 51 Sandy Bay Road.

Assumption of Traffic generation numbers will not be accepted. Generation numbers must be from The RTA Technical Direction.

Queuing Theory Calculations

Input data on queuing theory are initially base on arrival rate, service rates and directional split. While the queuing theory equations may be sound, No information on how the 65/35 PM directional split is determined (this appears to be an assumed number). This directional split determination, corrected site arrival rates based on site generation and service times based on documentation provided have a direct impact on the results of queuing theory calculations and if the system has sufficient capacity to handle the volume. This will not be supported until these items are addressed and sound assessable technical report is submitted.

Pedestrian Access

Pedestrian Access is required and a line marked access is proposed in the updated TIA (page 31 and shown in Attachment E). However physical separation is required not line marking.

END

COMMENTS: Assessed (17/03/2021)

Summary:

Development Engineering does not support this application and is recommending refusal.

Development Proposal

The proposed development at 201 Macquarie Street is for the construction of a multi-storey building that will have 45 residential apartments.

There will be five floor levels with apartments and two levels of car parking. 43 apartments will have one bedroom and there will be two apartments with two bedrooms.

Two car lifts will provide access from the Ground Floor Level to the car parking spaces on the two Basement Levels. There will be 24 car parking spaces on Basement Level 2 and 25 car parking spaces on Basement Level 3 – a total of 50 car parking spaces.

One further car parking space will be located next to the office building.

Grounds of refusal

E5.5.1 Existing road accesses and junctions A3 (NOT MET) ,P3 c) and h) (NOT MET) For more detailed reading see DE response to TIA.

- A3 Will see an increase in vehicle activity by more that 40 Vehicle movements per day and 20%
- P3 c) - the nature and efficiency of the access or the junction - Unverified and misleading information on vehicle lift operation, dual driveway workings and traffic generation give DE no alternative other than refusal.
- P3 h) - any traffic impact assessment - Traffic Impact Assessment (TIA) was provided and deemed unsatisfactory as a supporting document for a planning application. The TIA proved to be deficient in the understanding of Australian Standards lacked data or referencing sources of data and made unjustified assumptions.

E6.1 Purpose

E6.1.1 a) Safe pedestrian access is not provided

E6.1.1 b) Inadequate car parking forcing access use that doesn't exist

E6.7.2 Design of Vehicular Accesses A1 (Not Met), P1 a) (Not Met)

- A1 Design vehicle access does not comply with AS 2890.1 Parking Facility's
- P1 a) - avoidance of conflicts between users including vehicles, cyclists and pedestrians

No safe access for pedestrians or people with disabilities is provided. Driveway grade is 20% and safe access for a pedestrian requires a path of a minimum width of 1.2m, with handrails, separating vehicle movements from pedestrians. Figure 1 shows the driveway of 201 Macquarie Street with vehicles entering and exiting and where a 1.2 m safe access would be. It is clear that a 1.2 m safe access to separate pedestrians and vehicles is not possible. The development proposal only provides the necessary 6m vehicle clearance for a two way driveway.

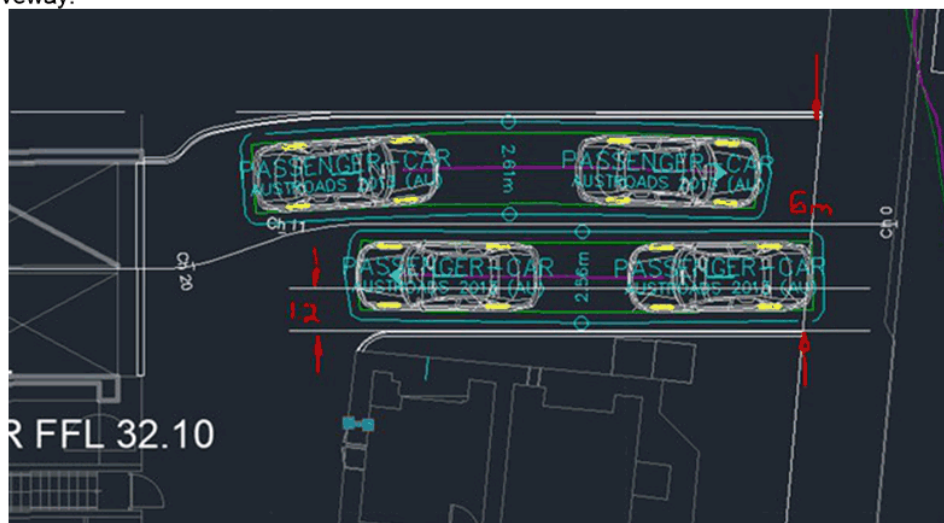


Figure 1: shows the entire driveway width is occupied denying any pedestrian safe access

E6.6.1 Parking deficient by 15

Macquarie street cannot be guaranteed or relied upon for continued visitor parking.

Department of State Growth has no obligation to provide parking along Macquarie Street in the long term and may be subject to change leaving residents with little alternative for visitor

parking.

*NOTE: While not able to be assessed with the Hobart Interim Planning Scheme (2015). Failure to mention that the development **does not comply** with Section 23 of the Disability and Discrimination Act 1992 and the Building Act 2016 would be irresponsible. Page 19 of the TIA states "While a 1:14 grade is required for a pathway to accommodate disabled people, this development is not one that will attract such persons at random" and "If a resident is to receive a disabled person, vehicle access into the car park would be possible by the resident".*

Full response to TIA can be found below

Discretions:

E5.5.1 Existing road accesses and junctions
E5.6.4 sight distance at access and junctions: No geometric evidence sight distances can be met. However sight distance is plausible and is supported under the performance criteria.
E6.1 Purpose
E6.1.1 a) Safe pedestrian access is not provided
E6.1.1 b) Inadequate car parking forcing access use that doesn't exist
E6.7.2 Design of Vehicular Accesses A1 (Not Met), P1 a) (Not Met)
E6.6.1 Parking Numbers - deficient by 15

CONDITIONS:

In a council related engineering context, the proposal can be supported in principal subject to the following conditions and advice. **NOT CONDITIONED YET**

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 3b:
ENG 3c: The access driveway and parking module (parking spaces, aisles and manoeuvring area) must be constructed in accordance with the *Design Consultants* documentation to be received by the Council.
ENG 4: Surface treatment
ENG 5: The number of car parking spaces approved on the site, for use is *fifty* (50)
ENG 5b: The number of bicycle parking spaces approved on the site is a minimum of *[word]* (#)
ENG 6: All visitor car parking spaces must be delineated.
ENG 7: The number of motorcycle parking spaces approved on the site, for use is *[word]* (#)
ENG 8: The use of the car parking spaces approved by this permit is restricted to residential, domestic associated with operations within the site.
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
ENG 13: An ongoing waste management plan for all commercial waste and recycling/compost bins must be implemented post construction
ENG sw1: Stormwater
ENV1: SWMP
ENV 2: SWMP design (Stormwater Unit / EDP Report)
PART 5 for Car Lift maintenance schedule.
ENG s1 Driveway to be line marked

ENG s2 1 lift out one lift in

ADVICE:

- Dial before you dig
- Fees and charges
- Building Permit
- Plumbing Permit
- Occupation of the Public Highway
- Driveway surfacing over highway reservation
- Condition endorsement engineering
- Work in the highway reservation
- New Service Connection
- Stormwater
- Permit To Construct Public Infrastructure

REPRESENTATIONS:

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E5.0 Road and railway access code

E5.1 Purpose		E5.1.1
		The purpose of this provision is to:
		(a) protect the safety and efficiency of the road and railway networks; and
		(b) reduce conflicts between sensitive uses and major roads and the rail network.
E5.2 Application of this Code	YES NO	
		This Code applies to use or development of land:
	Yes No	(a) that will require a new vehicle crossing, junction or level crossing; or
	Yes No	(b) that intensifies the use of an existing access; or
	Yes No	(c) that involves a sensitive use, a building, works or subdivision within 50m metres of a Utilities zone that is part of:
	Yes No	(i) a rail network;
	Yes 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.
Clause for Assessment		Comments / Discussion (in bold)
Clause 5.5.1 Existing road accesses and junctions		The existing road access must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).
PERFORMANCE CRITERIA		<u>Documentation submitted to date does not satisfy the Acceptable Solution for clause E5.5.1 (A3) and as such, shall be assessed under Performance Criteria.</u>
		Acceptable Solution A3: - NON COMPLIANT

The annual average daily traffic (AADT) of vehicle movements, to and from a site, using an existing access or junction, in an area subject to a speed limit of 60km/h or less, must not increase by more than 20% or 40 vehicle movements per day, whichever is the greater.

Three hundred and Forty Eight (348) vehicle movements per day. Increase is more than 40 vehicle movements per day and greater than 20%

Traffic generation rates were sourced from the RTA Guide. The RTA Guide states the following traffic generation rates for medium density residential developments:

Performance Criteria – P3:

Any increase in vehicle traffic at an existing access or junction in an area subject to a speed limit of 60km/h or less, must be safe and not unreasonably impact on the efficiency of the road, having regard to:

- (a) the increase in traffic caused by the use;
- **The increased traffic generated by the proposed development is likely to be 100 plus vehicles per day when all units are fully developed and occupied.**
- (b) the nature of the traffic generated by the use;
- **All traffic generated by the proposed development will be residential in nature.**
- (c) the nature and efficiency of the access or the junction;
- **The information provided on the operation of the site as a whole is unsatisfactory and can not be supported**
- (d) the nature and category of the road;
- **Major arterial road**
- (e) the speed limit and traffic flow of the road;
- **The general urban speed limit of 50-km/h applies to Macquarie Street.**
- (f) any alternative access to a road;
- **No alternative access is possible for the proposed development.**
- (g) the need for the use;
- **The need for the use has not been assessed and is this report.**
- (h) any traffic impact assessment; and
- **Traffic Impact Assessment was submitted and deemed unsatisfactory.**
- (i) any written advice received from the road authority.

		<p>- No written advice was requested by the road authority (Council) relating to the access.</p> <p>Detail on lift operation was minimal. Traffic increase may be higher.</p>
<p>Clause 5.5.2 Existing level crossings</p> <p>NOT APPLICABLE</p>		<p>Documentation submitted to date appears not to invoke clause E5.5.2.</p> <p>No intensification of an existing level crossings proposed.</p>
<p>Clause 5.6.1 development adjacent to roads and railways</p> <p>NOT APPLICABLE</p>		<p>Documentation submitted to date appears not to invoke clause E5.6.1.</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>ACCEPTABLE SOLUTION</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>Documentation submitted to date does appear to satisfy the Acceptable Solution for clause E5.6.2.</p> <p>Acceptable solution - A1 No new access or junction to roads in an area subject to a speed limit of more than 60km/h. - N/A</p> <p>Acceptable solution - A2 - COMPLIANT 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.</p>
<p>Clause 5.6.3 new level crossings</p> <p>NOT APPLICABLE</p>		<p>Documentation submitted to date appears not to invoke clause E5.6.3.</p> <p>No new level crossings proposed.</p>
<p>Clause 5.6.4 sight distance at access and junctions</p> <p>PERFORMANCE CRITERIA</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>Documentation submitted to date does not satisfy the Acceptable Solution for clause E5.6.4 and as such, shall be assessed under Performance Criteria.</p> <p>Acceptable solution - A1: - NON COMPLIANT</p>

Sight distances at:

- (a) an access or junction must comply with the Safe Intersection Sight Distance shown in Table E5.1; and
- (b) rail level crossings must comply with AS1742.7 Manual of uniform traffic control devices - Railway crossings, Standards Association of Australia. - **N/A**

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.

The available sight distance generally exceeds the required 80 metres except during times when cars are parked adjacent to the site.

Based on the available sight distances exceeding the minimum Planning Scheme requirements, the access complies with Acceptable Solution A1 of Clause E5.6.4.

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;

- All traffic generated by the proposed development will be residential in nature. This is compatible with the existing traffic utilising *Macquarie Street* near the subject site. The increased traffic generated by the proposed development is likely to be 20 vehicles per day when all units are fully developed and occupied.

- (b) the frequency of use of the road or rail network;

- *Macquarie Street* is a major arterial road.

- (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 an unable to provide geometric clarification of sight distances

- (f) any measures to improve or maintain sight distance; and

- Not enough detail o assess

		<p>(g) any written advice received from the road or rail authority.</p> <p>- No written advice was requested by the road authority (Council) relating to the access.</p> <p>Council is of the opinion that the Acceptable Solution for clause E5.6.4 is not met due to the lack of geometric proof of sight lines being submitted. However after DE carried out a site inspection the development may therefore be accepted under Performance Criteria P1:E5.6.4 of the Planning Scheme.</p>

E 6.0 Parking and Access Code

E6.1 Purpose			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.
E6.2 Application of this Code	YES	—	This code applies to all use and development.
Clause for Assessment			Comments / Discussion (in bold)
Clauses 6.6's are all to do with parking number			The parking number assessment must satisfy either Acceptable Solutions or Performance Criteria for each

assessment. These will be assessed by planner based on DE assessment of the following relevant clauses.

**PERFORMANCE
CRITERIA**

clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).

Documentation submitted to date does not satisfy the Acceptable Solution for clause E6.6.1 (a) and as such, shall be assessed under Performance Criteria.

Acceptable solution - A1: - **NON COMPLIANT**

The number of on-site car parking spaces must be:

(a) no less than and no greater than the number specified in Table E6.1;

- **Submitted documentation does not satisfy this requirement, a deficiency of *fifteen* (15) car parking spaces proposed. No disabled parking provided.**

Performance Criteria - P1:

The number of on-site car parking spaces must be sufficient to meet the reasonable needs of users, having regard to all of the following:

(a) car parking demand;

- **The empirical parking assessment indicates that the provision of 50 on-site car parking spaces will sufficiently meet the likely demands associated with the development, with the exception of onsite visitor parking.**

(b) the availability of on-street and public car parking in the locality;

- **There is a relatively little supply of on-street parking in the surrounding road network. Much of the available parking is in the form of time-restricted parking on Macquarie street, with authorised residents excepted. Department of State Growth has no obligation to provide parking along Macquarie Street in the long term and may be subject to change leaving residents with little alternative for visitor parking. **Refusal Based on this determination****

(c) the availability and frequency of public transport within a 400m walking distance of the site;

- **Metro Tasmania operate regular bus services within 400 metres of the subject site.**

(d) the availability and likely use of other modes of transport;

- **The site is located a convenient walking distance from shops, schools and services.**

(e) the availability and suitability of alternative arrangements for car parking provision;

- **No alternative parking provision is available.**

(f) any reduction in car parking demand due to the sharing of car parking spaces by multiple uses, either

		<p>because of variation of car parking demand over time or because of efficiencies gained from the consolidation of shared car parking spaces; - Not applicable.</p> <p>(g) any car parking deficiency or surplus associated with the existing use of the land; - Not applicable.</p> <p>(h) any credit which should be allowed for a car parking demand deemed to have been provided in association with a use which existed before the change of parking requirement, except in the case of substantial redevelopment of a site; - Not applicable.</p> <p>(i) the appropriateness of a financial contribution in lieu of parking towards the cost of parking facilities or other transport facilities, where such facilities exist or are planned in the vicinity; - Not applicable.</p> <p>(j) any verified prior payment of a financial contribution in lieu of parking for the land; - Not applicable.</p> <p>(k) any relevant parking plan for the area adopted by Council; - Not applicable.</p> <p>(l) the impact on the historic cultural heritage significance of the site if subject to the Local Heritage Code; and - Not applicable.</p> <p>(m) whether the provision of the parking would result in the loss, directly or indirectly, of one or more significant trees listed in the Significant Trees Code. - No impact.</p> <p>Based on the above assessment and given the submitted documentation, refusal is recommended</p>
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<p>Clause 6.7.1 number of vehicle accesses</p> <p>ACCEPTABLE SOLUTION</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><u>Documentation submitted to date appears to be able to satisfy the Acceptable Solution for clause E6.7.1.</u></p> <p>Acceptable solution: - COMPLIANT</p> <p>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.</p> <p>One (1x) crossover (Macquarie Street frontage) - Existing, no additional crossover(s) proposed.</p>
<p>Clause 6.7.2 design vehicle access</p> <p>PERFORMANCE CRITERIA</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><u>Documentation submitted to date does not satisfy the Acceptable Solution for clause E6.7.2 (a) [sight distance: 2m x 2.5m sight triangles - These areas to be kept clear of obstructions to visibility] and as such, shall be assessed under Performance Criteria.</u></p> <p>Acceptable Solution - A1: - NON COMPLIANT</p> <p>Design of vehicle access points must comply with all of the following:</p> <p>(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.</p> <p>Performance Criteria - P1:</p> <p>Design of vehicle access points must be safe, efficient and convenient, having regard to all of the following:</p> <p>(a) avoidance of conflicts between users including vehicles, cyclists and pedestrians;</p> <p>- NOT MET, submitted documentation do not satisfy this requirement given the statements provided by the applicant's traffic engineer contained within the Traffic Impact Assessment</p> <p>(b) avoidance of unreasonable interference with the flow of traffic on adjoining roads;</p> <p>- Acceptable, submitted documentation appears to satisfy this requirement given the statements provided by the applicant's traffic engineer contained within the</p>

		<p>Traffic Impact Assessment</p> <p>(c) suitability for the type and volume of traffic likely to be generated by the use or development; and - Acceptable, submitted documentation appears to satisfy this requirement given the statements provided by the applicant's traffic engineer contained within the Traffic Impact Assessment</p> <p>(d) ease of accessibility and recognition for users. - Acceptable, submitted documentation appears to satisfy this requirement given the statements provided by the applicant's traffic engineer contained within the Traffic Impact Assessment</p> <p>Based on the above assessment and given the submitted documentation, design Vehicle access is not supported and refusal is recommended</p>
<p>Clause 6.7.3 vehicle passing</p> <p>ACCEPTABLE SOLUTION</p>		<p>Vehicle passing must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015). <u>Documentation submitted to date appears to be able to satisfy the Acceptable Solution for clause E6.7.3.</u></p> <p><u>Acceptable solution - A1:</u> - COMPLIANT</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; - Yes (ii) is more than 30 m long; - Yes (iii) it meets a road serving more than 6000 vehicles per day; - No</p> <p>(b) be 6 m long, 5.5 m wide, and taper to the width of the driveway; - Submitted documentation appears to satisfy this requirement</p> <p>(c) have the first passing area constructed at the kerb; - Submitted documentation appears to satisfy this requirement</p> <p>(d) be at intervals of no more than 30 m along the access. - Submitted documentation appears to satisfy this requirement</p>

<p>Clause 6.7.4 on site turning</p> <p>NOT APPLICABLE</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). <u>Documentation submitted to date appears not to invoke clause E6.7.4.</u></p> <p>Acceptable solution - A1: On-site turning must be provided to enable vehicles to exit a site in a forward direction, except where the access complies with any of the following: (a) it serves no more than two dwelling units; - COMPLIES (b) it meets a road carrying less than 6000 vehicles per day. - COMPLIES</p> <p>Submitted documentation appears to indicate no facility / requirement for on-site turning.</p>
<p>Clause 6.7.4 on site turning</p> <p>ACCEPTABLE SOLUTION</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). <u>Documentation submitted to date appears to satisfy the Acceptable Solution for clause E6.7.4.</u></p> <p>Acceptable solution - A1: - COMPLIANT On-site turning must be provided to enable vehicles to exit a site in a forward direction, except where the access complies with any of the following: (a) it serves no more than two dwelling units; - APPLIES (b) it meets a road carrying less than 6000 vehicles per day. - APPLIES</p>
<p>Clause 6.7.5 layout of parking area</p> <p>ACCEPTABLE SOLUTION</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). <u>Documentation submitted to date appears to satisfy the Acceptable Solution for clause 6.7.5.</u></p> <p>Acceptable Solution A1: - COMPLIANT The layout of car parking spaces, access aisles, circulation roadways and ramps must be designed and constructed to comply with section 2 "Design of Parking Modules, Circulation Roadways and Ramps" of AS/NZS 2890.1:2004 Parking Facilities Part 1: Off-street car parking and must have sufficient headroom to comply with clause 5.3 "Headroom" of the same Standard.</p> <ul style="list-style-type: none"> • Car Parking Space Dimensions (AS2890.1 Fig 2.2 = 2.4x5.4m Class 1A): - Submitted documentation appears to satisfy this requirement • Car Parking Space Design Envelope (AS2890.1 Fig 5.2 300mm clearance on side):

			<ul style="list-style-type: none"> - Submitted documentation appears to satisfy this requirement • Headroom: (AS2890.1 Fig 5.3 = 2.2m clearance): - Submitted documentation appears to satisfy this requirement • Parking Space Gradient (5%): - Submitted documentation appears to satisfy this requirement • Aisle Width (AS2890.1 Fig 2.2 = 5.8m Class 1A): - Submitted documentation appears to satisfy this requirement • Garage Door Width & Apron (AS2890.1 Fig 5.4 = 2.4m wide => 7m wide apron): - Submitted documentation appears to satisfy this requirement • Parking Module Gradient (manoeuvring area 5% Acceptable Soln, 10% Performance): - Submitted documentation appears to satisfy this requirement • Driveway Gradient & Width (AS2890.1 Section 2.6 = 25% and 3m): - Submitted documentation appears to satisfy this requirement • Transitions (AS2890.1 Section 2.5.3 = 12.5% summit, 15% sag => 2m transition): - Submitted documentation appears to satisfy this requirement • Vehicular Barriers (AS2890.1 Section 2.4.5.3 = 600mm drop, 1:4 slope): - Submitted documentation appears to satisfy this requirement • Blind Aisle End Widening (AS2890.1 Fig 2.3 = 1m extra): - <u>N/A</u> • "Jockey Parking" (Performance Assessment): - <u>Not indicated</u>
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<p>Clause 6.7.6 surface treatment</p> <p>ACCEPTABLE SOLUTION</p>			<p>The surface treatment must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015). <u>Documentation submitted to date does satisfy the Acceptable Solution for clause E6.7.6.</u></p> <p>Acceptable Solution - A1: - COMPLIANT 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; and (b) drained to an approved stormwater system, unless the road from which access is provided to the property is unsealed.</p> <p>Submitted plans indicate a concrete surface treatment and able to be drained to an approved stormwater system. Condition on Planning Permit to ratify timing.</p>
<p>Clause 6.7.7 Lighting of parking area Planner and health unit to assess</p>	—	—	Planner to assess
<p>Clause 6.7.8 Landscaping Planner to assess</p>	—	—	Planner to assess
<p>Clause 6.7.9 motor bike parking</p> <p>ACCEPTABLE SOLUTION</p>			<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). <u>Documentation submitted to date does satisfy the Acceptable Solution for clause E6.7.9.</u></p> <p>Acceptable Solution A1: - COMPLIANT 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; and (b) be located within 30 m of the main entrance to the building.</p> <p>Submitted documentation indicates adequate motorcycle parking provisions on-site.</p>

<p>Clause 6.7.10 bicycle parking</p> <p>ACCEPTABLE SOLUTION</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). <u>Documentation submitted to date does satisfy the Acceptable Solution for clause E6.7.10.</u></p> <p>Acceptable Solution A1: - COMPLIANT The number of on-site bicycle parking spaces provided must be no less than the number specified in Table E6.2.</p> <p>Acceptable Solution A2: - COMPLIANT The design of bicycle parking spaces must be to the class specified in table 1.1 of AS2890.3-1993 Parking facilities Part 3: Bicycle parking facilities in compliance with section 2 "Design of Parking Facilities" and clauses 3.1 "Security" and 3.3 "Ease of Use" of the same Standard.</p> <p><i>Table E6.2 sets out the number of bicycle parking spaces required. The requirement for spaces for a use or development listed in the first column of the table is set out in the second and forth columns of the table with the corresponding class set out in the third and fifth columns. If the result is not a whole number, the required number of (spaces) is the nearest whole number. If the fraction is one-half, the requirement is the next whole number.</i></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>NOT APPLICABLE</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). <u>Documentation submitted to date appears not to invoke clause E6.7.13.</u></p> <p>Submitted documentation appears to indicate no commercial vehicles loading, unloading or manoeuvring.</p> <p>Submitted documentation appears to indicate no changes proposed to existing commercial vehicles loading, unloading or manoeuvring.</p>

Clause 6.7.14 access to a road NOT APPLICABLE		<p>The access to a road must satisfy the Acceptable Solutions of the Hobart Interim Planning Scheme 2015 (HIPS 2015).</p> <p><u>Documentation submitted to date appears not to invoke clause E6.7.14.</u></p> <p>Submitted documentation appears to indicate no access to a road, existing or proposed.</p> <p>Submitted documentation appears to indicate no changes proposed to the existing access to a road.</p>
Clause 6.7.15 access to Niree Lane NOT APPLICABLE		<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><u>Documentation submitted to date appears not to invoke clause E6.7.15.</u></p> <p>No development proposed within Niree Lane.</p>

E 7.0 Stormwater assessed by EEU

E7.1.1 Purpose		<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>
E7.2 Application of this Code	YES	N/A This code applies to development requiring management of stormwater. This code does not apply to use.
Clause for Assessment		Comments / Discussion (in bold)
<p>A1 (SW disposed to Public SW Inf via Gravity / P1 (onsite/pump))</p> <p>NOT APPLICABLE</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><u>Documentation submitted to date appears not to invoke clause E7.7.1 (A1).</u></p> <p>Submitted documentation appears to indicate no new impervious surfaces.</p> <p>Submitted documentation appears to indicate no changes proposed to existing impervious surfaces.</p>

A2 (WSUD) /P2 (Mechanical Treatment)			<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><u>Documentation submitted to date appears not to invoke clause E7.7.1 (A2).</u></p> <p>Acceptable Solution A2: A stormwater system for a new development must incorporate water sensitive urban design principles R1 for the treatment and disposal of stormwater if any of the following apply: (a) the size of new impervious area is more than 600 m²; - No (b) new car parking is provided for more than 6 cars; - No (c) a subdivision is for more than 5 lots - No</p> <p>Submitted documentation appears to indicate no requirement for stormwater treatment.</p> <p>Submitted documentation appears to indicate no changes proposed to existing stormwater treatment.</p>
A3 (Minor SW System)			<p>The stormwater drainage and disposal must satisfy the Acceptable Solutions of the Hobart Interim Planning Scheme 2015 (HIPS 2015).</p> <p><u>Documentation submitted to date appears not to invoke clause E7.7.1 (A3).</u></p> <p>Submitted documentation appears to indicate no requirement for a minor stormwater system.</p> <p>Submitted documentation appears to indicate no changes proposed to the existing minor stormwater system.</p>
A4 (Major SW System accommodates 1:100 ARI)			<p>The stormwater drainage and disposal must satisfy the Acceptable Solution of the Hobart Interim Planning Scheme 2015 (HIPS 2015).</p> <p><u>Documentation submitted to date appears not to invoke clause E7.7.1 (A4).</u></p> <p>Submitted documentation does not appear to show any proposal for construction of major stormwater drainage.</p>

PROTECTION OF COUNCIL INFRASTRUCTURE

Council infrastructure at risk	Why?
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Stormwater pipes	Not required
Council road network	Yes - During construction

- Swept paths for garbage truck provided 18th Jan
- Reverse entry from Macquarie proposed - acceptable under AS 2890.2 Cl 3.2.2
- Truck will reverse down to the bottom of the entry ramp - gradient of concrete area where bins will be manually manoeuvred approximately 2-3%
- OK given to planner to advertise 01/02/21

Response to Traffic Impact Assessment 16/03/2021 (Saved in TRIM under PLN-19-768)

Summary

Page 19 of the TIA states "While a 1:14 grade is required for a pathway to accommodate disabled people, this development is not one that will attract such persons at random" and "If a resident is to receive a disabled person, vehicle access into the car park would be possible by the resident".

The development does not comply with Section 23 of the Disability and Discrimination Act 1992 and the Building Act 2016.

Development Engineering is recommending Refusal on the basis that:

- E5.5.1 Existing road accesses and junctions A3 (NOT MET), P3 c) and h) (NOT MET) the increase vehicle activity from the premises. Inadequacies in the TIA, in particular the assessment of vehicle lift operation and its impact on peak hour traffic in and out of the premises fail to address this.
- E6.6.1 Parking deficient by 15
- E6.1.1 a) Safe pedestrian access is not provided.
- E6.1.1 b) Inadequate car parking for people with disabilities
- E6.7.2 Design of Vehicular Accesses A1 (Not Met), P1 a) (Not Met)

Macquarie Street cannot be guaranteed or relied upon for visitor parking in the long term due to Department of State Growth management plans for the carriageway.

The purpose of the parking and access code states:

E6.6.1 The purpose of the provision

- ensure safe and efficient access to the road network for all users, including drivers, passengers, pedestrians and cyclists;
- ensure enough parking is provided for a use or development to meet the reasonable requirements of users, including people with disabilities;

No safe access for pedestrians or people with disabilities is provided. Driveway grade is 20%. Safe access for a pedestrian requires a path of a minimum width of 1.2m, separating vehicle movements from pedestrians. Figure 1 shows the driveway of 201 Macquarie Street with vehicles entering and exiting and where a 1.2 m safe access would be.

It is clear that a 1.2 m safe access to separate pedestrians and vehicles is not possible. The development proposal only provides the necessary 6m vehicle clearance for a two way driveway.

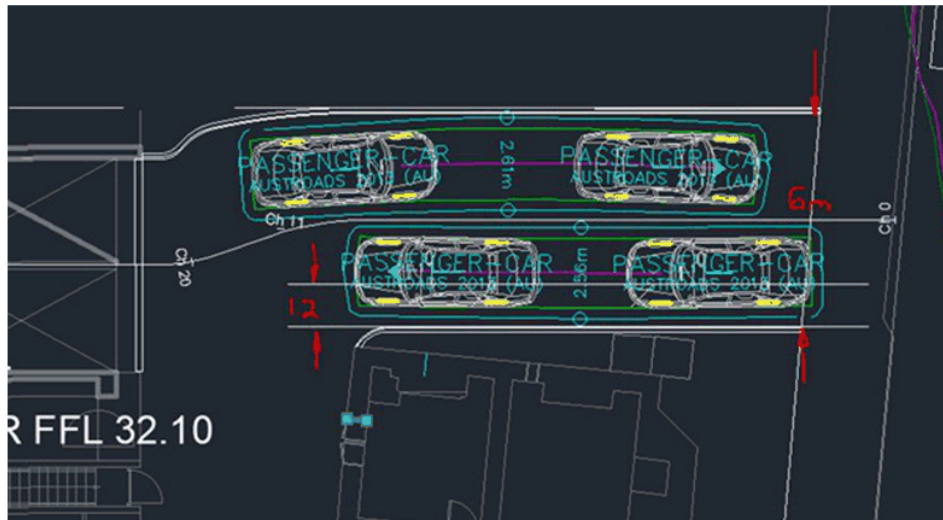


Figure 1: shows the entire driveway width is occupied denying any pedestrian safe access

3. Development Proposal.

45 apartment's total. Forty three 1 bedroom, two 2 bedroom, One office building 68m²
Five levels of units, two levels of car parking space (basement 2 and basement 3) and two existing, two bedroom apartments located on the road frontage.

4.2 Traffic. Numbers provided seem plausible however no reference to survey data from DSG provided or attached.

4.3 Crash record. Numbers provided seem plausible however no reference to survey data from DSG provided or attached.

5. Traffic Generation.

The consultant contradicts his own report and assumes a traffic generation rate of 2.8 vehicles/apartment/day this assumption is based on a development with 20 units at 74 Sandy Bay Rd development. Twenty seven (27) units less than the proposed development. No DA number is provided to validate this report.

A worst case scenario is always the standard to which an Engineer must assess any problem. This allows for a margin of error and a factor of safety. The assumption made by the consultant that the traffic generation of 2.8 is less than half that of published by the commonly referred to RTA 'Technical Direction' to the Guide dated August 2013 and these numbers will not be accepted by Development Engineering.

Due to lack of any other referred material the development will be assessed at 7.4 vehicles/apartment/day

Therefore total trips per day

Applying this trip generation rate to the 47 residential apartments/flats, the traffic generation is expected to be around 348 vehicles/day.

The traffic generation by the office will be around 6 vehicles/day.

The total traffic use of the driveway to the development site will therefore be around 354 vehicles/day 153% greater than that proposed in the TIA, and around 36 vehicles/hour during peak traffic periods 158% greater than that proposed in the TIA.

These figures do not take into consideration the operation of the car lifts.

6. Traffic Assessment and Impact**6.1 Operational Impact of Increased Traffic Activity**

Traffic will enter turning left into the most northern lane of Macquarie Street which also carries the heaviest volumes.

Based on the TIA the development will have 50 car parks on site where there are currently 28. A 79% increase.

Average "platoon" lengths not provided or detail whether the vehicles in a driveway que will clear the queue before the next platoon arrives making assessment difficult.

It would be unreasonable to assume that an increase in vehicle activity at peak times would not affect the flow of traffic on Macquarie Street.

These figures do not take into consideration the operation of the car lifts.

6.2 Sight Distances

The consultant's interpretation of Australian Standards is incorrect. The TIA incorrectly interpolates the site distance table to obtain a sight distance. The sight distance should be rounded up to the next row, See Note 4, AS 2890.1 Figure 3.2. (Page 32).

The speed limit on Macquarie Street is 50km/h according to the Australian Standards the desired sight distance is 69 m taken from 2.5 meters from the road frontage and 1.15 m from the ground to simulate driver's eye level, See Note 7.

Driver's sight line has not been proven through geometric means and cannot be verified.

6.3 Internal Traffic Access

- Access driveway and traffic circulation and on-site turning considerations

The driveway appears to meet the required Australian Standard gradients. Driveway is two way. TIA suggests pedestrian walking into the development can do so safely with adequate room. The minimum driveway width for a single driveway according to AS 2890.1, Table 3 is 3m. The minimum for a two way access with safe clearance is 6m. The minimum safe separate pedestrian access is 1.2 m this does not include room for barriers to separate pedestrians and vehicles.

There is no room for pedestrian access.

Onsite turning inside the carpark itself is acceptable.

Onsite turning outside the building if required cannot be performed if the single office car park space is occupied.

- Car parking Supply

Fifty car spaces are will be provided, 49 basement and 1 in front of office area

Car parking required (HIPS 2015)

1 per single bedroom apartment (43 required)

2 per two bedroom apartment (2 existing, 2 new) (8 required) the two existing do not appear to be considered in this report.

1 per 30m² (2)

1 per 4 unit's visitor parking (11.75 rounded up to 12)

TOTAL 65

15 spaces deficient

Motorcycle Parking – Provided - None Required

Bicycle Parking – Provided - None Required

No DDA (disability) compliant car parking spaces.

- Car Lift Operation

It is common practice in an engineering report to provide supporting documentation or references. Particularly a report addressing such a high use mechanical equipment such as a vehicle lift which if failed, would have significant impact on the occupants.

No supporting documentation has been provided, no references of articles on the feasibility of vehicle lifts.

The TIA provided by Milan Prodanovic provides limited information on car lift operation. Mr

Prodanovic states in his TIA that "he has received advice from car lift suppliers in Australia".

Items that are deemed critical for assessment which are not provided:

1. Potential Manufacturer and supplier.
2. Training.
3. After sales support
4. Breakdown support
5. Service and maintenance, schedules, Parts availability
6. No literature provided to confirm operating rates provided.
7. Emergency Procedures

Note: All lift suppliers are at minimum based in mainland Australia. Support whether service or breakdown repair must be flown in at cost to the residents.

- While the unverified lift timing (lifts travelling maximum distance) numbers from the TIA may work. No information on how the two way driveway will cope with this system and whether the existing driveway which only has provisions for three queueing vehicles will affect this operation.
- Lifts must be a dedicated exiting lane and an entering lane. There is no dedicated waiting bay on entry to the site ensuring a two lift multi direction lift operation will not work.
- No scenario on the impact of the residents, traffic on Macquarie Street if a total failure of the lift system occurred.
- Queuing calculations do not consider queuing from the lift to Macquarie Street.
- It is DE's opinion that the calculations provided are incorrect and limited in scope. Single channel multi-phase queuing analysis would be required, where entering Macquarie Street (via platoon gaps) would act as a second phase.

Further reading on lift considerations follow the links below.

<https://strataconsultants.com.au/are-car-stackers-a-good-idea-in-owners-corporations#1>
https://d39d3mj7qio96p.cloudfront.net/media/documents/SR255_Car_parks_-_Fires_involving_modern_cars_and_stacking_systems.pdf
http://dimacs.rutgers.edu/archive/Workshops/ASIEconEpi/Slides/Queuing_Theory_Equations.p

Development cannot be supported with no information on lift operation provided, only "Advice has been received through discussions with Australian suppliers of car lifts"

- On-site Parking Area Design

Appears Ok

No disabled parking provided

- Pedestrian Traffic

Pedestrian sight lines not provided lack of obstructions around the access will allow this to meet the acceptable solution A1

Page 19 of the TIA states "While a 1:14 grade is required for a pathway to accommodate disabled people, this development is not one that will attract such persons at random. Therefore, the 20% grade of the driveway under the circumstances is not considered as excessive for general pedestrian access. If a resident is to receive a disabled person, vehicle access into the car park would be possible by the resident"

- No reference provided or mention of consultation with members of the disability community or disability support groups to determine if the development will attract a person with a disability. It is not the responsibility of the Traffic Engineer.
- No disabled parking is provided on site

Waste Collection/Servicing

Using Car lift 1 is feasible to bring the waste bins to the ground floor. The truck will be parked on a 7% grade. This may cause problems manoeuvring bins to be lifted. The TIA was not clear what waste collection arrangements will be made for the two front apartments.

No Vehicle lift manufacturer has been suggested in the TIA. It cannot be assumed that a manufacturer will support using a lift for anything other than vehicles and whether their warranty would support it or be made void altogether.

The letter from Veolia (Attachment D of TIA) states that a small to medium size rear lift truck will be most appropriate. Therefore the worst case scenario must be adopted. The medium truck which is 8.8m long is 2.5 m wide and requires clearance from the existing front building when reversing at least 300 mm. It is therefore very likely that the document provided in the TIA (See Attachment B, C1.03) is accurate and that an obstruction of the driveway when exiting lift 2 will occur contrary to the consultants comments.

No time estimates for how much time the entire procedure of moving the 8 bins from their storage location, empty and return to storage will take while occupying a significant portion of the vehicle access.

Conclusion

The proposed development is significantly deficient in the number of parking spaces. The TIA's justification for this is young professionals and students who will walk/bus and ride bicycles when no safe access is provided, vehicle barriers or handrails. A driveway with a 20% gradient even for a short distance is difficult to walk/ride up or down. A 20% driveway grade with frost or ice increases the risk of an injury sustained from slipping or a fall.

The TIA provided lacks any in depth analysis and employs dangerous best case scenarios to improve the case.

Critical references are missing and unsubstantiated assumptions are made. These factors make it impossible to make a determination in favour of the development.

URBAN DESIGN ADVISORY PANEL

MINUTES

16 FEBRUARY 2021

PLN-19-768 – 201 MACQUARIE STREET , HOBART

Description:

The application proposes the retention of the heritage listed building at the front of the site. The main part of the proposal is a new eight storey (six storeys above ground floor level) apartment building, containing 45 apartments. 43 of the apartments are one-bedroom and two are two-bedroom. A small section of the rear of the existing listed building will be demolished, and this building used as two apartments. The stables building will be converted into an office. Overall there will be 47 dwellings, 50 car parking spaces, four motorcycle parking bays and a bicycle storage area.

Comment:

The development was presented to the Panel during a pre-application meeting on 20 August 2019. The Panel's comments at that meeting were around the connection with the rivulet, form and bulk of the building and how to integrate landscaping into the design. The Panel understand there are constraints around the site but would have liked to have seen more changes to the design with regards to their feedback.

There were concerns around the height and massing of the building and whether it provides a positive contribution to the townscape and streetscape of its setting.

The proposal sought to provide a transition in building height between 199 Macquarie Street and 212 Collins Street. The Panel is of the opinion the new building does not provide an acceptable transition between the height and form of the two existing buildings. The new building has a common height to the main building height of 199 Macquarie Street. Whilst the application had used the roof top plant room on 199 Macquarie Street to suggest a height transition, the inset location of the existing plant room results in the dominant building height of 199 Macquarie Street being the perimeter height, especially when viewed from the lower level of Collins Street. The Panel also noted whilst the seven-storey height of 212 Collins Street had been referred in the application, 212 Collins street incorporates a varied height building

**URBAN DESIGN ADVISORY PANEL
MINUTES
16 February 2021**

form, which steps down especially adjacent to the existing building at 210 Collins Street. The Panel noted the more appropriate height to evidence a transition to would be the lower height of 212 Collins Street immediately adjacent 210 Collins Street. Building in such a plane would likely have the effect of reducing the height at the rivulet end of the site by several storeys – possibly two or three.

The Panel noted the proposal had incorporated a design change to the uppermost level at the rivulet end, to assist in the reading of the transition in height through the new development. Analysis from different vantage points, especially Collins Street, lead the Panel to determine this was a welcome design consideration but was insufficient to address the Panel's concerns with the overall height of the proposal.

There was a lot of deliberation from the Panel on the building being built right up to the edge of the rivulet. There is a feeling that the rear of the building is not compatible with the transition within the streetscape of Collins Street and it loses the connection with the rivulet. Consistent with the Panel's comments from the pre-application meeting, it was also discussed whether the building should step down towards the rivulet and whether there is further opportunity to open up the apartments to allow more sun into the apartments and improve the amenity of the building.

Fronting Macquarie Street is an existing heritage building and the bulk of the development is formed at the rear of this building and the development is quite a solid form. This forms the entrance to the apartments and whilst the Panel accepted the proposal for the new building to be a recessive backdrop to the heritage building, there was the feeling that it is not welcoming and further work could be completed on activating this space. The Panel noted the importance of considering the Macquarie Street streetscape as a series of layered experiences and felt further planting opportunities would be beneficial in enhancing the heritage building and the streetscape experience on approach to the new building.

The Panel also felt that there could be a greater integration with the design between the Heritage cottage and the rear development.

Overall, the Panel recognised the Macquarie Street façade of the new building had been reduced since the pre-application meeting, due to the removal of the roof terrace in the earlier proposal and were satisfied the height and bulk of the Macquarie Street façade and its impact on the streetscape.

Concern was raised regarding the minimal side and rear boundary setbacks, the limited opportunities for landscaping and the potential for significant loss of amenity to apartments arising from future adjacent development.

**URBAN DESIGN ADVISORY PANEL
MINUTES
16 February 2021**

The Panel did not see sufficient evidence for the proposed transition in building height and bulk within the precinct, as suggested by the applicants, and were disappointed the comments of the pre-application meeting had not been sufficiently investigated in the presentation of alternate urban design strategies. The Panel recognised this project presents considerable challenges in developing an infill site with large topographic differences, but were not satisfied this project demonstrates a strong lead for future similar development in the area. Accordingly it is the Panel's advice that the height of the proposed development, particularly for approximately the rear half of the site, does not satisfy the City of Hobart Planning Scheme performance criteria to provide an acceptable transition in heights of adjoining buildings within the streetblock.

URBAN DESIGN ADVISORY PANEL

MINUTES

20 AUGUST 2019

Pre Application Proposal – 201 Macquarie Street – Partial Demolition, Alterations and Extensions to create New Building for Multiple Dwellings

Description:

The proposal is for the retention of the two existing buildings on the site, and the construction of a new eight storey residential building containing two basement levels of car parking, a roof terrace, and six levels of residential accommodation with a total of 47 apartments.

More specifically the proposal includes:

Retention of the two existing heritage listed buildings sited towards the front of the site. Demolition of a part of the rear of the front building, and a brick wall and planting to the east of this building, along the driveway. Continued use of the front building as two flats. Use of the rear building as an office (it is currently residential)

Basement Level: Two basement levels of car parking, accessed off Macquarie Street. The car park is accessed at ground floor level, with a car lift to take the cars to the basement levels. 49 car spaces over the two levels, with stairs and a lift leading to the upper levels. An accessible parking space is proposed between the two existing buildings.

Lower Ground Level: Rubbish room, switch room, bike storage and Apartments 1 to 7. Each apartment is one bedroom, and has a terrace and garden bed. Ground Level: Apartments 8 to 15. Apartment 9 has a terrace, the other apartments on this level have a balcony. Each apartment is one bedroom. Total of 47 apartments, each apartment is one bedroom, and has a balcony. Each bedroom has one bedroom, so there is a total of 47 beds. Roof top terrace (179m²).

The building (including balconies) does not overhang the Hobart Rivulet.

The new building will be constructed of grey off form precast concrete with face brick tiles on the car park levels. The car park levels will also have aluminium louvre grills to allow air intake into the car park. The deck balustrading will be galvanised steel. The elevation facing Macquarie Street (the south-east elevation) will have clear glass blocks.

**URBAN DESIGN ADVISORY PANEL
MINUTES
26/6/2019****Comments:****Form and Bulk of the Building**

- The Panel considers that the development should be stepped down towards the Hobart Rivulet in a manner more consistent with the natural fall of the topography of the area and that the colour of the building be recessive.
- The possibility of relocating the roof top barbeque area to a stepped down roof top section at the rear of the building may help with the reduction of bulk and should be investigated.
- Concern was raised regarding the minimal side and rear boundary setbacks, the limited opportunities for landscaping and the potential for significant loss of amenity arising from future adjacent development.
- The limited access to natural sunlight, in respect of some apartments was also noted.

Connection with the Rivulet

- The Panel suggested that the applicant consider the rivulet as an asset to the development proposed and that it could be beneficial to have discussions with Council officers regarding what might be possible in the longer term, given the potential for further residential development in the area

Landscaping

- The Panel would like the planting to extend all the way down the perimeter and the preference would be to have plants in the ground and not just in planters.

Internal Design

- It was suggested it would be beneficial to provide some light into the far end of the central corridor.



Howarth Fisher and Associates
ACN 119 043 051
Structural, Civil and Traffic Engineering

Structural and Civil Engineering

Project Design and Management
Forensic Engineering and Structural Inspections
Research and Development Facilitators

Traffic Engineering

Traffic Management Studies and Traffic Impact Assessment
Expert Witness Representation
Road Safety Audits

Proposed Residential Apartments

Peer Review Assessment of Traffic Engineering Issues

201 Macquarie Street, Hobart



Prepared for
JP Cumming

Date
May 2021

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Appendix A Milan Prodanovic - Traffic Impact Assessment – Proposed Residential Development Report April 2021 and Application Referral Development Engineering Response

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	Name	Signature	Date
Authorised by:	Joanne Fisher		21 st May 2021



1. Introduction

1.1 Client Details

This document has been prepared for the following:

Client Name: Martin Stephenson

Address: 54 Sandy Bay Road

Battery Point

Client Contact: JP Cumming

1.2 Project Details

The report is undertaken for the site at 201 Macquarie Street, Hobart. An existing Traffic Impact Assessment Report and supplementary information, undertaken by *Milan Prodanovic Traffic Engineering and Road Safety* was submitted to the Hobart City Council as part of the Development Application Process. There were a number of issues which the Council wanted independently assessed given the innovative nature of the parking access and the significance of Macquarie Street in the strategic road network within Hobart.

This report will address the issues which have been mentioned in the Development Engineering Response.

A copy of the Traffic Impact Assessment by Milan Prodanovic and proposed development plans can be found in **Appendix A**.



2. Scope of Consultancy

The scope of consultancy involves the following:

- Liaise with client and Hobart City Council and obtain all existing reports, calculations and plans.
- Assess AM and PM directional split issue (undertake surveys).
- Assess the operation of the lift and the queueing calculations (with some sensitivity testing).
- Assess the pedestrian access and propose solution(s).
- Assess site generation (surveys).
- Assess queue lengths implications on Macquarie Street.
- Document the findings in a report



3. Location of the Development

Figure 1 shows the location of the proposed development in the context of the surrounding street network.



Figure 1: Location (source: Google maps)



4. Existing Situation

4.1 Site Details

The site is located at 201 Macquarie Street, Hobart. Macquarie Street is a one way major arterial road operating in the immediate periphery of the CBD in Hobart. There are three one way south east bound lanes in the vicinity of the site plus two parking lanes, one on either side of the road, with time restricted metered parking. There is a three-metre-wide footpath on either side of the road and traffic signal controlled pedestrian crossing facilities at the intersection of Molle Street and Macquarie Street.

4.2 Traffic Volumes

The Department of State Growth has been contacted and advised of the following available traffic counts, through their SCATS intersection traffic controlled data.

Based on this data there are approximately 15,000 vehicles per day (AADT) going past the site, of which approximately 1,500 travel past the site in the morning peak (8am – 9pm) and 1,200 travel past the site in the evening peak (4.15pm – 5.15pm).

4.3 Posted Speed Limits

The speed limit along Macquarie Street, in the vicinity of the site, is 50km/hr, the urban default speed limit.

4.4 Proposed Development

It is advised that the proposed 201 Macquarie Street development project will involve the construction of a five-storey building accommodating 43 single bedroom units, and 2 two-bedroom units.

The site will have two levels of car-parking spaces, both being serviced by car lifts, which will allow vehicles to move from the ground floor to the two parking levels and vice versa. Also associated with the development will be 4 motorcycle parking spaces and 8 bicycle spaces. The parking spaces will be accessed via the existing crossover on Macquarie Street.



5. Assessment of Trip Generation

An assessment has been made of the assumptions and conclusions drawn in relation to trip generation.

5.1 Existing Trip Rates

5.1.1 Milan Prodonovic Report April 2021

Extract from Section 6.1 - Operational Impact of Increased Traffic Activity

"...The development site currently is predominantly used as a commuter car park with 32 car parking spaces accessed via the driveway off Macquarie Street. The peak hour traffic movement is expected to currently be around 20 vehicles/hour, but with the peak directional split in traffic movements in the future being opposite to the present."

5.1.2 Howarth Fisher Assessment

As a worst case, the commuter car park which has provision to accommodate 32 vehicles, located at 201 Macquarie Street would generate a maximum of 32 vehicle trips inbound and 32 vehicle trips outbound in the morning and evening peak.

5.2 Proposed Trip Generation

5.2.1 Milan Prodonovic Report April 2021

Extract from Section 6.1 - Operational Impact of Increased Traffic Activity

"The proposed apartment development is expected to generate around 140 vehicles/day and 14 vehicles/hour at peak traffic times of the day, with a directional split of around 70% exiting and 30% entering the site during the morning peak hour, and around 35% exiting and 65% entering the site during the afternoon peak hour. This means there will be around: - 10 vehicles/hour exiting the site and 4 vehicles/hour entering the site during the morning peak hour; and - 5 vehicles/hour exiting the site and 9 vehicles/hour entering the site during the afternoon peak hour."

"Having regard to all the above considerations and findings, a traffic generation rate of 2.8 vehicles/apartment/day will be assumed for the proposed development. This is slightly higher than indicated in the Technical Direction for the high density regional developments as well as was found for the site at 51 Sandy Bay Road."



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Applying this trip generation rate to the 47 residential apartments/flats, the traffic generation is expected to be around 132 vehicles/day. The traffic generation by the office will be around 6 vehicles/day.

The total traffic use of the driveway to the development site will therefore be around 140 vehicles/day and around 14 vehicles/hour during peak traffic periods, based on the peak hour traffic being the typical 10% of the daily traffic volume."

5.2.2 Howarth Fisher and Associates Assessment of Trip Generation

A survey of trips to and from Empress Towers in Battery point, at approximately the same distance from the CBD as 201 Macquarie Street has been undertaken. Empress Towers has a total of 37 units, with several being two bedroomed. The survey of a similar type of land use was undertaken on the evening of Tuesday 18th May, and both morning and evening on Wednesday 19th May 2021. Another survey on the morning of the 18th May was also undertaken, at the apartments block at 20 Elderslie Road, Battery Point.

Table 1: Trip Generation for Empress Tower Apartments. Source: Howarth Fisher & Associates Survey

	Morning Peak (7:30AM-8:30PM)	Evening Peak (4:30PM-5:30PM)
18th May	N/A	3 vehicles entering 4 vehicles exiting 3 pedestrians entering
19th May	5 vehicles exiting 1 pedestrian exiting 2 pedestrians entering 1 bicycle exiting	5 vehicles entering 2 vehicles exiting 4 pedestrians entering 3 pedestrians exiting

Table 2: Trip Generation for Elderslie Road Apartments. Source: Howarth Fisher & Associates Survey

Date	Traffic Volumes
18 th May 2021 7.45am – 8.45am	1 vehicle entering 2 vehicles exiting



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It can be seen for both surveys in the evening peak (worst case), that the traffic movements were 7 in total. Based on 37 apartments, this equates to 0.18 trips per unit. This is a lower figure than that used in the initial Prodanovic TIA (45 vehicles generating 14 trips in the peak, giving 0.31 trips per unit). The trip rate found from the Empress Towers survey has been applied to 201 Macquarie Street.

Howarth Fisher and Associates survey data has been applied to 201 Macquarie Street.

Table 3: Additional Trip Generation for Apartments. Source: Howarth Fisher & Associates Survey

Land Use	Car based Trip Generation Rates Daily/ Peak Hourly	Total
<i>43 one bedroom units including two accessible units</i>	Total 7 during the evening peak hour (based on the 37 apartments) Total - 0.18 per unit	7.74 trips (total) during the evening peak
<i>2 x 2 bedroom unit</i>		0.36 trips (total) during evening peak
<i>TOTAL</i>		8.1 trips (total) during the evening peak

Our survey data results in a lower trip generation figure than the data contained in the Milan Prodanovic report.

5.2.3 Trip Rates based on NSW, Transport Roads and Maritime Services TDT/2013/04a (RMS/ TDT/2013/04a

In line with standard practice, although not as accurate as undertaking local surveys, given these results are based on NSW regional data from 2013, a comparison has been made with NSW Roads and Maritime Services Technical Direction 04a

The value used for peak hour trips is higher in the TDT/2013/04a than the Milan Prodanovic initial TIA at 0.42 trips per unit (as opposed to 0.31 trips per unit within Milan Prodanovic TIA).



Under the definitions of the RTA Technical Direction:

High density residential flat building: a multi-level building containing 20 or more dwellings. These buildings are typically more than 5 levels, have secure basement level car parking and are located in close proximity to public transport services.

The rates for high density residential apartments in a CBD environment are as follows:

Metropolitan Regional Centres (CBD)

- *Daily vehicle trips – not available*
- *Peak hour Vehicle Trips – 0.42 trips per unit (as absolute worst case for the evening peak).*

The above rates include visitors, staff, service delivery and on street movements such as taxis pick up/set down activities.

Table 4: Trip rates associated with the proposed development based on the requirements of the NSW, RTA, Guide to Traffic Generating Developments, 2002.

Land Use	Trip Generation Rates Daily / Peak Hourly	Total
43 one bedroom units including two accessible units	Daily vehicle trips – not available	18.06 trips per peak hour
	Peak hour Vehicle Trips – 43 x 0.42 trips per unit	
2 x 2 bedroom unit	Peak hour Vehicle Trips 2 x 0.42	0.84 trips per peak hour
Office Space (68m ²)	Peak hour vehicle trips – 1.6 per 100m ² gross area (worst case)	1.6 vehicle trips during the peak (these do not use the lifts)
TOTAL		12.8 trips per peak hour (18.9 trips using lifts)

It should be noted that the trip rate of 0.42 per apartment in the evening peak, when the majority of vehicles will be entering the lifts, reflects the absolute highest recorded trip rate within the range for larger apartments (i.e. not predominantly 1 bedroomed) as indicated in the RMS Technical Direction 2013/04a. This therefore reflects an absolute worst case.



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Typically, the RTA Guide would be used for comparison purposes only. The surveys are based on regional New South Wales data from surveys undertaken at least 8 years ago and they are not totally representative of the situation close to the centre of Hobart. Actual survey data (which is lower than the NSW, RMS data is more accurate.

5.3 Directional Split

Based on the surveys that were undertaken by Howarth Fisher and Associate the highest directional split was 71% incoming during the PM peak. To verify the effect of the split on the lift system Howarth Fisher have also conducted a calculation on a worst case of 100% incoming trips during the evening peak period.



6. Lift Operation & Queuing

6.1 Lift Operation

6.1.1 Milan Prodanovic Report April 2021

The following extract from Milan Prodanovic's report section 6.3 Internal Traffic Access, Circulation and Car Parking – Car lift Operation states:

"Advice has been received through discussions with Australian suppliers of car lifts that the travel speed of the car lift between floor levels depend on the cost outlay; it can vary from 6 metres/minute to 15 metres/minute. The developer has decided to have lifts which will operate at the highest speed of 15 metres/minute.

The service rate will also depend on the location of the lift (what level it is at the time of demand by an arriving vehicle). The lift operation can be programmed to be waiting at Basement Floor Levels in the morning peak hour and Ground Floor Level during the afternoon peak hour to best service the peak directional vehicle movements, which is proposed for this development.

It is proposed both lifts will operate for vehicle movements in both directions.

i.e. vehicle movements both into the car park and out of the car park.

The lift travel time will be:

- 33 seconds between Basement Level 2 and the Ground Floor Level; and
- 23 seconds between Basement Level 3 and the Ground Floor Level.

The suppliers of the lifts have also confirmed:

- time for door to open = 5 seconds;
- time of car to either enter or exit lift = 5 seconds;
- time for door to close = 5 seconds.

The lifts will take:

- between 63 and 96 seconds to travel between Ground Floor Level and Basement Level 2 (or vice versa), depending on whether the lift is waiting at the level of car entry of the other floor level; and
- between 53 and 86 seconds to travel between Ground Floor Level and Basement Level 3 (or vice versa), depending on whether the lift is waiting at the level of car entry of the other floor level.



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For the above worst-case situation, each lift would service cars at a rate of around 33 and with two lifts, the average service rate will be 67 vehicles/hour, but with return of the lift to the peak arrival level, the service rate will be around 40 vehicles/hour/lift.

The traffic generation by the development is expected to be only 14 vehicles/hour.

The two lifts will therefore efficiently service the car arrival and departure rate with the queueing/service rate calculations."

6.1.2 Howarth Fisher and Associates Assessment of Lift Operation

The lift travel times in the information above is incorrect (33 seconds and 23 seconds should be swapped), however, the correction is made subsequently in his report. The calculations as part of the initial TIA by Milan (attached in Appendix E) were also correct based on the values they used, however, there was no explanation of what the final numbers meant. Given the information was not entirely clear, it has been summarised and recalculated using the Howarth Fisher results below.

As per the manufacturers specifications, the expected time taken for a vehicle to use the lift is as follows:

The following scenario assumes that the vehicle is on the ground floor and the lift is waiting on the ground floor.

- 5 seconds for door to open
- 5 seconds for car to drive in
- 5 seconds for door to close
- 33 seconds to travel (worst case time)
- 5 seconds for door to open
- 5 seconds for vehicle to drive out
- Total: 58 seconds (full cycle time from the ground floor to the third floor basement).

However, if the lift is not already on the ground floor and needs to be called from the 3rd floor basement these additional times would need to be included.



Howarth Fisher and Associates



An additional time of:

- 5 seconds for door to close
- 33 seconds to travel back to top level (worst case time)
 - Total: 96 seconds

There is therefore a cycle time of 96 seconds as a worst case scenario. This gives a total maximum cycle time of 96 seconds for each individual lift. While there is the possibility for vehicles not having to wait for a lift, (reducing the average cycle time to 53 seconds), there is no guarantee this will occur, particularly in higher flow times.

Directional Split

The assumption is made in the equations that there is only one queue, i.e., only the traffic entering the site is evaluated.

Two cases for directional split have been assessed, one based on Howarth Fisher and Associates directional split findings (notably 71% entering and 29% exiting during the evening peak hour) and a sensitivity test (representing the absolute worst case of 100% entering during the evening peak hour).

Applying this to the development flows, the expected trip rate would be 13.5 (14) vehicles entering and 5.5 (6) vehicles exiting during the evening peak hour. These traffic generation rates are based on the RMS TDT 4a trip rates and not the lower trip rates calculated by Howarth Fisher and Associates or Milan Prodanovic.

As a second case, an assumption is made that there is a 0% exiting, 100% entering split. This is an absolute worst case scenario and negates the possibility of incorrect directional splits having an impact on the outcome. The trip values found in Section 5.2.2 have been used as though every vehicle is entering the site, and none are leaving. This gives an inflow of 19 vehicles during the peak. It should be noted that this is highly unlikely to ever occur.



Queue Calculations

The site, as noted, is expected to have 19 vehicles in both the morning and evening peak as per the RTA Technical Direction maximum trip rates.

The calculations used are based upon *the Austroads Guide to Traffic Management Part 2: Traffic Theory Concepts* which states:

"In many traffic situations, particularly at intersections, conflicts between different traffic streams and/or fluctuations in flow can result in the formation of queues of vehicles. Queuing theory provides a way of analysing queue behaviour and predicting its consequences, including queue lengths and queuing delays.

The complete specification of a queuing system requires the values of the following five input characteristics:

- *the distribution of arrivals, including the average arrival rate and the type of distribution, e.g. regular, random, Erlang, etc.*

In this case, the distribution would be classed as random. The average arrival rate, r , is the value of incoming and outgoing traffic during the peak hour, which is 18.9 vehicles/hr based off the RTA Technical Direction (rounded to be 19 vehicles).

- *whether the input source (i.e. the pool from which arrivals are drawn) is finite or infinite*

For calculation purposes, the input source is assumed to be infinite (worst case). In reality, the pool is finite, as there are only a total of 50 vehicles that can enter and exit the car park.

- *the queue discipline, i.e. the means of deciding the order in which queue members obtain service, which may be first-come-first-served, random, some priority system, etc.*

This will be dependent on the programming of the lift sequence. As a worst case scenario, it is assumed that the service is given in a first-come-first-served manner.

- *the channel configuration, which includes the number of separate queues, the number of service positions and whether queue members are served singly, in parallel or in series*

There are two lifts which will be utilised in the system, but only one queue. The vehicles will be served in parallel (lifts can be used at the same time).

- *the distribution of service times for each service point, including the average service rate and the type of distribution."*

The worst case service time, s , has been found to be 96 seconds (which converts to 37.5 vehicles/hr).

**Single Lift Operation**

The RTA Technical direction showed a trip rate of 19 vehicles during the peak hour when applied to 201 Macquarie Street, with a 71% entering/29% exiting split (based on HFA surveys). The calculations were first conducted based on this split, giving 13.5 vehicles/hr incoming.

The ratio between arrival rate and service rate can be used to determine a utilisation factor ρ .

$$\rho = \frac{r}{s} = \frac{13.5 \text{ veh/hr}}{37.5 \text{ veh/hr}} = 0.36$$

The factor can then be used to determine the probability of the number (or greater) of vehicles in the system at any given time (in this case, the peak hour) using the equation:

$$\Pr(n > x) = \rho^{x+1}$$

Where

n = the probability of a number of vehicles or greater in a system

x = the number of vehicles in a system at one time

For 2 or more vehicles in the system (the total system, not just the queue), the equation is:

$$\Pr(n > 2) = \rho^{2+1} = 0.36^3 = 0.0466 = 4.67\%$$

For 3 or more vehicles in the system (this could be 1 in the lift, 2 in the queue for example)

$$\Pr(n > 3) = \rho^{3+1} = 0.36^4 = 0.01675 = 1.67\%$$

For 4 vehicles in the system (this could be 1 in the lift, 2 in the queue, and 1 on the road, i.e., the system fails)

$$\Pr(n > 3) = \rho^{4+1} = 0.36^5 = 0.00605 = 0.605\%$$

Therefore, the system is capable to Australian Standards using only one lift if the directional split is based upon the Howarth Fisher and Associates survey undertaken at Empress Towers. This is explained two paragraphs below.



Sensitivity Test

Looking at the worst case available (for example, if one lift is unavailable due to maintenance/faults etc) an assessment using only one lift, and an assumption that all flow is entering the site, and none are leaving during the evening peak hour has been undertaken.

AS/NZS 2890.1:2004 section 3.5 states that "... the storage area shall be designed to accommodate the 98th percentile queue...", meaning that 98% of the time, the queue length needs to be sufficient for the trip rates placed upon the system.

The ratio between arrival rate and service rate can be used to determine a utilisation factor ρ .

$$\rho = \frac{r}{s} = \frac{19 \text{ veh/hr}}{37.5 \text{ veh/hr}} = 0.506$$

The factor can then be used to determine the probability of the number (or greater) of vehicles in the system at any given time (in this case, the peak hour) using the equation:

$$\Pr(n > x) = \rho^{x+1}$$

Where

n = the probability of a number of vehicles or greater in a system

x = the number of vehicles in a system at one time

For 2 or more vehicles in the system (the total system, not just the queue), the equation is:

$$\Pr(n > 2) = \rho^{2+1} = 0.506^3 = 0.13 = 13.0\%$$

For 3 or more vehicles in the system (this could be 1 in the lift, 2 in the queue for example)

$$\Pr(n > 3) = \rho^{3+1} = 0.506^4 = 0.065 = 6.5\%$$

For 4 vehicles in the system (this could be 1 in the lift, 2 in the queue, and 1 on the road, i.e., the system fails)

$$\Pr(n > 3) = \rho^{4+1} = 0.506^5 = 0.0332 = 3.32\%$$

Therefore, the system is not capable to Australian Standards using only one lift if the assumption is made that all 100% of evening peak traffic is entering. It is however, very close to the requirement of section 3.5 *Access to Mechanical Installation* outlined in the *Australian Standard, 2890.1:2004* with it being capable of catering for the 96.7th percentile (as opposed to catering for 98% of the queue). The likelihood of this situation occurring is very low, given that there are two lifts operating and the directional split is unlikely ever to be 100% entering.



Howarth Fisher and Associates

The calculation can also be done to find the maximum number of vehicles the system could successfully manage, and still adhere to AS/NZS 2890.1:2004 section 3.5, "... the storage area shall be designed to accommodate the 98th percentile queue..."

Rearranging this equation to find the arrival rate r to satisfy the conditions of AS/NZS 2890, i.e., the probability of having 4 or more vehicles in a system (the total system, not just the queue) is less than or equal to 2%,

$$\Pr(n > x) = \rho^{x+1} \leq 0.02$$

$$\left(\frac{r}{s}\right)^{x+1} \leq 0.02,$$

$x = 4$, (total vehicles in the system at one time)

$s = 37.5 \text{ vehicles/hr}$

It is found that if only using one lift, and assuming all flow is incoming, 17.15 vehicles/hour is the maximum allowed. This would be more than sufficient for normal operating conditions.

The Howarth Fisher directional split survey (using the highest trip rates found in the RMS guide) showed there to be a maximum of 14 incoming vehicles per hour.

Two Lift Operation

Two lifts have also been assessed, which is the actual proposed scenario for the development at 201 Macquarie Street. In this case, a similar method is applied (finding the probability of ' x ' vehicles in a system), but the equations take both lifts into account. A diagrammatic representation of the scenario the equation represents is shown in Figure 2. The previous TIA also used these equations, however the outputs were not clear.

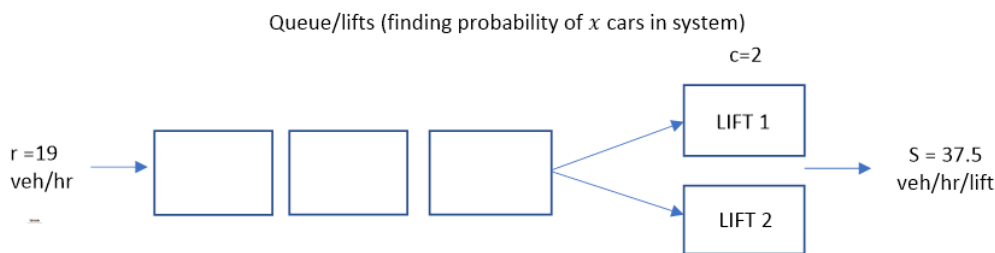


Figure 2: Diagrammatic representation of the lift system being analysed.

The probability that there are zero vehicles in the system can be found (and is used later to find the probability of x number of vehicles in the system) using the equation:



$$P_0 = \left(\sum_{x=0}^{c-1} \frac{\left(\frac{r}{s}\right)^x}{x!} + \frac{\left(\frac{r}{s}\right)^c}{c! \left(1 - \frac{r}{s}\right)} \right)^{-1}$$

$$P_0 = \left(\frac{0.506^0}{0!} + \frac{0.506^1}{1!} + \left(\frac{0.506^2}{2! \left(1 - \frac{0.506}{2}\right)} \right) \right)^{-1}$$

$$P_0 = (1 + 0.506 + 0.1714)^{-1} = 0.596 = 59.61\%$$

Therefore, there is a 59.61% chance of the system being empty during the peak hour.

To find the probability of x vehicles in the system, the following equation is used.

$$P_x = P_0 \left(\frac{\rho^x}{c^{x-c} * c!} \right)$$

For the probability of two vehicles in the system, (e.g., 1 in the lift and 1 in the queue)

$$P_2 = 0.596 \left(\frac{0.506^2}{2^{2-2} * 2!} \right) = 0.596 \left(\frac{0.256}{2} \right) = 0.0763 = 7.63\% \text{ chance of 2 vehicles in the system during the peak hour.}$$

For the probability of three vehicles in the system, (e.g., 2 in the lifts and 1 in the queue)

$$P_3 = 0.596 \left(\frac{0.506^3}{2^{3-2} * 2!} \right) = 0.596 \left(\frac{0.129}{4} \right) = 0.0192 = 1.92\% \text{ chance of 3 vehicles in the system during the peak hour.}$$

For the probability of four vehicles in the system, (e.g., 2 in the lifts and 2 in the queue)

$$P_3 = 0.596 \left(\frac{0.506^4}{2^{4-2} * 2!} \right) = 0.596 \left(\frac{0.0655}{8} \right) = 0.00488 = 0.488\% \text{ chance of 4 vehicles in the system during the peak hour.}$$

For the probability of five vehicles in the system, (e.g., 2 in the lifts, 2 in the queue, and 1 outside the queuing area i.e., the system fails)

$$P_3 = 0.596 \left(\frac{0.506^5}{2^{5-2} * 2!} \right) = 0.596 \left(\frac{0.033}{16} \right) = 0.001235 = 0.124\% \text{ chance of 5 vehicles in the system during the peak hour.}$$



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AS/NZS 2890.1 requires the queue length to be sufficient for the 98th percentile (i.e., the queue length is large enough for 98% of the time). The two-lift system at 201 Macquarie Street has sufficient capacity for this requirement, as there is only a 0.488% chance of both lifts being in use at the same time while 2 vehicles are queuing.

The probability of the system failing entirely (vehicles spilling onto Macquarie Street) is 0.124%, which is very low. It should be noted that this is with 100% of vehicles entering during the evening peak, which is very unlikely. Using the directional splits found at Empress Towers, the probability of a failing system is even lower.

7. Pedestrian Access

7.1 Proposed Access Width

There is a proposed pedestrian and vehicular access to the site off Macquarie Street. This is shown below (an extract from the design drawings). The combined pedestrian and vehicular access is 6.9 metres wide.

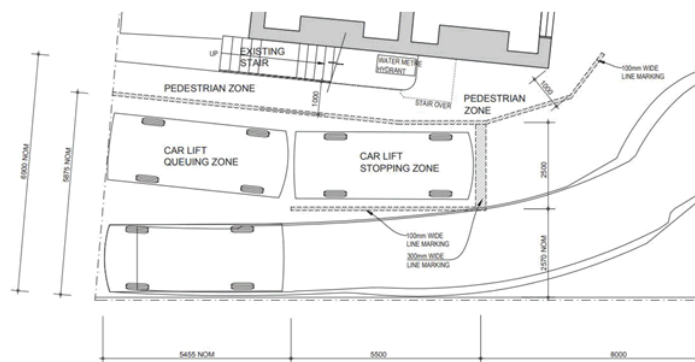


Figure 3: The proposed access onto the site is 6.9 metres wide

The council has stated that the pedestrian zone must be separated by more than line marking in the engineering response. However, *AS/NZS 1742.4*, section 3.2.6 states that:

Shared zones are generally provided in area where the competing demands of pedestrians, moving vehicles and parking require a form of control which allows complete pedestrian mobility and restricts vehicle speeds thereby enhancing pedestrian safety. A speed limit of 10km/h is recommended.

In the design of a shared zone the environment needs to be altered to make it obviously different from other streets. This can be achieved by the use of different coloured and textured paving, by the use of full width paving between property lines and by judicious and aesthetic placement of planters and other landscaping. Perimeter (threshold treatments in accordance with AS 1742.123 should also be considered.

The signs SHARED ZONE (R4-4) and END SHARED ZONE (R4-5) (see Clause 3.1.5) shall be used at every entrance to and exit from the shared zone.

A shared zone gives significantly more freedom to pedestrians than the line marking situation proposed. The speed at which vehicles would likely enter the driveway will also be significantly less than the speed limit of Macquarie Street. The pedestrians will encounter a small amount of vehicles given the size and nature of the carpark.



Given the nature of the driveway, and the low vehicle/pedestrian numbers which would be encountered, in comparison to a shared zone arrangement, a 10km/h speed limit and a dedicated pedestrian pathway is more than sufficient.

As a comparison, a similar system has been implemented at Radiology Tasmania, 325 Macquarie Street. The pathway has markings for pedestrians to use it. This is shown in photograph 1.



Photograph 1: Radiology Tasmania shared Driveway/pedestrian access using linemarking only.



8. Conclusion and Recommendations

The proposed development has been assessed in relation to the following:

Trip Generation

Trip generation can be determined most accurately from undertaking local survey from similar unit type development in close proximity to the centre of Hobart. Howarth Fisher and Associates undertook surveys over a two-day period and the results showed trip rates to be lower than those contained in Milan Prodanovics report.

The NSW, RMS Technical Direction has been used for comparison purposes, and for the purposes of providing worst case scenario trip generation rates.

Parking – Lift Operation and Queuing

The lift system has sufficient capacity to keep the queue length less than or equal to 2 for significantly more time than AS/NZS2890 requires (98th percentile).

AS/NZS 2890.1 requires the queue length to be sufficient for the 98th percentile (i.e., the queue length is large enough for 98% of the time). The two lift system at 201 Macquarie Street has sufficient capacity for this requirement, as there is only a 0.488% chance of both lifts being in use at the same time while 2 vehicles are queuing.

The probability of the system failing entirely (vehicles spilling onto Macquarie Street) is 0.124%, which is very low. It should be noted that this is with 100% of vehicles entering during the evening peak, which is very unlikely. Using the directional splits found at Empress Towers, the probability of a failing system is even lower.

Access

The access to the underground parking area is 6.9 metres wide. This is fully compliant with the Australian Standard for access driveways accommodating the number spaces that they serve and accessing on to a local road.

Pedestrian Access

One recommended option is to implement a vehicular pedestrian / shared zone sign with a 10km/hr speed restriction sign, providing a safe low speed environment for pedestrians and vehicles to share the space. Pedestrians using this zone will encounter a small volume of vehicles given the size and nature of the carpark.

Alternatively, line marking and pedestrian symbols could be used to mark a pedestrian pathway completely segregated from the vehicular access.



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However, if more segregation than line marking is deemed appropriate by Council, a 10km/hr speed restriction and a line with thin diameter bollards could be used to physically segregate the access (as provided at the access to Argyle Street car park).

It should be noted that the implementation of bollards may give rise to issues arising with people pushing prams or in wheelchairs given the pedestrian path is only 1 metre wide. It should be noted that there are many examples of solely line marked pedestrian accesses in Hobart, where there are higher pedestrian and vehicle flows into off street car parking arrangements. Taplin Radiology on Macquarie Street was designed by Howarth Fisher and Associates and approved by Council in 2009 and shows a line marked pedestrian arrangement.

Conclusion

The trip generation rates in the NSW RMS technical direction show the highest trip rates and have been used in this analysis, to represent worst case scenarios. The results of our trip generation surveys show much lower trip generation rates than the highest ones surveyed in New South Wales.

Our surveys showed the highest directional split to be 71% incoming and 29% outgoing in the evening peak. There is no issue with the queue lengths based on the highest NSW trip rates and the highest Howarth Fisher trip rates.

Even when sensitivity testing the highest NSW trip rate and the maximum 100% incoming trips, the probability of the system failing entirely (vehicles spilling onto Macquarie Street) is 0.124%, which is very low. Using the directional splits found at Empress Towers, the probability of a failing system is even lower.

Pedestrian provision can be accommodated in a similar way to other constrained sites in Hobart via line marking. Pedestrian flows are much lower to a residential development site than for example to the radiology centre on Macquarie Street which was approved in 2009 or internally within Argyle Street car park. Signing a shared zone is another common method of providing a shared low speed pedestrian vehicle space and if Council are insistent on physical separation thin bollards can be used (refer to Argyle Street car park ground floor access).



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Appendix A

TIA MILAN PRODANOVIC AND DEVELOPMENT ENGINEERING RESPONSE



TRAFFIC IMPACT ASSESSMENT

**PROPOSED
RESIDENTIAL APARTMENT
DEVELOPMENT**

**201 MACQUARIE STREET
HOBART**

**REVISED
APRIL 2021**



TRAFFIC IMPACT ASSESSMENT

PROPOSED RESIDENTIAL APARTMENT DEVELOPMENT

201 MACQUARIE STREET
HOBART

REVISED
APRIL 2021

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ATTACHMENTS:

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

Attachment B - Traffic data for Macquarie Street received from DSG

Attachment C - Crash report for Macquarie Street received from DSG

Attachment D - Drawings of civil design and access management

Attachment E - Car lift technical details, calculations of lift operation, queueing and manoeuvring diagram

Attachment F - Details of waste collection proposal and service vehicle



TIA – PROPOSED RESIDENTIAL APARTMENT DEVELOPMENT
201 MACQUARIE STREET, HOBART

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 3: Geometric Design (2020)
- AUSTROADS – Guide to Road Design Part 4: Intersections and Crossings General (2017)
- AUSTROADS – Guide to Road Design Part 4A: Unsignalised and Signalised Intersections (2017)
- AUSTROADS – Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings (2019)
- AUSTROADS – Guide to Traffic Management Part 12: Traffic Impacts of Developments (2019)
- Australian Standard AS 2890 – Parking Facilities, Part 1 – Off-street car parking
- Australian Standard AS 2890 – Parking Facilities, Part 6 – Off-street parking for people with disabilities
- Hobart Interim Planning Scheme 2015

1. INTRODUCTION

A multi-storey residential apartment development is proposed for the property 201 Macquarie 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 Macquarie 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 Macquarie Street.

Consideration is given to the access arrangements and available sight distances along Macquarie 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 to Austroads Guide to Traffic Management - Part 12. 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 northern side of Macquarie Street and around 70m to the east of the Molle Street intersection.

The site lies within the Urban Mixed Use Zone in the Hobart municipality, around 60m from the Central Business Zone. The surrounding development is quite mixed with commercial, office, visitor accommodation as well as school uses.

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

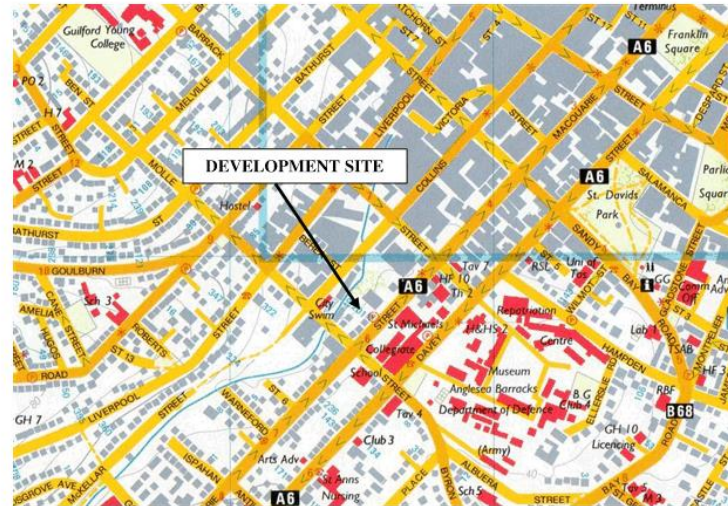


Figure 2.1: Extract of street atlas showing location of proposed apartment development site

3. DEVELOPMENT PROPOSAL

The proposed development at 201 Macquarie Street is for the construction of a multi-storey building that will have 45 residential apartments.

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



Photograph 3.1: View of development site and access from Macquarie Street

There will be five floor levels with apartments and two levels of car parking. 43 apartments will have one bedroom and there will be two apartments with two bedrooms.

Two car lifts will provide access from the Ground Floor Level to the car parking spaces on the two Basement Levels. There will be 24 car parking spaces on Basement Level 2 and 25 car parking spaces on Basement Level 3 – a total of 50 car parking spaces.

One further car parking space will be located next to the proposed office building (see below).

With the multilevel apartment building there will also be four motorcycle parking spaces on the Basement Level 3 and at least 8 bicycle parking spaces in a secured room on the Lower Ground Floor Level.

There are two buildings at the front part of the development site. The two storey building at the frontage boundary has a 2-bedroom flat on each level. The smaller building behind this also has two levels with a 1-bedroom flat on

each level. This rear building will be converted to an office which will have a total floor area of around 68m², slightly less when excluding the stairs.

The vehicle and pedestrian access to the on-site car parking area will be via the existing driveway off Macquarie Street.

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 apartment development with respect to vehicular traffic is Macquarie Street.

In the area of the development site, Macquarie Street has a straight horizontal alignment on a fairly flat grade.

It is a one-way street with three marked traffic lanes carrying eastbound traffic and parking along both sides of the street, except for a section of no parking along the southern or opposite side of Macquarie Street to the development site, between the development site and Molle Street.

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

A view of the geometric character of Macquarie Street in the area of the development site is seen in Photograph 4.1.



Photograph 4.1: View to east along Macquarie Street with development site ahead on left

4.2 Traffic Activity

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

The vehicle volume data are from the traffic signal loop detectors in each lane in Macquarie Street at the Barrack Street intersection with the volumes

recorded on Thursday 27 September 2018. The traffic data from DSG is included with this report as Attachment B.

The peak hour traffic volumes in each lane during the 8:00am – 9:00am and 4:00 – 5:00pm periods have been detailed in Figures 4.1 and 4.2.

The traffic volume along Macquarie Street in the near or northern traffic lane at the Barrack Street intersection was 800-900 vehicles/hour during the afternoon and morning peak hour period, respectively.

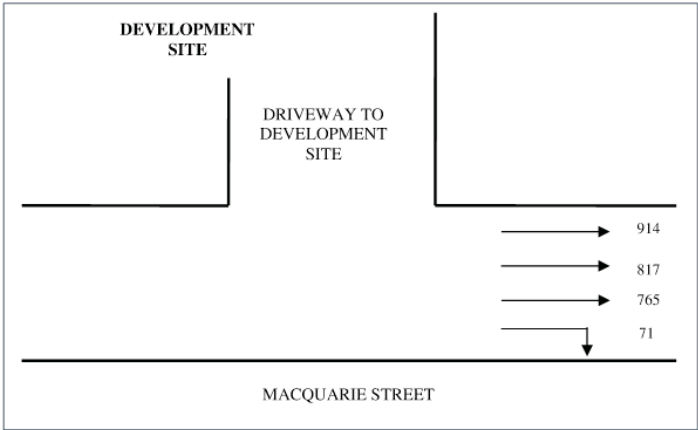


Figure 4.1: Traffic volumes along Macquarie Street past development site driveway - 8:00am to 9:00am

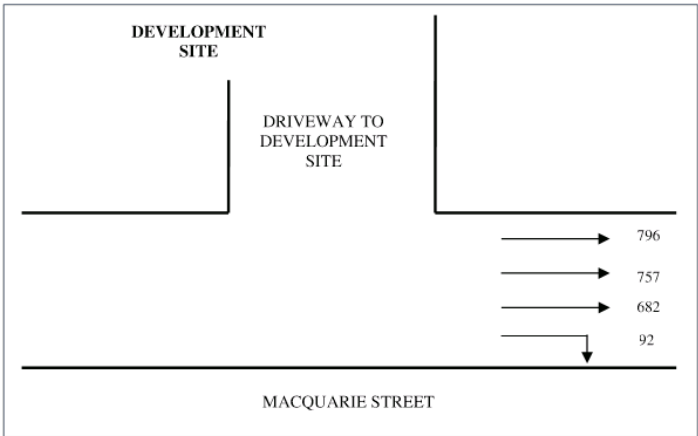


Figure 4.2: Traffic volumes along Macquarie Street past development site driveway - 4:00pm to 5:00pm

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 Macquarie Street between Molle Street and Barrack Street, including the intersections at each end, over the five and half year period since January 2014.

Advice has been received that the crash database has record of 67 reported crashes along this section of Macquarie Street. The crash report from DSG is included with this report as Attachment C.

Of these crashes, a very high 30 crashes have occurred at the Macquarie Street/Barrack Street intersection compared with only seven at the Macquarie Street/Molle Street intersection.

At the Macquarie Street/Barrack Street intersection, 20 crashes have been angle collisions between vehicles proceeding straight ahead from adjacent legs of the intersection, with around 5-6 such crashes each year.

These crashes would be due to red light running and one third of these crashes resulted in injury. A further seven of these 20 crashes were rear end or side swipe collisions.

With the seven reported collisions at the Macquarie Street/Barrack Street intersection - three collisions were between vehicles heading straight ahead from adjacent legs of the intersection, one resulted in injury and the other four collisions were rear end or side swipe collisions.

Of the 30 midblock collisions, 14 crashes were rear end collisions, and 10 crashes were due to lane change/side swipe incidents. Only two of the midblock collisions resulted in injury.

Only four of the collisions were parking incidents and there have been no collisions involving vehicles entering from property driveways.

With this crash record, there is a need to undertake detailed investigations into required improvements or crash countermeasures at the Macquarie Street/Barrack Street intersection.

5. TRAFFIC GENERATION BY THE DEVELOPMENT

As outlined in Section 3 of this report, the proposed development under consideration is the construction of 45 residential apartments in a multistorey building on the site at 201 Macquarie Street. All but two of the residential apartments will have one bedroom; the two apartments will have two bedrooms.

There are two existing buildings on the site that will remain. One building has two 2-bedroom residential flats, the other building will be converted to an office use with a total floor area of 68m².

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.

However, various factors do lower the traffic generation rates by residential units, some of which are listed in Clause E6.6.1 P1 of the Hobart Interim Planning Scheme.

The following points are relevant in estimating the traffic generation by the proposed development:

- 43 of the 45 proposed apartments will have only one bedroom and these will have one car parking space on-site;
- the development site is very close to the Hobart CBD (just over 600m walking distance to Centrepoin);
- the development site is very close to the 'all routes' central bus station around the Elizabeth Street/Macquarie Street intersection (around 600m walking distance)
- the site will be within easy access of the cycling route along Collins Street between the Hobart Rivulet Walk at Molle Street/Colins Street and the city centre, which is around the corner from the development site.

As has been outlined in TIA reports by this consultant for other similar developments, peak hour traffic surveys have been undertaken at other

existing unit developments in the Hobart area, which have found lower traffic generation rates apply to some residential unit developments.

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. 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.

The proposed residential apartments are expected to generate less traffic activity than the Grosvenor Square apartments with the target market being single professionals and students.

The updated 'Technical Direction' to the Guide dated August 2013 provides additional traffic generation detail about high density residential developments.

The Technical Direction states that for regional sites the traffic generation is around 0.42 vehicles/unit/hour and 0.21 vehicles/bedroom/hour during peak hour periods for the road network. The assessed sites have a mix of one, two and three bedroom units.

Applying these rates to the proposed development indicates a traffic generation of 20 vehicles/hour based on the number of apartments but 11 vehicles/hour based on the number of bedrooms.

A further recent survey was undertaken during the afternoon peak hour (4:30pm to 5:30pm) at the driveway to 51 Sandy Bay Road, which provides access to a multiple residential apartment development with 21 one-bedroom apartments.

The survey was conducted on Wednesday 7 April 2021 and it recorded 5 vehicles/hour entering or exiting the property. The traffic generation rate for this development is 0.24 vehicles/apartment/hour, which also translates to 0.24 vehicles/bedroom/hour.

Applying this traffic generation rate to the proposed 51 bed development (including the flats) indicates a peak hour traffic generation of 12 vehicles/hour based on the number of bedrooms (which is a rate of 0.255 vehicles/apartment/hour for the proposed development, or 2.55 vehicles/apartment/day based on the peak hour traffic volume being 10% of the daily traffic volume).

Having regard to all the above considerations and findings, a traffic generation rate of 2.8 vehicles/apartment/day will be assumed for the proposed development. This is slightly higher than indicated in the Technical Direction for the high density regional developments as well as was found for the site at 51 Sandy Bay Road.

Applying this trip generation rate to the 47 residential apartments/flats, the traffic generation is expected to be around 132 vehicles/day. The traffic generation by the office will be around 6 vehicles/day.

The total traffic use of the driveway to the development site will therefore be around 140 vehicles/day and around 14 vehicles/hour during peak traffic periods, based on the peak hour traffic being the typical 10% of the daily traffic volume.

6. TRAFFIC ASSESSMENT AND IMPACT

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

An assessment has been made of the adequacy of available intersection sight distance along Macquarie 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 apartment development is expected to generate around 140 vehicles/day and 14 vehicles/hour at peak traffic times of the day, with a directional split of around 70% exiting and 30% entering the site during the morning peak hour, and around 35% exiting and 65% entering the site during the afternoon peak hour. This means there will be around:

- 10 vehicles/hour exiting the site and 4 vehicles/hour entering the site during the morning peak hour; and
- 5 vehicles/hour exiting the site and 9 vehicles/hour entering the site during the afternoon peak hour.

There will not be any major change or increase in the level of traffic activity and impact on the Macquarie Street traffic flow during peak hour periods as a result of the traffic activity generated by the proposed development.

The future traffic volume that will use the driveway to the development site during peak hour periods would be less than the current traffic volume. The development site currently is predominantly used as a commuter car park with 32 car parking spaces accessed via the driveway off Macquarie Street. The peak hour traffic movement is expected to currently be around 20 vehicles/hour, but with the peak directional split in traffic movements in the future being opposite to the present.

Vehicles turning movements are and will in the future be predominantly to and from the left-hand traffic lane in Macquarie Street which carries up to 900 vehicles/hour in peak traffic periods.

Normally traffic volumes up to 1,500 vehicles/hour can generally be accommodated between conflicting traffic streams at intersections or junctions before traffic problems can begin to arise. The conflicting traffic volume will be around 60% of this volume.

However, traffic on Macquarie Street passes the development site in platoons and it is expected that during peak hour periods vehicles will mostly wait for

the platoons to pass before entering Macquarie Street. Once the platoon passes there are more than sufficient opportunities and time to enter Macquarie Street during the two intergreen periods in each traffic signal cycle at the Molle Street/Macquarie Street.

The traffic operation along Macquarie Street will clearly allow more than the up to 10 vehicles/hour exiting the site, to be absorbed into the traffic stream.

6.2 Assessment of Available Sight Distances

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

The view along Macquarie Street for motorists entering from the location of the proposed driveway are seen in Photograph 6.1.

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 private driveway such as is under consideration in this assessment.

Free vehicle speeds in Macquarie Street past the development site would be around 50 - 55km/h, with the 85th percentile speed being at the lower end of this range. The desirable driveway sight distance along Macquarie Street is 69m for approach 85th percentile vehicle speed of 50km/h from a point 2.5m back from the edge of road (which is forward of the property boundary), and 77m for approach 85th percentile vehicle speeds of 55km/h (determined from safe intersection sight distance formula in Austroads: Guide to Road Design Part 4A).

A driver exiting the site will be able to see much further than 77m along Macquarie Street with the advantage of a 6m long ‘no stopping zone’ immediately to the west of the driveway followed by only two car parking spaces and then a bus zone, with the bus stop being mostly vacant.

As can be appreciated from the view in Photograph 6.1 and based on measurements of the sight lines along Macquarie Street, it should normally be possible to see well beyond the Molle Street intersection to traffic approaching along Macquarie Street, to distances of over 150m along Macquarie Street, subject to parked vehicles in the near side parking lane along Macquarie Street.

Vehicles turning into Macquarie Street from Molle Street come into sight around 75m from the development site driveway, but these vehicles are travelling at a much lower speed as they come into view, at around 25km/h.

The required sight distance for these lower speeds is also much lower at around 40m.

All the above sight distances were measured to achieve the current Austroads guide requirements for an eye height of 1.1m at the entering vehicle to a 1.25m height at an approaching vehicle.

If there are parked cars along Macquarie Street, it is often possible to gain sufficient sight distance through or between parked vehicles, as seen in Photograph 6.1. If there is limited sight distance, exiting drivers can safely continue to exit the site up to the outer edge of the parking lane to obtain sufficient sight distance along Macquarie Street before moving into the traffic stream. This is normal and common practice at any driveway on a public street and at street junctions where there are parked cars along the near side of the road.

Because the traffic along Macquarie Street passes in platoons, motorists normally enter Macquarie Street after the platoon has passed, when there are virtually no approaching vehicles for up to 10 seconds, due to the intergreen period and pedestrians crossing at the upstream traffic signals.

There have not been any reported crashes at driveways along this section of Macquarie Street, including at the development site which currently provides access to 32 car parking spaces.

Overall, sufficient sight distances can be achieved to meet not only AS 2890.1 requirements but also the more demanding sight distances in current Austroads guidelines.



**Photograph 6.1: View to west along Macquarie Street from
driveway to development site**

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, the circulation area and parking arrangements which will service the apartments are shown on the development site architectural layout drawings in Attachment A and civil design drawings in Attachment D.

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

Access driveway and traffic circulation and on-site turning considerations

There will be one driveway servicing access to the proposed off-street vehicle parking in the apartment block as well as the one car parking space at the office building.

The driveway will have a width of around 7.0m from the frontage boundary into the property, narrowing to around 6.0m beside the existing residential building and then widening significantly to the access at the office building, the adjacent car parking space and access to the car lifts to the proposed new building .

The driveway will be regraded to have a continuous varying grade into the property from around a 1% upgrade at the property boundary, increasing to a maximum downgrade of around 20% then reducing to around 7% for the 6m length before the entry point to the car lifts.

The proposed maximum grade of 20% will be less than the maximum grade of 25% for a private car park and continuous curve finish will have sufficient transition to meet AS 2890.1 requirements, i.e. grade changes of not more than 12% for the crest and 15% for the sag over 2m lengths.

The driveway width is sufficient to allow vehicles to simultaneously enter and exit the driveway to/from Macquarie Street as well as pass one another along the driveway, with the width being sufficient to also accommodate pedestrian movements along the driveway.

There is also sufficient space for a car to turnaround in the driveway outside of the lifts and forward of the stop line for the lifts (see below), should this need arise. This is demonstrated in part with the swept turn path for the external car parking space on the civil design drawings. A manoeuvre in the opposite direction (reversing towards or into the parking bay) is a more easily achieved turnaround for the parking space but also for any other car without the need to enter the parking bay.

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

For multiple dwelling developments, Clause E6.6.1 of the Hobart City Council Interim Planning Scheme requires 2 car parking spaces per apartment that has two or more bedrooms and 1 car parking space for apartments with one bedroom, plus 1 visitor parking space per 4 apartments.

In addition, the planning scheme requires 1 car parking space for each 30m² of floor area in office developments.

Based on the planning scheme, the required car parking supply would be 51 resident car parking spaces and 12 visitor parking spaces for the 43 one-bedroom apartment and 4 two-bedroom apartment/flat development, plus 2 parking spaces for the office.

There will be 50 car parking spaces on the site for the residents of the apartments and the office. There will also be 4 motorcycle parking spaces and a bicycle storage area for at least eight bicycles.

One car parking space will be allocated to each one-bedroom apartment and two spaces to each two-bedroom apartment in the new building, which meets the planning scheme requirements. Each of the two flats in the existing building will also have access to one car parking space, which is the current arrangement, but these will be in the car park within the new building. The one standard car parking space between the two existing buildings on the site will be for office employee use.

On-street parking spaces can be readily found along Macquarie Street and streets such as Molle Street, Collins Street, Barrack Street and Davey Street, throughout the day, within 250m walking distance of the development site, in more than sufficient numbers to meet any peak visitor parking demand (which would be mostly outside normal business hours, when most of the kerbside parking becomes vacant)

This available on-street car parking includes streets other than Macquarie Street if the current available parking along Macquarie Street in the immediate area of the development site was lost to accommodate other traffic needs.

If there will be a parking loss along Macquarie Street, it is expected this would occur with a 'clearway' only along the northern side of the road during morning and afternoon peak traffic periods. The southern side parking can only be affected (or removed by clearway) if the street was widened with a narrowing of both footpaths.

In order to confirm on-street car parking availability, car parking surveys were recently undertaken along the surrounding streets within around 250m walking distance of the development site. The surveys were undertaken on different days and times to include weekday work hours, weekends, and evenings.

The results from these parking surveys have been summarised in Table 6.1. It can be seen from the table there were between 72 vacant car parking spaces on

a weekday afternoon and up to 146 vacant car parking spaces on a weekend afternoon and weekday evening within the surveyed area.

A car could be parked for at least one hour in these vacant spaces, but most spaces were available for at least two hours on the weekday, and for an unlimited time period during the weekend and evening.

Therefore, the available on-street car parking supply will meet any visitor car parking demand for the development site, even with loss of parking along Macquarie Street.

It should be noted the development site is only around 60m from the Central Business Zone where a development, such as under consideration in this report, is not required to provide any off-street parking for a residential development.

TIME/DATE			2:20pm - 2:50pm 1 April 2021	2:30pm - 2:50pm 5 April 2021	6:55pm - 7:15pm 6 April 2021
STREET	BLOCK	SIDE	VACANT PARKING SPACES - ONE HOUR +		
MOLLE ST	SOUTH TO DAVEY	WEST	3	7	11
		EAST	6	16	18
MOLLE ST	DAVEY TO MACQUARIE	WEST	2	5	6
		EAST	1	0	0
MOLLE ST	MACQUARIE TO COLLINS	WEST	0	10	10
		EAST	2	8	6
MOLLE ST	COLLINS to Before LIVERPOOL	WEST	1	1	2
		EAST	2	2	4
BARRACK ST	COLLINS TO MACQUARIE	EAST	4	3	0
		WEST	0	0	0
BARRACK ST	MACQUARIE TO DAVEY	EAST	0	3	1

		WEST	0	3	1
DAVEY ST	EAST OF ARMY TO MOLLE	NORTH	9	10	8
		SOUTH	3	2	4
DAVEY ST	MOLLE TO JUST PAST ABERFELDY Red roof incl	NORTH	2	6	5
		SOUTH	4	7	7
MACQUARIE ST	ONE HOUSE WEST OF DENISON TO MOLLE	NORTH	3	8	11
		SOUTH	4	13	11
MACQUARIE ST	MOLLE TO BARRACK	NORTH	5	13	14
		SOUTH	9	12	1
MACQUARIE ST	BARRACK TO VACANT BLOCK	NORTH	4	1	1
		SOUTH	4	10	0
COLLINS ST	MOLLE TO BERE A	NORTH	2	0	3
		SOUTH	2	3	3

TABLE 6.1: AVAILABLE ON-STREET CAR PARKING SPACES WITHIN 250M WALKING DISTANCE

Car lift operation

Advice has been received through discussions with Australian suppliers of car lifts that the travel speed of the car lift between floor levels depend on the cost outlay; it can vary from 6 metres/minute to 15 metres/minute. The developer has decided to have lifts which will operate at the highest speed of 15 metres/minute.

The service rate will also depend on the location of the lift (what level it is at the time of demand by an arriving vehicle). The lift operation can be programmed to be waiting at Basement Floor Levels in the morning peak hour and Ground Floor Level during the afternoon peak hour to best service the peak directional vehicle movements, which is proposed for this development. It is proposed both lifts will operate for vehicle movements in both directions. i.e. vehicle movements both into the car park and out of the car park.

The lift travel time will be:

- 33 seconds between Basement Level 2 and the Ground Floor Level; and
- 23 seconds between Basement Level 3 and the Ground Floor Level.

The suppliers of the lifts have also confirmed:

- time for door to open = 5 seconds;
- time of car to either enter or exit lift = 5 seconds;
- time for door to close = 5 seconds.

The lifts will take:

- between 63 and 96 seconds to travel between Ground Floor Level and Basement Level 2 (or vice versa), depending on whether the lift is waiting at the level of car entry of the other floor level; and
- between 53 and 86 seconds to travel between Ground Floor Level and Basement Level 3 (or vice versa), depending on whether the lift is waiting at the level of car entry of the other floor level.

For the above worst-case situation, each lift would service cars at a rate of around 33 and with two lifts, the average service rate will be 67 vehicles/hour, but with return of the lift to the peak arrival level, the service rate will be around 40 vehicles/hour/lift.

The traffic generation by the development is expected to be only 14 vehicles/hour.

The two lifts will therefore efficiently service the car arrival and departure rate with the queueing/service rate calculations.

Attachment E provides calculations of delays and queueing based on the more conservative or lesser service rate of 33 vehicles/hour/lift.

For the peak hour traffic movements, the calculations show the average waiting time with two lifts and the lift return operation will be a few seconds, and the 99th percentile queue will be 1.30 vehicles, i.e. rarely will there be two cars.

With a one lift operation, the average waiting time will be 40 seconds, the average queue will be 0.37 vehicles and the 99th percentile queue will be 1.99, i.e. two vehicles (should one lift have an operational issue).

Therefore, the lift operation will service the car arrival rate so that there will not be any impact or queueing at all into Macquarie Street.

With the average waiting time under normal lift operation being a few seconds, the impact of queueing on access to parking bays within the car park will be minimal. The few seconds of delay can be managed by drivers waiting for the lift by repositioning the vehicle in the parking aisle if necessary. There will be no issue if a car is waiting to leave the parking space, as it is effectively joining the queue, if this were to ever occur with the high lift service rate that will be available.

The above calculations are based on the specifications, operational data and additional information about the lift which has been received by the project proponent from the lift supplier. This data and information are also included with this report as Attachment E. It also includes advice about local servicing arrangements that would exist for the lifts.

Within the driveway between Macquarie Street and the lift, guidance will be provided on the stopping position when waiting to enter the lift with the marking of a stop line and centreline, as shown on the drawing in Attachment E.

These marking provide for sufficient space for a B99 vehicle to exit the lifts when a car is waiting to enter a lift as well as sufficient length to store two cars (5.5 metres per car) waiting to enter the lift, clear of the footpath.

On-site parking area design

All the resident and office 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, and B99 where required.

The specific dimensions that have been assessed include the following:

- All standard parking spaces will be 5.4m long and 2.4m wide in accordance with User Class 1A for residential parking (as detailed in Figure 2.2 of AS 2890.1 for 90-degree parking);

- The two small car parking spaces will be 5.0m long and 2.3m wide, in accordance with Section 2.4.1 (a) (iii) of AS 2890.1;
- There will be at least a 300mm clearance to the side walls and columns will be positioned correctly for door opening and manoeuvring (as detailed in Figure 2.2 and Figure 5.2 of AS 2890.1);
- The width of the parking aisle will be 6.6m, more than the minimum 5.8m (as required in Figure 2.2 of AS 2890.1 for Class 1A 90-degree parking);
- There will be at least a 1.0m extension to the ends of the parking aisle for cars to reverse out of parking spaces (as detailed in Figure 2.3 of AS 2890.1);
- The motorcycle parking spaces will be 2.5m long and 1.2m wide (as detailed in Figure 2.7 of AS 2890.1);
- The height clearance will be well over the required minimum of 2.2m in all trafficable areas except:
 - Under the exhaust ducts located above the front of car parking spaces for some of the car parking spaces on both sides and on both car parking levels. The height clearance below the exhaust ducts will be 2.175m for a distances of 0.8m out from the wall;
 - Above car parking space No.4. The height clearance above this car parking space will be more than 2.2m for the initial 1.7m from the back of the bay, then progressively reduce over the remainder of the bay to 2.14m at the front of the bay;
- The reduced height clearance by 25-60mm in these situations and locations will not cause any issue for cars to park in these bays. This will be consistent with the requirements of Clause 5.3 in AS 2890.1 and in particular as demonstrated in Figure 2.7 in AS 2890.6 which would require more demanding height clearances for disabled parking spaces (SUV vehicles are generally less than 1.8m high while small cars are around 1.5m high);
- The grade within the two basement floor level parking areas will be no more than around 1% except for part of Basement Level 3 which will have a grade of 2.9% which is less than the acceptable maximum with the grade not affecting the required minimum height clearance;
- The office car parking space will be on a fairly flat grade (less than 5%) and the manoeuvring space will accommodate a B99 car with the car on a grade of around 7% at the reverse turn location to exit the site.

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 development is a Class 2 building according to the Building Code of Australia. The Code does not require any disabled car parking spaces to be provided on the site and hence this meets the planning scheme requirements.

On-street infrastructure

The existing driveway over the footpath and the gutter crossover to the development site is sufficient to service full access to the development site.

No changes are proposed to the gutter crossover or footpath outside of the development site.

Pedestrian Traffic

Pedestrian access to the apartment block will be along the driveway directly from Macquarie Street to the pedestrian entrance into the building.

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

The available sight triangles on each side will be greater than required as there is an adjacent driveway to the neighbouring property immediately to the east, and with the 7m width of the development site driveway, it ensures that to the west pedestrians are at least 3m away from the exiting vehicle, as seen in Photographs 6.2 and 6.3.

As mentioned earlier, the driveway width is sufficient to allow two way vehicles passing along the driveway as well as allow pedestrian movements along the driveway.

While a 1:14 grade is required for a pathway to accommodate disabled people, this development is not one that will attract such persons at random. Therefore, the 20% grade of the driveway under the circumstances is not considered as excessive for general pedestrian access.

If a resident in an apartment is to receive a disabled person, vehicle access into the car park would be possible by the resident.

A vehicle movement of up to only 14 vehicles/hour is also very low, so that the passage of this volume of vehicles passing a similar number of pedestrians each hour will not result in any safety issues.

This level of pedestrian and vehicle traffic would occur at peak times at present as the driveway services access to 32 car parking spaces, with no identified safety issues.

The probability of two car passing one another at 10km/h over the 20m long driveway with a two-way traffic movement of 14 vehicles/hour is around 1.4%. When including the same number of pedestrians each hour at a walking speed of 1.2m/sec, the probability of a car or pedestrian passing another car or pedestrian is less than 6%.

This level of pedestrian and car traffic activity in an off-street slow speed car park environment does not need the segregation of pedestrians and cars to ensure safety of driveway users.

However, should this remain a concern for Council officers, it is possible to define a pedestrian pathway or passageway along the western side of the driveway. This could be in the form of a painted line or pavement texturing as shown on the drawing in Attachment E, to define a one metre wide pathway.



Photograph 6.2: View to east along the Macquarie Street footpath from vehicle exiting the development site driveway



Photograph 6.3: View to west along Macquarie Street footpath from vehicle exiting the development site driveway

Waste collection/servicing

The collection of domestic waste will be undertaken by arrangements with Veolia.

There have been discussions with Veolia about the servicing of the development site. Following a site inspection by Veolia management, written advice has been provided by the company about the servicing operation that would be undertaken at this site. This advice, with details of the operation and vehicle that would be used, is included with this report as Attachment F.

Veolia has confirmed the width, length, and grade of the access driveway into the site and to the proposed building is not a concern for reversing of a small waste collection vehicle from Macquarie Street to the lift from where waste bins will be wheeled to the vehicle.

Further discussion with the author of the advice from Veolia confirmed the waste collection would occur twice a week between 6am and 7am, but earlier in the morning if no time restrictions related to noise were applicable to the waste collection at this site.

Subsequent to the above, Veolia confirmed they can bring the bins into the lift themselves and load directly into the trucks, such that there is not a need for temporary bin storage area in the loading area, nor the use of 'bin tugs'. This will avert the need for any storage of bins in the driveway area.

The swept path of a standard (8.8m long) service vehicle reversing from Macquarie Street to the lift and then exiting the site is shown on Sheet C1.03 in Attachment D. However, it should be noted that the garbage truck to be used to service the proposed development will be smaller than this (as detailed in Attachment F) and hence have a significantly smaller swept path.

The garbage/waste room has been designed to align with/have access to car lift No.1. Therefore, the reversing truck to the car lift will follow a path more along the western side of the driveway (compared with the above plot), which will align the parked truck with that lift, allowing the bins to be wheeled straight between the lift and the back of the truck.

This will also ensure any required use of a car lift during this time will not block such access to and from car lift 2.

As indicated in the Veolia advice in Attachment F, the waste collection will occur well outside the significant or even moderate pedestrian and car activity times of the day for the proposed development, the truck will have various warning devices when using the driveway, the driveway will be wide enough to accommodate opposite or passing vehicle movements and the waste collection contractor has vast experience in servicing private developments.

All these factors ensure that waste collection from the development site can occur while maintaining access for other driveway users and will occur without compromising the safety of those users.

6.4 Public Transport Services

Metro Tasmania currently operates regular route bus services along Macquarie Street (inbound) and Davey Street (outbound).

The central city bus station is located around the Elizabeth Street/Macquarie Street intersection which is around 800m walking distance from the development site.

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 45 apartments at 201 Macquarie Street in Hobart and conversion of an existing building from two flats to an office use.

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

In the area of the development site, Macquarie Street is a one-way street with three marked traffic lanes carrying eastbound traffic and 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 Macquarie Street are around 800-900 vehicles/hour in the near of northern traffic lane (2,500 vehicles/hour in all lanes).

The crash database has record of 67 reported crashes along Macquarie Street between Barrack Street and Molle Street over the last five and a half years since January 2014.

Of these crashes, a very high 30 crashes have occurred at the Macquarie Street/Barrack Street intersection compared with only seven at the Macquarie Street/Molle Street intersection.

Of the 30 midblock collisions, 14 crashes were rear end collisions, and 10 crashes were due to lane change/side swipe incidents. Only two of the midblock collisions resulted in injury. Only four of the collisions were parking incidents and there have been no collisions involving vehicles entering from property driveways.

With this crash record, there is a need to undertake detailed investigations into required improvements or crash countermeasures at the Macquarie Street/Barrack Street intersection.

It has been estimated that the proposed development, with 45 apartments plus the two flats and office space, when fully developed and occupied, will generate some 140 vehicles/day and around 14 vehicles/hour during peak traffic periods, based on the peak hour traffic being the typical 10% of the daily traffic volume.

The future traffic volume that will use the driveway to the development site during peak hour periods will be less than the current traffic volume.

Vehicle turning movements are and will in the future be to and from the left-hand traffic lane in Macquarie Street which carries up to 900 vehicles/hour in peak traffic periods.

However, traffic on Macquarie Street passes the development site in platoons and vehicles will wait for the platoons to pass before entering Macquarie

Street. Once the platoon passes there are more than sufficient opportunities and time to enter Macquarie Street (during intergreen periods at the Molle Street/Macquarie Street intersection).

An assessment has been undertaken of the available sight distances at the junction of the development site driveway with Macquarie Street. The available sight distances are more than sufficient to meet AS 2890.1 requirements as well as current Austroads guidelines, and hence the planning scheme.

The sight triangle between motorists exiting the driveway and pedestrians approaching along the Macquarie Street footpath will be greater than required.

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 Hobart City Council Interim Planning Scheme requires 2 car parking spaces per two-bedroom apartment and 1 car space per one-bedroom apartment and 1 dedicated visitor parking space per 4 dwellings, plus 1 car parking space per 30m² of office floor area.

The required car parking supply is 51 resident car parking spaces and 12 visitor parking spaces for this apartment development, plus 2 parking spaces for the office.

There will be 50 car parking spaces on the site for the residents of the apartments and the office. There will also be 4 motorcycle parking spaces and a bicycle storage area for at least eight bicycles.

One car parking space will be allocated to each one-bedroom residential apartment in the new building and to each of the two flats in the existing building, plus two parking spaces to each two-bedroom residential apartment. The office will have one standard car parking space between the two existing buildings on the site.

The required number of car parking spaces for the residents will be provided on-site (the two flats currently have one car parking space each, and this will continue). There will be no resident visitor parking on-site.

However, there is sufficient on-street parking along the surrounding streets throughout the day within 250m walking distance of the development site, and in a sufficient number to meet any peak visitor parking demand (outside normal business hours).

Recent parking surveys have found between 72 vacant car parking spaces on a weekday afternoon and up to 146 vacant car parking spaces on a weekend afternoon and weekday evening within the surveyed area within around 250m walking distance of the development site.

The vacant spaces were available to parked for at least one hour, but mostly spaces available for at least two hours on the weekday, and for an unlimited time period during the weekend and evening.

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 office 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 two lifts will efficiently service the car arrival of departure rate with the queueing/service rate calculations indicating the average delay to an arriving vehicle will be around a few seconds and the 99th percentile queue will mostly be no more than one vehicle (1.30 vehicles).

The driveway between Macquarie Street and the lift, will be provided with pavement markings to define the car stopping position when waiting to enter the lift. These marking provide for sufficient space for a B99 vehicle to exit the lifts when a car is waiting to enter a lift as well as sufficient length to store two cars clear of the footpath.

The driveway width is sufficient to allow two way vehicles passing along the driveway as well as allow pedestrian movements along the driveway.

A vehicle movement of up to only 14 vehicles/hour is also very low, so that the passage of this volume of vehicles passing a similar number of pedestrians each hour will not result in any safety issues. This level of pedestrian and car traffic activity in an off-street slow speed car park environment does not need the segregation of pedestrians and cars to ensure safety of driveway users.

However, should this remain a concern for Council officers, it is possible to define a pedestrian pathway or passageway along the western side of the driveway. This could be in the form of a painted line or pavement texturing define a one metre wide pathway.

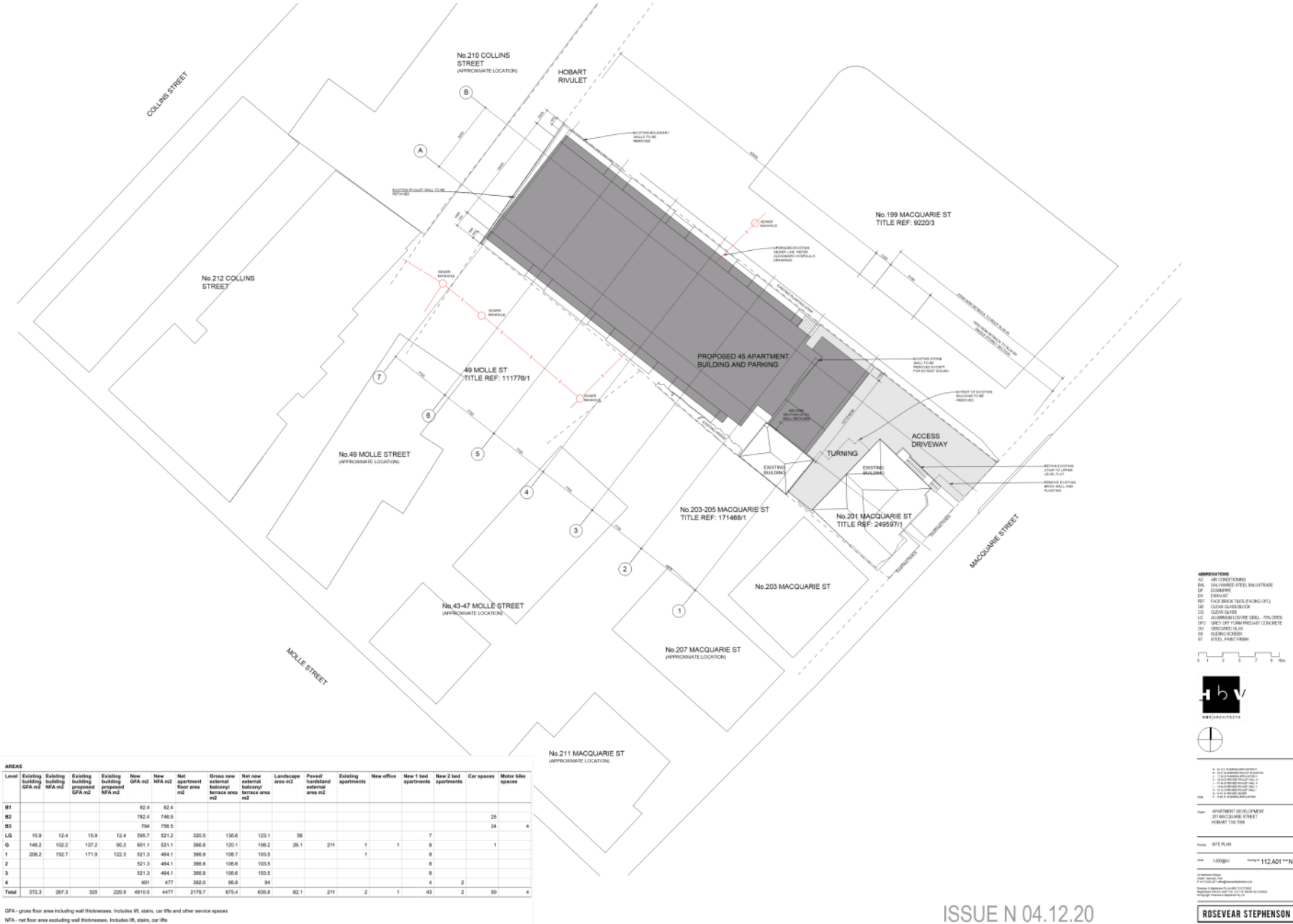
The collection of domestic waste will be undertaken by arrangements with Veolia. The off-street waste collection from the development site can occur while maintaining access for other driveway users and will occur without compromising the safety of those users.

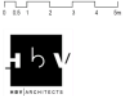
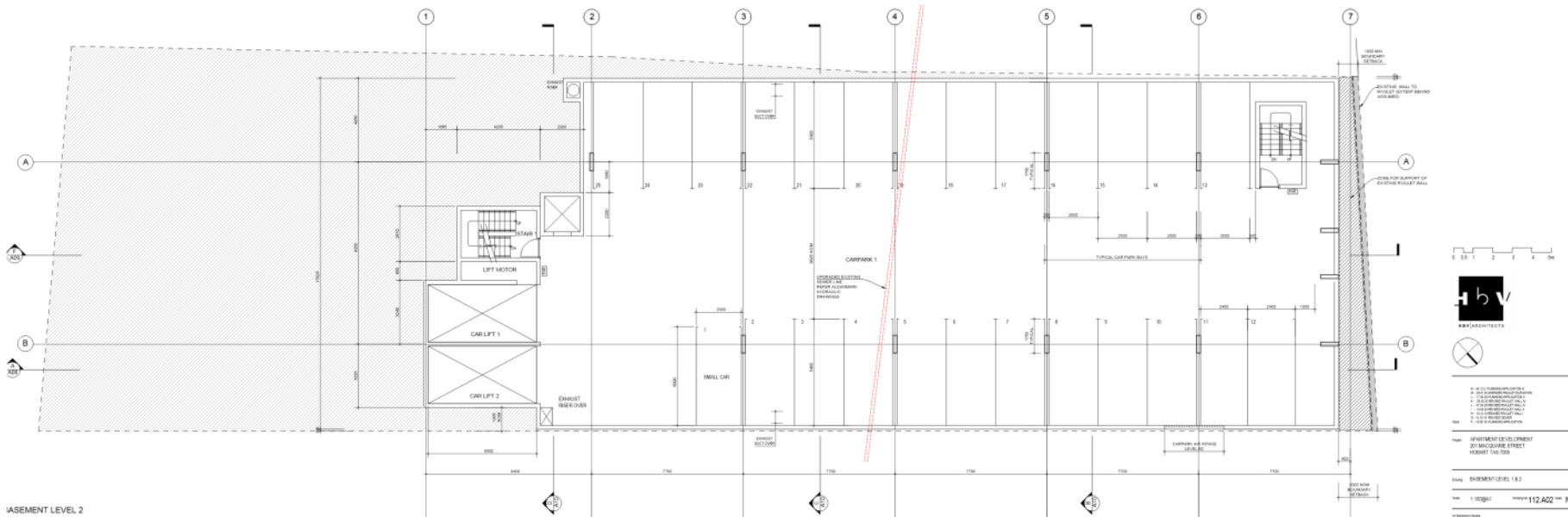
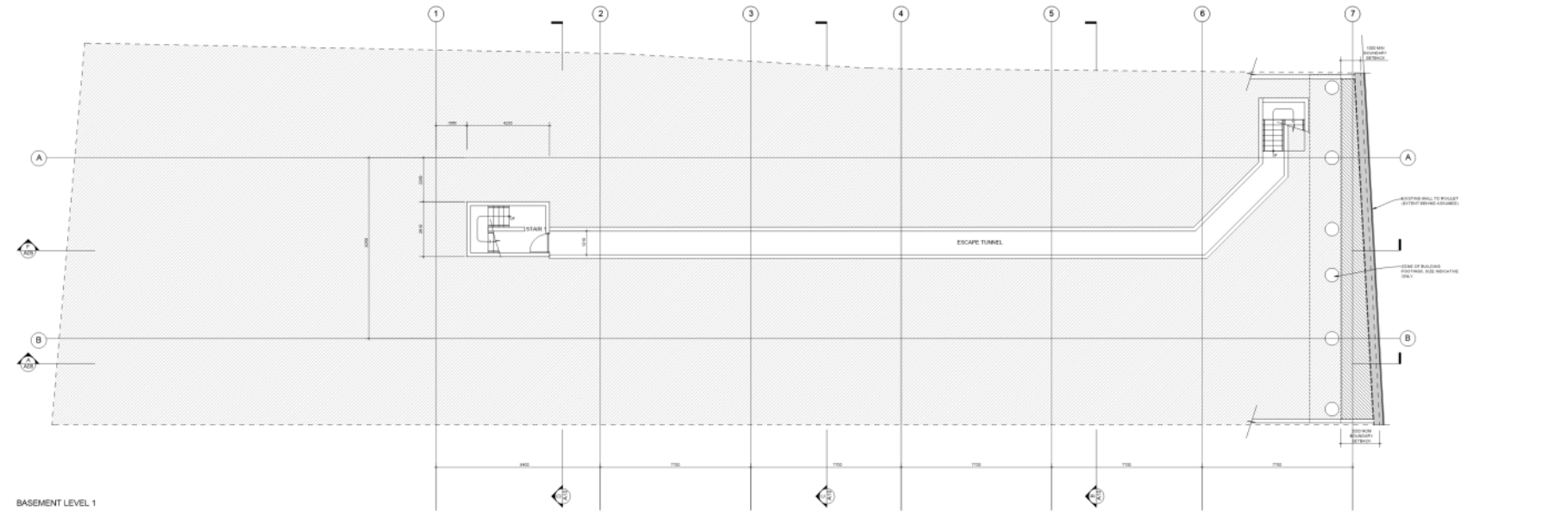
Public transport will be readily accessible with passing service on Macquarie Street and Davey Street as well as the central city bus station which is located around the Elizabeth Street/Macquarie Street intersection, located around 800m walking distance.

Overall, it has been concluded that the proposed apartment 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 development



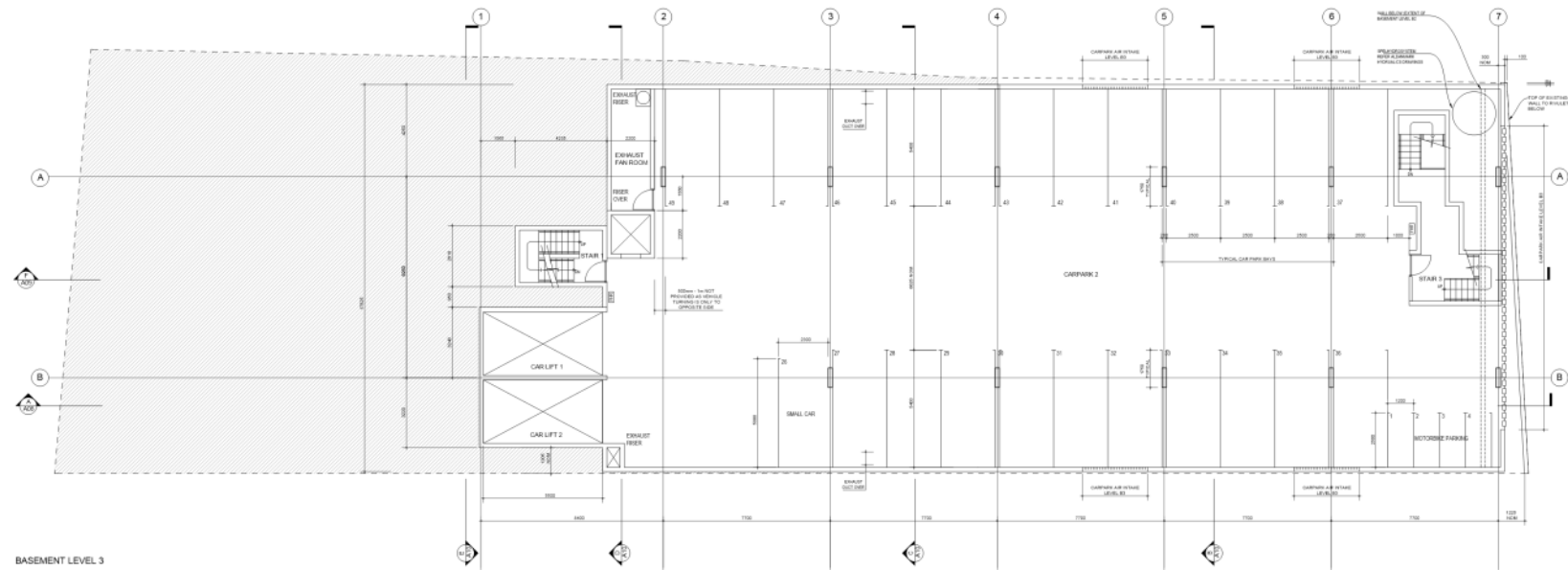


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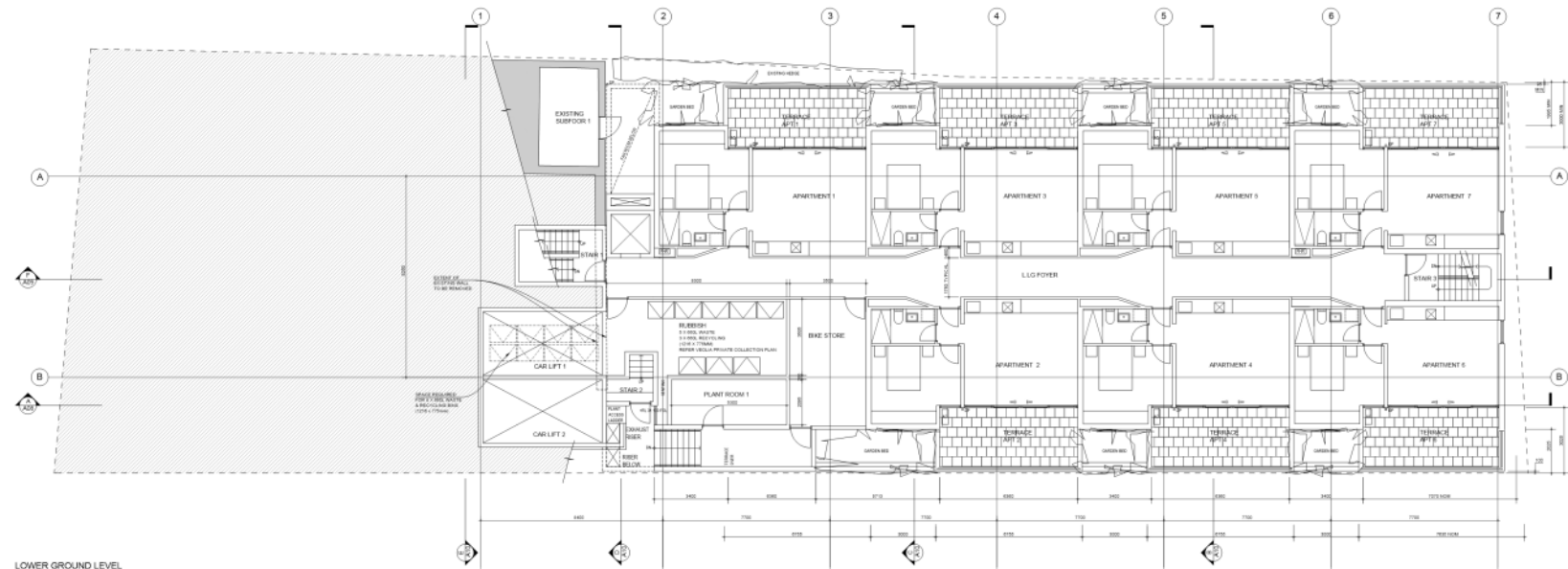
Project: APARTMENT DEVELOPMENT
200 MACQUE STREET
PERMIT 150 TON

Drawn: BASEMENT LEVEL 1 & 2
Date: 15/06/21 11:24:02 N

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BASEMENT LEVEL 3



LOWER GROUND LEVEL



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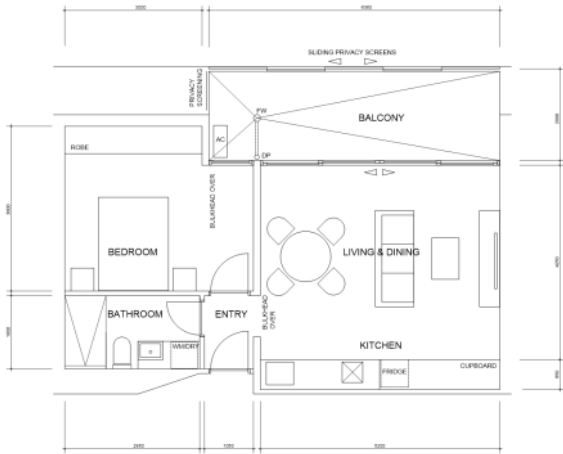
Project: APARTMENT DEVELOPMENT
200 MACQUEEN STREET
HONG KONG

Drawn: BASEMENT LEVEL 3 & LOWER GROUND

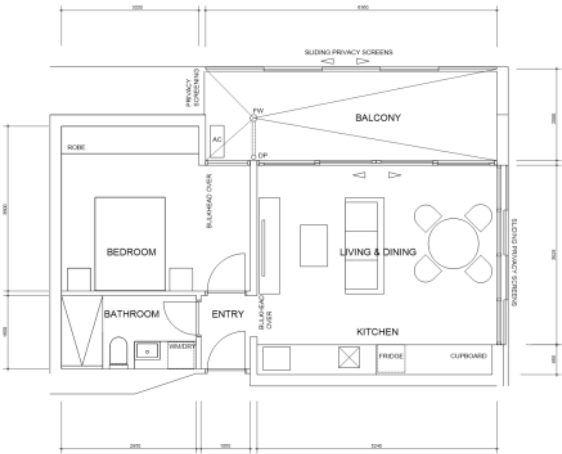
Date: 1/10/2021 11:24:03 AM

By: ROSEVEAR STEPHENSON

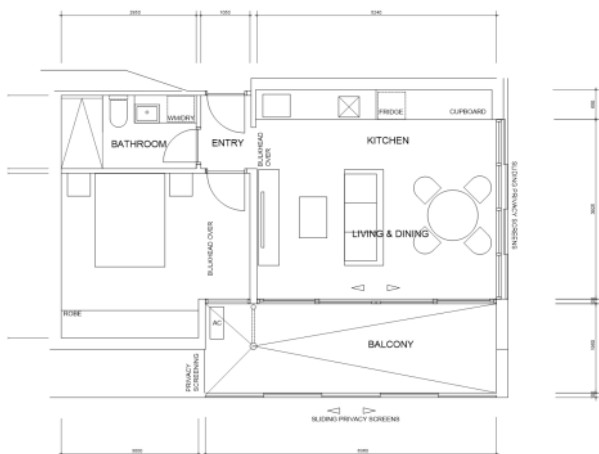
ROSEVEAR STEPHENSON



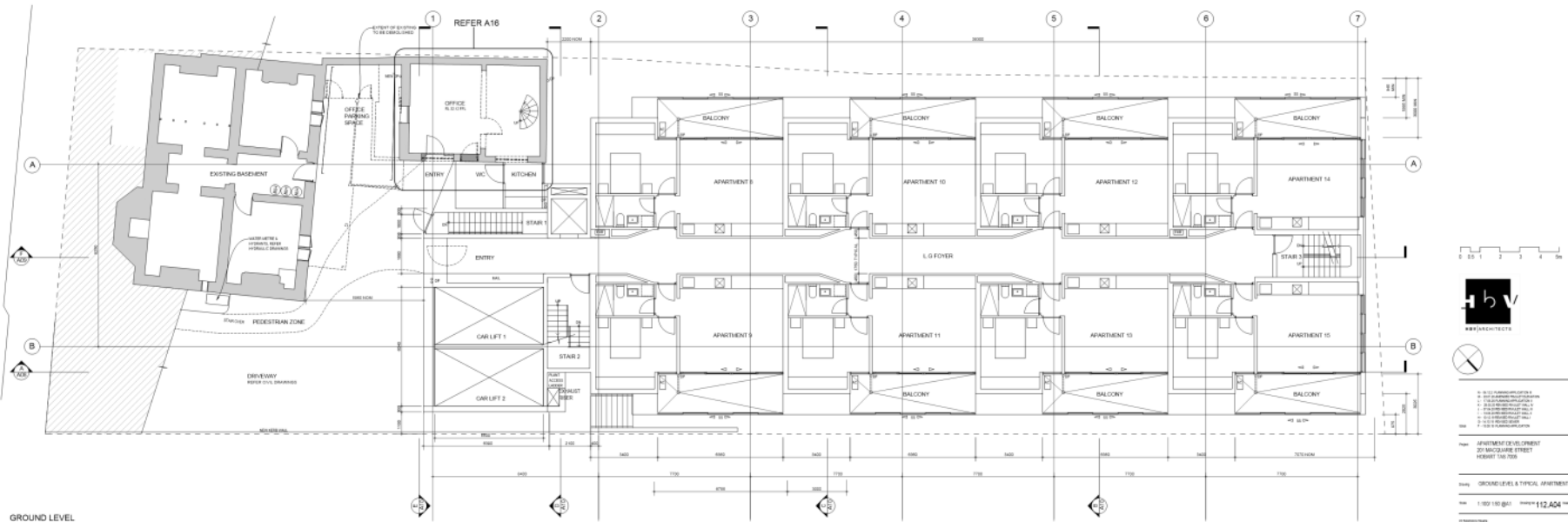
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1/17/2019, 10:58 AM 47300 gsm 40300 x40 - 1/17/2019, 10:58 AM 12142



TYPICAL WESTERN CORNER APARTMENT (No. 7, 14, 22, 30, 38) 1:50
1/17/2019, 10:58 AM 47300 gsm 40300 x40 - 1/17/2019, 10:58 AM 12142



TYPICAL NORTHERN CORNER APARTMENT (No. 6, 15, 23, 31, 39) 1:50
1/17/2019, 10:58 AM 47300 gsm 40300 x40 - 1/17/2019, 10:58 AM 12142



GROUND LEVEL

0 1 2 3 4 5



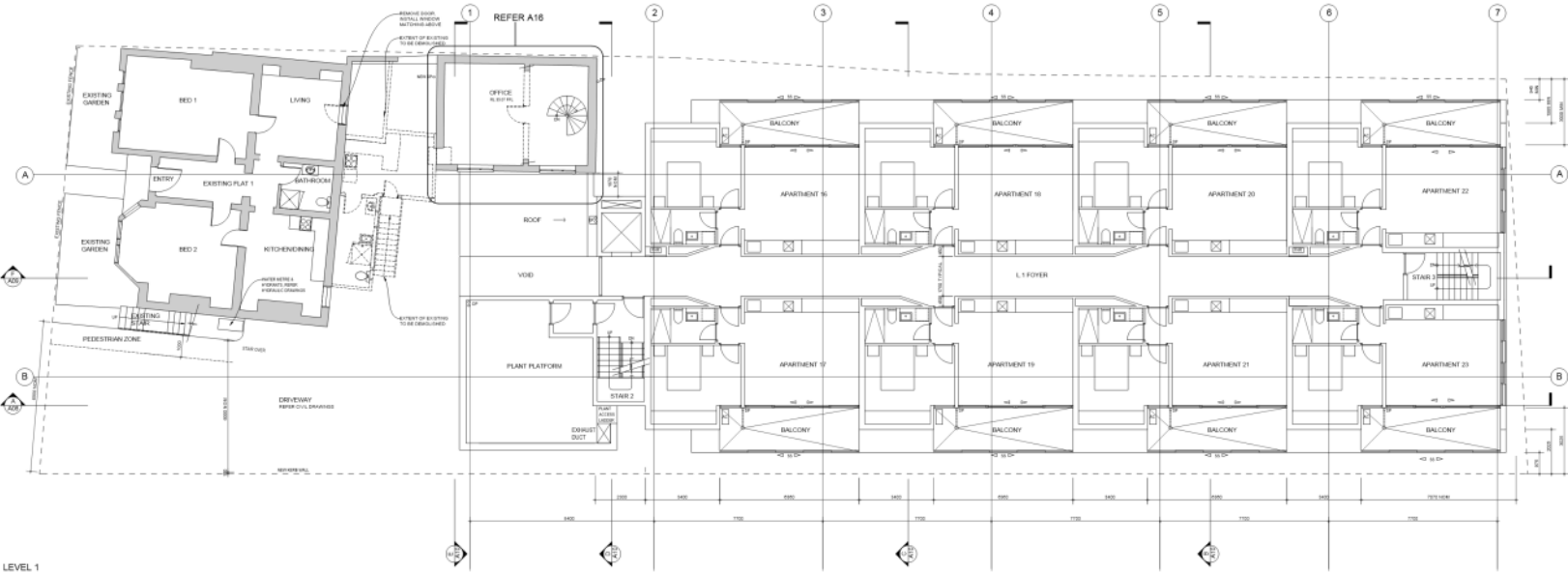
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- 2. 1/17/2019, 10:58 AM 47300 gsm 40300 x40 - 1/17/2019, 10:58 AM 12142
- 3. 1/17/2019, 10:58 AM 47300 gsm 40300 x40 - 1/17/2019, 10:58 AM 12142
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Project: APARTMENT DEVELOPMENT
201 MACQUE STREET
FOURTH FLOOR

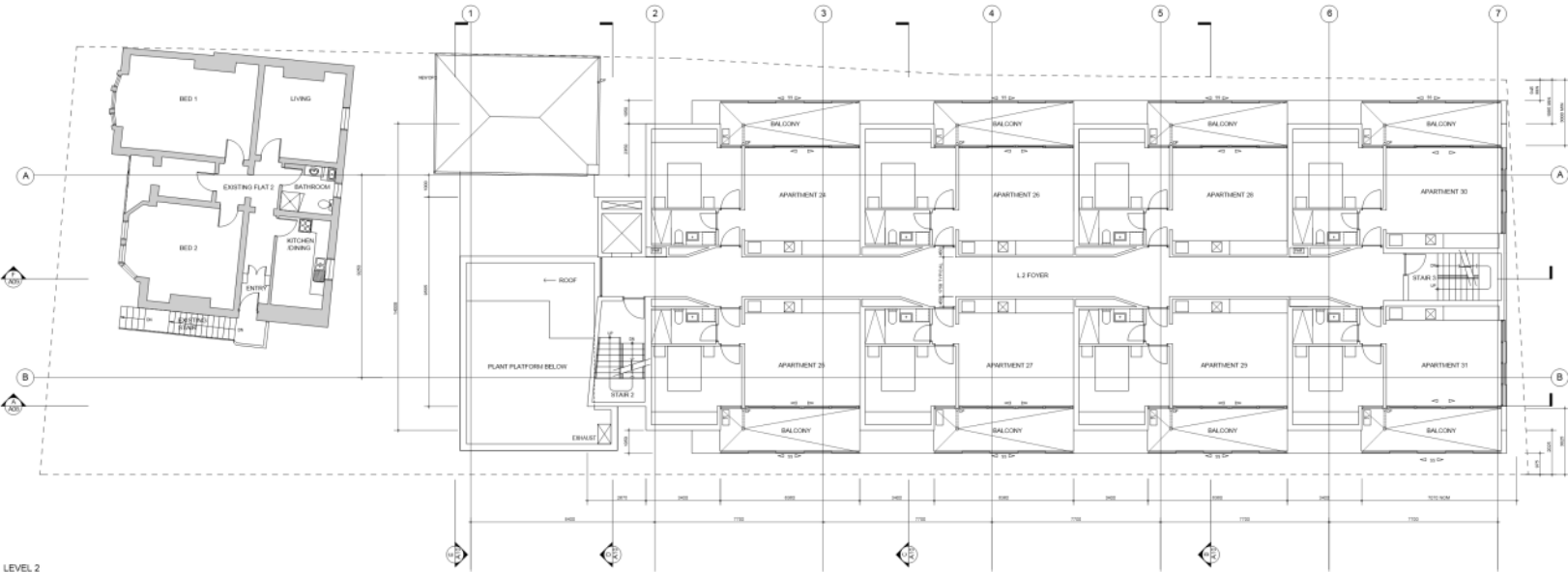
Scale: 1:100 1/8" = 1'-0" 112,404' N

Prepared by: [Name]
Checked by: [Name]
Approved by: [Name]
Date: 1/17/2019

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LEVEL 1



LEVEL 2

0 1 2 3 4 5



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Project: APARTMENT DEVELOPMENT
201 MACQUE STREET
FOURTH FLOOR

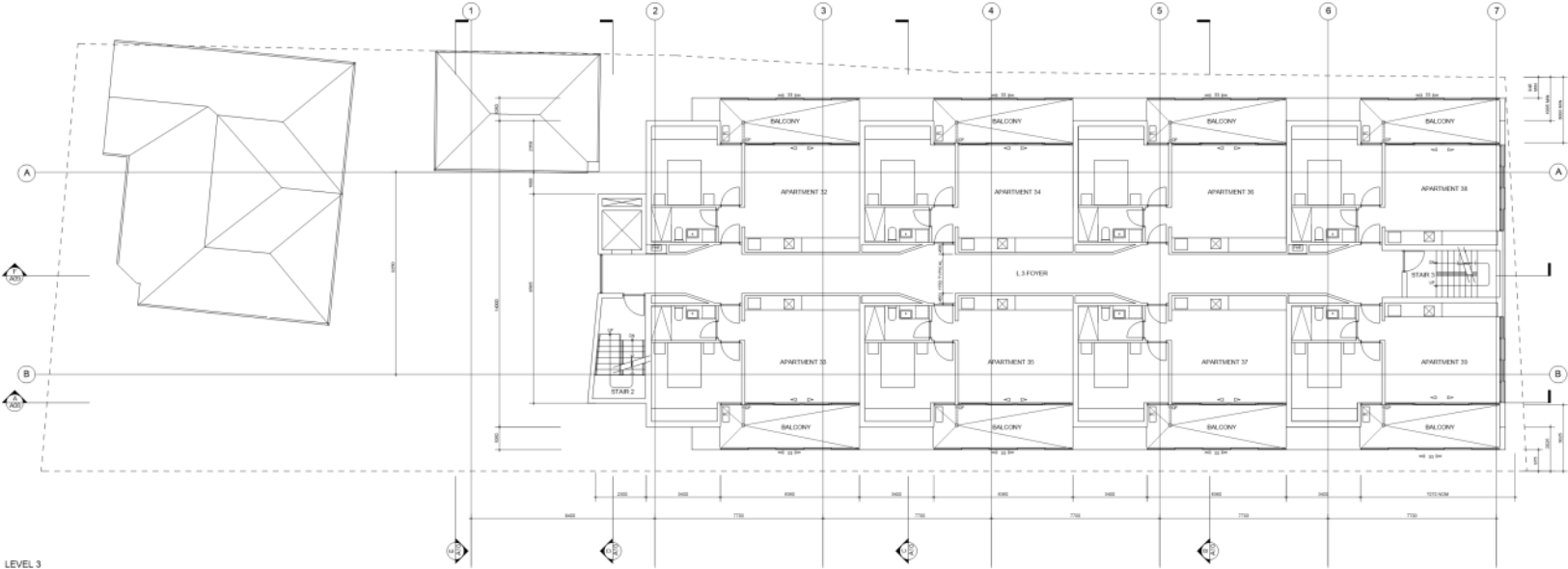
Drawn: LEVEL 1 & 2

Date: 1/10/2021

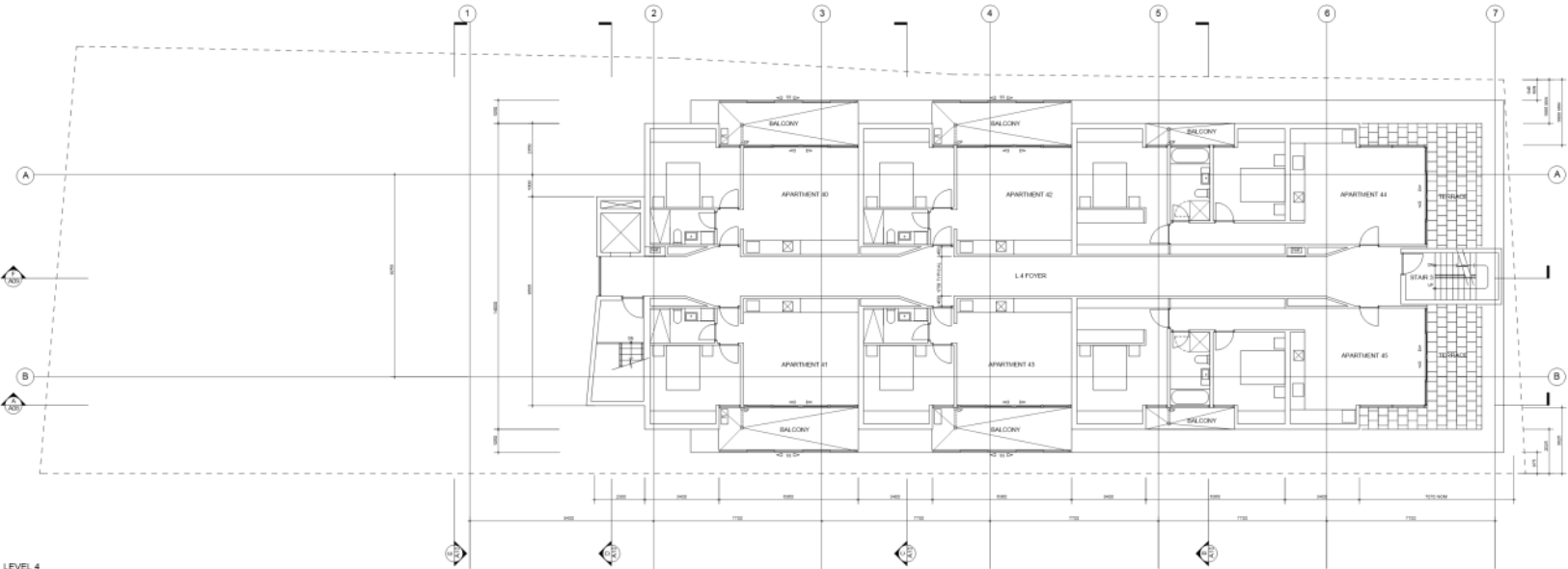
Scale: 1:100 (A1) 112,405 mm N

4b v architects
P.O. Box 1000
Sydney, New South Wales 1586
Telephone: (02) 9550 1000
Fax: (02) 9550 1001
www.4bv.com.au

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LEVEL 3



LEVEL 4



- 1. ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED
- 2. DATE 10/10/2018 BY 10101
- 3. DATE 10/10/2018 BY 10101
- 4. DATE 10/10/2018 BY 10101
- 5. DATE 10/10/2018 BY 10101
- 6. DATE 10/10/2018 BY 10101
- 7. DATE 10/10/2018 BY 10101

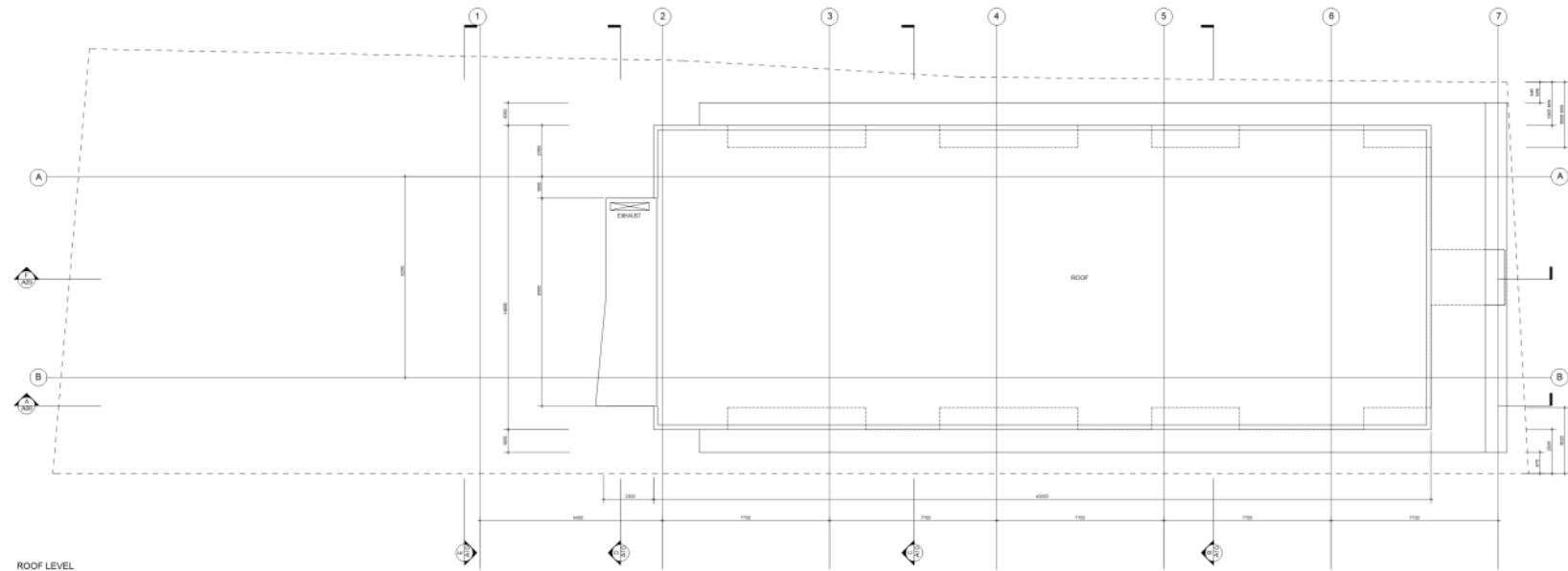
Project: APARTMENT DEVELOPMENT
201 MARQUEE STREET
FOURTH FLOOR

Drawn: LEVEL 3 & 4

Date: 1/10/2021 11:24:06 AM

4b architects
10101
10101
10101
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10101

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- 1. 10/12/2020: Initial design
- 2. 10/12/2020: Initial design
- 3. 10/12/2020: Initial design
- 4. 10/12/2020: Initial design
- 5. 10/12/2020: Initial design
- 6. 10/12/2020: Initial design
- 7. 10/12/2020: Initial design

Project: APARTMENT DEVELOPMENT
200 MARQUEE STREET
PERMIT 150 100

Drawn: ROOF LEVEL

Scale: 1:1000 112,407 mm N

Architect: JbV
10/12/2020: Initial design
10/12/2020: Initial design
10/12/2020: Initial design
10/12/2020: Initial design
10/12/2020: Initial design
10/12/2020: Initial design
10/12/2020: Initial design

ROSEVEAR STEPHENSON



ABBREVIATIONS

AC AIR CONDITIONING
BAL GALVANIZED STEEL BALUSTRADE
DF DOWNPIPE
EH EXHAUST
FST FACE BRICK TILES (FACING OFC)
GL CLEAR GLASS BLOCK
LO CLEAR GLASS
LO GLASS BALUNYARD GRILL, FIN-OPEN
OFC GREY OFF FORM FRECAST CONCRETE
OS OBERKIRCHEN
SS GLASS SCREEN
ST STEEL PLATE FINISH

0 0.5 1 2 3 4 5m

[illegible]

Page APARTMENT DEVELOPMENT
301 MACQUARIE STREET
HOBART TAS 7006

SECTION A

Size: 1.100GB Loading: 112.408 MB N

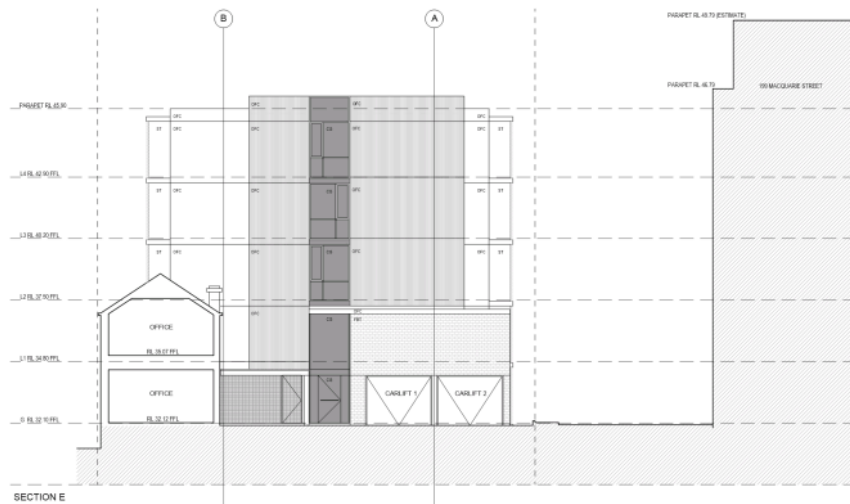
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ROSEVEAR STEPHENSON



ABBREVIATIONS

AC AIR CONDITIONING
BAL GALVANIZED STEEL BALUSTRADE
DN DOWNPIPE
EH EXHAUST
FET FACE BRICK TILES (FACING OFC)
GL CLEAR GLASS BLOCK
CG CLEAR GLASS
JL JAMBLINE LOUVER GRILL - 75% OPEN
GFC GREY OF FORM-CAST CONCRETE
OFG OBSCURED GLASS
BG BILING GREEN
ST STEEL PAINT FINISH

0 0.5 1 2 3 4 (m)

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Project APARTMENT DEVELOPMENT
301 MACQUARIE STREET
HOBART TAS 7006

ELEVATION ME

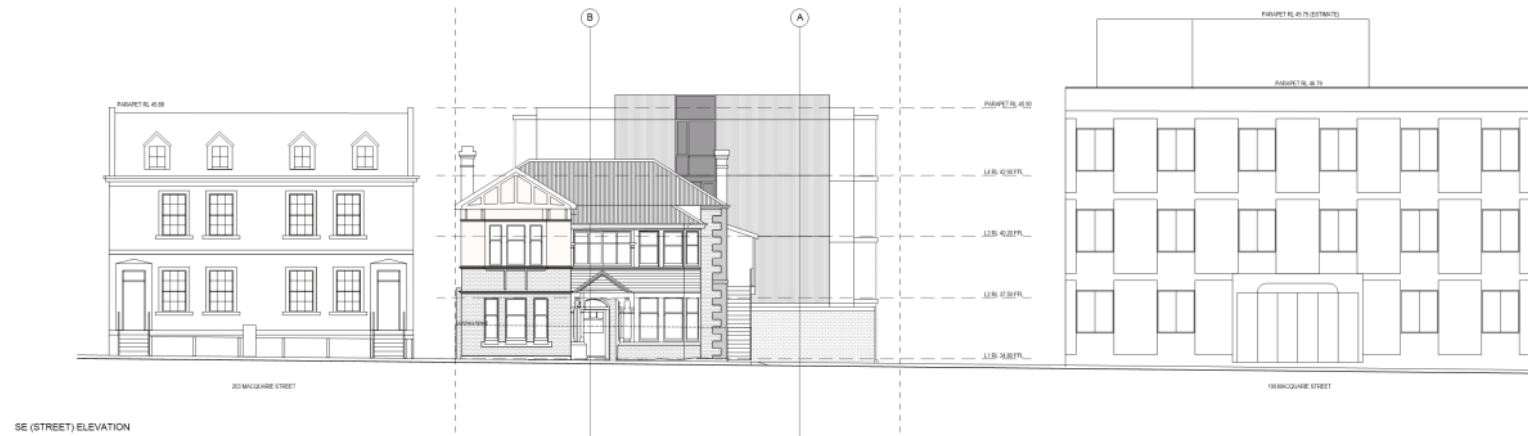
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Rebecca L. Stephenson PhD, 26, 600 12000
Boulevard North, Suite 100, Fort Worth, TX 76116

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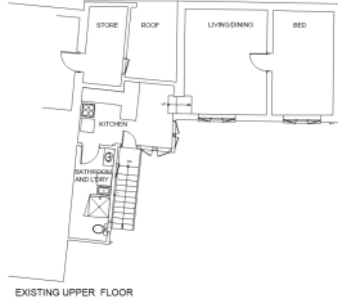




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EXISTING GROUND FLOOR



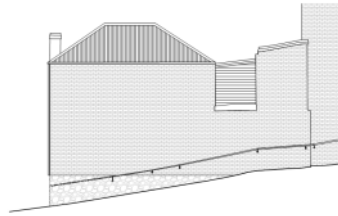
EXISTING UPPER FLOOR



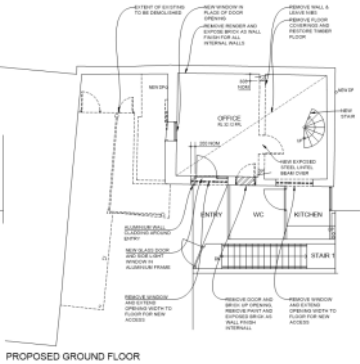
EXISTING NORTH EAST ELEVATION



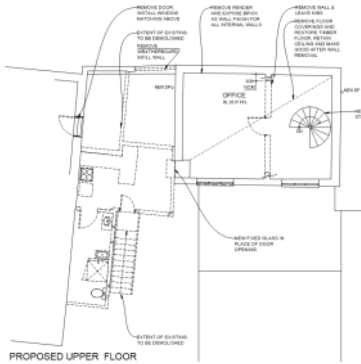
EXISTING NORTH WEST ELEVATION



EXISTING SOUTH WEST ELEVATION



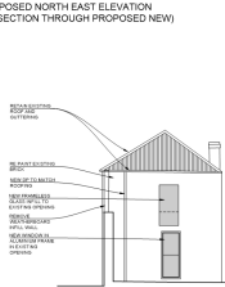
PROPOSED GROUND FLOOR



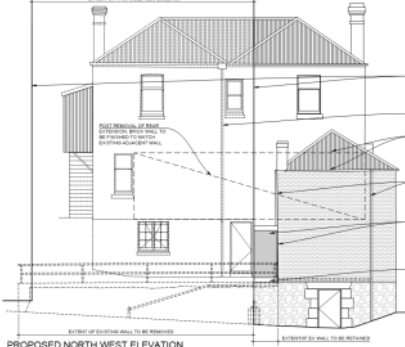
PROPOSED UPPER FLOOR



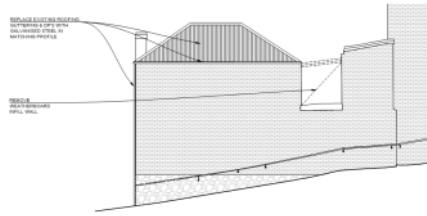
PROPOSED NORTH EAST ELEVATION
(AS SECTION THROUGH PROPOSED NEW)



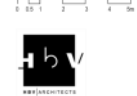
PROPOSED SOUTH EAST ELEVATION



PROPOSED NORTH WEST ELEVATION



PROPOSED SOUTH WEST ELEVATION



1:50 (G1) 112.416 m N

ROSEVEAR STEPHENSON

ATTACHMENT B

Traffic data for Macquarie Street received from DSG



Sunday, 23 September 2018

Approach		detector(s)...									
	Approach	1	1	2	3	4	5	6	7	8	
01:00	Approach	1	54	73	67	5	36	51	42	47	375
02:00	Approach	1	38	47	44	1	30	41	24	21	246
03:00	Approach	1	26	31	39	2	19	27	23	24	191
04:00	Approach	1	20	18	35	1	24	56	16	22	192
05:00	Approach	1	28	35	21	3	32	43	12	16	190
06:00	Approach	1	38	47	29	2	16	27	11	29	199
07:00	Approach	1	102	107	65	9	17	36	23	28	387
08:00	Approach	1	217	238	59	6	48	84	38	46	736
09:00	Approach	1	366	440	54	16	70	102	73	75	1196
10:00	Approach	1	587	682	132	36	119	161	127	132	1976
11:00	Approach	1	758	681	270	29	119	198	175	170	2400
12:00	Approach	1	742	670	266	52	142	237	204	206	2519
13:00	Approach	1	736	753	235	41	125	231	228	228	2577
14:00	Approach	1	611	727	153	44	142	262	226	230	2395
15:00	Approach	1	637	707	139	44	117	241	220	231	2336
16:00	Approach	1	576	627	275	50	127	243	223	213	2334
17:00	Approach	1	477	488	366	49	105	199	179	169	2032
18:00	Approach	1	410	384	265	47	85	169	160	148	1668
19:00	Approach	1	322	290	200	24	75	149	110	111	1281
20:00	Approach	1	196	178	123	13	48	112	84	96	850
21:00	Approach	1	167	176	108	9	52	97	86	94	789
22:00	Approach	1	148	137	75	9	30	77	60	71	607
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Approach 1 AM peak 2519 11:00 - 12:00 PM peak 2577 12:00 - 13:00 Daily
 Total 28009

Monday, 24 September 2018

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04:00	Approach	1	17	23	10	1	3	5	2	2	63
05:00	Approach	1	48	62	30	2	6	8	11	14	181
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07:00	Approach	1	413	430	318	8	54	75	49	49	1396
08:00	Approach	1	861	854	700	71	112	176	140	140	3054
09:00	Approach	1	933	887	741	85	157	271	265	270	3609
10:00	Approach	1	582	458	463	51	117	246	208	205	2330
11:00	Approach	1	647	537	381	102	148	244	239	221	2519
12:00	Approach	1	664	524	430	80	150	266	232	230	2576
13:00	Approach	1	653	541	399	64	147	262	244	230	2540

14:00	Approach	1	687	545	416	78	137	269	230	229	2591
15:00	Approach	1	681	567	444	102	166	271	313	251	2795
16:00	Approach	1	729	704	571	100	202	360	378	352	3396
17:00	Approach	1	738	765	672	97	224	364	397	372	3629
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24:00	Approach	1	58	54	17	2	27	35	18	19	230

Approach 1 AM peak 3674 07:45 - 08:45 PM peak 3629 16:00 - 17:00 Daily
 Total 40085

Tuesday, 25 September 2018

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05:00	Approach	1	50	56	25	2	5	10	7	11	166
06:00	Approach	1	140	183	73	4	17	25	23	28	493
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10:00	Approach	1	683	580	489	73	153	265	213	211	2667
11:00	Approach	1	712	598	383	81	135	260	237	222	2628
12:00	Approach	1	691	603	389	77	125	257	241	228	2611
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16:00	Approach	1	743	739	635	112	177	359	358	339	3462
17:00	Approach	1	742	733	698	104	229	394	418	369	3687
18:00	Approach	1	681	597	548	94	257	457	467	429	3530
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20:00	Approach	1	312	314	195	24	82	152	129	144	1352
21:00	Approach	1	231	186	141	16	51	109	124	110	968
22:00	Approach	1	163	155	82	11	47	85	85	97	725
23:00	Approach	1	116	110	69	2	38	71	50	52	508
24:00	Approach	1	36	42	16	4	13	20	23	31	185

Approach 1 AM peak 3730 07:35 - 08:35 PM peak 3700 15:30 - 16:30 Daily
 Total 42090

Wednesday, 26 September 2018

	Approach	1	1	2	3	4	5	6	7	8	
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03:00	Approach	1	14	17	6	1	2	14	5	7	66
04:00	Approach	1	22	18	7	4	2	2	2	3	60
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15:00	Approach	1	693	627	523	94	150	289	285	282	2943
16:00	Approach	1	742	713	632	116	223	363	364	355	3508
17:00	Approach	1	810	788	698	81	254	393	417	408	3849
18:00	Approach	1	667	653	563	102	183	379	259	332	3138
19:00	Approach	1	500	465	334	66	131	266	237	228	2227
20:00	Approach	1	357	333	206	44	116	187	136	157	1536
21:00	Approach	1	241	221	133	22	77	136	134	139	1103
22:00	Approach	1	211	183	112	16	51	93	91	83	840
23:00	Approach	1	122	114	52	8	32	69	54	65	516
24:00	Approach	1	64	65	32	3	20	30	34	26	274

Approach 1 AM peak 3762 07:40 - 08:40 PM peak 3877 16:10 - 17:10 Daily
Total 42677

Thursday, 27 September 2018

	Approach	1	1	2	3	4	5	6	7	8	
01:00	Approach	1	16	33	10	1	12	21	14	13	120
02:00	Approach	1	18	19	9	1	7	13	3	5	75
03:00	Approach	1	21	17	4	0	10	12	3	5	72
04:00	Approach	1	17	30	6	2	5	7	7	4	78
05:00	Approach	1	41	65	20	2	5	10	9	12	164
06:00	Approach	1	137	178	82	8	17	29	25	27	503
07:00	Approach	1	441	466	318	20	51	73	44	49	1462
08:00	Approach	1	883	817	714	54	101	186	153	150	3058
09:00	Approach	1	914	817	765	71	163	292	302	298	3622
10:00	Approach	1	695	550	510	55	158	276	215	215	2674
11:00	Approach	1	711	595	408	75	127	265	244	235	2660
12:00	Approach	1	737	633	397	74	146	265	247	228	2727
13:00	Approach	1	710	611	432	72	143	285	261	265	2779
14:00	Approach	1	711	620	437	83	148	279	241	244	2763
15:00	Approach	1	753	642	503	91	150	283	292	272	2986
16:00	Approach	1	756	705	639	99	246	249	365	369	3428
17:00	Approach	1	796	757	682	92	178	301	391	371	3568
18:00	Approach	1	676	644	561	84	249	442	402	425	3483
19:00	Approach	1	500	467	391	50	153	245	229	221	2256
20:00	Approach	1	335	284	171	35	91	158	165	147	1386

21:00	Approach	1	247	224	122	22	75	121	110	110	1031
22:00	Approach	1	193	159	111	13	49	93	88	88	794
23:00	Approach	1	125	114	66	6	24	62	56	52	505
24:00	Approach	1	52	53	16	5	24	33	32	31	246

Approach 1 AM peak 3712 07:45 - 08:45 PM peak 3716 16:30 - 17:30 Daily
Total 42440

Friday, 28 September 2018

	Approach	1	1	2	3	4	5	6	7	8	
01:00	Approach	1	30	39	9	2	10	13	18	17	138
02:00	Approach	1	15	23	4	0	7	13	7	9	78
03:00	Approach	1	14	14	4	0	2	5	6	6	51
04:00	Approach	1	19	24	9	2	1	5	4	3	67
05:00	Approach	1	45	52	22	5	8	13	12	9	166
06:00	Approach	1	143	147	79	11	21	31	25	32	489
07:00	Approach	1	448	437	299	15	50	81	46	59	1435
08:00	Approach	1	836	810	690	49	109	191	156	137	2978
09:00	Approach	1	877	805	755	81	169	303	273	281	3544
10:00	Approach	1	588	457	417	48	136	204	201	183	2234
11:00	Approach	1	325	160	87	12	129	146	57	79	995
12:00	Approach	1	617	532	408	43	104	174	76	77	2031
13:00	Approach	1	558	497	303	38	151	229	134	123	2033
14:00	Approach	1	597	554	406	79	173	315	280	315	2719
15:00	Approach	1	721	665	522	90	193	351	349	316	3207
16:00	Approach	1	709	737	575	99	205	347	360	359	3391
17:00	Approach	1	792	771	645	74	216	369	365	353	3585
18:00	Approach	1	694	677	569	88	148	229	318	234	2957
19:00	Approach	1	582	509	435	42	148	253	260	254	2483
20:00	Approach	1	349	305	220	37	94	149	121	122	1397
21:00	Approach	1	237	243	172	14	72	147	111	127	1123
22:00	Approach	1	226	201	149	24	64	139	109	116	1028
23:00	Approach	1	171	144	111	12	40	104	80	86	748
24:00	Approach	1	90	110	57	5	38	69	51	56	476

Approach 1 AM peak 3636 07:45 - 08:45 PM peak 3585 16:00 - 17:00 Daily
Total 39353

Saturday, 29 September 2018

Approach	1	1	2	3	4	5	6	7	8	
01:00 Approach	1	62	52	29	1	27	44	49	25	289
02:00 Approach	1	25	30	23	1	25	29	10	15	158
03:00 Approach	1	11	21	22	2	21	36	10	15	138
04:00 Approach	1	22	19	13	1	20	28	5	9	117
05:00 Approach	1	30	50	29	1	21	31	9	13	184
06:00 Approach	1	59	94	70	11	15	31	16	18	314
07:00 Approach	1	170	201	154	16	25	43	49	23	681
08:00 Approach	1	267	293	199	20	51	88	59	56	1033

09:00	Approach	1	466	521	322	18	89	158	119	108	1801
10:00	Approach	1	625	635	415	46	100	198	177	167	2363
11:00	Approach	1	710	635	412	63	158	277	229	251	2735
12:00	Approach	1	729	684	450	45	146	267	260	246	2827
13:00	Approach	1	688	661	488	57	154	311	282	289	2930
14:00	Approach	1	657	568	379	61	161	276	270	263	2635
15:00	Approach	1	530	468	330	33	106	213	212	209	2101
16:00	Approach	1	468	412	287	27	103	203	215	199	1914
17:00	Approach	1	399	342	227	32	82	152	166	157	1557
18:00	Approach	1	435	353	304	34	95	183	159	157	1720
19:00	Approach	1	439	373	266	26	88	180	130	148	1650
20:00	Approach	1	320	264	196	32	72	145	97	102	1228
21:00	Approach	1	213	177	122	25	66	96	102	97	898
22:00	Approach	1	181	151	108	16	40	90	72	68	726
23:00	Approach	1	141	156	116	15	51	89	67	85	720
24:00	Approach	1	108	82	87	2	43	69	41	53	485

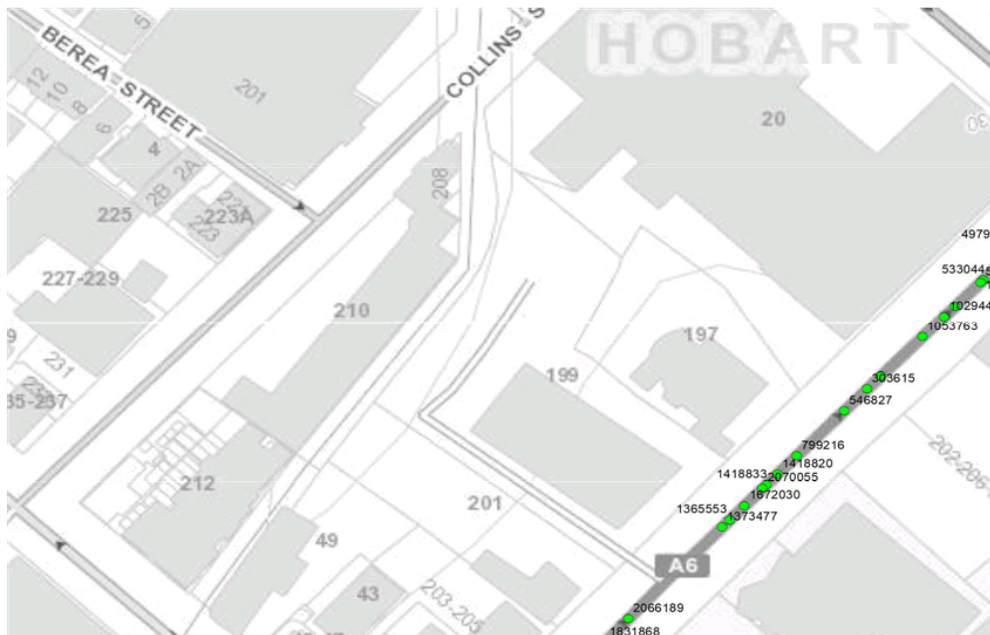
Approach 1 AM peak 2864 10:25 - 11:25 PM peak 2947 12:05 - 13:05 Daily
Total 31204

ATTACHMENT C

Crash report for Macquarie Street received from DSG

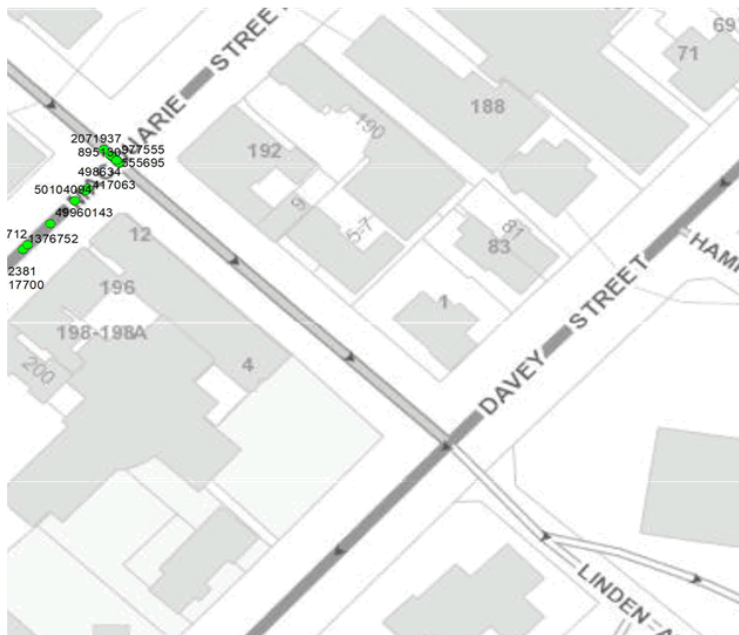
ID	VCRN	DESCRIPTION	CRASH_DATE
270407	14002043	110 - Cross traffic	17/04/2014
291758	14002421	130 - Vehicles in same lane/ rear end	10/05/2014
303615	14002739	149 - Other maneuvering	23/05/2014
306291	14002816	110 - Cross traffic	29/05/2014
336101	14003486	110 - Cross traffic	5/07/2014
417063	14005171	130 - Vehicles in same lane/ rear end	16/10/2014
431349	14005468	110 - Cross traffic	1/11/2014
455323	14006023	110 - Cross traffic	4/12/2014
498634	15000311	110 - Cross traffic	17/01/2015
533044	15001126	130 - Vehicles in same lane/ rear end	13/11/2014
546827	15001834	139 - Other same direction (including vehicle rolling backwards)	2/04/2015
551735	15002079	110 - Cross traffic	16/04/2015
555695	15002241	110 - Cross traffic	26/04/2015
582381	15002823	135 - Vehicles in parallel lane/ lane change left	26/05/2015
799216	15003612	142 - Leaving parking	7/07/2015
895130	15004162	110 - Cross traffic	26/07/2015
977555	15004947	110 - Cross traffic	25/09/2015
1029442	15005310	130 - Vehicles in same lane/ rear end	16/10/2015
1053763	15005487	133 - Vehicles in parallel lane/ lane side swipe	19/10/2015
1067784	15005570	130 - Vehicles in same lane/ rear end	4/11/2015
1189706	15006297	133 - Vehicles in parallel lane/ lane side swipe	9/12/2015
1236391	15006577	139 - Other same direction (including vehicle rolling backwards)	24/12/2015
1365553	16000554	191 - Load or missile struck vehicle	1/02/2016
1373477	16000594	130 - Vehicles in same lane/ rear end	4/02/2016
1376752	16000617	130 - Vehicles in same lane/ rear end	4/02/2016
1406087	16000777	130 - Vehicles in same lane/ rear end	13/02/2016
1418820	16000864	130 - Vehicles in same lane/ rear end	16/02/2016
1418833	16000865	190 - Fell from/in vehicle	17/02/2016
1672030	16001998	142 - Leaving parking	18/04/2016
1717700	16002457	144 - Parking vehicles only	11/05/2016
1760081	16002811	110 - Cross traffic	31/05/2016
1815774	16003303	136 - Vehicles in parallel lane/ right turn side swipe	24/06/2016
1822199	16003335	133 - Vehicles in parallel lane/ lane side swipe	27/06/2016
1831868	16003413	130 - Vehicles in same lane/ rear end	1/07/2016
1879149	16003685	110 - Cross traffic	17/07/2016
1883413	16003811	110 - Cross traffic	23/07/2016
1895566	16004358	102 - Far side	23/08/2016
1927520	16005261	110 - Cross traffic	16/10/2016
1984317	16006564	110 - Cross traffic	18/12/2016
1986412	16006665	110 - Cross traffic	22/12/2016
1995710	17000227	110 - Cross traffic	12/01/2017
2026759	17001734	130 - Vehicles in same lane/ rear end	28/03/2017

2057638	17003195	139 - Other same direction (including vehicle rolling backwards)	18/06/2017
2066189	17003577	130 - Vehicles in same lane/ rear end	7/07/2017
2070055	17003760	130 - Vehicles in same lane/ rear end	17/07/2017
2071937	17003852	110 - Cross traffic	21/07/2017
2079262	17004194	110 - Cross traffic	10/08/2017
2079497	17004204	133 - Vehicles in parallel lane/ lane side swipe	2/08/2017
2081150	17004280	139 - Other same direction (including vehicle rolling backwards)	14/08/2017
2088480	17004629	110 - Cross traffic	3/09/2017
48818298	18000072	110 - Cross traffic	4/01/2018
48819685	18000118	145 - Reversing	7/01/2018
49156325	18001482	130 - Vehicles in same lane/ rear end	13/03/2018
49198006	18002057	136 - Vehicles in parallel lane/ right turn side swipe	12/04/2018
49382660	18003729	136 - Vehicles in parallel lane/ right turn side swipe	4/07/2018
49386109	18003773	133 - Vehicles in parallel lane/ lane side swipe	5/07/2018
49527575	18004657	139 - Other same direction (including vehicle rolling backwards)	20/08/2018
49538409	18004781	136 - Vehicles in parallel lane/ right turn side swipe	26/08/2018
49759776	18007234	110 - Cross traffic	29/12/2018
49791712	19000129	130 - Vehicles in same lane/ rear end	8/01/2019
49856885	19001044	110 - Cross traffic	19/02/2019
49887467	19001370	130 - Vehicles in same lane/ rear end	6/03/2019
49903799	19001546	137 - Vehicles in parallel lane/ left turn side swipe	15/03/2019
49924203	19001679	133 - Vehicles in parallel lane/ lane side swipe	20/03/2019
49960143	19002146	130 - Vehicles in same lane/ rear end	9/04/2019
49996418	19002794	130 - Vehicles in same lane/ rear end	4/05/2019
50104094	19003714	130 - Vehicles in same lane/ rear end	21/06/2019



TIME	SEVERITY	VISITED	SURFACE_TY	LIGHT_COND	CENTRE_LIN
1:20:00 PM	Property Damage Only	Yes	Sealed	Daylight	Single broken
12:00:00 PM	Property Damage Only	No	Sealed	Daylight	Single broken
10:50:00 AM	Property Damage Only	No	Sealed	Daylight	Single broken
5:50:00 PM	Property Damage Only	Yes	Sealed	Dawn / Dusk	Single broken
7:40:00 PM	Minor	Yes	Sealed	Darkness (with street light)	Single broken
8:15:00 AM	Property Damage Only	Yes	Sealed	Daylight	Single broken
2:30:00 PM	Property Damage Only	No	Sealed	Daylight	None
3:04:00 PM	First Aid	Yes	Sealed	Daylight	Single Continuous
8:00:00 PM	First Aid	Yes	Sealed	Daylight	None
6:45:00 PM	Property Damage Only	No	Sealed	Daylight	Double continuous
12:15:00 PM	Property Damage Only	No	Sealed	Daylight	Single broken
7:15:00 PM	Property Damage Only	Yes	Sealed	Darkness (with street light)	Single broken
9:58:00 AM	Minor	Yes	Sealed	Daylight	Single broken
10:32:00 AM	Property Damage Only	No	Sealed	Daylight	Not known
12:05:00 AM	Property Damage Only	No	Sealed	Darkness (with street light)	Single broken
5:00:00 PM	Property Damage Only	No	Sealed	Daylight	Single broken
3:11:00 PM	Property Damage Only	Yes	Sealed	Daylight	Single broken
10:50:00 AM	Property Damage Only	No	Sealed	Daylight	Single broken
9:40:00 AM	Property Damage Only	No	Sealed	Daylight	Single broken
4:04:00 PM	First Aid	Yes	Sealed	Daylight	Single broken
7:10:00 AM	Property Damage Only	No	Sealed	Daylight	Single broken
2:30:00 PM	Property Damage Only	No	Sealed	Daylight	Single broken
8:30:00 AM	Property Damage Only	No	Sealed	Daylight	Single broken
8:45:00 AM	Property Damage Only	No	Sealed	Daylight	None
11:55:00 AM	Property Damage Only	Yes	Sealed	Daylight	Single broken
1:20:00 PM	Property Damage Only	Yes	Sealed	Daylight	Single Continuous
9:30:00 AM	Property Damage Only	No	Sealed	Daylight	Not known
9:00:00 AM	Property Damage Only	No	Sealed	Daylight	Not known
9:30:00 AM	Property Damage Only	Yes	Sealed	Daylight	Single broken
4:07:00 PM	Property Damage Only	Yes	Sealed	Daylight	Single broken
5:25:00 PM	Minor	Yes	Sealed	Darkness (with street light)	Single broken
7:10:00 PM	Property Damage Only	No	Sealed	Darkness (with street light)	Not known
8:50:00 AM	Property Damage Only	No	Sealed	Daylight	Single broken
10:20:00 AM	Minor	Yes	Sealed	Daylight	Single broken
3:00:00 PM	Property Damage Only	Yes	Sealed	Daylight	Single Continuous
7:20:00 PM	First Aid	Yes	Sealed	Darkness (with street light)	Single Continuous
9:15:00 AM	Minor	Yes	Sealed	Daylight	Single broken
8:08:00 AM	Minor	Yes	Sealed	Daylight	Single broken
6:55:00 PM	Minor	Yes	Sealed	Daylight	Other
6:19:00 AM	Property Damage Only	Yes	Sealed	Daylight	Single broken
11:05:00 AM	Property Damage Only	No	Sealed	Daylight	Single broken
11:40:00 PM	Property Damage Only	Yes	Sealed	Darkness (with street light)	Single broken

9:30:00 AM	Property Damage Only	Yes	Sealed	Daylight	Single broken
8:25:00 AM	Property Damage Only	No	Sealed	Daylight	Single broken
9:00:00 AM	Property Damage Only	No	Sealed	Daylight	Not known
12:10:00 PM	Property Damage Only	Yes	Sealed	Daylight	Single broken
6:10:00 AM	Property Damage Only	Yes	Sealed	Dawn / Dusk	Single broken
10:10:00 AM	Property Damage Only	No	Sealed	Daylight	Single broken
9:05:00 AM	Property Damage Only	No	Sealed	Daylight	Single broken
12:16:00 AM	Property Damage Only	Yes	Sealed	Darkness (with street light)	Single broken
9:30:00 PM	First Aid	Yes	Sealed	Darkness (with street light)	Single broken
7:00:00 PM	Property Damage Only	No	Sealed	Daylight	Single Continuous
10:07:00 AM	Property Damage Only	Yes	Sealed	Daylight	Double broken
1:20:00 PM	Property Damage Only	No	Sealed	Daylight	Not known
10:30:00 AM	Property Damage Only	Yes	Sealed	Daylight	Other
4:40:00 PM	Property Damage Only	No	Sealed	Dawn / Dusk	Single broken
3:15:00 PM	Property Damage Only	Yes	Sealed	Daylight	Single broken
5:30:00 PM	First Aid	Yes	Sealed	Dawn / Dusk	Single Continuous
1:18:00 PM	First Aid	Yes	Sealed	Daylight	None
5:30:00 PM	Property Damage Only	No	Sealed	Daylight	Single broken
10:35:00 PM	First Aid	Yes	Sealed	Darkness (with street light)	Single Continuous
10:04:00 PM	First Aid	Yes	Sealed	Daylight	Single broken
1:45:00 PM	Property Damage Only	No	Sealed	Daylight	Single broken
9:00:00 AM	Property Damage Only	No	Sealed	Daylight	Single broken
5:10:00 PM	Property Damage Only	Yes	Sealed	Daylight	Single broken
12:15:00 PM	Property Damage Only	Yes	Sealed	Daylight	Single broken
5:30:00 PM	Property Damage Only	No	Sealed	Darkness (with street light)	Single Continuous





SPEED_ZONE	LOCATION_D	LATITUDE
050	Intersection of Barrack Street and Macquarie Street, Hobart, Hobart	-42.88709113490
050	Macquarie Street, Hobart, Hobart	-42.88844010750
050	Macquarie Street, Hobart, Hobart	-42.88759936260
050	Intersection of Barrack Street and Macquarie Street, Hobart, Hobart	-42.88709113490
050	Intersection of Barrack Street and Macquarie Street, Hobart, Hobart	-42.88709113490
050	Macquarie Street, Hobart, Hobart	-42.88715259610
050	Intersection of Barrack Street and Macquarie Street, Hobart, Hobart	-42.88709113490
040 school	Intersection of Macquarie Street and Molle Street, Hobart, Hobart	-42.88859336370
050	Intersection of Barrack Street and Macquarie Street, Hobart, Hobart	-42.88709113490
050	Macquarie Street, Hobart, Hobart	-42.88735568860
050	Macquarie Street, Hobart, Hobart	-42.88764807900
050	Intersection of Macquarie Street and Molle Street, Hobart, Hobart	-42.88859336370
050	Intersection of Barrack Street and Macquarie Street, Hobart, Hobart	-42.88709113490
050	Macquarie Street, Hobart, Hobart	-42.88736111150
050	Macquarie Street, Hobart, Hobart	-42.88774831430
050	Intersection of Barrack Street and Macquarie Street, Hobart, Hobart	-42.88709660620
050	Intersection of Barrack Street and Macquarie Street, Hobart, Hobart	-42.88709113490
050	Macquarie Street, Hobart, Hobart	-42.88743748570
050	Macquarie Street, Hobart, Hobart	-42.88748358130
050	Intersection of Barrack Street and Macquarie Street, Hobart, Hobart	-42.88709113490
050	Macquarie Street, Hobart, Hobart	-42.88757043980
050	Macquarie Street, Hobart, Hobart	-42.88835362970
050	Macquarie Street, Hobart, Hobart	-42.88788922140
050	Macquarie Street, Hobart, Hobart	-42.88790467700
050	Macquarie Street, Hobart, Hobart	-42.88728853360
050	Intersection of Barrack Street and Macquarie Street, Hobart, Hobart	-42.88709113490
050	Macquarie Street, Hobart, Hobart	-42.88778853460
050	Macquarie Street, Hobart, Hobart	-42.88781185370
050	Macquarie Street, Hobart, Hobart	-42.88785785840
050	Macquarie Street, Hobart, Hobart	-42.88736102110
050	Intersection of Barrack Street and Macquarie Street, Hobart, Hobart	-42.88709113490
050	Intersection of Macquarie Street and Molle Street, Hobart, Hobart	-42.88859914800
050	Macquarie Street, Hobart, Hobart	-42.88823218090
050	Macquarie Street, Hobart, Hobart	-42.88815961880
050	Intersection of Barrack Street and Macquarie Street, Hobart, Hobart	-42.88709113490
050	Intersection of Barrack Street and Macquarie Street, Hobart, Hobart	-42.88708243540
050	Intersection of Barrack Street and Macquarie Street, Hobart, Hobart	-42.88709113490
050	Intersection of Barrack Street and Macquarie Street, Hobart, Hobart	-42.88707857880
050	Intersection of Barrack Street and Macquarie Street, Hobart, Hobart	-42.88709113490
050	Intersection of Macquarie Street and Molle Street, Hobart, Hobart	-42.88859336370
050	Intersection of Barrack Street and Macquarie Street, Hobart, Hobart	-42.88709113490
050	Intersection of Barrack Street and Macquarie Street, Hobart, Hobart	-42.88709113490

050	Intersection of Barrack Street and Macquarie Street, Hobart, Hobart	-42.88709113490
Not known	Macquarie Street, Hobart, Hobart	-42.88810666590
Not known	Macquarie Street, Hobart, Hobart	-42.88781962650
050	Intersection of Barrack Street and Macquarie Street, Hobart, Hobart	-42.88706647120
050	Intersection of Barrack Street and Macquarie Street, Hobart, Hobart	-42.88709113490
Not known	Intersection of Macquarie Street and Molle Street, Hobart, Hobart	-42.88859336370
Not known	Macquarie Street, Hobart, Hobart	-42.88841155250
050	Intersection of Barrack Street and Macquarie Street, Hobart, Hobart	-42.88708162800
050	Intersection of Barrack Street and Macquarie Street, Hobart, Hobart	-42.88709113490
050	Intersection of Barrack Street and Macquarie Street, Hobart, Hobart	-42.88709113490
050	Intersection of Barrack Street and Macquarie Street, Hobart, Hobart	-42.88709113490
050	Intersection of Macquarie Street and Molle Street, Hobart, Hobart	-42.88859336370
050	Intersection of Barrack Street and Macquarie Street, Hobart, Hobart	-42.88709113490
050	Macquarie Street, Hobart, Hobart	-42.88741425720
050	Macquarie Street, Hobart, Hobart	-42.88715774810
050	Intersection of Barrack Street and Macquarie Street, Hobart, Hobart	-42.88709113490
050	Intersection of Barrack Street and Macquarie Street, Hobart, Hobart	-42.88709113490
050	Macquarie Street, Hobart, Hobart	-42.88727822960
050	Intersection of Barrack Street and Macquarie Street, Hobart, Hobart	-42.88709113490
050	Macquarie Street, Hobart, Hobart	-42.88851655470
050	Intersection of Macquarie Street and Molle Street, Hobart, Hobart	-42.88859336370
Not known	Macquarie Street, Hobart, Hobart	-42.88757161500
050	Macquarie Street, Hobart, Hobart	-42.88723104940
050	Intersection of Barrack Street and Macquarie Street, Hobart, Hobart	-42.88709113490
Not known	Macquarie Street, Hobart, Hobart	-42.88717980150

LONGITUDE	Unit_No	Unit_Type	Unit_No2	Unit_Type2	Unit_No3	Unit_Type3
147.32459687800	1	LightVehicle	2	LightVehicle	3	LightVehicle
147.32288245600	1	LightVehicle	2	LightVehicle		
147.32393946400	1	LightVehicle	2	LightVehicle		
147.32459687800	1	LightVehicle	2	LightVehicle		
147.32459687800	1	LightVehicle	2	LightVehicle		
147.32451735500	1	LightVehicle	2	LightVehicle		
147.32459687800	1	LightVehicle	2	LightVehicle		
147.32269551600	1	LightVehicle	2	LightVehicle	3	HeavyVehicle
147.32459687800	1	LightVehicle	2	LightVehicle		
147.32425463400	1	LightVehicle	2	LightVehicle		
147.32387652800	1	LightVehicle	2	LightVehicle		
147.32269551600	1	LightVehicle	2	LightVehicle		
147.32459687800	1	LightVehicle	2	LightVehicle		
147.32424768200	1	HeavyVehicle	2	LightVehicle		
147.32374675000	1	LightVehicle	2	LightVehicle		
147.32460462200	1	LightVehicle	2	LightVehicle		
147.32459687800	1	LightVehicle	2	HeavyVehicle		
147.32414888600	1	LightVehicle	2	LightVehicle		
147.32408924300	1	LightVehicle	2	LightVehicle		
147.32459687800	1	LightVehicle	2	LightVehicle	3	LightVehicle
147.32397690900	1	HeavyVehicle	2	LightVehicle		4 LightVehicle
147.32298793800	1	LightVehicle	2	LightVehicle		
147.32356452600	1	LightVehicle				
147.32354452200	1	LightVehicle	2	LightVehicle		
147.32434147600	1	LightVehicle	2	LightVehicle	3	LightVehicle
147.32459687800	1	LightVehicle	2	LightVehicle	3	LightVehicle
147.32369479100	1	LightVehicle	2	LightVehicle		
147.32366454200	1	HeavyVehicle				
147.32360514200	1	LightVehicle	2	LightVehicle		
147.32424780400	1	LightVehicle				
147.32459687800	1	LightVehicle	2	LightVehicle		
147.32268807600	1	LightVehicle	2	LightVehicle		
147.32313609900	1	LightVehicle	2	HeavyVehicle		
147.32322463000	1	LightVehicle	2	LightVehicle	3	LightVehicle
147.32459687800	1	LightVehicle	2	LightVehicle		
147.32458434200	1	LightVehicle	2	LightVehicle	3	LightVehicle
147.32459687800	1	LightVehicle	2	Pedestrian		4 LightVehicle
147.32457881100	1	LightVehicle	2	LightVehicle		
147.32459687800	1	LightVehicle	2	LightVehicle		
147.32269551600	1	LightVehicle	2	LightVehicle		
147.32459687800	1	LightVehicle	2	LightVehicle		
147.32459687800	1	LightVehicle	2	LightVehicle		

147.32459687800	1	LightVehicle	2	LightVehicle	
147.32328913700	1	LightVehicle	2	LightVehicle	
147.32365454000	1	LightVehicle	2	LightVehicle	
147.32456135700	1	LightVehicle	2	LightVehicle	
147.32459687800	1	LightVehicle	2	LightVehicle	
147.32269551600	1	LightVehicle	2	HeavyVehicle	
147.32291733200	1	LightVehicle	2	HeavyVehicle	
147.32458323500	1	LightVehicle	2	LightVehicle	
147.32459687800	1	LightVehicle	2	LightVehicle	
147.32459687800	1	LightVehicle	2	LightVehicle	
147.32459687800	1	LightVehicle	2	LightVehicle	
147.32269551600	1	LightVehicle	2	LightVehicle	
147.32459687800	1	LightVehicle	2	LightVehicle	
147.32417889100	1	LightVehicle	2	HeavyVehicle	
147.32451064600	1	LightVehicle	2	LightVehicle	
147.32459687800	1	LightVehicle	2	LightVehicle	
147.32459687800	1	LightVehicle	2	LightVehicle	
147.32435489300	1	LightVehicle	2	LightVehicle	
147.32459687800	1	LightVehicle	2	LightVehicle	3 LightVehicle
147.32278929100	1	LightVehicle	2	LightVehicle	
147.32269551600	1	LightVehicle	2	LightVehicle	
147.32397532300	1	LightVehicle	2	HeavyVehicle	
147.32441587700	1	HeavyVehicle	2	LightVehicle	
147.32459687800	1	LightVehicle	2	LightVehicle	3 LightVehicle
147.32448222800	1	LightVehicle	2	LightVehicle	

ATTACHMENT D

Drawings of civil design and access management

CIVIL DRAWINGS
PROPOSED UNIT DEVELOPMENT
201 MACQUARIE STREET,
HOBART, TASMANIA 7000

SHEET	DRAWING	ISSUE	DATE
CD 01	OVERALL PLAN, INDEX AND NOTES	D	1/12/2020
C1 01	DESIGN LEVELS AND GRADING PLAN	D	1/12/2020
C1 02	VEHICLE TURNPATHS	D	1/12/2020
C1 03	VEHICLE TURNPATHS - GARBAGE TRUCK	D	1/12/2020

GENERAL NOTES

1. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS AND THE TRAFFIC ENGINEER'S REPORT. STANDARDS REFERENCED ARE TO BE THE MOST CURRENT VERSION.
2. THESE DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION UNLESS ENDORSED FOR CONSTRUCTION AND AUTHORIZED FOR ISSUES ACCORDINGLY.
3. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH PREVALENT STANDARDS, DRAWINGS AND SPECIFICATIONS, AUSTRALIAN STANDARDS, TIER 1A SUPPLY CODE OF AUSTRALIA & WATER SUPPLY CODE OF AUSTRALIA AND TO THE SATISFACTION OF COUNCIL'S DEVELOPMENT ENGINEER.
4. PREVALENT STANDARDS DRAWINGS TO BE READ IN CONJUNCTION WITH COUNCIL EXCLUSION SHEETS T20-011 & T20-021.
5. ALL WORKS ARE TO BE CARRIED OUT IN A SAFE MANNER.
6. CONTRACTOR SHALL ADVISE PRIOR TO THE COMMENCEMENT OF WORKS.
7. CONTRACTOR TO OBTAIN APPROVAL, SERVICE CLEARANCES AND COORDINATE WORK WITH ALL RELEVANT AUTHORITIES PRIOR TO COMMENCEMENT.
8. A DRAFT OF WORKS NOTICES MUST BE OBTAINED FROM COUNCIL PRIOR TO ANY WORKS COMMENCED.
9. SURVEY DATA UNDERPASSES AND PROVIDED BY ROSSBURGH ENGINEERING.
10. ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS AND PROVIDED BY ROSSBURGH ENGINEERING.
11. FLOOR LEVELS SET BY ARCHITECT. ELEVATION DRAWINGS BASED ON THESE.

WORKPLACE HEALTH & SAFETY NOTES

- BEFORE THE CONTRACTOR COMMENCES WORK THE CONTRACTOR SHALL UNDERSTAND & SITE SPECIFIC PRESENT HAZARD ANALYSIS. USE SAFETY ANALYSIS (USE-RISK) SHALL BE OBTAINED FROM:
- THE TYPE OF WORK.
 - HAZARDS AND RISKS TO HEALTH AND SAFETY.
 - THE CONTROL TO BE APPLIED IN ORDER TO ELIMINATE OR REDUCE THE RISK POSED BY THE IDENTIFIED HAZARDS.
 - THE HAZARD ANALYSIS OF THE RISK CONTROL. HAZARD ANALYSIS TO BE IMPROVED.

THESE ARE TO BE SUBMITTED TO THE SUPERVISOR/CLIENT AND/OR OTHER RELEVANT WORKPLACE SAFETY OFFICERS.

- FOR THIS PROJECT POSSIBLE HAZARDS WOULD BE LIMITED TO:
- EXCAVATION OF ANY TYPE & DEPTH.
 - CONTAMINATED SOIL.
 - CONSTRUCTION IN PROXIMITY WITH HIGH WATER TABLE.
 - FELLING, LOGGING OR REMOVAL OF EXISTING TREES/VEGETATION.
 - UNDERGROUND STRUCTURES (TANKS, TUNNELS, ETC).
 - COMBUSTIBLE SPACES.
 - OVERHEAD POWER LINES.
 - UNDERGROUND STORAGE TANKS, WATER AND SEWER PIPES.
 - TELECOMMUNICATION CABLES, BOTH UNDERGROUND & OVERHEAD.
 - ELECTRICAL POWER CABLES, BOTH UNDERGROUND & OVERHEAD.
 - WORKERS AT HEIGHTS.
 - WORKERS WITH LIMITED COORDINATION/IMPAIRMENT.
 - TRAFFIC MANAGEMENT.

EARTHWORKS & DRIVEWAY NOTES

1. ALL EARTHWORKS SHALL BE IN ACCORDANCE WITH BEST PRACTICE FOR EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS.
2. ALL VIBRATION AND TRENCHING SHALL BE CARRIED OUT IN THE AREA OF PROPOSED WORKS.
3. VIEW OF RECEIVED EARTHWORKS ORDERS SHALL BE IN ACCORDANCE WITH PRACTICE STANDARDS DRAWING T20-011 & MUST BE INSPECTED AND APPROVED BY COUNCIL.
4. EXCAVATED AND IMPORTED MATERIALS SHALL BE TO BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
5. FILL MATERIALS SHALL BE WELL GRADED AND FREE OF Boulders OR CORNERS EXCEEDING 100mm IN DIAMETER UNLESS APPROVED OTHERWISE.
6. FILL REQUIRED TO SUPPORT DRIVEWAYS INCLUDING FILL IN SUBBASEMENTS THAT SUPPORT DRIVEWAYS SHALL BE METACAST IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:
 - TOP SOIL AND DRIVEWAY UTILITY SHALL BE STRENGTHENED TO A MINIMUM OF 100mm.
 - THE FILL SHALL BE WELL GRADED AND HAVE A MINIMUM BOUNDARY COMPACTED TO 95%.
 - FILL IN SUBBASEMENTS SHALL BE KEPT FROM INTO NEARBY DRIVEWAYS.
 - THE FILL SHALL BE COMPACTED TO A MINIMUM OF 95% TO A MINIMUM OF 100mm.
 - EACH LAYER SHALL BE COMPACTED TO A MINIMUM OF 95% TO A MINIMUM OF 100mm.
7. WHERE THE ABOVE REQUIREMENTS CANNOT BE ACHIEVED THE ENGINEER SHALL BE CONSULTED AND THE FORMATION SHALL BE PROPOSED UNDER SUPERVISION OF THE ENGINEER TO COMPLY WITH APPROVED BASE.
8. CONCRETE PAVEMENTS SHALL BE CURED FOR A MINIMUM OF 28 DAYS USING A CURRENT BEST PRACTICE METHOD.
9. DRIVEWAY EDGES SHALL BE CONSTRUCTED AS SOON AS POSSIBLE WITHOUT HINDERING THE JOURNEY, GENERALLY THIS SHALL BE WITHIN 24 HOURS.
10. BUTTERS SHALL BE SET TO A SAFE ANGLE OF REPOSE IN ACCORDANCE WITH THE BCA VOL 1 & 2 DATES BELOW.

SOIL TYPE (REFER BCA 32.4)		EMBANKMENT SLOPES H:L	
		COMPACTED FILL	OUT
STABLE ROCK (A)		2:1	0:1
SAND (A)		1:2	1:2
SILT (A)		1:4	1:4
CLAY	HEAVY CLAY	1:3	1:1
	SOFT CLAY	NOT SUITABLE	2:3
SOFT SOIL (A)		NOT SUITABLE	NOT SUITABLE

NOTE: WHERE SITE CONDITIONS ARE UNSUITABLE FOR A BUTTERED BANK CONSULT THE ENGINEER FOR A BUTTERED RETENTION WALL DESIGN. ENGINEER'S THAT ARE TO BE SET BY ENGINEER MUST BE CARRIED OUT IN ACCORDANCE WITH THE BCA VOL 1 & 2 DATES BELOW.

DRAINAGE AND SERVICES NOTES

1. ALL WORKS ASSOCIATED WITH PUBLIC STORMWATER INFRASTRUCTURE IS TO BE CARRIED OUT IN ACCORDANCE WITH PRACTICE STANDARDS DRAWING T20-011 & MUST BE INSPECTED AND APPROVED BY COUNCIL.
2. ALL WORKS ASSOCIATED WITH PUBLIC SEWER AND WATER IS TO BE CARRIED OUT IN ACCORDANCE WITH THE VISA PARTS 2 & 3 & JOURNAL AND RESURFACE CODES OF AUSTRALIA AND TO THE SATISFACTION OF TARRANT.
3. ALL CONNECTIONS TO EXISTING WORKS TO BE CARRIED OUT IN THE PRESENCE OF AUTHORITY OF COUNCIL UNLESS APPROVED OTHERWISE.
4. ALL PIPES TO BE COORDINATED WITH OTHER SERVICES. MINIMUM LAYOUT AS SHOWN IN NOTIONAL LAYOUT TO BE CONFIRMED ON SITE.
5. ALL EXISTING SERVICES TO BE LOCATED ON SITE PRIOR TO THE COMMENCEMENT OF WORKS.
6. GENERAL LAYOUT SHALL BE INSTALLED IN TRENCHES SHALL COMPLY WITH AUSTRALIAN AND THE TARRANT PRACTICE CODE.
7. INSTALL ALL SERVICES TO THE REQUIREMENTS OF AUSTRALIAN AND PART 3.1.2 OF THE BCA.
8. PAVEMENT AND HAZARDOUS AREAS SHALL BE KEPT FROM INTO NEARBY DRIVEWAYS.
9. ALL PIPES WORK UNDER PROPOSED AREAS, INCLUDING DRIVEWAYS, IS TO BE BACKFILLED WITH COMPACTED FILL.
10. DRIVEWAY PIPES TO BE KEPT FROM INTO NEARBY DRIVEWAYS TO BE KEPT FROM INTO.
11. MINIMUM GRADES FOR DRIVEWAY PIPES SHALL BE 1% FOR STORMWATER AND 1% FOR SEWER LINES.
12. MINIMUM COVER FOR DRIVEWAY PIPES SHALL BE 100mm FOR STORMWATER AND 100mm FOR SEWER LINES.
13. OUTER PIPES TO BE KEPT FROM INTO NEARBY DRIVEWAYS TO BE KEPT FROM INTO.
14. OUTER CONNECTIONS SHALL BE PROVIDED WITH UTILITY AND BACKFILL PREPARATION AS PER TARRANT STANDARDS DRAWING T20-011.
15. ALL PIPES TO BE INSPECTED BY COUNCIL PRIOR TO BACKFILL.
16. IF TARRANTING DESIGN HAVE BEEN CONSIDERED BY THE ENGINEER, THESE PIPES MUST BE INSPECTED IN MINIMUM INTERVAL, SIZE DUE TO THE DEPTH AS PER ACCESS AS PER TABLE BELOW WHICH IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE COMPLIANCE TO ACCESS.

DEPTH TO HAZARD OF OUTLET	MINIMUM INTERVAL DRAINAGE SPACING	
	DEPTH	WIDTH
0-100	100	100
100-200	100	100
200-300	100	100
300-400	100	100
400-500	100	100
500-600	100	100
600-700	100	100
700-800	100	100
800-900	100	100
900-1000	100	100



THESE DRAWINGS MUST BE APPROVED BY
 COUNCIL & TARRANT PRIOR TO CONSTRUCTION

OVERALL PLAN
 SCALE 1:1000 (A1)



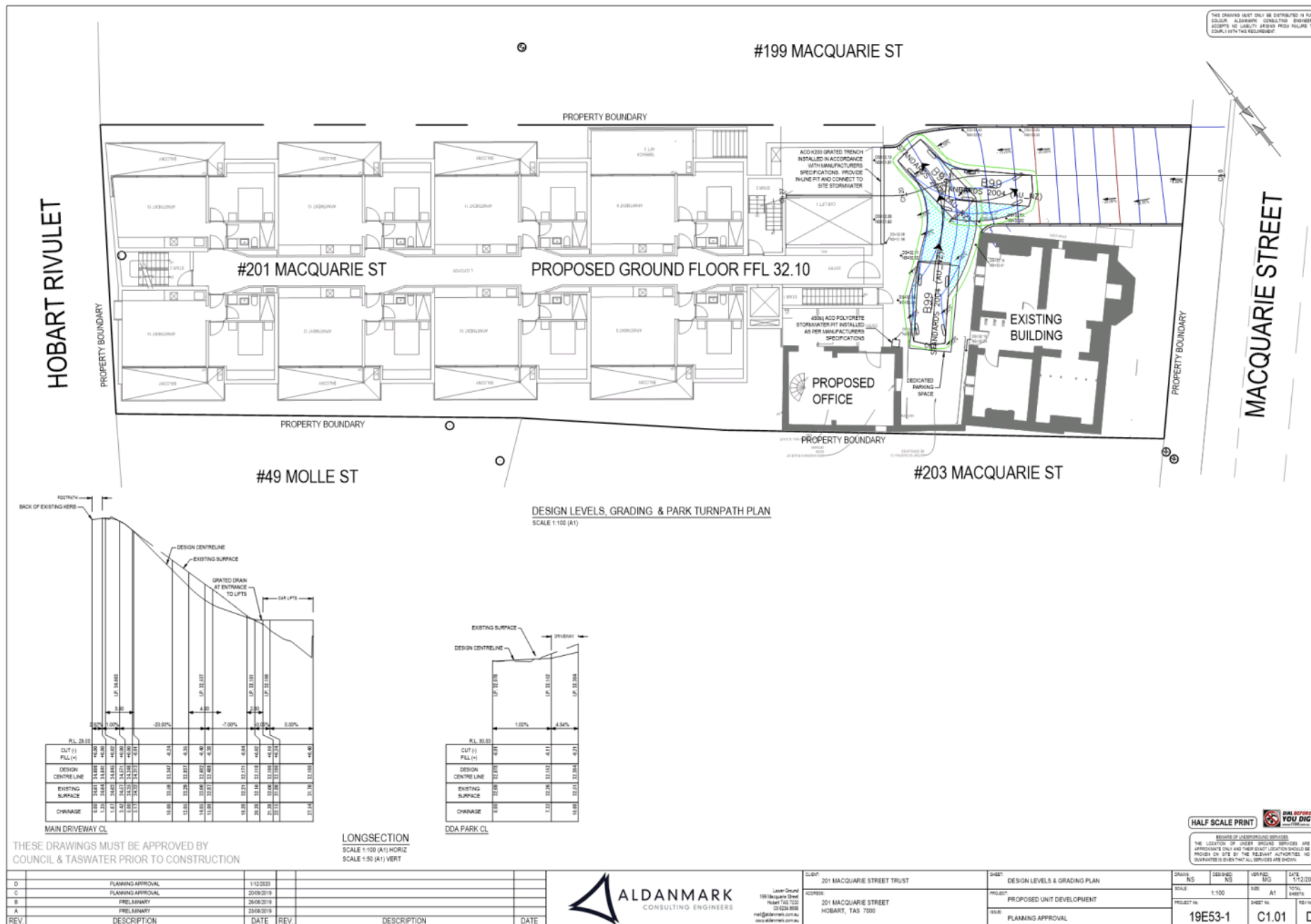
Unit 201
 201 Macquarie Street
 Hobart TAS 7000
 03 6234 8888
 mail@aldanmark.com.au
 www.aldanmark.com.au

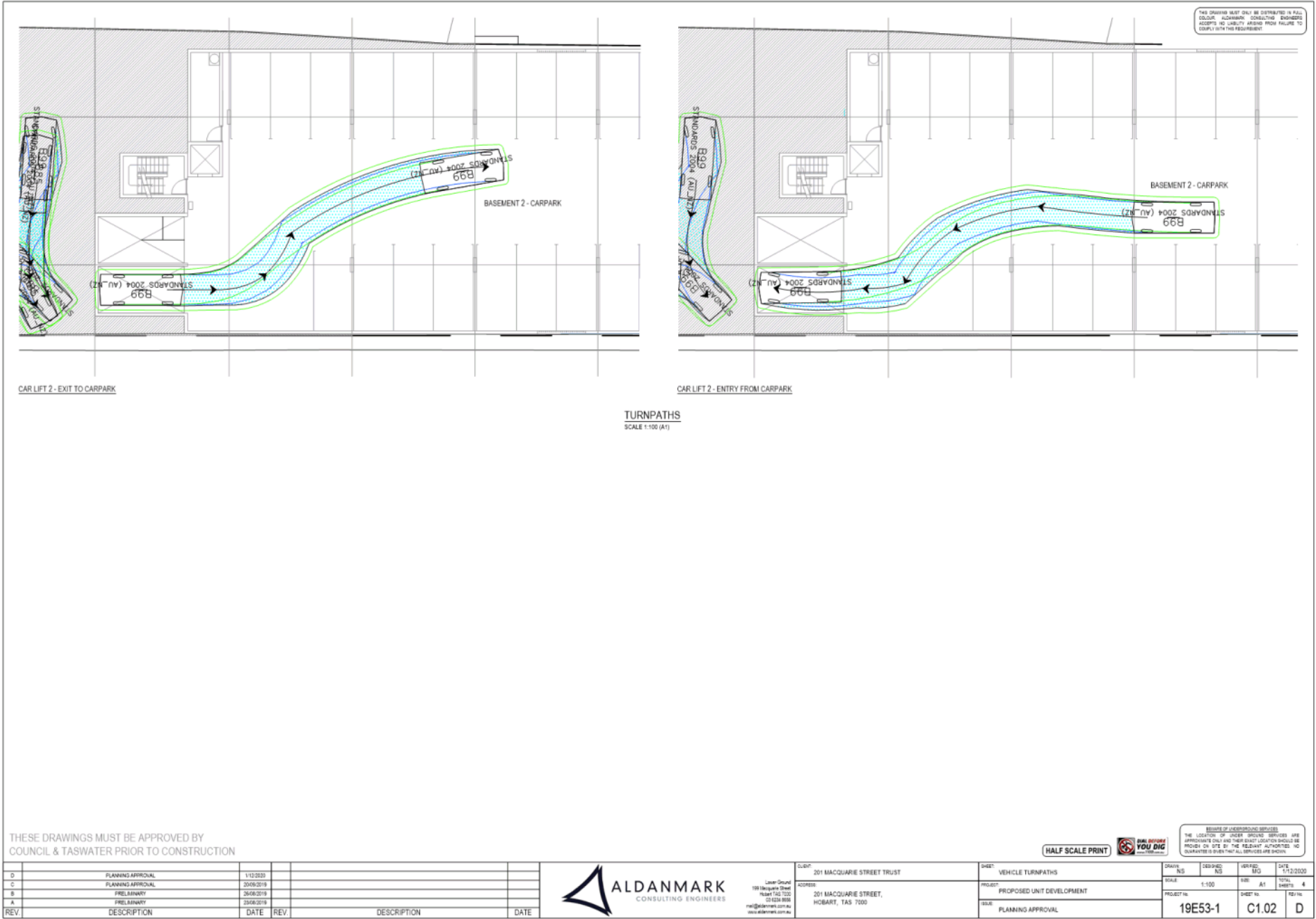
CLIP:
 201 MACQUARIE STREET TRUST
 ADDRESS:
 201 MACQUARIE STREET,
 HOBART, TAS 7000

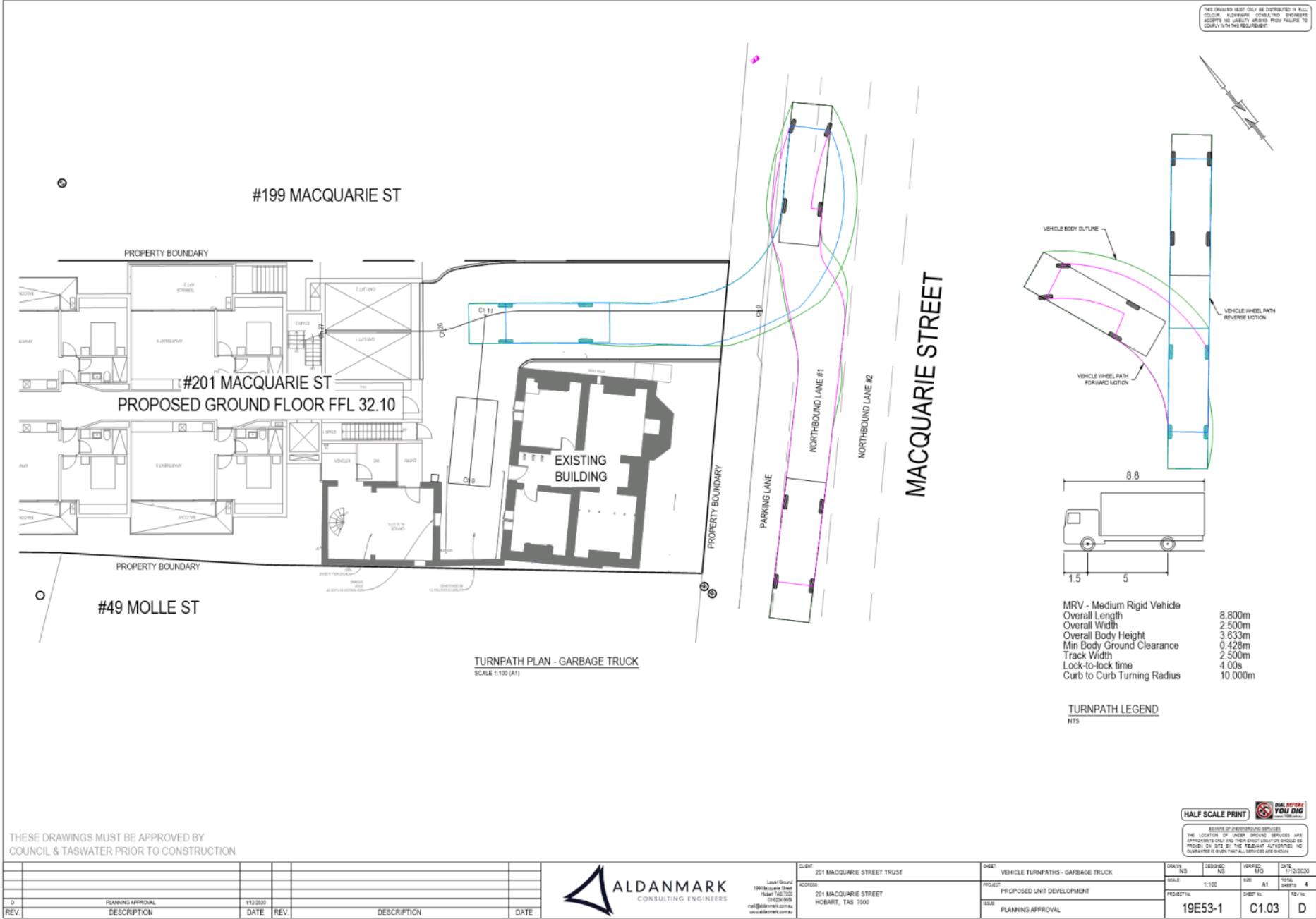
SHEET:
 OVERALL PLAN, INDEX AND NOTES
 PROJECT:
 PROPOSED UNIT DEVELOPMENT
 DATE:
 PLANNING APPROVAL

HALF SCALE PRINT				DUAL REPORT YOU DIG			
THE LOCATION OF ORDER SERVICE SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT LOCATION SHOULD BE PROVIDED ON SITE BY THE RELEVANT AUTHORITIES. NO GUARANTEE IS GIVEN THAT ALL SERVICES ARE EXACT.							
DRAWN	NS	DESIGNED	NS	VERIFIED	MG	DATE	1/12/2020
SCALE	1:1000	SHEET	A1	TOTAL	SHEETS	4	
PROJECT NO.	19E53-1	SHEET NO.	C0.01	REV	NO		

REV	DESCRIPTION	DATE	REV	DESCRIPTION	DATE
D	PLANNING APPROVAL	1/12/2020			
C	PLANNING APPROVAL	20/09/2019			
B	PRELIMINARY	26/08/2019			
A	PRELIMINARY	23/08/2019			







ATTACHMENT E

Car lift technical details, calculations of lift operation,
queueing and manoeuvring diagram

ATTACHMENT E

Car lift technical details, calculations of lift operation,
queueing and manoeuvring diagram



Vehicle Lifts



Architecturally sensitive design, Australian manufactured

The Best Way to Drive Down-Under

safetech.com.au

Safety and Productivity by Design

Why Choose Safetech

Australia's widest range of vehicle lifts.



For more than 30 years Safetech has been lifting Australian business with our award-winning range of lifting products and solutions.

From large 30 tonne truck lifts in shopping centres to custom car lifts that complement your home and your lifestyle. We make them all.

Our Vehicle Lifts are built with the same engineering excellence and tradesman's care that is trusted by many Australian retailers, factories and warehouses.



Lifts that work for you, not the other way around

Many Vehicle Lifts are industrial relics. Safetech lifts are simple intuitive and modern.

Riding one of our lifts requires the same skill as any commercial or residential personnel lift.

One touch/no touch controls schemes and automatic sensing.

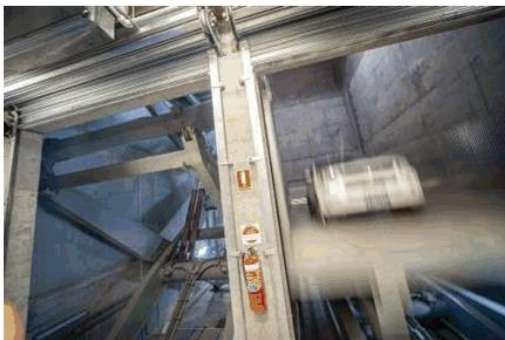
Creating Value



Lifting your investment

For many people, a house or apartment is their most valuable investment and access to secure, reliable parking is essential for many buyers.

Safetech are Australia's most trusted supplier of lifting solutions with national 24/7 support.



Lift your profile

For builders and owners the quality and finish of a building and its utilities add value and prestige.

Safetech offers a variety of standard and bespoke features and surface treatment to enhance appearance and function.

Safety & Security



Lifts that keep you safe

Security and safety are at the core of any Safetech design.

Passengers feel secure in the well lit Safetech cabin. Refined controls provide instant feedback on the lifts progress.

- ❖ Non-powered descent
- ❖ Onboard phone support
- ❖ Control panel feedback during travel
- ❖ Optional landing lock pins
- ❖ Warning lights and alarms
- ❖ Manual override controls to prevent intruders

Park Assist

The Safetech Park Assist system provides intuitive feedback about the position of your vehicle.

Various integrated mounting options are available upon request.



Buyers Guide To Car lift Selection

Making the right decision

Choosing a vehicle lift is one of the most important decisions you will make for your building. The lift should be easy to use, reliable, efficient, safe and add value to the property.

Standardised Australian Design

- Is the car lift locally manufactured and supported?
- Does it comply with Australian mechanical, electrical, hydraulic and controls standards?

A Single Trusted Supplier

- Does the manufacturer make the lift, doors and controls?
- Who do you call? Managing multiple suppliers reduces accountability.

Safety & Security

- Is the lift WorkSafe compliant?
- Can you safely exit in a power outage?
- Any risk of entrapment?
- Can strangers use it to enter the building?

Performance & Reliability

- Check the suppliers history. Ask other customers for a reference.
- Does the lift run smoothly?
- What is the lift cycle time?
 - Including door opening/closing?

Quality Finishes

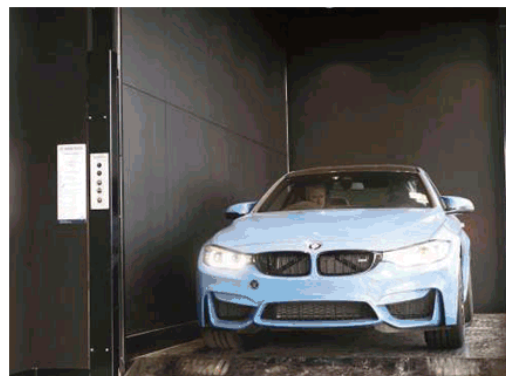
- Does the lift design match the finish of your building?

User Experience

- Are the controls modern and attractive?
- Is it easy to use?
- Can you stay in your car?

Support & Service

- Is 24/7 local support available?
- Are design and controls engineers in Australia or overseas?
- Are parts available locally?



Configurations

A lift for every space

AutoMate

Our refined vehicle lift package has been designed with existing industry specifications in mind, combined with Safetech's proven quality lifting components.



Dual Rail

Our Dual Rail system provides all the benefits of the AutoMate, with higher capacity and versatility.



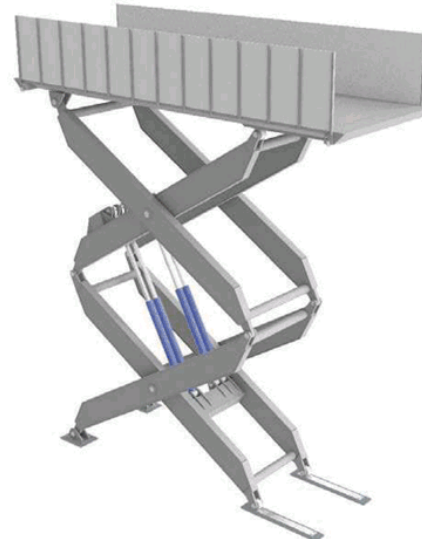
Scissor Lift

Scissor options in general allow for minimum shaft width, maximising floor space for the rest of the building. This option requires a pit to house the legs when lowered.



Double Scissor

Double scissors allow for longer travel, but a deeper pit is required.



Roll Over Roof

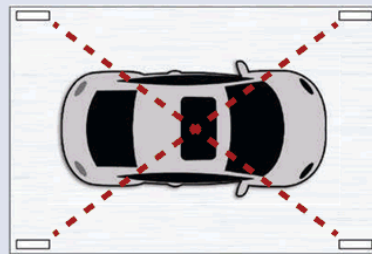


The Space Saver

Park or Play: One up, One down

Safetech roll-over Car Lifts provide extra car parking space on the roof of the lift.

When closed two cars can be accommodated. One on the roof and a second parked below on the lift or driving through to a basement garage.



Vehicle Presence Sensors

Our unique sensor array protects the user by preventing the lift from rising when objects or people are on the car roof.



Longer Travel

Affordable longer travel is made possible by Safetech's custom roof design.

Our modular roof can be separated from the lift during descent, making access to deeper basement levels possible.

Locking pins ensure that loads remain safe and secure on the upper level.

Control - Residential System

Controller: Safetech Designed Control Access



	Vehicle Access	Pedestrian Access
Ground Level	2 BUTTON ELSEMA REMOTE	No controls as standard.
Onboard	For all vehicle based travel. Including opening doors. 	KEYPAD & RFID READER To enable controls. 
Other Levels		CALL BUTTON Where security is not an issue inside the building. 

Options



4 BUTTON ELSEMA REMOTE

To separate door and lift with raise/lower control.



GROUND LEVEL KEYPAD & RFID

For pedestrian access

Controls can be set up to have the hoist waiting at ground level. So as you approach home simply press the up control and drive in like any other garage.

Close the door behind you and proceed to your basement or mezzanine level without the need to reach outside of your vehicle.

Control - Multi User System

Controller: Industry Standard Access Controller




	Vehicle Access	Pedestrian Access
Ground Level	 RFID 4 BUTTON REMOTE For destination input.	 KEYPAD & RFID READER To enable landing control panel.
Onboard	No input required. Destination is pre-programmed.	 KEYPAD & RFID READER To enable onboard control panel.
Other Levels	 PHOTOELECTRIC SENSOR For automatic return to ground.	 CALL BUTTON Where security is not an issue inside the building.

Drivers simply press their destination level, wait for the door to open and proceed onto the platform.

The onboard controls will illuminate to confirm its destination and the occupied lift will automatically proceed to the level and open the level door.

Safetech Multi User controls are web based and provide building administrators with control over access, default levels and help improve cycle times.



Options

RFID TAGS/FOBS

For pedestrian travel. Enables use of onboard controls

Finishes

Lifts that match your style

Vehicle lifts may be hidden from the street but that doesn't mean they should be dark and industrial. Users shouldn't feel like they are riding in a rubbish chute when they arrive home. Safetech offers you quality finishes and custom touches.



Paint

Standard colour options.
Custom colours available upon request.



Doors

Lifts that don't keep you waiting

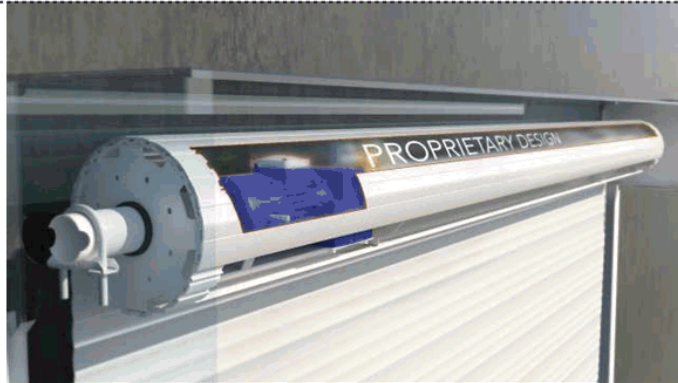
Contact Safetech for more information and advice on what may suit your needs best.

DuraFast™

High speed roller door

Our DuraFast™ door has been designed from the ground up.

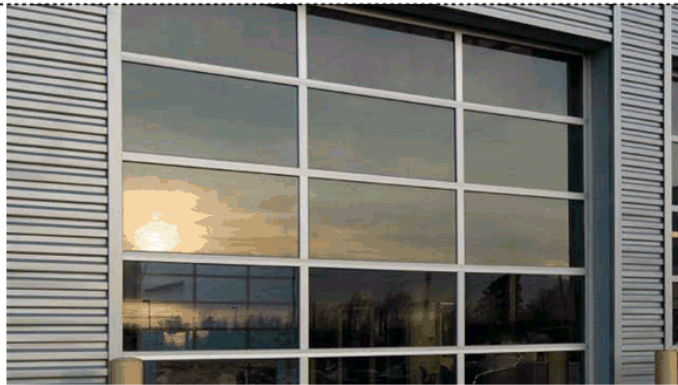
They are faster, quieter and tougher.
Tested to more than 100,000 cycles



Sectional Doors

Architecturally sensitive designed door panels

Insulated, transparent and ventilated sectional door options available in various colours for all applications.



Custom Doors

Nested Roller Doors

- Roof integrated housing to maximise clear door opening

Sliding Doors

- Hotel personnel lift style doors

Swing Doors

- For extremely low roof scenarios

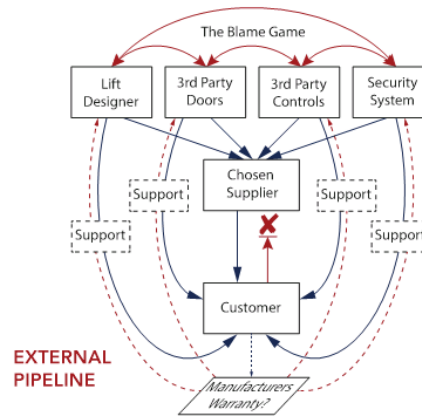
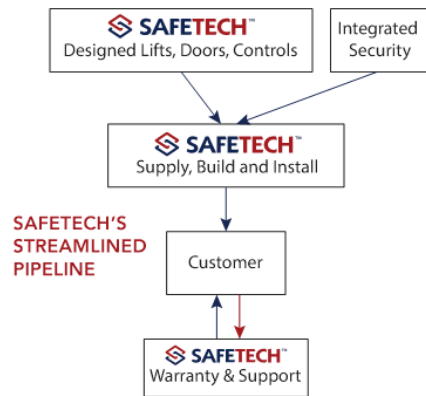
Personnel Door Interlock

- Recessed lock for secure pedestrian access



Performance & Reliability

A single trusted supplier that supports you before and after the sale



What we provide;

- The lift
- Doors
- User controls
- Electrical components
- Security system
- Custom sizes
- A range of booth finishes
- Ongoing servicing
- 24/7 breakdown support
- Emergency assistance
- A suite of optional extras
- & much more

What we don't do;

- Sell cheap, substandard imports
- Fail to meet Australian Worksafe standards
- Rely on 3rd party suppliers
- Disappear after the sale
- Blame others when issues arise

Scheduled servicing agreements for peace of mind

- ✓ Safetech will track & schedule when your equipment is due for service
- ✓ A full service history ensures correct diagnosis and management of your product
- ✓ Receive priority attendance to any breakdowns / call outs
- ✓ Receive a 10% Discount on the total of any invoice for a breakdown / call out attendance
- ✓ Intervals to match your usage

Safetech Customer Care provides all of this and more!



39-45 Della Torre Road, Moe Victoria 3825
t: 1800 674 566
e: sales@safetech.com.au
12 | safetech.com.au



SAFETECH™
Servicing customers across Australia and New Zealand

Safetech Customer Care



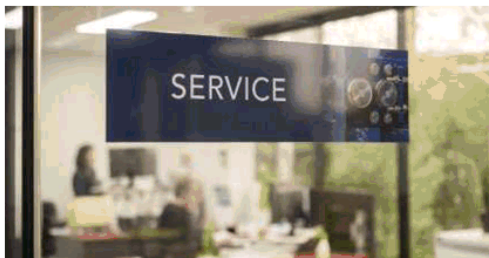
Safetech products. Safe in our care.

Your choice of equipment supplier is important. You should take the time to carefully evaluate and choose the best provider.

Quality, value, performance and safety all help determine who you finally select.

Choice of service and maintenance supplier is no different and equally as important. A great product can be ruined by inadequate and inexperienced service providers. As equipment becomes more complicated there is an increasing need for service groups to possess mechanical, hydraulic, electrical and controls expertise as well as access to experienced engineering support.

Safetech Customer Care provides all of this and more!



When you use Safetech Customer Care you get a network of trained service technicians backed by the engineering team that designed and manufactured your equipment.

You will speak to our friendly Melbourne based service coordinators who also have extensive product knowledge.

No other company comes close to offering such comprehensive support for Safetech products.

Our focus is our equipment. So you can be sure we will always know how to look after you.

21 Lionel Road, Mt Waverley, 3149
t: 1800 674 566, option '2'
e: service@safetech.com.au

 **SAFETECH™**
Servicing customers across Australia and New Zealand

safetech.com.au

Australia's premier dock products and lifting solutions company

Safetech Servicing



Scheduled servicing agreements for peace of mind

- ✓ Safetech will track & schedule when your equipment is due for service.
- ✓ A full service history ensures correct diagnosis and management of your product.
- ✓ Receive priority attendance to any breakdowns / call outs.
- ✓ Receive a 10% Discount on the total of any invoice for a breakdown / call out attendance.
- ✓ Intervals to match your usage



Emergency Support



Priority Callout



Full Service History



1800 574 566



service@safetech.com.au



21 Lionel Road
Mt Waverley, 3149

safetech.com.au

Australia's premier dock products and lifting solutions company



Access Control Requirements Specification

Client:	201 Macquarie St Pty Ltd	Proposal Number
Prepared for:	Shane Pritchard	Q0019097 Rev A
Project:	201 Macquarie	Date of Issue
		11/12/2020

Thank you for the opportunity to provide this quotation.

We are pleased to confirm our preliminary understanding of the project requirements and we provide the following access control requirements specifications which can be passed on to your access control contractor, enabling a seamless integration of our lift into your building.

Prepared by:	Chris White	Safetech Pty Ltd
Contact:	chrisw@safetech.com.au	39-45 Della Torre Road
	0419 159 685	Moe
	03 5127 4566	Victoria 3825



Access Control Requirements

Dear Shane,

Following on from recent discussions, we take pleasure in supplying our access control requirements specification of your proposed Safetech Vehicle Lift.

All Safetech Vehicle Hoists and Lifts are designed and manufactured in Australia. Recognised as having only the highest quality construction, components and finish, we also offer extensive support and after sales service to ensure a long life and years of trouble free performance.

Project Options

The following requirements were identified from our discussions during quotation, the requirements dictate the access control requirements and any inaccuracies **must** be identified and corrected prior to project start:

- The Access Control will be provided by **an access control company to be organised by the customer**
- The lift will have a *Recall Fire Service Mode* compliant with BCA E3.7
- The lift will not be provided with remote monitoring support
- Safetech will have 24hr access to the machine for the purposes of support
- An external keypad will not be provided (which allows Safetech's service team to override lift commands) in the case of an Access Control fault
- An external credential interface is required for pedestrians to call the lift
- Calls to internal levels will not be credentialed
- Occupants will not be restricted to their assigned parking level
- Our control system is designed around nominal vehicle ingress and egress using two-button remote
- Booth Controls are credentialed



Access Controller I/O

All items listed below are to be provided by the access control company engaged by the customer and will not be provided by Safetech.

End User Interfaces		Qty
Two Button Radio Remote:	Each remote button input triggers a relay specific to each user's assigned level Relays are as follows: <ul style="list-style-type: none"> • Button 1: Call to primary landing and send to user's assigned level • Button 2: Call to user's assigned level and send to primary landing 	To be supplied by Access Control Company
Booth Controls Enable:	Activated by booth reader <ul style="list-style-type: none"> • User supplies credentials to reader which enables booth control panel 	1
External Pedestrian Access:	Activated by reader for external pedestrian access <ul style="list-style-type: none"> • A primary landing push button control panel is required so a user as a pedestrian can provide credentials then press the lift call button 	1
Output Relays		Qty
Radio Remote Relays:	Two relays per-level (excluding primary landing). The relays are triggered by remote buttons and are user specific and assigned to specific levels. Each input pair 1&2 (from remote) triggers a lift sequence as follows: <ul style="list-style-type: none"> • Button1, call to primary landing (building entrance level) followed by send to the users assigned level • Button2, call to the user's assigned level followed by send to the primary landing (building entrance level) 	4
Booth Relays:	Relays for booth control enable, the relays allow the users to select primary landing or their assigned level (i.e. B1 or B2 for a three level machine).	2
Primary Landing Relay:	One relay for primary landing call button.	1



Recall Fire Service Mode

Qty

Fire Alarm Signal Wire to PLC:	<p>Safetech can comply with BCA E3.7 and provide a Fire Service Recall Mode. The lift PLC requires;</p> <ul style="list-style-type: none"> • A Fire Service Recall signal wire to indicate when the mode has been activated • This must be a closed contact, which opens to activate the Recall Fire Service Mode. <p>In the event of a fire, the lift will;</p> <ul style="list-style-type: none"> • If positioned at a level will leave the doors open if open • If in transit between levels, go to the lowest level, and open the doors • Cancel all active or queued requests • Not respond to any requests until the fire alarm is deactivated 	1
---------------------------------------	--	---

Safetech Service Requirements

As the site is an unmanaged residential building (no 24hr reception) Safetech recommends remote monitoring to assist with our service technicians provide the fastest response in the event of a technical issue. The equipment required to enable remote monitoring can be added to any vehicle lift for an additional cost.

With **ST Connect** our technicians can provide remote diagnostics, monitor the health of the vehicle lift and optimise servicing intervals based on actual usage minimising downtime and costs. Please ask our sales team for more information regarding **ST Connect** and pricing.

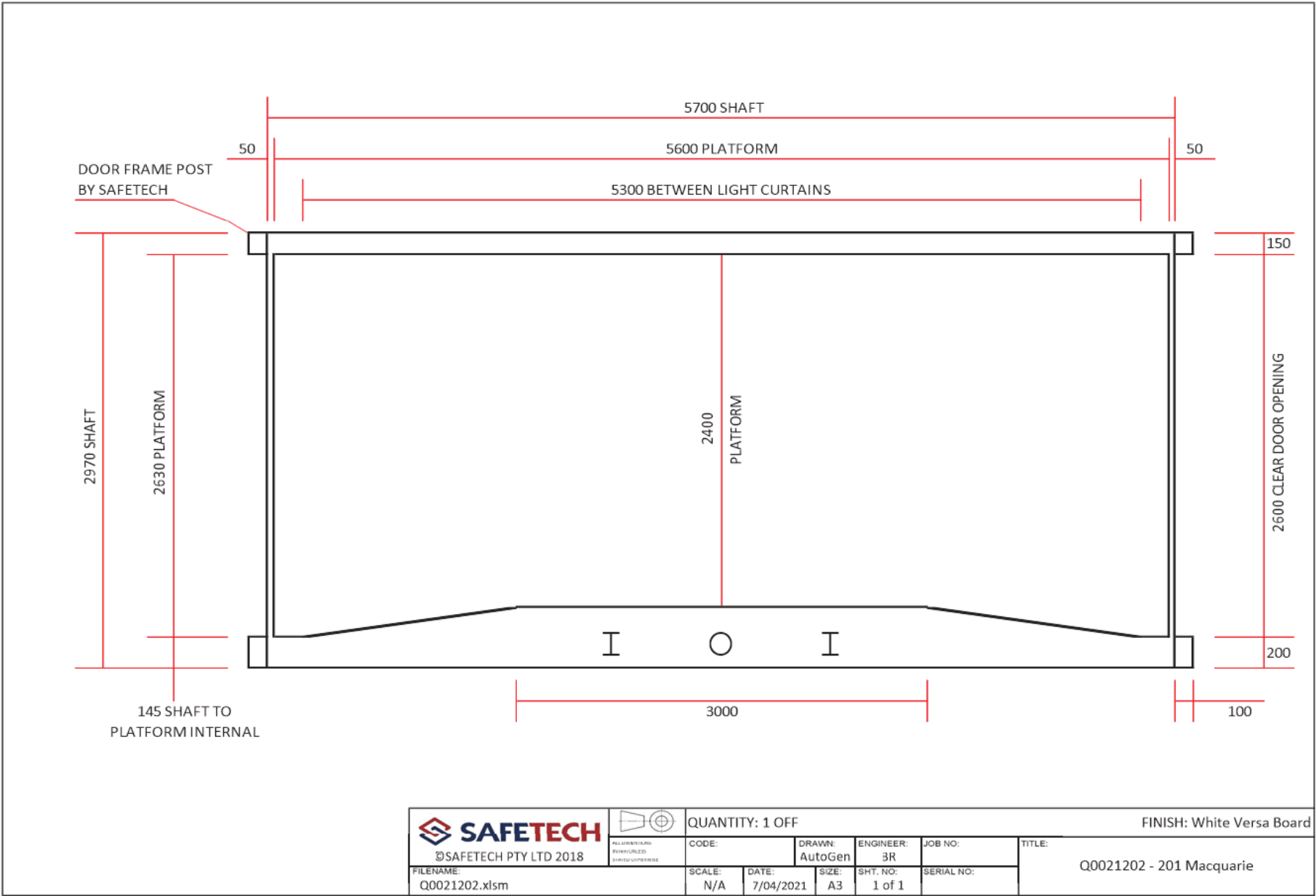
Variations

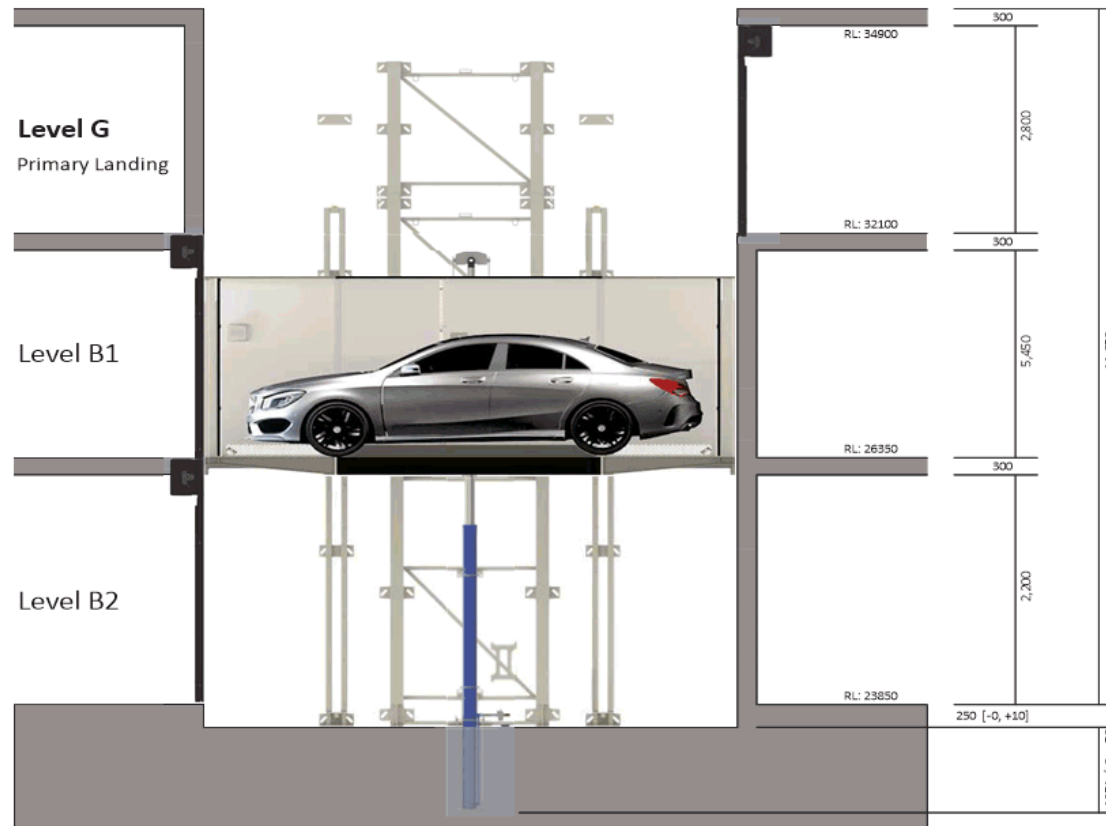
Safetech's proposal is based on the above access control scenario, should the access control contractor have an alternate approach, this must be reviewed and would be subject to a variation.

Best Regards

Chris White

Sales Manager (Moe) & Business Development
E chrisw@safetech.com.au | M 0419 159 685





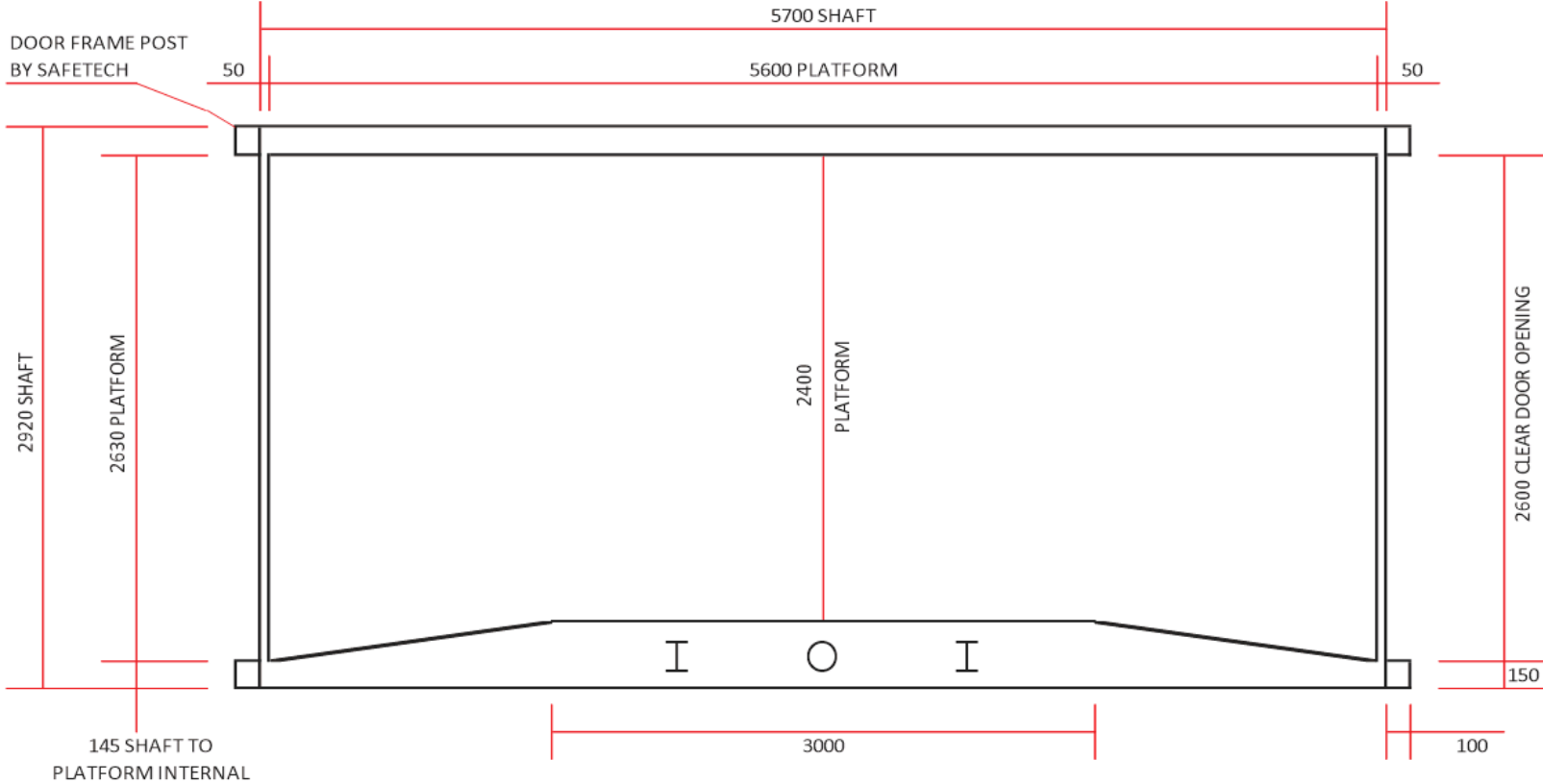
Operation Time Calculator



Safetech Hoist Speed (m/min)	15
Durafast Door Open Time (s)	5

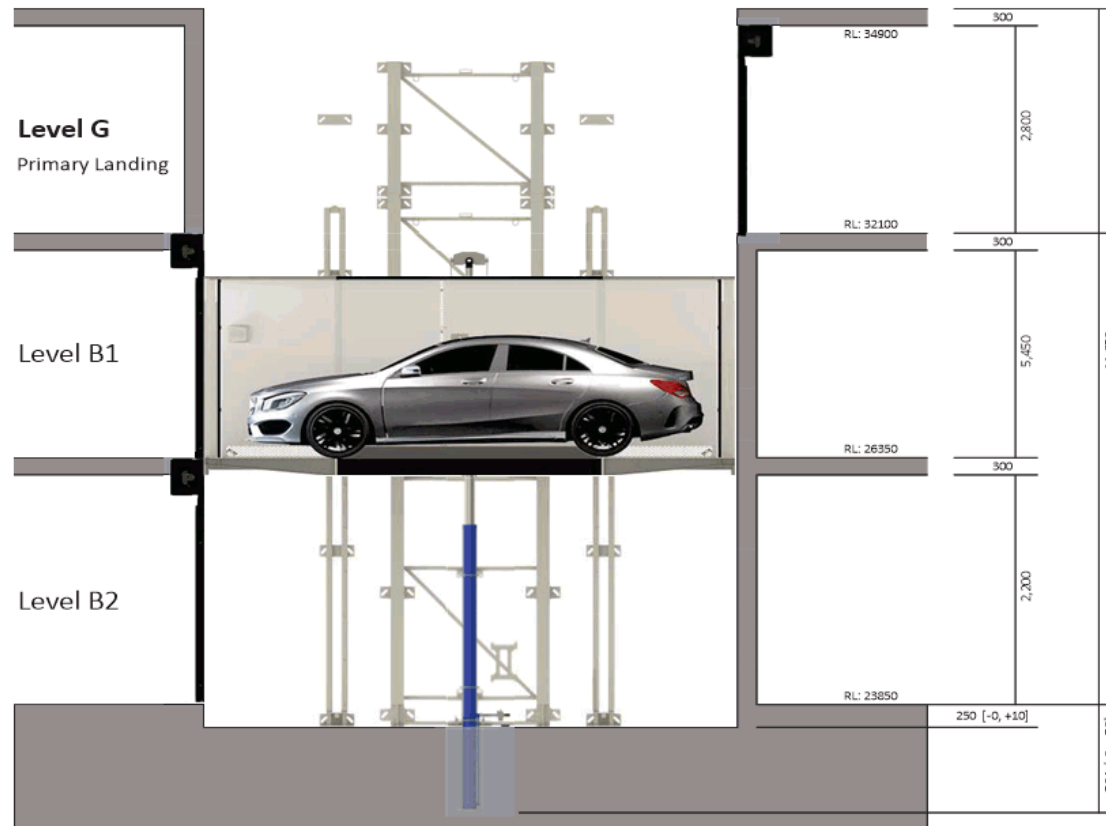
Primary to Level B1	
Products info and specs	
Travel Height (m)	5.75
Operations	Safetech + Durafast
Approach lift, press button	
Door open	5
Enter the lift, press button	5
Door close	5
Average travel time	23
Door open	5
Exit the lift	5
Total Travel Time	48sec

Primary to Level B2	
Products info and specs	
Travel Height (m)	8.25
Operations	Safetech + Durafast
Approach lift, press button	
Door open	5
Enter the lift, press button	5
Door close	5
Average travel time	33
Door open	5
Exit the lift	5
Total Travel Time	58sec

SAFETECH ©SAFETECH PTY LTD 2018		QUANTITY: 1 OFF		FINISH: White Versa Board	
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				SHT. NO: 1 of 1	SERIAL NO:
					TITLE: Q0021202 - 201 Macquarie



 ©SAFETECH PTY LTD 2018		 FULL CERTIFIED BY ISO 9001:2015 STATEWIDE		QUANTITY: 1 OFF					FINISH: White Versa Board				
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		SCALE: N/A	DATE: 11/12/2020	SIZE: A3	SHT. NO: 1 of 1	SERIAL NO:							





Operation Time Calculator

Safetech Hoist Speed (m/min)	9
Durafast Door Open Time (s)	5

Primary to Level B1	
Products info and specs	
Travel Height (m)	5.75
Operations	Safetech + Durafast
Approach lift, press button	
Door open	5
Enter the lift, press button	5
Door close	5
Average travel time	38.33333333
Door open	5
Exit the lift	5
Total Travel Time	63sec

Primary to Level B2	
Products info and specs	
Travel Height (m)	8.25
Operations	Safetech + Durafast
Approach lift, press button	
Door open	5
Enter the lift, press button	5
Door close	5
Average travel time	56
Door open	5
Exit the lift	5
Total Travel Time	80sec

 ©SAFETECH PTY LTD 2018		 ALL DIMENSIONS IN METERS UNLESS STATED OTHERWISE		QUANTITY: 1 OFF				FINISH: White Versa Board		
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		SCALE: N/A	DATE: 11/12/2020	SIZE: A3	SHT. NO: 1 of 1	SERIAL NO:				

From: Chris White <ChrisW@safetech.com.au>
Sent: Tuesday, 30 March 2021 5:04 PM
To: Shane Pritchard <shanepritchard@ozemail.com.au>
Subject: FW: 201 Macquarie Street

Shane,

As per our discussion, I have attached a little information for your use regarding are vehicle lift and how they operate.

As previously quoted we have excluded the 'Access Control' system, which includes remote controls. (we are able to option this). The access controller is to be setup with 2 button remotes which:

- call to ground and take the drive to their predetermined level
- call to predetermined level and return the drive to ground.

The attached operation times are as provided previously to your traffic engineer to allow them to calculate throughput and any impacts on traffic flow etc.

We regularly supply a pair of vehicle lifts on developments, and in this instance we provide a system whereby each lift has its own operator, however responds to a central operator (this central control is responsible for deciding which lift is available and placing call accordingly).

Both lifts will allow inbound and outbound travel and traffic flow is managed by our landing traffic lights. This includes providing feedback to the drivers.

The idle position of both vehicle lifts is typically at ground (to maximise ability to clear the street). However this can be adjusted based on the time of day.

The key points are:

- Single button press on remote to call to your level and input your destination.
- Traffic Lights for traffic management and driver feedback.
- Park Assist onboard lights to confirm vehicle position (central) when clear travel starts automatically.

Regarding Equipment Support/Maintenance and 24/7 coverage. Safetech is represented by FRM Materials Handling in Hobart. FRM will play a critical role in installation and ongoing support of our equipment, for which they do and have done for more than 15 years. This includes several operation critical installations in some of the major retail outlets in Tasmania including our goods lifts and hoists in Woolworths and Kmart.

FRM provide a 24/7 call out coverage and we would have the onboard phone modules programmed to call FRM's support number. FRM technicians have the direct support of our own maintenance and support team, plus that of the design engineers.

Installation of your equipment would be lead onsite by Safetech Project Managing, with FRM's Install team providing local labour and expertise.

I hope that the above is clear and aides in your understanding of our equipment operation.

Kind Regards,

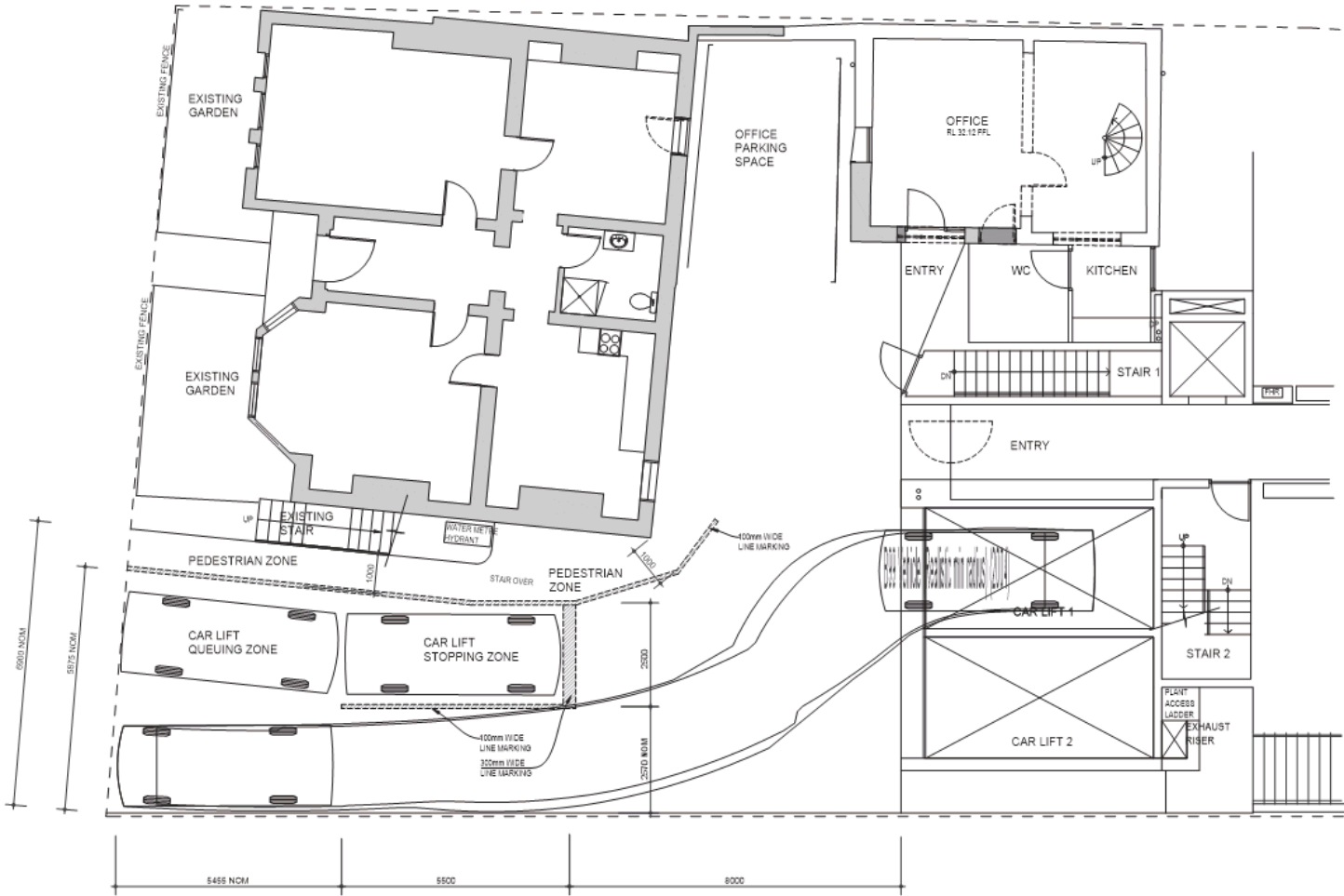
Chris White

Sales Manager (Moe) & Business Development

T +61 3 5128 8219 | M 0419 159 685

E chrisw@safetech.com.au





201 MACQUARIE STREET - CAR LIFT 1 EXIT PATH (B99) AND QUEUING ZONE DIAGRAM

Queuing Theory Equations***Definition*** λ = Arrival Rate μ = Service Rate $\rho = \lambda / \mu$

C = Number of Service Channels

M = Random Arrival/Service rate (Poisson)

D = Deterministic Service Rate (Constant rate)

M/D/1 case (random Arrival, Deterministic service, and one service channel)Expected average queue length $E(m) = (\lambda^2 / \mu^2) / (2(1 - \rho))$ Expected average total time $E(v) = (\lambda / \mu^2) / (1 - \rho)$ Expected average waiting time $E(w) = (\lambda / \mu^2) / (1 - \rho)$ ***M/M/1 case (Random Arrival, Random Service, and one service channel)***The probability of having zero vehicles in the systems $P_0 = 1 - \rho$ The probability of having n vehicles in the systems $P_n = \rho^n P_0$ Expected average queue length $E(m) = \rho / (1 - \rho)$ Expected average total time $E(v) = \rho / \lambda (1 - \rho)$ Expected average waiting time $E(w) = E(v) - 1/\mu$

M/M/C case (Random Arrival, Random Service, and C service channel)

Note : $\frac{\rho}{c}$ must be < 1.0

The probability of having zero vehicles in the systems

$$P_0 = \left[\sum_{n=0}^{c-1} \frac{\rho^n}{n!} + \frac{\rho^c}{c!(1-\rho/c)} \right]^{-1}$$

The probability of having n vehicles in the systems

$$P_n = P_0 \frac{\rho^n}{n!} \quad \text{for } n < c$$

$$P_n = P_0 \frac{\rho^n}{c^{n-c} c!} \quad \text{for } n > c$$

Expected average queue length

$$E(m) = P_0 \frac{\rho^{c+1}}{c! (1-\rho/c)^2}$$

Expected average number in the systems

$$E(n) = E(m) + \rho$$

Expected average total time $E(v) = E(n) / \lambda$

Expected average waiting time $E(w) = E(v) - 1/\mu$

derivatives of the above probabilities with respect to time, as follows:

$$P_n'(t) = -(r+s) \cdot P_n(t) + r \cdot P_{n-1}(t) + s \cdot P_{n+1}(t) \quad n > 0 \quad (6.54)$$

and

$$P_0'(t) = -r \cdot P_0(t) + s \cdot P_1(t). \quad (6.55)$$

For time-independent steady-state conditions, these derivatives are zero, and we obtain (substituting from (6.49))

$$(1 + \rho) P_n = P_{n+1} + \rho \cdot P_{n-1} \quad n > 0 \quad (6.56)$$

and

$$P_1 = \rho \cdot P_0 \quad (6.57)$$

where P_n is the steady-state probability that the system is in state n .

Letting $n = 1$ in (6.56) and substituting for P_1 from (6.57) leads to the result

$$P_2 = \rho^2 \cdot P_0 \quad (6.58)$$

and in fact it can be shown that the more general result applies:

$$P_n = \rho^n \cdot P_0 \quad (6.59)$$

Now

$$\sum_{n=0}^{\infty} P_n = 1 = P_0 (1 + \rho + \rho^2 + \rho^3 + \dots) = \frac{P_0}{1-\rho} \quad (6.60)$$

so that

$$P_0 = 1 - \rho \quad (6.61)$$

and hence

$$P_n = (1 - \rho) \rho^n \quad (6.62)$$

The mean of this distribution, or the expected number in the system, is determined as

$$E(n) = \sum_{n=0}^{\infty} n \cdot P_n = (1-\rho) \sum_{n=1}^{\infty} n \rho^n = (1-\rho) \cdot \frac{\rho}{(1-\rho)^2}$$

i.e.

$$E(n) = \frac{\rho}{1-\rho} = \frac{r}{s-r} \quad (6.63)$$

The probability of there being more than N items in the queueing system is

$$\Pr(n > N) = \sum_{n=N+1}^{\infty} P_n = (1-\rho) \sum_{n=N+1}^{\infty} \rho^n = \rho^{N+1} \quad (6.64)$$

The mean queue length excluding the unit being serviced is determined as

$$E(m) = \sum_{n=1}^{\infty} (n-1) P_n = \frac{\rho^2}{1-\rho} = \frac{\rho}{1-\rho} - \rho \quad (6.65)$$

Queuing & Service Rate of Lifts

Peak hour traffic movement 14 vehicles/hour
 65/35 directional split
 Worst Case for queuing is Margraive Street = PM peak
 Peak Arrival Rate = \rightarrow 9 vehicles/entering lift to PM
 Peak Departure 8 PM = ~~5~~ 5 veh/hour leaving site

Assume One Lift Operation

$$\begin{aligned}\lambda &= \text{arrival rate} = 9 \text{ vehicles/hour} \\ \mu &= \text{service rate} = 1 \text{ vehicle/108 seconds} = 33.3 \text{ vehicles/hour} \\ \rho &= \frac{\lambda}{\mu} = \frac{9}{33.3} = 0.27 \\ \text{Probability of 0 vehicles in system (unloading lift)} \\ P_0 &= 1 - \rho \\ &= 1 - 0.27 \\ &= 0.73 \quad (73\%) \\ \text{Probability of 1 veh in system } P_1 &= \rho^1 P_0 \\ &= 0.27^1 \times 0.73 \\ &= 0.197 \quad 20\% \\ \text{Probability of 2 veh in system } P_2 &= 0.27^2 \times 0.73 \\ &= 0.05 \quad 5\%\end{aligned}$$

Expected Average Queue Length

$$\begin{aligned}E_{q1} &= \rho / (1 - \rho) \\ &= 0.27 / (1 - 0.27) \\ &= 0.37\end{aligned}$$

Expected Average Total Time in system

$$\begin{aligned}E_{w1} &= \rho / (\lambda (1 - \rho)) \\ &= 0.27 / (9 (1 - 0.27)) \times 3600 \\ &= 148 \text{ seconds}\end{aligned}$$

Expected Average Waiting Time

$$\begin{aligned}E_{w2} &= E_{w1} - \frac{1}{\mu} \\ &= 148 - \frac{1 \times 3600}{33.3} \\ &= 40 \text{ seconds}\end{aligned}$$

2.

ONE LIFT (continued)

Queue Storage Space for 95% of TIME.

$$P_r(n > N) = p^{N+1} \leq 0.05$$

$$\Rightarrow 0.27^{N+1} \leq 0.05$$

$$(N+1) \log 0.27 \leq \log 0.05$$

$$N \leq \frac{\log 0.05}{\log 0.27} - 1$$

$$\leq 2.29 - 1$$

$$\leq 1.29$$

i.e. queue will not exceed 2 vehicles for 95% of time
with ONE LIFT
DURING AFTERNOON PEAK HOUR

If lift has auto return to service peak arrival
at Hargrave Street

$\mu = 102 / 86 \text{ seconds} \Rightarrow$ serves rate of 42 vehicle/hour

$$p = \frac{1}{42} = 0.214$$

Above calculation for 99% of time

$$p^{N+1} \leq 0.01$$

$$N \leq \frac{\log 0.01}{\log 0.214} - 1$$

$$\leq 2.987 - 1$$

$$\leq 1.987$$

i.e. Queue will not exceed 2 vehicles
for 99% of the time

(3)

2 lift operation

$$\rho = \frac{\lambda}{\mu} = \frac{9}{33.3} = 0.27 \quad (\text{as before})$$

Probability of
overhead system

$$P_0 = \left[\sum_{n=0}^{c-1} \frac{\rho^n}{n!} + \frac{\rho^c}{c!(1-\rho/c)} \right]^{-1}$$

$$= [1 + 0.27 + 0.042]^{-1}$$

$$= [1.312]^{-1} = 0.762$$

Average Queue Length

$$E_{(n)} = P_0 \times \frac{\rho^{c+1}}{c!} \times \frac{1}{(1-\rho/c)^2}$$

$$= 0.762 \times \frac{0.27^3}{2 \times 2!} \times \frac{1}{(1 - \frac{0.27}{2})^2}$$

$$= 0.762 \times 0.0049 \times 1.3365$$

$$= 0.005$$

Average No. cars in system

$$E_{(n)} = E_{(n)} + \rho$$

$$= 0.005 + 0.27$$

$$= 0.275 \text{ vehicle}$$

Expected Average Total Time in system

$$E_{(n)} = E_{(n)} / \lambda$$

$$= 0.275 \times \frac{3600}{9}$$

$$= 110 \text{ seconds}$$

Expected Average Waiting Time

$$E_{(w)} = E_{(n)} - \frac{1}{\mu}$$

$$= 110 - \frac{3600}{33.3}$$

$$= \underline{\underline{2 \text{ seconds}}}$$

(4)

2 Lifts Cont'dQueue storage space \approx 2 lifts (99% of time)

$$P_r(n \geq N) = \left(\frac{P_c}{c}\right)^{N+1} \leq 0.01$$

$$\left(\frac{0.27}{2}\right)^{N+1} \leq 0.01$$

$$N+1 \leq \frac{\log 0.01}{\log 0.135}$$

$$N \leq 1.3$$

ie $<$ two vehicles

ATTACHMENT F

Details of waste collection proposal and service vehicle



31 July 2020

Site assessment - 201 Macquarie Street Hobart

A site assessment has been conducted at 201 Macquarie Street to determine the most appropriate methodology in relation to provision of a waste and recycling collection service at the above address. The assessment conclusions / recommendations are as follows:

- A small to medium size Rear lift truck is considered the most appropriate truck for provision of the service/s
- Sufficient bins will be provided at the facility to minimise service visits (maximum two days per week)
- The driveway access is sufficiently wide enough for easy access for this size truck
- Visibility is very good at the entry point
- Reversing in off Macquarie Street is the safest method to provide the service, compared to other
- options (reversing out onto Macquarie Street or provision of a kerbside service)
- Trucks will have flashing safety beacon lights operating prior to entry to site
- Trucks will pull over to the kerbside and wait for a sufficient gap in traffic prior to reversing into site
- Peak traffic times will be avoided when providing the collection services
- The access to this site is considered to be much easier than many other sites serviced by Veolia in and around the CBD
- A formal Risk Assessment / Work Instruction will be provided to Veolia operators detailing the
- above requirements and restrictions, prior to commencing the service/s
- Veolia trucks have reversing cameras

Regards

A handwritten signature in black ink, appearing to read 'H. Halton', with a stylized flourish at the end.

Harold Halton
Manager, Commercial Services Southern Region

Veolia Environmental Services (Australia) Pty Ltd ABN: 20 051 316 584
A: 95 Kennedy Drive, Cambridge, TAS, 7170
W: www.veolia.com.au F: (03) 6244 0085





REAR LIFT TRUCK SPECIFICATIONS



** Includes TR49, TR52, TR57

Specifications:

• Overall Length	7.54 metres
• Overall Width (excluding mirrors)	2.42 metres
• Overall Width (Including mirrors)	2.84 metres
• Maximum Height	2.60 metres
• Wheel Base (From centre of front and rear axle)	4.20 metres
• Turning Circle	16.90 metres
• Gross Vehicle Mass	14.00 tonne
• Tare Weight	9.10 tonne
• Payload	4.90 tonne



REAR LIFT TRUCK SPECIFICATIONS**



** Includes Rear Lift Unit #'s: 71149, 71052, 71057, 71080

Specifications:

- | | |
|--|--------------|
| • Overall Length | 7.54 metres |
| • Overall Width (excluding mirrors) | 2.42 metres |
| • Overall Width (Including mirrors) | 2.95 metres |
| • Maximum Height | 2.90 metres |
| • Wheel Base
(From centre of front and rear axle) | 4.20 metres |
| • Turning Circle | 16.90 metres |
| • Gross Vehicle Mass | 15.50 tonne |
| • Tare Weight | 10.40 tonne |
| • Payload | 5.10 tonne |

Application Referral Development Engineering - Response

From:	Dave Morley reassigned from Cameron Cecil reassigned from Stefan Gebka - Development Engineering
Recommendation:	Proposal is unacceptable.
Date Completed:	
Address:	201 MACQUARIE STREET, HOBART 49 MOLLE STREET, HOBART 199 MACQUARIE STREET, HOBART ADJACENT RIVULET
Proposal:	Partial Demolition, Alterations, Partial Change of Use to Office and Two Multiple Dwellings, New Building for 45 Multiple Dwellings, Signage and Associated Works
Application No:	PLN-19-768
Assessment Officer:	Ben Ikin,

Referral Officer comments:

RESPONSE TO TIA SUBMITTED 12/04/2021

An updated TIA has been provide by Mr Milan Prodanovic.

Assessment after consultation with Council Traffic Engineers have determined that this cannot be accepted based on:

Car lift Operation

The TIA lift timing provide in updated TIA (Figure 1) contradicts the new lift data provided in updated TIA (Figure 2).

The lift travel time will be:

- 33 seconds between Basement Level 2 and the Ground Floor and
- 23 seconds between Basement Level 3 and the Ground Floor

The suppliers of the lifts have also confirmed:

- time for door to open = 5 seconds;
- time of car to either enter or exit lift = 5 seconds;
- time for door to close = 5 seconds.

The lifts will take:

- between 63 and 96 seconds to travel between Ground Floor L Basement Level 2 (or vice versa), depending on whether the car is waiting at the level of car entry of the other floor level; and
- between 53 and 86 seconds to travel between Ground Floor L Basement Level 3 (or vice versa), depending on whether the car is waiting at the level of car entry of the other floor level.

For the above worst-case situation, each lift would service cars at a rate of around 33 and with two lifts, the average service rate will be 67 vehicles/hour but with return of the lift to the peak arrival level, the service rate will be around 40 vehicles/hour/lift.

Figure 1; Page 23 of the Updated TIA

Operation Time Calculator

Safetech Hoist Speed (m/min)	15
Durafast Door Open Time (s)	5

Primary to Level B1	
Products info and specs	
Travel Height (m)	5.75
Operations	Safetech + Durafast
<i>Approach lift, press button</i>	
Door open	5
<i>Enter the lift, press button</i>	5
Door close	5
Average travel time	23
Door open	5
<i>Exit the lift</i>	5
Total Travel Time	48sec

Primary to Level B2	
Products info and specs	
Travel Height (m)	8.25
Operations	Safetech + Durafast
<i>Approach lift, press button</i>	
Door open	5
<i>Enter the lift, press button</i>	5
Door close	5
Average travel time	33
Door open	5
<i>Exit the lift</i>	5
Total Travel Time	58sec

Figure 2: Attachment E of the updated TIA

Section 5 (Traffic Generation By The Development) of the report.

Excerpts and comments of section 5 below:

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 a high density, not low density residential development.

the development site is very close to the 'all routes' central bus station around the Elizabeth Street/Macquarie Street intersection (around 600m walking distance)

All RTA surveys were taken close to public transport

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. 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.

As previously mentioned. This is not a valid comparison and will not be accepted.

The Technical Direction states that for regional sites the traffic generation is around 0.42 vehicles/unit/hour and 0.21 vehicles/bedroom/hour during peak hour periods for the road network. The assessed sites have a mix of one, two and three bedroom units.

AM and PM rates are not provided.

Having regard to all the above considerations and findings, a traffic generation rate of 2.8 vehicles/apartment/day will be assumed for the proposed development. This is slightly higher than indicated in the Technical Direction for the high density regional developments as well as was found for the site at 51 Sandy Bay Road.

Assumption of Traffic generation numbers will not be accepted. Generation numbers must be from The RTA Technical Direction.

Queuing Theory Calculations

Input data on queuing theory are initially base on arrival rate, service rates and directional split. While the queuing theory equations may be sound, No information on how the 65/35 PM directional split is determined (this appears to be an assumed number). This directional split determination, corrected site arrival rates based on site generation and service times based on documentation provided have a direct impact on the results of queuing theory calculations and if the system has sufficient capacity to handle the volume. This will not be supported until these items are addressed and sound assessable technical report is submitted.

Pedestrian Access

Pedestrian Access is required and a line marked access is proposed in the updated TIA (page 31 and shown in Attachment E). However physical separation is required not line marking.



Martin Stephenson
rosevearstephenson
54 Sandy Bay Road
BATTERY POINT TAS 7004

Dear Martin

**PROPOSED RESIDENTIAL APARTMENT DEVELOPMENT
201 MACQUARIE STREET, HOBART**

I refer to the advice from the Hobart City Council that the information in the Traffic Impact Assessment report is not satisfactory.

It is perplexing why this is the case because most of the points of the information and detail is exactly the same as accepted by councils, including Hobart City Council over many years.

I can provide the following response to the points as raised.

Lift Operation

The lift timings provided in the updated TIA report do not contradict the lift data provided by the lift supplier.

The additional 5 second (difference) simply allows for the doors to close after the car has exited the lift, basically allowing for the full cycle from door opening at entry to door closing at exit, ready for the next entry demand at any level.

It does not at all affect the calculations of performance and queueing that have been undertaken.

Traffic Generation

The TIA report discusses various considerations for traffic generation from that in the 2002 RTA New South Wales document to the more recent updated RMS Technical Direction.

The report does verify that for the most similar type of development with one to three bedrooms in a regional area is Site 8 (proposed development has predominantly one-bedroom apartments). The higher traffic generation rate of 0.42 vehicles/unit/hour was quoted for the two peak hour periods (from Appendix B3) and the average for the rate per bedroom. The actual figures are 0.42 vehicles/unit/hour for the PM peak and 0.39 vehicles/unit/hour for the AM peak; plus 0.22 vehicles/bedroom/hour for the PM peak and 0.20 vehicles/



bedroom/hour for the AM peak. This makes no difference to what was discussed in the TIA report about this RMS Technical Direction.

It must be understood that reliance on traffic generation data (sometime from surveys undertaken over a decade and in the case of the RTA Guide, many decades ago) from another state is acceptable as a last resort.

However it is wrong to state that local survey data is not acceptable and it must be based on the RTA Technical Direction.

The Austroads *Guide to Traffic Management – Part 12* states:

Traffic generation

Traffic generation is normally considered for the peak periods of the surrounding road system, and for other normal weekly peak periods associated with the development and the surrounding area (e.g. evenings or weekends).

Traffic generation can be estimated using trip generation rates computed from previous surveys. Locally derived rates are preferred to those applying elsewhere. Such information may be available in consultant reports (copyright provisions permitting) including those reported in town planning appeals, local government files and collated traffic generation reports (e.g. Roads and Maritime Services 2013).

This is exactly what has been undertaken using local sites that are very comparable if not the same in type of development and locational characteristics.

Directional Split in Traffic

I have undertaken hundreds of traffic assessments across the state using the same or similar peak hour directional splits for traffic entering or leaving a residential development site and never been queried on these figures in the report.

It is well accepted among traffic engineers in Tasmania as well as the mainland that directional split in traffic to and from residential developments is around 70/30 in the AM peak hour and 60/40 in the PM peak hour.

This can be seen from reports that are readily available on the internet, in planning appeal records with RMPAT, as well as council records.



I have used a 65/35 split for the PM peak, a slightly higher 65% figure for traffic entering the site, based on findings for surveys at select sites over many years and to cover any such concerns.

The Ratio traffic impact report for a similar development in Oakleigh (Victoria) was presented as a model TIA report at a meeting with council officers.

This report has an unusually high 80/20 split for the AM peak but a 60/40 split for the PM peak with the same level of explanation as the TIA report for 201 Macquarie Street.

I have no doubt that the TIA report for 201 Macquarie Street adequately addresses this point.

However, because the traffic generation and queueing is seemingly causing concern for council in understanding traffic implications with the lift operation, the queueing analysis has been reassessed for a traffic generation rate twice that allowed for in the TIA report. Such a high rate would normally be applied for a low density multiple residential development with two to three bedrooms in a suburban area; i.e. a PM peak car arrival into the site of 18 vehicles/hour.

The analysis shows there would be less than 2% probability of the queue exceeding two vehicles (2 times in each 100 queues), which would never occur with only 18 vehicle arrivals per hour without the auto lift return to the vehicle entry level to the building and less than 1% probability with the auto lift return which is proposed.

Pedestrian Traffic

Based on my extensive experience over many decades in addressing road safety on public road and private development, I cannot agree that it is necessary to segregate pedestrians and vehicles in this low activity and low speed environment.

As indicated in the above Austroads document, within car parks there is an expectation that pedestrians will be walking along a parking aisle, or in this instance a 0-2 car queue, and the speed environment needs to be low.

I draw attention to the pedestrian arrangements for the recently approved development at 66 Burnett Street, which will have higher pedestrian and vehicle movements, but no separate facilities. There are other similar recent examples of pedestrian and vehicle shared areas.

The provision of a marked area for any pedestrians, as proposed, is a sufficient formal measure for this area. If concerns remain, the area could be signed as a shared zone with 10km/h speed limit.



Yours sincerely



Milan Prodanovic

**7.1.2 98 ARGYLE STREET, HOBART AND ADJACENT ROAD RESERVE -
DEMOLITION AND NEW BUILDING FOR 20 MULTIPLE DWELLINGS
PLN-20-706 - FILE REF: F21/54650**

Address:	98 Argyle Street, Hobart and Adjacent Road Reserve
Proposal:	Demolition and New Building for 20 Multiple Dwellings
Expiry Date:	21 June 2021
Extension of Time:	Not applicable
Author:	Adam Smee

RECOMMENDATION

That pursuant to the *Hobart Interim Planning Scheme 2015*, the Council approve the application for demolition and new building for 20 multiple dwellings at 98 Argyle Street, Hobart, for the reasons outlined in the officer's report and a permit containing the following conditions be issued:

GEN

The use and/or development must be substantially in accordance with the documents and drawings that comprise PLN-20-706 - 98 ARGYLE 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 Amended Submission to Planning Authority Notice, Reference No. TWDA2020/01741-HCC dated 27/4/2021 as attached to the permit.

Reason for condition

To clarify the scope of the permit.

PLN 15a

A demolition waste management plan must be implemented throughout

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

Advice:

It is recommended that the developer liaise with the Council's 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), revised plans, and montages and samples where appropriate, must be submitted and approved as a Condition Endorsement 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:

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

Reason for condition

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

PLN s2

A landscape plan must be prepared for the soft and hard landscaping, by a suitably qualified landscape designer.

Prior to the issue of any approval under the *Building Act 2016*

(excluding for demolition), 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 (or another suitably qualified landscape designer) that the all landscaping works required by this condition have been implemented, must be submitted to the satisfaction of the Directory City Planning.

Advice:

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

Reason for condition

In the interest of the amenity of the spaces, streetscape and townscape values of the surrounding area.

PLN s3

Any cranes used in construction of the approved development must not create an obstruction or hazard for the operation of aircraft approaching and departing the Royal Hobart Hospital helipad.

Advice:

The developer is encouraged to contact the Department of Health and Human Services prior to construction to discuss the operation of any cranes.

Reason for condition

To ensure that cranes or other temporary structures used in the construction of the development do not interfere with safe aircraft operations in the vicinity of the Royal Hobart Hospital helipad.

PLN s4

Prior to the issue of any approval under the *Building Act 2016* (excluding for demolition), revised plans must be submitted and approved as a Condition Endorsement that demonstrate that design elements of the development are able to achieve internal noise levels in accordance with relevant Australian Standards for acoustics control

(AS3671:1989 – *Road Traffic Noise Intrusion (Building Siting and Construction)* and AS2107:2016 – *Acoustics (Recommended Design Sound Levels and Reverberation Times for Building Interiors)*).

The revised plans must be certified by a suitably qualified person as demonstrating likely compliance with the above requirement.

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

Advice:

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

Reason for condition

To ensure that buildings for residential uses provide reasonable levels of amenity in terms of noise.

ENG 12

A construction waste management plan must be implemented throughout construction.

A construction waste management plan must be submitted and approved as a Condition Endorsement, prior to commencement of work on the site. The construction waste management plan must include:

- Provisions for commercial waste services for the handling, storage, transport and disposal of post-construction solid waste and recycle bins from the development; and
- 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 construction waste management plan.

Advice:

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

It is recommended that the developer liaise with the Council's 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.

ENG sw1

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

Reason for condition

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

ENG sw4

Any new stormwater connection required must be constructed, and any existing redundant connections be abandoned and removed. The connection works must be done by Council at the owner's expense prior to occupancy or commencement of use (whichever occurs first).

Detailed engineering drawings must be submitted and approved as a Condition Endorsement, 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 accurate location and levels of the proposed connections and all existing connections;
2. the size and design of the connection such that it is appropriate to safely service the development for all 5% AEP rainfall events (including the vertical catchment) and discharge is contained within the kerb;
3. plan and long-section of the proposed connection clearly showing clearances from any nearby obstacles including crossovers and 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 engineering drawings.

Advice:

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

The depth and alignment of the stormwater connection shown on the Rare Drainage and Service Plan DA01 RevA does not agree with Council records. A single connection for the property is required under the Urban Drainage Act 2013. Standard sizes for kerb and gutter connections are in Council's Fees and Charges Booklet available from [here](#), and must run in a straight line from the private boundary transition pit if possible.

Once the Condition Endorsement has been issued, the applicant will need to submit an [application for a new stormwater connection](#) with Council's City Amenity Division. Should the applicant wish to have their contractor install the connection, an [Application to Construct Public Infrastructure](#) is required.

The stormwater service connection may be required to have been approved prior to any plumbing permits being issued for private plumbing works.

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 occupancy or the commencement of use (whichever occurs first).

A stormwater management report and detailed design must be submitted and approved as a Condition Endorsement, prior to the issuing of any approval under the *Building Act 2016* or commencement of works (whichever occurs first). The stormwater management report and design must:

1. be prepared by a suitably qualified person;
2. include detailed design of the proposed treatment train, including estimations of contaminant removal for the final design, driving head, and a long-section;
3. include a supporting maintenance plan, which specifies the required maintenance measures to check and ensure the ongoing effective operation of all systems, such as: inspection frequency; cleanout procedures; descriptions and diagrams of how the installed systems operate; details of the life of assets and replacement requirements.

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

Advice:

Once the plans and report have 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 domestic waste and recycling must be implemented post construction.

The waste management plan must be submitted and approved as a Condition Endorsement, prior to commencement of work on the site (excluding for demolition). The waste management plan must include:

1. Details of commercial waste services for the handling, storage,

transport and disposal of domestic waste and recycle bins from the development.

2. Written evidence from a suitable private waste collection company that they are willing to and able to collect waste from the development site in the manner and frequency described in the waste management plan.

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

Advice:

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

Reason for condition

To ensure 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 as a Condition Endorsement, prior to commencement work (including demolition). The construction traffic and parking management plan must:

1. Be prepared by a suitably qualified person.
2. Include 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.

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

Advice:

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

Reason for condition

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

ENG 2a

Prior to first occupation or commencement of use (whichever occurs first), vehicular barriers compliant with the Australian Standard AS/NZS 1170.1:2002 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/NZS 2890.1:2004 (including the requirement for vehicle safety barriers where required), or a Council approved alternate design certified by a suitably qualified engineer to provide a safe and efficient access, and enable safe, easy and efficient use.

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 3b

The access driveway, circulation roadways, ramps and parking module (parking spaces, aisles and manoeuvring area) design must be submitted and approved as a Condition Endorsement, prior to the issuing of any approval under the *Building Act 2016* (excluding for demolition).

The access driveway, circulation roadways, ramps and parking module (parking spaces, aisles and manoeuvring area) design must:

1. Be prepared and certified by a suitably qualified engineer,
2. Be generally in accordance with the Australian Standard AS/NZS 2890.1:2004,
3. Where the design deviates from AS/NZS 2890.1:2004 the designer must demonstrate that the design will provide a safe and efficient access, and enable safe, easy and efficient use, and
4. Show dimensions, levels, gradients and transitions, and other details as Council deem necessary to satisfy the above requirement.

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.

Once the design has been approved, the Council will issue a 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 3c

The access driveway, circulation roadways, ramps and parking module (parking spaces, aisles and manoeuvring area) must be constructed in accordance with the design drawings approved by Condition ENG 3b.

Prior to the commencement of use, documentation by a suitably qualified engineer certifying that the access driveway 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 commencement of use.

Reason for condition

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

ENG 5

The number of car parking spaces approved on the site for use is twenty (20). All parking spaces must be in accordance with Australian Standards AS/NZS 2890.1 2004, prior to commencement of use.

Reason for condition

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

ENG 5b

The number of bicycle parking spaces approved on the site for use is eighteen (18).

Bicycle parking spaces and storage must be in accordance with Australian Standards AS 2890.3 2015, prior to commencement of use.

Reason for condition

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

ENG 1

Any damage to council infrastructure or any third-party infrastructure within the road reserve resulting from the implementation of this permit, must, at the discretion of the Council:

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

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

A photographic record of the Council's infrastructure (e.g. existing property service connection points, roads, buildings, stormwater, footpaths, driveway crossovers and nature strips, including if any, pre-existing damage) will be relied upon to establish the extent of

damage caused to the Council's infrastructure during construction. In the event that the owner/developer fails to provide to the Council a photographic record of the Council's infrastructure, then any damage to the Council's infrastructure found on completion of works will be deemed to be the responsibility of the owner.

Reason for condition

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

ENG r3

Prior to the commencement of use, the proposed driveway crossover Argyle Street 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-v2

Lighting plans approved by TasNetworks must be submitted and approved prior to commencement of work.

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.

Please note that your proposal does not include adjustment of footpath levels. Any adjustment to footpath levels necessary to suit the design of proposed floor, parking module or driveway levels will require separate

agreement from Council's Road Services Engineer and may require further planning approvals. It is advised to place a note to this effect on construction drawings for the site and/or other relevant engineering drawings to ensure that contractors are made aware of this requirement.

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

Reason for condition

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

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 as a Condition Endorsement prior to the issue of any approval under the *Building Act 2016* or the commencement of work, whichever occurs first. The SWMP must be prepared in accordance with:

- the Soil and Water Management on Building and Construction Sites fact sheets (Derwent Estuary Program, 2008), available [here](#); and
- any Contamination Management Plan for the site, as required by the Pitt & Sherry *Site Contamination Appraisal*

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

Advice:

This condition requires further information to be submitted as a Condition

Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

Reason for Condition

To avoid the pollution and sedimentation of roads, drains and natural watercourses that could be caused by erosion and runoff from the development.

HER 6

All onsite excavation and disturbance in the areas identified in the Austral Tasmania report (dated 21 Feb 2020) and shown as having moderate archaeological potential (shown in yellow in the diagram upon p.20) must be monitored and excavated in accordance with recommendations 3 and 4 of the above report. Should any features or deposits of an archaeological nature be discovered on the site during excavation or disturbance:

1. All excavation and/or disturbance must stop immediately; and,
2. A qualified archaeologist must be engaged to attend the site and provide advice and assessment of the features and/or deposits discovered and make recommendations on further excavation and/or disturbance; and,
3. All and any recommendations made by the archaeologist engaged in accordance with the above sub-clause 2 must be complied with in full; and,
4. All features and/or deposits discovered and excavated must be reported to Council within 1 day and prior to the conclusion of the excavation; and,
5. A qualified archaeologist must undertake an audit of all bulk archaeological materials such as worked sandstone blocks, 19th century bricks or cobblestones suitable for reuse. These bulk archaeological shall be retained on site subject to the approval of their removal by the Council.
6. A copy of the archaeologist's advice, assessment, and recommendations obtained in accordance with the above sub-clauses 2, 3, and 5 must be provided to Council within 60 days of receipt of the advice, assessment, and recommendations and prior to the issue of any approval under the *Building Act 2016* (excluding for demolition) to the satisfaction of Council.

Excavation and/or disturbance must not recommence until approval is granted from the Council.

Reason for condition

To ensure that work is planned and implemented in a manner that seeks to understand, retain, protect, preserve and manage significant archaeological evidence.

HER 7

All artefacts of high interpretative value and/or rare or otherwise significant as determined by the qualified archaeologist engaged in accordance with Condition HER 6 must be incorporated into an on-site interpretation and history.

An interpretation plan must be prepared and submitted and approved by Council prior to occupation.

The on-site interpretation must be:

- in accordance with the approved interpretation plan,
- incorporate the artefacts described above,
- located in a publicly accessible space, and,
- provided upon completion of the development.

Reason for condition

To ensure that there is public benefit from archaeological investigations.

HER s1

The audit report prepared in accordance with condition HER 6, must be submitted and approved as a Condition Endorsement prior to the issue of any approval under the Building Act 2016 for construction of the development (excluding any approval issued under this Act for demolition associated with the development). The audit report must also demonstrate how the finds described in condition HER 6, sub-clause 5 are to be incorporated into the development in landscaping, vertical or horizontal surfaces, or other designed or decorative features. Revised plans must be submitted and approved as part of the Condition Endorsement showing the recommendations of the audit report in accordance with the above requirement.

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

Advice:

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

Reason for condition

To ensure that archaeological evidence is retained, protected and preserved or otherwise appropriately managed.

ENVHE 1

The recommendations in the report "HB20090 - Site Contamination Appraisal - 98 Argyle Street by Pitt & Sherry", dated 24 March 2020, must be implemented and maintained for the duration of construction of the development. Specifically:

1. A Contamination Management plan (CMP) should be prepared prior to the commencement of works, which should detail management measures for the protection of construction workers and management of potentially contaminated soil and groundwater, triggers and contingency measures.
2. If significant soil and or groundwater contamination is encountered during site works an appropriately experienced Environmental Scientist should be present to monitor ambient vapours and identify/sample potentially contaminated soil. If significant contaminated soil is identified, it may be required to be excavated with validation sampling of the remaining soil to demonstrate it will not pose a health risk to future occupants.

Reason for condition

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

ADVICE

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

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

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

CONDITION ENDORSEMENT

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

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

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

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

BUILDING PERMIT

You may need building approval in accordance with the *Building Act 2016*. Click [here](#) for more information.

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

PLUMBING PERMIT

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

OCCUPATION OF THE PUBLIC HIGHWAY

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

You may require an occupational license for structures in the Hobart City Council highway reservation, in accordance with conditions to be established by the Council. Click [here](#) for more information.

You may require a road closure permit for construction or special event. Click [here](#) for more information.

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

STORMWATER

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

WORK WITHIN THE HIGHWAY RESERVATION

Please note development must be in accordance with the Hobart City Council's Infrastructure By law. Click [here](#) for more information.

CBD AND HIGH VOLUME FOOTPATH CLOSURES

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

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

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

For more information about this requirement please contact the Council's Traffic Engineering Unit on 6238 2804.

REDUNDANT CROSSOVERS

Redundant crossovers are required to be reinstated under the Hobart City Council's

Infrastructure By law. Click [here](#) for more information.

WASTE DISPOSAL

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




Further information regarding waste disposal can also be found on the Council's [website](#).

FEES AND CHARGES

Click [here](#) for information on the Council's fees and charges.

DIAL BEFORE YOU DIG

Click [here](#) for dial before you dig information.

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|---------------|--|
| Attachment A: | PLN-20-706 - 98 ARGYLE STREET HOBART TAS
7000 - Planning Committee or Delegated Report ↓
 |
| Attachment B: | PLN-20-706 - 98 ARGYLE STREET HOBART TAS
7000 - CPC Agenda Documents ↓  |
| Attachment C: | PLN-20-706 - 98 ARGYLE STREET HOBART TAS
7000 - Urban Design Advisory Panel Minutes ↓  |

**APPLICATION UNDER HOBART INTERIM PLANNING SCHEME 2015**

Type of Report:	Committee
Council:	21 June 2021
Expiry Date:	21 June 2021
Application No:	PLN-20-706
Address:	98 ARGYLE STREET , HOBART ADJACENT ROAD RESERVE
Applicant:	LXN ARCHITECTURE & CONSULTING PO BOX 136
Proposal:	Demolition and New Building for 20 Multiple Dwellings
Representations:	223 representations.
Performance criteria:	Commercial Zone Development Standards; Potentially Contaminated Land Code; Parking and Access Code; Stormwater Management Code; and Historic Heritage Code

1. Executive Summary

- 1.1 Planning approval is sought for demolition and new building for 20 multiple dwellings at 98 Argyle Street, Hobart.
- 1.2 More specifically the proposal includes the demolition of the existing building on the site and the construction of a new six storey building for residential use. The new building would include car parking on the ground floor and 4 apartments on each subsequent floor, for a total of 20 apartments. The building is proposed to have a maximum height of approximately 19.6 metres. The total gross floor area of the proposed building would be 3653m². The proposed building would be finished externally with a combination of materials including face brick walls and cement and metal sheet cladding. Cement render and substantial glazed areas are also proposed on the elevation which would face the site frontage.
- 1.3 The proposal relies on performance criteria to satisfy the following standards and codes:
 - 1.3.1 23.0 Commercial Zone -Building Height, Landscaping, Residential and Visitor Accommodation Amenity
 - 1.3.2 E2.0 Potentially Contaminated Land Code -Excavation

- 1.3.3 E6.0 Parking and Access Code - Number of Carparking Spaces, Number of Motorcycle Parking Spaces, Design of Bicycle Parking Facilities
 - 1.3.4 E7.0 Stormwater Management Code - Stormwater Drainage and Disposal
 - 1.3.5 E13.0 Historic Heritage Code - Building, works and Demolition for Places of Archaeological Potential
- 1.4 Two hundred and twenty three (223) representations objecting to the proposal were received. Of those, 211 were received within the statutory advertising period between 19 May and 2 June 2021. The remaining 12 were accepted as late representations.
- 1.5 The application was considered by the Urban Design Advisory Panel at its meeting of 31 May 2021. While the Panel expressed some misgivings regarding the proposal and expressed a desire for changes to be made to the proposed design, it stopped short of recommending that Council refuse the application.
- 1.6 The proposal is recommended for approval subject to conditions.

- 1.7 The final decision is delegated to the Council because a building in excess of 2000m² and three storeys in height is propose, and more than five objections have been received.

2. Site Detail

- 2.1 The proposed development site is a commercial property to the north of the Hobart central business district. The site is rectangular in shape and has an area of 730m². The site is currently occupied by a single storey commercial building that is currently vacant but has recently been approved for use as an office equipment service centre. The adjoining property to the north-west of the site is also currently vacant although it has until recently been used as a motor vehicle sales showroom. A re-development of the commercial building on the adjoining property to the south-east had been completed relatively recently at the time of writing. The Hobart Fire Station is to the north-east of the site on the opposite side of Argyle Street. The site is generally surrounded by commercial use and development (please refer to figure 1). A site visit was conducted on 28 May 2021,
- 2.2 The site is within the Commercial Zone of the *Hobart Interim Planning Scheme 2015* (please refer to figure 2). The site is listed as a potentially contaminated site and a place of archaeological potential. There are no other mapped overlays applicable to the site although it is within the area covered by the Royal Hobart Hospital Helipad Airspace Specific Area Plan.
- 2.3 The site is not listed on the Tasmanian Heritage Register (THR) or as a heritage place within the planning scheme. The site is also not within a heritage precinct. The Hobart Fire Station site to the north-east of the site is listed on the THR and as a heritage place. The terrace houses to the south-east at 88 and 90 Argyle Street are also listed on the THR. The Ocean Child Hotel site further to the south-east on the corner of Argyle Street and Melville Street is also listed on the THR and as a heritage place (please refer to figure 3). The site and the surrounding area is recognised in the planning scheme as a place of archaeological potential.

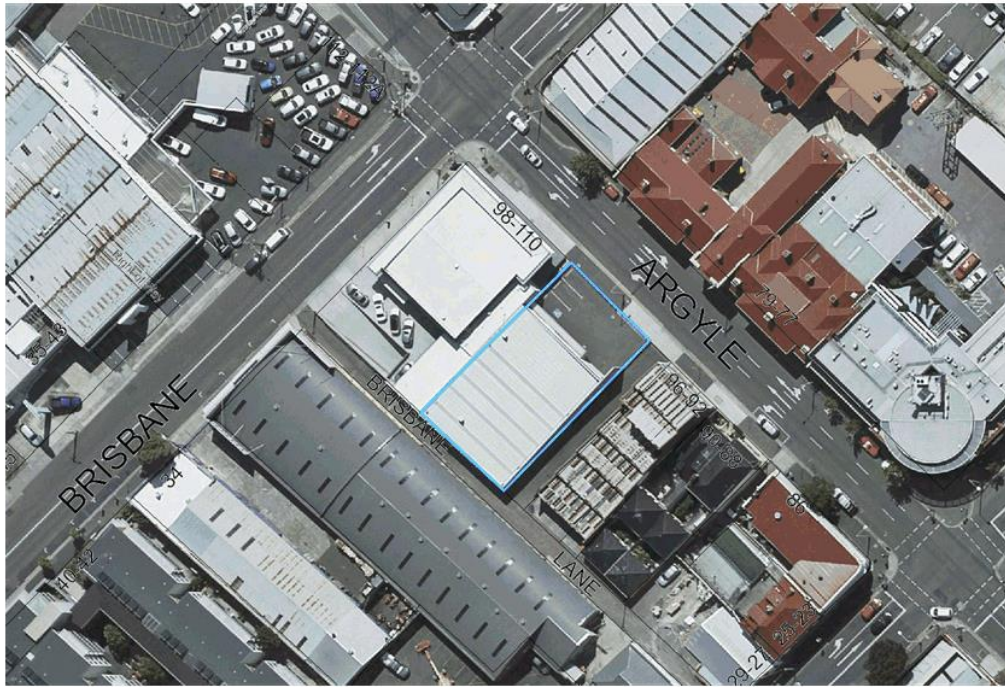


Figure 1: aerial view of site (outlined in blue) and surrounding area.

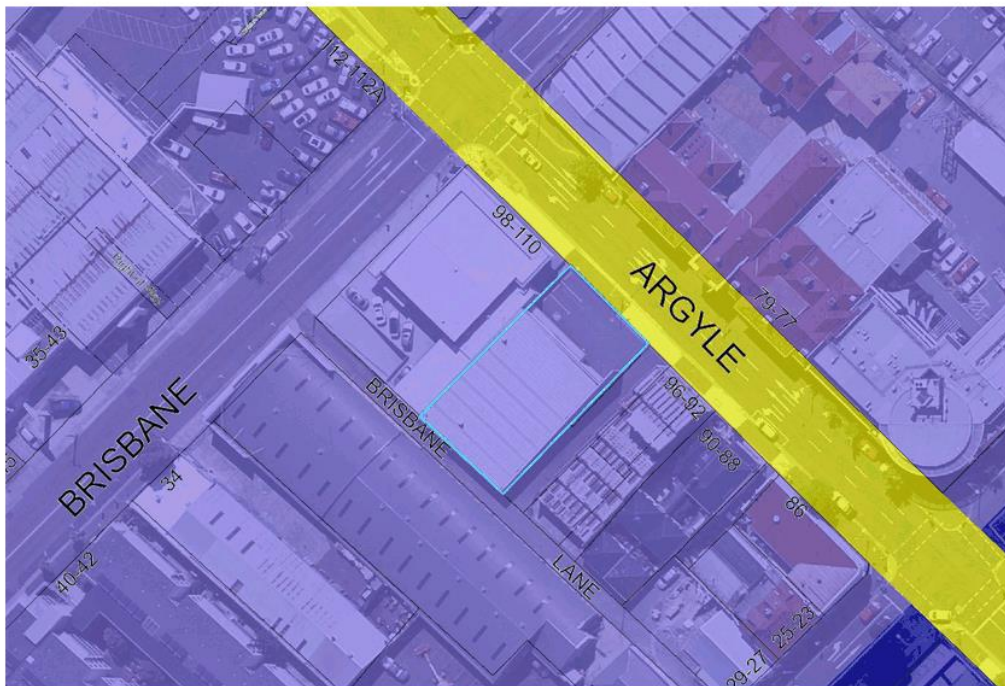


Figure 2: aerial view of site (outlined in light blue) and surrounding area overlaid with zoning layer; key: purple: Commercial Zone, yellow: Utilities Zone, dark blue: Central

Business Zone.

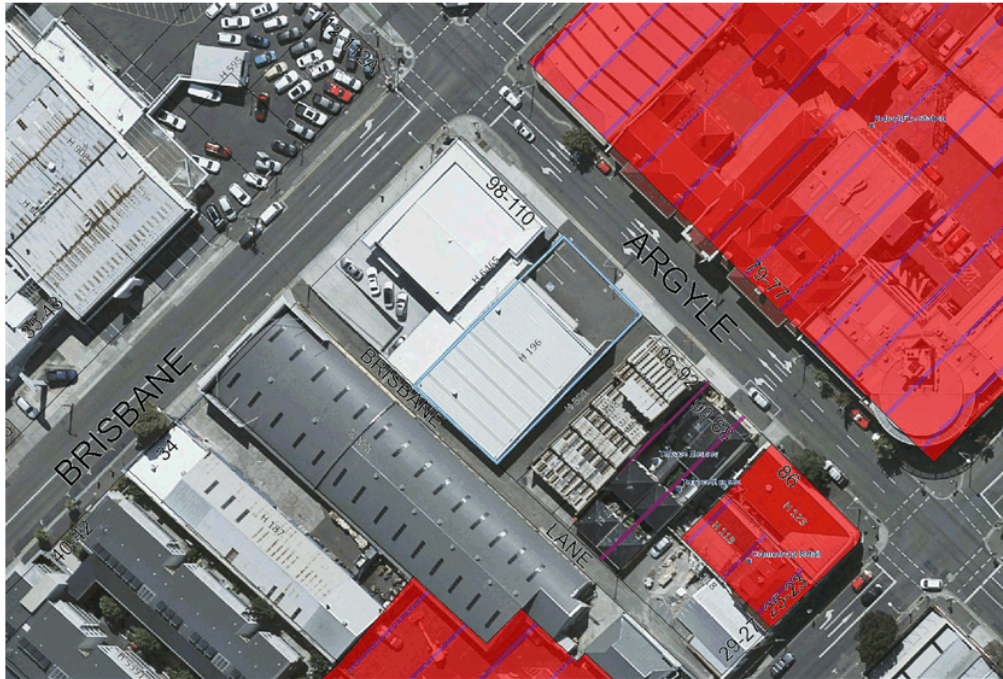


Figure 3: aerial view of site (outlined in light blue) and surrounding area overlaid with heritage status layer; key: purple hatching: THR listed place, red shading: planning scheme listed heritage place.

3. Proposal

- 3.1 Planning approval is sought for demolition and new building for 20 multiple dwellings at 98 Argyle Street, Hobart.
- 3.2 More specifically the proposal includes the demolition of the existing building on the site and the construction of a new six storey building for residential use. The new building would include car parking on the ground floor and 4 apartments on each subsequent floor, for a total of 20 apartments. The building is proposed to have a maximum height of approximately 19.6 metres. The total gross floor area of the proposed building would be 3653m². The proposed building would be finished externally with a combination of materials including face brick walls and cement and metal sheet cladding. Cement render and substantial glazed areas are also proposed on the elevation which would face the site frontage.



Figure 4: Four montages of the proposed development. Top left is looking up Argyle Street towards North Hobart. Top right is looking down Brisbane Street, towards the south. Bottom left is looking down Argyle Street towards the river. Bottom right is looking at the south side elevation of the proposal as viewed from Melville Street.

4. Background

- 4.1 Council received the application in October 2020, however, the application was not considered valid until the consent of Council's General Manager was received upon 20 April 2021. GM consent was required as the proposal includes work within the Argyle Street road reserve. The proposal that was originally submitted was for a building with a similar footprint, internal layout, and parking and access arrangements but with five storeys. The current proposal is therefore a revised proposal that includes an additional storey and an additional four apartments. The car parking arrangements and facade treatment on the ground floor of the building were also revised.

- 4.2 The application was first considered by the Urban Design Advisory Panel at its meeting of 17 December 2020. As the application was not considered valid at this stage, it was considered by the Panel as seeking "pre-application" advice. Once the application became valid, it was considered again by the Panel at its meeting of 31 May 2021 during the public exhibition period. While the Panel expressed some misgivings regarding the proposal and expressed a desire for changes to be made to the proposed design, it stopped short of recommending that Council refuse the application. The Panel's comments are included where relevant in section 6 of this report, and are discussed in section 7. The Panel's comments are provided in full as an attachment to this report.

5. Concerns raised by representors

- 5.1 Two hundred and twenty three (223) representations objecting to the proposal were received. Of those, 211 were received within the statutory advertising period between 19 May and 2 June 2021. The remaining 12 were accepted as late representations.

The majority of the representations followed a template which stated that:

"My reason to oppose is:

The height is not compatible with the scale of nearby buildings in the same Zone (Zone 8) i.e. 9.5m, 12.37m, and 14.74m and, at 20m, is too high, considering that the proposed absolute maximum height, recommended by Leigh Woolley and the City of Hobart's professional planning staff, is 18m.

We ask that it be reduced by 1 storey (the height of the original application).

I do not consent to my details being passed on to any third party".

- 5.2 The representations received included the following comments:

"The Application mentions 40-44 Melville Street as a 'nearby' building. It is 42.7m, in a different Zone, so not relevant".

"If approved this proposal would set a dangerous precedent. I know it's only 2 metres higher than the recommended maximum for the zone, but approvals should live within these recommendations. If approved it would be used as an excuse to approve even higher buildings in the zone in the future".
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"It is important that we do not set precedents for higher buildings along Argyle St. There are many sites that will become available for development along Argyle St and the Woolley Report gave a sensible guideline".
"We have rules and regulations set in place. Why can't we keep to these? If we are forever allowing the rules to be compromised or pushed out why have rules at all. So sick of hearing these requests".
"The proposal should stay under the recommended height limit for the area".
"I agree that this proposed development is too high at 20metres and is not in keeping with the immediate area".
"There is no need for an additional floor to this building. It does not warrant extending the height limit for a building such as this".
"I think asking to reduce the building by one story is a reasonable request so a precedent is not set to keep adding one more floor to future developments in the area".
"We must avoid incremental maximum height increase, which is what this additional storey would result in. We Hobart residents want to keep the current character of Hobart, not changing it to be like everywhere else. We choose to live here because of Hobart's special character. Don't change it!".
"Why have a height limit if it doesn't mean anything?".
"Once a 20 metre height is approved, it opens up wide for the next one to be 22 metres, and the one after that 24 metres and so on. Stick to our belief Hobart Not Highrise".
"Stand by your planning recommendations, please...or slow death by incremental fudging!".
"Height not compatible with nearby buildings. It is too high, considering the absolute ma[x] height recommended by Leigh Woolley and the City of Hobart's professional planning staff is 18m".

"Don't make the City of Hobart generic. People (tourists, new residents) swamp to Hobart because of its beauty and charm. If you want to see what you could turn Hobart into, go and look at Cairns. An Esplanade full of high rise buildings and a SEVERE lack of guests".
"I agree that if this application is passed the next one to come along will ask for greater height still and by that time the precedent will be set".
"I firmly believe in residential developments along Argyle St and others, but building heights have to followed not pushed to higher and higher levels".
"Aligns broadly' with the UDAP discussion seems to mean exploiting a perceived loophole. Enough with the discretions! We have a planning scheme, stick to it! Or be prepared to tell the public exactly why you haven't".
"Hobart City Council is building a record of ignoring its own planning schemes and recommendations made by professional planning staff, with regard to allowing business activities that do not meet the planning zone restrictions. If a maximum height has been set, within a specific zone, then applications that exceed that height must be rejected. Otherwise it makes the whole concept of planning zones laughable and the council management incompetent. Please consider whether the city planning schemes are to be supported or discarded, to improve transparency and remove unnecessary work and costs of applications and objections".
"Please can you lessen the height, as set above".
"The recommended maximum height which is in keeping with other buildings in this zone is 18m. The height listed in the original application was compliant with the recommended maximum and the original height should be upheld".
"The precedent argument is important because of the risk that any extension will support the next one and so on, and thus undermine whatever standard is set. The fact that this one is relatively modest cannot justify an exception. Otherwise, no standard height could survive".

"Why depart from the established principle?".
"Incrementalism! The height limit must be kept at 18 metres. Allow 20 metres then the next building will be higher. And so on. Our identity will be lost. We will be just another high rise city".
"The proposed height of this building if it were to be built would be significantly higher than those in the immediate area. This would then set a precedent for subsequent local buildings to be incrementally higher and so on. My opinion is that it should be reduced in height by one storey".
"A maximum must be a MAXIMUM! I would Actually prefer if any new building was only 15 metres high. Our historic buildings should be feature of our city. New buildings should be visually subservient to them and not dominate".
"Don't be greedy and help preserve the low rise character that is a valuable attraction for persons to Hobart".
"I feel this creep to increase height by one more floor will see a proliferation of more higher buildings in Hobart , as has happened in so many other beautiful small cities at round the globe . Thus I support sticking with the 18m maximum height".
"I propose to maintain the height of the original application. I do not agree with developers changing on amendment. They should not be allowed".
"Please don't destroy our unique city skyline with these non-conforming buildings".
"This development is creeping on the limits. 18 metres is the limit not 20 metres Please ask them to reduce the height to 18 metres".
"We realise that the proposed height is marginally higher than recommended by Leigh Woolley but where do you stop as next application will use 20m as a base".

"There is a trend in evidence here of "cheating an extra story" on top of the original application, which should not be allowed.. I ask that it be reduced by 1 story i.e. the height of the original application, as this strategy to "creep higher" will provide a basis for future DAs to develop over the 18m limit".

"As Leigh Woolley considered 18m to be the right height for buildings in this area why allow one of 20m. It would be the thin edge of the wedge!".

"I am continually concerned that our city has developments that are out of scale with existing buildings and the continual creep of higher and higher buildings. Surely 1 less storey would not too much to ask of the developer to maintain the existing building upper limit at 18m. I also think council should be consistent. A height limit is a height limit. Thank you".

"Please reduce down lower to be more consistent with adjacent buildings".

"Developers need to stick to the rules just like everyone else. Please don't allow them to destroy our beautiful city".

"Let's stay with the planning limits and not create a precedent".

"The council height is 18mts, that is what should be there not higher".

"If there is a proposed and recommended height by those who know what they're talking about, (and it's not proposed and recommended for nothing), then developers need to stick to this height! Others have stuck to it, so should this developer. A child could understand that. It's the same with laws, you can't just bend them, just because you want to. That is, if we live in a real and true democracy. I guess it's up to council then, to prove we do!!!".

"Developers trying their usual tricks again. The recommended height must be adhered to".

"As I have stated before with other plans submitted with heights not conducive to Hobart. I have been a resident of Hobart for 77 years and I entirely agree with the height set by Leigh Woolley. Why do developers still insist on submitting over height buildings. That 18m height should be locked in!"
"Yep, it has to come down a storey!!!!"
"I am concerned that if Council approve this height, it will give precedent and incentive for other developers to 'go just a little bit higher' in future. It is a slippery slope and one that I am sure Leigh Woolley would not approve. It is one thing for Council to be open for business but professional planning staff have specialisation regarding building heights, and their recommendations about absolute maximum height for this zone being 18 m should be supported. Developers are more involved with short term profit, whereas professional planning staff defend medium term public amenity and sensibility".
"The building exceeds 18m. As a result it should be refused".
"When will these developers get the message and stop pushing the boundaries?"
"Please, stop the development of these out of character buildings in our City. Andrew MacFie".
"It's very important to keep within recommended height limits to minimise incremental increases over time as further developments keep on attempt to stretch the boundaries. If this continues Hobart will lose its character that most residents cherish".
"Adding an additional storey to this building would set an unwelcome precedent in this area. I am sure the developer will make a very good return without this undesirable, unnecessary addition".
"I wholeheartedly support the lowering of the height to the original application and ask that Leigh Woolley and council's professional staff be listened to, and the limit of 18 metres be adhered to by the developer and people who do not want a high-rise Hobart".

"It's important that developers stick to the height that the planning laws state if we want to maintain the character of our city".
"If ever there was a case of a developer simply doing what they think they can get away with, this is it. Also, the Slippery Slope argument is often not a good one, but here it is; a little bit worse each time ensures disaster in the long run".
"This is a very bulky building for this site with no set back or attempt to soften the streetscape with green areas. The height and lack of set back, even for the top floors, will detract from and dominate this area and set a dangerous precedent for further developments to disregard the Councils own maximum height recommendations for this zone".
"Out of character with surrounding buildings".
"This is yet another example of a developer looking to sneak another storey on their proposals...looking for that 'weak link' in council who will overlook and unwittingly allow thru".
"I am concerned that the height may set a new benchmark".
"Please show developers that they do not control Hobart City planning".
"We are as citizens of Tasmania fighting unsuitable development which is outside the parameters of the established guidelines. Is it that our elected politicians don't understand what they are elected to do, or are acting in self interest for themselves or mates. This development doesn't meet the height restrictions so why is it submitted in the first place and wasting time cost even to consider it. What don't developers understand about NO".
"Please do not give into these plans, it will give the green light to other developers".
"I am concerned that the extra height will set a new standard of height in the vicinity".

"The building will overshadow Brisbane Lane and impact on future development of the corner site. Given the topography, the elevation and the proximity of the lot to the Brisbane St and Argyle St intersection, the proposed height of 20m will be visually intrusive and is not compatible with the scale of the majority of nearby buildings. The height should be reduced to the acceptable solution height of 15m. The roof top area should be developed to create the communal private open space to improve the amenity for future residents. The proposal includes an inadequate number of on-site parking spaces, both by E6.0 Code provisions and the RMS guide referenced by Mr Midson. City congestion with parking is an ongoing issue and Hobart's public transport is not sufficiently, modern, convenient or regular to encourage sufficient numbers of people to abandon their cars. A reduction in the height, will reduce the number of units and hence reduce the shortfall in on-site car parking".

"Please get this down by 1 story. Letting this through just creates another precedent so others will follow as has already been happening throughout the city. Hobart still has a fair quantity of older attractive buildings. Lets keep our remaining streetscapes. Not death by a thousand cuts".

"The proposed building is too high for the 18m recommendation for this zone and if approved would set a precedent for likely future developments. Please reject this 20m height".

"Please keep within the recommended height".

"The danger of this approval apart from the height discrepancy in nearby buildings is that it will set a precedent for the next build to also be above planning height".

"Keep developments in this area to under 18m please. Developers need to be told there will be no exceptions and no adding of extra floors for any reason".

"I'm concerned that approving this building will allow other buildings to 'creep' higher".

"I would prefer this building to be lower than 18m".

"Why keep making plans and then NOT adhering to them. Please, let's just stop the creeping upwards trend and spoiling Hobart forever! We shouldn't have to keep making this comment after all the decisions already made".
"Can we please keep our beautiful city of Hobart to the height plan intended by its first builders and residents?".
"There are limits. Why can't developers just stick to the rules!".
"Leigh Woolley and the City of Hobart's professional planning staff work is for the good of all the city's residents. Allowing developers to have a different standard does nothing for our beautiful, unique city".
"One only needs to look to the once inviting city of Devonport, specifically the ugly new Paranapple centre built right next to beautiful heritage buildings, to see how ugly Hobart could become if new developments are not planned carefully and kept at a humane scale".
"The proposed building is higher than that accepted generally and would foster the acceptance of other such buildings".
"Don't be greedy and help preserve the low rise character that is a valuable attraction for persons to Hobart".
"As a resident of Campbell St, and in the same planning zone, I am very concerned that this will create an unacceptable precedent for the zone".
"I wonder why developers are never able to accept the recommended heights to ensure Hobart keeps its character and does not turn into just another high rise city, So disappointing. The lovers of this island just have to keep fighting".
"If we want a liveable city we do not need more shade and cold in our city. Our climate does not require more shade, but in fact sunlight and heat to make our city a more attractive place to be (not less attractive) Lets protect what we have".
"I agree with the reasoning behind the above submission and that the development proposal should be reduced by at least one storey".

"WHY CANNOT THE HCC ACCEPT AND ADOPT A 18 METRE LIMIT IN RESPECT OF EVERY SINGLE APPLICATION".

"Don't let the over height buildings 'creep' up into the surrounding suburbs - grey corridors, gloomy streets and over scaled buildings do not a happy city make!".

"Increasing residential housing density along Argyle St is supported and it would be expected that there will be similar proposals for further residential accommodation in the vicinity of the proposed development due to close proximity to the city and the ease of access through active travel such as walking, cycling and other mobility devices".

"The development needs to provide more bicycle parking than is proposed as it is located on a cycling route (Argyle St bike lanes) and will connect to a wider cycling network".

"Considering a 3-bedroom apartment can accommodate 4 residents, there is the potential for 4 bicycle parking spaces to be needed for a single dwelling. The amount and type of bicycle parking should be increased".

"Visitor bicycle parking could be provided as part of the relocation of the light pole".

"Waste collection on Argyle St needs to consider impact on people using the footpath and people riding in the bike lanes, particularly placement of bins on the roadside for collection".

"The proposal will create such a traffic congestion on a already congested one way road, and it doesn't fit into the city's heritage culture. More housing should be built in the inner suburbs where people live, not in the CBD where people work."

"I would like to stress in my representation that this development is far too high. The surrounding buildings do not go over three levels high and many of the buildings are heritage listed. This development will change the whole character of this precinct and if passed will pave the way for future high rise buildings".

"If this proposed development is approved ,the resulting building will overshadow and dominate the heritage buildings its vicinity including the ones that I was responsible for restoring and re-instating".

<p>"The construction of 20 Multiple Dwellings will:</p> <ol style="list-style-type: none"> 1. Adversely impact on the privacy of dwellings at 40 Brisbane St., by the loss of privacy and enjoyment of properties; 2. The immediate area contains buildings of specific design and height, including heritage. The construction of a multiple story building towering over the area will take away visual values of the area; and 3. The right to enjoy a pleasant outlook from buildings at 40 Brisbane St., will be compromised greatly. The restriction of the proposed project to the same height as the surrounding buildings in the immediate area would be a more appropriate outcome".
<p>"It does not in any way comply with Hobart City Council's Planning Scheme requirement for building heights. Specifically it exceeds the maximum of 3 storeys and does not satisfy the requirement to be compatible with the scale of nearby buildings".</p>
<p>"It adversely impacts on the privacy of residential units at 40-42 Brisbane Street facing in the direction of the proposed building".</p>
<p>"The density of the building is too high with 20 units proposed".</p>
<p>"The Argyle Street frontage at ground level consists mostly of a car park entrance. This adds nothing to and detracts from the current streetscape as there is no setback from the current footpath. It is just plain ugly".</p>
<p>"The former Lexus showroom on the corner of Argyle and Brisbane Streets is likely to be redeveloped at a future date. The impact of any future development including any multi storey development must be considered for the current development application".</p>
<p>"The building height for the proposed development is not consistent with Desired Future Character Statements for the area set out in the University of Tasmania master plan for the Argyle Street precinct".</p>
<p>"A 6 storey building on Argyle Street will be totally out of place, dominant and overscale for the surrounding area as the topography is already higher than most other buildings in the Domain area and the CBD".</p>

"I would like to make a strong objection to the proposed height of the development at 98 Argyle St. Yet another nail in the coffin of our beautiful city! How can the planners even envisage the scope of this proposal on such a small land footprint? In what way could this proposal enhance the streetscape?"
"I object to this new development at this unreasonable height which will be an eyesore for this part of the city and encourage other developers to follow suit with similar size monstrosities".
"The historic value of this wonderful city is slowly being eroded by high rise and inappropriate developments such as this DA for 98, Argyle St. I am totally opposed to such developments as they contravene the Council generated report from Mr Leigh Woolley. A maximum height of 20 metres is unacceptable. 18 metres is acceptable however".
"The application fails to comply with the planning scheme - which is prescriptive for this section of Argyle St at 3 storeys, - the application outrageously twice the scheme at 6 storeys".
"The character of the street is not respected in the bulk of the proposal, or its placeless ugliness...it is not architecture".
"This development is far too high for this area also there is not enough parking allocated".
"The heights of adjoining buildings within a 100 metre radius of this DA are all under fifteen (15) metres, so the building should be reduced in height by at least one storey".
"Far too tall as a building for that historic precinct...site is too small for adequate parking for visitors".
"The building height does not satisfy the following: (a) not consistent with any Desired Future Character Statements provided for the area; (b) be compatible with the scale of nearby buildings; (d) allow for a transition in height between adjoining buildings, where appropriate".

- 5.4 Those concerns which relate to a discretion invoked by the proposal are addressed in Section 6 of this report.

6. Assessment

- 6.1 The *Hobart Interim Planning Scheme 2015* is a performance based planning scheme. To meet an applicable standard, a proposal must demonstrate compliance with either an acceptable solution or a performance criterion. Where a proposal complies with a standard by relying on one or more performance criteria, the Council may approve or refuse the proposal on that basis. The ability to approve or refuse the proposal relates only to the performance criteria relied on.
- 6.2 The site is located within the Commercial Zone of the *Hobart Interim Planning Scheme 2015*.
- 6.3 The planning report submitted with the application suggests that the site has previously been used by a motor vehicle parts business. This use would be classified as within the planning scheme's General retail and hire use class which is a permitted use in the above zone. The proposed use is for multiple dwellings within the Residential use class. This use is a permitted use in the above zone if it is proposed above ground level (except for access). However, as the proposal includes car parking associated with the proposed residential use at ground level, it is considered to be for a discretionary use.

Clause 8.10.2 of the planning scheme states that:

In determining an application for a permit for a discretionary use the planning authority must, in addition to the matters referred to in subclause 8.10.1, have regard to:

- (a) the purpose of the applicable zone;*
- (b) any relevant local area objective or desired future character statement for the applicable zone;*
- (c) the purpose of any applicable code; and*
- (d) the purpose of any applicable specific area plan,*

but only insofar as each such purpose, local area objective or desired future character statement is relevant to the particular discretion being exercised.

The Zone Purpose Statements for the Commercial Zone are provided at clause 23.1.1. The majority of these statements are not considered directly relevant to the proposal, although the proposed development is not considered to be inconsistent with any of the statements. The statement at clause 23.1.1.7, which states that the zone is "to provide for residential use primarily above ground floor level", is relevant to the proposal. The proposed development is considered to be consistent with

this statement as the proposed residential use would primarily occur above ground level, which is a point made in the planning report provided with the application. As stated in this report, only associated facilities are proposed on the ground floor of the building.

There are no local area objectives or desired future character statements provided for the Commercial Zone. The proposal is considered to be consistent with the purposes of the applicable codes. The proposal is consistent with the purpose of the Potentially Contaminated Land Code as it is supported by an assessment from a suitably qualified person which confirms that the use or development of potentially contaminated land would not adversely impact on human health or the environment. The proposal is consistent with the purpose of the Road and Railway Assets Code as it is accompanied by a Traffic Impact Statement which demonstrates that the safety and efficiency of the road and railway networks would be protected.

The relevant purpose statements for the Parking and Access Code are met as enough parking would be provided for the proposed development to meet the reasonable requirements of users. The proposal meets with the purpose of the Stormwater Management Code as stormwater from the development would be disposed of in a way which further the objectives of the State Stormwater Strategy. The proposal is consistent with the purpose of the Historic Heritage Code because the historic cultural heritage significance of an area of archaeological potential would be protected.

The site is within the area to which the Royal Hobart Hospital Helipad Airspace Specific Area Plan applies. However, the proposal clearly complies with the purposes of this specific area plan as the proposed building height is significantly lower than that required by the relevant provision within this plan.

6.4 The proposal has been assessed against:

- 6.4.1 23.0 Commercial Zone - 23.4 Development Standards for Buildings and Works
- 6.4.2 E2.0 Potentially Contaminated Land Code - E2.6 Development Standards
- 6.4.3 E5.0 Road and Railway Assets Code - E5.5 Use Standards and E5.6 Development Standards
- 6.4.4 E6.0 Parking and Access Code - E6.6 Use Standards and E6.7 Development Standards

- 6.4.5 E7.0 Stormwater Management Code - E.7 Development Standards
- 6.4.6 E13.0 Historic Heritage Code - E13.10 Development Standards for Places of Archaeological Potential
- 6.5 The proposal relies on the following performance criteria to comply with the applicable standards:
 - 6.5.1 23.0 Commercial Zone:
 - 23.4.1 Building Height P1,*
 - 23.4.5 Landscaping P1,*
 - 23.4.8 Residential and Visitor Accommodation Amenity P2, P5, P6, and P7.*
 - 6.5.2 E2.0 Potentially Contaminated Land Code:
 - E2.6.2 Excavation P1*
 - 6.5.3 E6.0 Parking and Access Code:
 - E6.6.1 Number of Car Parking Spaces P1*
 - E6.6.3 Number of Motorcycle Parking Spaces P1*
 - E6.7.10 Design of Bicycle Parking Facilities P2.*
 - 6.5.4 E7.0 Stormwater Management Code:
 - E7.7.1 Stormwater Drainage and Disposal P2*
 - 6.5.5 E13.0 Historic Heritage Code:
 - E13.10.1 Building, Works and Demolition P1*
- 6.6 The relevant performance criteria are assessed below.
- 6.7 *23.4.1 Building Height P1*
 - 6.7.1 The acceptable solution A1 at clause 23.4.1 requires building height to be no more than 15m high and a maximum of 4 storeys, if the development provides at least 50% of the floor space above ground level for residential use.
 - 6.7.2 The proposal includes a building height of more 15m high and more than

4 storeys. The proposed development would have a building height of approximately 19.6m and 6 storeys.

- 6.7.3 The proposal does not comply with the above acceptable solution and therefore relies upon assessment against the below performance criterion.

- 6.7.4 The performance criterion P1 at clause 23.4.1 provides as follows:

Building height must satisfy all of the following:

- (a) be consistent with any Desired Future Character Statements provided for the area;*
- (b) be compatible with the scale of nearby buildings;*
- (c) not unreasonably overshadow adjacent public space;*
- (d) allow for a transition in height between adjoining buildings, where appropriate;*

- 6.7.5 There are no Desired Future Character Statements provided for the Commercial Zone so the above sub-clause (a) is not considered relevant.

- 6.7.6 With regard to the above sub-clause (b) the term "compatible" is not defined in the planning scheme. However, the Resource Management and Planning Appeal Tribunal previously determined (in *Henry Design and Consulting v Clarence City Council and Ors* [2017] TASRMPAT 11) that the term was considered to mean "consistent with, similar to, in harmony with, and in broad correspondence with". In another Tribunal decision (9 *Sandy Bay Road Pty Ltd v Hobart City Council and Ors* [2017] TASRMPAT 19), "compatible" was found to mean, in relation to building height, that a building was "capable of coexisting with the scale of nearby buildings". In the same decision, "nearby" was found to mean "close to". Therefore, for the purposes of this assessment, nearby buildings are considered to include the buildings on adjoining lots and the buildings on the opposite side of Argyle Street and Brisbane Lane.

- 6.7.7 An assessment of the proposal against the above performance criterion must take into account the objective for the above clause, which is:

To ensure that building height contributes positively to the streetscape and does not result in unreasonable impact on residential amenity of land in a residential zone.

- 6.7.8 According to the planning scheme, "streetscape":

means the visual quality of a street depicted by road width, street planting, characteristics and features, public utilities constructed within the road reserve, the setbacks of buildings and structures from the lot boundaries, the quality, scale, bulk and design of buildings and structures fronting the road reserve. For the purposes of determining streetscape with respect to a particular site, the above factors are relevant if within 100 m of the site.

- 6.7.9 Argyle Street is a relatively standard width inner-city street at the point adjacent to the site. The street has three trafficable lanes and car parking on at least one side at this point. The other streets within 100m of the site have similar widths. Street planting in the Argyle Street reservation between Melville Street and Brisbane Street is limited. More extensive street planting is found to the south-east, however, it is generally limited upon the streets within 100m of the site. Public utilities constructed nearby within the road reserves surrounding the site are generally below ground. The only above ground utilities close to the site are streetlights. Given the above, road width, street planting, and public utilities are not considered to play a significant role in defining the streetscape surrounding the site.
- 6.7.10 Buildings within the area surrounding the site are generally built up to, or at least close to, the respective lot boundaries. There are exceptions to this pattern of development, such as upon the eastern corner of Argyle Street and Melville Street to the east of the site, where a car park separates a fast food restaurant from the front boundaries of the site. There are also several properties around the site that are considered to be under-developed that include only car parks or similar open areas. However, the prevailing pattern of development in the area within 100m of the site is that buildings are built up to the respective lot boundaries. The proposal would follow this pattern of development by siting the proposed building up to the site boundaries.
- 6.7.11 The qualities and design of the buildings within the surrounding area vary in architectural style and in the use of external materials. These buildings include the Art-Deco Ocean Child Hotel upon the western corner of Argyle Street and Melville Street to the south-east of the site, and the original early 20th century Hobart Fire Station on the opposite side of Argyle Street. Both of these buildings are heritage listed and incorporate the ornamentation and detailing that are expected to be found on older buildings. The fire station site also includes a more recent building on the northern corner of Argyle Street and Melville Street. While this is a modern building it includes references to the existing fire station building,

including the use of similar external materials such as red brick. This building also incorporates contemporary elements such as extensive glazed areas. The commercial buildings on the adjoining properties either side of the site also include extensive glazed areas. The building to the south-east is somewhat unique in that it is an older building that includes extensive glazing within its front facade as an original design feature, reflecting its original light industrial use as the J. Minty and Co Sheetmetalworkers (this building is therefore commonly referred to as "Minty's"). The proposal is considered to be consistent with the qualities and design of the buildings within the surrounding area given that they vary and include contemporary features, similar to those intended for the proposed building.

- 6.7.12 The scale and bulk of the buildings within the surrounding area also varies. However, as noted above, buildings are generally built up to, or at least close to property boundaries meaning that they occupy the majority of the respective lot. Therefore, the horizontal scale of buildings in the area is generally linked to the size of the respective property. It is noted that the development site has an area and street frontage width similar to that found elsewhere in the area. As a result, the proposed development would have a horizontal scale comparable to that found elsewhere in the surrounding area.
- 6.7.13 In terms of vertical scale, the majority of the buildings within the surrounding area are two storey. There are also single storey commercial buildings in the area with a similar height to a two storey building due to raised ceiling heights and shopfront facades. For example, while the commercial building on the adjoining property to the north-west is single storey, it has a building height similar to a two storey building as it has a near double height ceiling and a raised floor level. There are several three storey buildings in the area, including the commercial building on the adjoining property to the south-east and the more recent building on the fire station site on the opposite side of Argyle Street. There is only one building within 100m of the site that has more than three storeys - i.e. one of the apartment buildings to the south-west of the site at 40-42 Brisbane Street is five storey (although the ground level is a car park). The University of Tasmania accommodation facility at 157 Elizabeth Street, which has a significantly greater building height, is further to the south-west and greater than 100m from the site.
- 6.7.14 The proposed development would generally have a greater vertical scale than that found in the area within 100m of the site. The scale of the proposed development would also be greater than that of nearby

buildings. However, the scale of the proposed development is not considered to be incompatible with that of nearby existing buildings, as it would not be so dissimilar that it would be in disharmony with the latter. While the buildings on the properties either side of the site (i.e. at 92 and 110 Argyle Street) would have lower building heights than the proposed development, they are not small scale buildings and have reasonably significant bulk. The recently redeveloped three storey building on the adjoining property to the south-east would provide transition in scale between the proposed development and the single storey, heritage listed cottages further to the south-east.

- 6.7.15 As noted above, while the building on the adjoining property to the north-west is single storey, it has a raised floor level and near double height ceiling. This building is therefore unlikely to be visually dominated by the scale and bulk of the proposed development. The fire station building to the north-east of the site is also considered to be sufficiently robust to ensure that it is not visually dominated by the proposed development, particularly as it is separated from the site by Argyle Street. Similarly, the site is separated from the existing buildings to the south-west by Brisbane Lane. While this lane is narrow (i.e. only single lane) it would assist in providing sufficient separation between the development and the existing buildings in this direction.
- 6.7.16 While the proposed development would generally be greater in scale than other buildings within the surrounding streetscape, it is considered to be capable of coexisting with the scale of nearby buildings. As discussed above, the scale of nearby buildings is not insignificant. Therefore, the visual impact of the proposed development within the streetscape is not considered likely to be discordant or unexpected.
- 6.7.17 With regard to the above sub-clause (c), the only public open space that would be overshadowed by the proposed development would be the adjacent sections of Brisbane Lane. However, this impact is not considered to be unreasonable given that the lane is to the south and south-west of existing development, including the existing building on the site, and would therefore already be overshadowed to some extent for much of the day.
- 6.7.18 With regard to the above sub-clause (d), it is considered that the building does provide an adequate transition to the recently redeveloped Minty's building at 92-96 Argyle, which is three stories high. The two other adjoining sites of relevance are considered to be the site on the corner of Brisbane and Argyle Streets (110 Argyle Street) and the building at 31

Melville Street, which sits behind the subject site, adjoins Brisbane Lane, and has a frontage to both Brisbane and Melville Streets. With respect to these two properties, it should be recognised that the height of the buildings currently upon them is less than the permitted height in the Commercial Zone, particularly the permitted height for residential development (15m/4 storeys). The development potential of these properties is also not constrained by being heritage listed or within a heritage precinct, so the likelihood of their redevelopment is considered to be reasonable. Therefore, it is not considered appropriate in this instance to require the proposed development to transition down to these lower adjoining buildings (there is further commentary on the development potential of adjoining sites at paragraphs 6.10.7 to 6.10.10).

- 6.7.19 As noted earlier in the report, the proposal has been considered by the Urban Development Advisory Panel. The minutes from the meeting where the application was considered note that:

"The Panel was somewhat comfortable with the height [of the proposed building], although felt that as the first building in the area to increase the height, that there was a responsibility to validate an increased height in the context of the scheme. The Panel did not see validation in exceeding the permitted height merely to increase the number of apartments. Furthermore, the Panel noted the top floor apartments had less private outdoor space than the apartments below. The Panel noted that if the top floor had been set back further to provide more outdoor space to the top floor apartments, the 5 floors frontage to Argyle Street would have benefited the streetscape, being more compatible with adjacent buildings and the width of Argyle Street (approximately 17m)".

- 6.7.20 It is agreed that an increase in the setback from frontage for the top floor of the building would reduce the impact of the proposal upon the streetscape. However, it is considered that requiring such a setback would be beyond the scope of what could reasonably be conditioned, and that the setback of the top floor as proposed is not so impactful on the streetscape as to warrant refusal of the application.

- 6.7.21 The Panel also noted that:

"the application does not currently appreciate the transition from the denser city core. The top floor lacked the design finesse of the lower levels, which could have created better opportunities for resident amenity and transition. It was also noted that the cross sections to demonstrate the scale and relationship of the proposed building with its adjoining buildings

requested at the pre-application meeting were not provided. The Panel felt that this would have been beneficial to assess the building within the streetscape context and the amenity of the narrow private open space to apartments on the side facades".

- 6.7.22 It is noted that while the site is not within 100m of the higher density development that has occurred recently within the Hobart CBD, it is at the edge of the land within the Commercial Zone that abuts the Central Business Zone - i.e. the city block containing the site is the southernmost block within the Commercial Zone before the zoning changes to the Central Business Zone found along Elizabeth Street and on the south-eastern side of Melville Street. It is also noted that there are several sites between the proposed development site and the Central Business Zone land that are considered to have significant development potential. These sites include the property immediately to the south-west of the site on the opposite side of Brisbane Lane (at 31 Melville Street, see the comments at 6.10.10) and further to the south, at 70-82 Argyle Street. This latter property has been acquired by the University of Tasmania and identified as a site for future development. Given the large area of this property any development upon it is likely to be significant. Therefore, should the land between the site and the CBD develop as is likely, the height of the proposed development would provide an acceptable transition between the latter and the less developed areas to the north-east and north-west.
- 6.7.23 It is considered that the planning scheme limits its consideration of building height to the matters prescribed in the above performance criterion. The level of "design finesse" is not listed as one of the matters for consideration in the performance criterion. While the Panel was not provided with cross-sections of the proposed development that also show adjoining buildings, it was provided with street elevations that show the relationship of the proposed building to existing buildings (drawing DA-07).
- 6.7.2 The proposal complies with the above performance criterion.
- 6.8 23.4.2 *Setback* P1
- 6.8.1 The acceptable solution at clause 23.4.2 requires building setback from frontage to be parallel to the frontage and to be no less than 0m.
- 6.8.2 The proposal includes a building setback from frontage that would not be parallel to the frontage. Given that the proposed development aligns with the site side boundaries and that these boundaries are not perpendicular

to the front boundary, the facade of the proposed development would not be parallel to the latter boundary. As it is not possible to have a setback that is less than 0m, the aspect of the above standard that requires this is considered to be a drafting error.

- 6.8.3 The proposal does not comply with the above acceptable solution and therefore relies upon assessment against the below performance criterion.

- 6.8.4 The performance criterion P1 at clause 23.4.2 provides as follows:

Building setback from frontage must satisfy all of the following:

- (a) be consistent with any Desired Future Character Statements provided for the area;*
- (b) be compatible with the setback of adjoining buildings, generally maintaining a continuous building line if evident in the streetscape;*
- (c) enhance the characteristics of the site, adjoining lots and the streetscape;*
- (d) provide adequate opportunity for parking.*

- 6.8.5 There are no Desired Future Character Statements provided for the Commercial Zone so the above sub-clause (a) is not considered relevant.

- 6.8.6 The proposed building setback from frontage would be compatible with the setback of adjoining buildings. Only a minimal setback from frontage is proposed - i.e. a setback of only 60mm is proposed between the end of the wall proposed on the site's south-eastern boundary and the frontage. As similar setback is proposed for a landscaping bed. The setback from frontage proposed to the facade of the building varies from 745mm to 1274mm. Therefore, the proposed development would match the limited setbacks from frontage achieved by adjoining buildings to the north-east, south-east, and north-west. As a result, the generally continuous building line on this part of Argyle Street would be maintained.

- 6.8.7 The difference between the alignment of the site's front boundary and the facade of the proposed building would be less than 1 degree. Such a negligible difference would not be perceptible and is therefore unlikely to affect the characteristics of the site, adjoining lots, or the streetscape. Similarly, the alignment of the development relative to the frontage would not affect the provision of car parking on the site.

- 6.8.6 The proposal complies with the above performance criterion.

6.9 23.4.5 Landscaping P1

- 6.9.1 The acceptable solution A1 at clause 23.4.5 requires landscaping to be provided along the frontage of a site unless a building extends across the width of the frontage (except for vehicular access ways) and it has a setback from frontage of no more than 1m.
- 6.9.2 The proposal includes a building that would in part be setback from the site frontage by more 1m. While the proposal includes some landscaping, this would not extend along the frontage.
- 6.9.3 The proposal does not comply with the above acceptable solution and therefore relies upon assessment against the below performance criterion.
- 6.9.4 The performance criterion P1 at clause 23.4.5 provides as follows:

Landscaping must be provided to satisfy all of the following:

- (a) enhance the appearance of the development;*
(b) provide a range of plant height and forms to create diversity, interest and amenity;
(c) not create concealed entrapment spaces;
(d) be consistent with any Desired Future Character Statements provided for the area.
- 6.9.5 While the landscaping proposed on the site's Argyle Street frontage would be limited to two garden beds, this is considered adequate to soften and provide visual interest around the entrance to the building. The proposed landscaping would not create entrapment spaces. As noted earlier, there are no Desire Future Character Statements provided for the Commercial Zone.
- 6.9.6 The proposal complies with the above performance criterion.

6.10 23.4.8 Residential and Visitor Accommodation Amenity P2

- 6.10.1 The acceptable solution A2 at clause 23.4.8 requires the residential components of a new building to have all habitable room windows either setback at least 5m from a side boundary, or, facing a frontage.
- 6.10.2 The proposal includes habitable room windows that would not be setback at least 5m from the site's side boundaries and would not face a frontage.

The bedroom windows within the northern and southern elevations of the building would be approximately 3m from the site side boundaries and would not face either frontage.

- 6.10.3 The proposal does not comply with the above acceptable solution and therefore relies upon assessment against the below performance criterion.

- 6.10.4 The performance criterion P2 at clause 23.4.8 provides as follows:

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

- (a) proximity to side and rear boundaries;*
- (b) proximity to other buildings on the same site;*
- (c) the height and bulk of other buildings on the same site;*
- (d) the size of any internal courtyard or void;*
- (e) the use of light wells or air shafts;*
- (f) development potential on adjacent sites, considering the zones and codes that apply to those sites; and*
- (g) any assessment by a suitably qualified person.*

- 6.10.5 The side boundary setbacks proposed for the development are considered to allow for reasonable access to daylight into habitable rooms. It is noted that the windows proposed facing the site's side boundaries are generally bedroom windows, save for sliding glass doors to the living areas of the apartments proposed upon level 1 and small windows to the living areas on the subsequent levels above. Reduced access to daylight for bedrooms is considered acceptable where the living areas of the respective dwelling would receive adequate daylight. All of the living areas proposed at either the north-eastern end or the south-western end of the respective apartment would have near full height glazing within the elevation which would face the respective frontage - i.e. extensive glazing is proposed within the north-eastern elevation, which would face Argyle Street, and within the south-western elevation which would face Brisbane Lane. This extensive glazing would provide reasonable access to daylight for all of the proposed living areas, although it is noted that the apartments within the southern part of the development may receive only indirect sunlight at certain times of the year. The glazed areas also include double sliding doors that in conjunction with smaller sliding doors to be provided onto the balconies

adjacent to the proposed bedrooms would allow for air circulation and natural ventilation.

- 6.10.6 There are no other buildings on the site, so the above sub-clauses (b) and (c) are not relevant. An internal courtyard, void, light well, or air shaft is not proposed so sub-clauses (d) and (e) are also not relevant.
- 6.10.7 The adjacent sites surrounding the site have varying development potential. All of the adjacent sites are within the Commercial Zone so the same development standards that apply to the current proposal may apply to any future development upon adjacent sites. The development potential of the fire station site to the north-east of the site is constrained by its heritage status and the relevant provisions of the planning scheme's Historic Heritage Code. This code would also apply to other adjacent sites but only to the extent that they are considered to have archaeological potential. Without site specific assessments of the archaeological potential of the adjacent sites it is difficult to determine the impact of this potential upon the respective development potential of each site. However, it is assumed that given that the adjacent sites are relatively disturbed, there is unlikely to be significant archaeological evidence present that would significantly restrain development potential.
- 6.10.8 The adjacent property to the north-west, at 110 Argyle Street, is within the same ownership as the subject property. The applicant advises that a similar development to that currently proposed is envisaged for this site. Any development upon this adjacent site with a similar footprint and building height to that currently proposed would reduce the solar access of any windows within the north-western elevation of the proposed development. However, as noted above, these windows are predominantly bedroom windows and it is considered acceptable for these windows to receive less daylight where the living areas of the respective dwelling would receive adequate daylight.
- 6.10.9 Given that the adjacent site to the south-east of the site, at 92-96 Argyle Street, has been redeveloped relatively recently, it is perhaps less likely to be further developed in the near future. However, similarly to above, the solar access of the proposed development is unlikely to be significantly affected by future development upon this site as generally only bedroom windows would be affected.
- 6.10.10 The adjacent property to the south-west of the site is considered to have significant development potential. This property is a larger commercial lot that extends the full length of the city block between Melville Street and

Brisbane Street. The majority of this property is occupied by what appears to be an older, single storey warehouse style building that has a shopfront facing Brisbane Street but also has openings onto Brisbane Lane. Any redevelopment of this site that occupied a similar footprint to the existing building and had a building height similar to that currently proposed would affect the solar access of the living areas at the south-eastern end of the proposed development. However, Brisbane Lane would provide separation between the buildings in this scenario that would allow reasonable access to daylight (if not direct sunlight) and for air circulation and natural ventilation for these living areas.

- 6.10.11 The proposal is supported by a planning report which states, in response to the above performance criterion, that:

"The design of the proposed development allows for equitable development outcomes on the adjacent sites should these be developed in a similar manner. The upper levels are setback a minimum of 2m from the shared boundaries, and it would be anticipated that future developments on the adjacent sites would do the same to maintain a sense of openness between buildings and allow for equitable access to privacy, sunlight, daylight and outlook for the proposed and future developments".

This view is supported as it is agreed that future development upon the adjacent sites is likely to maintain adequate separation from development upon the site.

- 6.10.12 The proposal complies with the performance criterion.

6.11 *23.4.8 Residential and Visitor Accommodation Amenity P5*

- 6.11.0 The acceptable solution A5 at clause 23.4.8 requires each dwelling on a site to have private open space (POS) that has a minimum horizontal dimension of 2m.
- 6.11.2 The proposal includes dwellings that would not have POS with a minimum horizontal dimension of 2m. The areas of POS proposed at the south-western end of the building on levels 2 to 4 and at the south-western and north-eastern ends of level 5 would have a minimum dimension less than 2m.
- 6.11.3 The proposal does not comply with the above acceptable solution and therefore relies upon assessment against the below performance

criterion.

- 6.11.4 The performance criterion P5 at clause 23.4.8 provides as follows:

Private open space for dwellings or serviced apartments must provide reasonable amenity and be capable of meeting the projected outdoor recreation requirements of occupants, having regard to:

- (a) the size and minimum dimensions of the space, excluding space occupied by plant and equipment such as outdoor components of an air conditioning unit;*
- (b) the amount of space available for furniture or plantings;*
- (c) the potential for significant noise intrusion;*
- (d) proximity and overlooking to the private open space of existing adjacent residential and serviced apartment developments;*
- (e) screening where necessary for privacy that does not unreasonably restrict access to daylight;*
- (f) screening where necessary for noise and wind protection that does not unreasonably restrict access to daylight;*
- (g) screening from public view for clothes drying areas; and*
- (h) any advice from a suitably qualified person.*

- 6.11.5 As shown on the submitted floor plans, the POS proposed for the apartments on the south-western side of the building on levels 2 to 4 and on level 5 would have the size and dimensions necessary to accommodate furniture, plantings, and other equipment such as a small BBQ. The floor plans show that each area of POS could accommodate a small outdoor dining table and chairs as well as another smaller table and other chairs. A BBQ is also shown within the areas of POS on the plans.

- 6.11.6 The areas of POS proposed at the south-western end of the building on levels 2 to 4 and at the south-western and north-eastern ends of level 5 would not be occupied by plant and equipment such as the outdoor components of air conditioning units. While individual air conditioning units are proposed for each apartment, the respective outdoor components of these units would be placed upon the balconies proposed adjacent to the bedrooms on the side of the building. The areas of POS proposed at either end of the building would therefore be separated from these outdoor units and unlikely to be significantly affected by noise protrusion from the units.

- 6.11.7 There are no existing residential and serviced apartment developments adjacent to the site. It is noted that the part of the above

acceptable solution that addresses separation between areas of POS requires only separation between proposed areas and areas in another building - i.e. this standard does not apply to the separation between areas of POS in the same building.

- 6.11.8 Screens would be provided between the relevant areas of POS in order to provide privacy, as required by sub-clause (e) of the above performance criterion. These screens would not significantly affect access to daylight. While screening specifically for noise and wind protection would not be provided for the areas of POS, this screening is not considered necessary as the areas would generally be relatively enclosed.
- 6.11.9 External clothes drying facilities are not shown on the submitted plans, although these facilities are mentioned in the planning report provided with the application. The submitted floor plans indicate that the laundry for each apartment would include a clothes dryer so the use of the areas of POS for clothes drying is likely to be limited. Therefore, screening for clothes drying areas is not considered to be required.
- 6.11.10 As noted in the submitted planning report, an acoustic assessment has also been provided, although this does not address likely noise impacts upon the proposed areas of POS, so does not assist when considering the proposal against the above performance criterion.
- 6.11.11 The proposal complies with the above performance criterion.
- 6.12 23.4.8 Residential and Visitor Accommodation Amenity P6
 - 6.12.1 The acceptable solution A5 at clause 23.4.8 requires sites with more than 10 dwellings to provide communal open space.
 - 6.12.2 The proposal includes more than 10 dwellings but does not include communal open space.
 - 6.12.3 The proposal does not comply with the above acceptable solution and therefore relies upon assessment against the below performance criterion.
 - 6.12.4 The performance criterion P6 at clause 23.4.8 provides as follows:

Sites with 10 or more dwellings or serviced apartments must provide communal open space on the site that provides reasonable amenity and outdoor recreation opportunities for occupants, having regard to:

- (a) the area and dimensions of the space;*
- (b) the total number of dwellings or serviced apartments on the site;*
- (c) the accessibility of the space;*
- (d) the flexibility of the space and opportunities for various forms of recreation;*
- (e) the availability and location of common facilities within the space;*
- (f) landscaping;*
- (g) the provision of gardens, trees and plantings (including food gardens) appropriate in area to the size of the communal open space;*
- (h) accessibility to daylight, taking into account the development potential of adjacent sites;*
- (i) the outlook from the space;*
- (j) the level of noise intrusion from external noise sources; and*
- (k) any advice from a suitably qualified person;*

unless:

(i) the dwellings or serviced apartments are located in an existing building where communal open space cannot be reasonably achieved due to site constraints, or impacts on historic cultural heritage values of a place or precinct listed in the Historic Heritage Code;

(ii) open space, accessible by the public, that is of high quality in terms of location access to sunlight, outlook, facilities, landscaping and accessibility and that can adequately accommodate the needs of occupants is provided on the site; or

(iii) private open space is provided for all dwellings or serviced apartments on the site, provides a reasonable level of amenity in terms of access to sunlight and outlook, and sufficiently caters for flexible outdoor recreation needs including relaxation, entertainment, planting, outdoor dining and children's play.

6.12.5 Given that no communal open space is proposed, the proposal relies upon the exception provided by the above sub-clause (iii). The exceptions provided by sub-clauses (i) and (ii) are not applicable as the proposed dwellings would not be located in an existing building and publicly accessible open space would not be provided.

6.12.6 Private open space would be provided for all of the dwellings proposed on the site. As discussed above, the proposed areas of POS are considered to have reasonable access to sunlight, although it is recognised that the areas proposed on the south-western end of the

building would receive only limited direct sunlight at certain times of the year. This limitation is considered to offset to some extent by the provision of open areas on more than one side of each apartment. In addition to the larger area of POS provided at either the north-eastern or south-western end of the building, each apartment would also be provided with a smaller balcony on one side of the building. This arrangement would allow opportunity for different parts of the POS provided for each apartment to receive sunlight at different times of the day.

- 6.12.7 All of the areas of the proposed areas of POS are considered likely to enjoy a favourable outlook. The areas orientated toward the north-east would enjoy an outlook toward the Glebe and the Queens Domain, while those orientated toward the south-west would enjoy an outlook toward kunanyi/Mt Wellington.
- 6.12.8 The proposed areas of POS are considered likely to sufficiently cater for flexible outdoor recreation needs. As discussed above, the submitted plans demonstrate that the areas could accommodate outdoor dining facilities such as chairs, tables, and BBQs. In addition, the plans also show planter boxes that would make some provision for planting. These facilities are considered to sufficiently cater for outdoor relaxation and entertainment, although it is acknowledgement that limited provision is made for children's play.
- 6.12.9 As mentioned earlier in the report, the proposal was considered by the Urban Development Advisory Panel. The minutes from the meeting where the proposal was considered state that:
- "The Panel had concern about the lack of common open space proposed within the development. The extent and the quality of private open space proposed for each apartment was not considered sufficient to justify no communal open space, especially as the private open space does not satisfy the Scheme's Acceptable solution and would therefore require discretionary approval in accordance with the scheme's performance solution".
- 6.12.10 The extent of the POS provided for each apartment is considered to be comparatively generous given that the main areas of POS at either end of the building would be supplemented by smaller areas on the sides of the building. The quality of the proposed POS is considered acceptable given the evident site constraints - i.e. the site is a relatively narrow rectangular shaped lot that is orientated with its longer sides facing toward the north-west/south-east. It is noted that there is no direct link

between the above performance criterion regarding the provision of communal open space and any other planning scheme standard - that the private open space that would be provided within the development does not comply with all relevant acceptable solutions (as discussed earlier) is not relevant when considering whether communal open space should be provided.

6.12.11 The proposal complies with the above performance criterion.

6.13 23.4.8 Residential and Visitor Accommodation Amenity P7

6.13.1 The acceptable solution A7 at clause 23.4.8 requires each multiple dwelling to be provided with a dedicated and secure storage space of no less than 6m³.

6.13.2 The proposal includes multiple dwellings that would be provided with less than 6m³ of storage space. While each proposed dwelling would be provided with a storage space on the ground floor of the development, the space provided for some dwellings would be less than 6m³.

6.13.3 The proposal does not comply with the above acceptable solution and therefore relies upon assessment against the below performance criterion.

6.13.4 The performance criterion P7 at clause 23.4.8 provides as follows:

Each multiple dwelling must be provided with adequate storage space.

6.13.5 As noted in the planning report provided with the application, an average of 20m³ of internal storage space per dwelling would be provided within the development in addition to the external storage provided upon the ground floor. Therefore, each proposed dwelling would be provided with adequate storage space.

6.13.6 The proposal complies with the above performance criterion.

6.14 E2.6.2 Excavation

6.14.1 There is no acceptable solution for clause E2.6.2 which applies where excavation of potentially contaminated land is proposed.

6.14.2 The proposal includes excavation of potentially contaminated land. The is considered to be potentially contaminated land and excavation is

proposed in order to carry out the proposed development.

- 6.14.3 As there is no acceptable solution for the above clause the proposal therefore relies upon assessment against the below performance criterion

- 6.14.4 The performance criterion at clause E2.6.2 provides as follows:

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

*(a) an environmental site assessment that demonstrates there is no evidence the land is contaminated; or
(b) a plan to manage contamination and associated risk to human health and the environment that includes:*

*(i) an environmental site assessment;
(ii) any specific remediation and protection measures required to be implemented before excavation commences; and
(iii) a statement that the excavation does not adversely impact on human health or the environment.*

- 6.14.5 Council's Senior Environmental Health Officer has assessed the proposal against the above performance criterion and provided the following comments:

"A plan to manage contamination and associated risks to human health and the environment was submitted, and it includes:

(i) The plan includes a Environmental Site Assessment (ESA) which was conducted and prepared by a suitably qualified person/company and is in accordance with the National Environment Protection Measure (NEPM),
(ii) The ESA outlines specific remediation and protective measures required to be implemented before any excavation commences, and;
(iii) The ESA states that the excavation will not adversely impact on human health or the environment if the recommendations of the ESA are followed".

- 6.14.6 The proposal complies with the above performance criterion.

6.15 *E6.6.1 Number of Car Parking Spaces*

- 6.15.1 The acceptable solution at clause E6.6.1 requires the number of on-site car parking spaces to be no less than the number specified in Table E6.1.

- 6.15.2 The proposal includes less than the number of the number of on-site car parking spaces specified in Table E6.1. 45 on-site car parking spaces are required (including 5 spaces for visitor parking); 20 car parking spaces are proposed.
- 6.15.3 The proposal does not comply with the above acceptable solution and therefore relies upon assessment against the below performance criterion.
- 6.15.4 The performance criterion at clause E6.6.1 provides as follows:

The number of on-site car parking spaces must be sufficient to meet the reasonable needs of users, having regard to all of the following:

- (a) car parking demand;*
- (b) the availability of on-street and public car parking in the locality;*
- (c) the availability and frequency of public transport within a 400m walking distance of the site;*
- (d) the availability and likely use of other modes of transport;*
- (e) the availability and suitability of alternative arrangements for car parking provision;*
- (f) any reduction in car parking demand due to the sharing of car parking spaces by multiple uses, either because of variation of car parking demand over time or because of efficiencies gained from the consolidation of shared car parking spaces;*
- (g) any car parking deficiency or surplus associated with the existing use of the land;*
- (h) any credit which should be allowed for a car parking demand deemed to have been provided in association with a use which existed before the change of parking requirement, except in the case of substantial redevelopment of a site;*
- (i) the appropriateness of a financial contribution in lieu of parking towards the cost of parking facilities or other transport facilities, where such facilities exist or are planned in the vicinity;*
- (j) any verified prior payment of a financial contribution in lieu of parking for the land;*
- (k) any relevant parking plan for the area adopted by Council;*
- (l) the impact on the historic cultural heritage significance of the site if subject to the Local Heritage Code;*
- (m) whether the provision of the parking would result in the loss, directly or indirectly, of one or more significant trees listed in the Significant Trees Code.*

- 6.15.5 Council's Senior Development Engineer has assessed the proposal against the above performance criterion and provided the following comments:
- "The empirical parking assessment indicates that the provision of twenty (20) on-site car parking spaces will sufficiently meet the likely demands associated with the development, with the exception of onsite visitor parking".
 - "There is a relatively little supply of on-street parking in the surrounding road network during business hours".
 - "Metro Tasmania operate regular bus services is within 400 metres of the subject site".
 - "The site is located a convenient walking distance from shops, schools and services".
 - "Based on the above assessment and given the submitted documentation, the parking provision may be accepted under Performance Criteria P1: E6.6.1 of the Planning Scheme. This is particularly due to the actual parking demands that will be generated by the development".
- 6.15.6 The proposal complies with the above performance criterion.

6.16 *E6.6.3 Number of Motorcycle Parking Spaces P1*

- 6.16.1 The acceptable solution at clause E6.6.3 A 1 requires the number of on-site motorcycle parking spaces provided to be at a rate of 1 space to each 20 car parking spaces.
- 6.16.2 The proposal does not include on-site motorcycle parking spaces. At least one motorcycle parking space is required given the number of car parking spaces proposed.
- 6.16.3 The proposal does not comply with the above acceptable solution and therefore relies upon assessment against the below performance criterion.
- 6.16.4 The performance criterion at clause E6.6.3 P1 provides as follows:

The number of on-site motorcycle parking spaces must be sufficient to meet the needs of likely users having regard to all of the following, as appropriate:

- (a) motorcycle parking demand;*
- (b) the availability of on-street and public motorcycle parking in the locality;*
- (c) the availability and likely use of other modes of transport;*
- (d) the availability and suitability of alternative arrangements for motorcycle parking provision.*

- 6.16.5 While there is no on-street and public motorcycle parking in locality, the proposed development is considered to generate only limited demand for such parking. As noted above, the site is located a convenient walking distance from shops, schools and services so residents are likely to use other modes of transport. While motorcycle parking is not proposed, the ground floor of the development appears to have sufficient area to accommodate such parking if required.
- 6.16.6 The proposal complies with the above performance criterion.
- 6.17 *E6.7.10 Design of Bicycle Parking Facilities P2*
- 6.17.1 The acceptable solution A2 at clause *E6.7.10* requires the design of bicycle parking spaces to 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.
- 6.17.2 The proposal includes bicycle parking spaces that would not comply with the above requirements.
- 6.17.3 The proposal does not comply with the above acceptable solution and therefore relies upon assessment against the below performance criterion.
- 6.17.4 The performance criterion P2 at clause *E6.7.10* provides as follows:
- The design of bicycle parking spaces must be sufficient to conveniently, efficiently and safely serve users without conflicting with vehicular or pedestrian movements or the safety of building occupants.*
- 6.17.5 Council's Senior Development Engineer has assessed the proposal against the above performance criterion and advised that the proposed bicycle parking may be accepted.
- 6.17.6 The proposal complies with the above performance criterion.

6.18 E7.7.1 Stormwater Drainage and Disposal P2

- 6.18.1 The acceptable solution A2 at clause E7.7.1 requires a stormwater system for a new development to incorporate water sensitive urban design (WSUD) principles for the treatment and disposal of stormwater if new car parking is provided for more than 6 cars.
- 6.18.2 The proposal includes new car parking for more than 6 cars but would not include WSUD design principles in the proposed stormwater management system.
- 6.18.3 The proposal does not comply with the above acceptable solution and therefore relies upon assessment against the below performance criterion.
- 6.18.4 The performance criterion at clause E7.7.1 P2 provides as follows:

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

- 6.18.5 Council's Technical Officer - Environmental has assessed the proposed stormwater management arrangements and provided the following comments:

"The proposed treatment device (Ocean Protect Jellyfish JF900-1-1) is claimed to meet the State Stormwater Strategy standards for site discharge. It will require the existing connection to be replaced, as a site visit revealed it is currently very shallow. Head drop can be as little as 150mm if upstream weir gives head loss of 460mm. The proposed model would treat 5L/s - manufacturer modelled in MUSIC. Assume they used correct bypass figures. Assume they can obtain the required fall with the revised connection".

The information submitted with the application suggests that the proposed stormwater connections "(2x 150x75 at 5cmm over 7.5m) have capacity of 28L/s vs Q100 of 30.8L/s. Q20 would be ~18L/s (neglecting facade). Overflow in events >5% AEP is acceptable (as long as safe) - overflow is shown passing out of driveway grate and onto road [which is considered] acceptable. Council does not usually accept >12L/s discharge to kerb - but as replacing existing [this will be] allowed. The interception of rain by

the vertical catchment will slightly increase flows from the kerb connections, but not to the system as a whole. Site is low in catchment, and detention would not be beneficial".

6.18.6 The proposal complies with the above performance criterion.

6.19 *E13.10.1 Building, Works and Demolition P1*

6.19.1 The acceptable solution at clause *E13.10.1 A1* requires building and works at a place of archaeological potential to not involve excavation or ground disturbance.

6.19.2 The proposal includes excavation and ground disturbance and the site is a place of archaeological potential.

6.19.3 The proposal does not comply with the above acceptable solution and therefore relies upon assessment against the below performance criterion.

6.19.4 The performance criterion at clause *E13.10.1 P1* provides as follows:

Buildings, works and demolition must not unnecessarily impact on archaeological resources at places of archaeological potential, having regard to:

- (a) the nature of the archaeological evidence, either known or predicted;*
- (b) measures proposed to investigate the archaeological evidence to confirm predictive statements of potential;*
- (c) strategies to avoid, minimise and/or control impacts arising from building, works and demolition;*
- (d) where it is demonstrated there is no prudent and feasible alternative to impacts arising from building, works and demolition, measures proposed to realise both the research potential in the archaeological evidence and a meaningful public benefit from any archaeological investigation;*
- (e) measures proposed to preserve significant archaeological evidence 'in situ'.*

6.19.5 Council's Senior Cultural Heritage Officer has assessed the proposal against the above performance criterion and provided the following comments:

"The proposal is supported by a report by Austral Tasmania,

Archaeological Impact Assessment, Final Report, dated 21 February 2020. The report concludes that the majority of the site has low archaeological potential. This is the area of the footprint of the extant building while the remainder of the site is assessed as having moderate archaeological potential. A number of recommendations are made in relation to monitoring and recording. All recommendations outlined in the Austral Report (4.0 Conclusions and Recommendations, pp19-21) should be adhered to. This can be achieved by several conditions of permit. It is therefore concluded that this proposal satisfies *E13.10.1 P1*."

6.19.6 The proposal complies with the above performance criterion.

7. Discussion

- 7.1 Planning approval is sought for demolition and new building for 20 multiple dwellings at 98 Argyle Street, Hobart.
- 7.2 The application was advertised and received 223 representations. The representations raised concerns regarding the height of the proposed development, its impact upon the local traffic environment, and the proposed bicycle storage arrangements. More specifically the representations that raise concern regarding the height of the development suggest that it should have one less storey (as originally proposed) and that the development will set a precedent for the approval of further development within the area that does not comply with the planning scheme's acceptable solution for building height. Several of these representations also suggest that the development will have a detrimental impact upon the privacy and outlook of nearby residential development and that the impact of any future development upon adjoining sites should be taken into account when assessing the current proposal.

- 7.3 It is not possible for Council to approve the proposed development with a requirement that it be reduced in height by one storey. Given that this requirement would result in a significantly different outcome than that sought by the application, imposing the requirement is likely to be considered "tantamount to refusal". The proposal must be assessed as it is proposed. If it is Council's view that the proposal does not comply with the relevant planning scheme standards, including the relevant standard for building height, then the application should be refused. However, as detailed above, the proposal is considered to comply with this standard. While proposed development would have a building height greater than nearby buildings, its impact upon the streetscape is not considered likely to be so detrimental as to warrant refusal of the application. It should be noted that the height of the proposed development would not be significantly greater than that allowed for by the planning scheme's relevant acceptable solution for building height - i.e. the acceptable solution allows for a building height up to 15m and a height of less than 20m is proposed. It is also noted that there are several sites within the surrounding area that are considered to be underdeveloped and are likely to be developed in a similar manner to that currently proposed, given the prevailing planning controls.
- 7.4 Approving the current proposal would not create a precedent for the approval of further development within the area that does not comply with the planning scheme's acceptable solution for building height. Any development proposal must be assessed against the relevant planning scheme standards that specifically apply to the site. While aspects of the planning scheme standard for building height require a comparison between what is proposed and existing nearby development, it does not necessarily follow that a proposal will be approved if there is a building on a nearby site that does not comply with the acceptable solution for building height.

- 7.5 The proposed development would be separated from nearby residential uses by distance and by existing buildings. The development would be separated from the cottages to the south-east by the three storey building on the adjoining property in this direction, meaning that it is unlikely to be visible from the former. The development would be separated from the closest residential development to the south-west by a distance of approximately 50m. The development would be separated from the residential use to the north by a similar distance. Therefore, the proposal is considered unlikely to have an impact upon the privacy of nearby residential use and development. While the development would be visible from some parts of the nearby residential development, this is not considered likely to have an unacceptable visual impact. The impact of potential development on adjacent sites upon the proposed development has been taken into account in this assessment. The proposed development is considered to incorporate sufficient measures, such as side setbacks and the avoidance of single aspect dwellings, to ensure that its residential amenity is not unreasonably compromised by future development upon adjacent lots.
- 7.6 The proposal is not considered likely to have a significant impact upon the local traffic environment. While a not insignificant number of additional dwellings are proposed, the traffic generated by the development would not be significant in the context of the local road given the traffic volumes it carries. As noted earlier in the report, the site's proximity to the CBD is likely to encourage residents to use alternative means of transport, such as walking or cycling. There is no planning scheme requirement for bicycle parking to be provided for residential such as that proposed. Council therefore has no capacity to require the proposed bicycle parking to be altered or improved as suggested in one of the representations received.
- 7.7 The application was considered by the Urban Design Advisory Panel at its meeting of 31 May 2021. The Panel's comments are provided in full as an attachment to this report. A number of the Panel's comments have been included above in section 6 of the report. While the Panel expressed some misgivings regarding the proposal and expressed a desire for changes to be made to the proposed design, it stopped short of recommending that Council refuse the application.
- 7.8 The proposal has been assessed against the relevant provisions of the planning scheme and is considered to comply.
- 7.9 The proposal has been assessed by other Council officers, including the Council's Senior Development Engineer and its Senior Cultural Heritage Officer. The officers have raised no objection to the proposal, subject to conditions.
- 7.10 The proposal is recommended for approval.

8. Conclusion

- 8.1 The proposed demolition and new building for 20 multiple dwellings at 98 Argyle Street, Hobart satisfies the relevant provisions of the *Hobart Interim Planning Scheme 2015* and is recommended for approval.

9. Recommendations

That: Pursuant to the *Hobart Interim Planning Scheme 2015*, the City Planning Committee, in accordance with the delegations contained in its terms of reference, approve the application for demolition and new building for 20 multiple dwellings at 98 Argyle Street, Hobart, for the reasons outlined in the officer's report and a permit containing the following conditions be issued:

GEN

The use and/or development must be substantially in accordance with the documents and drawings that comprise PLN-20-706 - 98 ARGYLE 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 Amended Submission to Planning Authority Notice, Reference No. TWDA2020/01741-HCC dated 27/4/2021 as attached to the permit.

Reason for condition

To clarify the scope of the permit.

PLN 15a

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

Advice:

It is recommended that the developer liaise with the Council's 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), revised plans, and montages and samples where appropriate, must be submitted and approved as a Condition Endorsement 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: This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

Reason for condition

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

PLN s2

A landscape plan must be prepared for the soft and hard landscaping, by a suitably qualified landscape designer.

Prior to the issue of any approval under the *Building Act 2016* (excluding for demolition), 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 (or another suitably qualified landscape designer) that the all landscaping works required by this condition have been implemented, must be submitted to the satisfaction of the Directory City Planning.

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

Reason for condition

In the interest of the amenity of the spaces, streetscape and townscape values of the surrounding area.

PLN s3

Any cranes used in construction of the approved development must not create an obstruction or hazard for the operation of aircraft approaching and departing the Royal Hobart Hospital helipad.

Advice: The developer is encouraged to contact the Department of Health and Human Services prior to construction to discuss the operation of any cranes.

Reason for condition

To ensure that cranes or other temporary structures used in the construction of the development do not interfere with safe aircraft operations in the vicinity of the Royal Hobart Hospital helipad.

PLN s4

Prior to the issue of any approval under the *Building Act 2016* (excluding for demolition), revised plans must be submitted and approved as a Condition Endorsement that demonstrate that design elements of the development are able to achieve internal noise levels in accordance with relevant Australian Standards for acoustics control (AS3671:1989 – *Road Traffic Noise Intrusion (Building Siting and Construction)* and AS2107:2016 – *Acoustics (Recommended Design Sound Levels and Reverberation Times for Building Interiors)*).

The revised plans must be certified by a suitably qualified person as demonstrating likely compliance with the above requirement.

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

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

Reason for condition

To ensure that buildings for residential uses provide reasonable levels of amenity in terms of noise.

ENG 12

A construction waste management plan must be implemented throughout construction.

A construction waste management plan must be submitted and approved as a Condition Endorsement, prior to commencement of work on the site. The construction waste management plan must include:

- **Provisions for commercial waste services for the handling, storage, transport and disposal of post-construction solid waste and recycle bins from the development; and**
- **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 construction waste management plan.

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

It is recommended that the developer liaise with the Council's 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.

ENG sw1

All stormwater from the proposed development (including but not limited to: roofed areas, g 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

Any new stormwater connection required must be constructed, and any existing redundant connections be abandoned and removed. The connection works must be done by Council at the owner's expense prior to occupancy or commencement of use (whichever occurs first).

Detailed engineering drawings must be submitted and approved as a Condition Endorsement, 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 accurate location and levels of the proposed connections and all existing connections;**
- 2. the size and design of the connection such that it is appropriate to safely service the development for all 5% AEP rainfall events (including the vertical catchment) and discharge is contained within the kerb;**
- 3. plan and long-section of the proposed connection clearly showing clearances from any nearby obstacles including crossovers and 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 engineering drawings.

Advice:

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

The depth and alignment of the stormwater connection shown on the Rare Drainage and Service Plan DA01 RevA does not agree with Council records. A single connection for the property is required under the Urban Drainage Act 2013. Standard sizes for kerb and gutter connections are in Council's Fees and Charges Booklet available from [here](#), and must run in a straight line from the private boundary transition pit if possible.

Once the Condition Endorsement has been issued, the applicant will need to submit an [application for a new stormwater connection](#) with Council's City Amenity

Division. Should the applicant wish to have their contractor install the connection, an [Application to Construct Public Infrastructure](#) is required.

The stormwater service connection may be required to have been approved prior to any plumbing permits being issued for private plumbing works.

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 occupancy or the commencement of use (whichever occurs first).

A stormwater management report and detailed design must be submitted and approved as a Condition Endorsement, prior to the issuing of any approval under the Building Act 2016 or commencement of works (which ever occurs first). The stormwater management report and design must:

- 1. be prepared by a suitably qualified person;**
- 2. include detailed design of the proposed treatment train, including estimations of contaminant removal for the final design, driving head, and a long-section;**
- 3. include a supporting maintenance plan, which specifies the required maintenance measures to check and ensure the ongoing effective operation of all systems, such as: inspection frequency; cleanout procedures; descriptions and diagrams of how the installed systems operate; details of the life of assets and replacement requirements.**

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

Advice: Once the plans and report have 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 domestic waste and recycling must be implemented post construction.

The waste management plan must be submitted and approved as a Condition Endorsement, prior to commencement of work on the site (excluding for demolition). The waste management plan must include:

1. **Details of commercial waste services for the handling, storage, transport and disposal of domestic waste and recycle bins from the development.**
2. **Written evidence from a suitable private waste collection company that they are willing to and able to collect waste from the development site in the manner and frequency described in the waste management plan.**

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

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

Reason for condition

To ensure 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 as a Condition Endorsement, prior to commencement work (including demolition). The construction traffic and parking management plan must:

1. **Be prepared by a suitably qualified person.**

2. Include 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.

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

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

Reason for condition

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

ENG 2a

Prior to first occupation or commencement of use (whichever occurs first), 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), or a Council approved alternate design certified by a suitably qualified engineer to provide a safe and efficient access, and enable safe, easy and efficient use.

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 3b

The access driveway, circulation roadways, ramps and parking module (parking spaces, aisles and manoeuvring area) design must be submitted and approved as a Condition Endorsement, prior to the issuing of any approval under the *Building Act 2016* (excluding for demolition).

The access driveway, circulation roadways, ramps and parking module (parking spaces, aisles and manoeuvring area) design must:

1. **Be prepared and certified by a suitably qualified engineer,**
2. **Be generally in accordance with the Australian Standard AS/NZS2890.1:2004,**
3. **Where the design deviates from AS/NZS2890.1:2004 the designer must demonstrate that the design will provide a safe and efficient access, and enable safe, easy and efficient use, and**
4. **Show dimensions, levels, gradients & transitions, and other details as Council deem necessary to satisfy the above requirement.**

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.

- *Once the design has been approved, the Council will issue a 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 3c

The access driveway, circulation roadways, ramps and parking module (parking spaces, aisles and manoeuvring area) must be constructed in accordance with the design drawings approved by Condition ENG 3b.

Prior to the commencement of use, documentation by a suitably qualified engineer certifying that the access driveway 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 commencement of use.

Reason for condition

To ensure the safety of users of the access driveway and parking module, and that it

does not detract from the amenity of users, adjoining occupiers or the environment by preventing dust, mud and sediment transport.

ENG 5

The number of car parking spaces approved on the site for use is twenty (20).

All parking spaces must be in accordance with Australian Standards AS/NZS 2890.1 2004, prior to commencement of use.

Reason for condition

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

ENG 5b

The number of bicycle parking spaces approved on the site for use is eighteen (18).

Bicycle parking spaces and storage must be in accordance with Australian Standards AS 2890.3 2015, prior to commencement of use.

Reason for condition

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

ENG 1

Any damage to council infrastructure or any third-party infrastructure within the road reserve resulting from the implementation of this permit, must, at the discretion of the Council:

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

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

A photographic record of the Council's infrastructure (e.g. existing property service connection points, roads, buildings, stormwater, footpaths, driveway crossovers and nature strips, including if any, pre-existing damage) will be

relied upon to establish the extent of damage caused to the Council's infrastructure during construction. In the event that the owner/developer fails to provide to the Council a photographic record of the Council's infrastructure, then any damage to the Council's infrastructure found on completion of works will be deemed to be the responsibility of the owner.

Reason for condition

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

ENG r3

Prior to the commencement of use, the proposed driveway crossover Argyle Street 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-v2**

Lighting plans approved by TasNetworks must be submitted and approved prior to commencement of work.

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

for building approval may result in unexpected delays.

Reason for condition

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

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 as a Condition Endorsement prior to the issue of any approval under the *Building Act 2016* or the commencement of work, whichever occurs first. The SWMP must be prepared in accordance with:

- the Soil and Water Management on Building and Construction Sites fact sheets (Derwent Estuary Program, 2008), available [here](#); and
- any Contamination Management Plan for the site, as required by the Pitt & Sherry *Site Contamination Appraisal*

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

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

Reason for Condition

To avoid the pollution and sedimentation of roads, drains and natural watercourses that could be caused by erosion and runoff from the development.

HER 6

All onsite excavation and disturbance in the areas identified in the Austral Tasmania report (dated 21 Feb 2020) and shown as having moderate archaeological potential (shown in yellow in the diagram upon p.20) must be monitored and excavated in accordance with recommendations 3 and 4 of the above report. Should any features or deposits of an archaeological nature be discovered on the site during excavation or disturbance:

1. **All excavation and/or disturbance must stop immediately; and,**

2. A qualified archaeologist must be engaged to attend the site and provide advice and assessment of the features and/or deposits discovered and make recommendations on further excavation and/or disturbance; and,
3. All and any recommendations made by the archaeologist engaged in accordance with the above sub-clause 2 must be complied with in full; and,
4. All features and/or deposits discovered and excavated must be reported to Council within 1 day and prior to the conclusion of the excavation; and,
5. A qualified archaeologist must undertake an audit of all bulk archaeological materials such as worked sandstone blocks, 19th century bricks or cobblestones suitable for reuse. These bulk archaeological shall be retained on site subject to the approval of their removal by the Council.
6. A copy of the archaeologist's advice, assessment, and recommendations obtained in accordance with the above sub-clauses 2, 3, and 5 must be provided to Council within 60 days of receipt of the advice, assessment, and recommendations and prior to the issue of any approval under the *Building Act 2016* (excluding for demolition) to the satisfaction of Council.

Excavation and/or disturbance must not recommence until approval is granted from the Council.

Reason for condition

To ensure that work is planned and implemented in a manner that seeks to understand, retain, protect, preserve and manage significant archaeological evidence.

HER 7

All artefacts of high interpretative value and/or rare or otherwise significant as determined by the qualified archaeologist engaged in accordance with Condition HER 6 must be incorporated into an on-site interpretation and history.

An interpretation plan must be prepared and submitted and approved by Council prior to occupation.

The on-site interpretation must be:

- in accordance with the approved interpretation plan,

- incorporate the artefacts described above,
- located in a publicly accessible space, and,
- provided upon completion of the development.

Reason for condition

To ensure that there is public benefit from archaeological investigations.

HER s1

The audit report prepared in accordance with condition HER 6, must be submitted and approved as a Condition Endorsement prior to the issue of any approval under the Building Act 2016 for construction of the development (excluding any approval issued under this Act for demolition associated with the development). The audit report must also demonstrate how the finds described in condition HER 6, sub-clause 5 are to be incorporated into the development in landscaping, vertical or horizontal surfaces, or other designed or decorative features. Revised plans must be submitted and approved as part of the Condition Endorsement showing the recommendations of the audit report in accordance with the above requirement.

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

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

Reason for condition

To ensure that archaeological evidence is retained, protected and preserved or otherwise appropriately managed.

ENVHE 1

The recommendations in the report "HB20090 - Site Contamination Appraisal - 98 Argyle Street by Pitt & Sherry", dated 24 March 2020, must be implemented and maintained for the duration of construction of the development.

Specifically:

1. **A Contamination Management plan (CMP) should be prepared prior to the commencement of works, which should detail management measures for the protection of construction workers and management of potentially contaminated soil and groundwater, triggers and**

- contingency measures.
2. **If significant soil and or groundwater contamination is encountered during site works an appropriately experienced Environmental Scientist should be present to monitor ambient vapours and identify/sample potentially contaminated soil. If significant contaminated soil is identified, it may be required to be excavated with validation sampling of the remaining soil to demonstrate it will not pose a health risk to future occupants.**

Reason for condition

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

ADVICE

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

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

CONDITION ENDORSEMENT

- If any condition requires that further documents are submitted and approved, you will need to submit the relevant documentation to satisfy the condition via the Condition Endorsement Submission on Council's [online services e-planning portal](#). Detailed instructions can be found [here](#).
- A fee of 2% of the value of the works for new public assets (stormwater infrastructure, roads and related assets) will apply for the condition endorsement application.
- Once approved, the Council will respond to you via email that the condition has been endorsed (satisfied).
- Where building approval is also required, it is recommended that documentation for condition endorsement be submitted well before submitting documentation for building approval. Failure to address condition endorsement requirements prior to submitting for building approval may result in unexpected

delays.

BUILDING PERMIT

You may need building approval in accordance with the *Building Act 2016*. Click [here](#) for more information.

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

PLUMBING PERMIT

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

OCCUPATION OF THE PUBLIC HIGHWAY

- You may require a permit for the occupation of the public highway for construction or special event (e.g. placement of skip bin, crane, scissor lift etc). Click [here](#) for more information.
- You may require an occupational license for structures in the Hobart City Council highway reservation, in accordance with conditions to be established by the Council. Click [here](#) for more information.
- You may require a road closure permit for construction or special event. Click [here](#) for more information.
- You may require a Permit to Open Up and Temporarily Occupy a Highway (for work in the road reserve). Click [here](#) for more information.

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.

WORK WITHIN THE HIGHWAY RESERVATION

Please note development must be in accordance with the Hobart City Council's

Infrastructure By law. Click [here](#) for more information.

CBD AND HIGH VOLUME FOOTPATH CLOSURES

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

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

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

For more information about this requirement please contact the Council's Traffic Engineering Unit on 6238 2804.

REDUNDANT CROSSOVERS

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

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.



(Adam Smee)

Development Appraisal Planner

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



(Ben Ikin)

Senior Statutory Planner


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

Date of Report: 3 June 2021

Attachments:


Attachment B - CPC Agenda Documents

Attachment C - Urban Design Advisory Panel Minutes

 PLN-20-706 - 98 ARGYLE STREET

Application Information

▼ Application Details

PLN-20-706 Demolition and New Building for 20 Multiple Dwellings 

Submitted on: 15/10/2020

Accepted as Valid on: 15/10/2020

Target Time Frame: 42 Days.

Elapsed Time: 214 Days (*Stopped: 13 Days*) = 201 Days - *Granted an extension to the Expiry date of 181 Days* = Expiry date: 08/06/2021

Officer: Adam Smee

Have you obtained pre application advice?

☒ Yes

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

PAE-19-423

Are you applying for permitted visitor accommodation as defined by the State Government Visitor Accommodation Standards? Click on help information button for definition. If you are not the owner of the property you MUST include signed confirmation from the owner that they are aware of this application. *

☒ No

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

☒ No

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

Details

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

Commercial

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

Demolition and Multiple Apartments

Estimated cost of development *

6500000.00

Existing floor area (m2)

550.00

Proposed floor area (m2)

3155.00

Site area (m2)

730

Carparking on Site

Total parking spaces	Existing parking spaces	N/A
19	4	<input checked="" type="checkbox"/> Other (no selection chosen)

Other Details

Does the application include signage? *

☒ No

How many signs, please enter 0 if there are none involved in this application? *

0

Tasmania Heritage Register

Is this property on the Tasmanian Heritage Register?

☒ No

Edit



Amended Submission to Planning Authority Notice

Council Planning Permit No.	PLN-20-706	Council notice date	21/10/2020
TasWater details			
TasWater Reference No.	TWDA 2020/01741-HCC	Date of response	30/10/2020
		Amendment date	27/04/2021
TasWater Contact	Phil Papps	Phone No.	0474 931 272
Response issued to			
Council name	CITY OF HOBART		
Contact details	coh@hobartcity.com.au		
Development details			
Address	98-110 ARGYLE ST, HOBART	Property ID (PID)	7589903
Description of development	Demolition and New Building for 20 Multiple Dwellings		
Schedule of drawings/documents			
Prepared by	Drawing/document No.	Revision No.	Date of Issue
LXN Architecture	Site Plan DA-01	A	26/03/2020
Conditions			
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:			
CONNECTIONS, METERING & BACKFLOW			
<p>1. A suitably sized water supply with metered connections and sewerage system and connections to the development must be designed and constructed to TasWater's satisfaction and be in accordance with any other conditions in this permit.</p> <p>Advice: TasWater will not accept direct fire boosting from the network unless it can be demonstrated that the periodic testing of the system will not have a significant negative effect on our network and the minimum service requirements of other customers serviced by the network. To this end break tanks may be required with the rate of flow into the break tank controlled so that peak flows to fill the tank do not also cause negative effect on the network.</p>			
<p>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.</p>			
DEVELOPMENT ASSESSMENT FEES			
<p>3. The applicant or landowner as the case may be, must pay a development assessment fee of \$675.71 to TasWater, as approved by the Economic Regulator and the fee will be indexed, until the date paid to TasWater.</p> <p>The payment is required within 30 days of the issue of an invoice by TasWater.</p>			



Advice

General

For information on TasWater development standards, please visit
<http://www.taswater.com.au/Development/Development-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 this infrastructure as shown on the GIS is indicative only.

- (a) A permit is required to work within TasWater's easements or in the vicinity of its infrastructure. Further information can be obtained from TasWater
- (b) TasWater has listed a number of service providers who can provide asset detection and location services should you require it. Visit www.taswater.com.au/Development/Service-location for a list of companies

Boundary Trap Area

The proposed development is within a boundary trap area and the developer will need to provide a boundary trap that prevents noxious gases or persistent odours back venting into the property's sanitary drain. The boundary trap is to be contained within the property boundaries and the property owner remains responsible for the ownership, operation and maintenance of the boundary trap.

Declaration

The drawings/documents and conditions stated above constitute TasWater's Submission to Planning Authority Notice.

Authorised by

Jason Taylor
Development Assessment Manager

TasWater Contact Details

Phone	13 6992	Email	development@taswater.com.au
Mail	GPO Box 1393 Hobart TAS 7001	Web	www.taswater.com.au

**RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
160050	1
EDITION	DATE OF ISSUE
2	04-Sep-2019

SEARCH DATE : 12-Mar-2020

SEARCH TIME : 10.19 AM

DESCRIPTION OF LAND

City of HOBART

Lot 1 on Plan 160050

Derivation : Part of 1A-3R-6Ps Granted to J. Thompson

Prior CTs 32278/4 and 32278/5

SCHEDULE 1

E109579 TRANSFER to COSTMAC INVESTMENTS PTY. LTD.

Registered 04-Sep-2019 at noon

SCHEDULE 2

Reservations and conditions in the Crown Grant if any

C978873 ADHESION ORDER under Section 110 of the Local
Government (Building and Miscellaneous Provisions)
Act 1993 Registered 27-Aug-2010 at noonC990193 AGREEMENT pursuant to Section 71 of the Land Use
Planning and Approvals Act 1993 Registered
09-Nov-2010 at noon**UNREGISTERED DEALINGS AND NOTATIONS**

No unregistered dealings or other notations

**FOLIO PLAN**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



OWNER FOLIO REFERENCE CT 32278-4 CT 32278-5 GRANTEE PART OF 1A 3R 6P GTD TO JAMES THOMPSON		PLAN OF TITLE LOCATION CITY OF HOBART SECTION PP FIRST SURVEY PLAN No. D32278 COMPILED BY LTO SCALE 1: 300 LENGTHS IN METRES		Registered Number P.160050 APPROVED 17 AUG 2010 <i>Alice Kawa</i> Recorder of Titles
MAPSHEET MUNICIPAL CODE No. (114) 5225-42	LAST UPJ No GJQ 14, GJQ 15	LAST PLAN No. D32278	ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN	

MG



Enquiries to: City Planning
Phone: (03) 6238 2715
Email: coh@hobartcity.com.au

31 March 2021

Sarah Lindsay (LXN Architecture & Consulting)
21a Cross St
NEW TOWN TAS 7008

mailto: sarah@lxn.com.au

Dear Sir/Madam

**98 - 110 ARGYLE STREET, HOBART - WORKS WITHIN A ROAD RESERVE NOTICE OF
LAND OWNER CONSENT TO LODGE A PLANNING APPLICATION - GMC-21-3**

Site Address:

98-110 Argyle Street, Hobart

Description of Proposal:

Demolition and new building for 16 multiple dwellings involving the road reservation

Applicant Name:

Sarah Lindsay
LXN Architecture & Consulting

PLN (if applicable):

PLN-20-706

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 as the statutory planning authority.

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
W hobartcity.com.au

CityofHobartOfficial
ABN 39 055 343 428
Hobart City Council

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:

Drawing by LXN Architecture & Consulting
GM.1 Revision A-WIP



1 Street Montage 01 - From Argyle St Looking North



DATE 23/3/21



07/05/2021

–
21a Cross Street
New Town,
Tasmania 7008

Po Box 136
North Hobart,
Tasmania 7002

ABN 20 169 938 336

P. 03 6228 0113
hello@lxn.com.au
lxn.com.au

Att: Ben Ikin
via email: coh@hobartcity.com.au

Dear Ben,

Please find attached updated A3 scaled plans and reports responding to Council's Request for Additional Information, dated 30/04/21. The following comments and revisions are as noted below:

1. Please refer to previously submitted Architectural Design Statement for your assessment.
2. Please refer to previously submitted Architectural Design Statement for your assessment. A material palette is included within this statement.
3. A 3DS object file for Council's 3D city-wide model K2Vi system has been uploaded accordingly.

PA 2.1

4. A long section has been included within the drawing set along the proposed crossover to demonstrate that a B85 vehicle can access the property safely.
5. Please refer to previously submitted architectural drawings (DA-09) for a plan view and B85 swept paths of the ground floor carpark. The project complies with the Deemed to Satisfy provisions.

PA 5.1

6. Please refer to previously submitted architectural drawings (DA-09) for plan view of the ground floor carpark, showing compliance with Section 2 of AS 2890.1:2004.
7. The long section along the proposed driveway centreline has been provided and confirms headroom compliance in accordance with Section 5.3 of AS 2890.1:2004. The long section also confirms compliance with Section 2.4.6 of AS 2890.1:2004. Please refer to additional architectural drawing DA-11.

PA 13

8. Please refer to the provided Waste Management Plan in addressing PA 13

SW 2

9. Please refer to provided MUSIC model report addressing the proposed Treatment Train and Stormwater Strategy targets.

SW 5

10. Please refer to the appended MUSIC Modelling report (completed by Ocean Protect) for your assessment.

Please let us know if you require further information.

Sincerely,

.....
Sarah Lindsay
Director // Architect (TAS) RAIA

ARCHITECTURAL STATEMENT

—

98 ARGYLE APARTMENTS

98, Argyle Street, Hobart

—

LXN Architecture & Consulting

March 2021

LXN

—

01

PROJECT DESCRIPTION

The proposed development is located at 98 Argyle Street (the site) and fronts Argyle Street to the North-East and Brisbane Lane to the South-West, vehicle and pedestrian access is via Argyle Street.

The proposal is to re-develop the site to provide a high-quality residential apartment building, offering 20 apartments of both 2 and 3 bedrooms, across 5 levels.

The site is surrounded by a variety of uses, in both the immediate neighbouring buildings and the wider city block. These uses include multi-residential buildings, purpose-built student accommodation, commercial offices and showrooms, restaurants and bars. We feel that this mix of uses is conducive to supporting a residential development of this nature and density.

The proposal is considered to be a modest development in the context of the city and an appropriate scale within the streetscape. At ground floor level the building accommodates 21 carparking spaces, building amenities, service areas and the main entrance lobby. Each floor plate has a repeated plan comprising of 4 apartments: 2, 2-bedroom apartments and 2, 3-bedroom apartments. The 3-bedroom apartments have a smaller third bedroom that could be used as a single bedroom or study (home-office). Each apartment has a very liveable floor plan with apartments ranging from 88.5m² – 109m² in size with generous private outdoor space.

In mid-December 2020 a development application for the site was presented to the Urban Design Advisory Panel (UDAP) for pre-application advice. The proposal (PLN-20-706) was for 16 apartments across 4 levels (level 1-4). Since this meeting the proposal has been modified to include an additional level (level 5) to accommodate 4 additional apartments.

The enclosed design statement is structured into 4 key areas which align broadly with the previous UDAP discussion;

- Ground floor activation,
- Brisbane Lane,
- Landscaping,
- Material Palette.

—

2

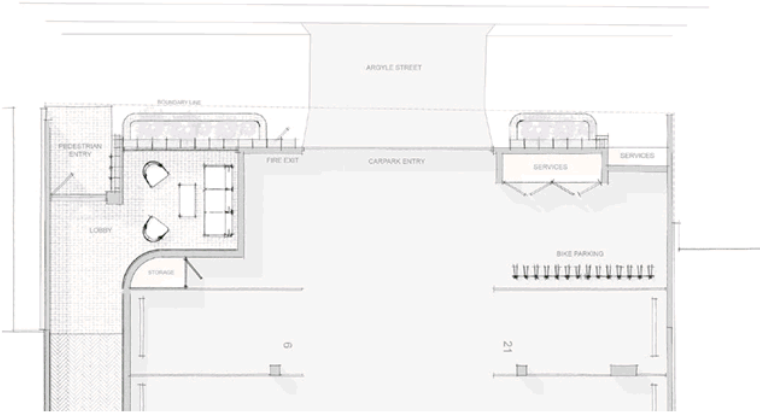
LXN

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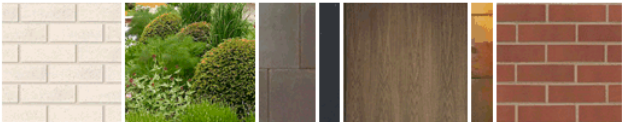
02

GROUND FLOOR ACTIVATION

Activation of the street frontage is an important part of the development and requires careful consideration. Following consultation with UPAD, the planning of the ground floor has been re-worked to create an internal lobby and additional external landscaping. The common lobby creates a weather-protected waiting area for residents or visitors and an informal meeting space within the building. The raised planter beds contribute to the outlook from the lobby and provide an edge to perch and wait outside the building, catching the sun and improving streetscape amenity.



Detail Plan - Ground Floor Street Edge (NTS)



Preliminary Material Palette: External Entry & Lobby

The development of the material palette for the ground floor entry and lobby is ongoing. Initial concepts draw on the material context and seek to create a warm, rich palette that contrast with the external urban environment.

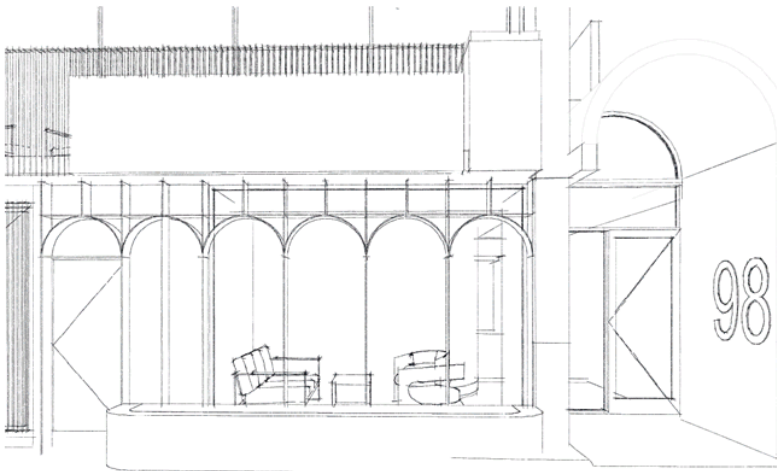
The ground floor lobby is designed as a shopfront for the building, making a contribution to the streetscape by displaying the quality of the internal environment.

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LXN

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To accentuate the ‘shopfront’ as a separate architectural element from the apartments above, the entry and shopfront glazing looks to the 1911 Fire Brigade Building (opposite the site) for precedent. The arched label moulds of the Federation Edwardian building demonstrate an architectural strategy that is both decorative and functional. The rhythm of the label moulds is reflected through a series of steel fins and arched window hoods that form the shopfront facade.



98 Argyle Street - Entry Elevation: Entry & Lobby as Shopfront



Precedent Images & Design Concept: Lobby as Shopfront, facade detailing & the Fire Brigade Building

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LXN

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03

BRISBANE LANE

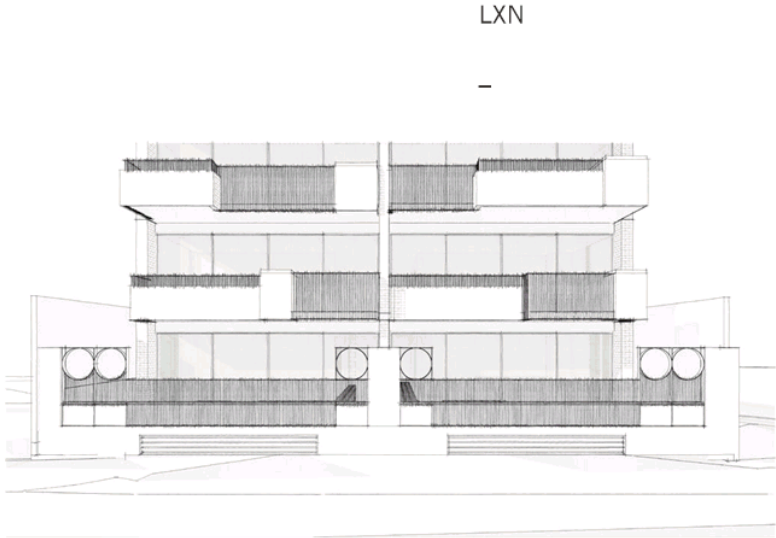
A structural review of the existing building determined that the existing concrete slab and pre-cast concrete walls could be retained and re-used. This environmentally responsible approach has the added benefit of minimal site disturbance on a site that has both an archaeological and contaminated land overlay. Working with the existing structure results in a circa 800mm height difference between the road level of Brisbane Lane and the adjacent finished floor level of apartments 3 & 4.

The UDAP pre-application feedback encouraged the development to have a positive effect on the future character of the lane way. A series of architectural strategies have been employed to ensure that the design response contributes to the lane while managing resident privacy and security. A solid base of precast concrete (both existing and new) continues the existing material language of the lane and is robust enough to withstand passing vehicles and local street art. A vertical metal balustrade, reminiscent of a front fence, provides security and protects the metal planter bed behind. The planter bed will provide privacy to the residents while contributing to a greening of the lane. Larger, playful steel motifs punctuate the balustrade and provide an element of scale that speaks to the warehouse building opposite.



Precedent Images: Brisbane Lane response; landscaping for privacy and greening

—



98 Argyle Street - Brisbane Lane: Apartment 3 & 4 Street Elevation

04

LANDSCAPING

Formal and informal planting is incorporated into the building design to make a positive contribution to the livability of the apartments. Landscaping is incorporated in the following key areas; the Argyle street entry, Brisbane lane and the balconies of each apartment. Where landscaping interfaces with the public realm the plants are protected by low height walls or balustrade railings. Apartments at level 1 have courtyards to the north and south which provides additional opportunities for potted plants and raised garden beds.

A landscape strategy and plant species specification will be prepared in consultation with a landscape specialist during the design development phase.



Balcony planter boxes managed by each resident.

Apartments at level; planing in pots and raised planter beds.

—

LXN

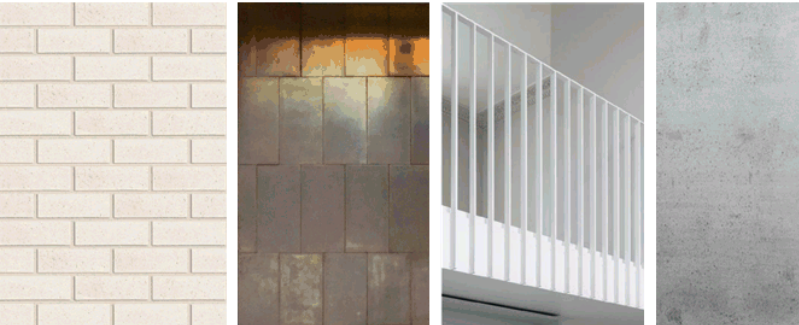
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05

MATERIAL PALETTE

The building typology is residential, and the modulated scale of the proposed materials seeks to reflect this use. The architecture is composed of a carefully considered palette of materials, selected for their durability and appropriateness for the urban condition. The form of the building embraces the modularity of the repeated plan while the balcony edges introduce articulation and break down the scale of the street facades. Brick is used for its residential references; the module inherently has a human scale, and the nature of the material is sustainable, low maintenance and robust. Additional materials include powdercoated aluminium and metal sheeting with an expressed joint to provide additional articulation and rhythm to the sleek surface. There is an interplay between the textured, tactile surface of the brick and the sleek 'sharp' finish of the metal sheeting and metal balustrades.

At level 5 the material palette changes to light-weight cladding and dark tones. This strategy seeks to create a top floor that is visually recessive and to preserve the reading of the four story building below as the dominant scale in the streetscape.



Material Palette - Level 1-Level 4



Material Palette - Level 5

—

98-110 Argyle Street, Hobart

Planning permit application

Supporting Planning Report

20 April 2021



ERA Planning Pty Ltd trading as ERA Planning and Environment

ABN 67 141 991 004

This document may only be used for the purposes for which it was commissioned and in accordance with the Terms of Engagement for the commission. Unauthorised use of this document in any form whatsoever is prohibited.

Job Number: 1920-071

Document Status

Document Version	Date	Author	Reviewer
Draft_V1	25 March 2020	Monica Cameron	Emma Riley
Final	26 March 2020	Monica Cameron	Emma Riley
Final V2	19 April 2021	Monica Cameron	Mark O'Brien

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1 Introduction

1.1 Purpose of the report

ERA Planning and Environment have been engaged to provide a supporting planning submission for a residential development at 98-110 Argyle Street, Hobart TAS 7000.

1.2 Name of planning authority

The planning authority is the Hobart City Council.

1.3 Subject site

The subject site is known as 98-110 Argyle Street, Hobart TAS 7000, and is contained within one lot formally known as CT 160050/1. The land is under the ownership of Costmac Investments Pty Ltd. Title documentation is attached.

Owner's consent from the City of Hobart as required by Section 52(1B) of the *Land Use Planning and Approvals Act 1993* is provided due to the proposed works within the road reservation in front of the site.

1.4 Statutory controls

The site is subject to the provisions of the *Hobart Interim Planning Scheme 2015* (the Planning Scheme).

1.5 Enquiries

Enquiries relating to this planning report should be directed to:

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2 The proposal

The proposal is to demolish the existing building at 98-110 Argyle Street, Hobart, and construct a six-storey residential development comprising five levels of apartments (20 apartments in total) with the ground floor level comprising residential amenities. Specifically, the proposal comprises:

- Ground Floor
 - Pedestrian and vehicular access
 - Lobby and entry area
 - Stair and lift well to access upper floors
 - 20 car spaces (one per apartment)
 - 18 bike parking spaces
 - 20 storage cages (one per apartment)
 - Bin storage area
 - Building services, switchboard and water meters/booster assembly
 - Landscaping within the front setback
- Levels 2-6
 - 2 x two-bedroom apartments
 - 2 x three-bedroom apartments
 - Stair and lift well
 - Communal waste and services

It is also proposed to demolish part of the existing kerb in front of the site to allow the existing crossover to be relocated in line with the proposed driveway. As a result, an existing power pole will be required to be relocated by TasNetworks. Both activities will be undertaken at the developers cost. Given these are located within the Argyle Street road reservation, owners consent from the City of Hobart has been obtained (Council reference GMC-21-3).

3 Subject site and surrounds

3.1 Site description

The subject site is located at 98-110 Argyle Street, Hobart, and formally known as 160050/1. Refer to Figure 1 and Figure 2 below. The site comprises one parcel of land which is generally rectangular in shape. The site is generally flat, with a slight slope towards the south-east. It has two frontages: one to Argyle Street and the other to Brisbane Lane.

The subject site is currently developed with a double storey commercial development which is built to all boundaries except for the front boundary to Argyle Street. This frontage comprises driveway access to the building, which connects with the double width crossover to Argyle Street, as well as three car parking spaces on site. The building on site is currently vacant, however was formerly occupied by a motor vehicle parts business.

As detailed in Section 2, works are also proposed in the Argyle Street road reservation. Therefore, the road reservation also forms part of the proposal site.

3.2 Title information

The details of the lots that form part of this proposal are shown below.

Address	Owner(s)	Title Reference	Land Area
98-110 Argyle Street, Hobart	Costmac Investments Pty Ltd	160050/1	730m ²
Argyle Street	City of Hobart	-	-

The Certificate of Title for 98-110 Argyle Street, Hobart has been provided. There is no Title for the Argyle Street road reservation.

3.3 Servicing

The subject site has full reticulated services.

3.4 Surrounding area

The subject site borders commercial developments on all elevations. The property adjacent to the north, on the corner of Argyle and Brisbane Streets, comprises a single storey development accommodating a car dealership. To the immediate west, at the rear of the subject site, is an abutting laneway, Brisbane Lane, and on the other side of this laneway is a one to two storey commercial building comprising a cleaning supplies company. To the south, at 92-96 Argyle Street, comprises a building ranging from three to one storey and is currently under construction for internal alterations to office and retail.

Within the wider surrounding area there are predominately commercial uses, with some residential uses in the vicinity, such as the UTAS Hobart Apartments located at 157 Elizabeth Street, and some dwellings on Argyle Street, Brisbane Street, and other nearby streets.

An aerial image of the subject site and surrounding context is provided at Figure 2.



Figure 1: Aerial image of the subject site (Source: TheList)



Figure 2: Aerial image of the subject site and surrounding area (Source: TheList)

4 Planning assessment

4.1 Statutory controls

The site is subject to the provisions of the *Hobart Interim Planning Scheme 2015* (the Planning Scheme).

Specifically, 98-110 Argyle Street, Hobart is zoned Commercial, refer to **Error! Reference source not found.**Figure

1. The site is partially impacted by the Royal Hobart Hospital Helipad Airspace Specific Area Plan (Class: Inner Area 64.5 AHD) along the frontage of the site. The site is not included on the local or state heritage register but is a place of archaeological potential under the Historic Heritage Code.



Figure 3: Zoning map (Source: TheLIST)

4.2 Use status

The proposed use is for residential (multiple dwellings), with associated car parking, bike parking and storage for residents. Pursuant to Table 23.2 of the Planning Scheme, residential uses (including multiple dwellings) are permitted providing they are above ground level (except for the access). Given that car parking, bike parking and services associated with the residential use are located at ground level, the proposed use is discretionary.

4.3 Zone purpose statements

The zone purpose statements for the Commercial Zone are as follows:

23.1.1.1 To provide for large floor area retailing and service industries.

23.1.1.2 To provide for development that requires high levels of vehicle access and car parking for customers.

23.1.1.3 To provide for a diversity of generally non-residential uses reflecting the transition between the Central Business Zone and inner residential areas.

23.1.1.4 To allow for uses such as car yards, warehouse and showrooms in the areas of high traffic volume and high passing visibility.

23.1.1.5 To allow good quality building stock to be used for less land extensive central service uses such as offices and specialist wholesaling uses.

23.1.1.6 To allow for service industry uses such as motor repairs which provide a valuable service to users of the central area.

23.1.1.7 To provide for residential use primarily above ground floor level.

The broad overarching purpose of the Commercial Zone is not compromised by the proposal, which will provide for residential use in a mixed use context that is complementary to the existing range of uses in the zone, and future mixed uses.

Clause 23.1.1.7 of the zone purpose statements is particularly relevant to the proposed development. The proposed ground floor level would contain services in association with the residential use and the upper five levels would contain the proposed 20 units. The residential use will therefore be primarily above ground floor level with ancillary components at ground level. As such it is considered that the proposal would comply with Clause 23.1.17 as the core residential use of dwelling units would be located above ground floor level.

4.4 Local area objectives

There are no local area objectives for the zone.

4.5 Desired future character statements

There are no desired future character statements for the zone.

4.6 Use standards

The application is assessed against Clause 23.3 of the Planning Scheme as below.

PLANNING SCHEME REQUIREMENT	
Acceptable Solutions	Performance Criteria
23.3.1 Hours of Operation	
A1 Hours of operation of a use within 50m of a residential zone must be within (a) 6.00 am to 10.00 pm Mondays to Saturdays inclusive; (b) 7.00 am to 9.00 pm Sundays and Public Holidays. except for office and administrative tasks.	P1 Hours of operation of a use within 50 m of a residential zone must not have an unreasonable impact upon the residential amenity of land in a residential zone through commercial vehicle movements, noise or other emissions that are unreasonable in their timing, duration or extent.

PLANNING SCHEME REQUIREMENT	
<p><u>Planner Response</u></p> <p>Not applicable. The subject site is not located within 50m of a residential zone, and only residential use is proposed (multiple dwellings).</p>	
23.3.2 Noise	
<p>A1</p> <p>Noise emissions measured at the boundary of a residential zone must not exceed the following:</p> <ul style="list-style-type: none"> (a) 55 dB(A) (LAeq) between the hours of 7.00 am to 7.00 pm; (b) 5dB(A) above the background (LA90) level or 40dB(A) (LAeq), whichever is the lower, between the hours of 7.00 pm to 7.00 am; (c) 65dB(A) (LMax) at any time. <p>Measurement of noise levels must be in accordance with the methods in the Tasmanian Noise Measurement Procedures Manual, issued by the Director of Environmental Management, including adjustment of noise levels for tonality and impulsiveness.</p> <p>Noise levels are to be averaged over a 15 minute time interval.</p>	<p>P1</p> <p>Noise emissions measured at the boundary of a residential zone site must not cause environmental harm within the residential zone.</p>
<p><u>Planner Response</u></p> <p>An acoustic report prepared by Noise Vibration Consulting (NVC) is submitted in support of the application. This states that:</p> <p>NVC do not foresee any issues which would result in compliance with the standards listed under the Scheme criteria not being able to be achieved.</p> <p>The proposal complies with acceptable solution A1.</p>	
23.3.3 External Lighting	
<p>A1</p> <p>External lighting within 50m of a residential zone must comply with all of the following:</p> <ul style="list-style-type: none"> (a) be turned off between 11:00 pm and 6:00 am, except for security lighting; 	<p>P1</p> <p>External lighting within 50m of a residential zone must not adversely affect the amenity of adjoining residential areas, having regard to all of the following:</p> <ul style="list-style-type: none"> (a) level of illumination and duration of lighting;

PLANNING SCHEME REQUIREMENT	
(b) security lighting must be baffled to ensure they do not cause emission of light outside the zone.	(b) distance to habitable rooms in an adjacent dwelling.
<u>Planner Response</u> Not applicable. The subject site is not located within 50m of a residential zone.	
23.3.4 Commercial Vehicle Movements	
A1 Commercial vehicle movements, (including loading and unloading and garbage removal) to or from a site within 50m of a residential zone must be within the hours of: (a) 6.00 am to 10.00 pm Mondays to Saturdays inclusive; (b) 7.00 am to 9:00 pm Sundays and Public Holidays.	P1 Commercial vehicle movements, (including loading and unloading and garbage removal) to or from a site within 50m of a residential zone must not result in unreasonable adverse impact upon residential amenity having regard to all of the following: (a) the time and duration of commercial vehicle movements; (b) the number and frequency of commercial vehicle movements; (c) the size of commercial vehicles involved; (d) the ability of the site to accommodate commercial vehicle turning movements, including the amount of reversing (including associated warning noise); (e) noise reducing structures between vehicle movement areas and dwellings; (f) the level of traffic on the road; (g) the potential for conflicts with other traffic.
<u>Planner Response</u> Not applicable. The subject site is not located within 50m of a residential zone.	

4.7 Development Standards for Buildings and Works

The application is assessed against Clause 23.4 of the Planning Scheme as below.

PLANNING SCHEME REQUIREMENT	
Acceptable Solutions	Performance Criteria
23.4.1 Building Height	
A1	P1

PLANNING SCHEME REQUIREMENT	
<p>Building height must be no more than:</p> <p>(a) 11.5m high and a maximum of 3 storeys; or</p> <p>(b) 15m high and a maximum of 4 storeys, if the development provides at least 50% of the floor space above ground level for residential use.</p>	<p>Building height must satisfy all of the following:</p> <p>(a) be consistent with any Desired Future Character Statements provided for the area;</p> <p>(b) be compatible with the scale of nearby buildings;</p> <p>(c) not unreasonably overshadow adjacent public space;</p> <p>(d) allow for a transition in height between adjoining buildings, where appropriate.</p>
<p><u>Planner Response</u></p> <p>The maximum overall building height is proposed to be approximately 20.0m (measured from NGL) and comprise six storeys. Therefore, the acceptable solution cannot be met, and the application is to be assessed against the performance criteria.</p> <p>It is noted that the Commercial Zone does not have any Desired Future Character Statements.</p> <p>A review of building heights within a 100m radius of the subject site has been completed by LXN Architecture and Consulting to determine the compatibility of the proposed height with the surrounding built form. This demonstrates that there are other developments of similar and greater height within 100m, including:</p> <ul style="list-style-type: none"> • 92-96 Argyle Street with an overall building height of approximately 9.50m • 77-79 Argyle Street with an overall building height of approximately 12.37m • 40-42 Brisbane Street with an overall building height of approximately 14.74m • 40-44 Melville Street with an overall building height of approximately 42.7m <p>The proposal will not unreasonably shadow public space, as demonstrated by the winter and summer solstice overshadowing diagrams prepared by LXN Architecture and Consulting. Importantly, given the orientation of the site, Argyle Street will not be overshadowed at all. In comparison to the existing shadows, the proposed shadows will only minimally increase.</p> <p>The buildings on lots adjoining the subject site are approximately 6.78m, 7.25m and 9.50m in height, and are lower in height than the proposed development of 20.0m. In saying this, the permitted height under the acceptable solution allows for a building height of 15m. Per the recent Supreme Court decision <i>Boland v Clarence City Council</i> [2021] TASFC 5, it is appropriate on occasions for the decision-maker to take into account an acceptable solution where it promotes the relevant objective. The decision discusses that in some circumstances, such as building height and setbacks, it is appropriate to take into account the acceptable solution as a relevant consideration under the performance criteria. As such, based on this recent decision, the acceptable solution should be considered in this situation as it helps to demonstrate the strategic intent for development of that height within the commercial zone and this site.</p>	

PLANNING SCHEME REQUIREMENT

Due to the slope of the site, the proposal will only be approximately 5m above the preferred 15m height limit where it abuts Argyle Street and have a height of approximately 16.9m (thus only 1.9m over the preferred height) where it abuts Brisbane Lane. The height of the proposed development is therefore only between 1.9-5m greater than the preferred 15m building height under the acceptable solution. It also complies with the preferred outcome of having at least 50% of the floor space above ground level for residential use, given all of the development is a residential use.

The 100m radius demonstrates that the surrounding area does provide for differences in building height, consistent with how existing building heights relate to each other. The below images (Figures 4 and 5) are taken from the corner of Argyle Street and Melville Street, looking towards the Ocean Child. These images show the subject site, the 15 storey UTAS Accommodation building located on the corner of Elizabeth and Melville Streets, and the UTAS Accommodation building located at 40-42 Melville Street. The heights of the UTAS buildings provide for relatively abrupt transitions to neighbouring developments. However, due to the topography of the landscape and other medium scale developments in the area, the heights do not look out of place within the built landscape.



Figure 4: View from the intersection of Melville and Argyle Streets down Melville Street.

PLANNING SCHEME REQUIREMENT



Figure 5: View from the intersection of Melville and Argyle Streets.

Therefore, while the proposed development may be higher than adjacent buildings, the proposal provides for a transition in building heights consistent with the surrounding area. It is opined that the proposal is appropriate when considering the wider area. The development will also importantly provide much needed housing stock for the Hobart population in a zoning which encourages residential development.

It is thus considered that the proposed building height of approximately 20.0m will fit comfortably within the existing built form landscape, and meets the performance criteria, as detailed above.

A2

Building height within 10 m of a residential zone must be no more than 8.5 m.

P2

Building height within 10 m of a residential zone must be compatible with the building height of existing buildings on adjoining lots in the residential zone.

Planner Response

Not applicable. The site is not located within 10 m of a residential zone.

23.4.2 Setback**A1**

Building setback from frontage must be parallel to the frontage and must be no less than:

0 m.

P1

Building setback from frontage must satisfy all of the following:

- (a) be consistent with any Desired Future Character Statements provided for the area;

PLANNING SCHEME REQUIREMENT	
	<p>(b) be compatible with the setback of adjoining buildings, generally maintaining a continuous building line if evident in the streetscape;</p> <p>(c) enhance the characteristics of the site, adjoining lots and the streetscape;</p> <p>(d) provide adequate opportunity for parking.</p>
<p><u>Planner Response</u></p> <p>A front setback to Argyle Street ranging between 60mm and 1.3m is proposed at ground floor level, and this increases at upper levels. Due to the angle of the front title boundary, the building setback is not parallel with the frontage. Therefore, the acceptable solution cannot be met and the proposal is assessed against the performance criteria.</p> <p>It is noted that the Commercial zone does not have any desired future character statements.</p> <p>The subject site adjoins two developments to the north-west and south-east that have 0m setbacks to the shared side boundaries with the subject site, and to their front boundaries to Argyle Street. The existing development on the subject site is setback approximately 10.5m from the front title boundary and is built to the side boundaries. The proposed development on the subject site will be built to the side boundaries, and have a front setback that is setback between 60mm and 1.3m from Argyle Street. As there are many car yards and commercial developments along this section of Argyle Street, there is not a consistent setback of building lines, as many have car parking spaces or other uses within the front setbacks. The proposed setback to Argyle Street is therefore considered appropriate for the existing streetscape.</p> <p>The front setback at ground floor level allows for some landscaping to be provided in front of the proposed building which will enhance the characteristics of the site and the streetscape, and improve the design qualities of the building and pedestrian's amenity. The setback will also help to create an identifiable and safe entryway for residents and visitors to the building, rather than having an entry to the building directly from the footpath or the public realm.</p> <p>The setback has been designed so as to provide greater visibility and a safer access and egress point for vehicles to enter and exit from the provided car parking spaces at ground floor level. A total of 20 car parking spaces are provided, which is sufficient for residents and visitors of the site.</p> <p>The proposed development has 0m setbacks to the side boundaries and to the frontage to Brisbane Lane, and the built form is parallel with these boundaries.</p> <p>The performance criteria are met.</p>	
<p>A2</p> <p>Building setback from the General Residential or Inner Residential Zone must be no less than:</p> <p>(a) 5m;</p> <p>(b) half the height of the wall, whichever is greater.</p>	<p>P2</p> <p>Building setback from General Residential or Inner Residential Zone must be sufficient to prevent unreasonable adverse impacts on residential amenity by:</p> <p>(a) overshadowing and reduction of sunlight to habitable rooms and private open space on</p>

PLANNING SCHEME REQUIREMENT	
	<p>adjoining lots to less than 3 hours between 9.00 am and 5.00 pm on June 21 or further decrease sunlight hours if already less than 3 hours;</p> <p>(b) overlooking and loss of privacy;</p> <p>(c) visual impact when viewed from adjoining lots, taking into account aspect and slope.</p>
<p><u>Planner Response</u></p> <p>Not applicable. The site does not abut a residential zone.</p>	
23.4.3 Design	
<p>A1</p> <p>Building design must comply with all of the following:</p> <ul style="list-style-type: none"> (a) provide the main pedestrian entrance to the building so that it is clearly visible from the road or publicly accessible areas on the site; (b) for new building or alterations to an existing facade provide windows and door openings at ground floor level in the front façade no less than 40% of the surface area of the ground floor level facade ; (c) for new building or alterations to an existing facade ensure any single expanse of blank wall in the ground level front façade and facades facing other public spaces is not greater than 30% of the length of the facade; (d) screen mechanical plant and miscellaneous equipment such as heat pumps, air conditioning units, switchboards, hot water units or similar from view from the street and other public spaces; (e) incorporate roof-top service infrastructure, including service plants and lift structures, within the design of the roof; (f) provide awnings over the public footpath if existing on the site or on adjoining lots; (g) not include security shutters over windows or doors with a frontage to a street or public place. 	<p>P1</p> <p>Building design must enhance the streetscape by satisfying all of the following:</p> <ul style="list-style-type: none"> (a) provide the main access to the building in a way that addresses the street or other public space boundary; (b) provide windows in the front façade in a way that enhances the streetscape and provides for passive surveillance of public spaces; (c) treat large expanses of blank wall in the front façade and facing other public space boundaries with architectural detail or public art so as to contribute positively to the streetscape and public space; (d) ensure the visual impact of mechanical plant and miscellaneous equipment, such as heat pumps, air conditioning units, switchboards, hot water units or similar, is insignificant when viewed from the street; (e) ensure roof-top service infrastructure, including service plants and lift structures, is screened so as to have insignificant visual impact; (f) only provide shutters where essential for the security of the premises and other alternatives for ensuring security are not feasible; (g) be consistent with any Desired Future Character Statements provided for the area.

PLANNING SCHEME REQUIREMENT	
<p><u>Planner Response</u></p> <p>The main pedestrian entrance to the building is clearly visible from the road, and easily identifiable for residents and visitors. It is located at the northern end of the frontage to avoid potential conflicts with vehicles entering and existing the car parking spaces on site.</p> <p>The front façade at the ground floor level has been designed to meet the acceptable solution. It comprises 57.2% active frontage, including windows and door openings. Refer to the elevations prepared by LXN Architecture and Consulting for details.</p> <p>The majority of the front façade will comprise an articulated car parking entry way, glazed windows and the pedestrian doorway. Therefore, less than 30% of the length will comprise blank wall, as demonstrated on the elevations prepared by LXN Architecture and Consulting.</p> <p>Miscellaneous equipment, such as heat pump/air conditioning units, are to be located on balconies and therefore screened from view from the street by the balustrades.</p> <p>There is no roof-top service infrastructure proposed.</p> <p>There are awnings on the buildings on the existing site and adjoining lots. An awning is also incorporated into the design of the proposed building. This is noted on the elevations.</p> <p>Security shutters over windows and doors are not proposed.</p> <p>The proposal meets the acceptable solution.</p>	
<p>A2</p> <p>Walls of a building on land adjoining a residential zone must comply with all of the following:</p> <ul style="list-style-type: none"> (a) be coloured using colours with a light reflectance value not greater than 40 percent; (b) if within 50 m of a residential zone, must not have openings in walls facing the residential zone, unless the line of sight to the building is blocked by another building. 	<p>P2</p> <p>No performance criteria.</p>
<p><u>Planner Response</u></p> <p>Not applicable. The subject site does not adjoin a residential zone.</p>	
23.4.4 Passive Surveillance	
<p>A1</p> <p>Building design must comply with all of the following:</p> <ul style="list-style-type: none"> (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; 	<p>P1</p> <p>Building design must provide for passive surveillance of public spaces by satisfying all of the following:</p> <ul style="list-style-type: none"> (a) provide the main entrance or entrances to a building so that they are clearly visible from nearby buildings and public spaces;

PLANNING SCHEME REQUIREMENT	
<p>(b) for new buildings or alterations to an existing facade provide windows and door openings at ground floor level in the front façade which amount to no less than 40% of the surface area of the ground floor level facade;</p> <p>(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;</p> <p>(d) avoid creating entrapment spaces around the building site, such as concealed alcoves near public spaces;</p> <p>(e) provide external lighting to illuminate car parking areas and pathways;</p> <p>(f) provide well-lit public access at the ground floor level from any external car park.</p>	<p>(b) locate windows to adequately overlook the street and adjoining public spaces;</p> <p>(c) incorporate shop front windows and doors for ground floor shops and offices, so that pedestrians can see into the building and vice versa;</p> <p>(d) locate external lighting to illuminate any entrapment spaces around the building site;</p> <p>(e) provide external lighting to illuminate car parking areas and pathways;</p> <p>(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;</p> <p>(g) provide for sight lines to other buildings and public spaces</p>
<p><u>Planner Response</u></p> <p>The main pedestrian entrance to the building is clearly visible from the road, and easily identifiable for residents and visitors. It is located at the northern end of the frontage to avoid potential conflicts with vehicles entering and existing the car parking spaces on site.</p> <p>The front façade at the ground floor level has been designed to meet the acceptable solution. It comprises 57.19% active frontage, including windows and door openings. Refer to the elevations prepared by LXN Architecture and Consulting for details.</p> <p>The majority of the front façade will comprise an articulated car parking entry way, glazed windows and the pedestrian doorway. Therefore less than 30% of the length will comprise blank wall, as demonstrated on the elevations prepared by LXN Architecture and Consulting.</p> <p>No entrapment areas are created by the proposed design. The front setback area will comprise landscaping, an access point to the car park, and the entryway for pedestrians.</p> <p>External lighting will be provided at the Argyle Street frontage and will be on a daylight and movement sensor and timer. Refer to the ground floor plan prepared by LXN Architecture and Consulting.</p> <p>The proposal complies with the acceptable solution.</p>	
23.4.5 Landscaping	
<p>A1</p> <p>Landscaping along the frontage of a site is not required if all of the following apply:</p>	<p>P1</p> <p>Landscaping must be provided to satisfy all of the following:</p>

PLANNING SCHEME REQUIREMENT	
<p>(a) the building extends across the width of the frontage, (except for vehicular access ways);</p> <p>(b) the building has a setback from the frontage of no more than 1m.</p>	<p>(a) enhance the appearance of the development;</p> <p>(b) provide a range of plant height and forms to create diversity, interest and amenity;</p> <p>(c) not create concealed entrapment spaces;</p> <p>(d) (d) be consistent with any Desired Future Character Statements provided for the area.</p>
<p><u>Planner Response</u></p> <p>The building extends across the width of the frontage and is setback between 60mm and 1.27m from the front title boundary (abutting Argyle Street). Therefore, some landscaping is provided along the site frontage. This will provide some visual interest for passers-by and residents of the site, enhance the appearance of the development and soften the built form. A range of plant heights and forms will be provided within the garden bed to create diversity and amenity. The landscaping will not create concealed entrapment spaces.</p> <p>The building extends across the width of the frontage abutting Brisbane Lane, and is also built to the boundary, therefore, no landscaping is required.</p> <p>The performance criteria (P1) is satisfied.</p>	
<p>A2</p> <p>Along a boundary with a residential zone landscaping must be provided for a depth no less than:</p> <p>2m</p>	<p>P2</p> <p>Along a boundary with a residential zone landscaping or a building design solution must be provided to avoid unreasonable adverse impact on the visual amenity of adjoining land in a residential zone, having regard to the characteristics of the site and the characteristics of the adjoining residentially-zones land.</p>
<p><u>Planner Response</u></p> <p>Not applicable. The subject site does not abut a residential zone.</p>	
23.4.7 Fencing	
<p>A1</p> <p>Fencing must comply with all of the following:</p> <p>(a) fences, walls and gates of greater height than 1.5 m must not be erected within 10 m of the frontage;</p> <p>(b) fences along a frontage must be at least 50% transparent above a height of 1.2 m;</p> <p>(c) height of fences along a common boundary with land in a residential zone must be no more than 2.1 m and must not contain barbed wire.</p>	<p>P1</p> <p>Fencing must contribute positively to the streetscape and not have an unreasonable adverse impact upon the amenity of land in a residential zone which lies opposite or shares a common boundary with a site, having regard to all of the following:</p> <p>(a) the height of the fence;</p> <p>(b) the degree of transparency of the fence;</p> <p>(c) the location and extent of the fence;</p> <p>(d) the design of the fence;</p>

PLANNING SCHEME REQUIREMENT	
	<ul style="list-style-type: none"> (e) the fence materials and construction; (f) the nature of the use; (g) the characteristics of the site, the streetscape and the locality, including fences; (h) any Desired Future Character Statements provided for the area.
<p><u>Planner Response</u></p> <p>Not applicable. No fencing is proposed on site.</p>	
23.4.8 Residential and Visitor Accommodation Amenity	
<p>A1</p> <p>Residential or visitor accommodation development must demonstrate that design elements are able to achieve internal noise levels in accordance with relevant Australian Standards for acoustics control (AS3671:1989 – Road Traffic Noise Intrusion (Building Siting and Construction) and AS2107:2016 – Acoustics (Recommended Design Sound Levels and Reverberation Times for Building Interiors)).</p>	<p>P1</p> <p>Residential or visitor accommodation development must demonstrate that design elements are able to achieve internal noise levels in accordance with relevant Australian Standards for acoustics control (including AS3671:1989 – Road Traffic Noise Intrusion (Building Siting and Construction) and AS2107:2016 – Acoustics (Recommended Design Sound Levels and Reverberation Times for Building Interiors)), unless:</p> <ul style="list-style-type: none"> (a) alterations required to meet these standards would negatively impact on historic cultural heritage values of an existing building listed as a place, or within a precinct, in the Historic Heritage Code; or (b) external alterations of an existing building that are required to meet these standards would negatively impact on the streetscape.
<p><u>Planner Response</u></p> <p>An acoustic report prepared by Noise Vibration Consulting (NVC) is submitted in support of the application. This states that:</p> <p>NVC do not foresee any issues which would result in compliance with the standards listed under the Scheme criteria not being able to be achieved, and as such the proposal is deemed likely to comply with the Clause 24.3.8 A1.</p> <p>The proposal complies with acceptable solution A1.</p>	
<p>A2</p>	<p>P2</p> <p>Residential or serviced apartment components of a new building must be designed to allow for reasonable access to daylight into habitable rooms and private</p>

PLANNING SCHEME REQUIREMENT	
<p>Residential or serviced apartment components of a new building (including external elements such as a balcony, roof garden, terrace or deck) must:</p> <p>(a) if the building includes any single aspect dwellings or single aspect serviced apartments, be set back at least 5m from all side or rear boundaries and other buildings on the same site (refer Figure 23.4 i); or</p> <p>(b) if the building includes no single aspect dwellings and no single aspect serviced apartments, have at least two elevations of the building, and all habitable room windows, that are either:</p> <p>(i) set back at least 5m from a side or rear boundary or other building on the same site; or</p> <p>(ii) facing a frontage (refer Figure 23.4 ii).</p>	<p>open space, and reasonable opportunity for air circulation and natural ventilation, having regard to:</p> <p>(a) proximity to side and rear boundaries;</p> <p>(b) proximity to other buildings on the same site;</p> <p>(c) the height and bulk of other buildings on the same site;</p> <p>(d) the size of any internal courtyard or void;</p> <p>(e) the use of light wells or air shafts;</p> <p>(f) development potential on adjacent sites, considering the zones and codes that apply to those sites; and</p> <p>(g) any assessment by a suitably qualified person.</p>
<p><u>Planner Response</u></p> <p>The proposal does not comprise any single aspect dwellings, they are all dual aspect. The development would not meet A2(b) though as the building will not have at least 2 elevations setback 5m from a side or rear boundary, and not all habitable room windows face a frontage. It therefore must meet performance criteria P2.</p> <p>All apartments would have reasonable access to daylight into habitable rooms and private open space, and reasonable opportunity for air circulation and natural ventilation. All apartments have been designed to have at least one habitable room in the form of the open plan kitchen/dining/living space that is dual aspect and faces towards the east or west and is thereby able to receive morning or afternoon daylight/sunlight. Apartments located on the northern side of the building would have windows to both the master and second bedroom that are north-west facing, thereby receiving ample sunlight/daylight from midday onwards. Bedrooms in the apartments on the southern side of the building will face towards the south-east, therefore will receive morning and midday sun access.</p> <p>The setback to the apartments on the northern side boundary would be 0m at the ground and first storey, and 2m on the upper levels. The setback to the southern side boundary would be 0m at the ground and first storey, then a minimum of 2.2m on the upper levels. This allows for air circulation and natural ventilation into master and second bedrooms. The apartments have also been designed with openable doors and windows within the apartments to allow for cross-ventilation.</p> <p>The existing on site building would be demolished as part of the proposal and there would be no other buildings on the same site. There are no internal courtyards, voids, lightwells or airshafts proposed. All apartments will comprise a primary balcony facing either Argyle Street or Brisbane Lane, and a secondary balcony off the bedrooms that is north-west or south-east facing.</p> <p>The adjacent sites to the north-west and south-east are subject to the same zoning and site specific overlays as the subject site. They are within the Commercial Zone like the subject site, and are both also partially impacted by the Royal Hobart Hospital Helipad Airspace Specific Area Plan (Class: Inner Area 64.5 AHD) along the frontage</p>	

PLANNING SCHEME REQUIREMENT	
<p>of the sites. Therefore, they have very similar development potential. The design of the proposed development allows for equitable development outcomes on the adjacent sites should these be developed in a similar manner. The upper levels are setback a minimum of 2m from the shared boundaries, and it would be anticipated that future developments on the adjacent sites would do the same to maintain a sense of openness between buildings and allow for equitable access to privacy, sunlight, daylight and outlook for the proposed and future developments. It is not considered that the proposed development will inhibit or restrict development opportunities on the adjacent sites.</p> <p>The proposal complies with performance criteria P2.</p>	
<p>A3</p> <p>Every habitable room in a dwelling:</p> <ul style="list-style-type: none"> (a) must have at least one external window; (b) must have at least one external window visible from all points of the room if a living room; and (c) where the only external window in the room is located within a recess, that recess must be: <ul style="list-style-type: none"> (i) a minimum width of 1.2m, and (ii) a maximum depth of 1.5 times the width, measured from the external surface of the external window; and (d) must have a room depth from an external window of: <ul style="list-style-type: none"> (i) not more than 2.5 times the ceiling height; or (ii) If an open plan layout (where the living, dining and kitchen are combined), not more than 8m 	<p>P3</p> <p>Every habitable room in a dwelling must have reasonable access to natural daylight and ventilation from an external window, having regard to:</p> <ul style="list-style-type: none"> (a) the orientation of the room; (b) the size and location of windows; (c) the size of the room; (d) the ceiling height; (e) the opportunity for cross-ventilation; (f) the proposed use of the room; (g) overshadowing of the site from existing development; (h) existing site constraints; and (i) any assessment by a suitably qualified person
<p><u>Planner Response</u></p> <p>Every habitable room has at least one external openable window or door to allow for reasonable access to daylight and ventilation. The external living room windows would be visible from all points of the living rooms, there are no windows proposed within recesses, and the depth of the open plan kitchen/dining/living rooms would not be more than 8m.</p> <p>The proposal complies with acceptable solution A3.</p>	
<p>A4</p> <p>Private open space must be provided for each dwelling or serviced apartment on a site.</p>	<p>P4</p> <p>Fewer than all of the dwellings or serviced apartments on a site may be provided with private open space if:</p> <ul style="list-style-type: none"> (a) communal open space is provided on site that: exceeds size requirements under 23.4.8 A6 by 10m² for each dwelling unit or serviced apartment without

PLANNING SCHEME REQUIREMENT	
	<p>private open space, and is of high quality in terms of location, access to sunlight, outlook, facilities, landscaping and accessibility;</p> <p>(b) environmental conditions such as high winds or high levels of noise would significantly diminish the amenity of the private open space and this is unable to be mitigated by screening that does not unreasonably reduce access to daylight, as demonstrated by a suitably qualified person; or</p> <p>(c) the dwelling or serviced apartment is in an existing building that cannot reasonably accommodate private open space due to site constraints, or impacts on historic cultural heritage values of a place or precinct listed in the Historic Heritage Code.</p>
<p><u>Planner Response</u></p> <p>Each apartment is provided with private open space in the form of either one or two balconies. On second level, apartments 1 and 2 have two separate balconies and apartments 3 and 4 have one large balcony. While the upper levels all have a primary balcony facing towards Argyle Street or Brisbane Lane, and a secondary balcony facing north-west or south-east. The private open space ranges between 15.6m² and 63.4m². Refer to the architectural plans for further details.</p> <p>The acceptable solution (A4) is met.</p>	
<p>A5</p> <p>Each dwelling or serviced apartment on a site must have private open space that:</p> <p>(a) has an area not less than:</p> <p>(i) 8m² for 1 bedroom dwellings or serviced apartments;</p> <p>(ii) 10m² for 2 bedroom dwellings or serviced apartments;</p> <p>(iii) 12m² for 3 or more bedroom dwellings or serviced apartments;</p> <p>(b) does not include plant and equipment such as outdoor components of an air conditioning unit;</p> <p>(c) unless drying facilities are provided elsewhere on the site, include a clothes drying area of at least 2m² in addition to the minimum area in (a) above, that</p>	<p>P5</p> <p>Private open space for dwellings or serviced apartments must provide reasonable amenity and be capable of meeting the projected outdoor recreation requirements of occupants, having regard to:</p> <p>(a) the size and minimum dimensions of the space, excluding space occupied by plant and equipment such as outdoor components of an air conditioning unit;</p> <p>(b) the amount of space available for furniture or plantings;</p> <p>(c) the potential for significant noise intrusion;</p> <p>(d) proximity and overlooking to the private open space of existing adjacent residential and serviced apartment developments;</p>

PLANNING SCHEME REQUIREMENT	
<p>may be in a separate location, and is screened from public view;</p> <p>(d) has a minimum horizontal dimension of 2m, or 1.5m for a 1 bedroom dwelling or serviced apartment;</p> <p>(e) where above ground floor level, not be located within 5m of private open space of any other dwelling or serviced apartment in another building (excluding between conjoined terrace-style dwellings or serviced apartments); and</p> <p>(f) is screened visually and acoustically from mechanical plant and equipment, service structures and lift motor rooms</p>	<p>(e) screening where necessary for privacy that does not unreasonably restrict access to daylight;</p> <p>(f) screening where necessary for noise and wind protection that does not unreasonably restrict access to daylight;</p> <p>(g) screening from public view for clothes drying areas; and</p> <p>(h) any advice from a suitably qualified person.</p>
<p><u>Planner Response</u></p> <p>Each of the proposed apartments contain 2 or 3 bedrooms and have an area of private open space in the form of a balcony that varies in size between 15.6m² and 63.4m². These areas all allow for enough space for a clothes drying area. However, the air conditioning units are located on the balconies for each of the apartments, the balconies are not all a minimum horizontal distance of 2m, and the balconies for apartments 2 and 3 are directly adjoining. Therefore, the acceptable solution cannot be met and the proposal is assessed against the performance criteria.</p> <p>Per the recent Supreme Court decision <i>Boland v Clarence City Council</i> [2021] TASFC 5, it is appropriate on occasions for the decision-maker to take into account an acceptable solution where it promotes the relevant objective. Given this, it is considered appropriate to determine that as the private open space areas for each of the apartments meet the sizes specified in the acceptable solution, they are of an appropriate size (excluding the areas where the AC units will be located) to satisfy P5(a). Where there are two balconies provided for an apartment, the main balcony is more than 2m in width, which is also considered suitable to accommodate outdoor dining furniture and planter boxes (both of which are indicated on the plans).</p> <p>An acoustic assessment prepared by Noise Vibration Consulting has been provided in support of this application. The report states that compliance with relevant standards is achievable with adequate noise control via window and façade construction and detailing.</p> <p>As shown on the plans, some screening is proposed on the balconies for the protection of privacy. The screening will also help somewhat with noise and wind protection. Privacy screening is proposed on the north-eastern balconies facing Argyle Street, and the south-western balconies facing Brisbane Lane. Screening is also proposed to separate the balconies of apartments 2 and 3 on the first level. There is no screening proposed on the uppermost level due to its setbacks from the boundaries. The screening proposed will also help in hiding clothes drying from public view.</p> <p>The performance criteria (P5) is satisfied.</p>	
A6	<p>P6</p> <p>Sites with 10 or more dwellings or serviced apartments must provide communal open space on the site that</p>

PLANNING SCHEME REQUIREMENT	
<p>Sites with 10 or more dwellings or serviced apartments must provide communal open space on the site that:</p> <ul style="list-style-type: none"> (a) is at least 70m², with an additional 2m² for every dwelling or serviced apartment over 10; (b) if provided in multiple locations, at least one single area must be a minimum of 40m²; (c) has a minimum horizontal dimension of 3m; (d) includes at least 20% of the total area for plantings (including food growing), being deep soil planting if at ground level; (e) is directly accessible from common entries and pathways; (f) screens any communal clothes drying facilities from public view; (g) may be above ground floor level, including rooftops; (h) is screened visually and acoustically from mechanical plant and equipment, service structures and lift motor rooms; (i) does not include vehicle driveways, manoeuvring or hardstand areas; and (j) includes no more than 20% of the total area located between 30 degrees East of South and 30 degrees West of South of: <ul style="list-style-type: none"> (i) a building on the site with a height more than 3m; or (ii) a side or rear boundary within 5m 	<p>provides reasonable amenity and outdoor recreation opportunities for occupants, having regard to:</p> <ul style="list-style-type: none"> (a) the area and dimensions of the space; (b) the total number of dwellings or serviced apartments on the site; (c) the accessibility of the space; (d) the flexibility of the space and opportunities for various forms of recreation; (e) the availability and location of common facilities within the space; (f) landscaping; (g) the provision of gardens, trees and plantings (including food gardens) appropriate in area to the size of the communal open space; (h) accessibility to daylight, taking into account the development potential of adjacent sites; (i) the outlook from the space; (j) the level of noise intrusion from external noise sources; and (k) any advice from a suitably qualified person; <p>unless:</p> <ul style="list-style-type: none"> (i) the dwellings or serviced apartments are located in an existing building where communal open space cannot be reasonably achieved due to site constraints, or impacts on historic cultural heritage values of a place or precinct listed in the Historic Heritage Code; (ii) open space, accessible by the public, that is of high quality in terms of location access to sunlight, outlook, facilities, landscaping and accessibility and that can adequately accommodate the needs of occupants is provided on the site; or (iii) private open space is provided for all dwellings or serviced apartments on the site, provides a reasonable level of amenity in terms of access to sunlight and outlook, and sufficiently caters for flexible outdoor recreation needs including relaxation,

PLANNING SCHEME REQUIREMENT	
	entertainment, planting, outdoor dining and children's play.
<p><u>Planner Response</u></p> <p>The proposed development does not contain communal open space and therefore does not comply with acceptable solution (A6).</p> <p>The performance criteria (P6) allows for no communal open space to be provided as long as private open space is provided for all dwellings that has a reasonable level of amenity in terms of access to sunlight and outlook, and sufficiently caters for flexible outdoor recreation needs including relaxation, entertainment, planting, outdoor dining and children's play.</p> <p>As demonstrated within the architectural plans and sun study prepared by LXN Architecture, the private open space of most of the dwellings will receive year-round sunlight. The south-east facing apartments on the lower levels will receive less sunlight than others due to their orientation and height. Apartment 7 will receive sunlight onto the private open space for 7 months of the year, however between April and August the sunlight will hit only the garden beds. Apartments 3 and 4 will receive sunlight for 8 months of the year, and apartment 8 will receive sunlight for 9 months of the year. The design of the apartments and private open space have been carefully considered so that the remaining apartments receive sunlight all year round. Considering the site is within a commercial zone and is within close proximity to the Hobart CBD, a lower level of amenity can be expected when compared to apartments within a residential zone. It is further considered appropriate given there are public open spaces within walking distance such as the Domain and Botanical Gardens, St Andrews Park, Soundy Park, and spaces near the Hobart Waterfront.</p> <p>The apartment balconies will also provide a reasonable level of amenity in terms of outlook, providing views across Hobart. The private open space ranges between 15.6m² and 63.4m², which exceeds the requirements under the planning scheme, and also provides more than adequate space for outdoor recreation needs. The architectural plans indicate that the balconies will all have ample space for outdoor settings and tables, planter boxes, and leftover space for practical items such as clothes airers or space for children's play.</p> <p>The performance criteria (P6) is satisfied.</p>	
<p>A7</p> <p>Each multiple dwelling must be provided with a dedicated and secure storage space of no less than 6m³, located externally to the dwelling.</p>	<p>P7</p> <p>Each multiple dwelling must be provided with adequate storage space.</p>
<p><u>Planner Response</u></p> <p>Each dwelling would be provided with a secure storage space between 3m³ and 8.25m³ which would be located in the car parking area. Therefore, the proposal does not comply with the acceptable solution. An average of around 20m³ of internal storage space is provided for each apartment. Coupled with storage space in the car parking area, this is more than adequate for a two or three bedroom dwelling.</p> <p>The performance criteria (P7) is satisfied.</p>	
23.4.9 Waste Storage and Collection	

PLANNING SCHEME REQUIREMENT	
<p>A1</p> <p>Bulk waste bins that are commercially serviced must be provided for sites:</p> <ul style="list-style-type: none"> (a) with more than one commercial tenancy; (b) with one commercial tenancy that is greater than 100m²; and (c) with more than 4 dwellings or visitor accommodation units (or 3 if a mixed use site); <p>unless:</p> <ul style="list-style-type: none"> (i) there are no more than 4 individual bins for kerbside collection at anyone time per commercial site; (ii) there are no more than 8 individual bins for kerbside collection at any one time per residential or mixed use site; or (iii) individual bins are commercially serviced without being placed on the kerbside for collection. 	<p>P1</p> <p>Bulk waste bins that are commercially serviced must be provided unless kerbside collection would not unreasonably compromise the amenity of the surrounding area or the flow and safety of vehicles, cyclists and pedestrians, and:</p> <ul style="list-style-type: none"> (a) the frontage of the site has a width equivalent to 5m for each dwelling, accommodation unit or tenancy with individual bins; or (b) bulk waste bin storage and collection cannot reasonably be provided on site due to: <ul style="list-style-type: none"> (i) impacts on historic cultural heritage values of a place or precinct listed in the Historic Heritage Code; or (ii) site constraints, if for an existing building.
<p><u>Planner Response</u></p> <p>Bulk waste bins that would be commercially serviced are provided on the ground floor level for convenient access.</p> <p>The proposal complies with acceptable solution A1.</p>	
<p>A2</p> <p>An on-site storage area, with an impervious surface (unless for compostables), must be provided for bins that:</p> <ul style="list-style-type: none"> (a) if for separate bins per dwelling, visitor accommodation or commercial tenancy: <ul style="list-style-type: none"> (i) provides an area for the exclusive use of each dwelling, accommodation unit or tenancy, and is not located between the building and a frontage; (ii) is set back not less than 4.5m from a frontage unless within a fully enclosed building; (iii) is not less than 5.5m horizontally from any dwelling or accommodation unit unless for bins 	<p>P2</p> <p>A storage area for waste and recycling bins must be provided that is:</p> <ul style="list-style-type: none"> (a) capable of storing the number of bins required for the site; (b) of sufficient size to enable convenient and safe access and maneuverability for occupants, and waste collection vehicles where relevant; (c) in a location on-site that is conveniently and safely accessible to occupants, without compromising the amenity and flow of public spaces; (d) screened from view from public spaces and dwellings or accommodation units; and

PLANNING SCHEME REQUIREMENT	
<p>associated with that dwelling, or within a fully enclosed building; and</p> <p>(iv) is screened from the frontage and any dwelling or accommodation unit by a wall to a height not less than 1.2m above the finished surface level of the storage area.</p> <p>(b) If for bulk waste bins:</p> <p>(i) is located on common property;</p> <p>(ii) includes dedicated areas for storage and management of recycling and compostables;</p> <p>(iii) is not less than 5.5m from any dwelling or accommodation unit unless within a fully enclosed building;</p> <p>(iv) is screened from any public road, dwelling or accommodation unit by a wall to a height not less than 1.8m above the finished surface level of the storage area;</p> <p>(v) is accessible to each dwelling, accommodation unit or tenancy without the requirement to travel off-site; and</p> <p>(vi) where the development is mixed use, have separate storage spaces for commercial and residential bins with separate access to each.</p>	<p>(e) if the storage area is for common use, separated from dwellings or units on the site to minimise impacts caused by odours and noise.</p>
<p><u>Planner Response</u></p> <p>An on-site storage area with an impervious surface is provided on the ground level for bulk waste bins. This meets the requirements under A2(b).</p> <p>The acceptable solution (A2) is met.</p>	
<p>A3</p> <p>Bulk waste bins must be collected on site by private commercial vehicles, and access to storage areas must:</p> <p>(a) in terms of the location, sight distance, geometry and gradient of an access, as well as off-street parking, manoeuvring and service area, be designed and constructed to comply with AS2890.2:2018: Parking Facilities - Off-Street Commercial Vehicle Facilities;</p>	<p>P3</p> <p>A waste collection plan demonstrates the arrangements for collecting waste do not compromise the safety, amenity and convenience of surrounding occupants, vehicular traffic, cyclists, pedestrians and other road and footpath users, having regard to:</p> <p>(a) the number of bins;</p> <p>(b) the method of collection;</p> <p>(c) the time of day of collection;</p>

PLANNING SCHEME REQUIREMENT	
<p>(b) ensure the vehicle is located entirely within the site when collecting bins; and</p> <p>(c) include a dedicated pedestrian walkway, alongside or independent of vehicle access ways.</p>	<p>(d) the frequency of collection;</p> <p>(e) access for vehicles to bin storage areas, including consideration of gradient, site lines, manoeuvring, direction of vehicle movement and pedestrian access;</p> <p>(f) distance from vehicle stopping point to bins if not collected on site;</p> <p>(g) the traffic volume, geometry and gradient of the street; and</p> <p>(h) the volume of pedestrians using the street</p>
<p><u>Planner Response</u></p> <p>The bulk waste bins will be collected on site by a private waste collector in a commercial vehicle. Access to the storage areas will meet A3 (a), (b) and (c). Refer to the architectural plans for details.</p> <p>The acceptable solution (A3) is met.</p>	

4.8 Specific Area Plan

The Royal Hobart Hospital Helipad Airspace Specific Area Plan applies to an approximate 2.5m strip along the eastern frontage of the site, adjacent to Argyle Street. Refer to Figure 6 below. This section is classed as the inner area, which preferably limits building heights to be no more than 64.5 AHD. Given the overall building height is only proposed to be approximately 16.2m the height will meet A1 of clause F4.3.1 relating to building height.

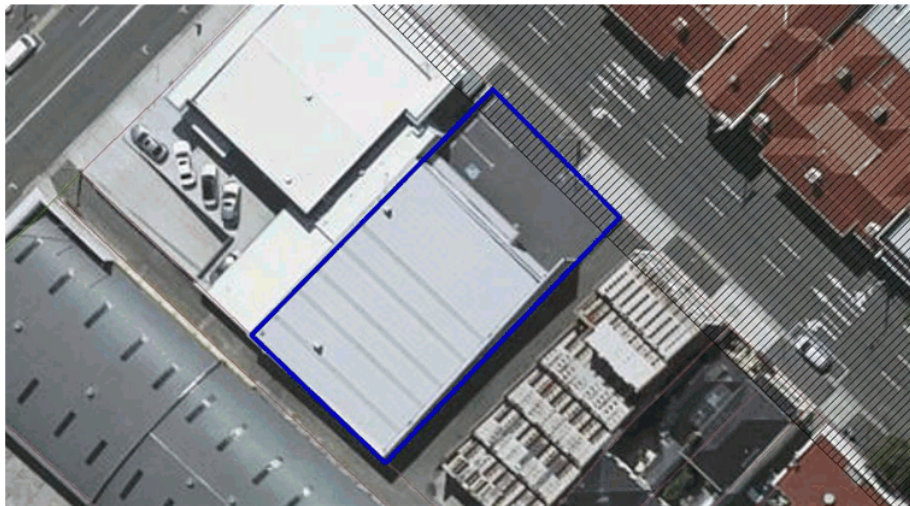


Figure 6: Royal Hobart Hospital Helipad Airspace Specific Area Plan

5 Codes

The following codes are applicable to the application:

5.1 Potentially Contaminated Land Code

This Code applies to development on potentially contaminated land. Hobart City Council has advised that the site is potentially contaminated with hydrocarbons, as the site was formerly used as a service station.

The application has been assessed against the performance criteria for Clause E2.5 (P1) and E2.6.2 (P1) within the Site Contamination Appraisal prepared by Pitt&Sherry.

5.2 Road and Railway Assets Code

The Road and Railway Assets Code applies to the application given the proposed use and development of the land will intensify the existing access point.

The application has been assessed against relevant standards of the Road and Railway Assets Code within the Traffic Impact Assessment prepared by Midson Traffic.

5.3 Parking and Access Code

The Parking and Access Code applies to all use and development.

The application has been assessed against relevant standards of the Parking and Access Code within the Traffic Impact Assessment prepared by Midson Traffic.

5.4 Stormwater Management Code

The Stormwater Management Code applies to all use and development.

Rare Innovation have prepared an assessment against the relevant standards of the Stormwater Management Code, as well as stormwater calculations.

5.5 Historic Heritage Code

The Historic Heritage Code applies to development involving land defined in the code as any of the following:

- A Heritage Place
- A Heritage Precinct
- A Cultural Landscape Precinct
- A Place of Archeological Potential.

The subject site is identified as a place of archeological potential, therefore the Historic Heritage Code is applicable.

Refer to the Archeological Impact Assessment prepared by Austral Tasmania for an assessment against the relevant standards of the Code.

6 Conclusion

It is proposed to develop the subject site with a six storey residential development comprising five levels of apartments (including 20 apartments in total) and the ground floor comprising residential amenities such as car and bike parking and storage.

The proposal relies upon the following performance criteria:

- Clause 23.4.1 (Building Height) P1
- Clause 23.4.2 (Setback) P1
- Clause 23.4.5 (Landscaping) P1
- Clause 23.4.8 (Residential and Visitor Accommodation Amenity) P2
- Clause 23.4.8 (Residential and Visitor Accommodation Amenity) P5
- Clause 23.4.8 (Residential and Visitor Accommodation Amenity) P6
- Clause 23.4.8 (Residential and Visitor Accommodation Amenity) P7
- Clause E2.5 (Use Standards) P1
- Clause E2.6.2 (Excavation) P1
- Clause E6.6.1 (Number of Car Parking Spaces) P1
- Clause E13.10.1 (Building, Works and Demolition) P1

The proposal will provide 20 new dwellings that are appropriately located within walking distance of Hobart's CBD, numerous community facilities and services, public open space, public transport and cycling and walking tracks. The uses will complement the surrounding area which comprises a mix of commercial and residential uses. All dwellings are also provided with onsite carparking to meet the anticipated needs of future residents.

The proposal is considered to be consistent with the objectives of the *Hobart Interim Planning Scheme 2015* and is recommended for approval.



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rare.

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Our Ref: 210068

12th March 2021

City of Hobart Council
Town Hall
Macquarie Street
Hobart TAS 7250

ATTENTION: ENGINEERING DEPARTMENT

To whom it may concern

98-110 ARGYLE STREET, HOBART – STORMWATER

I am writing to you to provide you preliminary design information and documentation to assess the proposed development against the councils Stormwater Code.

Please read this letter in conjunction to the following documents: -

- 210068 – DA01
- 210068 - Stormwater Calculations

In summary,

- The post-development impervious area is not increased from the pre-development impervious area.
- The roof drainage is fed through a series of grated pits that slow the flow of the water.
- The stormwater run off will all be directed to a water treatment device from SPEL.

Should you have any further queries please do not hesitate to contact us.

Yours faithfully,



Matthew Peart
Structural Engineer
B.E.Hons (Civil) // M.E.M // MIEAust

rare.Level 1a 10-14 Paterson Street
Launceston TAS 7250rarein.com.au
P 03 6388 9200

Project	918 ARGYLE ST HOBART	Project #	210068
Prepared By	RJ	Checked By	
CALCULATION / DESIGN DETAIL / ENGINEERS DIRECTION / INSPECTION		Sheet #	1
		Date	1/3/21

STORMWATER CALCULATION & CONCEPT.

BUILDING DIVIDED INTO 4 CATCHMENTS
BASED ON ROOF DRAINAGE - FEEDS TO
BALCONIES.

CATCHMENT 1 - 1 DOWNPIPE - BOX GUTTER
DESIGN 1 in 100 yr.

$$A = 200 \text{ m}^2$$

$$C = 0.95$$

$$I = 145 \text{ mm/hr}$$

$$\begin{aligned} Q &= C \times A / 3600 \\ &= 0.95 \times 145 \times 200 / 3600 \\ &= 7.7 \text{ L/sec} \end{aligned}$$

TOTAL DISCHARGE AT BASEMENT LEVEL
FOR 4 CATCHMENTS

$$4 \times 7.7 = 30.8 \text{ L/sec}$$

DOWNPIPE CAPACITY IS A FUNCTION OF
THE SUMP CAPACITY AT THE BOX GUTTER.
DN 100 DOWNPIPE IS SUITABLE AS 3500.3

LIKELY VELOCITY AT BASEMENT.

$$\begin{aligned} A &= (0.1^2 \times \pi) 4 \\ &= 0.0079 \text{ m}^2 \end{aligned}$$

$$Q = 0.0077$$

$$Q = VA$$

$$V = \frac{Q}{A} = \frac{0.0077}{0.0079} = 0.98 \text{ m/s.}$$

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Project	98 ARGYLE ST HOBART		Project #	210068
Prepared By	RL	Checked By	Sheet #	2
CALCULATION / DESIGN DETAIL / ENGINEERS DIRECTION / INSPECTION			Date	1/3/21

VELOCITY IS ACCEPTABLE

ALL PIPED SYSTEM PASS THRU STILLING
PIT IN BASEMENT.SYSTEM THEN DISCHARGES THRU THE
SPEL TREATMENT PIT. THEN TO KERB.

KERB ADAPTER 2 x 150 x 75 RHS.

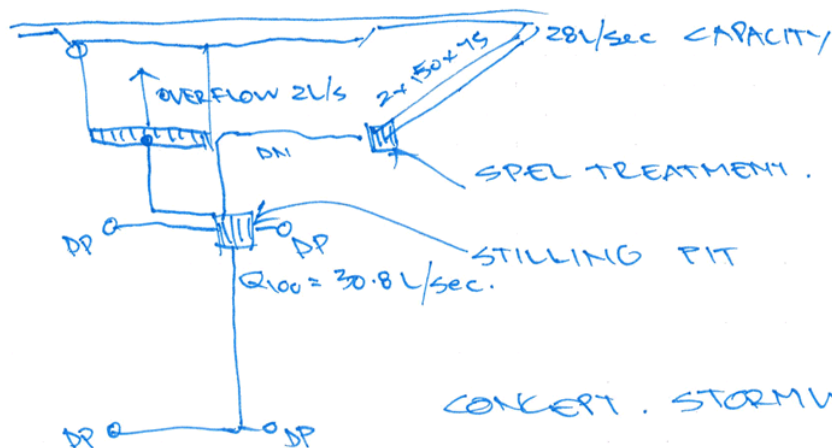
KERB CAPACITY IS 28 L/sec

STILLING SUMP WILL PROVIDE SMALL

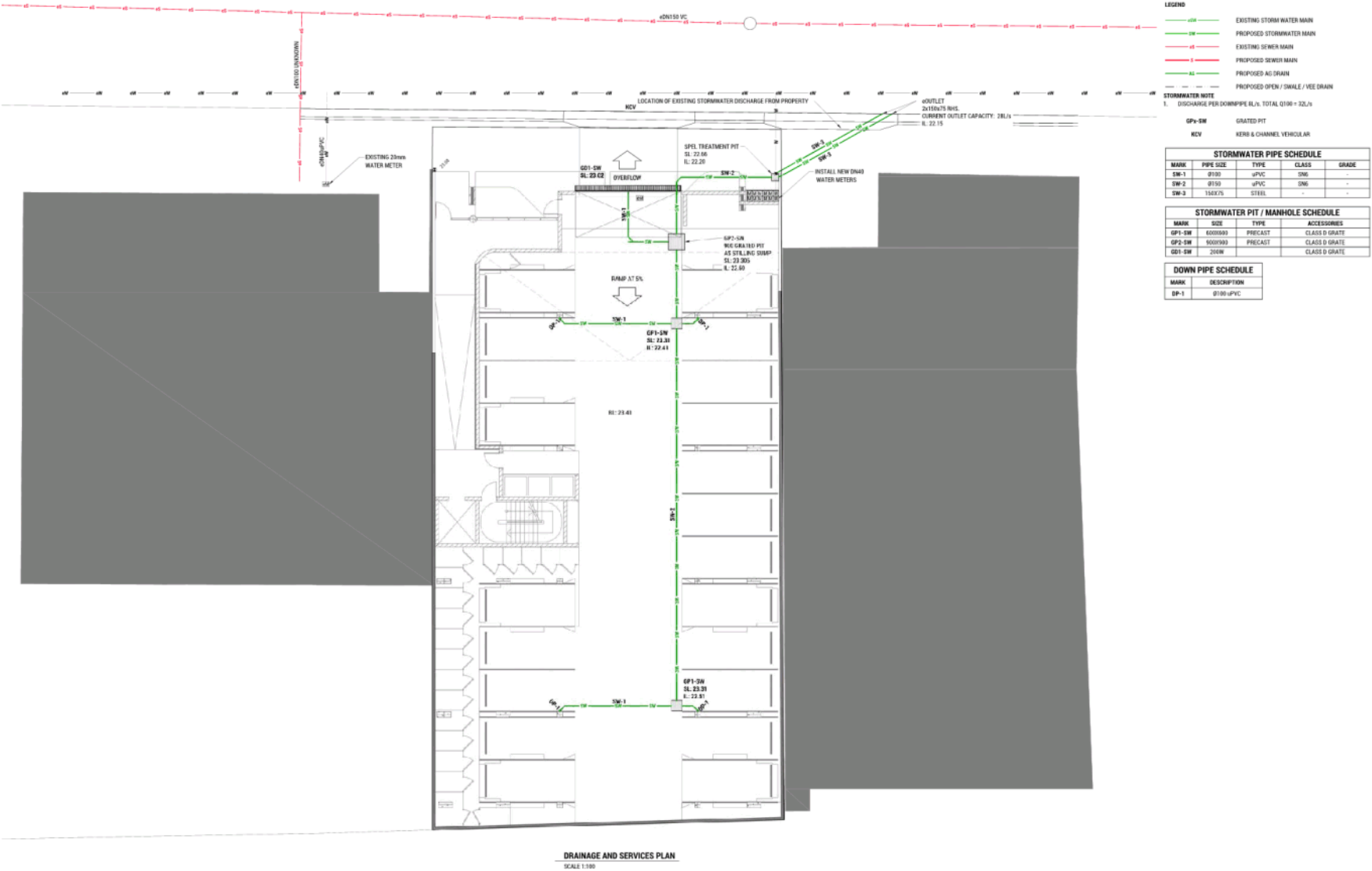
AMOUNT OF DETENTION REQUIRED &

GRADED DRAIN AT CAR PARK BASEMENT

ENTRY WILL BE THE OVERFLOW WITH

DIRECTED TO THE STREET. MAX 2 L/sec in 1 in 100 yr
EVENT

CONCEPT. STORMWATER



LXN Architecture Music Model

98 Argyle Street Apartments

98-110 Argyle Street, Hobart 7000

MUSIC MODEL

Project Name: 98 Argyle Street, 98-110 Argyle Street, Hobart 7000.

Client: Costmac Investments Pty Ltd

Project/Report Reference: A18067_Music

File Path: [file:///Volumes/01_LXN Architecture/00_Projects/A18067_98 Argyle St/04_AUTHORITIES/04_01_PLANNING AUTHORITY/04_01_RFIs/04_210430/MUSIC/A18067_MUSIC.docx](file:///Volumes/01_LXN%20Architecture/00_Projects/A18067_98%20Argyle%20St/04_AUTHORITIES/04_01_PLANNING_AUTHORITY/04_01_RFIs/04_210430/MUSIC/A18067_MUSIC.docx)

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Version: 01

Prepared By: Joshua Crossin

Date: 06/05/2021

Reviewed By: Sarah Lindsay

Date: 06/05/2021

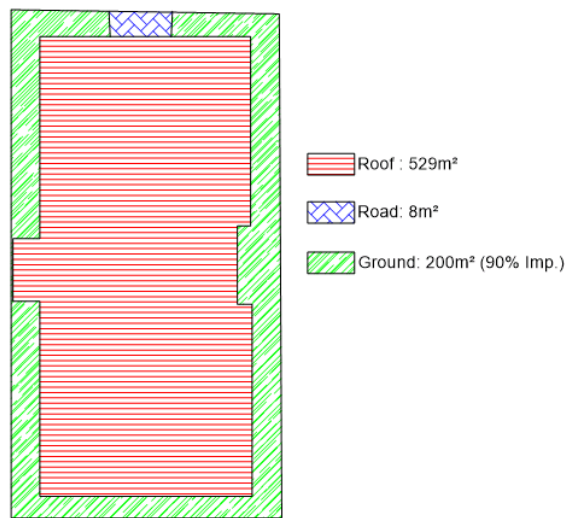
LXN Architecture Music Model

1.0 Introduction

LXN Architecture and Consulting commissioned Ocean Protect to provide a MUSIC (Model for Urban Stormwater Improvement Conceptualisation) assessment for 98 Argyle Street.

The below summary is based on the installation of an Ocean Project JellyFish model for the 98 Argyle Street Apartments located at 98-110 Argyle St, Hobart. This model includes all areas as per figure 1. The site area calculation breakup drains to the end of line JellyFish treatment system. The model achieves the State Stormwater Strategy targets using a JF900-1-1 (686) operating under 230mm of head. The JellyFish system is also required to be designed as an offline system.

Figure 1 MUSIC Model Site Area Breakup



16165 - 98-110 Argyle St, Hobart TAS 7000 (Site Area Breakup)

The catchment calculation in MUSIC in accordance with the following guidelines & parameters. These are;

- MUSIC Version 6.3.0
- Rainfall Station: Hobart 01 May 1996 to 01 October 2001 - 6min
- Melbourne MUSIC Guidelines (Melbourne Water 2016) utilizing modified % impervious area, rainfall threshold, soil properties & pollutant concentration
- No drainage routing between nodes.

LXN Architecture Music Model

2.0 State Stormwater Strategy (December 2010) targets

Ocean Protect have modelled the systems to meet current Tasmania – State Stormwater Strategy (December 2010) targets. These are;

- 80% Total Suspended Solids Reduction
- 45% Total Phosphorus Reduction
- 45% Total Nitrogen Reduction
- 90% Gross Pollutant Reduction

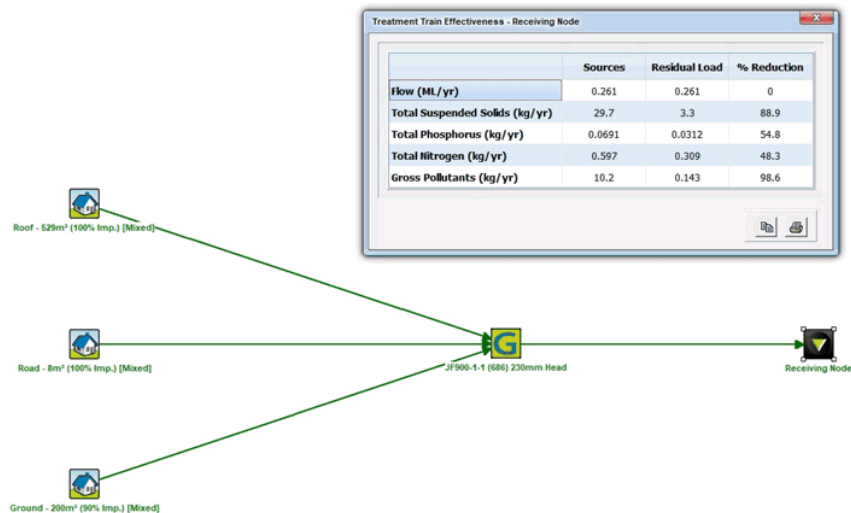
Preliminary Design (Treatment Train Input)

- JF900-1-1 (686) under 230mm Head.

3.0 MUSIC Model Results

As per the below MUSIC treatment train the following reduction targets achieve:

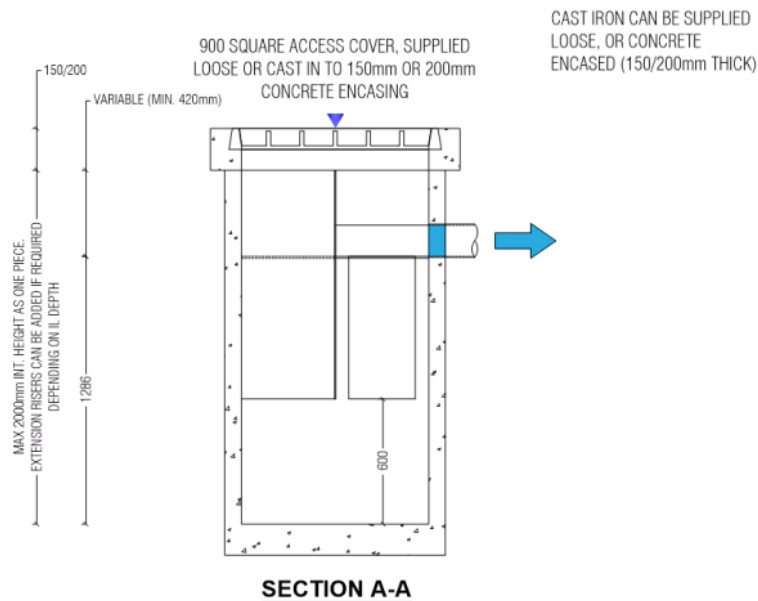
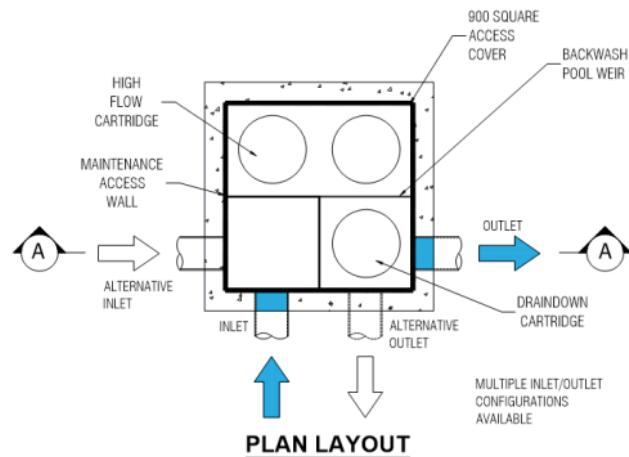
- 88.9% Total Suspended Solids Reduction
- 54.8% Total Phosphorus Reduction
- 48.3% Total Nitrogen Reduction
- 98.6% Gross Pollutant Reduction



4.0 Conclusion

Use of the Ocean Protect Jellyfish treatment train achieves Tasmania's State Stormwater Strategy targets and is deemed to be an comply with E.7.7.1 A2.

NOT FOR CONSTRUCTION



JELLYFISH DESIGN TABLE

JELLYFISH TREATMENT FLOW IS A FUNCTION OF THE NUMBER OF CARTRIDGES AND THE DEVICE TOTAL HEAD DIFFERENTIAL. IF THE PIPE FLOW EXCEEDS THE TREATMENT FLOW THEN AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.

REQUIRED DEVICE TOTAL HEAD DIFFERENTIAL [mm]	460	305	230
CARTRIDGE FLOW RATE HIGH-FLOW / DRAINDOWN [L/s]	2.5 / 1.3	1.68 / 0.98	1.27 / 0.79
CARTRIDGE LENGTH [mm]	686	690	690
OUTLET INVERT TO STRUCTURE INVERT [mm]	1286	1286	1286

SITE SPECIFIC
DATA REQUIREMENTS

STRUCTURE ID	[]		
WATER QUALITY FLOW RATE (L/S)	[]		
# OF CARTRIDGES REQUIRED (HF - DD)	[-]		
CARTRIDGE SIZE	690		
PIPE DATA:	I.L.	MATERIAL	DIAMETER
INLET PIPE	[]	[]	[]
OUTLET PIPE	[]	[]	[]
LID WEIGHT	TBC		
PART A & B WEIGHT (SEPARATE)	TBC		

NOTE: TANK SUPPLIED IN TWO PARTS; PARTS A & B TO BE JOINED ON SITE

GENERAL NOTES

- JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF THE PROJECT.
- PRECAST STRUCTURE SUPPLIED WITH CORE HOLES TO SUIT OUTER DIAMETER OF NOMINATED PIPE SIZE / MATERIAL.
- STRUCTURE AND ACCESS COVERS TO BE DESIGNED TO MEET AUSTRROADS T44 LOAD RATING WITH 0.0m TO 2.0m FILL MAXIMUM (CLASS D) UNLESS OTHERWISE NOTED. THE OUTLET PIPE INVERT ELEVATION, CERTIFYING ENGINEER TO CONFIRM ACTUAL GROUNDWATER ELEVATION. PRECAST STRUCTURE SHALL BE IN ACCORDANCE WITH AS3600.
- IF THE PEAK FLOW RATE, AS DETERMINED BY THE CERTIFYING ENGINEER, EXCEEDS THE TREATMENT FLOW RATE OF THE SYSTEM, AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.
- ALL WATER QUALITY TREATMENT DEVICES REQUIRE PERIODIC MAINTENANCE. REFER TO OPERATION AND MAINTENANCE MANUAL FOR GUIDELINES AND ACCESS REQUIREMENTS.
- SITE SPECIFIC PRODUCTION DRAWING WILL BE PROVIDED ON PLACEMENT OF ORDER.
- DRAWING NOT TO SCALE.

INSTALLATION NOTES

- ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE SPECIFIC DESIGN CONSIDERATION AND SHALL BE SPECIFIED BY THE CERTIFYING ENGINEER.
- CONTRACTOR TO PROVIDE ALL EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STRUCTURE (LIFTING DETAIL PROVIDED SEPARATELY).
- CONTRACTOR TO INSTALL AND LEVEL THE STRUCTURE, APPLY SEALANT TO ALL JOINTS AND TO PROVIDE, INSTALL AND GROUT INLET AND OUTLET PIPES.
- CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.
- CARTRIDGE INSTALLATION, BY OCEANPROTECT, SHALL OCCUR ONLY AFTER SITE HAS BEEN STABILIZED AND THE JELLYFISH UNIT IS CLEAN AND FREE OF DEBRIS. CONTACT OCEAN PROTECT TO COORDINATE CARTRIDGE INSTALLATION WITH SITE COMPLETION.



PHONE: 1300 354 722

www.oceanprotect.com.au

OCEAN PROTECT
JELLYFISH 900 SQUARE
STANDARD PRODUCT DRAWING



LXN Architects
98-110 Argyle Street
Traffic Impact Statement
March 2021





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1. Introduction

1.1 Background

Midson Traffic were engaged by LXN Architects to prepare a traffic impact statement for a proposed 20-unit residential apartment development at 98 Argyle Street, Hobart.

Figure 1 Proposed Development Render



1.2 Traffic Impact Assessment/ Traffic Impact Statement

A traffic impact assessment (TIA) is a process of compiling and analysing information on the impacts that a specific development proposal is likely to have on the operation of roads and transport networks. A TIA should not only include general impacts relating to traffic management but should also consider specific impacts on all road users, including on-road public transport, pedestrians, cyclists and heavy vehicles.

A traffic impact statement (TIS) is a reduced form of a TIA, where only specific traffic and/or parking matters are required to be investigated. A TIS is often undertaken when the full traffic and transport impacts associated with a development are not considered necessary.

This TIS has generally been prepared in accordance with the Department of State Growth (DSG) publication, *A Framework for Undertaking Traffic Impact Assessments*, 2007. This TIS has also been prepared with reference to the Austroads publication, *Guide to Traffic Management*, Part 12: *Traffic Impacts of Developments*, 2019.



This TIS also addresses the relevant clauses of E5.0, *Road and Railway Assets Code*, and E6.0, *Parking and Access Code*, of the Hobart Interim Planning Scheme, 2015.

Council have requested that a Traffic Impact Statement be prepared to investigate the parking requirements of the development proposal.

1.3 Statement of Qualification and Experience

This TIS has been prepared by an experienced and qualified traffic engineer in accordance with the requirements of Council's Planning Scheme and The Department of State Growth's, *A Framework for Undertaking Traffic Impact Assessments*, September 2007, as well as Council's requirements.

The TIS was prepared by Keith Midson. Keith's experience and qualifications are briefly outlined as follows:

- 25 years professional experience in traffic engineering and transport planning.
- Master of Transport, Monash University, 2006
- Master of Traffic, Monash University, 2004
- Bachelor of Civil Engineering, University of Tasmania, 1995
- Engineers Australia: Fellow (FIEAust); Chartered Professional Engineer (CPEng); Engineering Executive (EngExec); National Engineers Register (NER)

1.4 Subject Site

The subject site is located at 98-110 Argyle Street, Hobart. The subject site and surrounding road network is shown in Figure 2. The existing site is a commercial building with 3 on-site car parking spaces located between the building frontage and road.



Figure 2 Subject Site & Surrounding Road Network

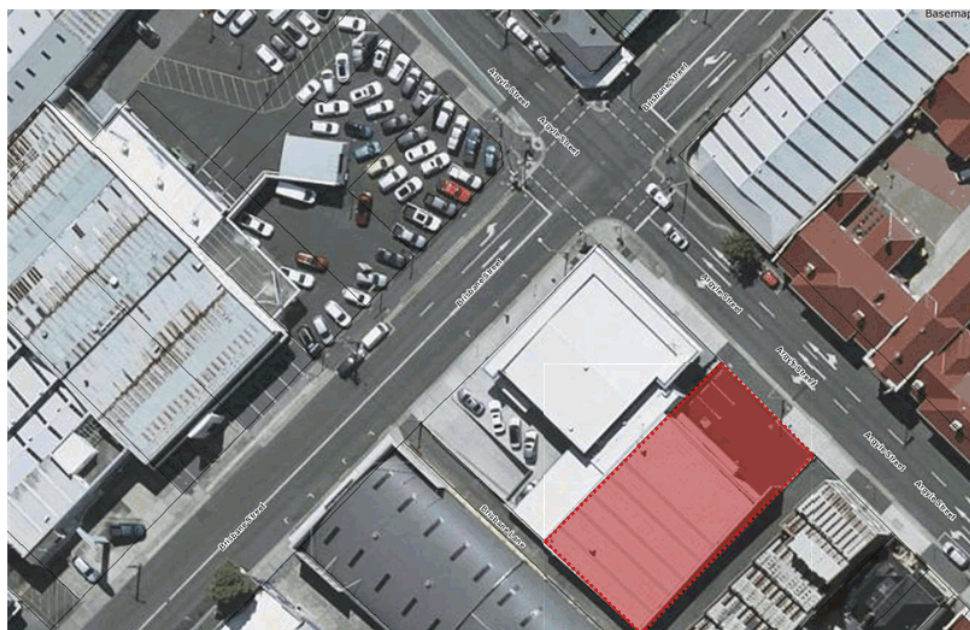


Image Source: LIST Map, DPIPWE

1.5 Reference Resources

The following references were used in the preparation of this TIA:

- Hobart Interim Planning Scheme, 2015 (Planning Scheme)
- Austroads, *Guide to Traffic Management*, Part 12: *Traffic Impacts of Developments*, 2019
- Austroads, *Guide to Road Design*, Part 4A: Unsignalised and Signalised Intersections, 2017
- Department of State Growth, *A Framework for Undertaking Traffic Impact Assessments*, 2007
- Roads and Maritime Services NSW, *Guide to Traffic Generating Developments*, 2002 (RMS Guide)
- Roads and Maritime Services NSW, *Updated Traffic Surveys*, 2013 (Updated RMS Guide)
- Australian Standards, AS2890.1, *Off-Street Parking*, 2004 (AS2890.1)



2. Existing Conditions

2.1 Transport Network

For the purposes of this report, the transport network consists of Argyle Street only. Argyle Street is a major arterial road that provides one-way flow between Davey Street and New Town Road. Adjacent to the subject site, Argyle Street has three lanes (left turn lane into Brisbane Street and two through lanes). Argyle Street adjacent to the subject site is shown in Figure 3.

A CBD 40-km/h speed limit applies to Argyle Street.

Argyle Street carries approximately 13,500 vehicles per day prior to the Brisbane Street junction. Argyle Street connects to Brisbane Street and Melville Street at signalised intersections.

Figure 3 Argyle Street



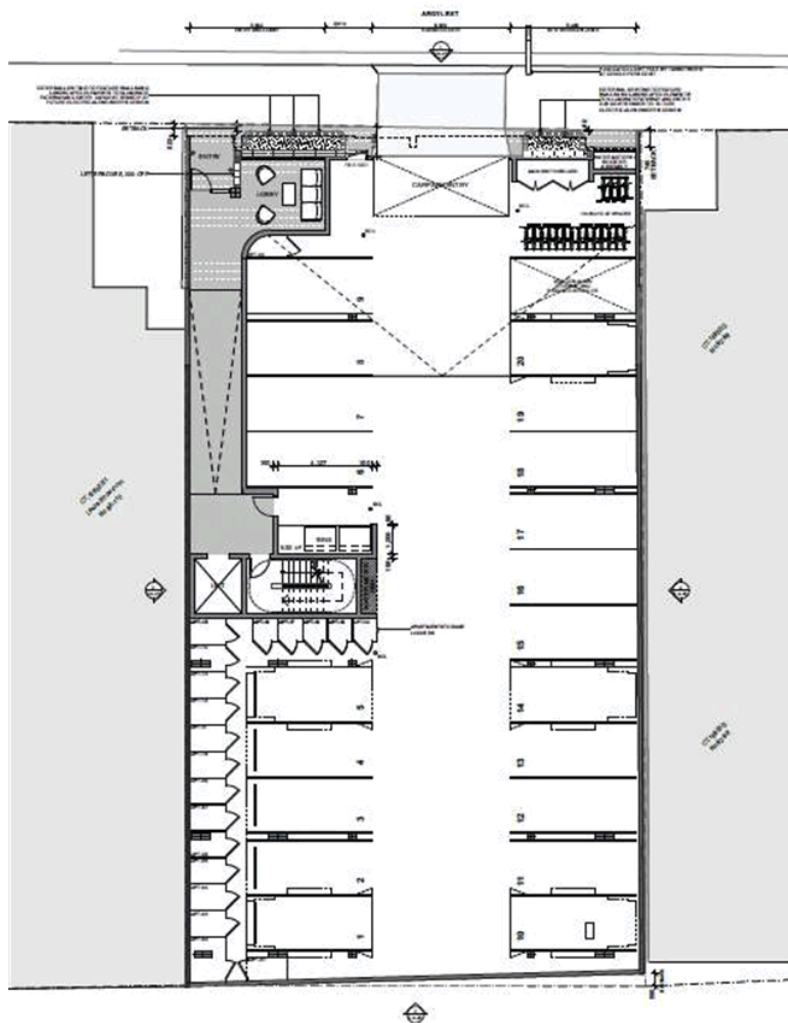


3. Proposed Development

3.1 Development Proposal

The proposed development involves the demolition of the existing building and the construction of an apartment complex consisting of 20 units. On-site car parking is proposed for 20 spaces accessed via a single driveway at Argyle Street.

The proposed development is shown in Figure 4.





4. Traffic Impacts

4.1 Traffic Generation

Traffic generation rates were sourced from the RMS Guide. The RMS Guide classifies the development as 'high-density' residential:

"A high density residential flat building refers to a building containing 20 or more dwellings. This does not include aged or disabled persons' housing. High density residential flat buildings are usually more than five levels, have basement level car parking and are located in close proximity to public transport services. The building may contain a component of commercial use".

The RMS Guide (Updated Surveys) provides the following traffic generation rates for high-density residential developments:

▪ Daily traffic generation	3.22 vehicles per day per parking space	64 vpd
▪ AM peak traffic generation	0.35 vehicles per hour per parking space	7 vph
▪ PM peak traffic generation	0.26 vehicles per hour per parking space	5 vph

Note the rate per parking space was adopted as parking on the site is constrained to 20 spaces.

4.2 Trip Distribution

All traffic will access the site via left-turn entry and left-turn exit manoeuvres due to the one-way flow of Argyle Street.

4.3 Access Impacts

The Acceptable Solution A3 of Clause E5.5.1 of the Planning Scheme states "*The annual average daily traffic (AADT) of vehicle movements, to and from a site, using an existing access or junction, in an area subject to a speed limit of 60km/h or less, must not increase by more than 20% or 40 vehicle movements per day, whichever is the greater*".

The traffic generation of the existing land use is not known. Potentially the previous use of the site may have generated approximately 40 vehicles per day (based on commercial turnover of three car parking spaces and the commercial vehicle garage access of the site). The increase in traffic generation is not greater than 40 vehicles per day (being the greater of 20% or 40 vpd) and therefore complies with the requirements of Acceptable Solution A3 of Clause E5.5.1 of the Planning Scheme.



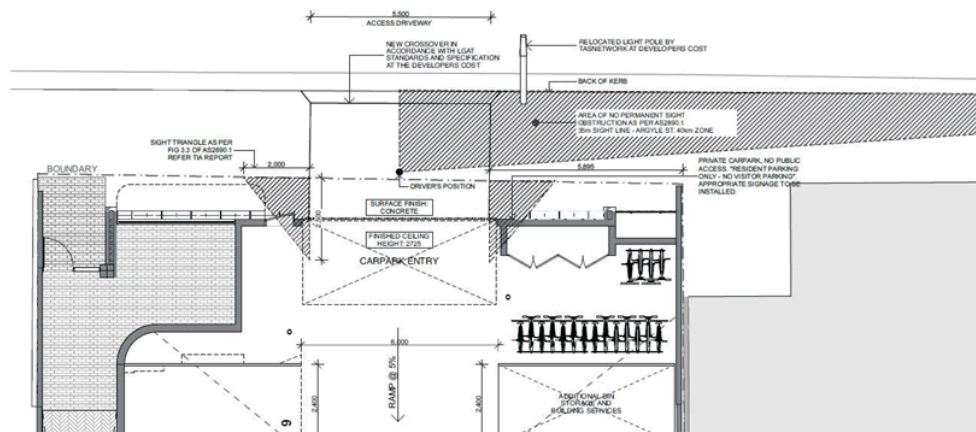
4.4 Sight Distance

Sight distances at the site's access were assessed against the requirements of AS2890.1 (Section 3.2.4 of AS2890.1).

For a road frontage speed of 40-km/h the required sight distance is 30 metres for a residential property access. The available sight distance from the site's access is 35 metres, therefore exceeding the minimum AS2890.1 requirements. It is also noted that increased sight distance is available as a vehicle moves out of the site into Argyle Street. This is shown in Figure 5.

A pedestrian sight triangle is required on the western side of the access (exit lane of the access). This is provided through an adjacent glass door as shown in Figure 5.

Figure 5 Access Sight Lines





5. Parking Assessment

5.1 Parking Provision

The proposed development provides a total of 1 car parking space for each unit (total of 20 on-site car parking spaces). The parking is configured in two rows of 10 x 90-degree parking spaces as shown in Figure 4.

5.2 Car Parking Demand

The RMS Guide recommends the following parking rates for high-density residential developments:

- 0.6 spaces per 1-bedroom unit
- 0.9 spaces per 2-bedroom unit
- 1.4 spaces per 3-bedroom unit
- 1 space per 5 units visitor parking

This equates to the following car parking requirement:

▪ 10 x 2-bedroom units	9 spaces
▪ 10 x 3-bedroom units	14 spaces
▪ Visitor	4 spaces
▪ <u>TOTAL</u>	<u>27 spaces</u>

The provision of 20 spaces falls short of the recommended provision of 27 spaces. If visitor parking is not included in the calculations then the shortfall reduces to 3 spaces when compared to the RMS Guide. In constrained residential developments it is common for visitor parking not to be provided.

It is further noted that modern residential unit development in urban areas (such as CBD environments or town centres) typically provide 1 car parking space per unit and little or no visitor parking. There are many recent examples in Hobart that provide this level of parking provision. The parking provision for each unit would be known to prospective purchasers or renters and this then forms part of the decision making process. In this regard, the parking provision is self-selecting as occupiers are unlikely to buy or rent a unit that does not accommodate their car parking needs.

5.3 Planning Scheme Requirements

The Acceptable Solution A1 of Clause E6.6.1 of the Planning Scheme states that "*the number of on-site car parking spaces must be no less than the number specified in Table E6.1*".

Table E6.1 requires 2 spaces for each dwelling and 1 dedicated visitor parking space per 4 dwellings (rounded up to the nearest whole number). This is a requirement for 45 parking spaces. The provision of 20 parking spaces does not comply with the Acceptable Solution A1 of Clause E6.6.1 of the Planning Scheme.



The Performance Criteria P1 of Clause E6.6.1 of the Planning Scheme states:

"The number of on-site car parking spaces must be sufficient to meet the reasonable needs of users, having regard to all of the following:

- (a) car parking demand;*
- (b) the availability of on-street and public car parking in the locality;*
- (c) the availability and frequency of public transport within a 400m walking distance of the site;*
- (d) the availability and likely use of other modes of transport;*
- (e) the availability and suitability of alternative arrangements for car parking provision;*
- (f) any reduction in car parking demand due to the sharing of car parking spaces by multiple uses, either because of variation of car parking demand over time or because of efficiencies gained from the consolidation of shared car parking spaces;*
- (g) any car parking deficiency or surplus associated with the existing use of the land;*
- (h) any credit which should be allowed for a car parking demand deemed to have been provided in association with a use which existed before the change of parking requirement, except in the case of substantial redevelopment of a site;*
- (i) the appropriateness of a financial contribution in lieu of parking towards the cost of parking facilities or other transport facilities, where such facilities exist or are planned in the vicinity;*
- (j) any verified prior payment of a financial contribution in lieu of parking for the land;*
- (k) any relevant parking plan for the area adopted by Council;*
- (l) the impact on the historic cultural heritage significance of the site if subject to the Local Heritage Code;*
- (m) whether the provision of the parking would result in the loss, directly or indirectly, of one or more significant trees listed in the Significant Trees Code".*

The following is relevant with respect to the development proposal:

- a. Car parking demand. The development provides sufficient on-site car parking supply to cater for the needs of each unit if all units have one car. Visitor parking demands are not catered for on-site. The car parking provision of 1 space per unit will be known to prospective purchasers or renters. The empirical car parking assessment is outlined in Section 5.2.
- b. On-street and public car parking. There is a relatively large supply of on-street car parking in the surrounding transport network. This is typically in the form of short-term time restrictions and parking meters. There is sufficient on-street car parking to cater for the shortfall of visitor car parking.



- c. Public transport. The site is located close to Elizabeth Street which is a major transit corridor. Metro Tasmania operate frequent buses along Elizabeth Street.
- d. Other modes of transport. The development is located close to shops and services in Hobart and North Hobart. Walking and cycling are likely to be common transport modes for residents for certain trip types.
- e. Alternative car parking provision. The development provides a large supply of on-site bicycle parking. Bicycle lanes have been installed along Argyle Street near the subject site.
- f. Shared parking. Not applicable.
- g. Parking deficiency or surplus. Not applicable.
- h. Car parking credit. Not applicable.
- i. Cash in lieu. Not applicable.
- j. Payment of cash in lieu. Not applicable.
- k. Parking plan. Not applicable.
- l. Historic cultural heritage significance. Not applicable.
- m. Significant Trees Code. Not applicable.

Based on the above assessment the development complies with the requirements of Performance Criteria P1 of Clause E6.6.1 of the Planning Scheme. Specifically the development provides sufficient parking to cater for the parking demands of the units but not visitor parking. The provision of visitor parking is readily available on-street in the surrounding road network.

5.4 Car Parking Layout

The Acceptable Solution A1 of Clause E6.7.5 of the Planning Scheme states "*The layout of car parking spaces, access aisles, circulation roadways and ramps must be designed and constructed to comply with section 2 "Design of Parking Modules, Circulation Roadways and Ramps" of AS/NZS 2890.1:2004 Parking Facilities Part 1: Off-street car parking and must have sufficient headroom to comply with clause 5.3 "Headroom" of the same Standard*".

The car parking requirements of AS2890.1 are set out in the following sections.

5.4.1 Driveway Requirements

The AS2890.1 driveway requirements are as follows:

- Minimum driveway width (Category 1 driveway, servicing Class 1A with less than 25 spaces) = 3.0m

The driveway width exceeds this requirement along the full width of the access.



5.4.2 Slope

Section 2.5.3(b) of AS2890.1 states the following regarding the maximum grade of straight ramps/driveways:

- i. Longer than 20 m – 1 in 5 (20%) maximum.
- ii. Up to 20 m long – 1 in 4 (25%) maximum. The allowable 20 m maximum length shall include any parts of the grade change transitions at each end that exceed 1 in 5 (20%).

In this case the driveway design does not exceed these gradient requirements, with the maximum longitudinal grade being 5%.

Section 2.4.6 of AS2890.1 states that the maximum grades within a car park shall be:

- Measured parallel to the angle of parking 1 in 20 (5%)
- Measured in any other direction 1 in 16 (6.25%)

All car parking spaces comply with AS2890.1 requirements in terms of grade (noting that all spaces are effectively level).

5.4.3 Parking Space Dimensions

The car parking is classified as User Class 1A, '*residential, domestic and employee parking*'. This requires car parking minimum dimensions to be:

- Width 2.4m
- Length 5.4m
- Aisle width 5.8m

Where a parking space is located immediately adjacent to a vertical structure (wall, fence, etc), an additional 0.3m additional space width is required.

All spaces comply with AS2890.1 dimensional requirements. Specifically the car parking dimensions are:

- Width 2.4 metres
- Length 5.4 metres
- Aisle width 6.0 metres

5.4.4 Parking Layout Summary

The parking spaces and manoeuvring areas comply with the relevant requirements of AS2890.1 and therefore comply with the requirements of Acceptable Solution A1 of Clause E6.7.5 of the Planning Scheme.



6. Conclusions

This traffic impact statement (TIS) investigated the traffic and parking impacts of a proposed 20-unit residential development at 98-110 Argyle Street, Hobart.

The key findings of the TIS are summarised as follows:

- The development will generate 64 vehicles per day with a peak of 7 vehicles per hour during the AM peak period.
- The traffic generation at the driveway access meets the requirements of Acceptable Solution A3 of Clause E5.5.1 of the Planning Scheme.
- The available sight distance at the site's access junction with Argyle Street meets the requirements of AS2890.1 for vehicles and pedestrians.
- The development provides a total of 20 on-site car parking spaces. The parking provision meets the requirements of Performance Criteria P1 of Clause E6.6.1 of the Planning Scheme. This is primarily due to the fact that the parking demands are constrained to 1 space per unit, which will be known to prospective purchasers/ renters. Visitor parking is not provided on-site but can be met in the surrounding network.
- The car parking layout and driveway design meets the requirements of Acceptable Solution A1 of Clause E6.7.5 of the Planning Scheme in terms of slope and dimensions.

Based on the findings of this report and subject to the recommendations above, the proposed development is supported on traffic grounds.



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Document Status

Revision	Author	Review	Date
0	Keith Midson	Zara Kacic-Midson	23 March 2021



LXN Architecture

Hobart, TAS

Attention: Josh Crossin

2 April 2021

Doc 6337

98 - 110 ARGYLE STREET — NOISE ASSESSMENT

A multi-residential development is proposed at 98 - 110 Argyle Street, Hobart. The developer has requested a noise assessment to accompany the DA submission, in order to assess the likely compliance of the proposal against clause 24.3.8-A1 of the Hobart Interim Planning Scheme 2015 (the Scheme). This letter presents a strategy for NVC to demonstrate compliance with these criteria.

1. BACKGROUND

The proposed site is an existing building at 98 - 110 Argyle Street, Hobart. The site and surrounding area is located within a Commercial zone under the Scheme.



FIGURE 1: SITE AND SURROUNDING AREA

NVC PTY. LTD.

ABN 53 626 639 521
T. 6244 5556PO Box 476, ROSNY PARK, TAS 7018
bill@nvc.com.au



2. CRITERIA

Section 23 of the Hobart Interim Planning Scheme 2015 contains criteria for a Commercial zone. In particular, clause 23.4.8 details criteria specific to development for residential and visitor accommodation within Commercial zone. The objective of this criteria is:

"To ensure that buildings for residential or visitor accommodation uses provide reasonable levels of amenity and safety in terms of noise, access to daylight and natural ventilation, open space, storage."

To satisfy this objective regarding noise, the following Acceptable Solutions criteria are stated under clause 23.4.8-A1:

"Residential or visitor accommodation development must demonstrate that design elements are able to achieve internal noise levels in accordance with relevant Australian Standards for acoustics control (AS3671:1989 – Road Traffic Noise Intrusion (Building Siting and Construction) and AS2107:2016 – Acoustics (Recommended Design Sound Levels and Reverberation Times for Building Interiors))."

3. ASSESSMENT & NOISE CONTROL

NVC has been engaged to provide acoustic advice for the development. In order to achieve compliance with these criteria, it is proposed to conduct noise logging on site over a period of nominally one week, to quantify existing ambient noise levels. This measurement data is then to be used to calculate the required facade noise attenuation to ensure the internal acoustic environment complies with the relevant criteria.

It is noted that, regardless of the ambient noise levels measured on site, compliance is achievable with adequate noise control via window and facade construction and detailing.

NVC does not foresee any issues which would result in compliance with the standards listed under the Scheme criteria not being able to be achieved, and as such, the proposal is deemed likely to comply with the clause 24.3.8-A1 of the Hobart Interim Planning Scheme 2015.

Should you have any queries, please do not hesitate to contact me directly.

Kind regards,

A handwritten signature in black ink, appearing to read 'Jack Pitt', is written in a cursive style.

Jack Pitt



pitt&sherry

**HB20090 – Site Contamination
Appraisal**

98 Argyle St, Hobart

Prepared for
LXN Architecture and Consulting

Client representative
Sarah Lindsay

Date
24 March 2020

Rev 01



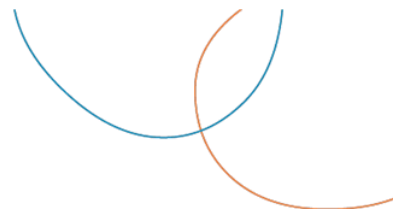


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Appendices

- Appendix A —** Figures
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1. Introduction

pitt&sherry were engaged by LXN Architecture and Consulting (the Client) to undertake an appraisal of an Environmental Site Assessment ¹ (ESA) undertaken by pitt&sherry in 2009. The ESA was undertaken prior to the redevelopment of a former Ampol Service station located at 98-110 Argyle Street, Hobart.

98 Argyle Street is currently used for retail and is proposed to be redeveloped into medium density residential accommodation. Hobart City Council's planning officers have advised that an ESA is required to form part of the development application submission for the site. It is understood that an ESA has been requested because the site is listed as potentially contaminated due to the proximity of the former service station. Detailed plans of the proposed building were provided to pitt&sherry, which has been taken into account with the ESA analytical data (from 2009) to assess potential human health and environmental risk.

The ESA was undertaken on behalf of Co-Op Toyota Pty Ltd who remain the current landowner, now referred to as Costmac Investments Pty Ltd. The ESA report documents the removal of seven underground fuel storage tanks and the sampling and assessment of residual contamination.

1.1 Scope of works

This appraisal will review the sampling data reported in the ESA in accordance with the framework set out in the National Environment Protection (Assessment of Site Contamination) Measures 1999 ('NEPM' – amended 2013), Tasmanian EPA Guidelines and Australian Standards. The scope of the report includes the following:

- Summary of site status
- Appraisal of ESA report
- Comparison of analytical data to current assessment guidelines (NEPM 2019)
- Discussion of assessment approach and analytical data gaps
- Conclusions and statement on site suitability.

1.2 Site setting

The proposed development occupies a flat area bounded by Argyle Street and Brisbane Lane to the East and West respectively. A Lexus car showroom occupies the adjoining building to the North, with a narrow lane to the South. At the time of writing there was a 3 story building on the boundary to the South (Hutchinson Builders Office) which was formally the site of Minty's sheet metalworkers building.

The extent of the 2009 ESA included 98-110 Argyle Street, and the proposed new development at 98 Argyle Street will occupy approximately 700 m² of the original plot, herein referred to as 'the site'. Soil and groundwater samples collected during the ESA were located inside and outside the proposed development area. The extent of the former service station and the proposed development is indicated in Figure 1.

The site is currently vacant and was formally occupied by a warehouse and retail outlet, which sells motor vehicle parts. The building occupies a large portion of the site, with a small customer carpark accessed from Argyle Street occupying approximately 200m² of the remainder.

¹ 98-110 Argyle Street, Hobart Environmental Site Assessment, June 2009 (HB08281H001 rep 31P Rev 00/DT/jw)

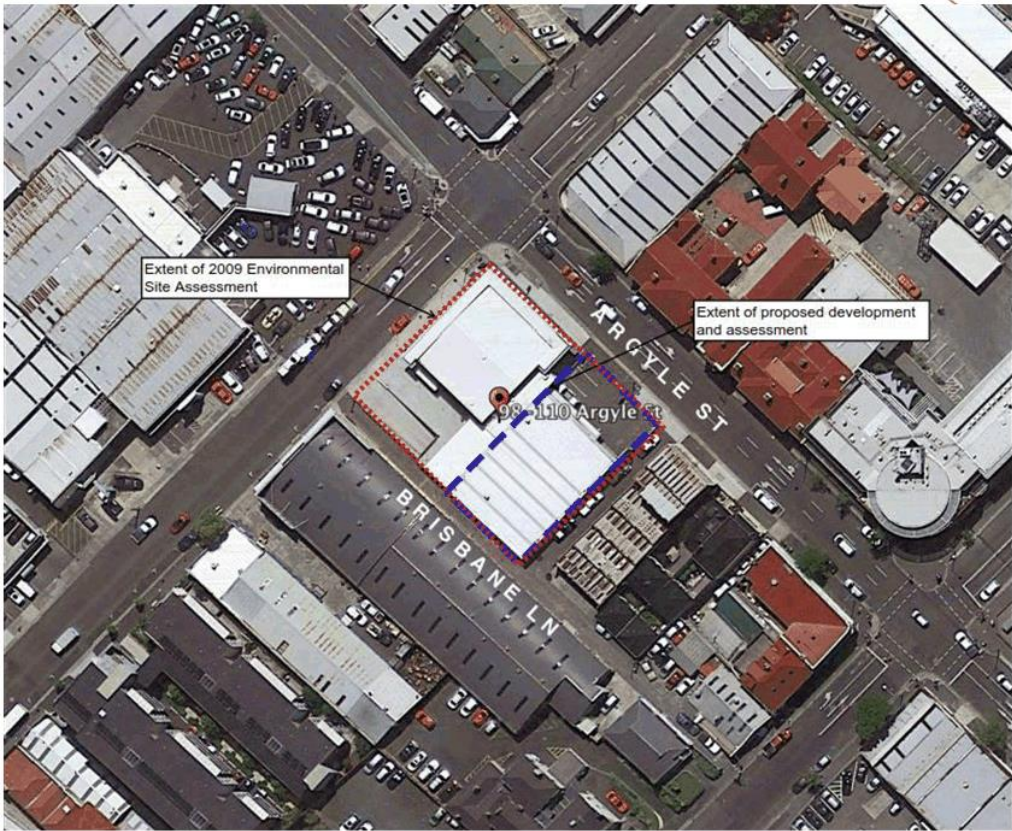



Figure 1 - Site location

1.3 Proposed change in landuse

The redevelopment will involve demolition of the current building and limited excavation for foundations and service trenches. The Client provided pitt&sherry with plans of the proposed building, which are enclosed in Appendix A. The proposed building has four floors consisting of two and three bed apartments occupying the second, third and fourth floors. The ground floor consists of a residential carpark, stairs, a lift shaft and utility services and will therefore not be used as a living space. The proposed building will occupy most of the site and will have sealed vehicle access from Argyle street. The development plan indicates narrow planters around the building, which would likely consist of raised beds with imported topsoil. Taking into account the details of the development, future residents would have no direct contact to underlying soils. Site details are summarised in Table 1.

Table 1 - Sites details (summarised from development plans provided)

Item	Details
Property ID	7589903
Title reference	CT.160050/1



Item	Details
Zoning	Commercial (residential is permitted above ground floor)
Current Owner	Costmac Investments Pty Ltd
Local Government Area	Hobart City Council

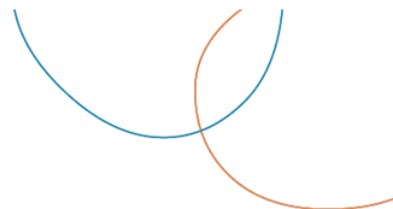
1.4 Surrounding land use

It is understood that Council requested an ESA due to the historical service station, located on 98 to 110 Argyle Street. Service stations are commonly associated with residual soil and groundwater contamination and commonly represents a trigger for assessment. The scope of this appraisal does not include a detailed assessment of other potentially contaminating activities onsite or in the vicinity of the site. However, surrounding landuse at the time of reporting is summarised in Table 2.

Table 2: Surrounding land use

Direction	Address	Owner	Current use
North-east	85 Argyle St	Tasmania Fire Service	Member Sports Club and storage
	29 Brisbane St	Argyle takeaway	Takeaway with residential beyond
North-west	110 Argyle Street	Costmac Investments Pty Ltd	Lexus car showroom, with second hand car yard beyond
South-east	92-96 Argyle St	Hutchins Builders	Laneway and Hutchins Builders offices (appears to be derelict) and residential and pub beyond
South - west	18/30 Brisbane St, Hobart	Central Cleaning Supplies Tasmania	Retail shop

Further assessment would be necessary to determine if the Tasmanian Fire Service site at 85 Argyle Street was historically used for firefighting training and if aqueous film forming foam (AFFF) was used. The historical use of AFFF is commonly associated with per- and polyfluoroalkyl substances (PFAS), which can contaminate soil, surface water and groundwater. PFAS in groundwater can migrate significant distances in groundwater due to its chemical properties. The risk of PFAS impacted groundwater to future occupants on the site is considered to be low, based on no groundwater abstraction for beneficial use occurring onsite. If subsequent information indicates offsite PFAS migration from the Tasmanian Fire Service site has occurred, the health and ecological risks to surrounding sites should be assessed.



1.1 Site geology and groundwater

The 2009 ESA reports states that the geology on the site consists of Triassic aged sediments of predominantly freshwater cross bedded quartz and feldspathic sandstone. Insitu bedrock was interpreted to be moderately to highly weathered.

Soil conditions encountered during the drilling of boreholes in 2009 predominantly consisted of clay to 10 meters below ground level (m BGL) which represented the maximum depth of drilling. A sandy unit was encountered in bore BH3 located in the north-eastern corner of the site between 2.5 to 10 m BGL. For the purpose of assessing vapour intrusion risk, sand soil type assessment criteria were conservatively adopted.

Groundwater levels recorded in 2009 ranged from 6.68 m BGL (BH1) to 2.69 m BGL (BH3). The report suggests that 3 meters would be excavated prior to the construction of the current building. If this was the case groundwater would be close to the surface at BH3 located in the north-eastern corner of the site. It should be noted that the gauging of the wells was undertaken 11 years ago in 2009, therefore groundwater levels may have changed significantly and the amount of material which was excavated prior to the construction of the present building is unknown.

The detailed assessment of potential groundwater use is beyond the scope of this report, however the Tasmania Groundwater Information Access Portal (accessed in March 2020) indicated no groundwater bores are registered within a 1 km radius of the site. The nearest bore is located approximately 1.97 km (Bore 2864) and was drilled by the Mines Department to 54 m BGL. The last documented operating status was 1983 and the bore's current status is unknown.

For the purpose of assessing the suitability of the site for the proposed future use it is assumed that onsite groundwater abstraction or beneficial use will not occur. This is considered to be appropriate taking into account the development proposed, the urban context, and reticulated water supply.

1.2 Vegetation

As the site will consists solely of the building and sealed surfaces, no vegetation is present on site and no vegetation surrounds the site.

1.3 Acid sulfate soils

The ASRIS Atlas of Australian Soils indicates the site is within an area of '*no known occurrence*' of acid sulfate soils, and no acid sulfate soils were reported to have been encountered during the 2009 investigation at the site.

2. Environmental Site Assessment (2009)

A total of seven underground storage tanks (USTs) were removed from the former service station. The tanks are reported to have consisted of six bulk fuel tanks and one waste oil tank. A copy of the site plan indicating the location of the tanks is provided in Figure 2.

The ESA included a larger area than the current development, which is also indicated in the Figure. The appraisal only assesses the area which is subject to redevelopment. All the soil and groundwater analytical data which was in the 2009 ESA report has been included in the Analytical Summary Table (Attachment C), however in the instance where any exceedances are reported the location of the sample relative to the current development area has been taken into account.

The site is reported to have been used as a second hand car dealership prior to the 2009 assessment and it was reported to have been approximately 15 years prior that the service station ceased trading.

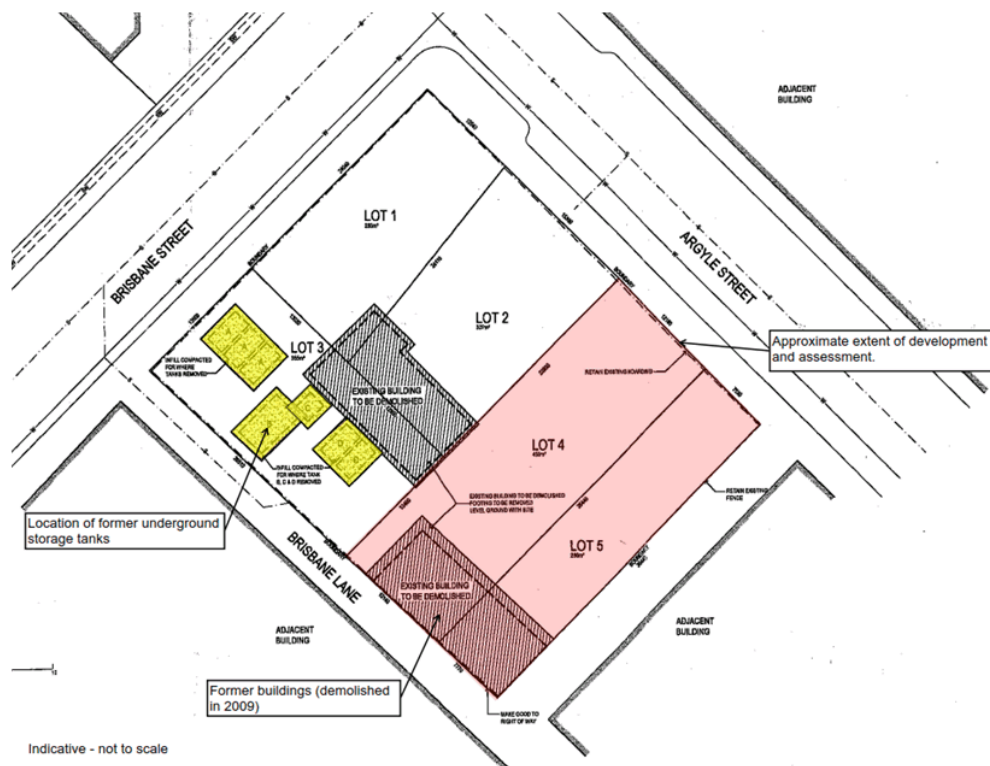


Figure 2 – Former service station layout and extent of assessment (base plan from pitt&sherry ESA, 2009)

3. Assessment criteria

Based on the proposed future use of the site, residential assessment criteria with no/minimal opportunities for soil access were adopted to assess the reported analytical data. Criteria were also adopted to assess the potential risk of exposure to excavation workers involved in the proposed excavation and construction of new foundation structures.

Much of the criteria applied was revised in 2013 and is detailed in Table 3.

In the absence of particle size distribution testing to establish the physical properties of soils, a sand soil type was conservatively applied when selecting the assessment criteria. Exceedance of any criteria are used to assess contamination and to trigger consideration of an appropriate site-specific risk-based approach or risk management options.

Table 3: Adopted assessment criteria

Reference	Sub Reference	Reason for Use*
National Protection (Assessment of Site Contamination) Measure 1999 – amended 2013	Soil Health Investigation Levels for Soil Contaminants, residential use (HSL-B) (Table 1A (1))	Assessing human health risk via all relevant pathways of exposure and generally apply to the top 3 m BGL.
	Soil Health Screening Levels for Vapour Intrusion, residential use (HSL-B) (Table 1A (3))	Assessment of petroleum hydrocarbon vapour intrusion risk for residential use (sub-slab data).
	Interim Soil Vapour Health Investigation Levels for chlorinated compounds, residential use (Interim HIL-A) (Table 1A (2))	Assessment of chlorinated compounds vapour intrusion risk for residential use (sub-slab data).
	Groundwater Health Screening Levels (HSLs) for vapour intrusion 2 m to <4 m, sand (Table 1A (2))	Assess health risk via inhalation and direct contact pathway
	Ecological Investigation Levels (EILs) (Table 1B (1))	Assess ecological risk for selected metals and organic substances. Apply to top 2 m of soil.
	Ecological Screening Levels (ESLs) for TPH, BTEX and B(a)P in soil – coarse soil	Assess terrestrial ecological risk for selected petroleum compounds. Apply to top 2 m of soil.
	Management Limits (Table 1 B (7))	Applicable to petroleum hydrocarbons and considered following the assessment of health and ecological risk.
CRC Care (2011) ² Technical Report No. 10	Health Screening Levels for Vapour Intrusion – Intrusive Maintenance Workers (Table B1(1) to (5))	Assessment of vapour intrusion risk into shallow trench from hydrocarbons.
	Soil Health Screening Levels for Direct Contact – HSL -B Residential (High Density) (Table A4)	Assessment of direct contact high density residential health risk of hydrocarbons.
	Soil Health Screening Levels for Direct Contact – Intrusive maintenance worker (Table A4)	Assessment of direct contact maintenance worker health risk of hydrocarbons.

Note - It is recognized that some contaminant compounds were not tested, and hydrocarbon banding reported in 2009 was slightly different to the current NEPM assessment criteria banding. These data gaps are considered in Section 4.

² CRC Care Technical Report No. 10, Health screening levels for petroleum hydrocarbons in soil and groundwater (2011)

4. Review of sampling methodology

The samples collected in the 2009 ESA are detailed in Table 4. Stockpile samples were also collected from packing sands removed from around the USTs for waste classification purposes. This material is reported to have been disposed offsite and has therefore not been included in the appraisal.

Table 4: Appraisal of sampling methodology

Sample type	Number of samples	Analyses	Details / comments
UST pit validation	13 (PS Pit and PV Pit)	Lead, TPH, phenols and BTEX	The USTs were located outside the proposed redevelopment area, refer to Attachment A.
Surface soil assessment	9 (LC1 to LC2)	Metals, OC/OP, PAH, PCB, TPH, phenols and BTEX	Samples LC1, LC2, LC6 to LC9 were collected inside the proposed redevelopment area.
Groundwater	3 (BH1 to BH3)	TPH, BTEX, lead and phenols	Soil samples were collected during the advancement of the bores (prior to groundwater well installation) for geotechnical purposes. The samples are reported to have been examined for any signs of hydrocarbons.

Notes: UST – Underground storage tank, TPH-Total petroleum hydrocarbons, BTEX – Benzene, toluene ethylbenzene and xylene, OC/OP – Organochloride and organophosphate pesticides

Six surface soil samples were collected from the site subject to redevelopment which is considered to represent the minimum number of sampling points in accordance with sampling density guidelines. The parameters tested and the number and coverage of samples collected is considered appropriate for preliminary site soil contamination assessment based on the reporting objectives.

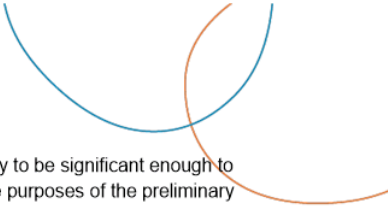
4.1 Quality assurance

Tank pit validation samples were collected after the removal of USTs. Samples are reported to have been collected from 0-20 cm depth from the walls and base of the tank excavations. The sample quantity and density from the tank excavations were deemed to be adequate taking into account no signs of contamination or discoloration. It is assumed that samples were collected by appropriately trained staff and appropriate sample collection, handling, logging and transportation procedure were adopted.

No duplicate, trip blank or field blank samples are reported to have been collected. These samples are typically required to demonstrate that samples are free from contamination and the accuracy and precision can be reliably achieved to ensure data quality objectives and the investigation approach is compliant with NEPM Guidelines.

It is considered that the QA/QC program implemented during the 2009 ESA would not be adequate to assess data reliability and accuracy in accordance with current NEPM 1999 guidelines, however the field observations and analytical results are deemed to be sufficiently reliable for the purpose of a preliminary assessment in the context of the proposed development.

Although a comprehensive review of the laboratory procedures was not undertaken in the 2009 ESA report, the laboratory that undertook the environmental testing (ALS) was NATA accredited for the analyses performed. No specific information was provided on internal laboratory quality control results or procedures.



Considering the objectives, the absence of internal laboratory analytical error is unlikely to be significant enough to change the overall interpretation of the data and it is considered to be adequate for the purposes of the preliminary assessment.

4.2 Other considerations

The appraisal is limited to the information provided in the 2009 ESA and does not include a site inspection, supplementary additional sampling or a desktop Preliminary Site Investigation (PSI). A PSI would typically include a detailed review of historical potentially contaminating activities on and nearby the site. Data sources would typically include historical aerial photographs, property records, certificate of titles, Dangerous Goods Records and a Property Information Request (PIR) from the Tasmanian Environment Protection Authority (EPA).

Based on the preliminary review of current landuse immediately surrounding the site (refer to Section 1.4) the risk to future occupants from migration of contaminated groundwater is conserved to be low. The absence of potentially contaminating activities surrounding the site, and onsite since the closure of the service station, reduces the likelihood that the site has been contaminated since the samples were collected.

The appraisal assumes that the primary source of contamination e.g. underground petroleum storage system (UPSS) infrastructure was removed prior to sampling in 2009. The assessment data gaps considered when applying the assessment criteria are summarised in Table 5, and the Analytical Summary Table is provided in Appendix C. The assessment approach detailed in the table is considered to be appropriate in the context of the appraisal objectives.

Table 5 – Assessment data gaps

Item	Assessment approach
Carcinogenic PAH as B(a)P TEQ not reported	Soil samples LC3, LC7, LC8 and LC9 where PAHs were reported above the LOR B(a)P TEQ was manually calculated.
NEPM TRH F1 and F2 concentrations not reported.	Petroleum hydrocarbon assessment fractions were revised in the updated 2013 NEPM incorporated into the 1999 guidelines. Volatile naphthalene was not reported which is now required to allow comparison with vapour intrusion HSL criteria. To assess the data the following was conservatively adopted: <ul style="list-style-type: none"> TPH C6-C9 minus BTEX compared to F1 criteria (TRH C6-C10 minus BTEX) TPH C10-C14 compared to F2 criteria (TRH C10-C16 minus naphthalene).
PAH not scheduled on groundwater samples to enable calculation of NEPM TRH F2 value.	TPH C10-C14 conservatively compared to F2 (TRH C10-C16 minus naphthalene) criteria.
TPH fractions reported slightly different to NEPM 2019 fractions	The TPH fractions which most closely match the fractions in the criteria were applied. The slight difference is not considered to significantly change the overall assessment of the data.
Calculation of Ecological Investigation Levels. No ABC concentrations or soil CEC and pH data.	ABC not added to the ACL criteria. Zinc, copper and chromium calculated using the most conservative urban residential land use soil conditions.

Notes: LOR – Limit of reporting, TEQ – Toxic equivalence quotient, OP – Organochlorine pesticide, ABC – Ambient background concentration, ACL – Added contaminant limit.

5. Comparison with assessment criteria

The results of the soil analytical data are summarised in Table 6.

Table 6: Summary of 2009 soil analytical results against assessment criteria

Sample	Criteria exceeded	Concentration detected
Tank excavation sample PS Pit 1A	C6-C10 minus BTEX (F1) HSL - 45 mg/kg EIL - 180 mg/kg Management Limit (Residential) - 700 mg/kg	913 mg/kg
	C10-C16 minus naphthalene (F2) HSL Residential - 110 mg/kg EIL - 120 mg/kg	700 mg/kg
	Total Xylene HSL Residential - 40 mg/kg ESL - 105 mg/kg	170 mg/kg
Tank excavation sample PS Pit 1C	C10-C16 minus naphthalene (F2) HSL Residential - 110 mg/kg EIL - 120 mg/kg	160 mg/kg
Tank excavation sample PS Pit 3B		230 mg/kg
Tank excavation sample PS Pit 3C		160 mg/kg
Site surface soil validation sample LC7	Lead HIL Residential – 1,200 mg/kg EIL Residential – 1,100 mg/kg	1,580 mg/kg
	B(a)P TEQ (half) HIL Residential – 4 mg/kg	4.6 mg/kg
	Benzo(a)pyrene ESL Residential – 0.7 mg/kg	3.9 mg/kg
Site surface soil validation sample LC8	Lead HIL Residential – 1,200 mg/kg EIL Residential – 1,100 mg/kg	1,730 mg/kg
	Benzo(a)pyrene ESL Residential – 0.7 mg/kg	1.1 mg/kg

Notes – Only samples reported above the assessment criteria are detailed in the table. All the analytical data and assessment criteria is provided in Appendix C.



6. Preliminary conceptual site model

A preliminary conceptual site model (CSM) has been developed based on the reviewed information and the current and future site setting. The assessment is based on potential source-pathway-receptor linkages with regards to human health and the environment.

Potential sources of on-site contamination and potential contaminants of concern have been considered. Potentially impacted media were determined to be soil and groundwater underneath the site associated with the former service station. The historical data collected in 2009 has been revised against current assessment criteria in the context of the proposed residential development.

Contamination which may potentially impact users of the site includes hydrocarbons, phenols, OC/OP, PAHs, BTEX and metals from:

- Residual petroleum contamination associated with the former service station UPSS infrastructure
- Historical spills of fuels, oils and chemicals used during operation of the garage
- Groundwater contamination from potential off-site sources; and
- Soil contamination associated with contaminated fill.

Human receptors identified for the site risk assessment are:

- Future site users; and
- Construction workers.

Groundwater extraction for beneficial use onsite is not considered to be a complete risk pathway based on the residential setting and reticulated water supply. The health risk to future occupants associated with contact / use of contaminated groundwater are therefore considered to be low.

Although the B(a)P soil concentrations exceeded residential ecological assessment criteria, the risk to ecological receptors were considered to be low taking into account the urban settings of the site and absence of exposed soil. No flora and fauna are (or is anticipated will be) present on site and the nearest surface water receptor is the Hobart Marina located approximately 700 m to the south-east of the site.

The identified potential pathways by which receptors may be exposed to contaminants are:

- Inhalation of contaminants (vapours) in indoor air (future site users).
- Direct contact (dermal / ingestion) with contaminants for future residential users; and
- Direct contact and inhalation of contaminants from the slab, sub-slab soils and/or groundwater during construction works (construction workers).



7. Discussion of results

7.1 Tank excavation soil samples

Concentrations of hydrocarbons (F1 and F2) and total xylene were detected above residential HSL and EIL criteria in tank excavation validation samples PS Pit 1A, 1C, 3B and 3C. The exceedance of these criteria is indicative of a potential vapour intrusion health and terrestrial ecological risk.

In addition, Hydrocarbon F1 concentrations in tank excavation validation sample PS Pit 1A were also reported above Residential Management Limits, which are based on site specific considerations following health and ecological risk assessment. Management limits consider the formation of phase separated hydrocarbons, fire and explosion risks, damage to buried services and aesthetics.

The following has been taken into account in the assessment of these exceedances:

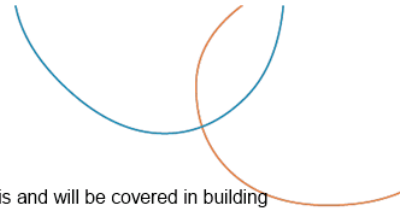
- The primary source of contamination USTs and associated infrastructure we removed approximately 11 years ago and ceased operating a number of years prior. The toxicity of residual hydrocarbon contaminants would be expected to have reduced over time (e.g. naturally attenuated).
- The tank validation samples were collected from the walls and base of the former tank excavations where contaminant concentrations would be expected to be most elevated. Concentrations typically reduce with distance from the source site.
- The former USTs (and tank excavation samples) were collected outside the proposed development area and the risk of lateral migration into the proposed development site is considered to be low based on the groundwater results.
- The proposed development will not include a basement or living space on the ground floor which will further mitigate the risk to future occupants.
- The calculated F2 data is considered to be inherently conservative because of the non-volatile fraction of naphthalene included.
- Contaminant concentrations were reported below the shallow trench vapour inhalation and direct contact construction worker health screening levels.

Taking the above into account the tank excavation sample contaminant concentrations reported are not considered to represent a risk to residents, construction workers involved in redevelopment of the site or terrestrial ecological receptors in the context of the proposed development.

7.2 Site surface soil validation samples

Lead and B(a)P were detected above Residential HIL criteria at surface validation samples LC7 and LC8. Sample LC7 was located approximately in the middle of the site and sample LC8 nearby to the south-east. HILs are generic assessment criteria designed to assess potential risks to human health from chronic exposure to contamination and are intentionally conservative. Taking into account soil samples LC7 and LC8 will be located under the concrete slab of the proposed building, the lead and B(a)P concentrations detected are not considered to represent a chronic exposure risk to future residential occupants, due to the absence of direct contact.

- B(a)p was also detected above Residential ESL in samples LC7 and LC8 and lead was detected above EIL in sample LC8. The following site specific factors should be taken into account in the assessment of terrestrial ecological risk:
- ESL for petroleum hydrocarbon materials broadly apply to coarse and fine grained soils. Clay was encountered across the majority of the site however a coarse grained soil type was conservatively applied based on sand being encountered in borehole BH3.



- Urban residential EILs are derived based on protecting 80% of species. The site is and will be covered in building and/or handstand which will not support terrestrial ecology.
- Contaminate concentrations were reported below the shallow trench vapour inhalation and direct contact construction worker health screening levels.

Taking the above considerations into account there the concentrations detected are not considered to present a risk to terrestrial ecosystem or excavation workers.

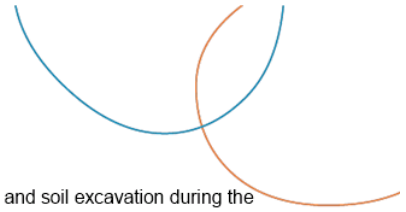
7.3 Groundwater

No groundwater analyte concentration exceeded HSL High Density Residential assessment criteria, refer to Table C4, Appendix C. It is noted that groundwater at monitoring well BH3 is reported to be less than 2 m BGL, however taking into account that BTEX concentrations were below the LOR and calculated hydrocarbon F1 and F2 concentrations were an order of magnitude below the assessment criteria, the groundwater concentrations reported are not considered to represent a vapor intrusion risk in the context of the proposed residential building.

8. Conclusions

Although hydrocarbons (F1 and F2) and xylene were detected above HSL and Management Limits in tank excavation samples 1A, 1C, 3B and 3C and lead and B(a)P were reported above HIL and in site surface samples LC7 and LC8 within the proposed development area, the risk to future site users is considered to be low and acceptable, taking into account the following considerations:

- The former UPSS infrastructure and tank excavation samples are located outside the redevelopment area. The absence of hydrocarbon contamination close to the removed tanks (BH1) and the proposed development area (BH3) suggests that significant lateral migration of hydrocarbons in groundwater had not occurred.
- No HSL exceedances were reported in surface soil samples across the proposed development area, indicative of a potential vapour intrusion risk.
- The primary source of contamination (UPSS) was located outside the current development area and was removed approximately 11 years ago. The residual contamination reported would be expected to reduce in concentration over time due to bio-attenuation processes and dispersion.
- The proposed development does not include a basement or living space on the ground floor or residential gardens with exposed soil. This reduces the risk of vapour inhalation and direct soil contact by occupants.
- Lead and B(a)P above HIL in surface samples LC7 and LC8 located in the proposed development area are not considered to represent a risk to future occupants because they are in an area of the site which will be under the building, therefore direct contact with occupants will not be possible.
- Based on the reported analytical data, groundwater contamination underneath the site from the removed UPSS infrastructure and past spills did not result in high levels of groundwater contamination. As future occupants will not have access to groundwater and the ground floor will not be used as a living space, the low concentrations of hydrocarbons reported in BH3 are not considered to pose a health risk to future residents



The risk to construction workers engaged in the removal of the existing concrete slab and soil excavation during the construction foundations and service trenches is considered to be low based on contaminate concentrations below the relevant health screening levels for excavation workers (vapour inhalation in a shallow trench and direct contact). However, taking into account the potential for unknown hotspots of soil contamination to be present or contact with contaminated groundwater, implementation of the following measures will ensure that such contamination will not present a risk to human health in the context of the proposed development:

- A Contamination Management plan (CMP) should be prepared prior to the commencement of works, which should detail management measures for the protection of construction workers and management of potentially contaminated soil and groundwater, triggers and contingency measures.
- If significant soil and or groundwater contamination is encountered during site works an appropriately experienced Environmental Scientist should be present to monitor ambient vapours and identify/sample potentially contaminated soil. If significant contaminated soil is identified, it may be required to be excavated with validation sampling of the remaining soil to demonstrate it will not pose a health risk to future occupants

The risk assessment is based on the reviewed analytical data and building concept plan provided by the Client with no access to soil or groundwater by future residents and the ground floor not being utilised as a living space. If the building design or landuse changes, further assessment and/or investigation would be required.

9. Important information

9.1 Scope of services

This report ("the Report") has been prepared in accordance with the scope of services set out in the contract, or as otherwise agreed, between the client and pitt&sherry ("the scope of services"). In some circumstances the scope of services may have been limited by a range of factors such as time, budget, access and/or site disturbance constraints. The Report may only be used and relied on by the client for the purpose set out in the contract or as otherwise agreed between the client and pitt&sherry. Any use which a third party makes of this document, or any reliance on or decisions to be made based on it, is the responsibility of such third parties.

9.2 Reliance on data

In preparing the Report, pitt&sherry has relied upon data, surveys, analyses, designs, plans and other information provided by the client and other individuals and organisations, most of which are referred to in the Report ("the data"). Except as otherwise stated in the Report, pitt&sherry has not verified the accuracy or completeness of the data. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations in the Report ("conclusions") are based in whole or part on the data, those conclusions are contingent upon the accuracy and completeness of the data. pitt&sherry does not warrant the accuracy will not be liable in relation to conclusions should any of the data, be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to pitt&sherry.

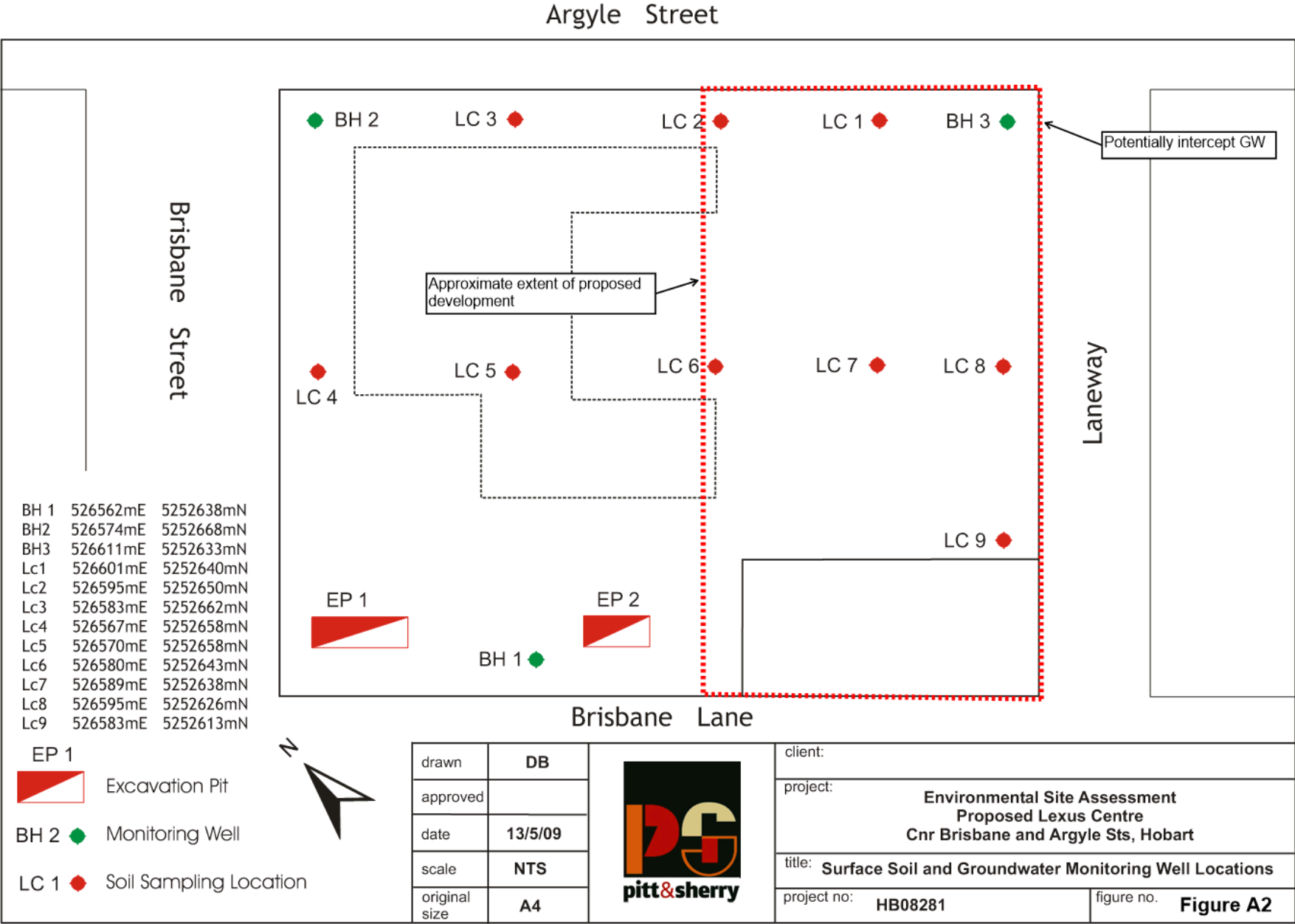
9.3 Conclusions and recommendations

The conclusions in this Report are based on conditions encountered and information reviewed at the date of preparation of the Report. pitt&sherry has no responsibility or obligation to update this Report to account for events or changes occurring subsequent to the date that the Report was prepared.



Figures

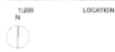
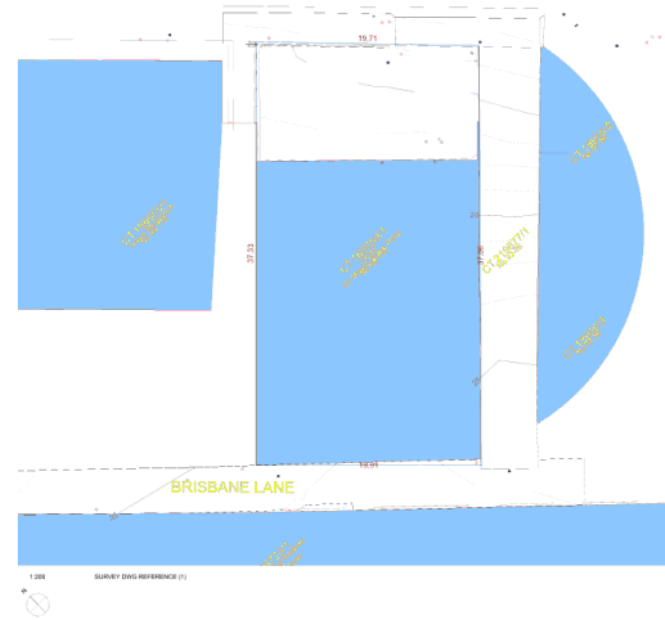
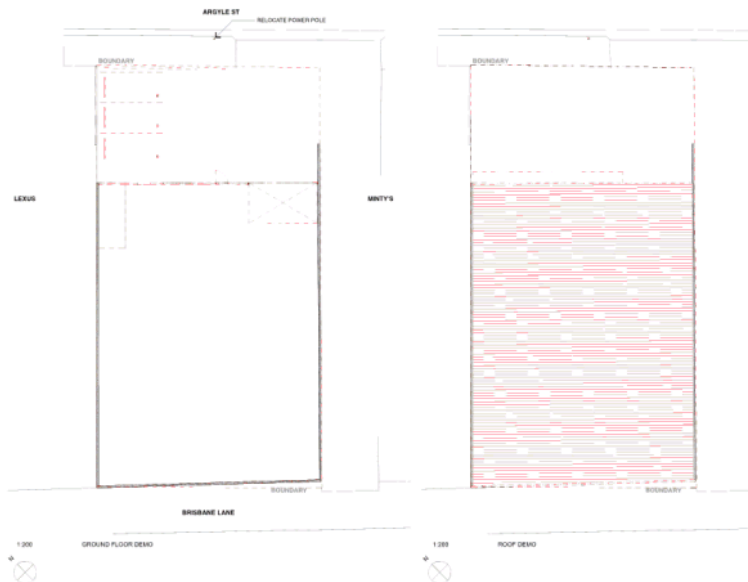
Appendix A





Proposed development plan

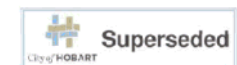
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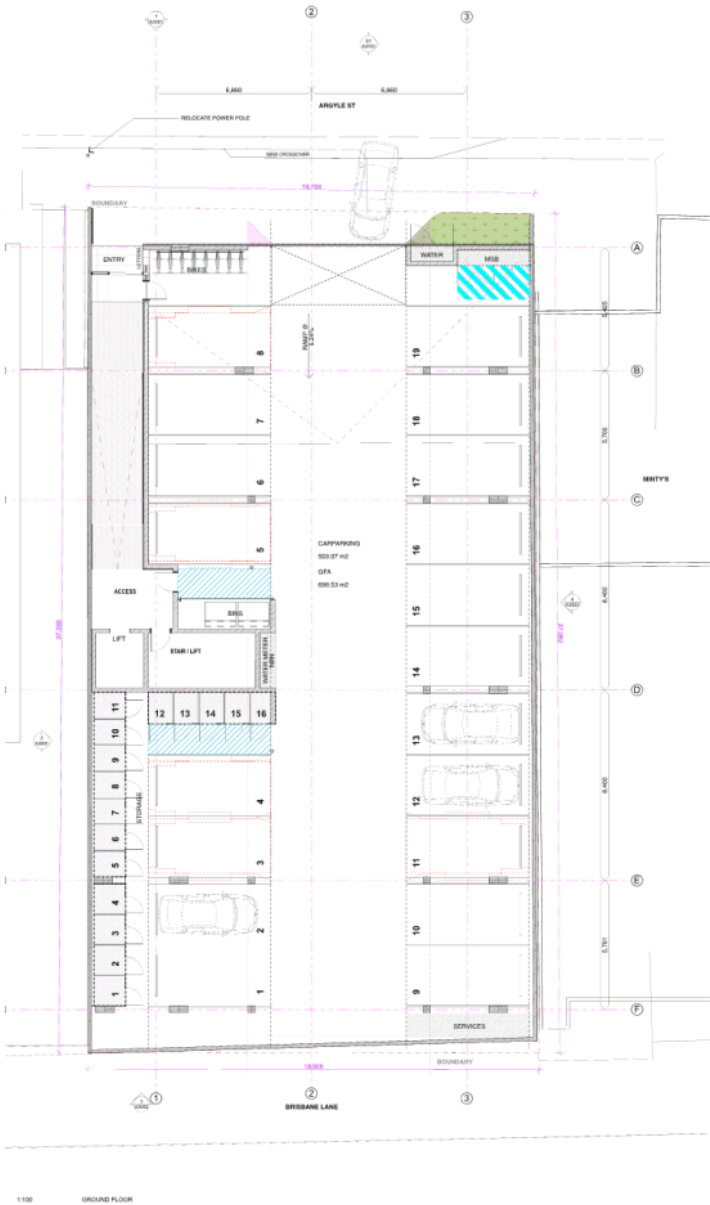
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FLOOR AREA SCHEDULE			
GROUND FLOOR	2018E	TYPE	AREA
CARPARK	---	---	903.07
CIRCULATION	---	---	53.48
CORE	---	---	19.29
GFA	---	---	985.83
FIRST FLOOR	---	---	---
2 BEDD	SA	---	85.17
2 BEDD	SB	---	86.49
2 BEDD	SB	---	127.89
3 BEDD	SA	---	107.89
BALCONY	SA	---	24.24
BALCONY	SA	---	25.21
BALCONY	SA	---	21.06
BALCONY	SB	---	20.48
CIRCULATION	---	---	17.15
CORE	---	---	19.80
GFA	---	---	713.37
SECOND FLOOR	---	---	---
2 BEDD	SA	---	85.17
2 BEDD	SB	---	86.49
3 BEDD	SA	---	127.89
3 BEDD	SA	---	127.89
BALCONY	SA	---	18.80
BALCONY	SB	---	18.80
BALCONY	SB	---	18.80
CIRCULATION	---	---	17.15
CORE	---	---	17.15
GFA	---	---	676.36
THIRD FLOOR	---	---	---
2 BEDD	SA	---	85.17
2 BEDD	SB	---	86.49
3 BEDD	SA	---	127.89
3 BEDD	SB	---	127.81
BALCONY	SA	---	17.32
BALCONY	SB	---	17.32
BALCONY	SB	---	17.32
BALCONY	SB	---	17.32
CIRCULATION	---	---	17.15
CORE	---	---	19.80
GFA	---	---	903.83
FOURTH FLOOR	---	---	---
2 BEDD	SA	---	85.17
2 BEDD	SB	---	86.49
3 BEDD	SA	---	127.89
3 BEDD	SA	---	127.81
BALCONY	SA	---	18.80
BALCONY	SB	---	18.80
BALCONY	SB	---	18.80
CIRCULATION	---	---	17.15
CORE	---	---	19.80
GFA	---	---	676.87
ROOF	---	---	---
GFA	---	---	594.72
ROOF (SERVICE)	---	---	---
GFA	---	---	37.63

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A1001

Project No.	AC0007
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Date	04/02/05
Drawn By	20
Checked By	JOHN CROSSIN
Alt. No.	000000





DRAWING TITLE
GROUND + FIRST
REV C - WIP
A2201

Project No. A2201
Scale 1:100
Date 15/06/2021
Drawn By JH
Checked By JH
Approved By JH

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DRAWING TITLE
SECOND + THIRD
REV C - WIP
A2202

Project No. A2202
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Date: 15/06/2021
Drawn By: JH
Checked By: JH
Approved By: JH
Rev: 001

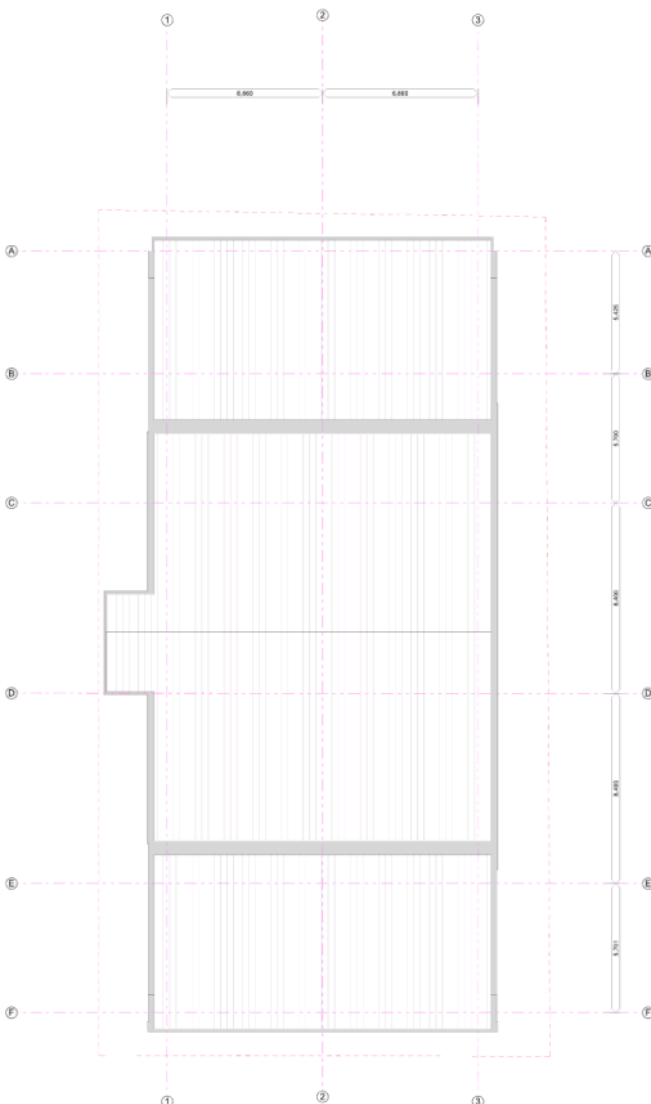
Superseded
City of Hobart

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215 Glen St, Hobart, TAS 7000
Ph: 03 6233 1111
Fax: 03 6233 1112
Email: info@lxn.com.au
Website: www.lxn.com.au



1:100 FOURTH FLOOR

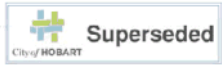


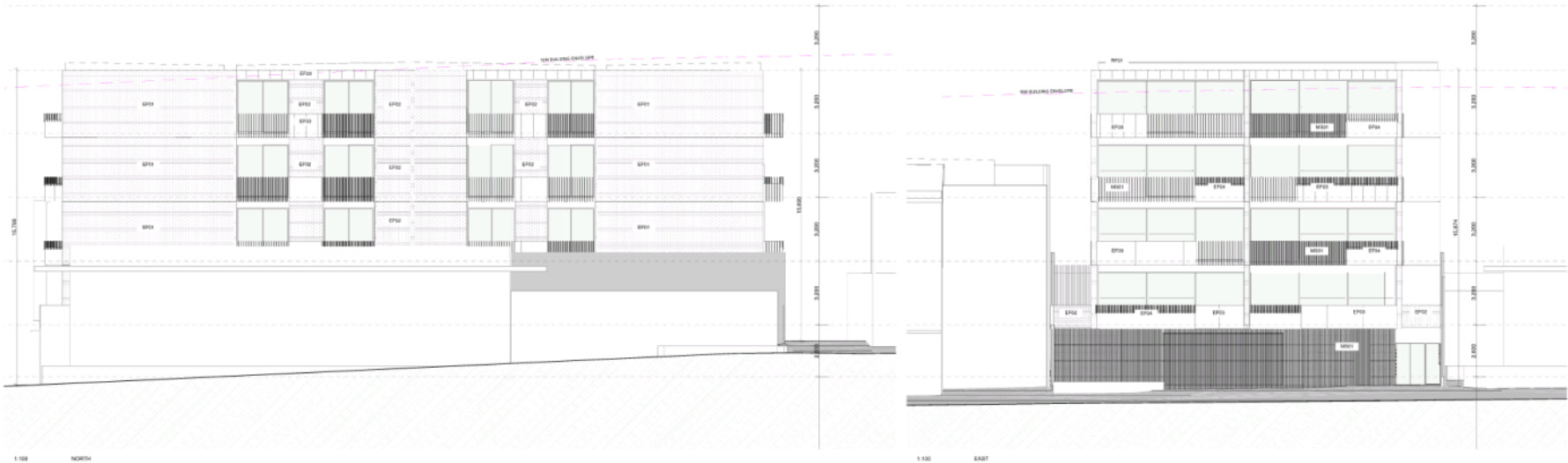
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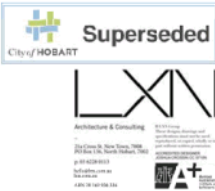
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Date: 15/06/2021
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Checked By: JH
Approved By: JH

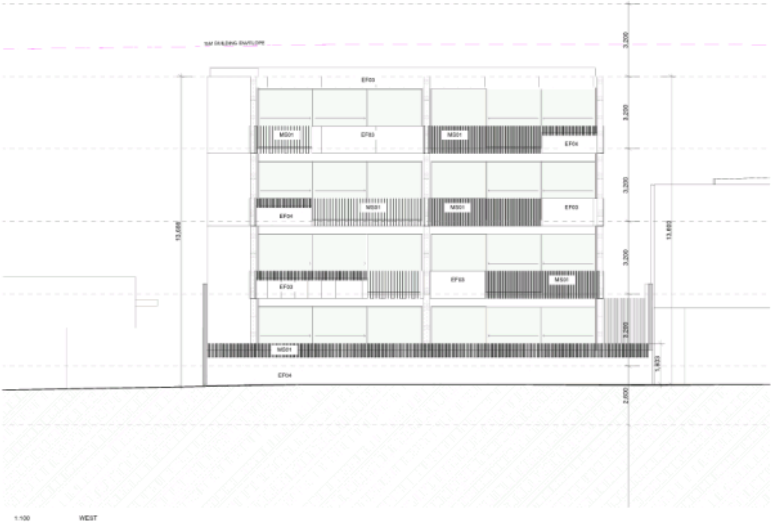
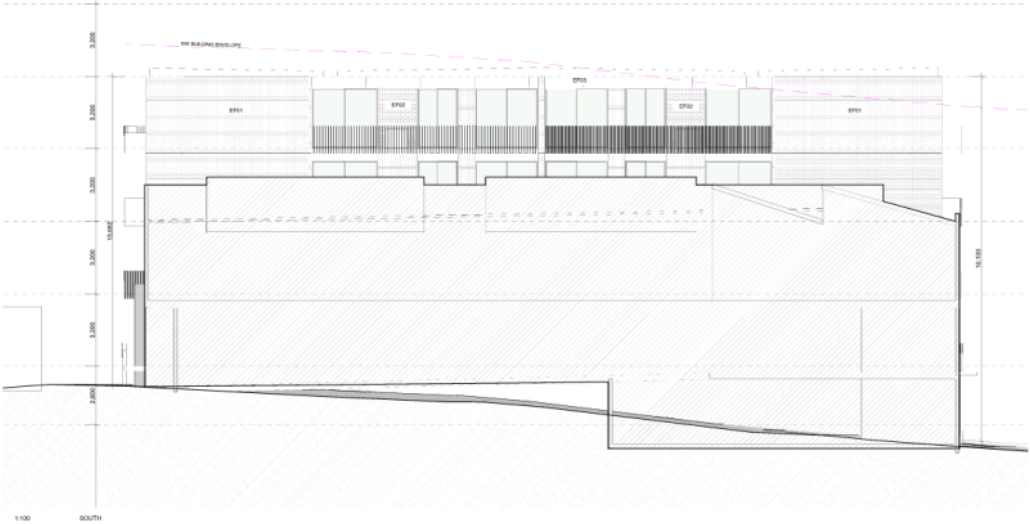




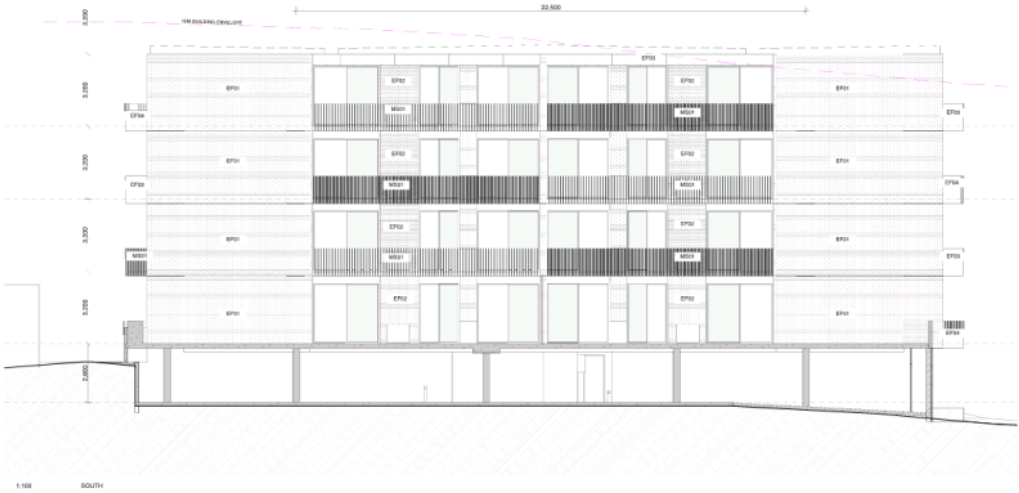
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CONCRETE - POLISHED CONCRETE
GLASS - CLEAR GLASS
ROOF - GRASS
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FLOORS - POLISHED CONCRETE
CEILING - POLISHED CONCRETE
DOORS - GLASS
WINDOWS - GLASS
ROOF - GRASS
WALLS - BRICK
FLOORS - POLISHED CONCRETE
CEILING - POLISHED CONCRETE
DOORS - GLASS
WINDOWS - GLASS

DRAWING TITLE
**EAST / NORTH
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A3001**
Project No. A3001
Scale 1:100
Date 15/06/2021
Drawn By JH
Checked By JH
Approved By JH



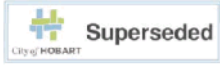


FINISHES:
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CONCRETE, POLISHED CONCRETE
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POLISHED BRICK, WHITE
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WEST / SOUTH
REV C - WIP
A3002

Project No. A3002
Scale 1:100
Date 15/06/2021
Drawn By JH
Checked By JH
Approved By JH





Analytical summary tables

C1 – C4



Appendix C

NR – Not reported

Unit - mg/kg
Conservative added contaminant limit criteria for Zn, Ni. RL adopted based on absence of ARC, CSC and pH

ME20202 - Soil Contamination Appraisal - 98 Apple Street, Kilsart

Table 28- Calculated Benz(a)pyrene TRG (benz)

EMMONS HANCOCK 16/03/2020				EMMONS HANCOCK 16/03/2020				EMMONS HANCOCK 16/03/2020				EMMONS HANCOCK 16/03/2020			
LCR		TSP		Sample x TSP		LCR		TSP		Sample x TSP		LCR		TSP	
Benz(a)anthracene	0.6	0.5	0.007	0.36	2.3	0.5	0.21	2.6	0.5	0.34	3.5	0.5	0.15	0.15	0.15
Chrysene	0.7	0.05	0.007	2.9	0.05	0.008	2.9	0.05	0.008	3.5	0.05	0.01	0.01	0.01	0.01
Benz(a)fluoranthene	0.7	0.5	0.07	4.7	0.5	0.47	9.6	0.5	0.46	3.9	0.5	0.4	0.5	0.19	0.19
Benz(b)fluoranthene	0	0.5	0	8.9	0.5	0.89	3.5	0.5	0.15	0	0.5	0	0.5	0	0
Benz(a)pyrene	0.7	1	0.7	9	1	9	9	1	9	3.5	1	3.5	1	3.1	3.1
Indeno(1,2,3-cd)pyrene	0	0.5	0	2	0.5	0.2	1.9	0.5	0.19	0.9	0.5	0.09	0.5	0.09	0.09
Dibenz(a,h)anthracene	0	1	0	0	1	0	0	1	0	0	1	0	1	0	0
Benz(g,h)perylene	0	0.05	0	2.9	0.05	0.029	2.9	0.05	0.029	0.7	0.05	0.01	0.007	0.007	0.007
Ref TRG (half LCR)				0.8		Ref TRG (half LCR)		4.9		Ref TRG (half LCR)		6.9		Ref TRG (half LCR)	

Table 29- Calculated Benz(a)pyrene TRG (half LCR)

EMMONS HANCOCK 16/03/2020				EMMONS HANCOCK 16/03/2020				EMMONS HANCOCK 16/03/2020				EMMONS HANCOCK 16/03/2020			
LCR		TSP		Sample x TSP		LCR		TSP		Sample x TSP		LCR		TSP	
Benz(a)anthracene	0.6	0.5	0.007	0.36	2.3	0.5	0.21	2.6	0.5	0.34	3.5	0.5	0.15	0.15	0.15
Chrysene	0.7	0.05	0.007	2.9	0.05	0.008	2.9	0.05	0.008	3.5	0.05	0.01	0.01	0.01	0.01
Benz(a)fluoranthene	0.7	0.5	0.07	4.7	0.5	0.47	9.6	0.5	0.46	3.9	0.5	0.4	0.5	0.19	0.19
Benz(b)fluoranthene	0.26	0.5	0.026	8.9	0.5	0.89	3.5	0.5	0.15	0.26	0.5	0.026	0.5	0.026	0.026
Benz(a)pyrene	0.7	1	0.7	9	1	9	9	1	9	3.5	1	3.5	1	3.1	3.1
Indeno(1,2,3-cd)pyrene	0.26	0.5	0.026	2	0.5	0.2	1.9	0.5	0.19	0.9	0.5	0.09	0.5	0.09	0.09
Dibenz(a,h)anthracene	0.26	1	0.26	0.26	1	0.26	0.26	1	0.26	0.26	1	0.26	1	0.26	0.26
Benz(g,h)perylene	0.26	0.05	0.0026	2.9	0.05	0.026	2.9	0.05	0.026	0.7	0.05	0.01	0.007	0.007	0.007
Ref TRG (half LCR)				1.1		Ref TRG (half LCR)		4.6		Ref TRG (half LCR)		6.2		Ref TRG (half LCR)	

Table 30- Calculated Benz(a)pyrene TRG (LCR)

EMMONS HANCOCK 16/03/2020				EMMONS HANCOCK 16/03/2020				EMMONS HANCOCK 16/03/2020				EMMONS HANCOCK 16/03/2020			
LCR		TSP		Sample x TSP		LCR		TSP		Sample x TSP		LCR		TSP	
Benz(a)anthracene	0.6	0.5	0.007	0.36	2.3	0.5	0.21	2.6	0.5	0.34	3.5	0.5	0.15	0.15	0.15
Chrysene	0.7	0.05	0.007	2.9	0.05	0.008	2.9	0.05	0.008	3.5	0.05	0.01	0.01	0.01	0.01
Benz(a)fluoranthene	0.7	0.5	0.07	4.7	0.5	0.47	9.6	0.5	0.46	3.9	0.5	0.4	0.5	0.19	0.19
Benz(b)fluoranthene	0.9	0.5	0.09	8.9	0.5	0.89	3.5	0.5	0.15	0.9	0.5	0.09	0.5	0.09	0.09
Benz(a)pyrene	0.7	1	0.7	9	1	9	9	1	9	3.5	1	3.5	1	3.1	3.1
Indeno(1,2,3-cd)pyrene	0.9	0.5	0.09	2	0.5	0.2	1.9	0.5	0.19	0.9	0.5	0.09	0.5	0.09	0.09
Dibenz(a,h)anthracene	0.9	1	0.09	0.09	1	0.09	0.09	1	0.09	0.09	1	0.09	1	0.09	0.09
Benz(g,h)perylene	0.9	0.05	0.009	2.9	0.05	0.029	2.9	0.05	0.029	0.7	0.05	0.01	0.007	0.007	0.007
Ref TRG (LCR)				1.4		Ref TRG (LCR)		4.9		Ref TRG (LCR)		6.4		Ref TRG (LCR)	

0.8	4.9	9.9	1.4
1.1	4.6	4.2	1.7
1.4	4.8	4.4	2.0

[illegible]

Table C6 - Groundwater Analytical Summary Table (mg/kg)
 H202090 - Soil Contamination Appraisal - 98 Apple Street, Hobart

	Units	LCR	H2L A and B line - High density residential sand 2m - <0.075	BS1	BS2	BS3
				SM09022490210 17/01/2009	SM09022490211 17/01/2009	SM09022490212 17/01/2009
Dissolved Metals by ICP-AES						
Lead	mg/L	0.005		0.004	0.077	0.162
Phenols						
Phenol				<1.0	<1.0	<1.0
2-Chlorophenol				<1.0	<1.0	<1.0
2-Methylphenol				<1.0	<1.0	<1.0
3- & 4-Methylphenol				<1.0	<1.0	<1.0
2-Nitrophenol				<1.0	<1.0	<1.0
2,4-Dimethylphenol				<1.0	<1.0	<1.0
2,4-Dichlorophenol				<1.0	<1.0	<1.0
2,6-Dichlorophenol				<1.0	<1.0	<1.0
4-Chloro-3-methylphenol				<1.0	<1.0	<1.0
2,4,6-Trichlorophenol				<1.0	<1.0	<1.0
2,4,6-Trichlorophenol				<1.0	<1.0	<1.0
Pentachlorophenol				<1.0	<1.0	<1.0
Total Petroleum Hydrocarbons						
C6 - C9 Fraction	µg/L	20		<10	<10	60
C10 - C14 Fraction	µg/L	50		<50	<50	70
C15 - C18 Fraction	µg/L	100		200	100	200
C20 - C26 Fraction	µg/L	50		<50	<50	<50
C10 - C26 Fraction (sum)	µg/L	50				
Total Recoverable Hydrocarbons - NPM 2012 Fractions						
C6 - C10 Fraction	µg/L	20				
C6 - C10 Fraction minus RTDX (F2)	µg/L	20	1000	<10	<10	60
<C10 - C16 Fraction	µg/L	100				
<C16 - C18 Fraction	µg/L	100				
<C18 - C20 Fraction	µg/L	100				
<C20 - C26 Fraction (sum)	µg/L	100				
<C10 - C16 Fraction minus Naphthalene (F2)	µg/L	100	1000	90	50	70
BTXBN						
Benzene	µg/L	2	200	<1	<1	<1
Toluene	µg/L	2	NI	<2	<2	<2
Ethylbenzene	µg/L	2	NI	<2	<2	<2
meta- & para-Xylene	µg/L	2		<2	<2	<2
ortho-Xylene	µg/L	2		<2	<2	<2
Total Xylenes	µg/L	2	NI			
Sum of BTXBN*	µg/L	1		0	0	0
Naphthalene	µg/L	5	NI			

* Sum of RTDX calculated as the sum of individual analyses reported above the LCR
 Assumes that groundwater abstraction for beneficial use results will not occur.

Table C5- Calculated TRH F1 and F2 - Water
HB20090 - Soil Contamination Appraisal - 98 Argyle Street, Hobart

	BH1	BH2	BH3
Total Petroleum Hydrocarbons			
C6 - C9 Fraction	20	20	40
Calculated F1 (C6-C9 subtract BTEX)	20	20	40
C10 - C14 Fraction	<50	<50	70
Calculated F2 (C10-C14 value only)	50	50	70
Sum of BTEX	0	0	0
Naphthalene	NR	NR	NR

Note - LOR adopted to calculate F1 and F2
Not reported



HB20090 – Site Contamination Appraisal

98 Argyle St, Hobart

Contact

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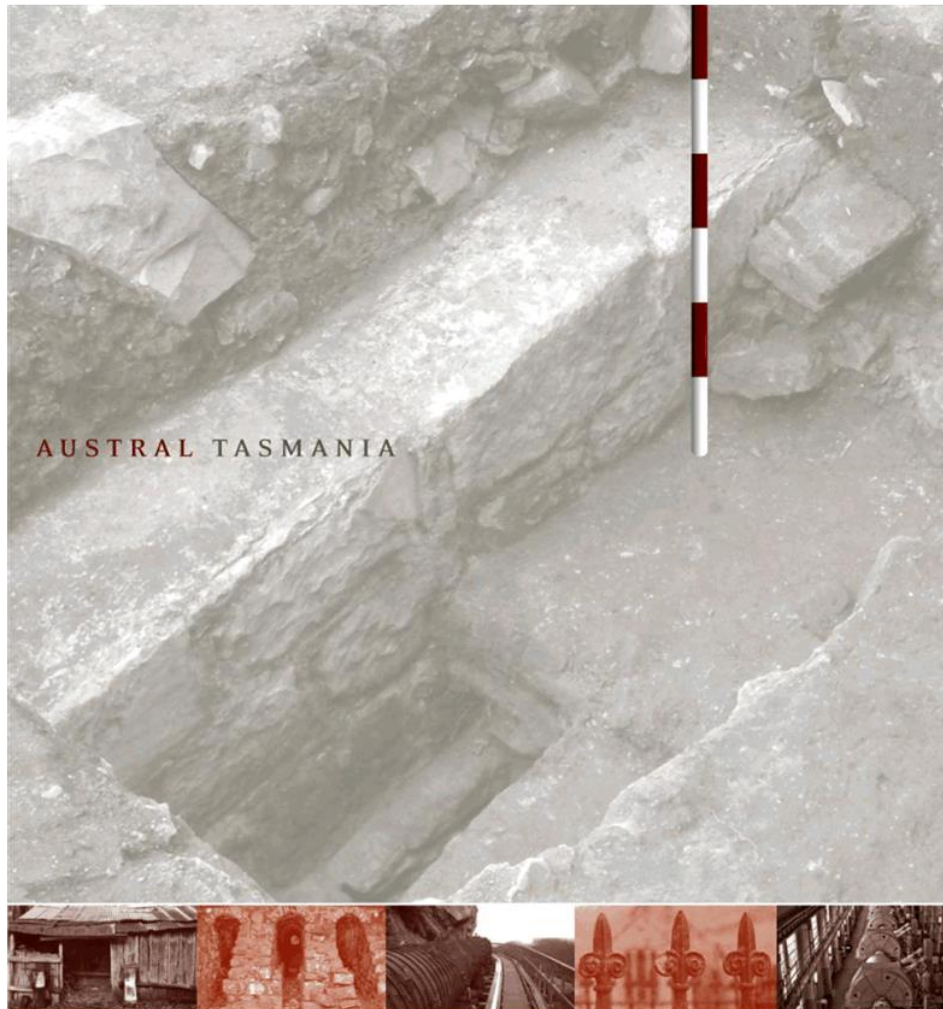
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98 Argyle Street, Hobart

Archaeological Impact Assessment

Final Report prepared for Costmac Investments Pty Ltd

ATo288

21 February 2020

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Document Version	Date	Review Reason	Prepared By	Reviewed and Approved By
Draft V1	21.02.20	Quality Assurance	James Puustinen	Justin McCarthy
Final	21.02.20	Client Review	James Puustinen	Josh Crossin

EXECUTIVE SUMMARY

Introduction

Costmac Investments Pty Ltd has proposed the construction of an apartment complex at 98 Argyle Street, Hobart. The property is within the Place of Archaeological Potential defined by Figure E13.4.1 of the *Hobart Interim Planning Scheme 2015*, and Hobart City Council has requested the preparation of an Archaeological Impact Assessment as part of the Development Application.

Archaeological Potential and Significance of the Study Area

The Statement of Archaeological Potential concludes that the majority of the site (some 530m²) has low archaeological potential. This relates to the footprint of the extant building which is likely to have highly disturbed archaeological features and deposits in this area. The remaining 210m² of the study area is assessed as having moderate archaeological potential. This area relates to the small car park located on the Argyle Street frontage of the lot. This area has the potential to contain structural and artefactual evidence of four mid-nineteenth century buildings which at various times combined residential and commercial functions. The archaeological potential has been assessed as having historical value and research potential.

Archaeological Impact Assessment

From the review of the proposed development, the assessment concludes that the development will result in minor archaeological impacts. The development largely avoids subsurface disturbance, the exception being pad foundations, footing and service trenches. Within the area of moderate archaeological potential, it is estimated that these works will total approximately 47.8m², which equates to archaeological impacts of about 22% of the area zoned as having potential.

These limited impacts may include some disturbance of subsurface archaeology. However, the extent of impact would not prevent future investigation of the site and the meaningful interpretation of the surviving archaeological material.

Subject to control measures of archaeological monitoring and recording, these impacts can be effectively mitigated, and the extent of impact is considered acceptable. The majority of the area zoned as having moderate potential (78%) will not be impacted by the development.

Recommendation

Recommendation 1: Statutory Compliance

This Archaeological Impact Assessment should form part of the Development Application to Hobart City Council.

Recommendation 2: Managing Potential Aboriginal heritage

The Unanticipated Discovery Plan for managing Aboriginal heritage (Appendix 1) should form part of the Project Specifications.

Recommendation 3: Archaeological Monitoring

Excavations occurring within the area zoned as having moderate archaeological potential and shown in the following Figure by yellow shading are to be archaeologically monitored by a suitably qualified and experienced archaeologist.

Following the marking and cutting (as required) of the monitoring areas, the existing surface should be carefully removed by machine under archaeological supervision. Excavation can proceed using a small machine equipped with a range of flat-edged or 'mud buckets' (generally 400-1200 mm wide) to remove the majority of consolidated deposits.

Mechanical excavation will be undertaken via a series of shallow scrapes so that the exposed surface in the trench is progressively reduced in a controlled manner.

Where safe to do so, small hand tools such as picks, shovels, pointing trowels, brushes and pans will be used in manual excavation for cleaning up excavated areas or revealing exposed features or deposits. The archaeologist will endeavour to expose and identify all significant historic features and deposits.



Archaeological Zoning Plan showing areas of excavations. Excavations within the yellow area zoned as having moderate potential are to be archaeologically monitored (LXN Architecture & Consulting).

Recommendation 4: Recording Methods

Basic, best practice, principles of stratigraphic excavation and recording will be adopted. Recording and documentation of archaeological contexts will conform to standard archaeological methods. The archaeological works will be recorded by way of photographs, written descriptions and grid coordinates taken with a handheld GPS unit.

All significant elements will be photographed with a scale bar. Digital media will be used for photographic recording.

The archaeologist will keep a field journal and a visual diary, creating a written and photographic record of the progression of the excavation.

Recommendation 5: Artefact Collection and Post-Excavation Analysis

Only artefacts recovered from significant or potentially significant *in situ* artefact bearing contexts will be retrieved and retained for post-processing. Artefacts from imported fill deposits, disturbed contexts, and/or which are non-diagnostic will not be retained unless they are rare, and/or have a high interpretive value or are otherwise of significance. Artefacts will be recorded with all standard information required to identify them. Following analysis and reporting, the artefact assemblage will be handed over to the Client.

Recommendation 6: Preparation of post-excavation report

An illustrated monitoring report will be produced on completion of the site works and artefact analysis tasks. If significant finds are made and/or substantial excavation is undertaken, a more detailed report will be required.

Recommendation 7: Protocol for Managing Unanticipated Historical (European) Archaeological Discoveries during Excavations Occurring within the Area Zoned as Having Low Potential

The study area has been assessed as having largely low archaeological potential to contain significant archaeological features or deposits, and this area is depicted in the Archaeological Zoning Plan by the green shading.

Excavations within this area can proceed without archaeological oversight. However, as a precaution, the project specifications should include notification protocols whereby archaeological advice is sought if features or deposits of an archaeological nature are uncovered during excavation or where doubt exists concerning the provenance of any strata revealed during excavations. This may include but not be limited to the exposure of any structural material made from bricks, stone, concrete or timber and forming walls or surfaces, or the presence of more than five fragments of artefacts such as ceramic, shell, glass or metal from within an area of no more than 1 m².

In such instances, excavation should immediately cease pending attendance on site and receipt of advice from the archaeological consultant, at which point, depending on the findings, it may also be necessary to involve Hobart City Council in discussions.

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1.0 INTRODUCTION

1.1 Client and project details

Costmac Investments Pty Ltd has proposed the construction of an apartment complex at 98 Argyle Street, Hobart. The site currently contains facilities associated with a former car show room and street frontage car parking (Figure 1).

In support of this development, Hobart City Council has requested the preparation of an Archaeological Impact Assessment (AIA), which determines the potential for impacts arising from the proposed development. This report has been prepared in accordance with the definition of an AIA contained in the *Hobart Interim Planning Scheme 2015 (HIPS 2015)*.



Figure 1: 98 Argyle Street study area outlined in red (Base image by TASMAP (www.tasmap.tas.gov.au), © State of Tasmania).

1.2 Authorship

This report was written by Justin McCarthy and James Puustinen and reviewed by Alan Hay.

1.3 Limitations and constraints

This assessment is limited to consideration of historical archaeological values within a scope defined by the *HIPS 2015*. The assessment of Aboriginal archaeological and cultural values, built heritage, landscape and social values is beyond the scope of this study.

The results and judgements contained in this report are constrained by the limitations inherent in overview type assessments, namely accessibility of historical information within a timely manner. Whilst every effort has been made to gain insight to the historic heritage profile of the subject study area, Austral Tasmania Pty Ltd cannot be held accountable for errors or omissions arising from such constraining factors.

All maps are oriented with North at the top of the page unless otherwise assigned.

1.4 Heritage Review

The study area is located within the planning area of the *HIPS 2015*. It is within the Place of Archaeological Potential defined by Figure E13.4.1 of the *HIPS 2015*. The Scheme defines an Archaeological Impact Assessment (AIA) as:

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).¹

This report has been prepared in accordance with the Scheme definition.

The *Historic Cultural Heritage Act 1995* does not apply to the property.

An Aboriginal Heritage Property Search has been carried out. This has not identified any registered Aboriginal relics or apparent risk of impacting Aboriginal relics. All Aboriginal heritage is protected under the *Aboriginal Heritage Act 1975*, and an Unanticipated Discovery Plan should be followed during works. This plan is included at Appendix 1.²

1.5 Acknowledgements

The assistance of the following people and organisations is gratefully acknowledged:

- Mr Josh Crossin, LXN Architecture;
- Ms Sarah Lindsay, LXN Architecture;

¹ *HIPS 2015*, Cl.E13.3

² Aboriginal Heritage Search Record, 98-110 Argyle Street, Hobart (PID 7589903), PS0098584

2.0 STATEMENT OF ARCHAEOLOGICAL POTENTIAL

2.1 Introduction

An Archaeological Impact Assessment must be prepared by reference to a Statement of Archaeological Potential (SoAP). This report addresses the definition requirements of a SoAP in the *HIPS 2015*, which are:

- (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).³

2.2 Written and Illustrated Site History

Given its central location, it is likely that the study area was subject to informal uses such as timber getting or agriculture in the years following British colonisation in 1804. However, details of such possible uses are not recorded.

The earliest documentation regarding the study area relates to land alienation. At some stage prior to 1824, Samuel Brammer acquired a lease over the property. At this stage it extended to the corner of Argyle and Brisbane streets, and contained approximately 1,800m². Properties were initially held as leases from the Crown for periods varying from 14 to 21 years. If, at the conclusion of the period the leaseholder had fulfilled their development obligations, they would then be eligible to receive a grant over the property.⁴

Samuel Brammer, also known as James Brammer had arrived in New South Wales in 1806 under sentence for felony. He was awarded his certificate of freedom in 1811 and arrived in Hobart in 1813, where he became overseer of brickmakers.⁵ The date at which Brammer acquired the study area has not been established, but was probably during the late 1810s, early 1820s, which is consistent with the general pattern of land alienation in Hobart. The 1824 register also noted that his land contained a hut.⁶

By the early 1830s, Brammer had transferred the land to James Thompson who owned all the land on the Argyle Street frontage of the block. Thompson succeeded in having the land granted to him in 1837.⁷

A series of maps from the 1830s consistently show the study area as vacant. This changes in the early 1840s with the sale and subdivision of the property into two lots and the construction of several buildings. The southern lot contained a masonry house, whilst the northern lot included a pair of conjoined timber dwellings. Timber outbuildings were located in the rear of both lots.⁸

Generally, these houses were used as rental properties, and leased to numerous tenants over the years, including a Mrs White and S Duke (1847), William Cochrane, John Williamson and Thomas Pearse (1855), Isaac Maddocks (1860), and Robert Henry, William Cernes, James Pace and Thomas Hefell (1865). At some stage between 1855-60, a third house was constructed off the northern end of the existing conjoined timber buildings. At one time or another, all buildings within the study area combined both residential and commercial premises of shops, a common practice during the

³ *Ibid*

⁴ TAHO LSD428/2/3, Samuel Brammer

⁵ <https://fretwelliana.files.wordpress.com/2019/03/profile-davis-mary-minimum.pdf>

⁶ TAHO LSD428/2/3

⁷ TAHO, SC309/1/293, Applications for Land Grant Register

⁸ TAHO, AF393/1/8, Map – Sprent's Page 7 - Bounded by Brisbane St, Argyle, Melville and Elizabeth Streets (Section Pp) Hobart

nineteenth century. A selection of early Assessment and Valuation Rolls for the property is included at Appendix 2.⁹

The study area retained this level of development until at least the mid-twentieth century. The lot was subsequently cleared, with the frontage given over to car parking, and a small building at the rear of the lot. It was redeveloped again during the early twenty first century as part of the vehicle showroom development located on the corner of Argyle and Brisbane streets. This building remains in place to today.

2.3 Historic Map Series

The following section reproduces historic maps of the study area from 1828 to 1973. Maps are accompanied by explanatory text tracing the history of development of the study area.

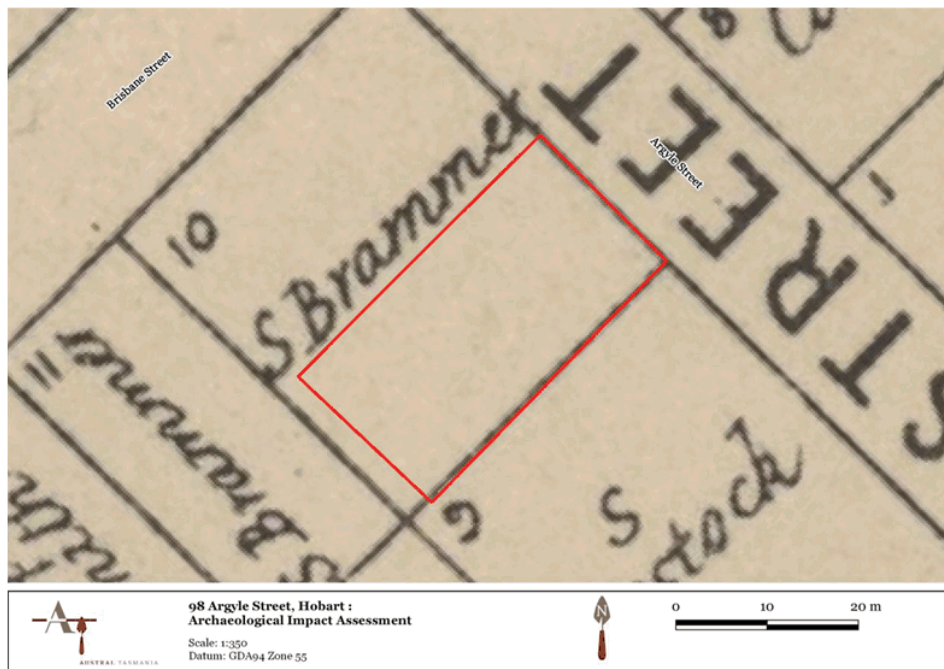


Figure 2: c.1826-1828 Map of Hobart showing the study area and original lease holders (TAHO, AF394/1/106, Map - Hobart 104 - Plan of Hobart from Sullivans Cove to Warwick Street and from Antill Street to Campbell Streets).

Figure 2 shows the original subdivision pattern and the lease holder of the land Samuel (James) Brammer.

⁹ TAHO, Assessment and Valuation Rolls



Figure 3: c.1830 map of Hobart showing the study area (TAHO, AF394/1/5, Map - Hobart 5 - Plan of Hobart Town).

Figure 3 is one of the earlier maps showing built development in Hobart. The red shading indicates that building works were occurring on the lot at the time this map was being prepared, but elsewhere on Thompson's larger property, and not within the study area.

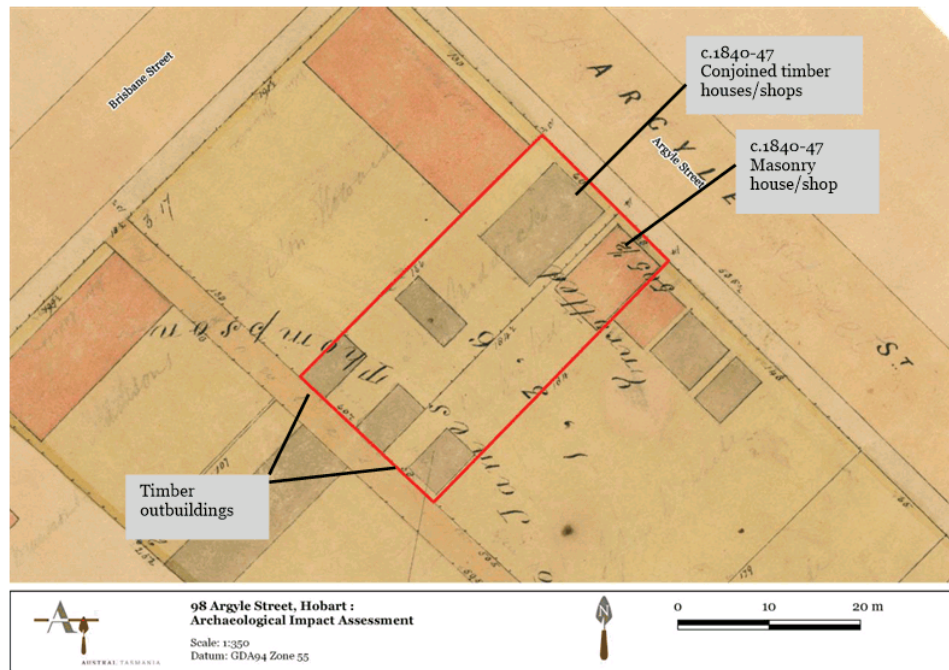


Figure 4: Detail from 1840s Sprent's survey (TAHO, AF393/1/8, Map – Sprent's Page 7 - Bounded by Brisbane St, Argyle, Melville and Elizabeth Streets (Section Pp) Hobart).

Sprent's survey is the first accurate depiction of the property and its subdivision into two lots. The buildings indicated on the plan were constructed from c.1840-47. At different times, all buildings combined residential and commercial functions.

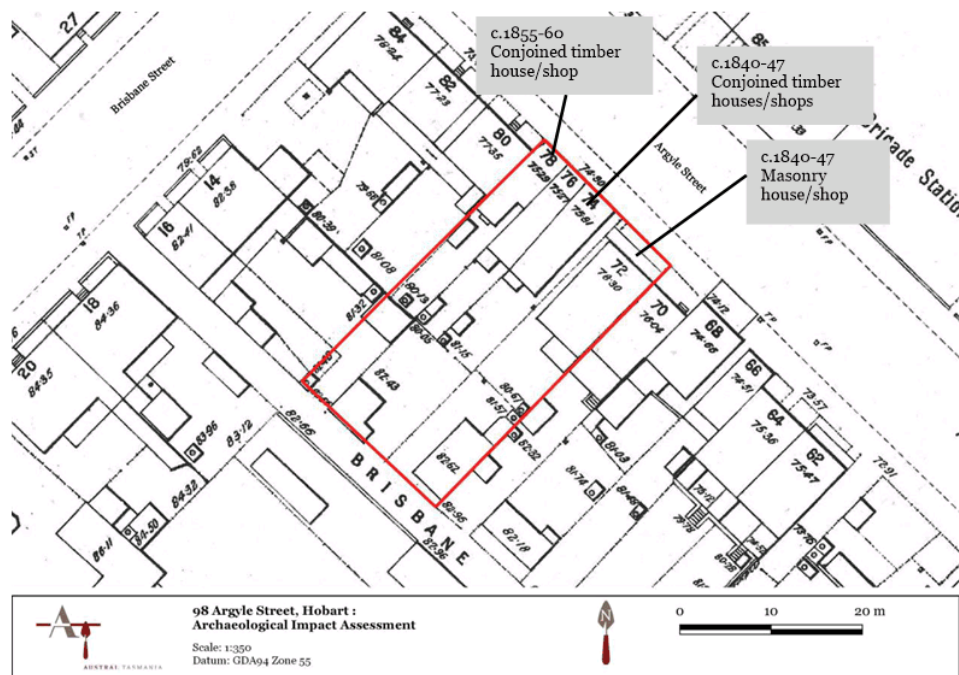


Figure 5: 1905 Drainage Board Plan (TAHO, Metropolitan Drainage Board, City of Hobart Detail Plan No.7 (City Centre), 1905).

The 1905 plan shows the same key buildings first depicted by Sprent, with the addition of the c.1855-60 combined dwelling and residence at the far northern end of the lot, identified as 78 Argyle Street in the above Figure. The plan also shows the subdivision of the rear yard and multiple outbuilding within this space and presumably accessed from Brisbane Lane. The use of these buildings is not recorded in Assessment Rolls.

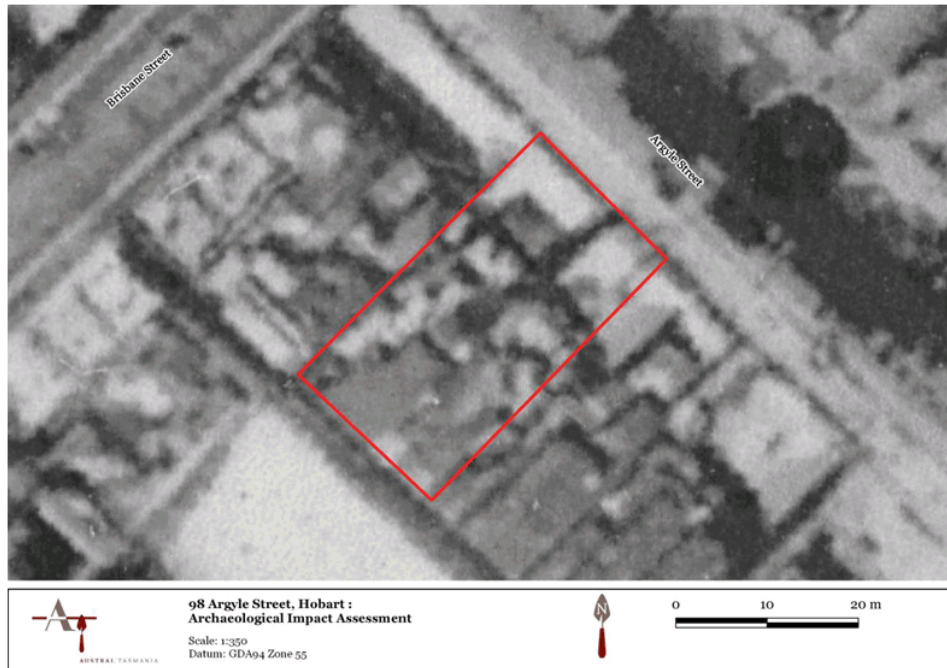


Figure 6: Detail from 1946 aerial photograph (Base image by TASMAP (www.tasmap.tas.gov.au), © State of Tasmania).

Although less than clear, the 1946 aerial shows the same key buildings on the street frontage as depicted on the earlier 1905 Drainage Plan. The yard spaces fronting Brisbane Lane appear largely clear.

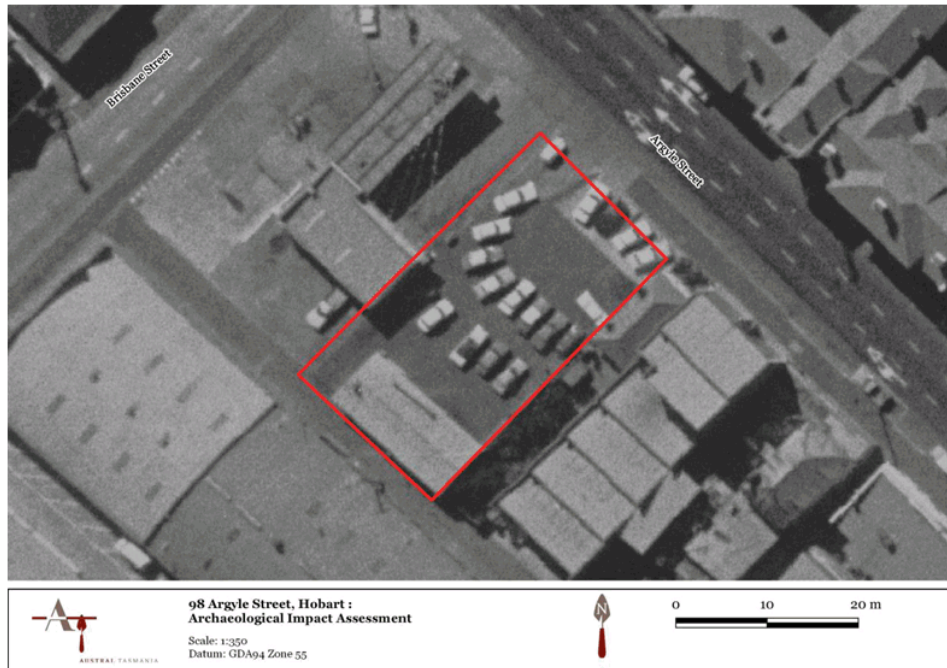


Figure 7: Detail from 1973 aerial photograph (Base image by TASMAP (www.tasmap.tas.gov.au), © State of Tasmania).

The 1973 aerial shows the clearance of the block and use as car parking, possibly associated with the adjacent petrol station on the corner block?

2.4 Disturbance History

The following sections discuss the potential for survival of archaeological features and deposits within the study area from each key phase of development. In doing so, it takes into account the disturbance history as gleaned from documentary sources and inspection of the site in the present. It attempts to establish how one phase of development may have affected a previous phase.

A site visit was carried out to clarify the understanding of disturbances and potential. The study area occupies approximately 740m². Historically the land was higher at the rear of the lot on the Brisbane Lane frontage, and fell towards the street frontage. The site has subsequently been cut and benched to create a largely level lot.

The majority of the site (some 530m²) is occupied by the early twenty first century building, located towards the rear of the lot. The remaining 210m² is occupied by a sealed car park on the street frontage. The car park falls gently to the north east and Argyle Street (Figures 8-9).



Figure 8: 98 Argyle Street, looking SW.



Figure 9: The car park fronting the site, note the fall in the land. Looking S.

The study area has a relatively simple disturbance history which can be divided into three key phases:

1. c.1840-c.1860: The construction of masonry and timber dwellings on the street frontages with outbuildings to the rear. By 1860 the property included four dwellings. At various times all buildings were used as houses combined with shop functions.
2. Mid-late twentieth century: Site clearance, probably as part of the development of the adjacent petrol station. A small building was located to the rear of the lot, with the majority of the site used for car parking.
3. Early twenty first century: Site redevelopment, with the construction of the extant building which occupies the majority of the lot.

The conclusion drawn from the above is that the study area has both a simple phasing and high levels of disturbances occurring from the mid twentieth, to early twenty first century. The exception to this is the car park on the street frontage which appears to have suffered fewer disturbances that may have resulted in the destruction of the archaeological resource. Comparing 1905 to 2020 elevations, cuttings in the order of 0.54m appear to have occurred closer to the street frontage, but increase in depth at the rear of the lot to approximately 1.56 m. The construction of the extant building along with its footings would have resulted in greater levels of disturbance within its footprint.

2.5 Assessment of Archaeological Potential

An assessment of archaeological potential establishes the likelihood of archaeological features or deposits existing at a particular place, and provides a level of judgment as to the likely surviving intactness of the archaeological resource. This, when tied in with the extent to which a site may contribute knowledge not available from other sources, establishes the archaeological significance of the place, or its research value or potential which is Criterion (c) under the *Historic Cultural Heritage Act 1995*.

Archaeological potential is thus a factor in establishing archaeological significance. For example a site that is assessed to have a high level of intactness (i.e., not badly disturbed) is likely to be assessed to have a high level of archaeological potential; but if it is common and well understood and does not have research potential, it will have a low level of archaeological significance. Conversely, a site that is assessed to have a low level of intactness (i.e., badly disturbed) is likely to be assessed to have a low level of archaeological potential; but if it is rare and/or not well understood and has research potential, it will have a high level of archaeological significance.

The archaeological potential of the study area is stated as follows:

- The footprint of the extant building is assessed as having low archaeological potential. Ground reduction works in the order of 1.56m coupled with the construction of the building is likely to have disturbed, if not destroyed, archaeological features and deposits within this area.
- The street frontage car park is assessed as having a moderate level of archaeological potential. There has been some disturbances from site clearance in this area during the mid-twentieth

century, however the ground reductions in the order of 0.54m is unlikely to have destroyed all archaeological evidence in this location. The car park coincides with the majority of the footprints of the mid-nineteenth century combined housing and commercial buildings on the street frontage.

Ground level car parks have proved to be highly prospective environments for survival of underlying archaeological features and deposits. They are generally established through levelling as opposed to deep excavation, the latter typically reserved for service trenches which result in discrete as opposed to widespread disturbance. This often results in the truncation (but not total removal) of archaeological evidence. Austral Tasmania (and its predecessor in Tasmania, Austral Archaeology) have been involved in a number of assessments and excavations in recent years where car parks have effectively capped a variety of significant archaeological sites [e.g., Theatre Royal car park (Hobart 2016), Montpelier Retreat car park (Hobart 2015), Melville Street car park (Hobart 2015), Paterson Street, Wellington Square (Launceston, 2009), Tasmanian Museum and Art Gallery (Hobart, 2008) and Dunn Place (Hobart, 2007)].

The potential for structural evidence of the timber buildings to have survived is variable and determined by a number of factors. Timber buildings that were erected on timber footings usually leave little surviving evidence, save perhaps the footing holes. However, timber buildings supported on brick or stone footings are more likely to leave tangible remnants, if demolished prior to the 1940s when the use of earthmoving equipment for demolition became common.¹⁰

2.6 Archaeological Zoning Plan

Based on the historical research, disturbance history and assessment of potential, an Archaeological Zoning Plan (AZP) has been prepared for the study area (Figure 10).

This AZP adopts a simplified depiction of potential for the study area. The majority of the study area has been zoned as having low archaeological potential and this is indicated by green shading. This relates to the extant building and covers approximately 530m².

The car park which corresponds with the footprints of mid-nineteenth century development is zoned as having moderate archaeological potential and shown by yellow shading. This covers approximately 210m².

¹⁰ Austral Archaeology Pty Ltd, *Archaeological Investigation of the Hobart Magistrates' Court*, report prepared for the Tasmanian Department of Justice, Hobart, 1994, p.7



Figure 10: Archaeological Zoning Plan for the study area. Green shading refers to low archaeological potential, yellow indicates moderate potential (Base image by TASMAT (www.tasmap.tas.gov.au), © State of Tasmania).

2.7 Statement of Archaeological Significance

The study area is a place of archaeological significance. Developed from c.1840-60, the study area contained four houses which at various times were also used for commercial premises. This is not an early period in the European settlement and development of Hobart, but does mark a time of consolidation and higher densities in urban development. Archaeological evidence of this development has moderate potential to exist in the car park location, and low potential within the remainder of the property.

Structural and artefactual deposits from this development may provide information on working class residents who left few records of their daily lives. Structural evidence may assist in understanding construction techniques and quality of housing. Artefact deposits may assist in understanding how these places were used, and the lives of residents. Extended occupation can have a distinctive archaeological signature with the capacity to provide original insights (not available in the literature) to the lives, pastimes and occupations of nineteenth century urban dwellers. These investigations – and many others like them – yielded artefact assemblages that on analysis enabled new understanding of these areas. When coupled with the records of occupancy, the potential exists to reconcile place based information with names, providing valuable insights to lives otherwise unremarked.

All buildings were used at one time or another as shops. This archaeology could provide new information, not available from other sources, regarding the evolution, design and modification of buildings for commercial purposes; the types of businesses on the site; how they changed over time; nineteenth century consumerism, and the sources and availability of goods; and how the people who ran these businesses lived.

3.0 ARCHAEOLOGICAL IMPACT ASSESSMENT

3.1 Design Review

A Design Review is a means of quantifying the extent of possible impacts to areas of archaeological potential. It does so by identifying areas and depths of proposed excavation and how these may correspond with locations of archaeological potential. This assists in determining an archaeological strategy and management techniques.

This description should be read in conjunction with the following Figures. The proposed development is a four storey apartment complex which will occupy nearly all of the lot. The building will include a car park on the ground floor with apartments above.

Within the context of considering archaeological impacts, the following description relates solely to aspects involving excavation. The existing slab and pre-cast perimeter walls will be retained as part of the development. Sections will cut out of the slab to allow new pad foundations and columns, these columns are located on the grid lines.⁴⁴

Figure 14 shows these areas of excavation below the existing slab. With regard to the Archaeological Zoning Plan, excavations within the area of moderate archaeological potential will include:

- Three pad footings measuring 1.2 x 1.2m in area and 0.8m deep.
- The excavation of trenches around the northern perimeter of the building to accommodate footings. These will be 0.8m wide and 0.8m deep. Approximately 32m of these trenches corresponds with the area of moderate archaeological potential.
- The excavation of a service trench on a north easterly alignment. The service trench will be 1m wide and 0.8m deep. Approximately 11.5m of this trench corresponds with the area of moderate archaeological potential.

3.2 Assessment of Impacts to Archaeological Potential

From the review of the proposed development, the assessment concludes that the development will result in minor archaeological impacts. The development largely avoids subsurface disturbance, the exception being pad foundations, footing and service trenches. Within the area of moderate archaeological potential, it is estimated that these works will total approximately 47.8m², which equates to archaeological impacts of about 22% of the area zoned as having potential.

These limited impacts may include some disturbance of subsurface archaeology. However, the extent of impact would not prevent future investigation of the site and the meaningful interpretation of the surviving archaeological material.

Subject to control measures of archaeological monitoring and recording, these impacts can be effectively mitigated, and the extent of impact is considered acceptable. The majority of the area zoned as having moderate potential (78%) will not be impacted by the development.

3.3 Assessment against the Performance Criteria

The *HIPS 2015* establishes a series of Performance Criteria in clause E13.10.1 for assessing archaeological impacts. The standards emphasise the importance of protecting or managing places of archaeological potential. Each criterion is assessed in the Table below.

Performance Criteria	Response
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;	The assessment of archaeological potential for the study area is a predictive statement that has not been confirmed through physical investigations.

⁴⁴ Email, Josh Crossin, LXN Architecture & Consulting to James Puustinen, Austral Tasmania Pty Ltd, 12 February 2020

Performance Criteria	Response
	The assessment concludes that approximately 530m ² of the study area has low archaeological potential, with the remaining 210m ² having moderate potential.
(b) measures proposed to investigate the archaeological evidence to confirm predictive statements of potential;	<p>The proposed measures to investigate the archaeological potential of the place are detailed in section 4.0 of this report. In summary, it consists of the archaeological monitoring and recording of those excavations occurring within the zone of moderate potential.</p> <p>Having in place an unanticipated discovery protocol is recommended for excavations occurring within the area zoned as having low archaeological potential.</p>
(c) strategies to avoid, minimise and/or control impacts arising from building, works and demolition;	The proposed development will result in minor archaeological impacts, amounting to approximately 22% of the area zoned as having moderate potential. This is considered consistent with the objective of 'must not unnecessarily impact on archaeological resources'.
(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;	<p>The proposed works are considered to result in a minor archaeological impact. As such, there is little prudence in identifying alternatives that would lessen this already small impact.</p> <p>Appropriate measures are proposed to realise the archaeological evidence within a limited scope of narrow trenches.</p> <p>The small scale of works means there is little 'meaningful public benefit' that could be derived from the monitoring, beyond submission of a report to City Council at the end of works.</p>
(e) measures proposed to preserve significant archaeological evidence 'in situ'.	The majority of the area zoned as having moderate archaeological potential (some 88%) will not be impacted by the development, and therefore the archaeological evidence will be preserved in situ.

Table 1: Assessment against the Performance Criteria of E13.10.1



Figure 11: Ground and first floor (LXN Architecture & Consulting).



Figure 12: East/north elevations (LXN Architecture & Consulting).

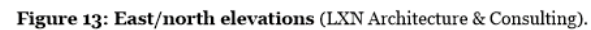




Figure 14: Ground floor plan (LHS) showing excavation areas and dimensions (LXN Architecture & Consulting).

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

This report concludes that a small section of the property at 98 Argyle Street has moderate potential to contain subsurface archaeological material related to significant mid-nineteenth century residential and commercial development. This area covers approximately 210m² and relates to the car park on the Argyle Street frontage. The remaining 530m² is assessed as having low archaeological potential, and this relates to the footprint of the extant building.

The Archaeological Impact Assessment concludes that the proposed apartment development will result in minor archaeological impacts, of approximately 22% of the area zoned as having potential. The remainder of this area will not be disturbed, and the extent of impact is considered acceptable where control measures of monitoring and recording are in place.

4.2 Recommendations

Recommendation 1: Statutory Compliance

This Archaeological Impact Assessment should form part of the Development Application to Hobart City Council.

Recommendation 2: Managing Potential Aboriginal heritage

The Unanticipated Discovery Plan for managing Aboriginal heritage (Appendix 1) should form part of the Project Specifications.

Recommendation 3: Archaeological Monitoring

Excavations occurring within the area zoned as having moderate archaeological potential and shown in the following Figure by yellow shading are to be archaeologically monitored by a suitably qualified and experienced archaeologist.

Following the marking and cutting (as required) of the monitoring areas, the existing surface should be carefully removed by machine under archaeological supervision. Excavation can proceed using a small machine equipped with a range of flat-edged or 'mud buckets' (generally 400-1200 mm wide) to remove the majority of consolidated deposits.

Mechanical excavation will be undertaken via a series of shallow scrapes so that the exposed surface in the trench is progressively reduced in a controlled manner.

Where safe to do so, small hand tools such as picks, shovels, pointing trowels, brushes and pans will be used in manual excavation for cleaning up excavated areas or revealing exposed features or deposits. The archaeologist will endeavour to expose and identify all significant historic features and deposits.



Figure 15: Archaeological Zoning Plan showing areas of excavations. Excavations within the yellow area zoned as having moderate potential are to be archaeologically monitored (LXN Architecture & Consulting).

Recommendation 4: Recording Methods

Basic, best practice, principles of stratigraphic excavation and recording will be adopted. Recording and documentation of archaeological contexts will conform to standard archaeological methods. The archaeological works will be recorded by way of photographs, written descriptions and grid coordinates taken with a handheld GPS unit.

All significant elements will be photographed with a scale bar. Digital media will be used for photographic recording.

The archaeologist will keep a field journal and a visual diary, creating a written and photographic record of the progression of the excavation.

Recommendation 5: Artefact Collection and Post-Excavation Analysis

Only artefacts recovered from significant or potentially significant *in situ* artefact bearing contexts will be retrieved and retained for post-processing. Artefacts from imported fill deposits, disturbed contexts, and/or which are non-diagnostic will not be retained unless they are rare, and/or have a high interpretive value or are otherwise of significance. Artefacts will be recorded with all standard information required to identify them. Following analysis and reporting, the artefact assemblage will be handed over to the Client.

Recommendation 6: Preparation of post-excavation report

An illustrated monitoring report will be produced on completion of the site works and artefact analysis tasks. If significant finds are made and/or substantial excavation is undertaken, a more detailed report will be required.

Recommendation 7: Protocol for Managing Unanticipated Historical (European) Archaeological Discoveries during Excavations Occurring within the Area Zoned as Having Low Potential

The study area has been assessed as having largely low archaeological potential to contain significant archaeological features or deposits, and this area is depicted in the Archaeological Zoning Plan by the green shading.

Excavations within this area can proceed without archaeological oversight. However, as a precaution, the project specifications should include notification protocols whereby archaeological advice is sought if features or deposits of an archaeological nature are uncovered during excavation or where doubt exists concerning the provenance of any strata revealed during excavations. This may include but not be limited to the exposure of any structural material made from bricks, stone, concrete or timber and forming walls or surfaces, or the presence of more than five fragments of artefacts such as ceramic, shell, glass or metal from within an area of no more than 1 m².

In such instances, excavation should immediately cease pending attendance on site and receipt of advice from the archaeological consultant, at which point, depending on the findings, it may also be necessary to involve Hobart City Council in discussions.

5.0 REFERENCES

5.1 Secondary Materials

5.1.1 Published & Unpublished Sources

Aboriginal Heritage Search Record, 98-110 Argyle Street, Hobart (PID 7589903), PS0098584

Austral Archaeology Pty Ltd, *Archaeological Investigation of the Hobart Magistrates' Court*, report prepared for the Tasmanian Department of Justice, Hobart, 1994

Hobart Interim Planning Scheme 2015

5.1.2 Websites

<https://fretwelliana.files.wordpress.com/2019/03/profile-davis-mary-minimum.pdf>

5.2 Primary Materials

5.2.1 Archival Materials

TAHO, Assessment and Valuation Rolls

TAHO LSD428/2/3, Samuel Brammer

TAHO, SC309/1/293, Applications for Land Grant Register

5.2.2 Historic Plans, Images etc

Aerial photographs, images by TASMAP (www.tasmap.tas.gov.au), © State of Tasmania

TAHO, AF393/1/8, Map – Sprent's Page 7 - Bounded by Brisbane St, Argyle, Melville and Elizabeth Streets (Section Pp) Hobart

TAHO, AF394/1/5, Map - Hobart 5 - Plan of Hobart Town

TAHO, AF394/1/106, Map - Hobart 104 - Plan of Hobart from Sullivans Cove to Warwick Street and from Antill Street to Campbell Streets

TAHO, Metropolitan Drainage Board, City of Hobart Detail Plan No.7 (City Centre), 1905

APPENDIX 1: UNANTICIPATED DISCOVERY PLAN

Unanticipated Discovery Plan

Procedure for the management of unanticipated discoveries of Aboriginal relics in Tasmania

For the management of unanticipated discoveries of Aboriginal relics in accordance with the *Aboriginal Heritage Act 1975* and the *Coroners Act 1995*. The Unanticipated Discovery Plan is in two sections.

Discovery of Aboriginal Relics other than Skeletal Material

Step 1:

Any person who believes they have uncovered Aboriginal relics should notify all employees or contractors working in the immediate area that all earth disturbance works must cease immediately.

Step 2:

A temporary 'no-go' or buffer zone of at least 10m x 10m should be implemented to protect the suspected Aboriginal relics, where practicable. No unauthorised entry or works will be allowed within this 'no-go' zone until the suspected Aboriginal relics have been assessed by a consulting archaeologist, Aboriginal Heritage Officer or Aboriginal Heritage Tasmania staff member.

Step 3:

Contact Aboriginal Heritage Tasmania on **1300 487 045** as soon as possible and inform them of the discovery. Documentation of the find should be emailed to aboriginal@heritage.tas.gov.au as soon as possible. Aboriginal Heritage Tasmania will then provide further advice in accordance with the *Aboriginal Heritage Act 1975*.

Discovery of Skeletal Material

Step 1:

Call the Police immediately. Under no circumstances should the suspected skeletal material be touched or disturbed. The area should be managed as a crime scene. It is a criminal offence to interfere with a crime scene.

Step 2:

Any person who believes they have uncovered skeletal material should notify all employees or contractors working in the immediate area that all earth disturbance works cease immediately.

Step 3:

A temporary 'no-go' or buffer zone of at least 50m x 50m should be implemented to protect the suspected skeletal material, where practicable. No unauthorised entry or works will be allowed within this 'no-go' zone until the suspected skeletal remains have been assessed by the Police and/or Coroner.

Step 4:

If it is suspected that the skeletal material is Aboriginal, Aboriginal Heritage Tasmania should be notified.

Step 5:

Should the skeletal material be determined to be Aboriginal, the Coroner will contact the Aboriginal organisation approved by the Attorney-General, as per the *Coroners Act 1995*.

Aboriginal Heritage Tasmania
Department of Primary Industries, Parks, Water and Environment



Guide to Aboriginal site types**Stone Artefact Scatters**

A stone artefact is any stone or rock fractured or modified by Aboriginal people to produce cutting, scraping or grinding implements. Stone artefacts are indicative of past Aboriginal living spaces, trade and movement throughout Tasmania. Aboriginal people used hornfels, chalcedony, spongelite, quartzite, chert and silcrete depending on stone quality and availability. Stone artefacts are typically recorded as being 'isolated' (single stone artefact) or as an 'artefact scatter' (multiple stone artefacts).

Shell Middens

Middens are distinct concentrations of discarded shell that have accumulated as a result of past Aboriginal camping and food processing activities. These sites are usually found near waterways and coastal areas, and range in size from large mounds to small scatters. Tasmanian Aboriginal middens commonly contain fragments of mature edible shellfish such as abalone, oyster, mussel, warrener and limpet, however they can also contain stone tools, animal bone and charcoal.

Rockshelters

An occupied rockshelter is a cave or overhang that contains evidence of past Aboriginal use and occupation, such as stone tools, middens and hearths, and in some cases, rock markings. Rockshelters are usually found in geological formations that are naturally prone to weathering, such as limestone, dolerite and sandstone.

Quarries

An Aboriginal quarry is a place where stone or ochre has been extracted from a natural source by Aboriginal people. Quarries can be recognised by evidence of human manipulation such as battering of an outcrop, stone fracturing debris or ochre pits left behind from processing the raw material. Stone and ochre quarries can vary in terms of size, quality and the frequency of use.

Rock Marking

Rock marking is the term used in Tasmania to define markings on rocks which are the result of Aboriginal practices. Rock markings come in two forms; engraving and painting. Engravings are made by removing the surface of a rock through pecking, abrading or grinding, whilst paintings are made by adding pigment or ochre to the surface of a rock.

Burials

Aboriginal burial sites are highly sensitive and may be found in a variety of places, including sand dunes, shell middens and rock shelters. Despite few records of pre-contact practices, cremation appears to have been more common than burial. Family members carried bones or ashes of recently deceased relatives. The Aboriginal community has fought long campaigns for the return of the remains of ancestral Aboriginal people.

Further information on Aboriginal Heritage is available from:

Aboriginal Heritage Tasmania
Natural and Cultural Heritage Division
Department of Primary Industries, Parks, Water and Environment
GPO Box 44 Hobart TAS 7001

Telephone: **1300 487 045**

Email: **aboriginal@heritage.tas.gov.au**

Web: **www.aboriginalheritage.tas.gov.au**

This publication may be of assistance to you but the State of Tasmania and its employees do not accept responsibility for the accuracy, completeness, or relevance to the user's purpose, of the information and therefore disclaims all liability for any error, loss or other consequence which may arise from relying on any information in this publication.



**APPENDIX 2: ASSESSMENT AND VALUATION ROLLS
(SELECT)**

1847					
Address	Description	Occupier	Owner	Rateable Value	Net Annual Value
Argyle Street	House	W Sherwood	W Sherwood	£18	
Argyle Street	House	Mrs White	W Sherwood	£15	
Argyle Street	House	S Duke	W Sherwood	£15	
1855					
Address	Description	Occupier	Owner	Rateable Value	Net Annual Value
Argyle Street	Shop and dwelling	William Cochrane	-	£30	
Argyle Street	Shop and dwelling	John Williamson	-	£22	
Argyle Street	Shop and dwelling	Thomas Pearse	-	£16	
1860					
Address	Description	Occupier	Owner	Rateable Value	Net Annual Value
76 Argyle Street	Shop and house	William Cochrain	Robert Henry	£25	
78 Argyle Street	Shop	Empty	Frederick Legyte Piquenet	£16	
80 Argyle Street	Shop	Isaac Maddocks	Frederick Legyte Piquenet	£14	
80A Argyle Street	House and shop	Empty	Frederick Legyte Piquenet	£14	
1865					
Address	Description	Occupier	Owner	Rateable Value	Net Annual Value
76 Argyle Street	House	Robert Henry	Robert Henry	£20	
78 Argyle Street	House	William Cernes	Samuel Maddox	£15	
80 Argyle Street	House	James Pace	Samuel Maddox	£13	
80A Argyle Street	House and shop	Thomas Hefell	Samuel Maddox	£13	
1869					
Address	Description	Occupier	Owner	Rateable Value	Net Annual Value
76 Argyle Street	House	Thomas Ingram	Robert Henry	£15	
78 Argyle Street	House	Empty	Mrs Maddox	£15	
80 Argyle Street	House	Elizabeth Howard	Mrs Maddox	£15	
82 Argyle Street	House and shop	Lewis Pillsbury	Mrs Maddox	£7	
1875					
Address	Description	Occupier	Owner	Rateable	Net

				Value	Annual Value
76 Argyle Street	House	Thomas Ingram	Robert Henry	£16	
78 Argyle Street	House	John Spaulding	Mrs Maddox	£16	
80 Argyle Street	House	William Baker	Mrs Maddox	£10	
82 Argyle Street	House	William Pearson	Mrs Maddox	£8	
1884					
Address	Description	Occupier	Owner	Rateable Value	Net Annual Value
76 Argyle Street	House	Henry Prohatt	Robert Henry	£16	
78 Argyle Street	House	John Spaulding	William Pearson	£16	
80 Argyle Street	House	William Baker	William Pearson	£10	
82 Argyle Street	House and shop	William Pearson	William Pearson	£8	
1889					
Address	Description	Occupier	Owner	Rateable Value	Net Annual Value
72 Argyle Street	House	-	Mrs R Henry	£18	
74 Argyle Street	House and shop	William Pearson	William Pearson	£20	
76 Argyle Street	House	-Hunt	William Pearson	£16	
78 Argyle Street	House	Miss Martin	William Pearson	£16	
1895					
Address	Description	Occupier	Owner	Rateable Value	Net Annual Value
72 Argyle Street	House	Empty	Mrs R Henry	£18	
74 Argyle Street	House and shop	Eliza Hoskins	William Pearson	£20	
76 Argyle Street	House	Miss Martin	William Pearson	£16	
78 Argyle Street	House	William Pearson	William Pearson	£16	
1898					
Address	Description	Occupier	Owner	Rateable Value	Net Annual Value
72 Argyle Street	House	Miss Martin	Mrs R Henry	£18	
74 Argyle Street	House and shop	Eliza Hoskins	William Pearson	£20	
76 Argyle Street	House	Percival Mullross	William Pearson	£16	
78 Argyle Street	House	William Pearson	William Pearson	£16	
1901					
Address	Description	Occupier	Owner	Rateable Value	Net Annual Value
72 Argyle Street	House	Miss Martin	Mrs R Henry	£15	£300
74 Argyle Street	House and shop	Eliza Hopkins	William Pearson's estate	£24	£460

76 Argyle Street	House	-	William Pearson's estate	£12	
78 Argyle Street	House	Charles Woodley	William Pearson's estate	£11	
1905					
Address	Description	Occupier	Owner	Rateable Value	Net Annual Value
72 Argyle Street	House	Miss Martin	Mrs R Henry	£15	£300
74 Argyle Street	House and shop	Eliza Hopkins	Emma Lewis	£24	
76 Argyle Street	House	Alfred Warren	Emma Lewis	£14	
78 Argyle Street	House	Josejiena Russo	William Pearson's estate	£13	

LXN Architecture Waste Management Plan

98 Argyle Street Apartments 98-110 Argyle Street, Hobart 7000

WASTE MANAGEMENT PLAN

Project Name: 98 Argyle Street, 98-110 Argyle Street, Hobart 7000.

Client: Costmac Investments Pty Ltd

Project/Report Reference: A18067_WMP

File Path: [file:///Volumes/01_LXN Architecture/00_Projects/A18067_98 Argyle St/04_AUTHORITIES/04_01_PLANNING AUTHORITY/04_01_RFIs/04_210430/Waste Management Plan_Template.docx](file:///Volumes/01_LXN%20Architecture/00_Projects/A18067_98%20Argyle%20St/04_AUTHORITIES/04_01_PLANNING_AUTHORITY/04_01_RFIs/04_210430/Waste%20Management%20Plan_Template.docx)

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Version: 01

Prepared By: Joshua Crossin

Reviewed By: Sarah Lindsay

Date: 06/05/2021

Date: 06/05/2021

LXN Architecture Waste Management Plan

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LXN Architecture Waste Management Plan

1.0 INTRODUCTION

LXN Architecture and Consulting has been engaged by Costmac Investments Pty Ltd to prepare a Waste Management Plan for a proposed 98 Argyle Street Apartments located at 98-110 Argyle Street, Hobart 7000. This Waste Management Plan (WMP) has been prepared based on industry best practice. Waste generation rates enclosed herein are based on the South Australia Better Practice Guide Waste Management for Residential and Mixed-Use Developments, <https://www.unmakingwaste.org/zero-waste-sa/>.

2.0 INCLUDED IN THIS REPORT

Enclosed is the Waste Management Plan for the proposed development at 98-110 Argyle Street, Hobart 7000. Included are details regarding:

- Land use;
- Waste generation;
- Waste systems;
- Bin quantity, size and colour;
- Collection frequency;
- Bin storage area;
- Signage;
- Waste collection;
- Scaled waste management drawings.

3.0 LAND USE

Planning application number: PLN-20-706
 Planning Scheme: Hobart Interim Planning Scheme 2015
 Land Zone: 23.0 Commercial Zone
 Number of levels: 5
 Number of Apartments: 20 total;

- 10 off two-bedroom apartments, and
- 10 off three-bedroom apartments

4.0 WASTE MANAGEMENT PLAN

4.1 Waste Generation

Residential waste generation rates are shown in Table 1.
 Calculations are based on 7 days per week occupancy.

Table 1 Waste Generation Rates

Use	Garbage (L/bedroom/week)	Recycling (L/bedroom/week)	Organics (L/bedroom/week)
High Density Residential Dwelling	30*	25*	10*

LXN Architecture Waste Management Plan

* Waste generation calculator is based on the South Australia Better Practice Guide Waste Management in Residential or Mixed use developments as established by the *Zero Waste SA ACT 2004*.

** The City of Hobart Waste Management Strategy 2015-2030 states, the current kerbside service provision to residents is a weekly collection of a 120L waste bin, and fortnightly collections of a 240L recycling bin per rateable property. The applied Waste Generation Rates for this project are less than the current CoH provision.

A residential waste generation assessment is provided in Table 2.

Table 2 Waste Generation Assessment

Use	Bedrooms	Waste Per Week		
		Garbage	Recycling	Organics
High Density Residential Dwelling	50	1,500L	1,250L	500L
Total Waste Generated per Week		1,500L	1,250L	500L

4.2 Waste Systems

Waste would be sorted on-site (in apartments) by residents as appropriate into the following streams:

- Garbage (General Waste),
- Comingled Recycling,
- Organics (CoH FOGO), and
- Bulky Waste

4.2.1 Garbage (General Waste)

Each apartment will include a dual integrated under bench bin to accommodate Garbage and Comingled Recyclables with a minimum capacity of 15 litres for the temporary holding of General Waste. Residents will be required to apply a plastic liner to their general waste bin.

The disposal of the waste from apartments will be via a chute drop off point located within level adjacent to the fire stair core.

Garbage is to be disposed of bagged.

4.2.2 Comingled Recycling

Each apartment will include a dual integrated under bench bin to accommodate Garbage and Comingled Recyclables with a minimum holding capacity of 12 litres for the temporary holding of comingled recycling.

The disposal of the waste from apartments will be via a chute drop off point located within level adjacent to the fire stair core.

Comingled Recyclables are to be disposed of loosely.

LXN Architecture Waste Management Plan

4.2.3 Organic Waste

Each apartment would be supplied an Organics Waste Bin (similar to the City of Hobart FOGO bin) to for the temporary holding of organic waste. These bins have a maximum capacity of 5 litres. Residents of all apartments would dispose of organics from these bins directly into the appropriate organics bin provided with in the ground floor refuse area.

Organic Waste bin will be collected by private contractor.

4.2.4 Bulky Goods

A minimum annual storage capacity of 15.4m³ is required for the storage of Bulky Goods Waste. This has been calculated on a rate of 0.77m³ of Bulky Waste generated per household per annum. A volume of 4.7m³ with the minimum dimensions of 1400mmW x 1400mmD x 2400mmH has been allocated on the ground floor adjacent to the lift lobby and carpark access point. This space is a temporary storage space with the expectation that the building manager would arrange (3) collections occurring per year or residents. Residents can also utilise the City of Hobart's McRobbies transfer station that provides up to five free entry weekends for residents of the City and located 5.2km south west to the site.

The storage area would be clearly marked and accessed via the carpark. Refer appendix 1 for the location.

4.3 Bin Quantity, Size and Collection Frequency

The bin quantity, size and the frequency of collection are shown below in Table 3 and Table 4. Two garbage waste collections per week is recommended given the volume and nature of the waste generated in the proposed development.

Table 3 Waste Bin Size and Collection Frequency

Waste Stream	Collection per Week	Bin Size	No. Bins	Total weekly volume	Weekly capacity per bedroom	Total weekly capacity
Garbage	2	1,100	1	1,500L	30L	2,200L
Comingled Recycling	2	1,100	1	1,250L	25L	2,200L
Organics	1	660	1	500L	10L	500L

Table 4 Typical Waste Bin Dimensions

Capacity	Width (mm)	Depth (mm)	Height (mm)	Area (m ²)
1100	1240	1070	1330	1.33
660	1260	780	1200	0.98
360	680	848	1100	0.58

* Bin dimensions based on typical SULO Pty Ltd refer

4.4 Bin Colour and Supplier

All bins will be provided by private supplier. The below bin colours are specified by Australian Standard AS 4123.7-2006, however due the private nature of the collection, these are only recommendations and are not mandatory:

- Garbage (general waste) shall have red lids with dark green or black body; and
- Recycle shall have yellow lids with dark green or black body.
- Green Waste / Organics shall have lime green lids with dark green or black body.

LXN Architecture Waste Management Plan

4.5 Waste Storage Area

Table 5 demonstrates the cumulative space requirements and provision of waste areas in the proposed development.

Please refer to scaled drawing shown in Appendix 1.

Table 5 Waste Area Space Requirements

Waste Type	Space Required (excl. circulation)	Space Provided
Garbage	1.33m ²	6.15m ²
Comingled Recycle	1.33m ²	
Organics	0.98m ²	
Bulky Goods	2.00m ²	
Total	5.64m²	6.15m²

Waste management would be overseen by building management.

4.6 Signage

Waste storage areas and bins would be clearly marked and signed with the industry standard signage approved, or equivalent, as illustrated in Figure 1.

Figure 1: Sustainability Victoria Signage



Figure 2: City of Hobart FOGO Signage



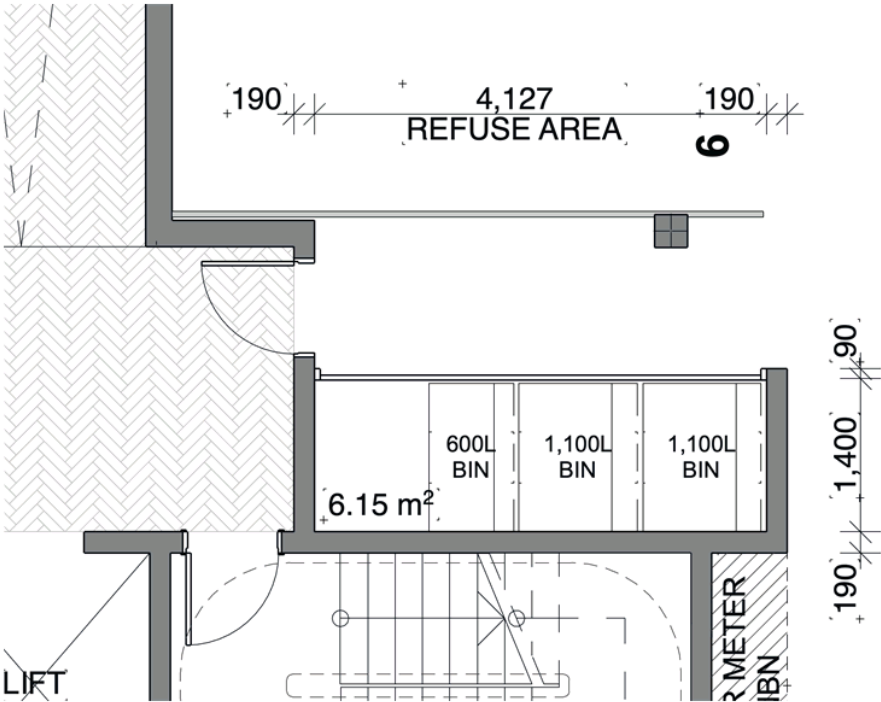
LXN Architecture Waste Management Plan

4.7 Waste Collection

Waste would be collected by private contractor, as follows:

- One 1,100L garbage bin collected twice per week,
 - One 1,100L comingled recycling bins collected twice per week, and
 - One, 600L organic bin collected once per week
1. All waste bins would be stored on-site in the bin refuse area provided with in the site.
 2. General waste collections would occur via nominally an 8.8m medium rigid vehicle.
 3. Waste collection vehicles would draw parallel to the kerb of Argyle Street and prop for collection (similar to CoH contractors)
 4. Vehicle operators would ferry waste bins from the bin refuse area and return upon emptying.
 5. Waste collections would be performed at off peak hours (i.e. prior or post peak traffic flows) to ensure safe access and pedestrian safety.

Design Drawings





98-110 Argyle Street
DEVELOPMENT APPLICATION

PROJECT INFORMATION

ADDRESS

300 WEST 10TH STREET

PROPERTY ID

100000

TITLE/BLD CODE

100000

STAIR AREA

75.00 SQ FT

FLOR AREA

75.00 SQ FT

CLIMBING AREA

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75.00 SQ FT

STAIR AREA

75.00 SQ FT

CLIMBING AREA

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STAIR AREA

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CLIMBING AREA

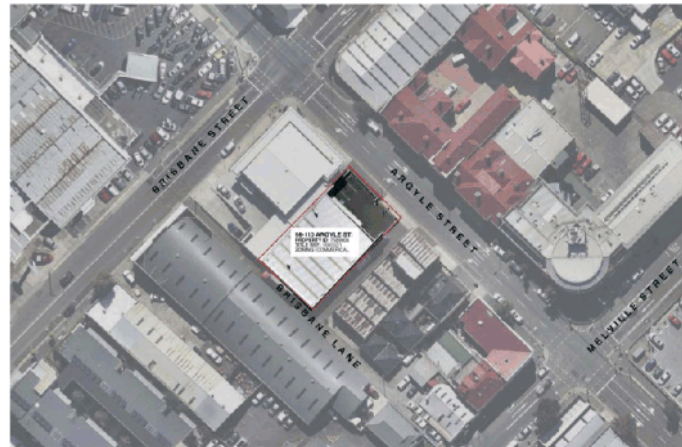
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STAIR AREA

75.00 SQ FT

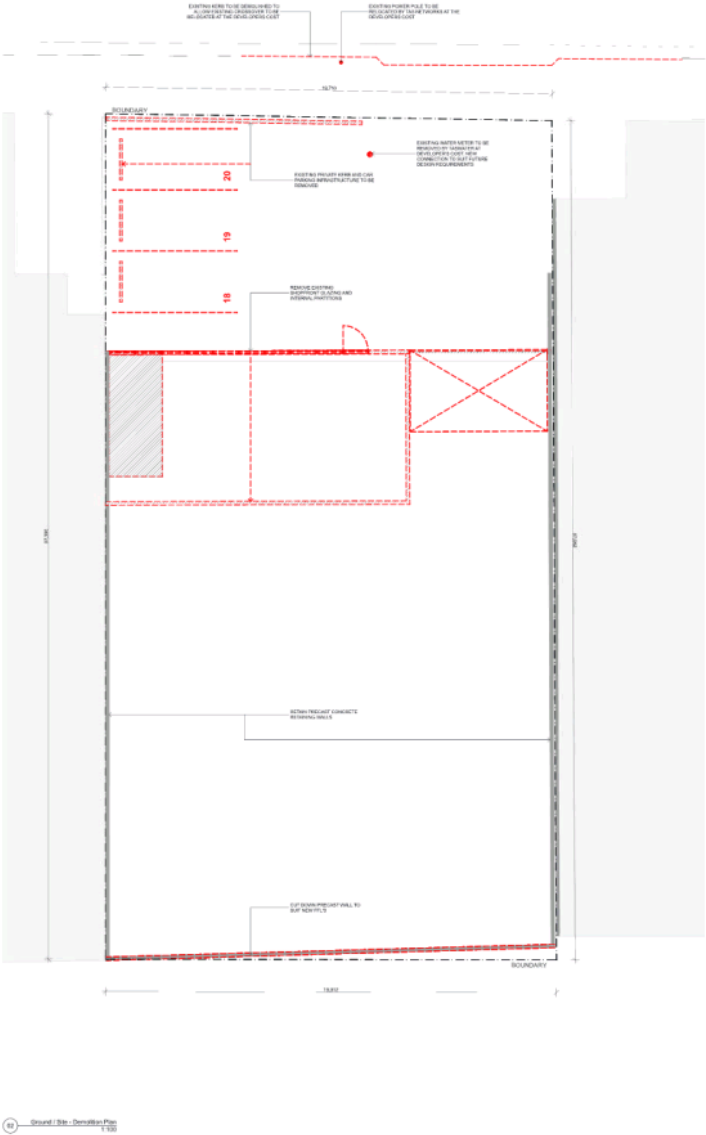
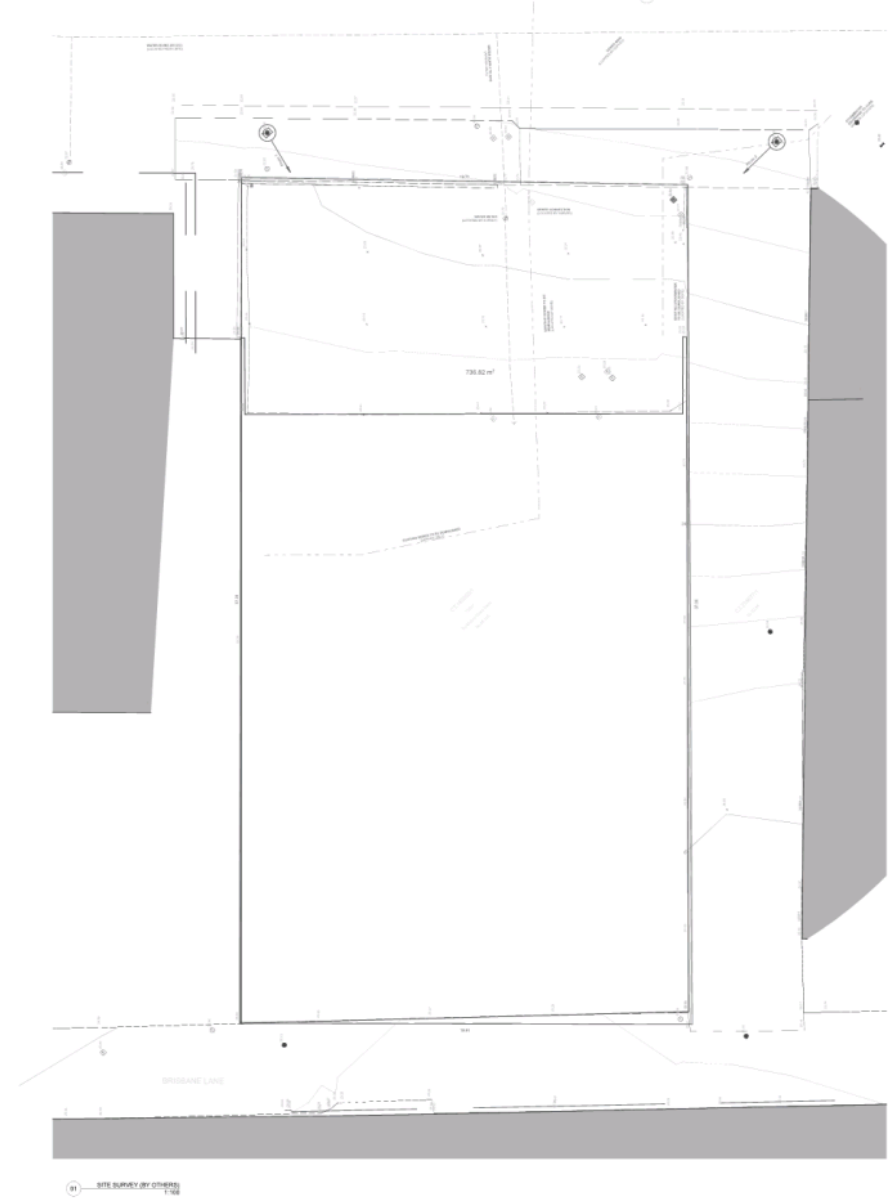
CLIMBING AREA

75.00 SQ FT



LOCATION PLAN - N.T.S.

NOT FOR CONSTRUCTION	
DEVELOPMENT APPLICATION	
REVISING	
Revised By: _____	Date: _____
By: _____	Date: _____
PROJECT NUMBER	
A18067	
P.L. 10010, Argyle St, Duran	
PROJECT NAME	
98-110 ARGYLE ST	
Site: _____	
By: _____	
Date: _____	
City/Town: _____	
County: _____	
City/Town/County/Project No.: _____	
<div style="display: flex; justify-content: space-between;"> EXPIRE DATE </div> <div style="display: flex; justify-content: space-between;"> DEVELOPMENT APPLICATION 2018/01 </div>	
DRAWING TITLE	
COVER PAGE	
DRAWING	REVISION
DA-00	A



NOT FOR CONSTRUCTION
DEVELOPMENT APPLICATION

REVISIONS

Rev#	Date	Description
1	2021	Development Application

PROJECT NUMBER
A18067

PROJECT NAME
98-110 ARGYLE ST

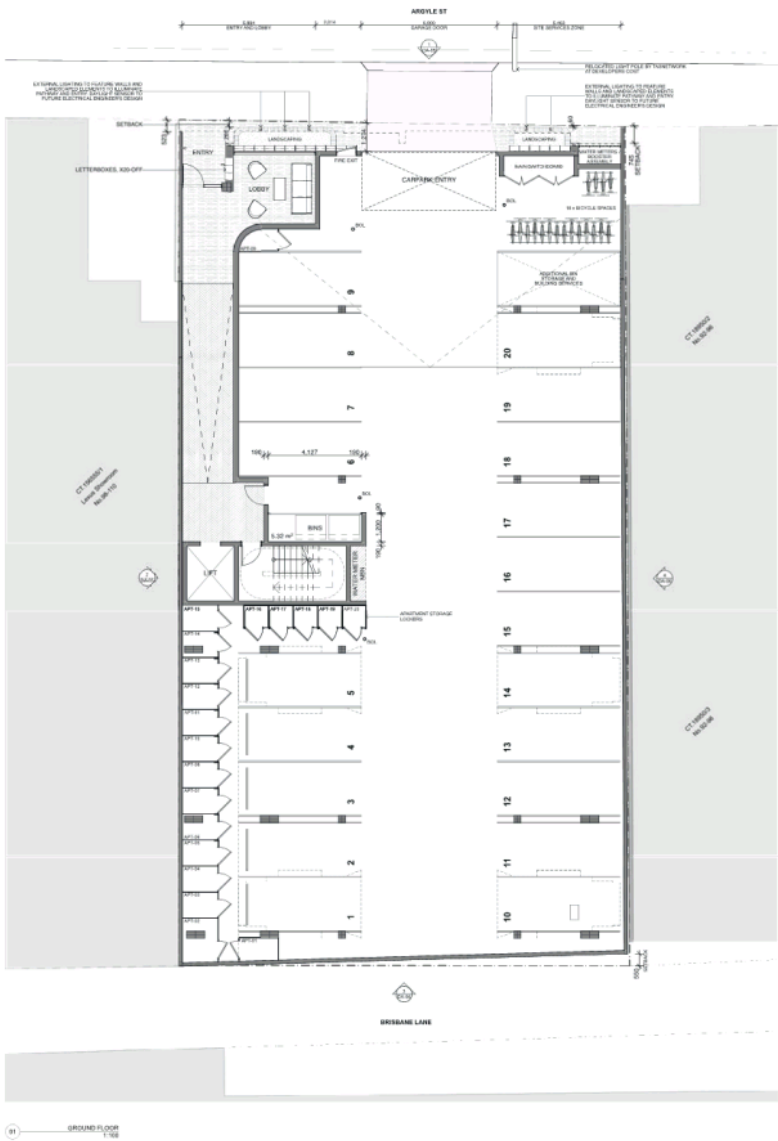
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DATE
2021

DRAWING TITLE
SURVEY + EXISTING / DEMO

DRAWING NUMBER
DA-01

REVISION
A



NOT FOR CONSTRUCTION
DEVELOPMENT APPLICATION

REVISIONS

Rev	Description	Date
1	Submitted Application	2021/06

PROJECT NUMBER
A18067

FILE NAME
A18067 Argyle St, Bayside

PROJECT NAME
98-110 ARGYLE ST

DATE
15/06/2021

SCALE
1:100

STATUS
DEVELOPMENT APPLICATION

DRAWING TITLE
GROUND + LEVEL 1 PLAN

DRAWING
DA-02

REVISION
A



NOT FOR CONSTRUCTION
DEVELOPMENT APPLICATION

REVISIONS

NO.	DATE	DESCRIPTION
1	2021.06.15	Submittal Application

PROJECT NUMBER
A18067

FILE: A18067_Appl 15.06.21

PROJECT NAME
98-110 ARGYLE ST

SITE
98-110 Argyle Street
New York, NY 10038

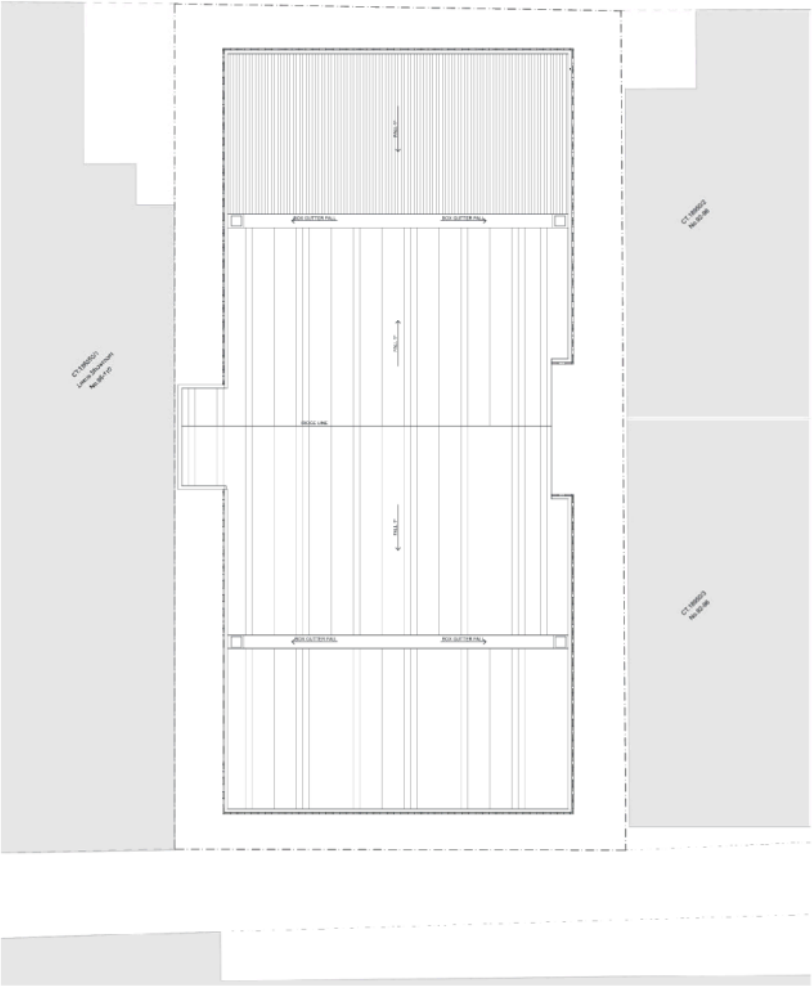
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APPROX.

DATE
2021.06.15

DRAWING TITLE
TYPICAL FLOOR + LEVEL 5

DRAWING NUMBER
DA-03

REVISION
A



1 ROOF PLAN
1/100

NOT FOR CONSTRUCTION	
DEVELOPMENT APPLICATION	
REVISIONS	
Rev#	Date
1	2021.06.15
PROJECT NUMBER	
A18067	
PROJECT NAME	
98-110 ARGYLE ST	
SITE	
100-110 Argyle Street	
OWNER	
LUXURY DEVELOPMENT LLC	
SCALE	
1" = 10'-0"	
DATE	
2021.06.15	
DRAWING TITLE	
ROOF PLAN	
DA-04	A



FINISHES:

- FF-01-METAL SHEET 01
- FF-02-PAVE BRICK 01
- FF-03-PAVE BRICK 02
- FF-04-POUR-CAST CONCRETE, FORMWORK TO SECTIONS
- FF-05-METAL SHEET 02
- FF-06-PLAY SAND, NONBEREDED FINISH
- FF-07-CEMENT SHEET (CLADDING 01), PAINT FINISH
- FF-08-CEMENT SHEET (CLADDING 02), PAINT FINISH

NOT FOR CONSTRUCTION

DEVELOPMENT APPLICATION

Rev ID	Issue Name	Date
1	Development Application	2015/02
2	Market Issue	Work in Progress

PROJECT NUMBER
A18067
FILE: A18067_Apple 9c_Erikabo

PROJECT NAME
98-110 ARGYLE ST

NOTE
DO NOT SIGN CONTRACT
TILL
CLIENT
COMPLETES AGREEMENTS P/L

94.8%
1.7% (0.5%)
53.5% (1.2%)

STATUS: 00762076627 APPROVED
DATE: 03/03/17

ELEVATIONS

CLAIMING	SCENARIO
DA-05	B - WIP

LXIN

Architects & Consulting
200 Green & New York, Suite
1000, New York, New York
10001-201000
212.250.0000
info@lxin.com

100-110 ARGYLE STREET

100-110 ARGYLE STREET

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100-110 ARGYLE STREET



ARGYLE STREET ELEVATION
1:200



ARGYLE STREET SECTION
1:200

NOT FOR CONSTRUCTION
DEVELOPMENT APPLICATION

REVISIONS	
Rev	Date
1	2021/06/15

PROJECT NUMBER
A18067

PROJECT NAME
98-110 ARGYLE ST

DATE
15/06/2021

SCALE
1:200

STATUS
DEVELOPMENT APPLICATION

DRAWING TITLE
STREET ELEVATIONS

DATE
15/06/2021

REVISION
A



Street Montage 01 - Argyle St looking North
Note: This image is a computer-generated image and does not represent an actual photograph.



Street Montage 02 - Argyle St looking South
Note: This image is a computer-generated image and does not represent an actual photograph.



Street Montage 03 - Argyle St looking South
Note: This image is a computer-generated image and does not represent an actual photograph.



Street Montage 04 - Argyle St looking South
Note: This image is a computer-generated image and does not represent an actual photograph.

NOT FOR CONSTRUCTION
DEVELOPMENT APPLICATION

REVISIONS

Rev	Date	Description
1	2021	Initial

PROJECT NUMBER
A18067

PROJECT NAME
98-110 ARGYLE ST

DATE
15/06/2021

SCALE
1:100

STATUS
DEVELOPMENT APPLICATION

DRAWING TITLE
STREET MONTAGES

DATE
15/06/2021

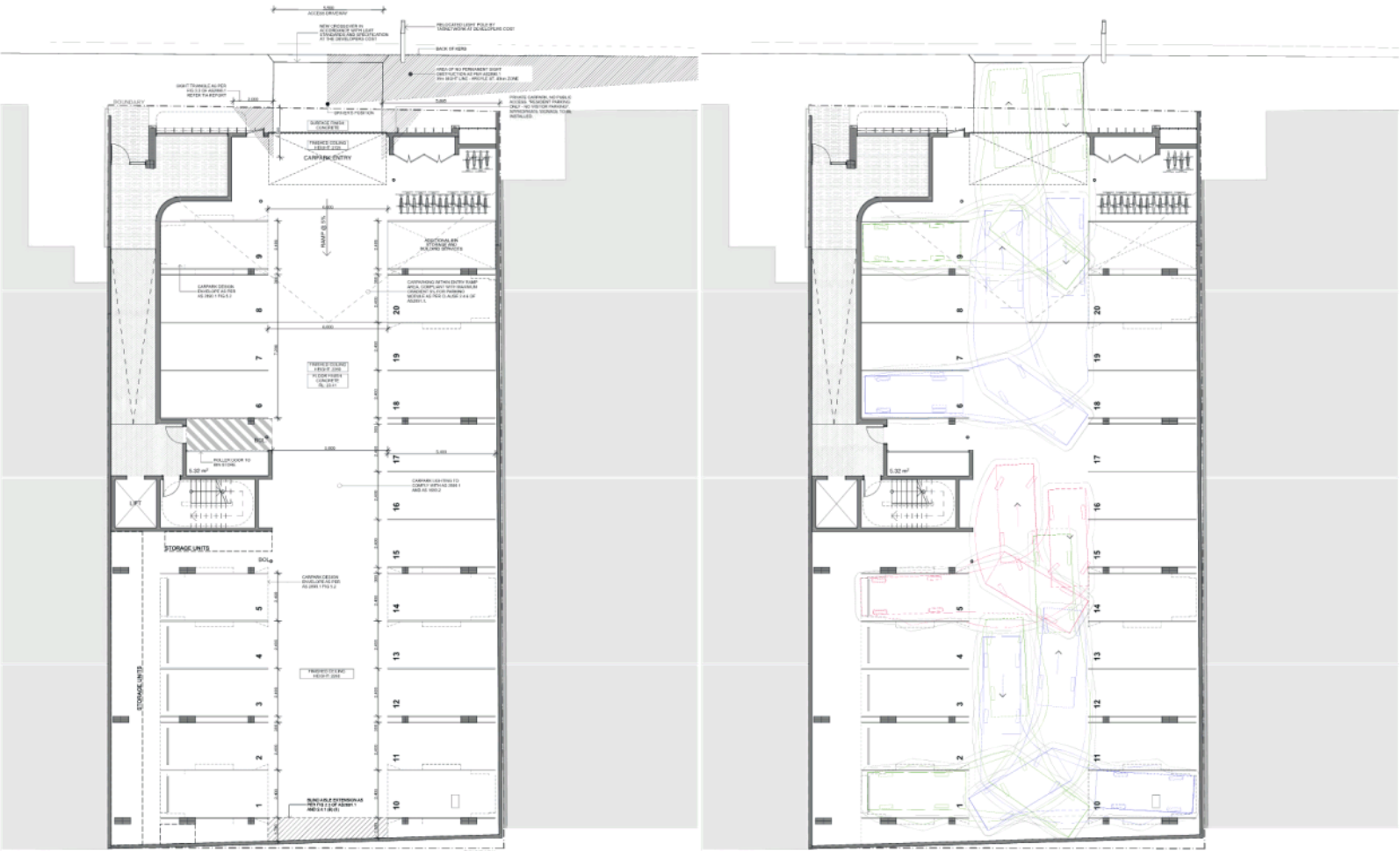
REVISION
A

LXIN

Architects & Consulting


200 South 10th Street, Suite 200
Portland, OR 97204-2800
TEL: 503.222.0111 FAX: 503.222.0112

200 South 10th Street, Suite 200
Portland, OR 97204-2800
TEL: 503.222.0111 FAX: 503.222.0112



SOFTWARE: AUTOTURN ONLINE

VEHICLE DIMENSIONS



deg

WHEEL TRACK

LOCK TO LOCK TIME

SWEEPING ANGLE

WHEEL TRACK

LOCK TO LOCK TIME

SWEEPING ANGLE

NOT FOR CONSTRUCTION

DEVELOPMENT APPLICATION

REVISIONS

Rev	Date	Description
1	2021/06/15	Submitted Application

PROJECT NUMBER

A18067

PROJECT NAME

98-110 ARGYLE ST

DATE

15/06/2021

SCALE

1:100

STATUS

DEVELOPMENT APPLICATION

DRAWING TITLE

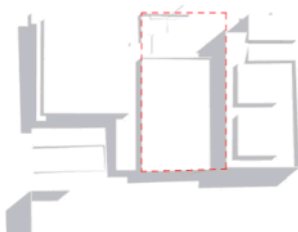
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DRAWING NUMBER

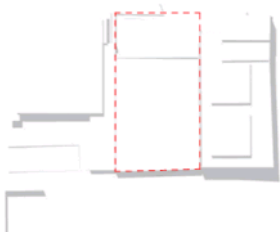
DA-09

REVISION

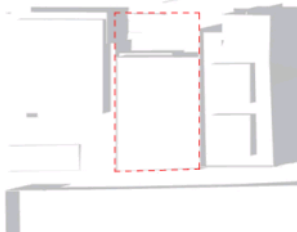
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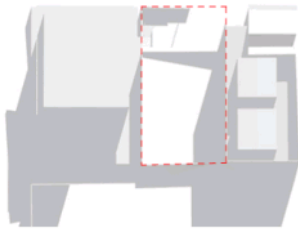
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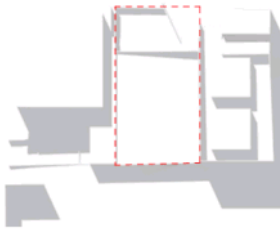
Existing - Summer Solstice 12pm



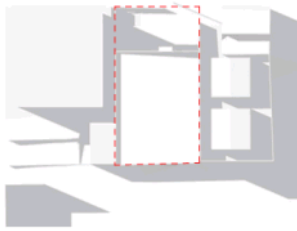
Existing - Summer Solstice 3pm



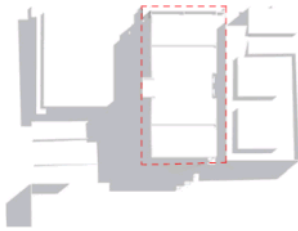
Existing - Winter Solstice Sun



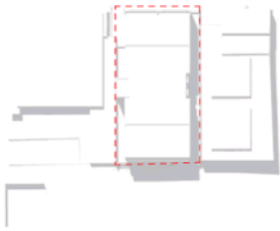
Existing - Winter Solstice 12pm



Existing - Winter Solstice 3pm



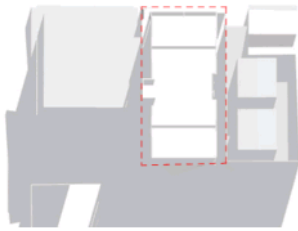
Proposed - Summer Solstice Sun



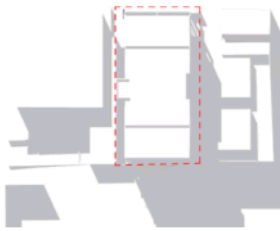
Proposed - Summer Solstice 12pm



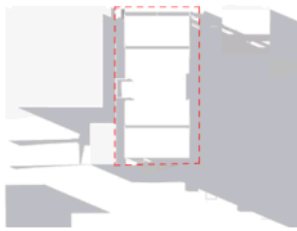
Proposed - Summer Solstice 3pm



Proposed - Winter Solstice Sun



Proposed - Winter Solstice 12pm



Proposed - Winter Solstice 3pm

NOT FOR CONSTRUCTION
DEVELOPMENT APPLICATION

REVISIONS

Rev#	Date	Description
1	2021.06.15	Development Application

PROJECT NUMBER
A18067

FILE NUMBER
98-110 ARGYLE ST, SEASIDE

PROJECT NAME
98-110 ARGYLE ST

DATE
15/06/2021

SCALE
1:100

STATUS
DEVELOPMENT APPLICATION

DRAWING TITLE
SUN STUDY

DATE
15/06/2021

REVISION
A



URBAN DESIGN ADVISORY PANEL

MINUTES

MINUTES OF A MEETING OF THE URBAN DESIGN ADVISORY PANEL
HELD AT 9:30 AM ON MONDAY 31 MAY 2021
LADY OSBORNE ROOM

98 ARGYLE STREET – PLN-20-706

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 application proposes the demolition of most of the existing building on the site and the construction of a new 6 storey building for residential use. The new building would include car parking on the ground floor and 4 apartments on each subsequent floor, for a total of 20 apartments. The building is proposed to have a maximum height of approximately 19.6 metres. The total gross floor area of the proposed building would be 3653m².

The proposed building would be finished externally with a combination of materials including face brick walls and cement and metal sheet cladding. Cement render and substantial glazed areas are also proposed on the Argyle street elevation.

Comments:

The application previously came before the Panel as a pre-application and it was noted that the Panel's advice was considered in the application, particularly in regard to Brisbane Lane and the shop front treatment, both of which are considered an improvement. The Panel encouraged an increase as much as possible to the area of the entry lobby, subject to the requirements of the adjacent fire exit, in order to maximise amenity for residents and the relationship with the adjacent street space.

In their original comments for the pre-application, the Panel noted that there was potential for a small increase in height, subject to amenity and design treatment particularly with regard the streetscape. The Panel was somewhat comfortable with the height, although felt that as the first building in the area to increase the height, that there was a responsibility to validate an increased height in the context of the scheme. The Panel did not see validation in exceeding the permitted height merely to increase the number of apartments.

Furthermore, the Panel noted the top floor apartments had less private outdoor space than the apartments below. The Panel noted that if the top floor had been set back further to provide more outdoor space to the top floor apartments, the 5 floors frontage to Argyle

Street would have benefited the streetscape, being more compatible with adjacent buildings and the width of Argyle Street (approximately 17m).

Notwithstanding these concerns, the Panel agreed the articulation of the top floor had the potential to be a design improvement on the pre-application scheme, which did not have an articulated roof scape.

Whilst acknowledging the design work undertaken in the masonry frame and balcony facades other than the top floor, the Panel felt that the streetscape character of the building could be further developed, which in turn would improve compatibility with adjacent buildings.

The Panel had concern about the lack of common open space proposed within the development. The extent and the quality of private open space proposed for each apartment was not considered sufficient to justify no communal open space, especially as the private open space does not satisfy the Scheme's Acceptable solution and would therefore require discretionary approval in accordance with the scheme's performance solution.

The Panel felt that the application does not currently appreciate the transition from the denser city core. The top floor lacked the design finesse of the lower levels, which could have created better opportunities for resident amenity and transition. It was also noted that the cross sections to demonstrate the scale and relationship of the proposed building with its adjoining buildings requested at the pre-application meeting were not provided. The Panel felt that this would have been beneficial to assess the building within the streetscape context and the amenity of the narrow private open space to apartments on the side facades.

The Panel also noted that care will need to be taken with planting due to the orientation and proposed material treatment of the building's proposed landscaping features.

URBAN DESIGN ADVISORY PANEL

MINUTES

MINUTES OF A MEETING OF THE URBAN DESIGN ADVISORY PANEL
HELD AT 1:00 PM ON THURSDAY 17 DECEMBER 2020
LADY OSBORNE ROOM

98 ARGYLE STREET HOBART (Pre-Application)

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 application proposes the demolition of the existing building on the site and the construction of a new 5 storey building for residential use. The new building would include car parking on the ground floor and 4 apartments on each subsequent floor, for a total of 16 apartments. The building is proposed to have a maximum height of approximately 16.6 metres. The total gross floor area of the proposed building would be 3155m².

Comment:

The application was lodged with Council on the 15 October and is currently an invalid application and being reviewed by the proponent. The application was discussed as a pre-application and the proponent advised that the client is currently reviewing the design and indicated that they are looking at adding an additional floor, therefore discussions were around the proposal including an additional floor. The building would become a six storey building which provides the opportunity to increase the floorplate with the same number of apartments per floor. The extra floor will take the building to a height of 19.8 metres.

The Panel welcomed the pre-application meeting and acknowledged the presenters were unfamiliar with the process and did not have a prepared presentation.

The Panel discussed the opportunity for the apartments to consider Brisbane Lane and the positive effect that it could have in changing the future character of the laneway which, although currently underutilised, is recognised as part of the city's existing and ongoing public network.

There was support with regards to the material palette of brick walls, cement and metal sheet cladding although there were some reservations about the articulation of the upper floors and the Panel felt that it may require further consideration. There is the concern that without attention the building may not fit within the context of the street and the height,

scale and mass of its buildings. There was a suggestion to setback the top floor but with further consideration it may be achieved via materials at the different levels of the building or considering the upper level(s) in a different context. This may also be achieved by treating the lower part of the building and modulating the building so it reads lower, while acknowledging the street space section. The street space section also considers the height of the 'street wall', typically a dimension no greater than the street width.

The building is in a transitional area of the city, it is recognised that there is going to be further development within the street. The adjacent corner lot has been acknowledged that it may be developed in the future as it has the same owner. At the moment the transition of the building and how it feels is that it may not be compatible with the streetscape, due to the scale and the form of the proposed building.

It is important to provoke the sense of communal between the public and private space at the street level. The building is an apartment block with no commercial space, therefore the frontage of the building needs to work to gain interesting street activation through managing the thresholds between public and private conditions. There were discussions around how to make it a more welcoming space, whether the bike space could be integrated into the entry of the building to create a larger and more attractive entry space for building residents, thus creating further activation between the public and private thresholds. The communal space at the ground floor level would be particularly beneficial as there is no other proposed communal space within the building as required by the Scheme.

Consider whether inground planting can be provided at street level at both Argyle St and Brisbane Lane frontages. Low walls/edges can be used to provide plant protection, street amenity and informal seating opportunities to Argyle St.

There is an indication that there will be ordered planters on the sides of the building and that will provide improved outlook from the lower apartments.

Understanding and provision for the ongoing maintenance of plants is required for these areas to be successful long term.

The Panel had some reservations with regards to the lack of the natural lighting within the apartment block in particular the ground floor entry corridor, the lift lobby to each level and the long corridors in each apartment. The Panel felt that further consideration with regards to the layout of the apartments may benefit the value of the building.

In conclusion, it was acknowledged that the plans are currently being reviewed and the Panel supported the approach to materials palette although there was a feeling that the building may benefit from further consideration as it might not be compatible with existing buildings. The frontage of the building needs to be considered with regard to its contribution to the interaction between public and private spaces, and the streetscape context. The Panel requested further cross sections to demonstrate the scale and relationship of the

proposed building with its adjoining buildings. It was acknowledged that it is an area in transition and that with these further considerations the building could sit comfortably within the streetscape.

**7.1.3 15 PARLIAMENT STREET, SANDY BAY - OUTBUILDING (GARAGE)
PLN-21-128 - FILE REF: F21/54501**

Address: 15 Parliament Street, Sandy Bay
Proposal: Outbuilding (Garage)
Expiry Date: 10 July 2021
Extension of Time: Not applicable
Author: Victoria Maxwell

RECOMMENDATION

That pursuant to the *Hobart Interim Planning Scheme 2015*, the Council approve the application for an outbuilding (garage) at 15 Parliament Street Sandy Bay TAS 7005 for the reasons outlined in the officer's report and a permit containing the following conditions be issued:

GEN

The use and/or development must be substantially in accordance with the documents and drawings that comprise PLN-21-128 15 PARLIAMENT STREET SANDY BAY TAS 7005 - 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 2021/00305-HCC dated 25/03/2021 as attached to the permit.

Reason for condition

To clarify the scope of the permit.

PLN s1

The garage is not approved for any commercial use.

Reason for condition

To clarify the scope of this permit.

PLN s2

The south eastern eaves must be no higher than 4.23m above natural ground level and the south western eaves must be no higher than 3.32m above natural ground level.

Advice:

The plans submitted to Council on 1st June 2021 are considered to satisfy the above condition.

Reason for condition

To clarify the scope of this permit.

PLN s3

The roof design must be changed so that the gable is located on the front (west) and rear (east) facades, with a maximum ridge height of 4.66m above natural ground level on the western facade.

Advice:

The plans submitted to Council on 1st June 2021 are considered to satisfy the above condition.

Reason for condition

To clarify the scope of this permit.

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 into the existing gully pit located on the 9 CRISP STREET via a drainage easement at the eastern boundary prior to first occupation or commencement of use (whichever occurs first).

Advice:

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

Reason for condition

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

SW 9

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

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

1. include detailed design and supporting calculations of the detention tank showing:
 - a. detention tank sizing such that there is no increase in flows from the developed site up to 5% AEP event and no worsening of flooding;
 - b. the layout, the inlet and outlet (including long section), outlet size, overflow mechanism and invert level;
 - c. the discharge rates and emptying times; and
 - d. all assumptions must be clearly stated;
2. include a supporting maintenance plan, which specifies the required maintenance measures to check and ensure the ongoing effective operation of all systems, such as: inspection frequency; cleanout procedures; descriptions and diagrams of how the installed systems operate; details of the life of assets and replacement

requirements.

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

Advice:

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

ENG 3a

Prior to first occupation or commencement of use (whichever occurs first), the access driveway, and parking module (parking spaces, and manoeuvring area) must be designed and constructed in accordance with Australian Standard AS/NZS 2890.1:2004 (including the requirement for physical controls where required), or a Council approved alternate design certified by a suitably qualified engineer to provide a safe and efficient access, and enable safe, easy and efficient use.

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 3b

The access driveway, and parking module (parking spaces, and manoeuvring area) design must be submitted and approved as a Condition Endorsement, prior to the commencement of work, issuing of any approval under the *Building Act 2016*.

The access driveway, and parking module (parking spaces, and manoeuvring area) design must:

1. Be prepared and certified by a suitably qualified engineer,
2. Be generally in accordance with the Australian Standard AS/NZS 2890.1:2004, and
3. Where the design deviates from AS/NZS 2890.1:2004 the designer must demonstrate that the design will provide a safe and efficient access, and enable safe, easy and efficient use.

Advice:

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

It is 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, and parking module (parking spaces, and manoeuvring area) must be constructed in accordance with the design drawings approved by Condition ENG 3b.

Prior to first occupation or commencement of use (whichever occurs first), documentation by a suitably qualified engineer certifying that the access driveway 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 5

The number of car parking spaces approved to be used on the site is three:

- Two (2) within the Proposed Garage
- One (1) in-place of the Proposed Tandem

Reason for condition

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

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.

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.

ENV 1

Sediment and erosion control measures sufficient to prevent sediment from leaving the site must be installed prior to any disturbance of the site, and maintained until all areas of disturbance have been stabilized or re-vegetated.

Advice:

For further guidance in preparing a Soil and Water Management Plan – in accordance with Fact sheet 3 Derwent Estuary Program click [here](#).

Reason for condition

To avoid the sedimentation of roads, drains, natural watercourses, Council land that could be caused by erosion and runoff from the development, and to comply with relevant State legislation.

HER 17a

The palette of exterior colours and materials must reflect the palette of materials of the existing house on site and precinct.

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

Reason for condition

To ensure that development at Sandy Bay 2 heritage precinct is undertaken in a sympathetic manner which does not cause loss of historic cultural heritage significance.

ADVICE

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

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

CONDITION ENDORSEMENT

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

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

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

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

BUILDING PERMIT

You may need building approval in accordance with the *Building Act 2016*. Click [here](#) for more information.

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

PLUMBING PERMIT

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

STORMWATER





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

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-21-128 - 15 PARLIAMENT STREET SANDY BAY TAS 7005 - Planning Committee or Delegated Report ↓  |
| Attachment B: | PLN-21-128 - 15 PARLIAMENT STREET SANDY BAY TAS 7005 - CPC Agenda Documents ↓  |
| Attachment C: | PLN-21-128 - 15 PARLIAMENT STREET SANDY BAY TAS 7005 - Planning Referral Officer Cultural Heritage Report ↓  |
| Attachment D: | PLN-21-128 - 15 PARLIAMENT STREET SANDY BAY TAS 7005 - CPC Supporting Documents - Amended Plans ↓  |

**APPLICATION UNDER HOBART INTERIM PLANNING SCHEME 2015**

Type of Report:	Committee
Council:	21 June 2021
Expiry Date:	10 July 2021
Application No:	PLN-21-128
Address:	15 PARLIAMENT STREET , SANDY BAY
Applicant:	Simon Chappell (Apogee (TAS) Pty Ltd) Suite 3 Level 2 93 York Street
Proposal:	Outbuilding (Garage)
Representations:	Seven
Performance criteria:	Inner Residential Zone Development Standards, Parking and Access Code Historic Heritage Code

1. Executive Summary

- 1.1 Planning approval is sought for an Outbuilding (Garage) at 15 PARLIAMENT STREET SANDY BAY TAS 7005.
- 1.2 More specifically the proposal includes:
 - construction of a 10m x 7m three bay garage in the south eastern corner of of the subject site,
 - the structure will be approximately 4m to the eaves and 4.6m to the ridgeline,
 - two 3m high roller doors and one pedestrian door are proposed on the western elevation,
 - the shed will be constructed of colourbond walls and roof,
 - to address the site's crossfall, the foundations on the southern side will be filled to 0.4m in the south western corner and up to 0.91m in the south eastern corner,
 - the maximum height in the south eastern corner eave will be 4.92m,
 - the garage will contain two vehicle spaces with a third bay for storage and accessed by a pedestrian door,
 - there will be a third parking space in front of the shed,
 - a substantial turning area and driveway will be constructed along the southern boundary with a turning bay located behind the dwelling.

- 1.3 The proposal relies on performance criteria to satisfy the following standards and codes:
 - 1.3.1 Inner Residential Zone - Building Envelope
 - 1.3.2 Parking and Access Code - Number of Parking Spaces
 - 1.3.3 Historic Heritage Code - Heritage Precinct
- 1.4 Seven (7) representations objecting to the proposal were received within the statutory advertising period between 3rd to 17th May 2021.
- 1.5 The proposal is recommended for approval subject to conditions.
- 1.6 The final decision is delegated to the Council, because more than five objections were received.

2. Site Detail

- 2.1 The site is located on the eastern side of Parliament Street, between King and Princes Streets. Surrounding uses are residential with a mix of densities and types of dwelling. To the north and west predominantly dwellings are single residences, listed under the planning scheme as heritage places. To the east is a public housing complex and immediately to the south are two dwellings on a strata title.



Figure 1: Site plan (Geo Cortex, 2021)

- 2.2 The site slopes down away from the road to the south eastern corner (location of the proposed outbuilding). The slope falls 5m over 62m (1:12 approx). The dwelling is located to the front of the lot with access running along the southern boundary to behind the dwelling.



Figure 2: View of site from rear boundary (Officer photo, 2021)

- 2.3 The area proposed for development in this application is currently put down to grass. There is a TasWater sewer manhole that connects an elbow in the sewer lines that run north and east from the site. The manhole is approximately 4.5m from the northern boundary and the eastern sewer line bisects the eastern boundary approximately 3.2m from the northern boundary. The easements for this infrastructure restrict placement of the garage to the south eastern corner.

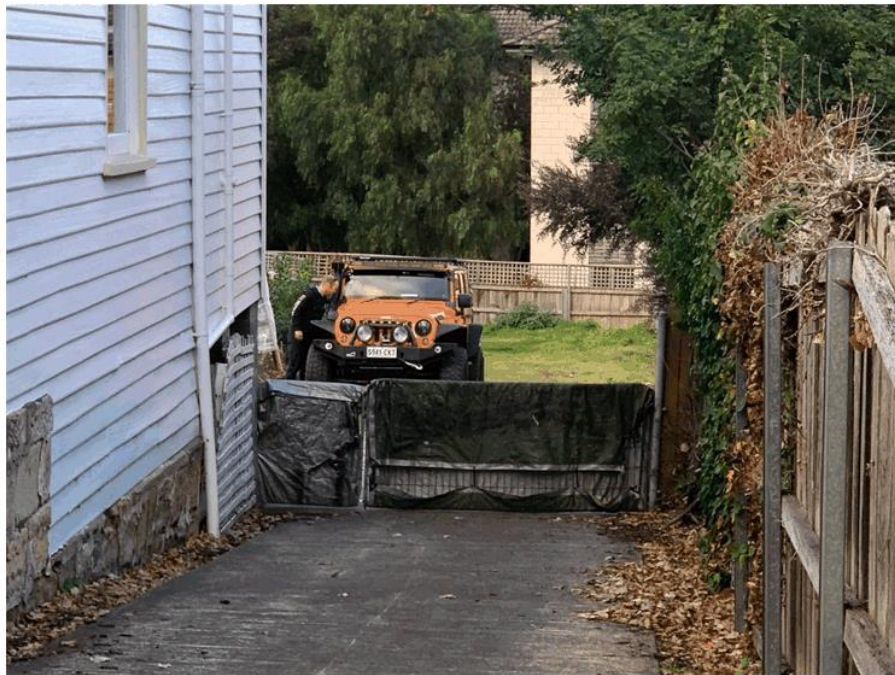


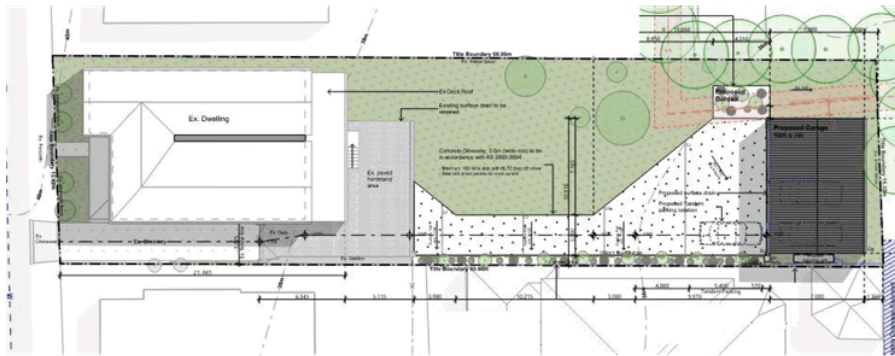
Figure 3: view from Parliament Street to the building site (Officer photo, 2021)

3. Proposal

- 3.1 Planning approval is sought for an Outbuilding (Garage) at 15 PARLIAMENT STREET SANDY BAY TAS 7005.

3.2 More specifically the proposal includes:

- construction of a 10m x 7m three bay garage in the south eastern corner of of the subject site,
- the structure will be approximately 4m to the eaves and 4.6m to the ridgeline,
- two 3m high roller doors and one pedestrian door are proposed on the western elevation,
- the shed will be constructed of colourbond walls and roof,
- to address the site's crossfall, the foundations on the southern side will be filled to 0.4m in the south western corner and up to 0.91m in the south eastern corner,
- the maximum height in the south eastern corner eave will be 4.92m,
- the garage will contain two vehicle spaces with a third bay for storage and accessed by a pedestrian door,
- there will be a third parking space in front of the shed,
- a substantial turning area and driveway will be constructed along the southern boundary with a turning bay located behind the dwelling.



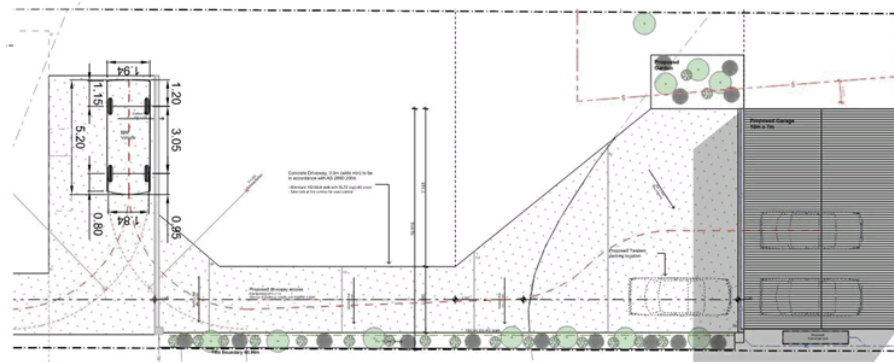


Figure 5: Onsite parking and turning plan(Apogee, 2021)

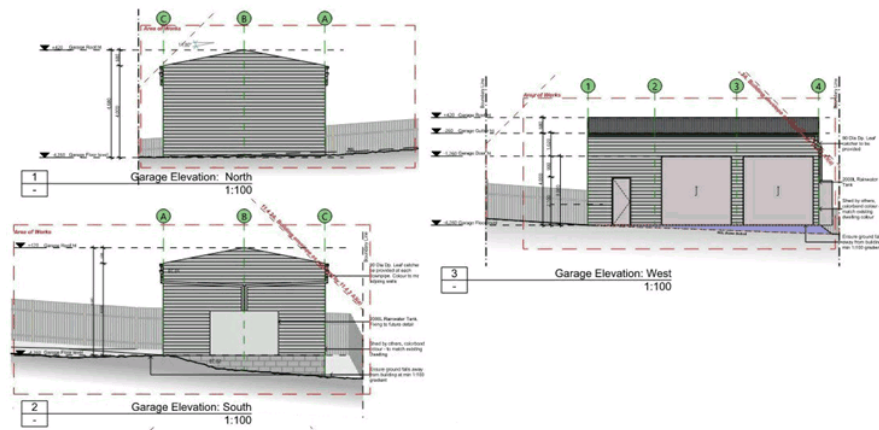


Figure 6: Shed elevations (Apogee, 2021)

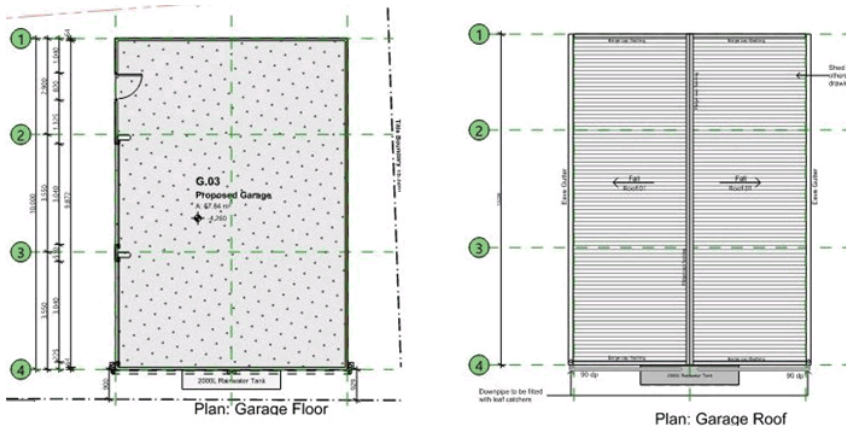


Figure 7: Shed floor and roof plan (Apogee, 2021)

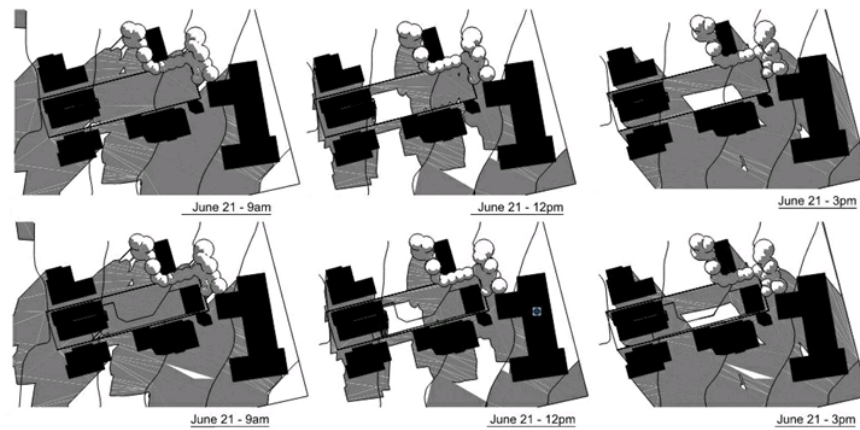
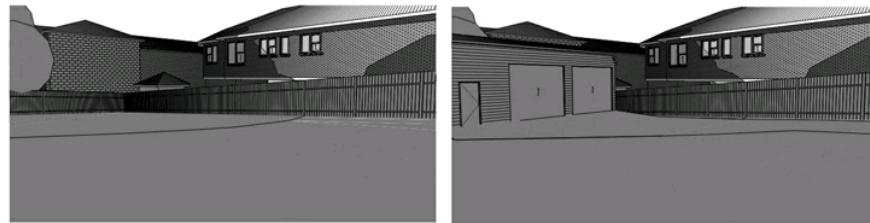


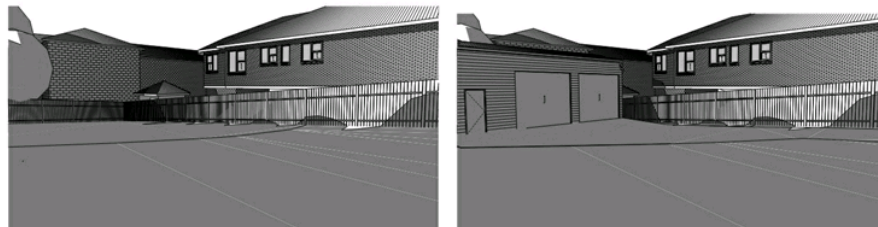
Figure 8: Existing (top) and proposed (bottom) shadow diagrams for 21st June (Apogee, 2021)



June 21st 9am - Existing

June 21st 9am - Proposed

Figure 9: Shade diagrams at 9am for existing and proposed on southern neighbour (Apogee, 2021)



June 21st 12pm - Existing

June 21st 12pm - Proposed

Figure 10: Shade diagrams - 12 noon for existing and proposed affect on southern neighbour (Apogee, 2021)

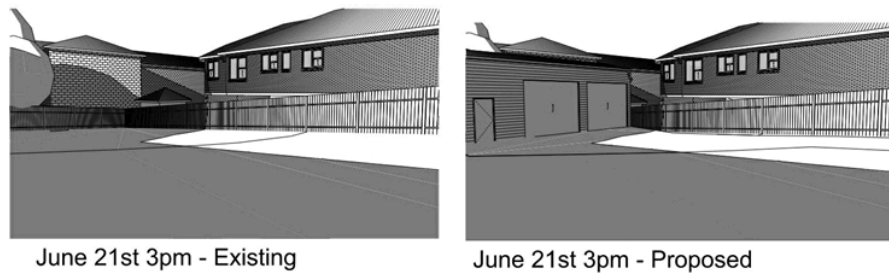


Figure 11: Shade Diagrams - 3pm for existing and proposed impact on the southern neighbour (Apogee, 2021)

4. Background

- 4.1 PLN 20-264 proposed a rear extension and deck along with the garage, the subject of this current proposal. The garage was removed for that application and approval limited to the dwelling alterations and extension.

5. Concerns raised by representors

- 5.1 Seven (7) representations objecting to the proposal were received within the statutory advertising period between 3rd and 17th May 2021.
- 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.

Building Bulk and Scale
The classification as Garage is misleading.
The 10 x 7m structure with two large roller doors and adjoining workshop is out of tenure with the Inner Residential zone clause 11.1.1.4.
Sandy Bay is a tight knit community of closely packed family homes and a designated Heritage Precinct. The introduction of such proportioned outbuildings will significantly detract from the amenity of local residents and the quiet nature of the area.
How appropriate will this be in a residential area of elderly residents and young families?

The concrete driveway is excessive for a residential zone.
If the applicant intends to use the garage as stated and not as a commercial workshop and/or storage space, the footprint and dimensions of the garage and hard stand area should be modified to align with this classification to reflect the residential amenity and uphold the intent of the planning scheme.
The proposed outbuilding does not respect the neighbourhood character of character cottages and substantial historic homes.
The visual impact of the large metal outbuilding significantly concerns regarding outlook at reflectivity. The external cladding does not attempt to fit into the heritage character of the area, which fences and colour schemes are trying to do.
The industrial warehouse style building will dominate the views of (currently) residential gardens and backyards.
Potential Commercial Use of the Building
Whilst a Home Based Business can be approved, the proposed "garage" is indicative that the use guidelines will be substantially exceeded.
The building is almost double the size of an average two car garage and the proposal is more accurately described as a large shed or workshop. When you consider the applicant's commercial refrigeration business it is fair to enquire how the large shed and significant hard stand will be used.
To run such alight industrial activity, with storage of gases and chemicals, as well as the potential noise and environmental pollution would negative impact the residential amenity of the area.
If the applicant was to run part of his business from the subject site, concerns over the increased traffic to an already overcrowded and narrow street,
Planning Scheme compliance
The proposal directly contradicts Zone Purposes Statements; 11.1.1.2 - To provide for compatible non-residential uses that primarily serve the local community, 11.1.1.4 - To encourage residential development that respects the neighbourhood character; and 11.1.1.5 - To provide a high standard of residential amenity.
Use Table in clause 11.2 allows a Home Based Business as No Permit Required only if with no more than 1 non-resident/worker/employee, no more than 1 commercial vehicle and a floor area of no more than 30m2. The proposed shed is 70m2 and there are currently two commercial branded vehicles parked on site.

11.4.2 Setbacks and building envelopes for all dwellings
P3 (a) not cause an unreasonable loss of amenity to adjoining properties, having regard to; ...
(iv) visual impacts caused by the apparent scale, bulk or proportions of the dwelling when viewed from an adjoining property.

The location of the "garage" is close to the (north-east facing) windows of an elderly resident's kitchen and will impact on their outlook and morning and afternoon sunlight.

6. Assessment

- 6.1 The *Hobart Interim Planning Scheme 2015* is a performance based planning scheme. To meet an applicable standard, a proposal must demonstrate compliance with either an acceptable solution or a performance criterion. Where a proposal complies with a standard by relying on one or more performance criteria, the Council may approve or refuse the proposal on that basis. The ability to approve or refuse the proposal relates only to the performance criteria relied on.
- 6.2 The site is located within the Inner Residential zone of the *Hobart Interim Planning Scheme 2015*.
- 6.3 The existing use is Residential - Single Dwelling. The proposed use is Residential - Single Dwelling. The existing use is a No Permit Required use in the zone. The proposed use is a No Permit Required use in the zone.
- 6.4 The proposal has been assessed against:
- 6.4.1 Part D - 11 - Inner Residential Zone
 - 6.4.2 E6.0 Parking and Access Code
 - 6.4.3 E7.0 Stormwater Management Code
 - 6.4.4 E13.0 Historic Heritage Code
- 6.5 The proposal relies on the following performance criteria to comply with the applicable standards:
- 6.5.1 Inner Residential Zone:

Building length and side setback – Part D 11.4.2 P3

6.5.2 Parking and Access Code:

*Number of Parking Spaces - E6.6.1 P1**Layout of Parking Spaces - E6.7.5 P1*

6.5.3 Historic Heritage Code:

Building and Works in a Heritage Precinct - E13.8.1 P2

6.6 Each performance criterion is assessed below.

6.7 Setback and Building Envelope Part D 11.4.2 P3

6.7.1 The acceptable solution at clause 11.4.2 A3 requires structures to fit within a three dimensional building envelope and if within 1.5m of the side or rear boundary to have a length less than 9 metres or 1/3 the length of the boundary, whichever is the lesser.

6.7.2 The proposal includes the southern portion of the roof extending approximately 1.2m outside of the building envelope and the 10m long shed is proposed between 1.41 and 0.96m off the rear boundary.

6.7.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.

6.7.4 The performance criterion at clause 11.4.2 P3 provides as follows:

The siting and scale of a dwelling must:

(a) not cause an unreasonable loss of amenity to adjoining properties, having regard to:

(i) reduction in sunlight to a habitable room (other than a bedroom) of a dwelling on an adjoining property;

(ii) overshadowing the private open space of a dwelling on an adjoining property;

(iii) overshadowing of an adjoining vacant property; or

(iv) visual impacts caused by the apparent scale, bulk or proportions of the dwelling when viewed from an adjoining property; and

(b) provide separation between dwellings on adjoining properties that is

consistent with that existing on established properties in the area.

- 6.7.5 The proposed shed will have greatest potential for impact on the eastern and southern neighbours. Being located to the rear and south eastern corner of the lot, which also falls to this point, the degree of impact on western and northern neighbours is negligible. The northern boundary is screened by a substantial evergreen hedge some three to four metres in height. Properties to the west, whilst slightly elevated above the subject site, are screened by the existing dwellings fronting Parliament Street. As well, the structure will not extend above public housing complex to the east, preventing any significant impact on these western neighbouring properties.

To the rear is a three storey public housing complex. The closest wing to the subject site is approximately 5 metres off the mutual boundary. It appears that the western rooms are bedrooms. The first floor rooms will not be affected, with windows located above the ridge of the garage and setback some 6m from the structure. However, the ground floor bedroom will be shaded in the afternoon and will look out on the the rear side of the shed, which reaches almost 5m in the southern corner. The scheme provisions do not permit consideration of overshadowing of a bedroom and the area of private open space in 9 Crisp Street likely to be affected is a landscaped area with clothes lines. The structure will overshadow these areas in the afternoon, however the open space is already shaded by development on adjacent properties and the flats themselves. To provide some understanding of scale, the shed eaves in the south east corner should reach up to about half way across the first floor windows of the public housing units in the photos below.

Private open space for the public housing appears to be to the north of the housing complex building, with seating and outside toys in a larger and more protected area. This spot, being north of the proposed shed, would not be affected by the proposal.



Figure 12: Affected window and affected private open space on 9 Crisp Street with approximate height of proposed shed to eaves (Officer photo,

2021)

Certainly there will be some visual impact by the proposed shed on the landscaped area of private open space. The eaves will extend to almost twice the height of the lattice extension to the fence. As a response to representations the applicant has submitted a modified roof design, with a central gable running from front to back, instead of side to side (these plans can be found in the CPC Supporting Documents - Amended Plans). As a result of these changes, the eaves in the south eastern corner can be reduced to 4.23m (a reduction of 0.7m). The change however also moves the gable onto the rear elevation, which raises the maximum height at the ridge to 5.35m. However, as the eaves are lower than the original proposal, it provides slightly more sunlight and changes the rectangular bulk to a more conventional roofline.

The visual bulk in the private open space for 9 Crisp Street is considered acceptable.

The other property likely to be affected by this proposal is the southern neighbour, 17A Parliament Street. This is a substantial two storey dwelling on a rear strata lot. There is a ground level patio on the north eastern side of that dwelling with an enclosed gazebo structure in the north eastern corner of that site. The ground level of that neighbour is approximately 400mm below the subject site. A low retaining wall inside the neighbour property maintains a higher level on the subject site. The boundary fence is already approximately 2 metres in height around the patio and the opportunity for sunlight is quite compromised by existing structures on site. The shade diagrams provided show that in June this patio already does not gain sunlight until 12 noon. It does however gain sunlight in the afternoon, which is not significantly affected by the proposed shed. With the reduced eave height and changed ridgeline orientation, this will further improve solar access in winter. The gazebo is already shaded between 9am and 3pm on 21st June by existing development and vegetation. Whilst the location of the garage would definitely cause a solar access concern, because the portion of that neighbouring property is already shaded, it is considered hard to justify a refusal of the proposal on this basis. The northern portion of the gazebo appears filled in and is being used for storage of gardening tools, etc. The small portion of private open space on the south eastern corner of 17A Parliament Street would gain some morning sun in June, before it is shaded by the public housing complex and the on site gazebo.

The visual bulk of the shed will be a significant change to the upstairs

living space for this southern neighbour. However, with the re-orientated ridgeline, this provides a great sense of openness from those windows. The separation between the garage and these windows in the living space will be approximately 5 metres, which is considered acceptable. It will be a significant difference to the occupants of this neighbouring dwelling, which has had until now uninterrupted views over the rear of the subject site. The garage however, will not unreasonably shade the upper windows of this southern neighbour, which have a sill level of 4m above natural ground level, according to the 1995 building plans.

Given the location of this neighbouring dwelling to the rear of that property, there is a precedence already for developing in the rear portion of these lots and thereby is consistent with existing separation between dwellings on adjoining properties.

6.7.6 The proposal complies with the performance criterion.

6.8 Parking and Access Code - Part E 6.6.1 P1 - Number of parking spaces

6.8.1 The acceptable solution at clause E6.6.1 A1 requires the number of parking spaces on site to be in accordance with Table 6.1, which requires two (2) parking spaces on site for a single dwelling.

6.8.2 The proposal includes three (3) parking spaces, with two in the shed and a jockey park in front of the shed.

6.8.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.

6.8.4 The performance criterion at clause E6.6.1 P1 provides as follows:

The number of on-site car parking spaces must be sufficient to meet the reasonable needs of users, having regard to all of the following:

- (a) car parking demand;*
- (b) the availability of on-street and public car parking in the locality;*
- (c) the availability and frequency of public transport within a 400m walking distance of the site;*
- (d) the availability and likely use of other modes of transport;*
- (e) the availability and suitability of alternative arrangements for car parking provision;*
- (f) any reduction in car parking demand due to the sharing of car parking spaces by multiple uses, either because of variation of car parking*

demand over time or because of efficiencies gained from the consolidation of shared car parking spaces;
(g) any car parking deficiency or surplus associated with the existing use of the land;
(h) any credit which should be allowed for a car parking demand deemed to have been provided in association with a use which existed before the change of parking requirement, except in the case of substantial redevelopment of a site;
(i) the appropriateness of a financial contribution in lieu of parking towards the cost of parking facilities or other transport facilities, where such facilities exist or are planned in the vicinity;
(j) any verified prior payment of a financial contribution in lieu of parking for the land;
(k) any relevant parking plan for the area adopted by Council;
(l) the impact on the historic cultural heritage significance of the site if subject to the Local Heritage Code; and
(m) whether the provision of the parking would result in the loss, directly or indirectly, of one or more significant trees listed in the Significant Trees Code.

- 6.8.5 The application was referred to Council's Development Engineer, who provided the following advice;

The parking number assessment must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).

Documentation submitted to date does not satisfy the Acceptable Solution for clause E6.6.1 (a) and as such, shall be assessed under Performance Criteria.

Acceptable solution - A1: - NON COMPLIANT

The number of on-site car parking spaces must be:

(a) no less than and no greater than the number specified in Table E6.1;

- Submitted documentation does not satisfy this requirement, a surplus of (One) 1 car parking space is proposed.

Performance Criteria - P1:

The number of on-site car parking spaces must be sufficient to meet the reasonable needs of users, having regard to all of the following:

- (a) car parking demand; - The empirical parking assessment indicates that the provision of 3 on-site car parking spaces will sufficiently meet, if not exceed, the likely demands associated with the property. Note there are no on-site visitor parking requirements/provisions.
- (b) the availability of on-street and public car parking in the locality; - This proposal can potentially reduce the on-street parking demands associated with the property
- (c) the availability and frequency of public transport within a 400m walking distance of the site; - Not applicable.
- (d) the availability and likely use of other modes of transport; - Not applicable.
- (e) the availability and suitability of alternative arrangements for car parking provision; - Not applicable.
- (f) any reduction in car parking demand due to the sharing of car parking spaces by multiple uses, either because of variation of car parking demand over time or because of efficiencies gained from the consolidation of shared car parking spaces; - Not applicable.
- (g) any car parking deficiency or surplus associated with the existing use of the land; - Not applicable.
- (h) any credit which should be allowed for a car parking demand deemed to have been provided in association with a use which existed before the change of parking requirement, except in the case of substantial redevelopment of a site; - Not applicable.
- (i) the appropriateness of a financial contribution in lieu of parking towards the cost of parking facilities or other transport facilities, where such facilities exist or are planned in the vicinity; - Not applicable.
- (j) any verified prior payment of a financial contribution in lieu of parking for the land; - Not applicable.
- (k) any relevant parking plan for the area adopted by Council; - Not applicable.
- (l) the impact on the historic cultural heritage significance of the site if subject to the Local Heritage Code; - Not applicable and

(m) whether the provision of the parking would result in the loss, directly or indirectly, of one or more significant trees listed in the Significant Trees Code. - No impact.

Based on the above assessment and given the submitted documentation, the parking provision may be accepted under Performance Criteria P1:E6.6.1 of the Planning Scheme.

6.8.6 The proposal complies with the performance criterion.

6.9 Parking and Access Code - Part E 6.7.5 P1 - Layout of Parking area

6.9.1 The acceptable solution at clause 6.7.5 A1 requires parking and accesses 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 standards. Part of this provision expects that any parking space should not block access for another space.

6.9.2 The proposal includes a jockey park in front of one of the roller doors to the garage.

6.9.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.

6.9.4 The performance criterion at clause 6.7.5 P1 provides as follows:

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

6.9.5 The application was referred to Council's Development Engineer, who advised as follows;

The layout of the parking area must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).

Documentation submitted to date does not satisfy the Acceptable Solution for clause E6.7.5 and as such, shall be assessed under Performance Criteria.

Acceptable Solution A1: - NON COMPLIANT

The layout of car parking spaces, access aisles, circulation roadways and ramps must be designed and constructed to comply with section 2 "Design of Parking Modules, Circulation Roadways and Ramps" of AS/NZS 2890.1:2004 Parking Facilities Part 1: Off-street car parking and must have sufficient headroom to comply with clause 5.3 "Headroom" of the same Standard.

- Car Parking Space Dimensions (AS2890.1 Fig 2.2 = 2.4x5.4m Class 1A): - Submitted documentation appears able to satisfy this requirement
- Car Parking Space Design Envelope (AS2890.1 Fig 5.2 300mm clearance on side): - Submitted documentation appears able to satisfy this requirement
- Headroom: (AS2890.1 Fig 5.3 = >2.2m clearance): - Submitted documentation appears able to satisfy this requirement, 3m
- Parking Space Gradient (5%): - Submitted documentation appears able to satisfy this requirement, FFL
- Garage Door Width & Apron (AS2890.1 Fig 5.4 = >2.4m wide): - Submitted documentation appears able to satisfy this requirement, 3.04m (each)
- Parking Module Gradient (manoeuvring area 5% Acceptable Soln, 10% Performance): - Submitted documentation appears to satisfy this requirement, 3% endfall & 1% crossfall
- Driveway Gradient & Width (AS2890.1 Section 2.6 = 25% and 3m): - Submitted documentation appears able to satisfy this requirement, <8% & 3m min.
- Transitions (AS2890.1 Section 2.5.3 = 12.5% summit, 15% sag => 2m transition): - Submitted documentation appears able to satisfy this requirement
- "Jockey Parking" (Performance Assessment): - YES but assessed under Performance Criteria

Performance Criteria - P1:

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

- Acceptable, submitted documentation appears to satisfy this requirement

Residential car parking space layout may utilise 'Jockey Parking' configuration in which the one car parking space is behind another car parking space provided it serves the same dwelling and is not designated for visitors. Submitted documentation appears to meet these parameters and therefore may be accepted under Performance Criteria P1:E6.7.5 given the driveway configuration.

6.9.6 The proposal complies with the performance criterion.

6.10 Historic Heritage Code - Part E 13.8.1 P1 and 13.8.2 - P1 to P5 Demolition and Works other than demolition in a Heritage Precinct

6.10.1 There is no acceptable solution for 13.8.1 A1 and 13.8.2 A1 to A5, for demolition, building and works in a heritage precinct.

6.10.2 The proposal includes demolition, building and works in Heritage Precinct Sandy Bay 2.

6.10.3 There are no acceptable solutions; therefore assessment against the performance criteria is relied on.

6.10.4 The performance criteria at clauses 13.8.1 and 13.8.2 provide as follows:

13.8.1

P1 Demolition must not result in the loss of any of the following:

(a) buildings or works that contribute to the historic cultural heritage significance of the precinct;

(b) fabric or landscape elements, including plants, trees, fences, paths, outbuildings and other items, that contribute to the historic cultural heritage significance of the precinct;

unless all of the following apply;

(i) there are, environmental, social, economic or safety reasons of greater value to the community than the historic cultural heritage values of the place;

(ii) there are no prudent or feasible alternatives;

(iii) opportunity is created for a replacement building that will be more complementary to the heritage values of the precinct.

and

13.8.2

P1 Design and siting of buildings and works must not result in detriment to the historic cultural heritage significance of the precinct, as listed in Table E13.2

P2 Design and siting of buildings and works must comply with any relevant design criteria / conservation policy listed in Table E13.2, except if a heritage place of an architectural style different from that characterising the precinct.

P3 Extensions to existing buildings must not detract from the historic cultural heritage significance of the precinct.

P4 New front fences and gates must be sympathetic in design, (including height, form, scale and materials), and setback to the style, period and characteristics of the precinct.

P5 The removal of areas of landscaping between a dwelling and the street must not result in the loss of elements of landscaping that contribute to the historic cultural significance or the streetscape values and character of the precinct.

- 6.10.5 The application was referred to Council's Cultural Heritage Officer, who provided the following advice;

15 Parliament Street is a white timber weatherboard house which appears to date from the late Victorian or early Federation era period. It features unpainted masonry chimneys and an enclosed verandah. The house is located in a heritage precinct. The property slopes to the rear, away from the street and the applicant is seeking to undertake development in the rear garden.

Demolition

Documentation submitted indicates that the only elements proposed to be demolished are lawn and trees in a rear garden. The removal of landscape elements behind a house is considered acceptable in a heritage precinct, because the landscape elements are not of a scale to make a significant contribution to the streetscape. The proposal satisfies E 13.8.1 P1.

Works

Documentation submitted indicates that the applicant seeks to construct hard stand driveway and parking and a double garage. All of these

elements would be located behind the existing period house. The garden would be replaced by parking related elements. The Planning Scheme provisions permit this. The colour of the proposed single storey structure would match the house - a light white tone. The proposed works are considered acceptable and satisfy E 13.8.2 P1.

This application is recommended for approval without conditions.

6.10.6 The proposal complies with the performance criterion.

7. Discussion

- 7.1 Planning approval is sought for an Outbuilding (Garage) at 15 PARLIAMENT STREET SANDY BAY TAS 7005.
- 7.2 The application was advertised and no representations were received.

- 7.2 The application was advertised and received seven (7) representations. The representations raised concerns including building visual bulk and scale, use of the building, amount of impervious surfaces. The bulk and scale have been discussed in relation to the Building Envelope Performance Criteria assessment and amended plans have been submitted, which are considered to reduce the visual impact on the two affected adjoining properties. These plans are provided at Attachment D, and a condition is recommended to reflect what is shown in those plans. In relation to the inappropriate scale of development for a domestic garage; the applicants refuted this, stating that an average double car garage is 9m (w) x 6m (d) x 3.5m (h). The proposed garage will be 10m (w) x 7m (d) by 4.47m (h).

The garage will be clad in colourbond walls and roof, reducing reflectivity concerns. Council's Cultural Heritage Officer considered that the setback from the Parliament Street building line and streetscape and imposed a condition requiring a matching colour scheme with the dwelling. This is considered adequate to maintain the character of the heritage precinct.

The use of the shed for a commercial purpose was raised in a number of representations, fearing that the size of the shed would facilitate the owner operating a business from it. Whilst the Planning Scheme does provide an exempt pathway for a resident to operate a Home Based Business from their place of principal residence, the scale and scope of such is limited to minimise negative affects on residential amenity in the area. The applicant and owner have both confirmed, that whilst the owner's commercial vehicle will be stored within it, the garage will not be used for a commercial activity. A detailed list of items to be stored within the shed was provided and includes a 3m high boat, camping, recreational and gardening equipment, etc, along with the two business vehicles. A condition will be imposed to prevent the use of the garage as a commercial operation beyond the scope of the Home Based Business.

Additional representations were received regarding the need for the substantial hardstand area. The applicants originally proposed a gravel driveway. This is not acceptable within the residential areas of Hobart, because of the amount of gravel and debris that is tracked onto the public road reserves by vehicles over time and does not support E6.7.6 P1 (c) of the Planning Scheme. The applicants advise that they require the turning area in order to manoeuvre their boat on site. The turning area behind the dwelling is considered necessary to ensure that these vehicles can enter and leave the site in a forward motion.

- 7.3 The proposal has been assessed against the relevant provisions of the planning scheme and is considered to perform well.

7.4 The proposal has been assessed by other Council officers, including the Council's Development Engineer, Cultural Heritage Officer, and Stormwater Officer. The officers have raised no objection to the proposal, subject to conditions.

7.5 The proposal is recommended for approval.

8. Conclusion

8.1 The proposed an Outbuilding (Garage) at 15 PARLIAMENT STREET SANDY BAY TAS 7005 satisfies the relevant provisions of the *Hobart Interim Planning Scheme 2015*, and as such is recommended for approval.

9. Recommendations

That: Pursuant to the *Hobart Interim Planning Scheme 2015*, the City Planning Committee, in accordance with the delegations contained in its terms of reference, approve the application for an Outbuilding (Garage) at 15 PARLIAMENT STREET SANDY BAY TAS 7005 for the reasons outlined in the officer's report and a permit containing the following conditions be issued:

GEN

The use and/or development must be substantially in accordance with the documents and drawings that comprise PLN-21-128 15 PARLIAMENT STREET SANDY BAY TAS 7005 - 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 2021/00305-HCC dated 25/03/2021 as attached to the permit.

Reason for condition

To clarify the scope of the permit.

PLN s1

The garage is not approved for any commercial use.

Reason for condition

To clarify the scope of this permit.

PLN s2

The south eastern eaves must be no higher than 4.23m above natural ground level and the south western eaves must be no higher than 3.32m above natural ground level.

Advice: The plans submitted to Council on 1st June 2021 are considered to satisfy the above condition.

Reason for condition

To clarify the scope of this permit.

PLN s3

The roof design must be changed so that the gable is located on the front (west) and rear (east) facades, with a maximum ridge height of 4.66m above natural ground level on the western facade.

Advice: The plans submitted to Council on 1st June 2021 are considered to satisfy the above condition.

Reason for condition

To clarify the scope of this permit.

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 into the existing gully pit located on the 9 CRISP STREET via a drainage easement at the eastern boundary prior to first occupation or commencement of use (whichever occurs first).

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

Reason for condition

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

SW 9

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

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

1. include detailed design and supporting calculations of the detention tank showing:
 1. detention tank sizing such that there is no increase in flows from the developed site up to 5% AEP event and no worsening of flooding;
 2. the layout, the inlet and outlet (including long section), outlet size, overflow mechanism and invert level;
 3. the discharge rates and emptying times; and
 4. all assumptions must be clearly stated;
2. include a supporting maintenance plan, which specifies the required maintenance measures to check and ensure the ongoing effective operation of all systems, such as: inspection frequency; cleanout procedures; descriptions and diagrams of how the installed systems operate; details of the life of assets and replacement requirements.

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

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

ENG 3a

Prior to first occupation or commencement of use (whichever occurs first), the access driveway, and parking module (parking spaces, and manoeuvring area) must be designed and constructed in accordance with Australian Standard AS/NZS2890.1:2004 (including the requirement for physical controls where required), or a Council approved alternate design certified by a suitably qualified engineer to provide a safe and efficient access, and enable safe, easy and efficient use.

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 3b

The access driveway, and parking module (parking spaces, and manoeuvring area) design must be submitted and approved as a Condition Endorsement, prior to the commencement of work, issuing of any approval under the *Building Act 2016*.

The access driveway, and parking module (parking spaces, and manoeuvring area) design must:

1. **Be prepared and certified by a suitably qualified engineer,**
2. **Be generally in accordance with the Australian Standard AS/NZS2890.1:2004, and**
3. **Where the design deviates from AS/NZS2890.1:2004 the designer must demonstrate that the design will provide a safe and efficient access, and enable safe, easy and efficient use.**

Advice:

- *This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.*
- *It is 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, and parking module (parking spaces, and manoeuvring area) must be constructed in accordance with the design drawings approved by Condition ENG 3b.

Prior to first occupation or commencement of use (whichever occurs first), documentation by a suitably qualified engineer certifying that the access driveway 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 5

The number of car parking spaces approved to be used on the site is three:

- **Two (2) within the Proposed Garage**
- **One (1) in-place of the Proposed Tandem**

Reason for condition

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

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.**

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.

ENV 1

Sediment and erosion control measures sufficient to prevent sediment from leaving the site must be installed prior to any disturbance of the site, and maintained until all areas of disturbance have been stabilized or re-vegetated.

Advice: For further guidance in preparing a Soil and Water Management Plan – in accordance with Fact sheet 3 Derwent Estuary Program click [here](#).

Reason for condition

To avoid the sedimentation of roads, drains, natural watercourses, Council land that could be caused by erosion and runoff from the development, and to comply with relevant State legislation.

HER 17a

The palette of exterior colours and materials must reflect the palette of materials of the existing house on site and precinct.

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

Reason for condition

To ensure that development at Sandy Bay 2 heritage precinct is undertaken in a sympathetic manner which does not cause loss of historic cultural heritage significance.

ADVICE

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

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

CONDITION ENDORSEMENT

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

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

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

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

BUILDING PERMIT

You may need building approval in accordance with the *Building Act 2016*. Click [here](#) for more information.

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

PLUMBING PERMIT

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

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.

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.



(Victoria Maxwell)

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



(Ben Ikin)

Senior Statutory Planner

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

Date of Report: 3 June 2021

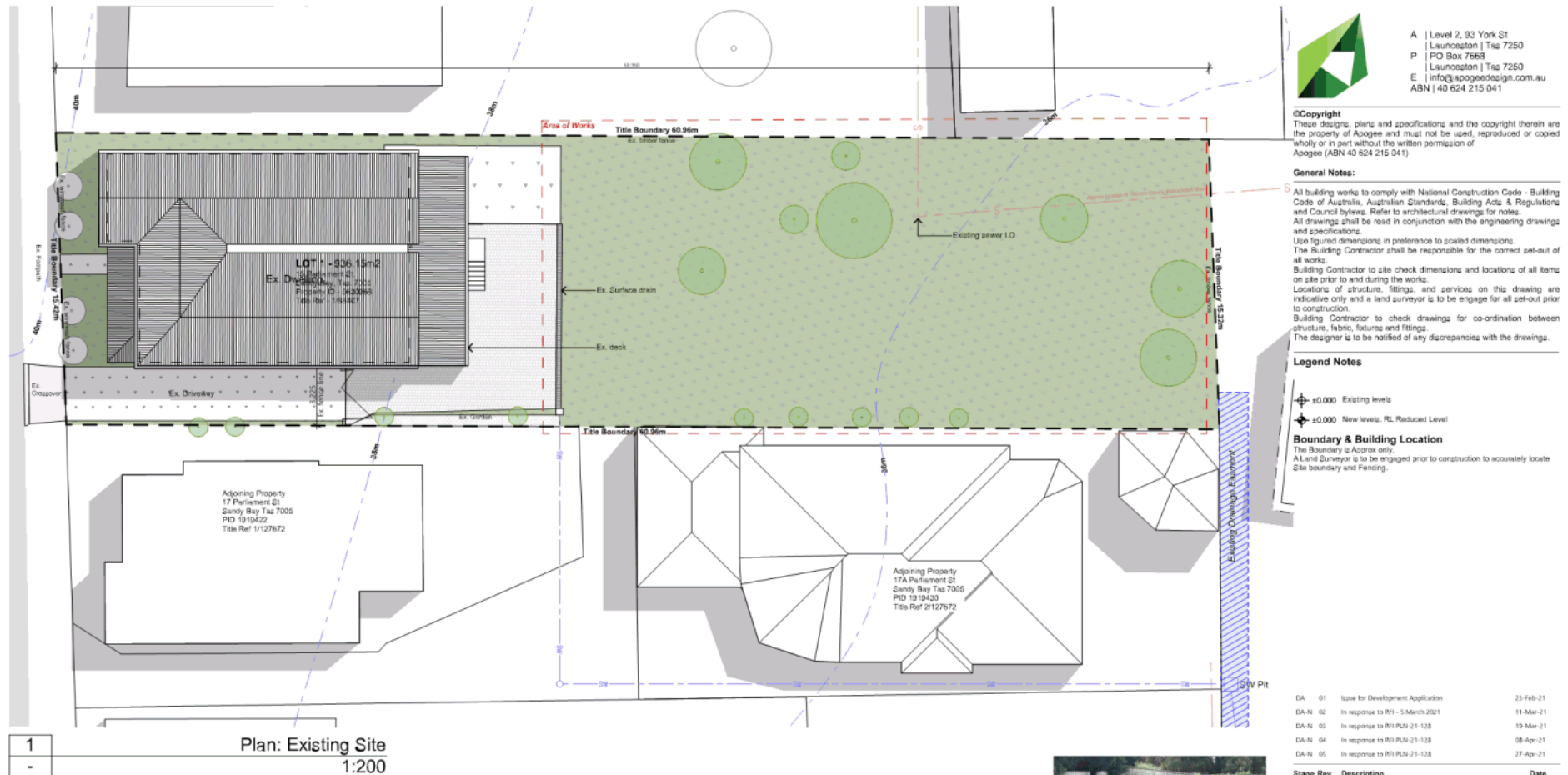
Attachment(s):

Attachment B - CPC Agenda Documents

Attachment C - Planning Referral Officer Cultural Heritage Report

Attachment D - CPC Supporting Documents - Amended Plans

A01-DA-N05



11.0 Inner Residential Development Standards

- 11.4.1 Residential/dwelling for multiple dwellings
- 11.4.2 Gateposts and building envelopes for all dwellings
- Refer to diagram 11.4.2A. Building envelope for **primary frontage** lots as required by subdivision 11.4.2 A(3).
- Northern Setback - (Side) Garage within projected lines
- Eastern Setback - (Rear)
- Western Setback - (Side)
- Western Setback (Primary front) Garage within projected lines
- 11.4.3 Site coverage and private open space for all dwellings
- Site coverage (less than 60%) - 20.81% (200m² + 70m²)
- Multi dwelling private open space (less than 60m²)
- Impervious surface area (less than 75%) - 156m², 16.7%
- 11.4.4 Unlight and overhanging for all dwellings
- North facing habitable room (other than a bedroom)
- Multi dwelling - North facing habitable room (other than a bedroom)
- 11.4.5 Wet of overings for garages
- Garage not located on primary frontage, and located within the dimension of the existing garage, driveway and crossover - Greater Than 12m

- | | | |
|-------------|--------|---|
| N/A | 11.4.6 | Privacy for all dwellings |
| Required by | | Privacy from a balcony, deck, roof terrace, parking space, or carport above |
| | | 1m from natural ground level - (North East Deck) refer to elevations. |
| A1(b) | | A window or glazed door, to a habitable room, of a dwelling, that has a floor level more than 1 m above the natural ground level. |
| A2 | 11.4.7 | Privacy from a shared driveway/parking space |
| A1(b) | 11.4.7 | Frontage fences for all dwellings - Excluding timber paling fences |
| A2(a) | 11.4.8 | Waste storage for multiple dwellings |
| | 11.4.9 | Site facilities for multiple dwellings |
| A1(a) | 11.5 | Standards for Subdivision |
| N/A | | |
| A1(c) | | <u>E6.9 Parking and Access Code</u> |
| N/A | E6.7.1 | Number of Vehicular Accesses - Existing |
| N/A | E6.7.2 | Design of Vehicular Accesses - Existing |
| | E6.7.3 | Vehicular Parking Areas Along an Access - |
| | E6.7.4 | On-Site Turning |
| N/A | E6.7.5 | Layout of Parking Areas |

- E6.7.6 Surface Treatment of Parking Areas
 - E6.7.7 Lighting of Parking Areas
 - E6.7.8 Landscaping of Parking Areas
 - E6.7.9 Design of Motorcycle Parking Areas - Existing
 - E6.7.10 Design of Bicycle Parking Facilities
 - E6.7.11 Bicycle End of Trip Facilities
 - E6.7.12 Stairs of Car Parking
 - E6.7.13 Facilities for Commercial Vehicles
 - E6.7.14 Access to a Road - Existing
 - E6.7.15 Access to Nine Lane Sandy Bay
- E7.7.1 Stormwater Drainage and Disposal**
- Impermeous Surfaces - Concrete Driveway
 - New Development
 - Minor Stormwater Drainage System
 - Major Stormwater Drainage System

- | |
|-----|
| A1 |
| N/A |
| N/A |
| A1 |
| N/A |
| N/A |
| A1 |
| N/A |
| N/A |
| N/A |

- P1
N/A
A3(b)
N/A



Reference image: Existing sewer I.O. and line location

Fidler Residence

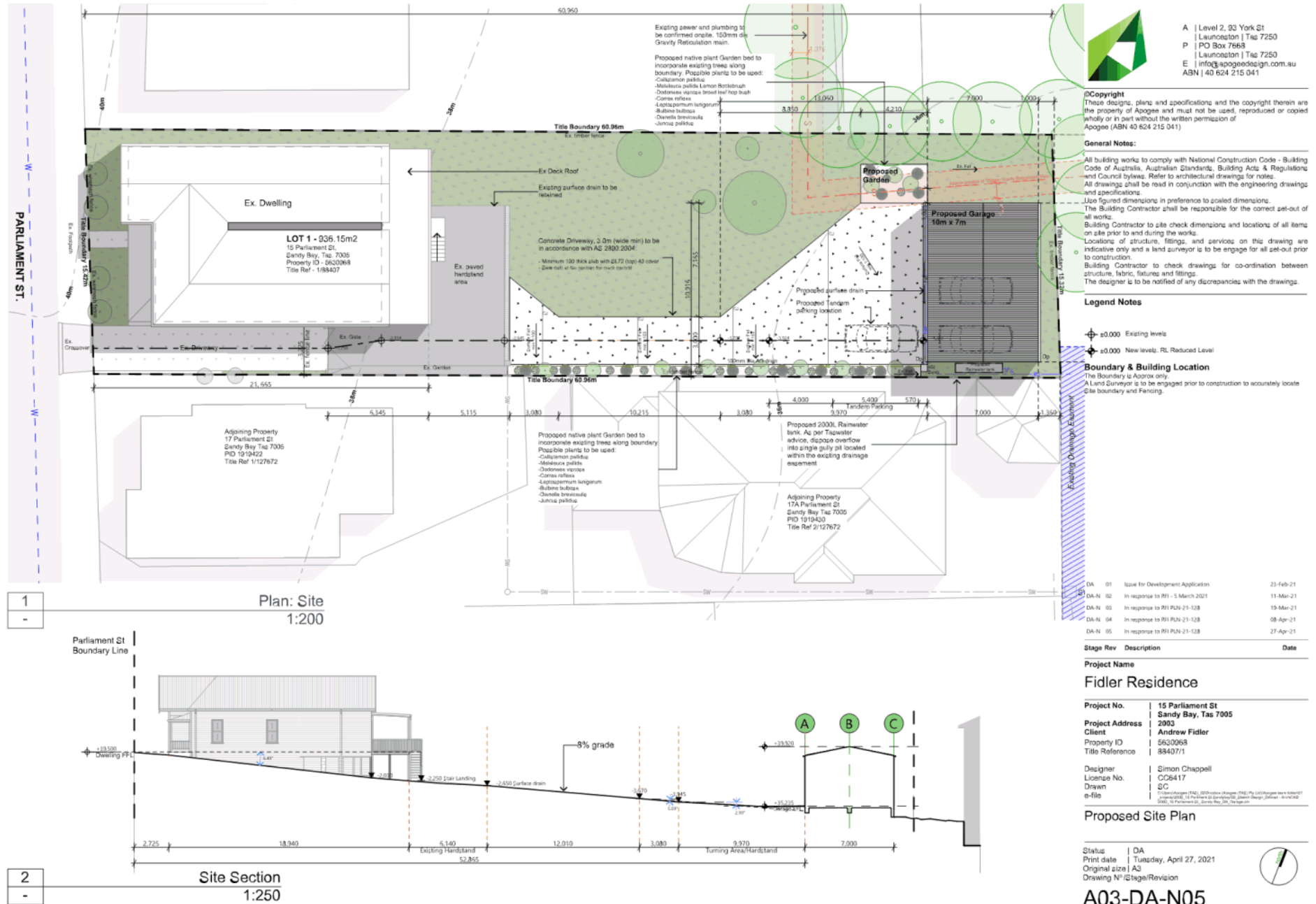
Project No.	15 Parliament St
	Sandy Bay, Tas 7005
Project Address	2003
Client	Andrew Fidler
Property ID	8320063
Title Reference	83407/1
Designer	Simon Chappell
License No.	C06417
Drawn	SC
e-file	15 Parliament St, 2003 (Simon Chappell, Pty Ltd) (Designer) (see 83407/1) 15 Parliament St, 2003 (see 83407/1) (see 83407/1) (see 83407/1) (see 83407/1)

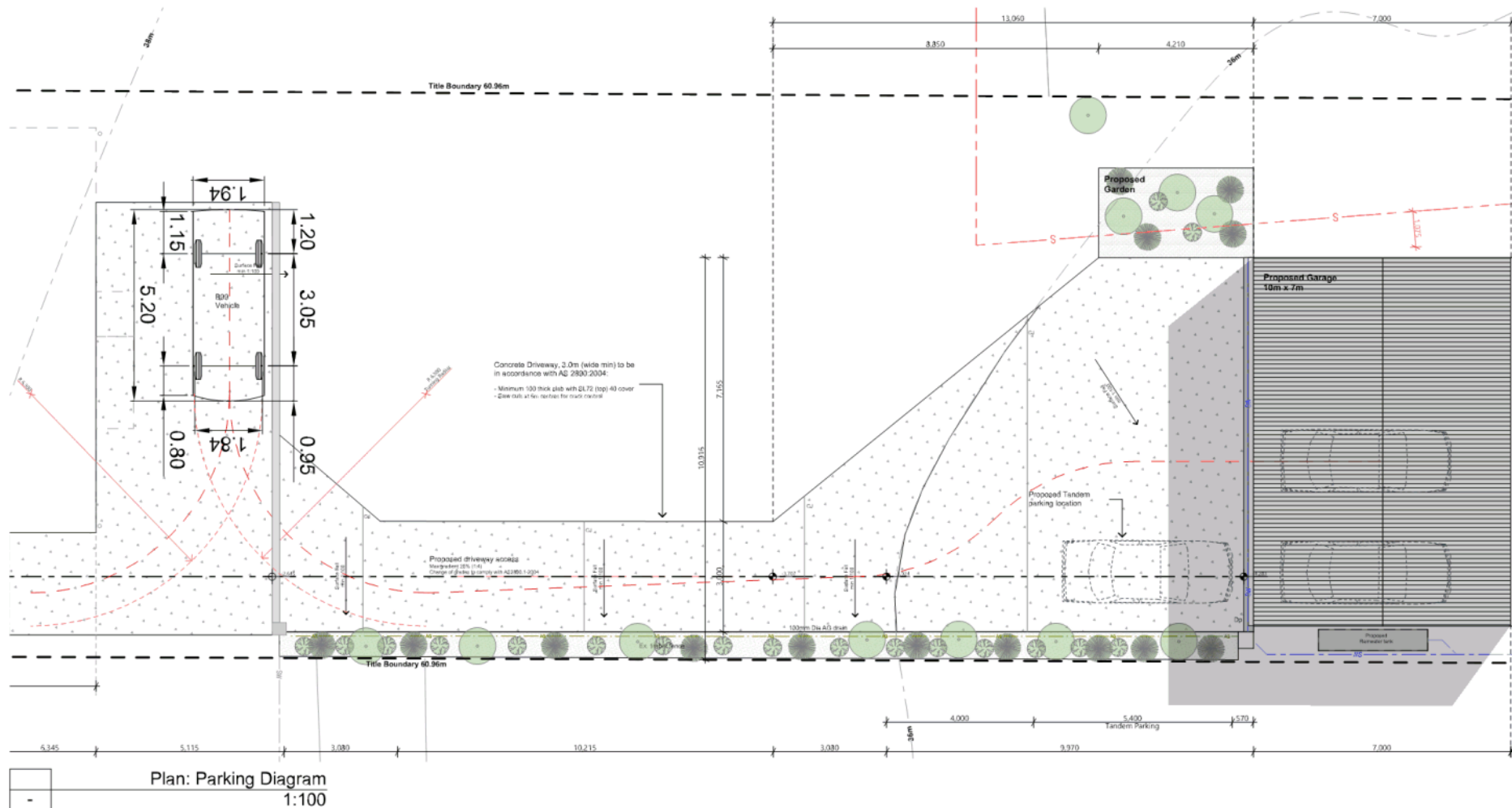
Existing Site Plan

Status	DA
Print date	Tuesday, April 27, 2021
Original size	A3
Drawing N°/Stage/Revision	



A02-DA-N05





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General Notes:

All building works to comply with National Construction Codes - Building & Plumbing Codes of Australia, Australian Standards, Building Acts & Regulations and Council bylaws. Refer to architectural drawings for notes.
All drawings shall be read in conjunction with the engineering drawings and specifications.
Use figured dimensions in preference to scaled dimensions.
The Building Contractor shall be responsible for the correct set-out of all works.
Building Contractor to site check dimensions and locations of all items on site prior to and during the works.
Locations of structure, fittings, and services on this drawing are indicative.
Building Contractor to check drawings for co-ordination between structure, fabric, saturing and fittings.
A land surveyor is recommended for all set-out.
The designer is to be notified of any discrepancies with the drawings.

Stage	Rev	Description	Date
DA-N	01	In response to R1 PUN-21-128	08-Apr-21
DA-N	02	In response to R1 PUN-21-128	27-Apr-21

Project Name
Fidler Residence

Project No. | 2003
Project Address | 15 Parliament St Sandy Bay Tas 7005
Client | Andrew Fidler
Property ID | 5630968
Title Reference | 1/89407

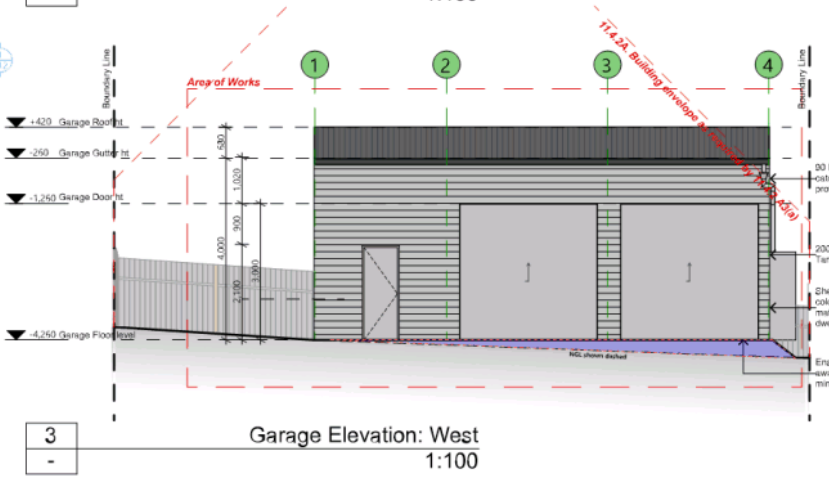
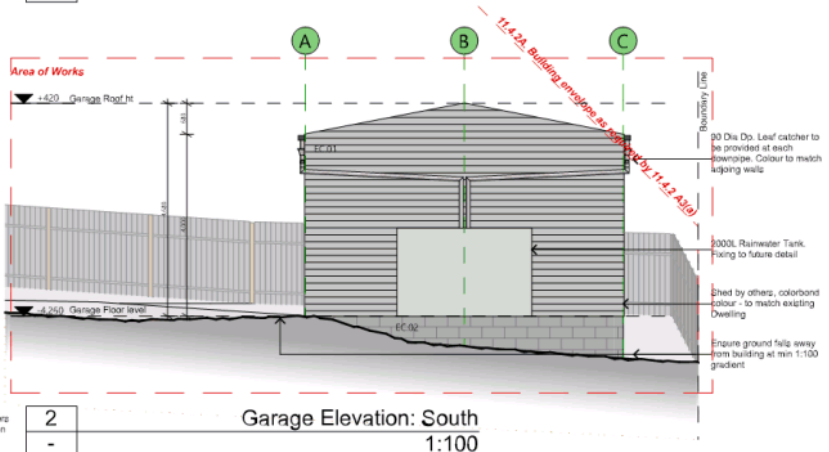
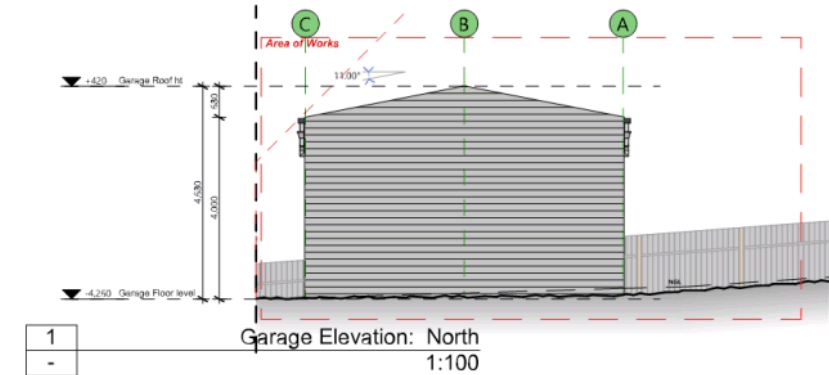
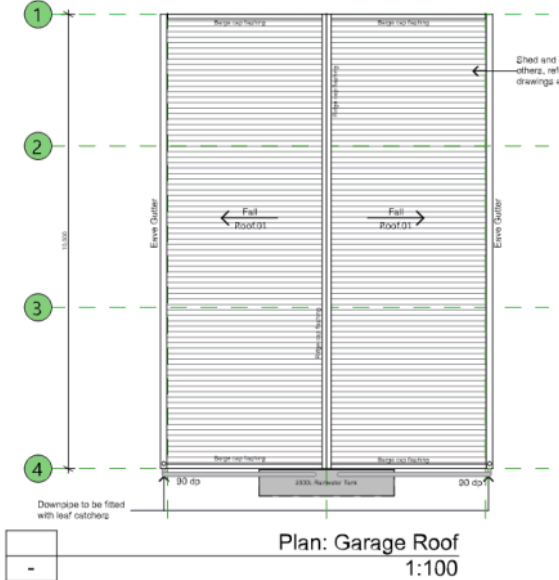
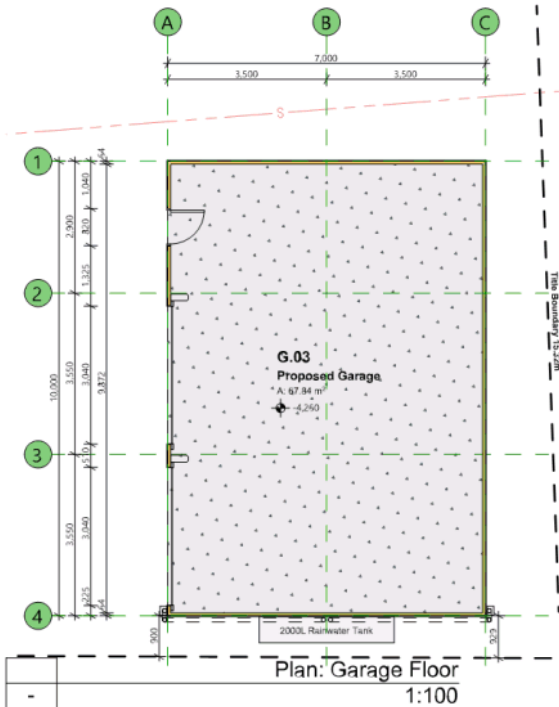
Designer | Simon Chappell
License No. | CC6417
Drawn | SC
e-file

Parking Diagram

Status | DA
Print date | Tuesday, April 27, 2021
Original size | A3
Drawing N°/Stage/Revision

A04-DA-N02





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Locations of structures, fittings, and services on this drawing are indicative only and a land surveyor is to be engaged for all set-out prior to construction.
Building Contractor to check drawings for co-ordination between structure, fabric, fixtures and fittings.
The designer is to be notified of any discrepancies with the drawings.

Elevation Legend
A. Awning window
CJ. Control joint
CL. Ceiling level
DP. Downpipe
F. Fixed window
FL. Floor level
Pb. Plasterboard
S. Sliding window
SD. Sliding door
EC.01. External Cladding - ZINCALUME® 42 Modred 780, Colour - to match existing, flashing to match.
EC.02. Blockwork 300(w)x100(h)x100(thk)mm, nature finish with light grey mortar & ironed joints.
Roof.01. To Match Existing, 3 degrees fall min, 0.48 BMT, Colorbond - Colour & Flashing to match existing. Provide single sheet lengths. Install to manufacturer's specification.
Shed by others, colorbond colour - to match existing dwelling.
Downpipes, fascias, flashing, & roof to match existing colour.
Window/Door Frames to Match Existing

DA	01	Issue for Development Application	23-Feb-21
DA-N	02	In response to B1 - 5 March 2021	11-Mar-21
DA-N	03	In response to B1 PLN-21-128	08-Apr-21
DA-N	04	In response to B1 PLN-21-128	27-Apr-21

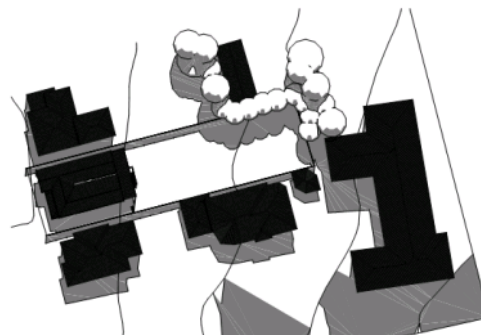
Stage	Rev	Description	Date
Project Name			
Fidler Residence			
Project No.			
15 Parliament St			
Sandy Bay, Tas 7005			
Project Address			
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Client			
Andrew Fidler			
Property ID			
5630068			
Title Reference			
8840771			
Designer			
Simon Chappell			
License No.			
C68417			
Drawn			
SC			
e-file			

Garage	
Status	DA
Print date	Tuesday, April 27, 2021
Original size	A3
Drawing N°/Stage/Revision	

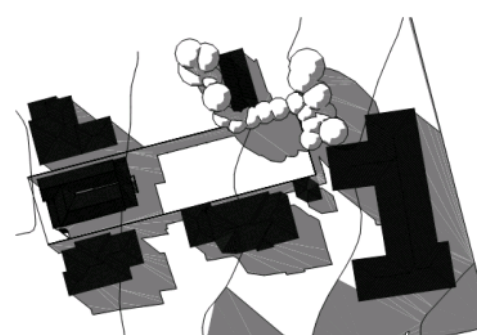
A05-DA-N04



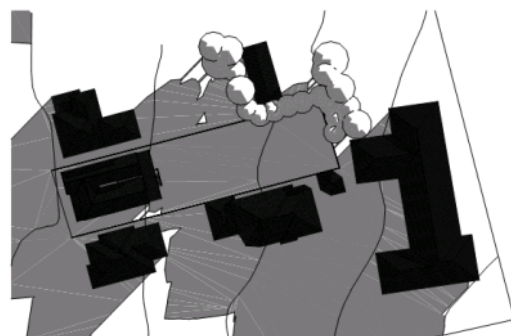
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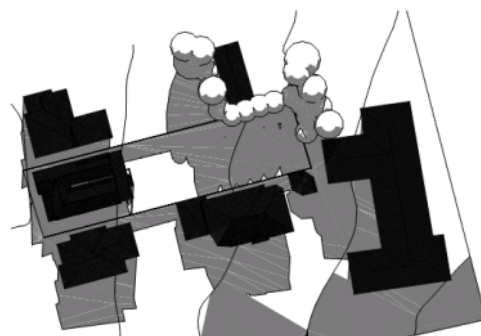
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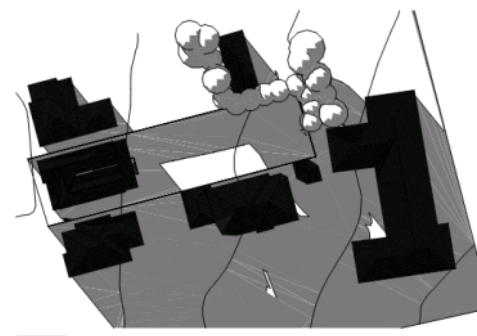
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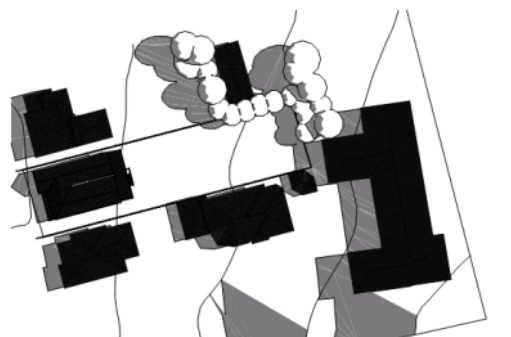
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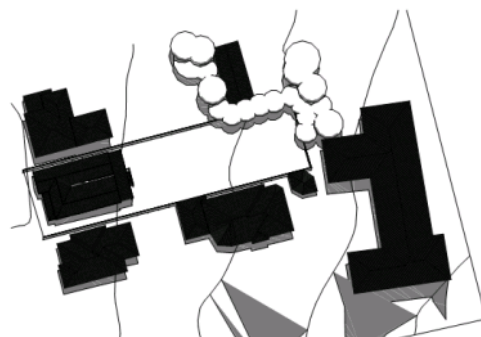
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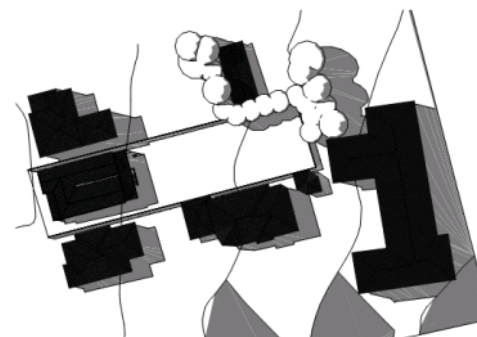
June 21 - 3pm
1:1000



Dec 21 - 9am
1:1000



Dec 21 - 12pm
1:1000



Dec 21 - 3pm
1:1000



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Use figured dimensions in preference to scaled dimensions.
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The designer is to be notified of any discrepancies with the drawings.

DA	01	Issue for Development Application	23-Feb-21
DA-N	02	In response to R1 - 5 March 2021	11-Mar-21
DA-N	03	In response to R1 PLN-21-128	08-Apr-21
DA-N	04	In response to R1 PLN-21-128	27-Apr-21

Stage	Rev	Description	Date
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Project Name

Fidler Residence

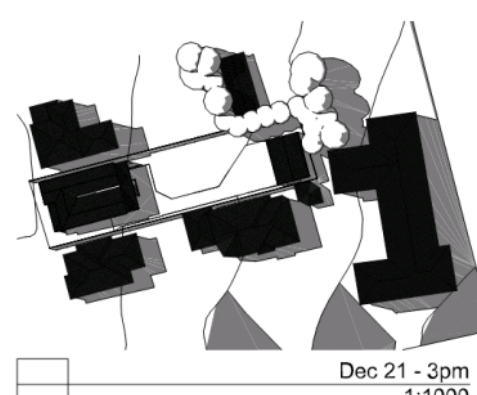
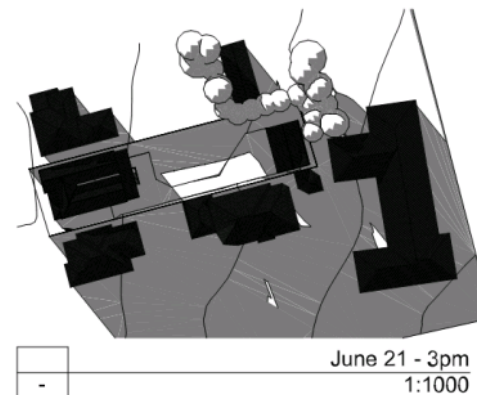
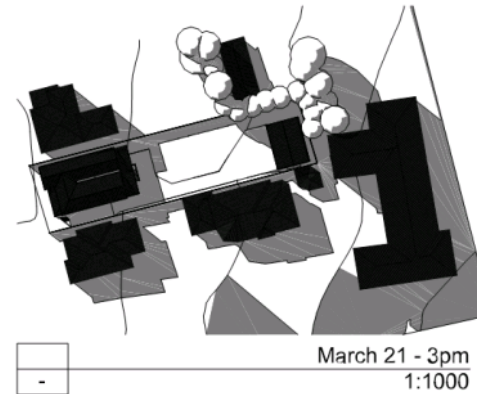
Project No. | 15 Parliament St
Sandy Bay, Tas 7005
Project Address | 2003
Client | Andrew Fidler
Property ID | 5630968
Title Reference | 8840771

Designer | Simon Chappell
Licence No. | C06417
Drawn | SC
e-file | C:\Users\apogee\OneDrive\Documents\Projects\15 Parliament St\15 Parliament St\15 Parliament St.dwg
C:\Users\apogee\OneDrive\Documents\Projects\15 Parliament St\15 Parliament St.dwg
C:\Users\apogee\OneDrive\Documents\Projects\15 Parliament St\15 Parliament St.dwg

Shadow Diagrams-Existing

Status | DA
Print date | Tuesday, April 27, 2021
Original size | A3
Drawing N°/Stage/Revision

A06-DA-N04



A | Level 2, 93 York St
| Launceston | Tas 7250
P | PO Box 7668
| Launceston | Tas 7250
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ABN | 40 624 215 041

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Stage	Rev	Description	Date
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Project Name

Fidler Residence

Project No.	15 Parliament St
Project Address	Sandy Bay, Tas 7005
Client	2003
Property ID	Andrew Fidler
Title Reference	5630068
	83407/1
Designer	Simon Chappell
License No.	CG6417
Drawn	SC
e-file	© Copyright (C) 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 26

Shadow Diagrams - Proposed

Status	DA
Print date	Tuesday, April 27, 2021
Original size	A3
Drawing N°/Stage/Revision	

A07-DA-N04



March 21st 9am - Proposed



June 21st 9am - Proposed



March 21st 9am - Existing



June 21st 9am - Existing



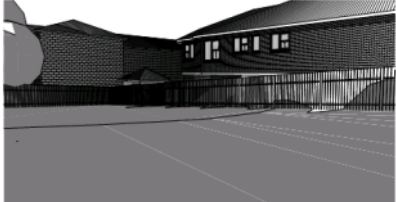
March 21st 12pm - Proposed



June 21st 12pm - Proposed



March 21st 12pm - Existing



June 21st 12pm - Existing



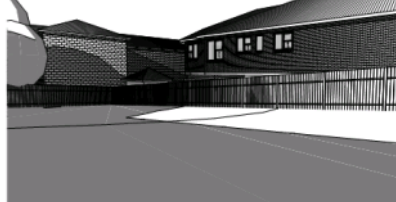
March 21st 3pm - Proposed



June 21st 3pm - Proposed



March 21st 3pm - Existing



June 21st 3pm - Existing



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Stage	Rev	Description	Date
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Project Name

Fidler Residence

Project No.	15 Parliament St
Project Address	Sandy Bay, Tas 7005
Client	2003
Property ID	Andrew Fidler
Title Reference	5630068
Designer	8840771
License No.	Simon Chappell
Drawn	CC6417
e-file	SC

Shadow Diagrams - Proposed

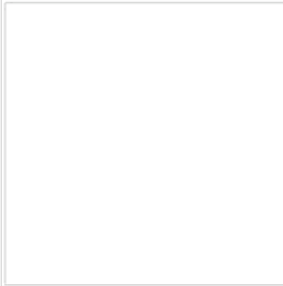
Status | DA
Print date | Tuesday, April 27, 2021
Original size | A3
Drawing N°/Stage/Revision

A08-DA-N04

Planning: #225644

Property

15 PARLIAMENT STREET SANDY BAY TAS 7005

**People**

Applicant

*

Apogee (TAS) Pty Ltd
Simon Chappell
Suite 3 Level 2
93 York Street
LAUNCESTON TAS 7250
0419 888 464
simon@apogeedesign.com.au

Owner

*

Andrew Fidler
15 Parliament Street
SANDYBAY TAS 7005
0438 065 043
services@tascool.com.au

Entered By

SIMON CHAPPELL
0419 888 464
simon@apogeedesign.com.au

Use

Single dwelling

Details

Have you obtained pre application advice?

☒ No

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

Are you applying for permitted visitor accommodation as defined by the State Government Visitor Accommodation Standards? Click on help information button for definition. If you are not the owner of the property you MUST include signed confirmation from the owner that they are aware of this application.

*

☒ No

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

*

☒ No

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

Details

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

*

Single Dwelling

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

*

Garage

Estimated cost of development

*

35000.00

Existing floor area (m2)	Proposed floor area (m2)	Site area (m2)
286.00	70.00	936

Carparking on Site

Total parking spaces Existing parking spaces N/A

2	2	<input type="checkbox"/> Other (no selection chosen)
---	---	--

Other Details

Does the application include signage?

*

☐ No

How many signs, please enter 0 if there are none involved in this application?

*

0

Tasmania Heritage Register

Is this property on the Tasmanian Heritage Register?

☒ No

Documents

Required Documents

Title (Folio text and Plan and Schedule of Easements)

*

Folio Plan & Text.pdf

Plans (proposed, existing)

*

2003_15 Parliment St, Sandy Bay_DA Issue.pdf



Exceed Engineering
www.exceedengineering.com.au
ABN: 86 132 286 527

27th April 2021

City of Hobart Planning Department
GPO Box 503
Hobart TAS 7001

Re: 15 Parliament St, Sandy Bay (Application No. PLN-21-128)

This document has been prepared in response to the additional information request issued by City of Hobart dated 19th March 2021 and must be read in conjunction with the documents provided by Apogee Pty Ltd.

TW1 Refer to Apogee drawing A03.

The distance from the existing sewer main to the proposed garage at the closest point is noted on the site plan. The location of the sewer main has been confirmed on site (refer to the photos provided).

PA5.1 Refer to Apogee drawings A03 and A04.

A plan view of the driveway and a long section along the driveway centreline is shown on drawing A03. The gradients of the driveway and turning area will be less than the maximum allowable gradients stated in AS/NZS 2890.1:2004.

Vehicle safety barriers / wheel stops are not required as the driveway and turning area will predominately be constructed on grade. The height differential for the small section of driveway near the southwestern corner of the garage that is elevated above natural ground level will be less than 400 mm. The ground will be landscaped and graded in this area to reduce the height differential to below 150 mm, eliminating the need for a barrier (refer to AS/NZS 2890.1:2004 Clause 2.4.5.3).

Drawing A04 demonstrates that adequate space will be provided for a standard passenger vehicle to manoeuvre and park safely and efficiently.

PA6 Refer to Apogee drawings A03 and A04.

The driveway and turning area will be of concrete construction. The surfaces will be suitably drained as per the response below.



Launceston: PO Box 1971 | 51 York Street, Launceston TAS 7250
P: (03) 6332 6955 E: info@exceedengineering.com.au



ENGINEERS
AUSTRALIA
MEMBER



SW1 Refer to Apogee drawing A03.

A crossfall on the driveway will direct stormwater to a subsurface 100Ø ag-drain in the garden bed along the southern boundary. A crossfall on the turning area will direct the stormwater to a grated drain across the west elevation of the garage or into the garden bed. Both the ag-drain and grated drain will flow to a 450 mm square sump pit located near the southwestern corner of the garage. From the pit, the stormwater will be disposed of via a 100Ø PVC pipe into the existing single gully pit located within the existing drainage easement near the eastern boundary. All stormwater flows will be gravity fed.

All roof stormwater from the garage roof will be captured in a 2 kL rainwater tank on the south elevation. The overflow on the rainwater tank will be directed into the existing single gully pit as above.

Exceed Engineering have reviewed the drawings prepared by Apogee Pty Ltd against the abovementioned additional information request and certify that the design is in accordance with AS/NZS 2890.1:2004 and the Acceptable Solutions of the *Hobart Interim Planning Scheme 2015*.

Should further information be required, please do not hesitate to contact us.

Yours sincerely,



Liam Dingemanse BE(Civil) MIEAUST CPENG NER APEC Engineer IntPE(Aus) RPEQ GAICD
Senior Engineer



Launceston: PO Box 1971 | 51 York Street, Launceston TAS 7250
P: (03) 6332 6955 **E:** info@exceedengineering.com.au



ENGINEERS
AUSTRALIA
MEMBER



**RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME 88407	FOLIO 1
EDITION 3	DATE OF ISSUE 08-Jan-2020

SEARCH DATE : 14-Apr-2020

SEARCH TIME : 12.20 PM

DESCRIPTION OF LAND

City of HOBART

Lot 1 on Plan 88407 (formerly being P565)

Derivation : Part of 66A-2R-30Ps. Gtd. to W.M. Orr.

Prior CT 2304/26

SCHEDULE 1

M795337 TRANSFER to JENNIFER LUANNE LAVERS and ANDREW LEIGH
FIDLER as tenants in common in equal shares
Registered 08-Jan-2020 at 12.01 PM

SCHEDULE 2

Reservations and conditions in the Crown Grant if any

E206434 MORTGAGE to Commonwealth Bank of Australia

Registered 08-Jan-2020 at 12.02 PM

UNREGISTERED DEALINGS AND NOTATIONS

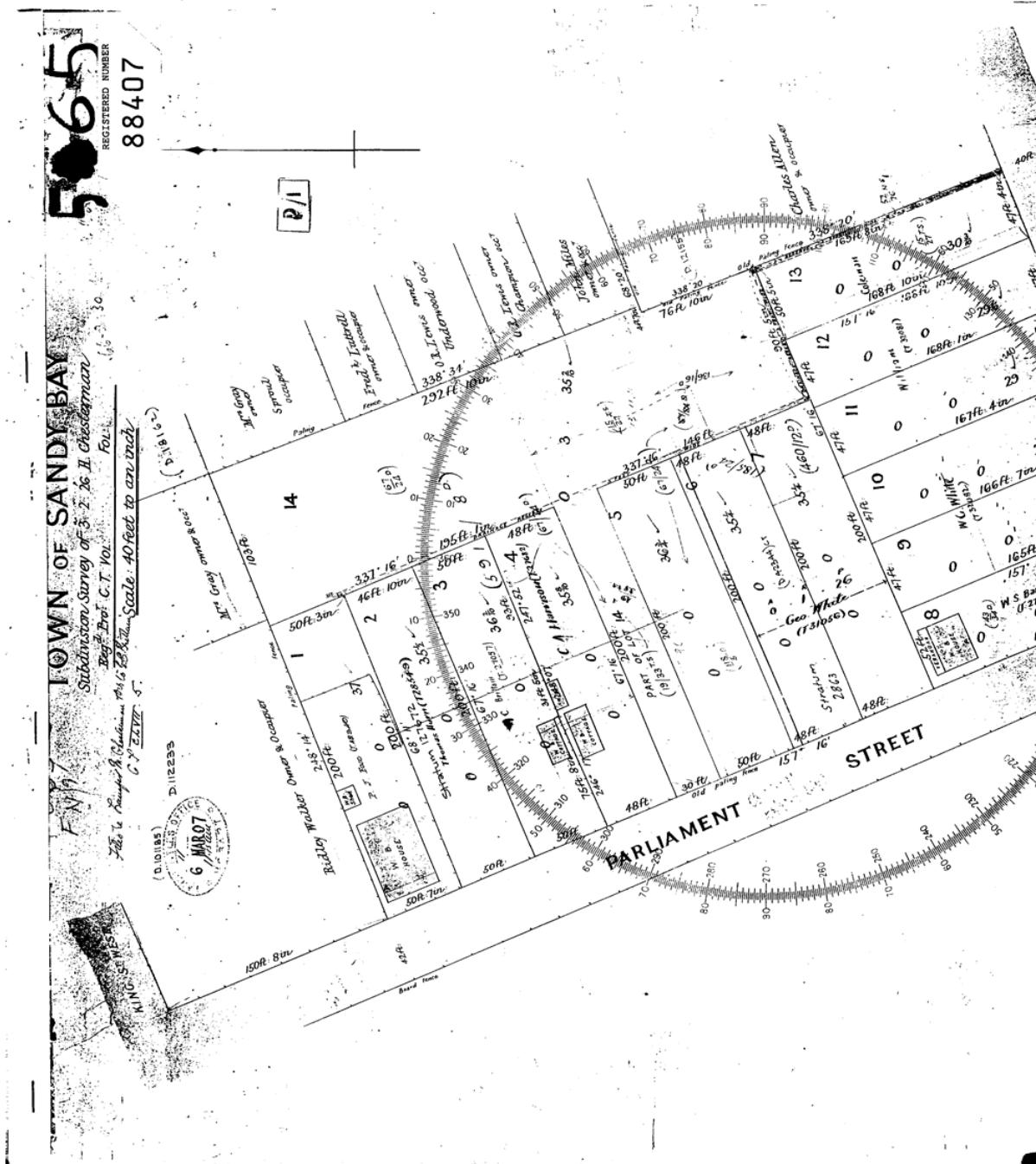
No unregistered dealings or other notations



FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

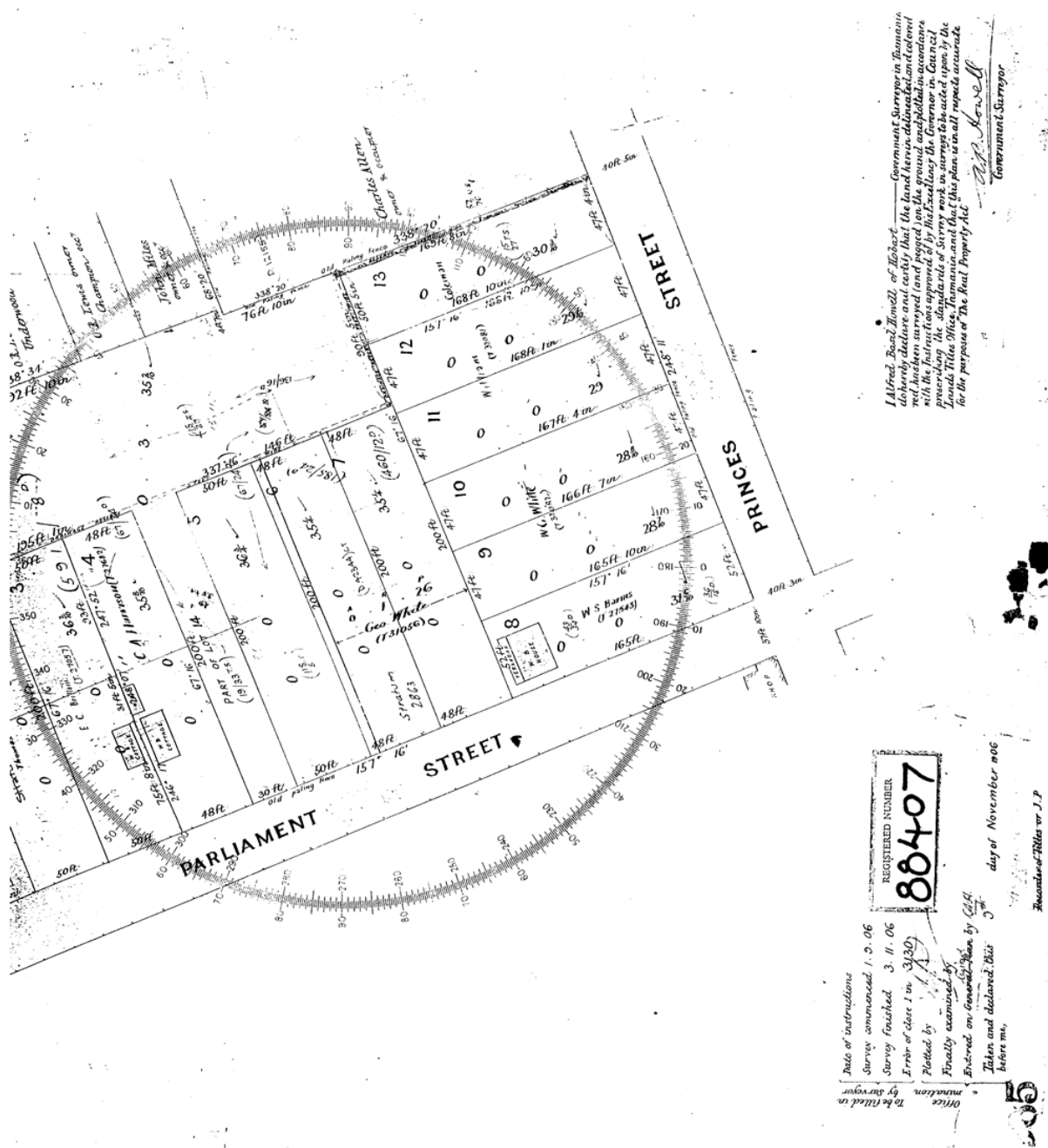




FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980





Submission to Planning Authority Notice

Council Planning Permit No.	PLN-21-128	Council notice date	25/02/2021
TasWater details			
TasWater Reference No.	TWDA 2021/00305-HCC	Date of response	25/03/2021
TasWater Contact	Jake Walley	Phone No.	0467 625 805
Response issued to			
Council name	CITY OF HOBART		
Contact details	coh@hobartcity.com.au		
Development details			
Address	15 PARLIAMENT ST, SANDY BAY	Property ID (PID)	5630968
Description of development	Outbuilding (garage)		
Schedule of drawings/documents			
Prepared by	Drawing/document No.	Revision No.	Date of Issue
Apogee Design	Plan: Site A03-DA-N03	03	19/03/2021
Conditions			
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:			
56W CONSENT			
1. Prior to the issue of the Certificate for Certifiable Work (Building) and/or (Plumbing) by TasWater the applicant or landowner as the case may be must make application to TasWater pursuant to section 56W of the Water and Sewerage Industry Act 2008 for its consent in respect of that part of the development which is built within a TasWater easement or over, or within two metres of TasWater infrastructure.			
Advice			
General			
For information on TasWater development standards, please visit http://www.taswater.com.au/Development/Development-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.			
(a) A permit is required to work within TasWater's easements or in the vicinity of its infrastructure. Further information can be obtained from TasWater			
(b) TasWater has listed a number of service providers who can provide asset detection and location services should you require it. Visit www.taswater.com.au/Development/Service-location for a list of companies			
(c) TasWater will locate residential water stop taps free of charge			



- (d) Sewer drainage plans or Inspection Openings (IO) for residential properties are available from your local council.

56W Consent

The plans submitted with the application for the Certificate for Certifiable Work (Building) and/or (Plumbing) will need to show footings of proposed buildings located over or within 2.0m from TasWater pipes and will need to be designed by a suitably qualified person to adequately protect the integrity of TasWater's infrastructure, and to TasWater's satisfaction, be in accordance with AS3500 Part 2.2 Section 3.8 to ensure that no loads are transferred to TasWater's pipes. These plans will need to also include a cross sectional view through the footings which clearly shows;

- (a) Existing pipe depth and proposed finished surface levels over the pipe;
- (b) The line of influence from the base of the footing must pass below the invert of the pipe and be clear of the pipe trench and;
- (c) A note on the plan indicating how the pipe location and depth were ascertained.

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

Phone	13 6992	Email	development@taswater.com.au
Mail	GPO Box 1393 Hobart TAS 7001	Web	www.taswater.com.au

Application Referral Cultural Heritage - Response

From:	Megan Baynes
Recommendation:	Proposal is acceptable without conditions.
Date Completed:	
Address:	15 PARLIAMENT STREET, SANDY BAY
Proposal:	Outbuilding (Garage)
Application No:	PLN-21-128
Assessment Officer:	Victoria Maxwell,

Referral Officer comments:

15 Parliament Street is a white timber weatherboard house which appears to date from the late Victorian or early Federation era period. It features unpainted masonry chimneys and an enclosed verandah. The house is located in a heritage precinct. The property slopes to the rear, away from the street and the applicant is seeking to undertake development in the rear garden.

Demolition

Documentation submitted indicates that the only elements proposed to be demolished are lawn and trees in a rear garden. The removal of landscape elements behind a house is considered acceptable in a heritage precinct, because the landscape elements are not of a scale to make a significant contribution to the streetscape. **The proposal satisfies E 13.8.1 P1.**

Works

Documentation submitted indicates that the applicant seeks to construct hard stand driveway and parking and a double garage. All of these elements would be located behind the existing period house. The garden would be replaced by parking related elements. The Planning Scheme provisions permit this. The colour of the proposed single storey structure would match the house - a light white tone. **The proposed works are considered acceptable and satisfy E 13.8.2 P1.**

This application is recommended for approval without conditions.

MB
CHO
10
05
2021

Discussion between VM and MB agreed colour condition required. VM to add the standard heritage colour condition.



Apogee Pty Ltd
A | Suite 3 Level 2, 93 York Street
Launceston Tas 7250
E | info@apogeedesign.com.au
ABN | 40 624 215 041

Ref: CAA-V2
Date: 31/05/2021

Town Hall, Macquarie St
GPO Box 503
Hobart, Tasmania, 7001
maxwellv@hobartcity.com.au

Attention: Victoria Maxwell

Proposed Garage. 15 Parliament Street, Sandy Bay. 7005.

Dear Victoria,

Please find the following response to information provided regarding objections to the application for the proposed Garage at 15 Parliament St, Sandy Bay.

*Building Bulk and Scale
The classification as Garage is misleading.*

By legal definition; *A garage shall be considered part of a dwelling if the garage and the dwelling have a roof or wall in common. ... Private **garage** means a building for the storage of motor vehicles where no repair service facilities are maintained and where no motor vehicles are kept for rental or sale.*

It is not an adjoining workshop it will be storage for 2 vehicles and an area for household garden equipment, camping and lifestyle equipment and general home storage. See attached client provided document for schedule of items.





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ABN | 40 624 215 041





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ABN | 40 624 215 041

The 10 x 7m structure with two large roller doors and adjoining workshop is out of tenure with the Inner Residential zone clause 11.1.1.4.

The building is a double vehicle garage, size of doors are relevant to the items being store – 2m high vehicle + racks and items totals to estimate 2.5m – adding camping items owned by client to rack brings the vehicle height close to 2.9m

Sandy Bay is a tight knit community of closely packed family homes and a designated Heritage Precinct. The introduction of such proportioned outbuildings will significantly detract from the amenity of local residents and the quiet nature of the area.

We have revisited the design in leu of this, refer attached alternate solution to the aesthetics for the building so it is less impactful on the local residents.

How appropriate will this be in a residential area of elderly residents and young families?

Noted

The concrete driveway is excessive for a residential zone.

Original proposal used an off-white granite pebble/stone driveway. This was not adequate or to HCC preference and three options were provided. These being bitumen, pavers or Concrete. Refer below:

To satisfy Hobart Interim Planning Scheme 2015 clauses E6.7.6 Acceptable Solution A1 the scaled and dimensioned design drawings must include:

Plan view showing parking spaces and driveway paved (pavers, concrete or bitumen) or a durable all weather pavement that is drained to an approved stormwater system.

The site requires adequate driveway surfacing to allow the parking of clients boat & boat trailer and vehicles

If the applicant intends to use the garage as stated and not as a commercial workshop and/or storage space, the footprint and dimensions of the garage and hard stand area should be modified to align with this classification to reflect the residential amenity and uphold the intent of the planning scheme.

Refer to the provided images above, additional items to be stored within this building
17ft boat and trailer

The proposed outbuilding does not respect the neighbourhood character of character cottages and substantial historic homes.

Proposed alteration to elevations – gable re-orientated.

The visual impact of the large metal outbuilding significantly concerns regarding outlook at reflectivity. The external cladding does not attempt to fit into the heritage character of the area, which fences and colour schemes are trying to do.

The Lysaght weatherboard cladding to the exterior is an attempt to reduce the visual impact of the structure.



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Image: https://www.lysaght.com/sites/default/files/styles/product_gallery_image/public/DSCN1171.JPG?itok=KVSjYmYx

The industrial warehouse style building will dominate the view of (currently) residential gardens and backyards.

The design is not an attempt at industrial warehouse

Potential Commercial Use of the Building

Whilst a Home Based Business can be approved, the proposed "garage" is indicative that the use guidelines will be substantially exceeded.

Please refer attached owner statement regarding this matter

The building is almost double the size of an average two car garage and the proposal is more accurately described as a large shed or workshop. When you consider the applicant's commercial refrigeration business it is fair to enquire how the large shed and significant hard stand will be used.

This is an incorrect statement - The average double car garage provided in the similar design is 9m(w)x6m(d) x 3.5m(h)

Our Dimensions are **10m(w)x7m(d)x4.47m(h)**

To run such a light industrial activity, with storage of gases and chemicals, as well as the potential noise and environmental pollution would negative impact the residential amenity of the area.

No business related materials or activities will be onsite, as with all residential garages, minor vehicle maintenance (such as washing) and general hobbies will be undertaken and are to be expected.

If the applicant was to run part of his business from the subject site, concerns over the increased traffic to an already overcrowded and narrow street,

Please refer client statement.



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Planning Scheme compliance

The proposal directly contradicts Zone Purposes Statements;

11.1.1.2 - To provide for compatible non-residential uses that primarily serve the local community,

Refer previous statements

11.1.1.4 - To encourage residential development that respects the neighbourhood character; and

Client does not want his land to be developed for anything other than personal use, providing a shed/garage to store his vehicles and the many items, to which are currently stored in the back yard. This overall enhances the area by tidying up the back yard which is overlooked by neighbouring buildings.

11.1.1.5 - To provide a high standard of residential amenity.

The definition of **residential amenity** is considered as the benefit enjoyed from physical external space which is part of the private home. The benefit enjoyed depends on the quality of space.

The design does not impact the adjoining dwellings with exception of the southern property and their tomato plants – we have proposed a redesign (refer attached) to assist in removing the impact of the proposed building which is only related to very minor reduction in Direct sunlight. Majority of all other dwelling views are obscured by plants or will be upon the growth of the client planted trees (currently tallying over 50).

Use Table in clause 11.2 allows a Home Based Business as No Permit Required only if with no more than 1 non-resident/worker/employee, no more than 1 commercial vehicle and a floor area of no more than 30m². The proposed shed is 70m² and there are currently two commercial branded vehicles parked on site.

Not applicable

11.4.2 Setbacks and building envelopes for all dwellings

P3 (a) not cause an unreasonable loss of amenity to adjoining properties, having regard to; ...

(iv) visual impacts caused by the apparent scale, bulk or proportions of the dwelling when viewed from an adjoining property.

Scale is equal to that of the adjoining property and the monolithic concrete block apartment building. Client has undertaken excessive planting to ensure views are obscured from northern properties.

The location of the "garage" is close to the (north-east facing) windows of an elderly resident's kitchen and will impact on their outlook and morning and afternoon sunlight.

Please refer the sun studies provided with the application – the impact the proposed out building has on the elderly residences is minimal with regard to sunlight/daylight.



Mobile: 0438 065 043
URL: www.tascool.com.au

20/05/2021

Attn: Hobart City Council

This declaration is in regards to the representations on PLN-21-128, specifically the queries about operating my business, Tascool, out of the new outbuilding (7 x 10 m garage) proposed for 15 Parliament St, Sandy Bay.

Tascool is a service-based refrigeration and air conditioning business. As such, all the work I perform is carried out on location in bars, restaurants, and hospitals. I also install and service heat pumps into commercial and residential homes statewide and across the greater Hobart area. None of this work is carried out from my place of residence because it is all completed on location. To call it a home based business is misleading, the only work I conduct from home is bookwork on the computer. All other business is carried out offsite.

If I was required to work from home, I would already be out of business because we have been living at 15 Parliament Street for over 18 months and I have been operating Tascool this entire time. The only worry I have had, which we've stated many times in various documents provided to the Council, is not having a secure location to store my vehicle and trailer which are full of expensive tools and equipment. For example, on any given day, my work truck contains Hand & Power tools, parts and stock worth an estimated \$10,000

Any chemicals that I require for work are securely stored in my work vehicle as per Australian Refrigeration Council requirements (with whom I've held a license since 2015). Importantly, this is no different than any other refrigeration tradesman's vehicle you would find in Hobart, no matter if they were sole operators or a business employee. Therefore I can guarantee that no extra chemicals will be stored anywhere on site due to me being a sole operator.

Sincerely,

Andrew Fidler
Owner, Refrigeration Mechanic
TasCool Refrigeration
E-mail: service@tascool.com.au
Mobile: 0438 065 043
URL: www.tascool.com.au

Following is a list of property that we require to be stored in our proposed garage –

2x vehicles, one with roof racks that carry ladders and rooftop tent. Height with rooftop tent is 2.7m high. Access height to rooftop tent required once inside the garage is 4.2m

17ft aluminium boat (3.02m high) requires letting down tires to fit under a 3.0m roller door. Roof height required to access inside the boat is 4.5m

7x5ft box trailer

4 household ladders including long extension ladder

Gardening wheelie bin

Fishing rods in a fishing rod rack to be stored upright.

Lawnmower

Whipper snipper

Chainsaw

Drop saw

Air compressor

Saw horses

Airless spray gun

Scuba diving equipment including wetsuits, dive tanks and accessories

Storage shelving - 3m high uprights, 3.6m long.

Tool chest

Spare wardrobe

Bbq

Dog crates

Welding trolley

8x large plastic tubs of stored items including camping equipment, 4wd equipment and household items.

Large tent

Camping chairs and mattresses

5 milk crates full of renovation tools and screws, bolts etc

Spare suitcases for travel

Air hose reel

Building materials for renovation

Large bin of seed for chickens

Rakes, shovels, pitchforks, axe, blockbuster and other gardening tools

Painting equipment including long extension handles.

Shop vac

Drill press

Laser level on tripod

2 bags of home tools

Fidler Residence - Proposed Garage

15 Parliament St Sandy Bay Tas 7005

Client: Andrew Fidler



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Project details

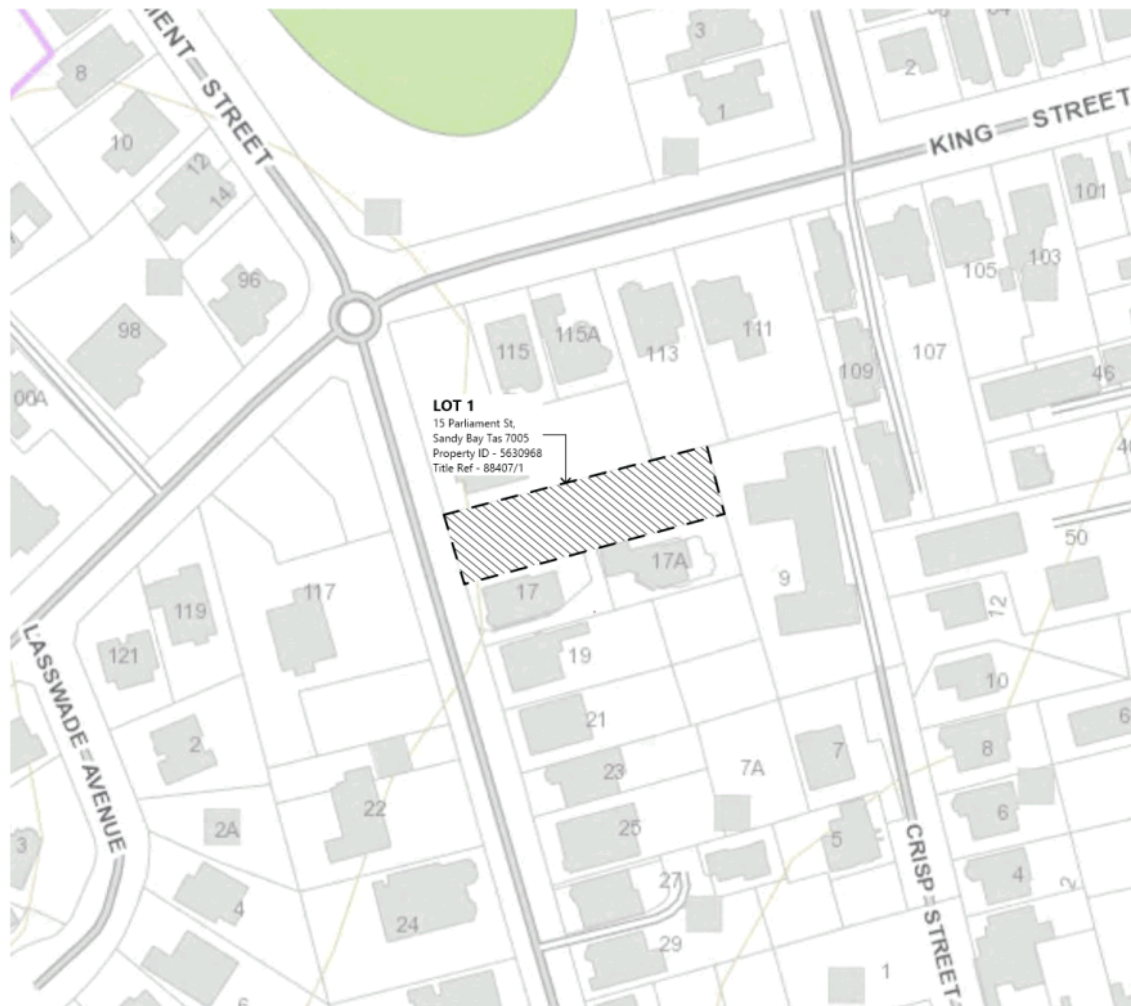
Council	Hobart Council
Zone	11.0 Inner Residential
Planning Overlay	116 HER Heritage Precinct
PID	5630968
Title File	88407
Title Volume	1
Building Classification	1a
Climate Zone	7
Design Wind Speed	-
Soil Class	TBA
BAL Rating	Low
Energy Rating	6 Star min
Corrosive Environment	TBA
Alpine	-
Other	-

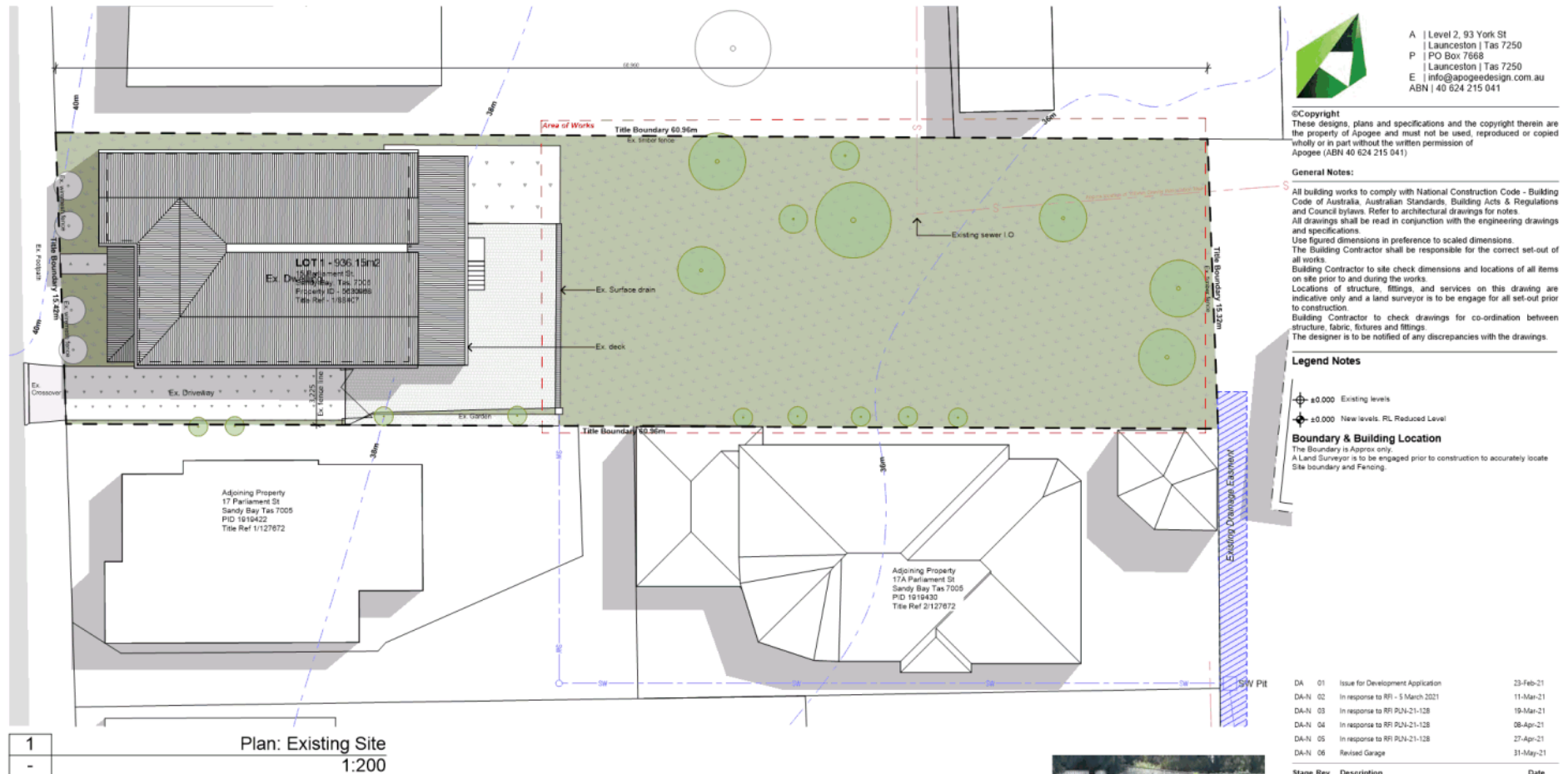
Area Schedule

Name	Area m ²
Site Area	936.15m ²
Existing Building Footprint	205.0m ²
Building Area	70.0m ²

Architectural

A01	Location Plan
A02	Existing Site Plan
A03	Proposed Site Plan
A04	Parking Diagram
A05	Garage
A06	Shadow Diagrams-Existing
A07	Shadow Diagrams - Proposed
A08	Shadow Diagrams - Proposed





DA	01	Issue for Development Application	23-Feb-21
DA-N	02	In response to RFI - 5 March 2021	11-Mar-21
DA-N	03	In response to RFI PLU-21-12B	19-Mar-21
DA-N	04	In response to RFI PLU-21-12B	28-Apr-21
DA-N	05	In response to RFI PLU-21-12B	07-May-21
DA-N	06	Revised Garage	31-May-21

Stage	Rev	Description	Date
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Project Name

Fidler Residence

Project No.	15 Parliament St
Project Address	Sandy Bay, Tas 7005
Client	2003
Property ID	Andrew Fidler
Title Reference	5630968
	88407/1
Designer	Simon Chappell
License No.	CC6417
Drawn	SC
e-file	

Existing Site Plan

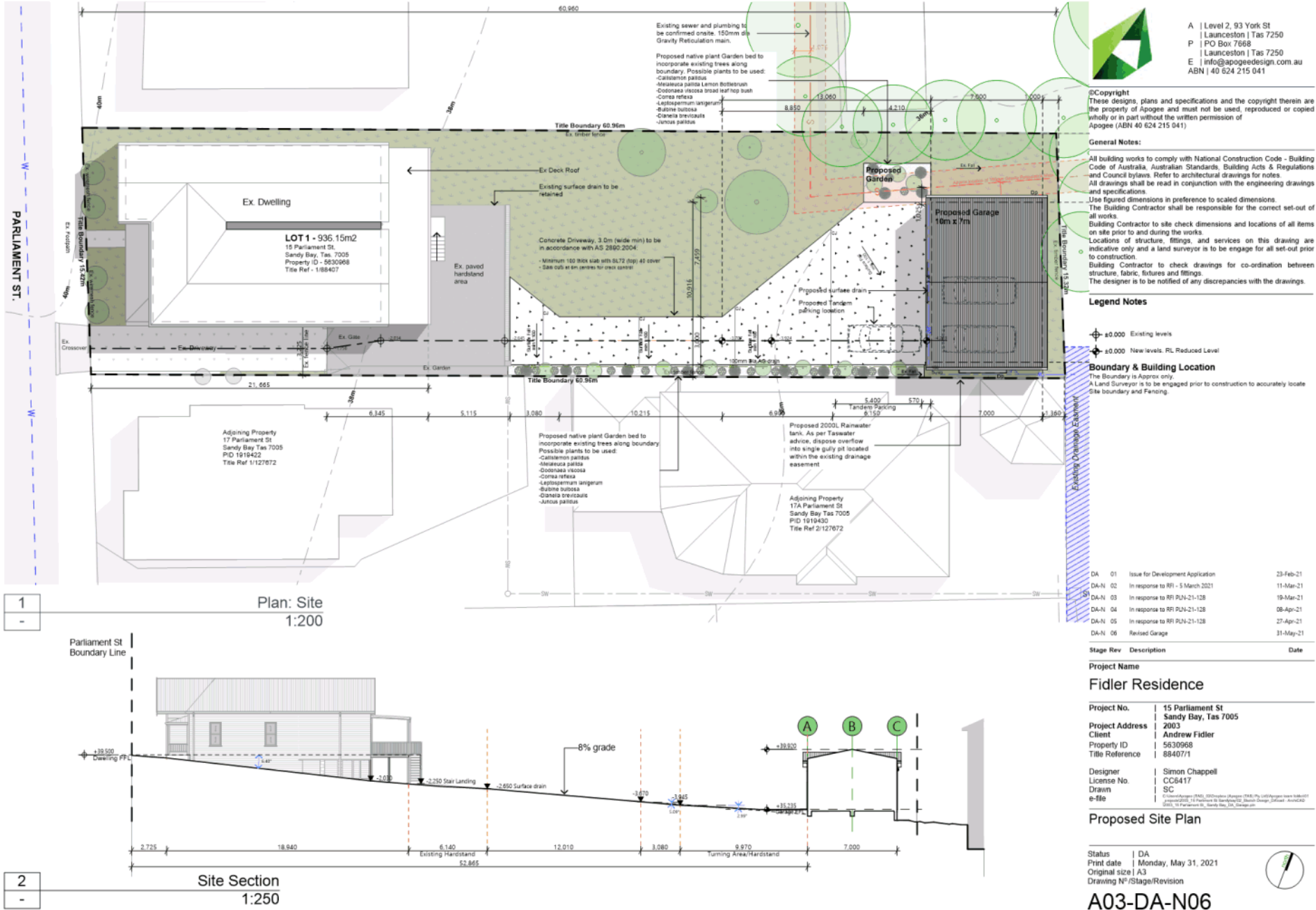
Status	DA
Print date	Monday, May 31, 2021
Original size	A3
Drawing N°/Stage/Revision	

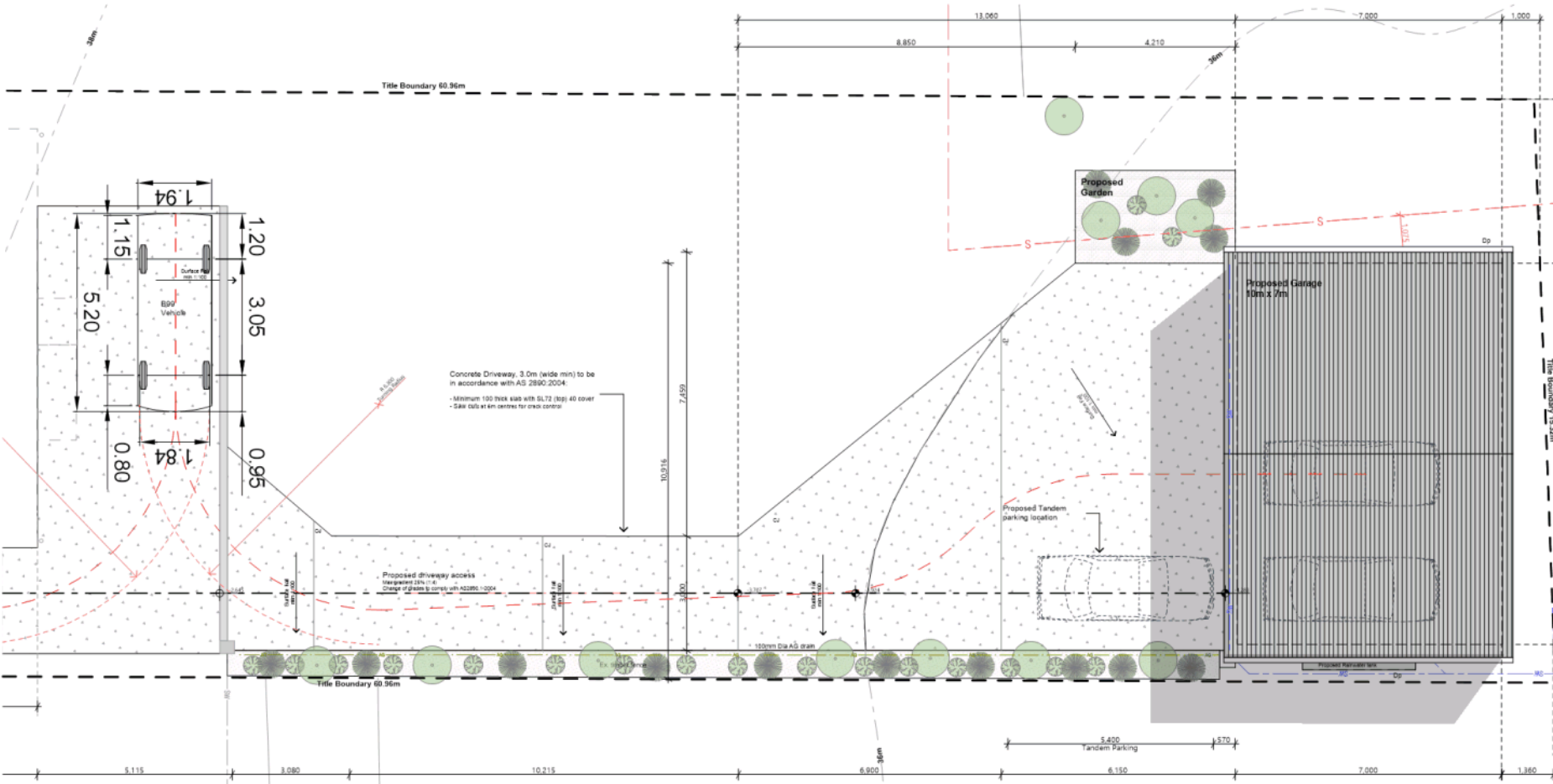


A02-DA-N06

11.0 Inner Residential Development Standards

11.4.1	Residential density for multiple dwellings	N/A	11.4.5	Privacy for all dwellings	E6.7.6	Surface Treatment of Parking Areas	A1	
11.4.2	Setbacks and building envelope for all dwellings			Privacy from a balcony, deck, roof terrace, parking space, or carport above 1m from natural ground level - (North East Deck) refer to elevations.	E6.7.7	Lighting of Parking Areas	N/A	
	Refer to diagram 11-4.2A. Building envelope for primary frontage lots as required by subclause 11.4.2(A)			A window or glazed door, to a habitable room, of a dwelling, that has a floor level more than 1 m above the natural ground level	NA	E6.7.8	Landscaping of Parking Areas	A1
	Western Setback - (Side) Garage within projected lines	A1(b)		Privacy from a shared driveway/parking space	NA	E6.7.9	Design of Motorcycle Parking Areas - Existing	A1
	Eastern Setback - (Rear)	A2		Frontage fences for all dwellings - Existing timber paling fence	NA	E6.7.10	Design of Bicycle Parking Facilities	N/A
	Southern Setback - (Side)	A3(a)	11.4.7	Waste storage for multiple dwellings	E6.7.11	Bicycle End of Trip Facilities	N/A	
	Western Setback (Primary front) - Garage within projected lines,	A2(a)	11.4.8	Site facilities for multiple dwellings	E6.7.12	Site of Trip Facilities	N/A	
			11.4.9	Standards for Subdivision	NA	E6.7.13	Facilities for Commercial Vehicles	N/A
11.4.3	Site coverage and private open space for all dwellings				NA	E6.7.14	Access to a Road - Existing	N/A
	Site coverage (less than 65%) - 20.81% (200m ² + 70m ²)	A1(a)				E6.7.15	Access to Niree Lane Sandy Bay	N/A
	Multi dwelling private open space (not less than 60m ²)	A1(c)						
	Impervious surfaces area (less than 75%) - 155m ² , 16.7%							
11.4.4	Sunlight and overshadowing for all dwellings					E7.7.1	Stormwater Drainage and Disposal	
	North facing habitable room (other than a bedroom)	N/A					Impervious Surfaces - Concrete Driveway	P1
	Multi dwelling - north facing habitable room (other than a bedroom)	N/A					New Development	N/A
			E6.7.1	Number of Vehicular Accesses - Existing	N/A		Minor Stormwater Drainage System	A3(b)
11.4.5	Width of openings for garages and carports		E6.7.2	Design of Vehicular Accesses - Existing	N/A		Major Stormwater Drainage System	A1
	Garage not located on primary frontage, and located within the dimension of the exiting garage, driveway and crossover - Greater Than 12m	N/A	E6.7.3	Vehicular Passing Areas Along an Access -				
			E6.7.4	On-Site Turning	A1			
			E6.7.5	Layout of Parking Areas	A1			





Plan: Parking Diagram
1:100



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Stage	Rev	Description	Date
DA-N	01	In response to RR RUN-21-128	08-Apr-21
DA-N	02	In response to RR RUN-21-128	27-Apr-21
DA-N	03	Revised Garage	31-May-21

Project Name
Fidler Residence

Project No. | 2003
Project Address | 15 Parliament St Sandy Bay Tas 7005
Client | Andrew Fidler
Property ID | 5630968
Title Reference | 1/88407

Designer | Simon Chappell
License No. | CC6417
Drawn | SC
e-file

Parking Diagram

Status | DA
Print date | Monday, May 31, 2021
Original size | A3
Drawing No./Stage/Revision

A04-DA-N03



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Elevation Legend

A. Awning window
CJ Control joint
CL Ceiling level
DP Downpipe
F Fixed window
FL Floor level
Pb Plasterboard
S Sliding window
SD Sliding door
EC 01 External Cladding - Stramit Monopanel 280, 48 or Bluescope Durasteel Colorbond Weatherboard, Colour - to match colorbond Surfmat, flashing to match.
EC 02 Blockwork 350x150x100 (30mm), nature finish with light grey mortar & ironed joints.
Roof 01 To Match Existing, 3 degrees fall min, 0.48 BMT, Colorbond - Colour & Flashing to match existing. Provide single sheet lengths. Install to manufacturers specification.
Downpipes, fascias, flashing, & roof to match existing colour.
Window/Door Frames to Match Existing

Stage	Rev	Description	Date
DA	01	Issue for Development Application	23-Feb-21
DA-N	02	In response to R1 - 5 March 2021	11-Mar-21
DA-N	03	In response to R1 R1-N-21-128	08-Apr-21
DA-N	04	In response to R1 R1-N-21-128	27-Apr-21
DA-N	05	Revised Garage	31-May-21

Project Name

Fidler Residence

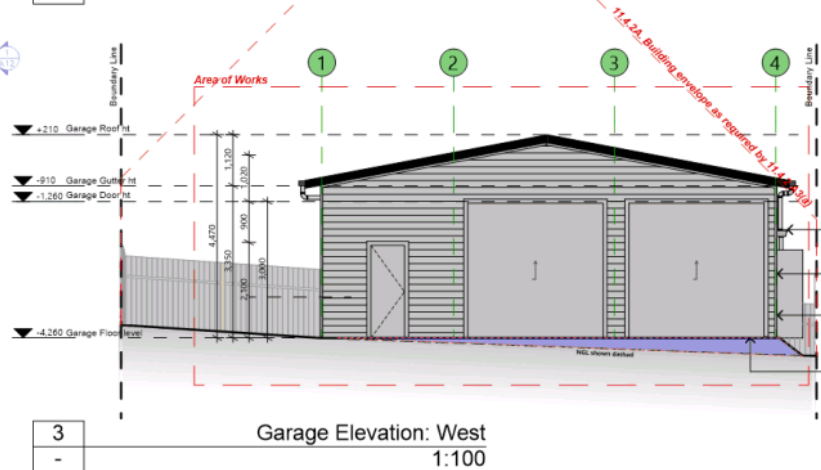
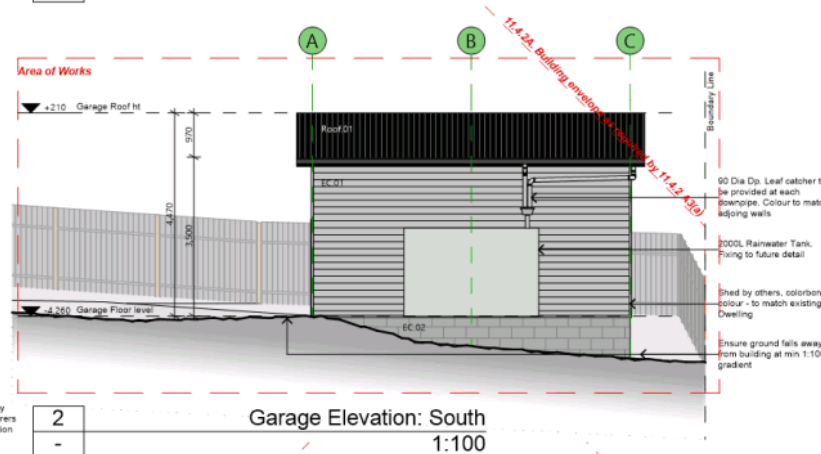
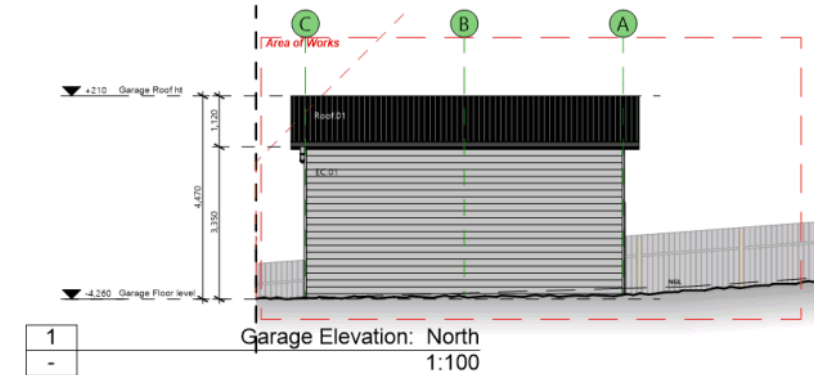
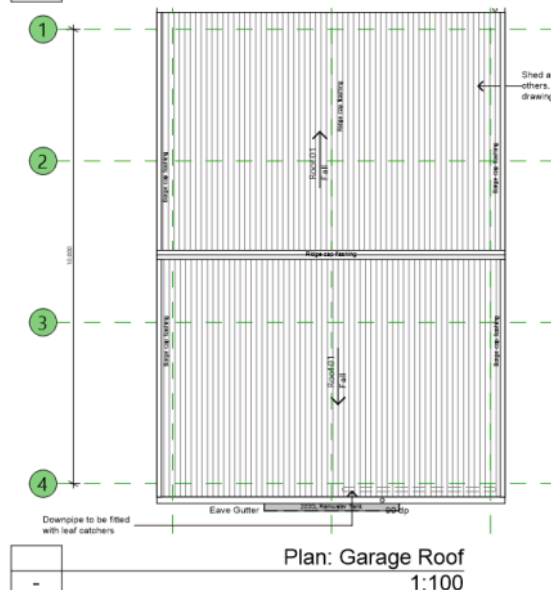
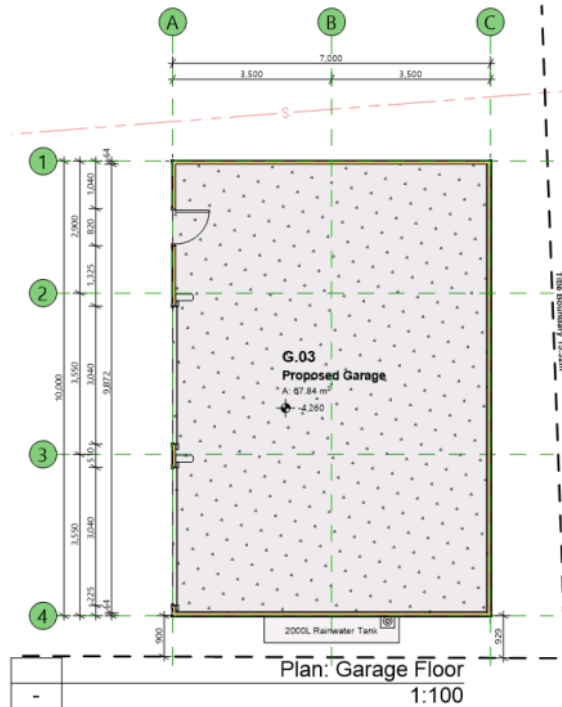
Project No. | 15 Parliament St
Sandy Bay, Tas 7005
Project Address | 2003
Client | Andrew Fidler
Property ID | 5630968
Title Reference | 8840771

Designer | Simon Chappell
License No. | CC6417
Drawn | SC
e-file

Garage

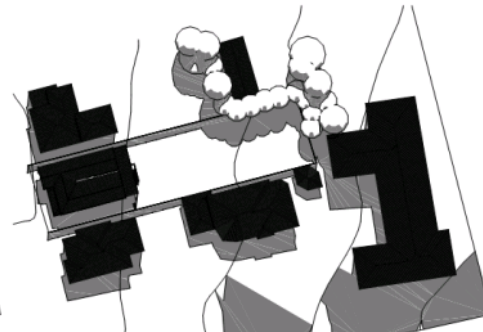
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Print date | Monday, May 31, 2021
Original size | A3
Drawing N°/Stage/Revision

A05-DA-N05

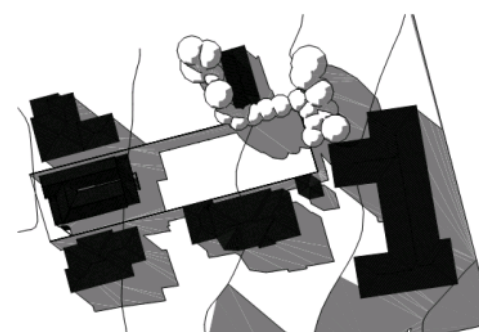




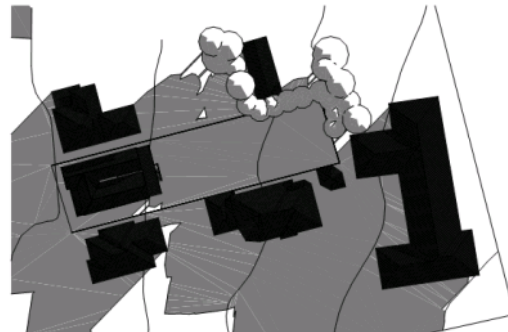
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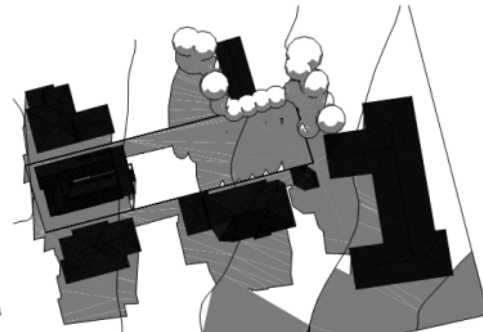
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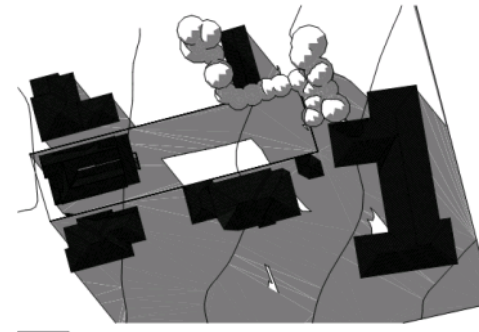
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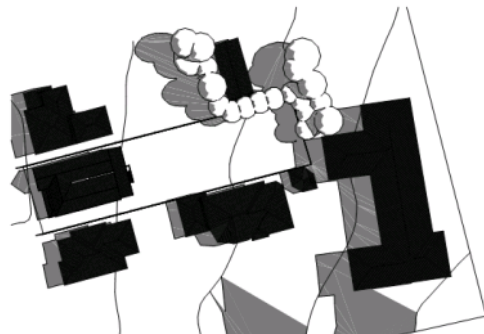
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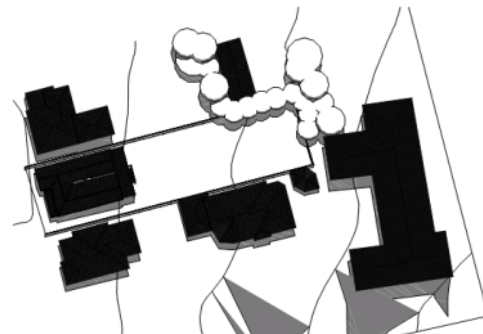
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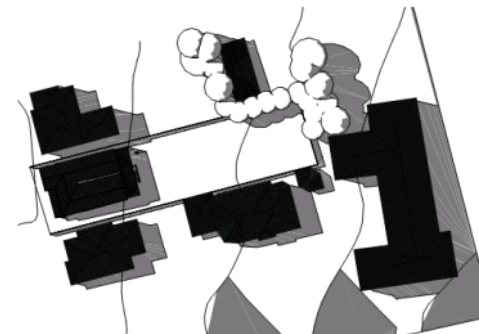
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Dec 21 - 9am
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Dec 21 - 12pm
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Dec 21 - 3pm
1:1000



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DA-N-04	In response to RFI RUM-21-128	27-Apr-21
DA-N-05	Revised Garage	31-May-21

Stage	Rev	Description	Date
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Project Name

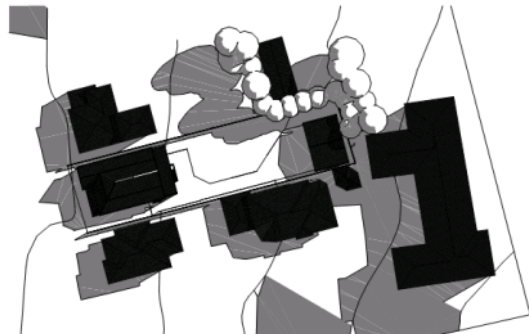
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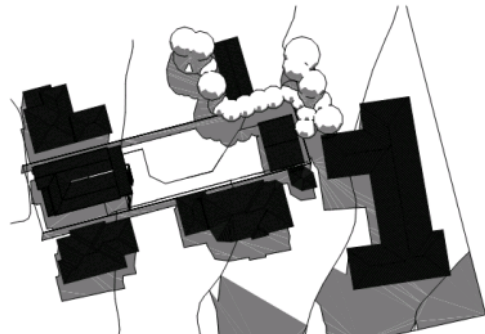
Shadow Diagrams-Existing

Status | DA
Print date | Monday, May 31, 2021
Original size | A3
Drawing N°/Stage/Revision

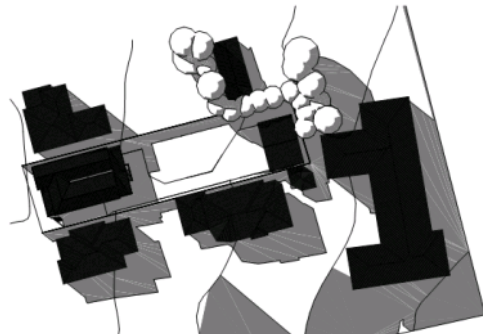
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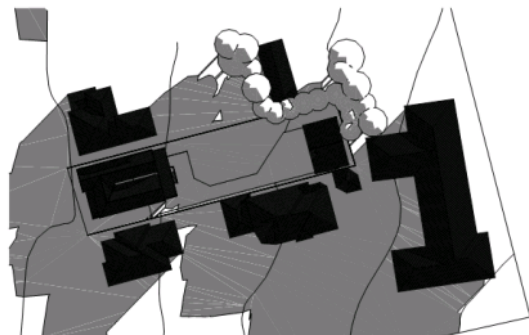
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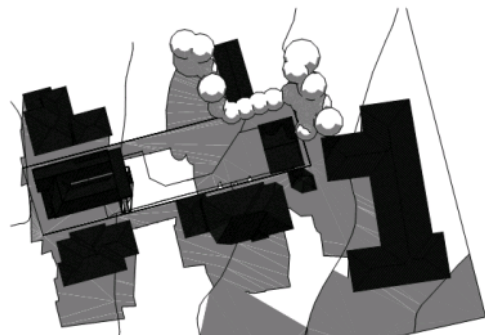
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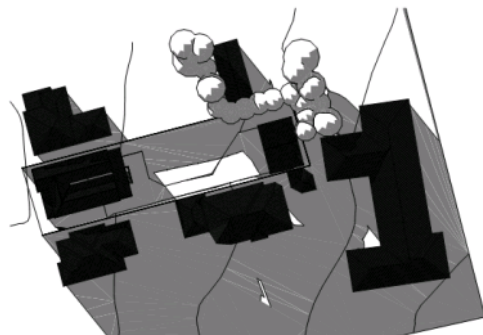
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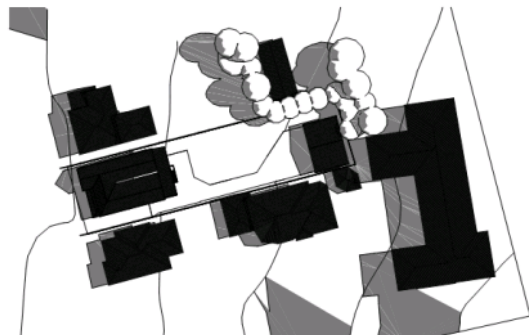
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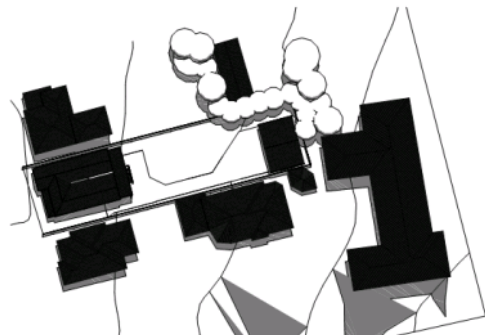
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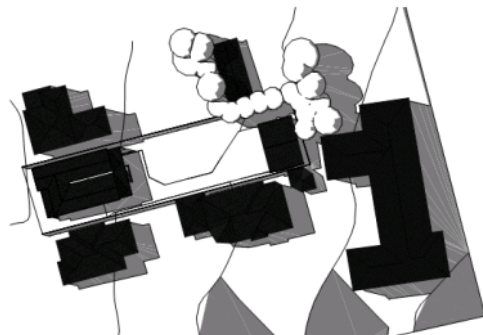
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General Notes:

All building works to comply with National Construction Code - Building Code of Australia, Australian Standards, Building Acts & Regulations and Council bylaws. Refer to architectural drawings for notes.
All drawings shall be read in conjunction with the engineering drawings and specifications.
Use figured dimensions in preference to scaled dimensions.
The Building Contractor shall be responsible for the correct set-out of all works.
Building Contractor to site check dimensions and locations of all items on site prior to and during the works.
Locations of structure, fittings, and services on this drawing are indicative only and a land surveyor is to be engaged for all set-out prior to construction.
Building Contractor to check drawings for co-ordination between structure, fabric, fixtures and fittings.
The designer is to be notified of any discrepancies with the drawings.

DA	01	Issue for Development Application	23-Feb-21
DA-N	02	In response to RFI - 5 March 2021	11-Mar-21
DA-N	03	In response to RFI PUN-21-128	08-Apr-21
DA-N	04	In response to RFI PUN-21-128	27-Apr-21
DA-N	05	Revised Garage	31-May-21

Stage	Rev	Description	Date
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Project Name

Fidler Residence

Project No.	15 Parliament St Sandy Bay, Tas 7005
Project Address	2003
Client	Andrew Fidler
Property ID	5630968
Title Reference	8840771
Designer	Simon Chappell
License No.	CC6417
Drawn	SC
e-File	C:\Users\Apogee [PMS] \Documents \Projects \PMS \P15 \LH\Apogee\Issue-1040201 \Project\2003_15 Parliament St Sandy Bay Tas - General.dwg

Shadow Diagrams - Proposed

Status | DA
Print date | Monday, May 31, 2021
Original size | A3
Drawing N°/Stage/Revision

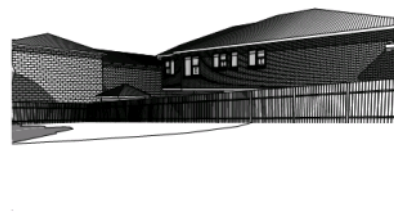
A07-DA-N05



	March 21st 3pm - Proposed
-	



	June 21st 3pm - Proposed
-	



	March 21st 31pm - Existing
-	



	June 21st 3pm - Existing
-	



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Project Name

Fidler Residence

Project No.	15 Parliament St
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Client	2003
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Designer	88407/1
License No.	Simon Chappell
Drawn	CC6417
e-file	SC

Shadow Diagrams - Proposed

Status	DA
Print date	Monday, May 31, 2021
Original size	A3
Drawing N°/Stage/Revision	

A08-DA-N05

**7.1.4 8 OLD PROCTORS ROAD, TOLMANS HILL - PUBLIC TOILETS,
BARBECUE SHELTER AND ASSOCIATED WORKS
PLN-21-249 - FILE REF: F21/54357**

Address: 8 Old Proctors Road, Tolmans Hill

Proposal: Public Toilets, Barbecue Shelter and Associated Works

Expiry Date: 14 July 2021

Extension of Time: Not applicable

Author: Michaela Nolan

RECOMMENDATION

That pursuant to the *Hobart Interim Planning Scheme 2015*, the Council approve the application for public toilets, barbecue shelter and associated works, at 8 Old Proctors Road, Tolmans Hill. 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-21-249 - 8 OLD PROCTORS ROAD TOLMANS HILL TAS 7007 - 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 2021/00582-HCC dated 23 April 2021 as attached to the permit.

Reason for condition

To clarify the scope of the permit.

PLN 17

Lighting and security lighting must operate in accordance with Australian

Standard AS4282- Control of the obtrusive effects of outdoor lighting.

Reason for condition

To ensure that the non-residential use does not unreasonably impact residential amenity.

ENG sw1

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

Advice:

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

Reason for condition

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

ENG 3a

Prior to commencement of use, the parking module(s) must be designed and constructed in accordance with Australian Standard AS/NZS 2890.1:2004 and AS/NZS 2890.6:2009.

Reason for condition

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

ENG 4

Prior to commencement of use (whichever occurs first), the access and parking module (parking space for people with disabilities) 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.

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

All 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, prior to commencement of use.

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.

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.

ENV 10

To ensure the protection of trees not approved for removal, in particular the large Blue Gum (*Eucalyptus globulus*), a Tree Protection Plan must be submitted and approved as a Condition Endorsement prior to the issuing of any consent under the Building Act. The Tree Protection Plan must include (but is not limited to) details in relation to the following:

1. installation of tree protection fencing around the Blue Gum, at a distance from the trunk that avoids compaction to the roots, with the installation
2. to occur before works commence and the fencing maintained in position for the duration of the works,
3. the location of the site office and amenities, storage and stockpile areas, machinery storage, washing areas for chemicals, parking etc. outside the tree protection fencing,
4. the location of site access and circulation,
5. no works occurring within the tree protection fencing, and
6. the location of two new trees to replace every tree to be removed during the development.

All work required by this condition must be undertaken in accordance with the approved Tree Protection Plan.

Advice:

This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit. Note also condition HER 18 below.

Reason for condition

To ensure the development does not result in unnecessary or unacceptable loss of priority biodiversity or significant cultural values.

ENV 1

Sediment and erosion control measures sufficient to prevent sediment from leaving the site must be installed prior to any disturbance of the site, and maintained until all areas of disturbance have been stabilized or re-vegetated.

Advice:

For further guidance in preparing a Soil and Water Management Plan – in accordance with Fact sheet 3 Derwent Estuary Program click [here](#).

Reason for condition

To avoid the sedimentation of roads, drains, natural watercourses, Council land that could be caused by erosion and runoff from the development, and to comply with relevant State legislation.

HER 18

The large *Eucalyptus globulus* (Blue Gum) tree at the centre of the circular footpath must be protected throughout excavation and post construction.

A notation must be added to construction documentation, and that documentation must be submitted and approved as a Condition Endorsement prior to the commencement of work. The notation must;

1. Clearly identify that the tree is a Significant Tree and protected by E 24.0 in the *Hobart Interim Planning Scheme, 2015*.
2. Clearly state that the tree is to be retained and protected during works as per Her 18.

All work required by this condition must be undertaken in accordance with the approved and notated construction documentation

Advice:

This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit. Note also condition ENV 10 above.

Reason for condition

To ensure that significant trees are not unnecessarily destroyed and are managed in a way that maintains their health and appearance.

ADVICE

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

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

BUILDING PERMIT

You may need building approval in accordance with the *Building Act 2016*. Click [here](#) for more information.

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

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

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

STORMWATER

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

WORK WITHIN THE HIGHWAY RESERVATION

Please note development must be in accordance with the Hobart City Council's Infrastructure By law. Click [here](#) for more information.

DRIVEWAY SURFACING OVER HIGHWAY RESERVATION

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

COUNCIL RESERVES




A separate Public Spaces By-law permit to undertake works will be required before works commence. Please allow two weeks for a permit application to be assessed. There may be charges associated with the by-law permit. The permit application form can be found [here](#) or;
<https://www.hobartcity.com.au/Community/Parks-reserves-and-sporting-facilities/Apply-for-a-permit>.

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-21-249 - 8 OLD PROCTORS ROAD
TOLMANS HILL TAS 7007 - Planning Committee or
Delegated Report ↓ 
- Attachment B: PLN-21-249 - 8 OLD PROCTORS ROAD
TOLMANS HILL TAS 7007 - CPC Agenda
Documents ↓ 
- Attachment C: PLN-21-249 - 8 OLD PROCTORS ROAD
TOLMANS HILL TAS 7007 - Planning Referral
Officer Development Engineering Report ↓ 

**APPLICATION UNDER HOBART INTERIM PLANNING SCHEME 2015**

Type of Report: Committee
Council: 21 June 2021
Expiry Date: 14 July 2021
Application No: PLN-21-249
Address: 8 OLD PROCTORS ROAD , TOLMANS HILL
Applicant: Ken Betlehem
Hobart City Council
16 Elizabeth Street
Proposal: Public Toilets, Barbecue Shelter and Associated Works
Representations: Nil
Performance criteria: Utilities Zone - Use and Use Standards

1. Executive Summary

- 1.1 Planning approval is sought for Public Toilets, Barbecue Shelter and Associated Works, at 8 Old Proctors Road, Tolmans Hill.

- 1.2 More specifically the proposal includes:
- Two shelters at the Tolmans Hill Playground with a walkway dividing the two shelters. The entire structure, including access ramps, would have an area of 295m².
 - One shelter would have a roofed area of 113m² and would contain three toilets and a accessible toilet, as well as an open area with picnic tables and a BBQ. A ramp at the front of the building would provide access from the playground and a ramp at the rear of the building would provide access from the car park.
 - The second shelter would have an area of 54m² and would contain picnic tables and a BBQ. A landing with large steps would provide access from the park.
 - The shelters would have a concrete slab with cement sheet and timber slat walls on the north-east elevation and a zincalume roof.
 - Alterations to fencing to accommodate the proposed building. Alongside the ramp, fencing would be the ramp barriers and to the south of the proposed development the fencing would be 1.04m high timber slat fence. Fencing to the north would remain as existing.
 - A new accessible car parking space in the existing car parking area accessed from Old Proctors Road.
 - Associated infrastructure to connect stormwater and sewer.
- 1.3 The proposal relies on performance criteria to satisfy the following standards and codes:
- 1.3.1 Utilities Zone - Use Table, Hours of Operation, External Lighting, Commercial Vehicle Movements, Discretionary Use.
- 1.4 No representations were received during the statutory advertising period between 11 May 2021 and 25 May 2021.
- 1.5 The proposal is recommended for approval subject to conditions.
- 1.6 The final decision is delegated to the Council, because the application involves development on Council owned land.

2. Site Detail

- 2.1 The subject site is the Tolmans Hill playground which located at the entrance to Tolmans Hill on the corner of Old Proctors Road and Woodcutters Road. The site is surrounded by native vegetation, albeit modified vegetation close to nearby roads, with the residential development of Tolmans Hill to the north, Ham Common sports fields to the south and the Southern Outlet to the east.



Figure 1: location of the subject site at 8 Proctors Road, Tolmans Hill (highlighted in yellow).



Figure 2: the subject site at 8 Proctors Road, Tolmans Hill (highlighted in yellow).



Figure 3: the subject site at 8 Proctors Road, Tolmans Hill. The location of the proposed toilets and BBQ shelter are circled in red, however they would be linked together with a walkway.



Figure 4: location of the proposed buildings as viewed from the southern end of the car park. The larger building with adjoining ramp would be sited to the right of the rubbish bins. The existing fence would be demolished.



Figure 5: location of the proposed buildings as viewed from the opposite side of Woodcutters Road.



Figure 6: location of the proposed accessible car parking space in the existing car parking area (outlined in red).



Figure 7: location of the proposed buildings as viewed from the northern side of the playground. The smaller building would be sited on the grassed area in the foreground and the larger building would be sited in the planted area behind, along side the fence line (fence to be demolished at this part). It is proposed to retain the picnic table and park bench.



Figure 8: location of the proposed buildings as viewed from within the playground. The smaller building would be sited on the grassed area on the right side of the red rectangle and the larger building would be sited in the planted area on the left side of the red rectangle. The large tree on the left hand side of the image is listed as a significant tree under the Hobart Interim Planning Scheme 2015.



Figure 9: location of the proposed buildings as viewed from within the playground. The smaller building would be sited on the grassed area on the right side of the red rectangle and the larger building would be sited in the planted area on the left side of the red rectangle. The large tree on the left hand side of the image is listed as a significant tree under the Hobart Interim Planning Scheme 2015.



Figure 10: View towards Olinda Grove and the connector roads to Proctors Road and the Southern Outlet from the play structure at the Tolmans Hill Playground.



Figure 11: view towards the nearby dwellings on the opposite side of

Woodcutters Road from near the existing entrance to the playground.

3. Proposal

- 3.1 Planning approval is sought for Public Toilets, Barbecue Shelter and Associated Works, at 8 Old Proctors Road, Tolmans Hill.
- 3.2 More specifically the proposal is for:
- Two shelters at the Tolmans Hill Playground with a walkway dividing the two shelters. The entire structure, including access ramps, would have an area of 295m².
 - One shelter would have a roofed area of 113m² and would contain three toilets and an accessible toilet, as well as an open area with picnic tables and a BBQ. A ramp at the front of the building would provide access from the playground and a ramp at the rear of the building would provide access from the car park.
 - The second shelter would have an area of 54m² and would contain picnic tables and a BBQ. A landing with large steps would provide access from the park.
 - The shelters would have a concrete slab with cement sheet and timber slat walls on the north-east elevation and a zincalume roof.
 - Alterations to fencing to accommodate the proposed building. Alongside the ramp, fencing would be the ramp barriers and to the south of the proposed development the fencing would be 1.04m high timber slat fence. Fencing to the north would remain as existing.
 - A new accessible car parking space in the existing car parking area accessed from Old Proctors Road.
 - Associated infrastructure to connect stormwater and sewer.

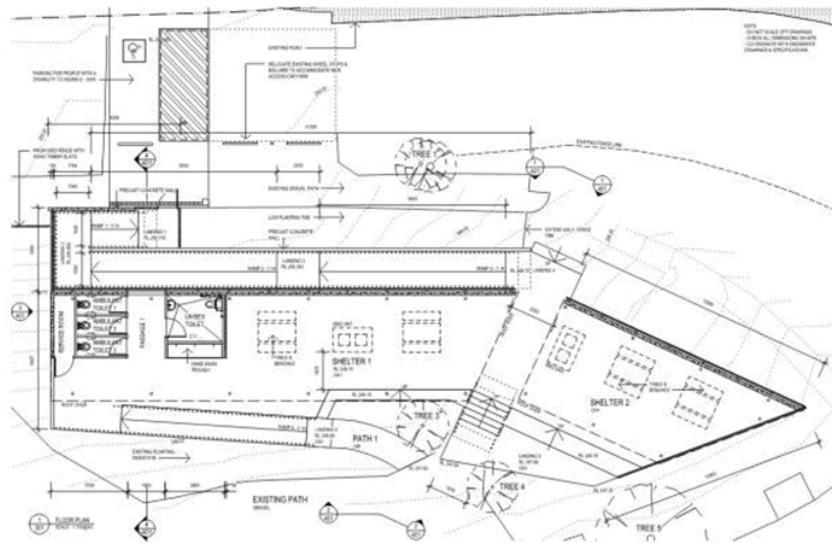


Figure 12: Floor plan of the proposed development at 8 old Proctors Road.

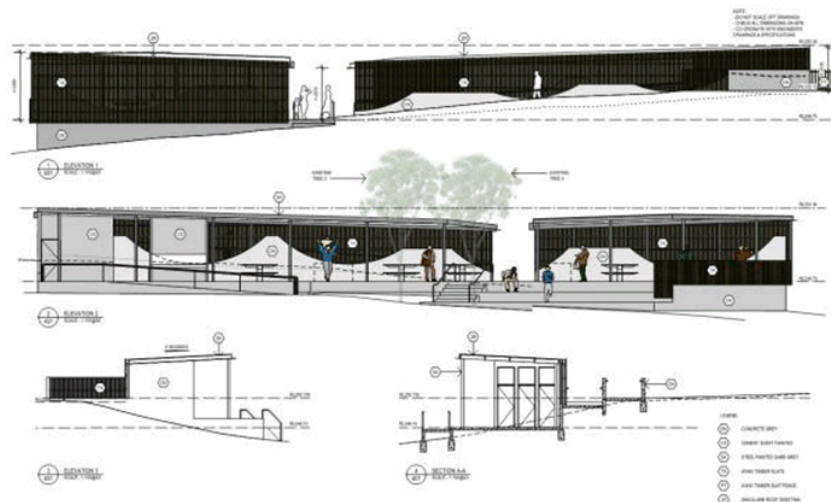


Figure 13: Elevation plans of the proposed development at 8 old Proctors Road.

4. Background

- 4.1 The application was initially lodged in January 2021. This application had to be withdrawn because amendments to the application during the preliminary assessment were not consistent with the plans approved under the application for General Manager Consent.

5. Concerns raised by representors

- 5.1 No representations were received during the statutory advertising period between 11 May 2021 and 25 May 2021.

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 Utilities of the *Hobart Interim Planning Scheme 2015*.
- 6.3 The existing use is Passive Recreation. The proposal is for development only, there would be no change of use. However because the application is for toilets and picnic shelters where there were none previously, it is considered that the application would be an intensification of the existing use. The existing use is a discretionary use in the zone.
- 6.4 The proposal has been assessed against:
- 6.4.1 Part D - 28 Utilities Zone
 - 6.4.2 E6.0 Parking and Access Code
 - 6.4.3 E7.0 Stormwater Management Code
 - 6.4.4 E24.0 Significant Trees Code
- 6.5 The proposal relies on the following performance criteria to comply with the applicable standards:
- 6.5.1 Utilities Zone:
 - Use Table - Part D 28.2*
 - Hours of Operation - Part D 28.3.1.P1*
 - External Lighting - Part D 28.3.3.P1*

Commercial Vehicle Movements - Part D 28.3.4.P1
Discretionary Use - Part D 28.3.5.P1

6.6 Each performance criterion is assessed below.

6.7 Use Table - Part D 28.2

6.7.1 The proposal is for an intensification to the use of an existing playground at 8 Old Proctors Road. This use would fall under the passive recreation use group which is a discretionary use in the Utilities Zone under the Use Table in clause 28.2.

6.7.2 Clause 8.10.2 requires the assessment of discretionary use to have regard to the following:

In determining an application for a permit for a discretionary use the planning authority must, in addition to the matters referred to in subclause 8.10.1, have regard to:

- (a) the purpose of the applicable zone;*
- (b) any relevant local area objective or desired future character statement for the applicable zone;*
- (c) the purpose of any applicable code; and*
- (d) the purpose of any applicable specific area plan,*
but only insofar as each such purpose, local area objective or desired future character statement is relevant to the particular discretion being exercised.

6.7.3 There is no local area objective, desired future character statement or specific area plan that applies to the subject site. As such the proposed use will be assessed against the purpose of the Utilities Zone and the purpose of applicable codes. The zone purpose for the Commercial Zone under clause 28.1.1 is as follows:

28.1.1.1 - To provide land for major utilities installations and corridors.

28.1.1.2 - To provide for other compatible uses where they do not adversely impact on the utility.

28.1.1.3 - To provide for the continued use of the McRobies Gully landfill site for recycling and waste disposal activities and the Cleary's Gates site for Council depot activities.

28.1.1.4 - To maintain an appropriate level of amenity for nearby residential and recreational areas without unreasonable restriction or constraint on the nature and hours of uses allowed in the Zone.

28.1.1.5 - To ensure that building design and form does not have an adverse impact on scenic values.

- 6.7.4 The proposed development would be associated with an existing playground on the site at 8 Old Proctors Road. This location is beside, but separated by topography from the southern outlet and is more closely connected to the residential areas of Tolmans Hill and the Ham Common sports ground. Nevertheless the site is highly accessible to passing traffic on the highway from existing slip lanes and off ramps. It is considered that this would meet clause 28.1.1.2 in that it would provide for a compatible use that would not have an impact on the utility of the Southern Outlet.
- 6.7.5 Clause 28.1.1.4 requires amenity for nearby residential uses to be maintained. It is considered that residential amenity would not be further affected by the presence of BBQ shelters and toilet, because whilst the structures may encourage greater use of the playground, this would be beneficial to the wider community and with normal use of the site, this would not be unreasonably detrimental to ongoing residential uses nearby.
- 6.7.6 The structures have been designed with timber slats on the external wall and dark grey steel frames. Furthermore, the site would be generally screened from nearby roads by established vegetation on the eastern and southern parts of the site. The structures would be more visible from vehicles on woodcutters Road and dwellings nearby the site, however it is considered that the scale and cladding of the buildings would not unreasonably detract from the scenic value of the area.
- 6.7.7 In regards to the purpose of the applicable codes, the relevant provisions for parking and access, stormwater management and significant trees are as follows:

E6.1.1:

- (a) ensure safe and efficient access to the road network for all users, including drivers, passengers, pedestrians and cyclists;*
- (b) ensure enough parking is provided for a use or development to meet the reasonable requirements of users, including people with disabilities;*
- (c) ensure sufficient parking is provided on site to minimise on-street parking and maximise the efficiency of the road network;*
- (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;*

(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;

(f) ensure that vehicle access and parking areas do not adversely impact on amenity, site characteristics or hazards;

(g) recognise the complementary use and benefit of public transport and non-motorised modes of transport such as bicycles and walking;

(h) provide for safe servicing of use or development by commercial vehicles.

E17.1.1

The purpose of this provision is to ensure that stormwater disposal is managed in a way that furthers the objectives of the State Stormwater Strategy.

E24.1.1:

The purpose of this provision is to recognize and protect trees that are considered to be significant for reasons including; aesthetics, size, age, species, cultural value or contribution to the streetscape, townscape or public amenity.

- 6.7.8 For a full assessment of the discretionary aspects of the relevant codes, see the relevant sections of this report below. However in summary, it is considered that the provision of carparking would be adequate for the ongoing use of the playground. Whilst the car parking area is small, it is considered that there is a low demand for on-street car parking and there would be sufficient parking in the area to accommodate any increase in car parking from the inclusion of the proposed amenities. It is proposed that stormwater would connect to the existing stormwater infrastructure at the kerb in Woodcutters Road. The nearby significant tree would be protected during construction works.
- 6.7.7 The proposal complies with the performance criterion.
- 6.8 Hours of Operation - Part D 28.3.1.P1
 - 6.8.1 The acceptable solution at clause 28.3.1.A1 requires a use within 50m of a residential zone must be within 7am and 7pm.
 - 6.8.2 The proposal includes the development of toilet and BBQ shelters for an existing playground that would have a minimum setback of 21m from the

adjoining Low Density Residential Zone.

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 28.3.1.P1 provides as follows:

Hours of operation of a use within 50m of a residential zone must not have an unreasonable impact upon the residential amenity of land in a residential zone through commercial vehicle movements, noise or other emissions that are unreasonable in their timing, duration or extent.

6.8.5 The subject site adjoins a low density residential zone which encompasses Tolmans Hill. To the north-west of the playground, residential development has been established (figure 14). The land to the west is currently undeveloped, however it is earmarked for development under Stage 28 of the Tolmans Hill Local Area Plan.



Figure 14: Zoning of land in relation to the Tolmans Hill Playground. Yellow represents land zoned utilities and pink represents land zoned low density residential. The site of the proposed development is indicated by the blue polygon.

- 6.8.6 The proposed development would be associated with an existing playground. Whilst this playground is accessible at all hours, it is likely that future use of the park would continue to be primarily during the day, which would be within the permitted hours of 7am to 7pm. However, the development of covered barbeque facilities and toilets would support use of the area into the evening, particularly in summer. Nevertheless, there would be no change to the overall use of the site and with normal use as a playground, the primary users of the site would be families with young children. It is considered that the noise generated by this kind of use would not be incompatible with nearby residential use.
- 6.8.7 The design features a timber slat wall on the north-west and west elevations, the elevations facing the low density residential zone. Whilst the walls would remain some transparency, it is considered that they would reduce noise emissions from the picnic area and parts of the playground from within the residential zone.
- 6.8.8 In regards to commercial vehicle movements, it is considered that this would predominantly consist of waste collection and cleaning and gardening services. Such movements would not generate high levels of noise and the proximity of the carpark to the highway and the proposed amenities would minimise the duration of vehicle noise near the residential zone.
- 6.8.9 It is considered that an intensification of the use of the existing playground would not be detrimental to residential amenity in the adjoining low density residential zone through noise, commercial vehicle movements or other emissions.
- 6.8.10 The proposal complies with the performance criterion.
- 6.9 External Lighting - Part D 28.3.3.P1
- 6.9.1 The acceptable solution at clause 28.3.3.A1 requires external lighting other than security lighting to be turned off between 10pm and 6am and for security lighting to be baffled.
- 6.9.2 The proposal does not include detail about external lighting.
- 6.9.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
- 6.9.4 The performance criterion at clause 28.3.3.P1 provides as follows:

External lighting within 50m of a residential zone must not adversely affect the amenity of adjoining residential areas, having regard to all of the following:

- a) level of illumination and duration of lighting;*
- b) distance to habitable rooms in an adjacent dwelling.*

- 6.9.5 As the proposed development is associated with an existing outdoor playground, it is unlikely that lighting (other than security lighting) would be required outside of the permitted hours. It is also considered that the orientation of the shelters, over the playground and away from the adjoining residential zone would minimise the impact of any lighting on residential amenity. As such, there would be no conflict with the performance criteria subject to a condition to minimise potential impact on nearby residential land.
- 6.9.6 The proposal complies with the performance criterion.
- 6.10 Commercial Vehicle Movements - Part D 28.3.4.P1
- 6.10.1 The acceptable solution at clause 28.3.4.A1 requires commercial vehicle movements within 50m of a residential zone to be between the hours of 7am to 7pm Monday to Friday, 9am and 5pm Saturday and not on Sundays and public holidays.
- 6.10.2 The proposal does not include .
- 6.10.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
- 6.10.4 The performance criterion at clause 28.3.4.P1 provides as follows:

Commercial vehicle movements, (including loading and unloading and garbage removal) to or from a site within 50 m of a residential zone must not result in unreasonable adverse impact upon residential amenity having regard to all of the following:

- (a) the time and duration of commercial vehicle movements;*
- (b) the number and frequency of commercial vehicle movements;*
- (c) the size of commercial vehicles involved;*
- (d) the ability of the site to accommodate commercial vehicle turning movements, including the amount of reversing (including associated warning noise);*
- (e) noise reducing structures between vehicle movement areas*

- and dwellings;*
- (f) the level of traffic on the road;*
- (g) the potential for conflicts with other traffic.*

- 6.10.5 In regards to commercial vehicle movements, it is considered that this would predominantly consist of waste collection and cleaning and gardening services. Such movements would not generate high levels of noise and would predominantly be within business hours. Furthermore, and the proximity of the carpark to the highway and the proposed amenities would minimise the duration of vehicle noise near the residential zone. As such, there would be no conflict with the performance criteria.
- 6.10.6 The proposal complies with the performance criterion.
- 6.11 Discretionary Use - Part D 28.3.5.P1
- 6.11.1 There is no acceptable solution for a discretionary use in the Utilities Zone.
- 6.11.2 The proposal includes intensification of an existing playground. This falls under the Passive Recreation use group, which is a discretionary use in the Utilities Zone.
- 6.11.3 There is no acceptable solution; therefore assessment against the performance criterion is relied on.
- 6.11.4 The performance criterion at clause 28.3.5.P1 provides as follows:
- Discretionary use must not compromise or reduce the operational efficiency of an existing or intended utility having regard to all of the following:*
- a) the compatibility of the utility and the proposed use;*
 - b) the location of the proposed use in relation to the utility;*
 - c) any required buffers or setbacks;*
 - d) access requirements*
- 6.11.5 The proposed development would be sited within an existing, established playground and is not considered to be a sensitive use. This playground is accessed from Woodcutters Road and does not have direct access from the main carriageway of the Southern Outlet. Furthermore the site is separated from the Southern Outlet by topography and established vegetation. As such, it is considered that the proposed development and

its location would not be incompatible with the on going use of the utility. Further buffers or access is not considered to be necessary in this instance.

6.11.6 The proposal complies with the performance criterion.

7. Discussion

- 7.1 Planning approval is sought for Public Toilets, Barbecue Shelter and Associated Works, at 8 Old Proctors Road, Tolmans Hill.
- 7.2 The application was advertised and no representations were received.
- 7.3 The proposal has been assessed against the relevant provisions of the planning scheme and is considered to perform well.
- 7.4 The proposal has been assessed by other Council officers, including the Council's Development Engineer, Cultural Heritage Officer, and Stormwater Services Engineer, Parks Planner and Environmental Development Planner. The officers have raised no objection to the proposal, subject to conditions.

The proposed development would be sited near a tree listed under the Significant Tree Code. No lopping, pruning, removal injury or destruction of the significant tree is proposed and as such the code would not apply. Nevertheless the Council's Cultural Heritage officer has provided the following comments.

A significant tree is located nearby to proposed development. The significant tree is noted as being retained on the drawings. Lopping or cutting of the tree is not proposed. The proposed development is well beyond the significant tree and I do not have concerns regarding the loss of significant cultural heritage values.

This application satisfies E 24.6 (f) and (d) and is recommended for approval with a condition to ensure fencing, as drawn, is installed to the satisfaction of Councils Arborist prior to, and for the duration of, the works.

- 7.5 The proposal is recommended for approval.

8. Conclusion

- 8.1 The proposed Public Toilets, Barbecue Shelter and Associated Works, at 8 Old Proctors Road, Tolmans Hill 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 Public Toilets, Barbecue Shelter and Associated Works, at 8 Old Proctors Road, Tolmans Hill. 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-21-249 - 8 OLD PROCTORS ROAD TOLMANS HILL TAS 7007 - 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 2021/00582-HCC dated 23 April 2021 as attached to the permit.

Reason for condition

To clarify the scope of the permit.

PLN 17

Lighting and security lighting must operate in accordance with Australian Standard AS4282- Control of the obtrusive effects of outdoor lighting.

Reason for condition

To ensure that the non-residential use does not unreasonably impact residential amenity.

ENG sw1

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

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

Reason for condition

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

ENG 3a

Prior to commencement of use, the parking module(s) must be designed and constructed in accordance with Australian Standard AS/NZS2890.1:2004 and AS/NZS2890.6:2009.

Reason for condition

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

ENG 4

Prior to commencement of use (whichever occurs first), the access and parking module (parking space for people with disabilities) 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.

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

All 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, prior to commencement of use.

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.**

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.

ENV 10

To ensure the protection of trees not approved for removal, in particular the large Blue Gum (*Eucalyptus globulus*), a Tree Protection Plan must be submitted and approved as a Condition Endorsement prior to the issuing of any consent under the Building Act. The Tree Protection Plan must include (but is not limited to) details in relation to the following:

1. installation of tree protection fencing around the Blue Gum, at a distance from the trunk that avoids compaction to the roots, with the installation to occur before works commence and the fencing maintained in position for the duration of the works,
2. the location of the site office and amenities, storage and stockpile areas, machinery storage, washing areas for chemicals, parking etc. outside the tree protection fencing,
3. the location of site access and circulation,
4. no works occurring within the tree protection fencing, and
5. the location of two new trees to replace every tree to be removed during the development.

All work required by this condition must be undertaken in accordance with the approved Tree Protection Plan.

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

Note also condition HER 18 below.

Reason for condition

To ensure the development does not result in unnecessary or unacceptable loss of priority biodiversity or significant cultural values.

ENV 1

Sediment and erosion control measures sufficient to prevent sediment from leaving the site must be installed prior to any disturbance of the site, and maintained until all areas of disturbance have been stabilized or re-vegetated.

Advice: For further guidance in preparing a Soil and Water Management Plan – in accordance with Fact sheet 3 Derwent Estuary Program click [here](#).

Reason for condition

To avoid the sedimentation of roads, drains, natural watercourses, Council land that could be caused by erosion and runoff from the development, and to comply with relevant State legislation.

HER 18

The large *Eucalyptus globulus* (Blue Gum) tree at the center of the circular footpath must be protected throughout excavation and post construction.

A notation must be added to construction documentation, and that documentation must be submitted and approved as a Condition Endorsement prior to the commencement of work. The notation must;

1. **Clearly identify that the tree is a Significant Tree and protected by E 24.0 in the Interim Planning Scheme, 2015.**
2. **Clearly state that the tree is to be retained and protected during works as per Her 18.**

All work required by this condition must be undertaken in accordance with the approved and notated construction documentation

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

Note also condition ENV 10 above.

Reason for condition

To ensure that significant trees are not unnecessarily destroyed and are managed in a way that maintains their health and appearance.

ADVICE

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

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

BUILDING PERMIT

You may need building approval in accordance with the *Building Act 2016*. Click [here](#) for more information.

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

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

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

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.

WORK WITHIN THE HIGHWAY RESERVATION

Please note development must be in accordance with the Hobart City Council's Infrastructure By law. Click [here](#) for more information.

DRIVEWAY SURFACING OVER HIGHWAY RESERVATION

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

COUNCIL RESERVES

A separate Public Spaces By-law permit to undertake works will be required before works commence. Please allow two weeks for a permit application to be assessed. There may be charges associated with the by-law permit. The permit application form can be found [here](#) or; <https://www.hobartcity.com.au/Community/Parks-reserves-and-sporting-facilities/Apply-for-a-permit>.

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.



(Michaela Nolan)

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: 31 May 2021

Attachment(s):

Attachment B - CPC Agenda Documents

Attachment C - Planning Referral Officer Development Engineering Report



Submission to Planning Authority Notice

Council Planning Permit No.	PLN-21-249	Council notice date	16/04/2021
TasWater details			
TasWater Reference No.	TWDA 2021/00582-HCC	Date of response	23/04/2021
TasWater Contact	Phil Papps	Phone No.	0474 931 272
Response issued to			
Council name	CITY OF HOBART		
Contact details	coh@hobartcity.com.au		
Development details			
Address	8 OLD PROCTORS RD, TOLMANS HILL	Property ID (PID)	0
		Volume/Folio	174041/1
Description of development	Public Toilets, Barbecue Shelter and Associated Works		
Schedule of drawings/documents			
Prepared by	Drawing/document No.	Revision No.	Date of Issue
HCC	Location Plan / 201	C	14/04/2021
HCC	Concept Services Plan / 203	C	14/04/2021
Conditions			
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:			
CONNECTIONS, METERING & BACKFLOW			
<ol style="list-style-type: none"> 1. A suitably sized water supply with metered connections and sewerage system and connections to the development must be designed and constructed to TasWater's satisfaction and be in accordance with any other conditions in this permit. 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. 			
DEVELOPMENT ASSESSMENT FEES			
<ol style="list-style-type: none"> 4. The applicant or landowner as the case may be, must pay a development assessment fee of \$211.63 to TasWater, as approved by the Economic Regulator and the fee will be indexed, until the date paid to TasWater. The payment is required within 30 days of the issue of an invoice by TasWater. 			
Advice			
General			
For information on TasWater development standards, please visit http://www.taswater.com.au/Development/Development-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 this infrastructure as shown on the GIS is indicative only.

- (a) A permit is required to work within TasWater's easements or in the vicinity of its infrastructure.

Further information can be obtained from TasWater

- (b) TasWater has listed a number of service providers who can provide asset detection and location services should you require it. Visit www.taswater.com.au/Development/Service-location for a list of companies.

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

Phone	13 6992	Email	development@taswater.com.au
Mail	GPO Box 1393 Hobart TAS 7001	Web	www.taswater.com.au

PROJECT

'TOLMANS HILL PARK - TOILETS
& BBQ SHELTERS'

CoH CONTRACT NO.

N/A

PURPOSE

- THIS SET OF DRAWINGS & SPECIFICATIONS DESCRIBES THE SCOPE OF WORKS AND ARE FOR THE PURPOSES OF DEVELOPMENT APPLICATION
- THESE DRAWINGS ARE NOT FOR CONSTRUCTION

ISSUE

F - DEVELOPMENT APPLICATION - 05/05/2021

ADDRESS	TOLMANS HILL PARK
PID	N/A
TITLE REF	174041/1
LAND OWNER	CITY OF HOBART
LAND OWNER CONSENT	RECEIVED
PROJECT ARCHITECT CoH	KEN BETLEHEM - DESIGN SERVICES - CoH
PROJECT MANAGER CoH	TBA
STRUCTURAL ENGINEER	JULIAN KONG - CITY OF HOBART
HYDRAULIC ENGINEER	TBA
ELECTRICAL ENGINEER	TBA
PLANNING PERMIT	REQUIRED
BUILDING PERMIT	REQUIRED
PLUMBING PERMIT	REQUIRED

DRAWING REGISTER

ARCHITECTURAL DRAWINGS BY DESIGN SERVICES - CITY OF HOBART

19-0050-A100	TITLE PAGE
19-0050-A201	LOCATION PLAN
19-0050-A202	SITE PLAN
19-0050-A203	CONCEPT SERVICES PLAN
19-0050-A301	FLOOR PLAN
19-0050-A401	ELEVATIONS & SECTION

<table><tr><th>No</th><th>Revision Description</th><th>Date</th></tr><tr><td>1</td><td>PROPOSAL</td><td>01/01/21</td></tr><tr><td>2</td><td>ADDITIONAL INFORMATION</td><td>01/01/21</td></tr><tr><td>3</td><td>ADDITIONAL INFORMATION</td><td>01/01/21</td></tr><tr><td>4</td><td>ADDITIONAL INFORMATION</td><td>01/01/21</td></tr><tr><td>5</td><td>ADDITIONAL INFORMATION</td><td>01/01/21</td></tr><tr><td>6</td><td>ADDITIONAL INFORMATION</td><td>01/01/21</td></tr><tr><td>7</td><td>ADDITIONAL INFORMATION</td><td>01/01/21</td></tr><tr><td>8</td><td>ADDITIONAL INFORMATION</td><td>01/01/21</td></tr><tr><td>9</td><td>ADDITIONAL INFORMATION</td><td>01/01/21</td></tr><tr><td>10</td><td>ADDITIONAL INFORMATION</td><td>01/01/21</td></tr></table>			No	Revision Description	Date	1	PROPOSAL	01/01/21	2	ADDITIONAL INFORMATION	01/01/21	3	ADDITIONAL INFORMATION	01/01/21	4	ADDITIONAL INFORMATION	01/01/21	5	ADDITIONAL INFORMATION	01/01/21	6	ADDITIONAL INFORMATION	01/01/21	7	ADDITIONAL INFORMATION	01/01/21	8	ADDITIONAL INFORMATION	01/01/21	9	ADDITIONAL INFORMATION	01/01/21	10	ADDITIONAL INFORMATION	01/01/21	 <p>City of HOBART</p>		<p>HOBART COUNCIL CENTRE 16 ELIZABETH STREET GPO BOX 500 T: (03) 6258 2711 F: (03) 6254 9727 E: hobart@hobartcity.com.au www.hobartcity.com.au</p>		<h1>ISSUE: DEVELOPMENT APPLICATION</h1>		<table><tr><td colspan="2">Project Description</td><td>RFQ Number</td></tr><tr><td colspan="2">TOLMANS HILL PARK - TOILETS & BBQ SHELTERS</td><td>RFQ 19-0050</td></tr><tr><td>Drawing Title</td><td>Author</td><td>Check</td></tr><tr><td rowspan="2">TITLE PAGE</td><td>N/A</td><td>A</td></tr><tr><td></td><td></td></tr><tr><td>Client</td><td>Date</td><td>Revision</td></tr><tr><td>CITY AMENITY</td><td>05/05/2021</td><td>101</td></tr></table>		Project Description		RFQ Number	TOLMANS HILL PARK - TOILETS & BBQ SHELTERS		RFQ 19-0050	Drawing Title	Author	Check	TITLE PAGE	N/A	A			Client	Date	Revision	CITY AMENITY	05/05/2021	101
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CITY AMENITY	05/05/2021	101																																																													



1 LOCATION PLAN
SCALE: 1:2000 @ A3

No	Revision Description	Date
1	PROPOSED WORKS	05/05/2021
2	EXISTING INFRASTRUCTURE	05/05/2021
3	NEW INFRASTRUCTURE APPLICATION	05/05/2021
4	EXISTING INFRASTRUCTURE	05/05/2021
5	NEW INFRASTRUCTURE APPLICATION	05/05/2021
6	EXISTING INFRASTRUCTURE	05/05/2021

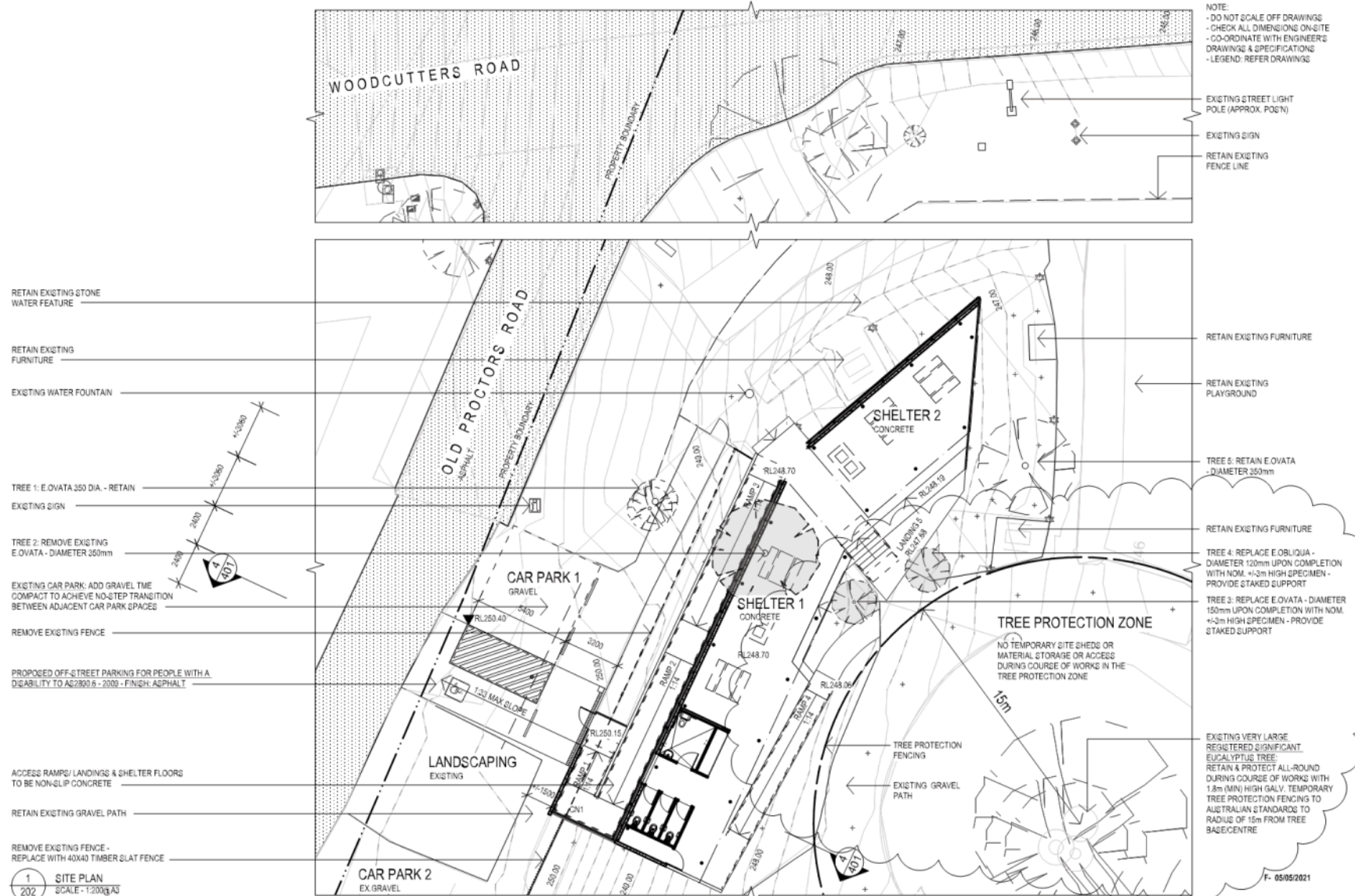


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E: hough.hobartcity.com.au
www.hobartcity.com.au



ISSUE: DEVELOPMENT APPLICATION

Project Description	File Number
TOLMANS HILL PARK - TOILETS & BBQ SHELTERS	RF210-0350
Drawing Title	LOCATION PLAN
Scale	1:2000 @ A3
Date	05/05/2021
Author	KB
Checker	BP
Reviewer	201 F



F: 05/05/2021

No.	Revision Description	Date
1	PROPOSED WORKS	05/05/2021
2	EXISTING INFORMATION	05/05/2021
3	NEW DEVELOPMENT APPLICATION	05/05/2021
4	EXISTING INFORMATION	05/05/2021
5	EXISTING INFORMATION	05/05/2021
6	EXISTING INFORMATION	05/05/2021



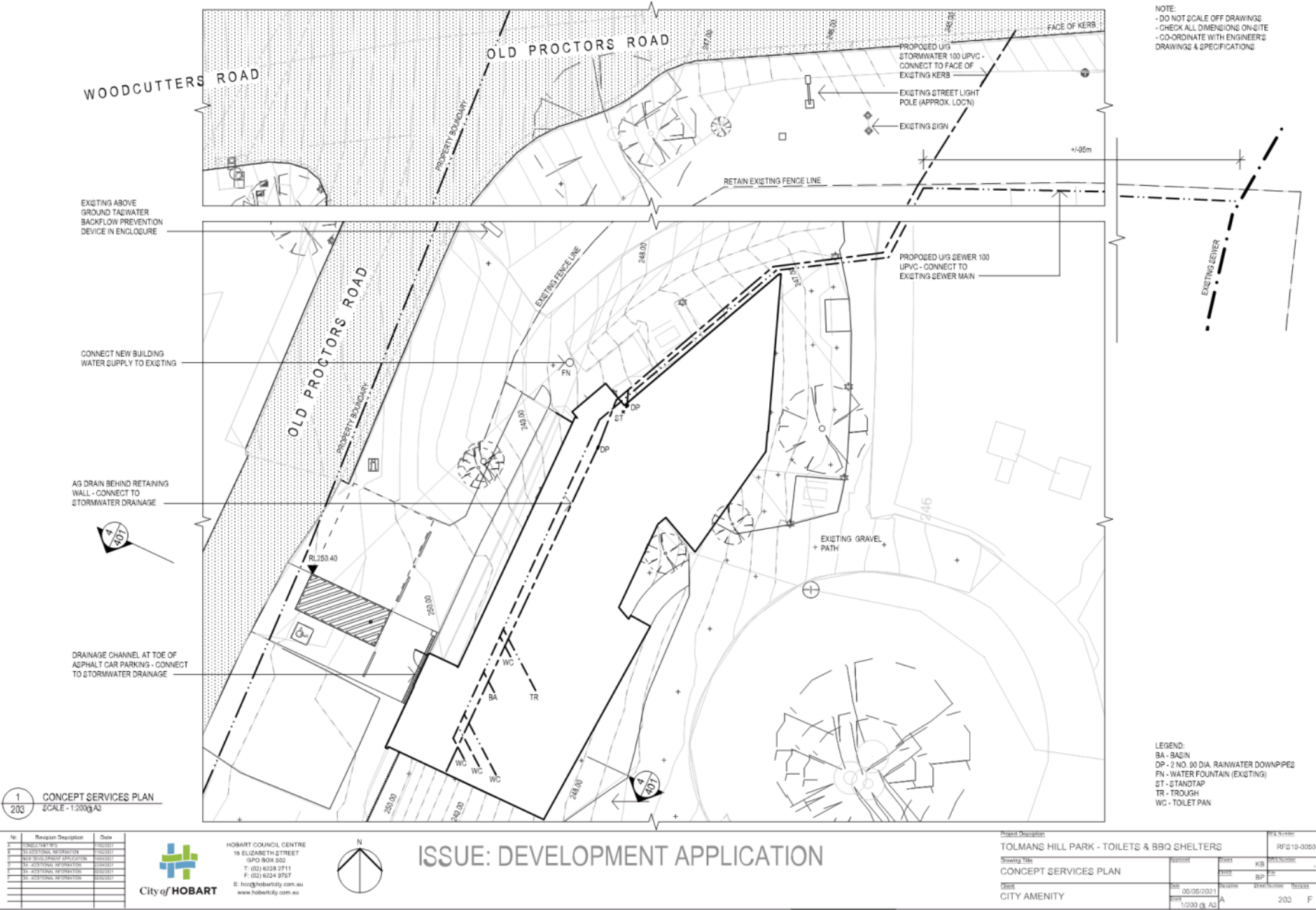
City of HOBART

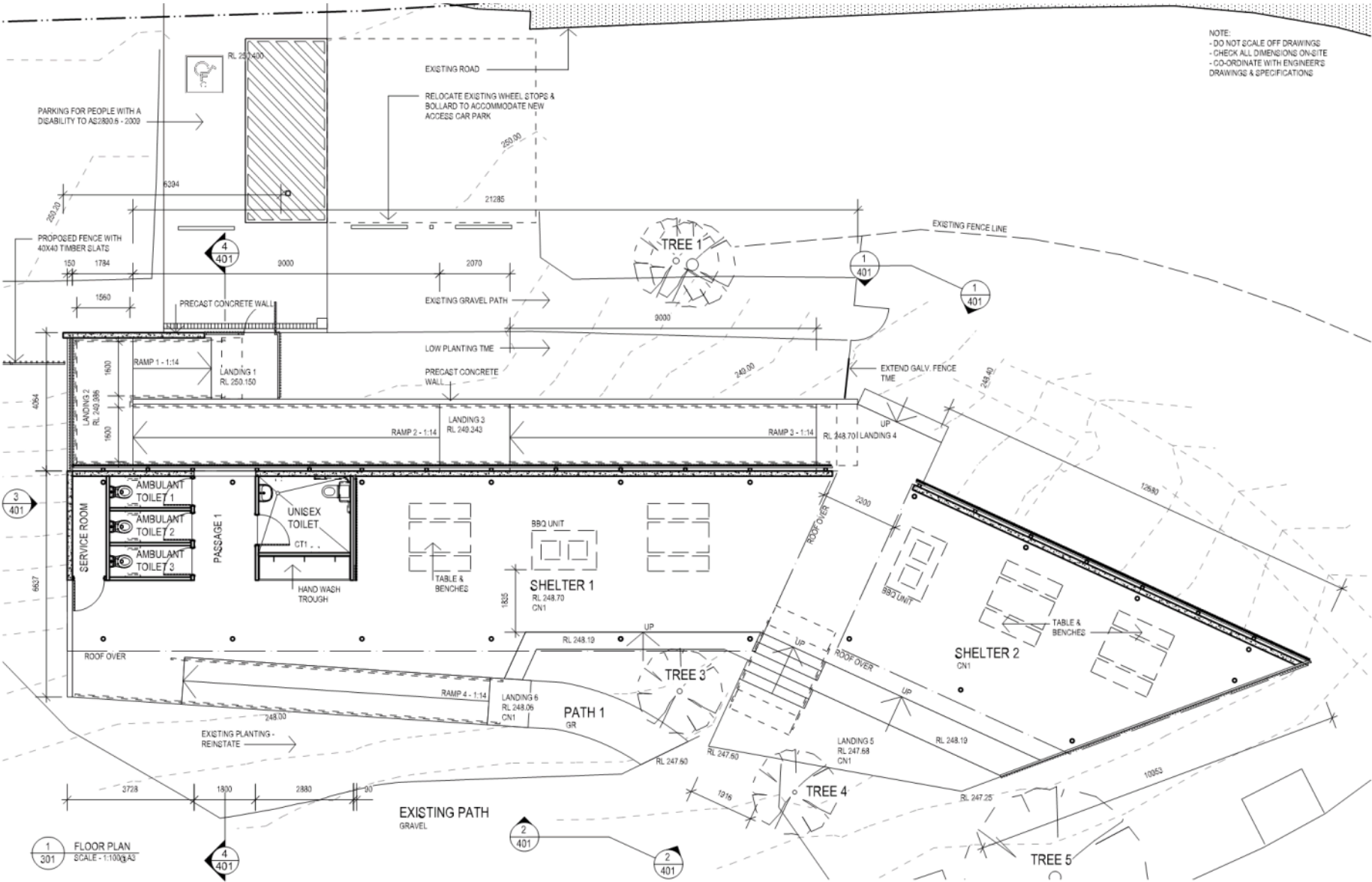
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ISSUE: DEVELOPMENT APPLICATION

Project Description		Project Number	
TOLMANS HILL PARK - TOILETS & BBQ SHELTERS		RF010-0350	
Drawing Title	Author	Drawn	KB
SITE PLAN		Check	BP
Date	05/05/2021	Revision	
CITY AMENITY	1/200 @ A3	202	F





No.	Revision Description	Date
1	PROPOSED SITE	20/05/2021
2	PROPOSED SITE	20/05/2021
3	PROPOSED SITE	20/05/2021
4	PROPOSED SITE	20/05/2021
5	PROPOSED SITE	20/05/2021
6	PROPOSED SITE	20/05/2021
7	PROPOSED SITE	20/05/2021
8	PROPOSED SITE	20/05/2021
9	PROPOSED SITE	20/05/2021
10	PROPOSED SITE	20/05/2021



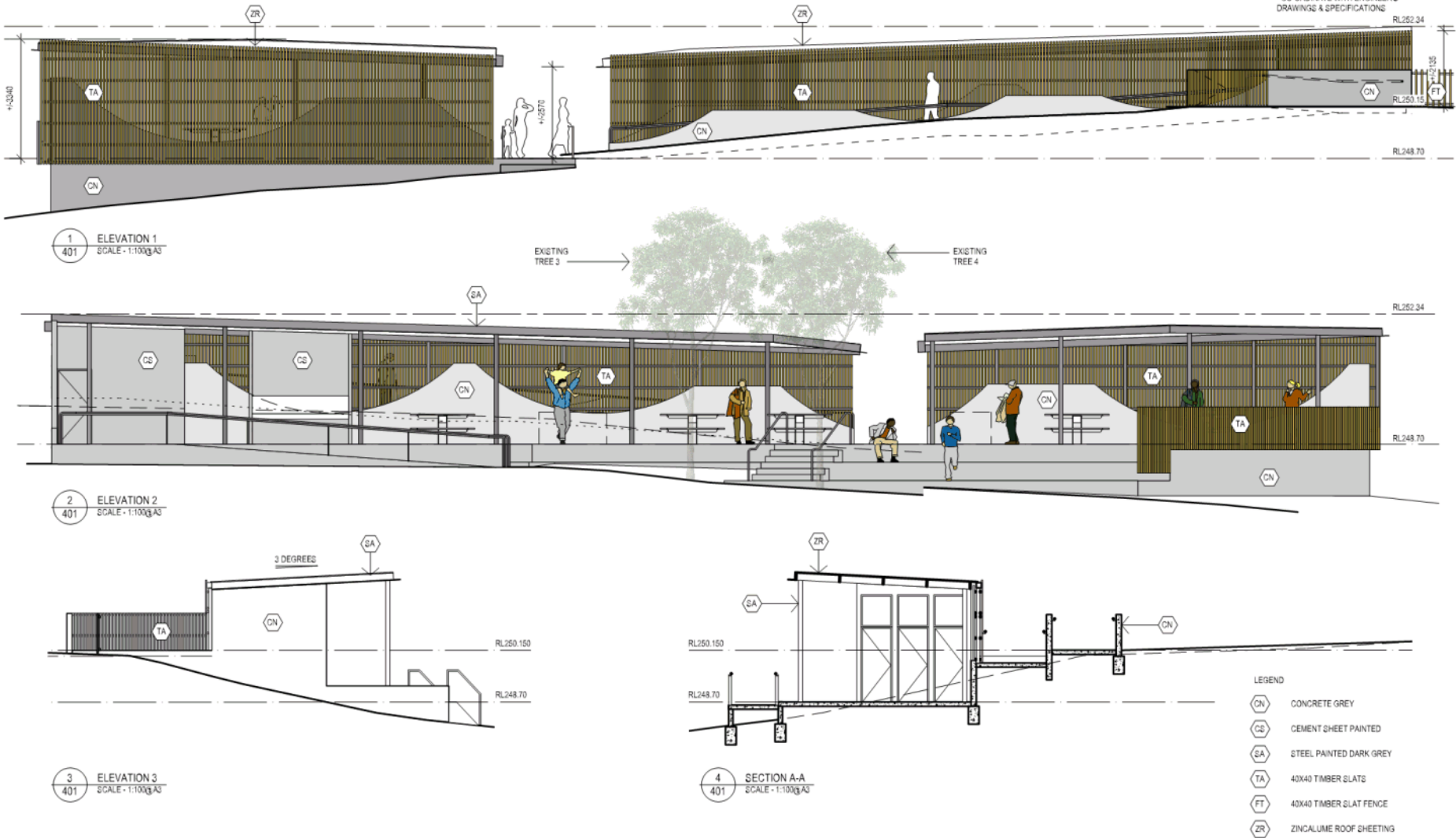
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ISSUE: DEVELOPMENT APPLICATION

Project Information		Project Number	
TOLMANS HILL PARK - TOILETS & BBO SHELTERS		RFD 19-0000	
Client	CITY AMENITY	Design	RF
Drawn	1/100, 06/06/2021	Check	06/06/2021
Scale	1/100, 06/06/2021	Drawn	06/06/2021

NOTE:
- DO NOT SCALE OFF DRAWINGS
- CHECK ALL DIMENSIONS ON-SITE
- CO-ORDINATE WITH ENGINEER'S
DRAWINGS & SPECIFICATIONS



No.	Revision Description	Date
1	PROPOSED NEW	15/06/2021
2	REVISIONS	15/06/2021
3	REVISIONS	15/06/2021
4	REVISIONS	15/06/2021
5	REVISIONS	15/06/2021
6	REVISIONS	15/06/2021
7	REVISIONS	15/06/2021
8	REVISIONS	15/06/2021
9	REVISIONS	15/06/2021
10	REVISIONS	15/06/2021

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ISSUE: DEVELOPMENT APPLICATION

Project Information		Project Number	
TOLMANS HILL PARK - TOILETS & BBO SHELTERS		RFD 19-0000	
Drawing Title		DATE	REV
ELEVATIONS & SECTION		05/06/2021	401
CITY AMENITY		1/100, 06 AS	F



Enquiries to: Ken Betlehem
Phone: (03) 6238 2461
Email: betlehemk@hobartcity.com.au

14 April 2021

Ben Ikin (City of Hobart)
GPO Box 503
HOBART Tasmania 7001

Dear Ben

**DEVELOPMENT APPLICATION FOR 8 OLD PROCTORS ROAD, TOLMANS HILL
– PUBLIC TOILETS, BARBECUE SHELTERS AND ASSOCIATED WORKS**

Please find attached drawings 19-0050-A101/ A201/ A202/ A203/ A301 & A401 inclusive of General Managers Consent GMC-21-26 dated 09/04/2021.

These drawings and associated documents are for the purposes of lodging a Development Application with the City of Hobart on behalf of City Amenity, City of Hobart and its interest in further developing its land at Tolmans Hill Park for the benefit of the community.

Note that the plans submitted have been considered from a disability access perspective providing access from Old Proctors Road into the proposed toilets & shelters in accordance with AS1428.1.

Assisted access will be required from the proposed toilets & shelters into the existing playground.

All the matters raised in an earlier RFI about the now withdrawn Development Application PLN-21-8 regarding this same project scope are addressed in these documents including:

- Taswater request for additional information
- a site plan showing the full extent of the proposed stormwater and sewer infrastructure in relation to lot boundaries
- information as requested in relation to the existing trees

If you have any queries please do not hesitate to make contact.

Yours faithfully

A handwritten signature in black ink, appearing to be "KB", written over a light blue grid background.

(Ken Betlehem)
PROJECT ARCHITECT
CITY PLANNING

Hobart Town Hall
50 Macquarie Street
Hobart TAS 7000

Hobart Council Centre
16 Elizabeth Street
Hobart TAS 7000

City of Hobart
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F 03 6234 7109
E coh@hobartcity.com.au
W hobartcity.com.au

CityofHobartOfficial
ABN 39 055 343 428
Hobart City Council



Enquiries to: Ken Betlehem
Phone: (03) 6238 2461
Email: betlehemk@hobartcity.com.au

05 May 2021

Ben Ikin (City of Hobart)
GPO Box 503
HOBART Tasmania 7001

Dear Ben

**DEVELOPMENT APPLICATION FOR 8 OLD PROCTORS ROAD, TOLMANS HILL
– PUBLIC TOILETS, BARBECUE SHELTERS AND ASSOCIATED WORKS**

Please find attached drawings 19-0050-A101/ A201/ A202/ A203/ A301 & A401- Issue 'F'.

These drawings and associated documents are for the purposes of lodging a Development Application with the City of Hobart on behalf of City Amenity, City of Hobart and its interest in further developing its land at Tolmans Hill Park for the benefit of the community.

All the matters raised in a series of RFI's received by myself are now addressed in these documents including:

- Formation of a Tree Protection Zone around the very large significant tree adjacent the works zone has been discussed with Megan Baynes and Ruby Wilson and now forms part of the proposed works
- Matters relating to stormwater and parking have been resolved in conversation with Tony Yan – Tony has made allowance in this instance for retaining the existing gravel parking in its present form – all other new hard-stand areas will be drained to the existing stormwater system

If you have any queries please do not hesitate to make contact.

Yours faithfully

A handwritten signature in black ink, appearing to read "KB", with a stylized flourish at the end.

(Ken Betlehem)
PROJECT ARCHITECT
CITY PLANNING

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CityofHobartOfficial
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Hobart City Council

Planning: #229528

Property

8 OLD PROCTORS ROAD TOLMANS HILL TAS 7007

People

Applicant

*

Ken Betlehem
Hobart City Council
16 Elizabeth Street
HOBART TAS 7000
6238 2461
betlehemk@hobartcity.com.au

Owner

*

Ken Betlehem
Hobart City Council
16 Elizabeth Street
HOBART TAS 7000
6238 2461
betlehemk@hobartcity.com.au

Entered By

Ken Betlehem
Hobart City Council
16 Elizabeth Street
HOBART TAS 7000
6238 2461
betlehemk@hobartcity.com.au

Use

Other

Details

Have you obtained pre application advice?

☒ No

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

Are you applying for permitted visitor accommodation as defined by the State Government Visitor Accommodation Standards? Click on help information button for definition. If you are not the owner of the property you MUST include signed confirmation from the owner that they are aware of this application.

*

<input type="radio"/> No		
Is the application for SIGNAGE ONLY? If yes, please enter \$0 in the cost of development, and you must enter the number of signs under Other Details below.		
<input type="radio"/> No		
If this application is related to an enforcement action please enter Enforcement Number		
Details		
What is the current approved use of the land / building(s)?		
Utilities		
Please provide a full description of the proposed use or development (i.e. demolition and new dwelling, swimming pool and garage)		
Proposed public toilets and BBQ shelters located adjacent to Tolmans Hill Park		
Estimated cost of development		
400000.00		
Existing floor area (m2)	Proposed floor area (m2)	Site area (m2)
0.00	297.00	38532
Carparking on Site		
		N/A
Total parking spaces	Existing parking spaces	<input type="checkbox"/> Other (no selection chosen)
6	6	
Other Details		
Does the application include signage?		
<input type="radio"/> No		
How many signs, please enter 0 if there are none involved in this application?		
0		
Tasmania Heritage Register		
Is this property on the Tasmanian Heritage Register?		
<input type="radio"/> No		
Documents		
Required Documents		
Title (Folio text and Plan and Schedule of Easements)		
8 Proctors Title.pdf		
Plans (proposed, existing)		
TOLMANS HILL_NEW DA_DRAWINGS.pdf		
GM or Crown consent		
GMC-21-26 - 8 OLD PROCTORS ROAD TOLMANS HILL TAS 7007 - Notice of Land Owner Consent to Lodge a Planning Application (Including Documentation).PDF		
Covering Letter		
TOLMANS HILL_NEW DA_COVER LETTER.pdf		



Enquiries to: City Planning
Phone: (03) 6238 2715
Email: coh@hobartcity.com.au

9 April 2021

Shannon Avery (City of Hobart)
16 Elizabeth Street
HOBART TAS 7000

<mailto:averys@hobartcity.com.au>

Dear Sir/Madam

**8 OLD PROCTORS ROAD, TOLMANS HILL - WORKS ON COUNCIL LAND NOTICE OF
LAND OWNER CONSENT TO LODGE A PLANNING APPLICATION - GMC-21-26**

Site Address:

8 Old Proctors Road, Tolmans Hill
(Tolmans Hill Playground)

Description of Proposal:

New Toilets and BBQ Shelter

Applicant Name:

Shannon Avery
obo City of Hobart

PLN (if applicable):

N/A

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 as the statutory planning authority.

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 CityofHobartOfficial
ABN 39 055 343 428
Hobart City Council

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



(Tim Short)

ACTING GENERAL MANAGER

Relevant documents/plans:

Brian Pigden - Plans RFS19-0050

**PROJECT**

'TOLMANS HILL PARK - TOILETS & BBQ SHELTERS'

CoH CONTRACT NO.

N/A

PURPOSE

- THIS SET OF DRAWINGS & SPECIFICATIONS DESCRIBES THE SCOPE OF WORKS AND ARE FOR THE PURPOSES OF DEVELOPMENT APPLICATION
- THESE DRAWINGS ARE NOT FOR CONSTRUCTION

ISSUE

DEVELOPMENT APPLICATION - 11/03/2021

ADDRESS	TOLMANS HILL PARK
PID	N/A
TITLE REF	174041/1
LAND OWNER	CITY OF HOBART
LAND OWNER CONSENT	RECEIVED
PROJECT ARCHITECT CoH	KEN BETLEHEM - DESIGN SERVICES - CoH
PROJECT MANAGER CoH	TBA
STRUCTURAL ENGINEER	JULIAN KONG - CITY OF HOBART
HYDRAULIC ENGINEER	TBA
ELECTRICAL ENGINEER	TBA
PLANNING PERMIT	REQUIRED
BUILDING PERMIT	REQUIRED
PLUMBING PERMIT	REQUIRED

DRAWING REGISTER

ARCHITECTURAL DRAWINGS BY DESIGN SERVICES - CITY OF HOBART

19-0050-A100	TITLE PAGE
19-0050-A201	LOCATION PLAN
19-0050-A202	SITE PLAN
19-0050-A203	CONCEPT SERVICES PLAN
19-0050-A301	FLOOR PLAN
19-0050-A401	ELEVATIONS & SECTION

No.	Revision Description	Date
1	PROPOSED WORK	11/03/21
2	BY ADDITIONAL INFORMATION	11/03/21



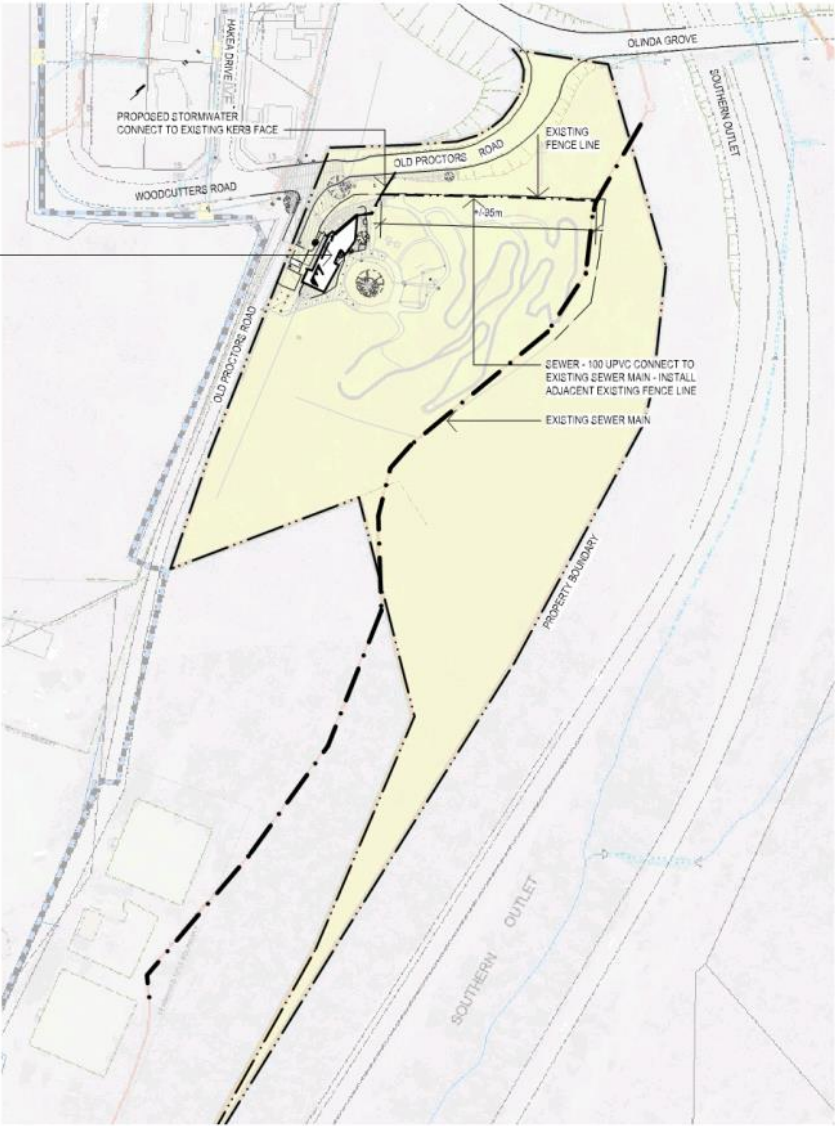
HOBART COUNCIL CENTRE
16 ELIZABETH STREET
GPO BOX 502
T: (03) 6258 2711
F: (03) 6254 9727
E: hough.hobart@city.hobart.tas.gov.au
www.hobartcity.com.au

ISSUE: DEVELOPMENT APPLICATION

Project Description		RFQ 19-0050	
TOLMANS HILL PARK - TOILETS & BBQ SHELTERS		RFQ 19-0050	
Drawing Title	11/03/21	Drawn	KB
TITLE PAGE	11/03/21	Check	BP
Date	11/03/2021	Revision	101
CITY AMENITY	N/A	A	B

City of HOBART
Approved - General
Manager Consent Only
GMC-21-26 09/04/2021

PROPOSED TOILETS
& BBQ SHELTERS



NOTE:
- DO NOT SCALE OFF DRAWINGS
- CHECK ALL DIMENSIONS ON-SITE
- CO-ORDINATE WITH ENGINEERS
DRAWINGS & SPECIFICATIONS
- LEGEND: REFER DRAWINGS

1 LOCATION PLAN
201 SCALE: 1:2000 @ A3

No.	Revision Description	Date
1	PROPOSED SITE	11/03/2021
2	EXISTING STORMWATER	11/03/2021



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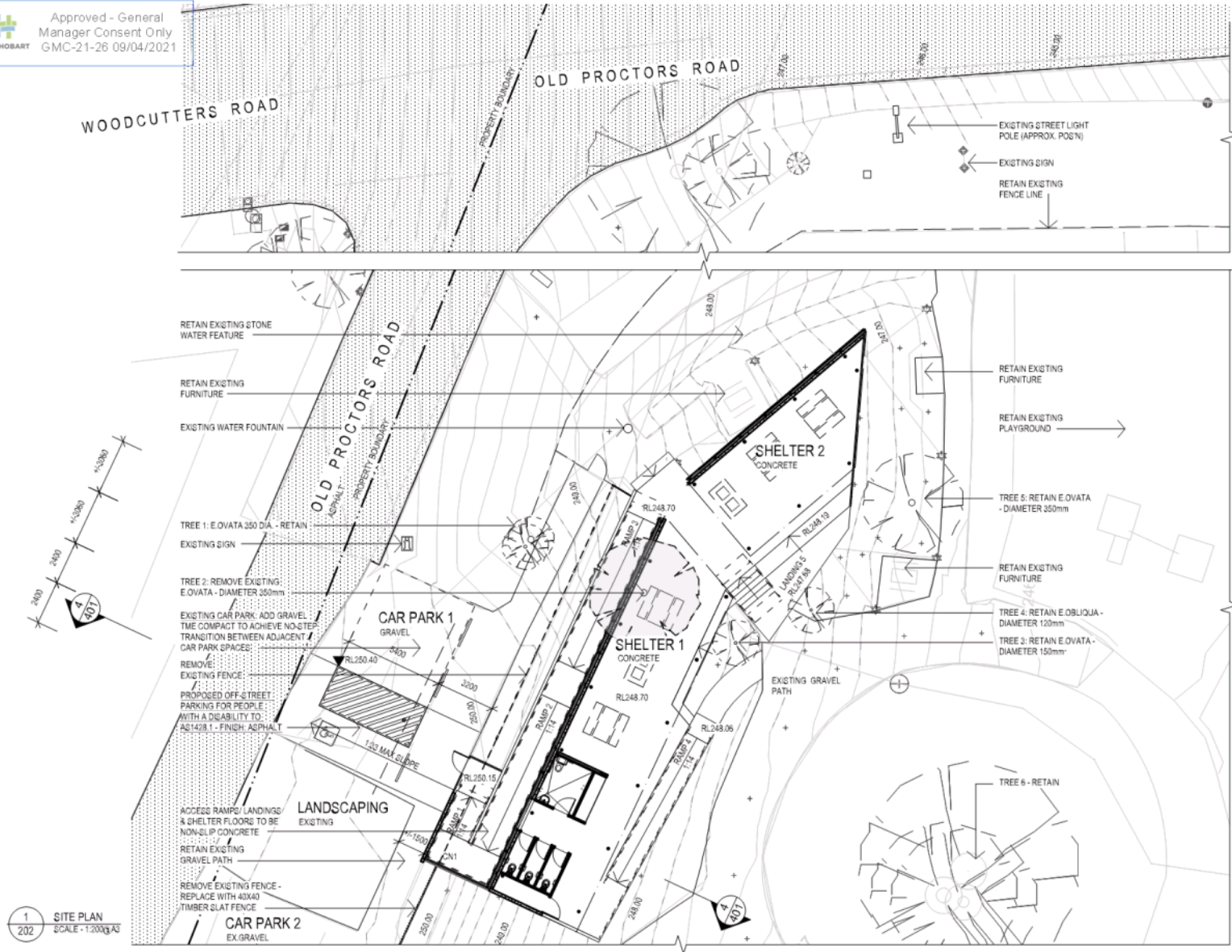


ISSUE: DEVELOPMENT APPLICATION

Project Description	TOLMANS HILL PARK - TOILETS & BBQ SHELTERS			File Number
Drawing Title	LOCATION PLAN			RFQ 19-0350
Client	CITY AMENITY			
Issue	11/03/2021	Revision	201	201
Scale	1:2000 @ A3	Author	BP	

Approved - General
Manager Consent Only
GMC-21-26 09/04/2021

NOTE:
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- CO-ORDINATE WITH ENGINEERS
DRAWINGS & SPECIFICATIONS
- LEGEND: REFER DRAWINGS



No.	Revision Description	Date
1	PROPOSED SITE	11/03/2021
2	EXISTING WATER FEATURE	11/03/2021
3		
4		
5		
6		
7		
8		
9		
10		

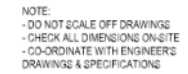


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ISSUE: DEVELOPMENT APPLICATION

Project Description		RFQ 19-0350	
TOLMANS HILL PARK - TOILETS & BBQ SHELTERS			
Drawing Title	Author	Drawn	KB
SITE PLAN		BP	
Date	11/03/2021	Revision	202
CITY AMENITY	1/200 @ A3	Sheet Number	B

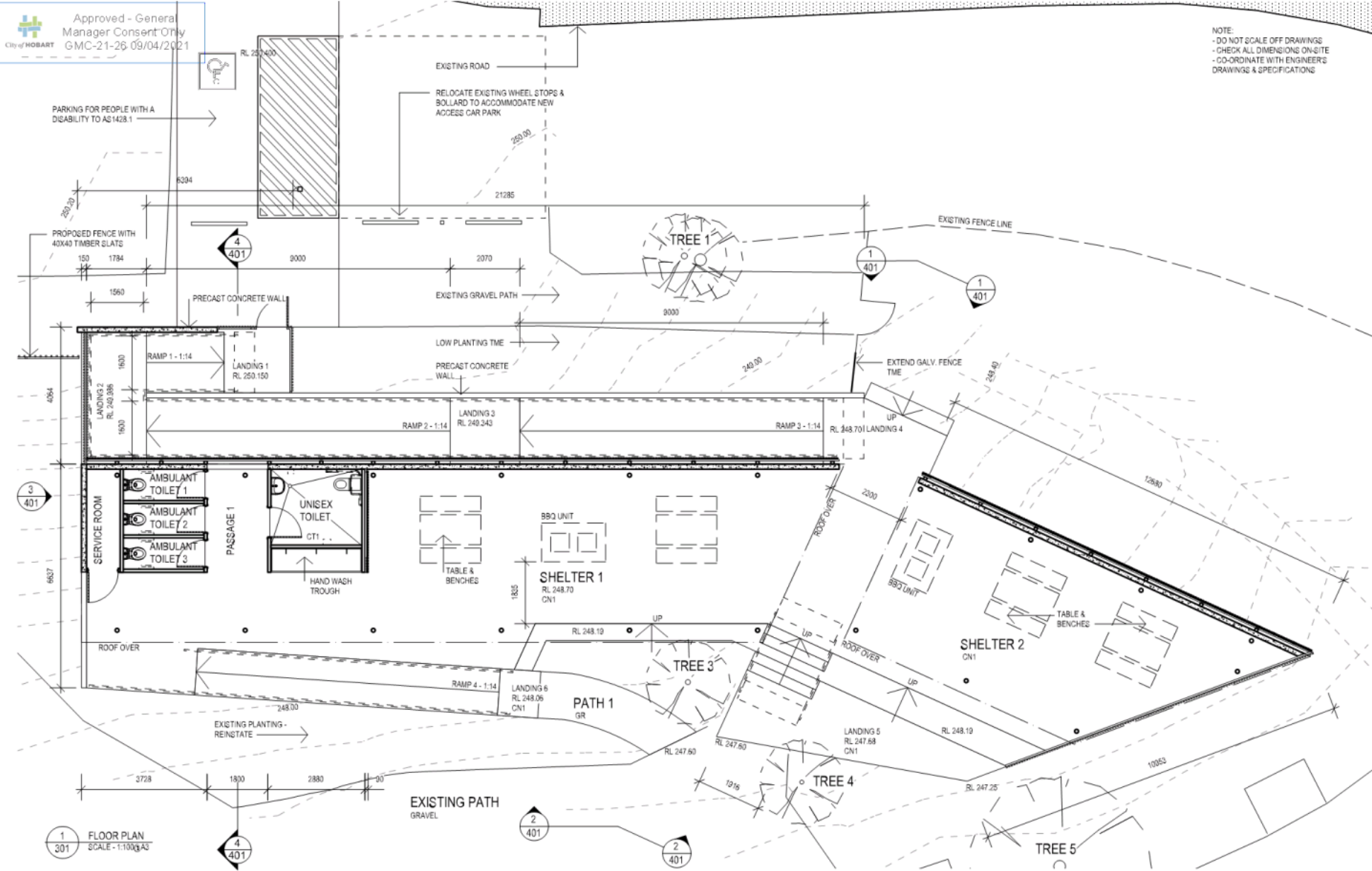


LEGEND:
BA - BASIN
DP - 2 NO. 90 DIA. RAINWATER DOWNPIPES
FN - WATER FOUNTAIN (EXISTING)
ST - STANDTAP
TR - TROUGH
WC - TOILET PAN

1 CONCEPT SERVICES PLAN
203 SCALE - 1:2000 @ A3

ISSUE: DEVELOPMENT APPLICATION

Project Description		RF# Number	
TOLMANS HILL PARK - TOILETS & BBQ SHELTERS		RF# 19-0060	
Bidding Title	Approved	Class	KB
CONCEPT SERVICES PLAN		PERM	-
		BP	-
Start	Date	Supplier	Street Number
CITY AMENITY	11/03/2021		
	1/20/2023	A	203 B



No.	Revision Description	Date
1	PROPOSED NEW	11/03/2021
2	REVISIONS	11/03/2021
3	REVISIONS	11/03/2021
4	REVISIONS	11/03/2021
5	REVISIONS	11/03/2021
6	REVISIONS	11/03/2021
7	REVISIONS	11/03/2021
8	REVISIONS	11/03/2021
9	REVISIONS	11/03/2021
10	REVISIONS	11/03/2021



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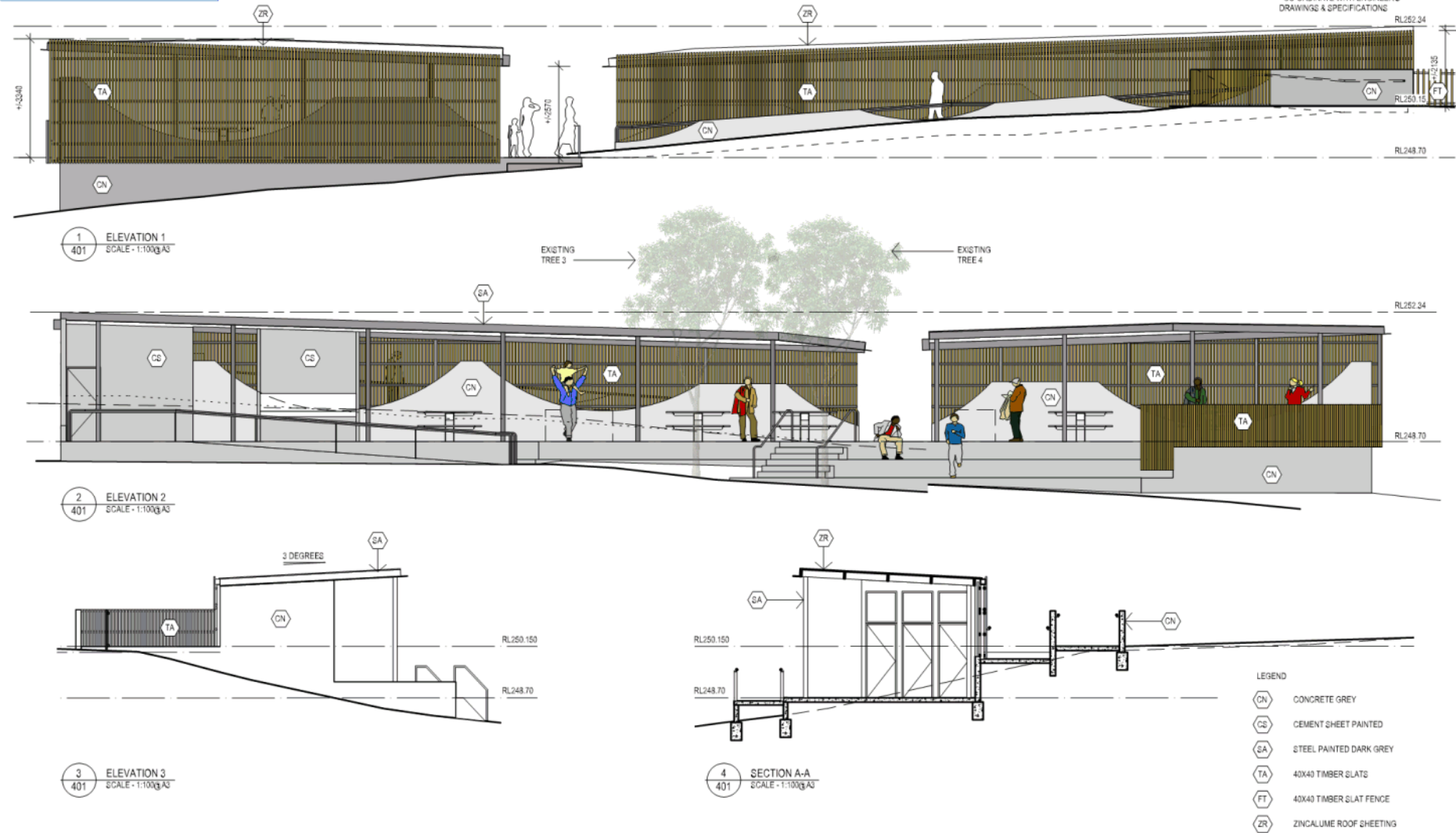


ISSUE: DEVELOPMENT APPLICATION

Project Information		City of Hobart	
TOLMANS HILL PARK - TOILETS & BBO SHELTERS		RPG 19-0000	
Drawing No.	11/03/2021	City	11/03/2021
FLOOR PLAN	11/03/2021	City	11/03/2021
CITY AMENITY	11/03/2021	City	11/03/2021

Approved - General
Manager Consent Only
GMC-21-26 09/04/2021

NOTE:
- DO NOT SCALE OFF DRAWINGS
- CHECK ALL DIMENSIONS ON-SITE
- CO-ORDINATE WITH ENGINEER'S
DRAWINGS & SPECIFICATIONS



No.	Revision Description	Date
1	PROPOSED NEW	11/03/2021
2	EXISTING INFORMATION	11/03/2021



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ISSUE: DEVELOPMENT APPLICATION

Project Information		Ref: 10100	
TOLMANS HILL PARK - TOILETS & BBO SHELTERS		RFD 19-0000	
Drawing Title	NO. 10100	DATE	11/03/2021
ELEVATIONS & SECTION	NO. 10100	DATE	11/03/2021
CITY AMENITY	NO. 10100	DATE	11/03/2021

**RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME 174041	FOLIO 1
EDITION 2	DATE OF ISSUE 25-Jul-2019

SEARCH DATE : 14-Apr-2021

SEARCH TIME : 09.57 AM

DESCRIPTION OF LAND

City of HOBART
Lot 1 on Plan 174041
Derivation : Part of 633A-0R-0P, Part of 507 Acres and Part of
1000 Acres Granted to Robert Lathrop Murray
Derived from 20294, A23761
Prior CTs 156398/1, 203172/1 and 151233/1

SCHEDULE 1

E109622 TRANSFER to HOBART CITY COUNCIL Registered
09-Apr-2019 at noon

SCHEDULE 2

E109622 Land is limited in depth to 15 metres, excludes
minerals and is subject to reservations relating to
drains sewers and waterways in favour of the Crown
E109622 FENCING PROVISION in Transfer
E109622 REVERSIONARY CONDITIONS set forth in Transfer

UNREGISTERED DEALINGS AND NOTATIONS

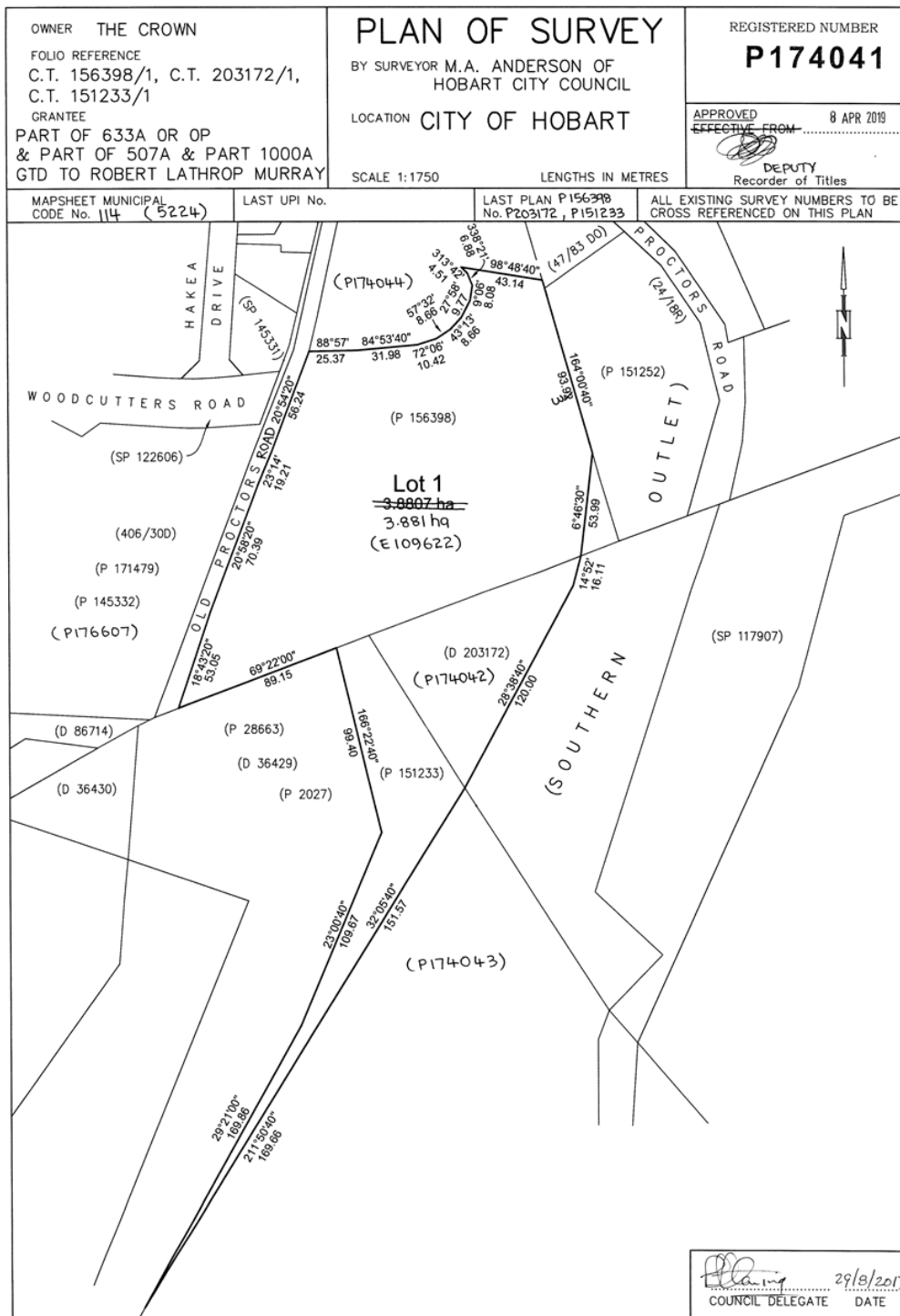
No unregistered dealings or other notations



FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



Application Referral Development Engineering - Response

From:	Ken Denman reallocated to David Morley
Recommendation:	
Date Completed:	
Address:	8 OLD PROCTORS ROAD, TOLMANS HILL
Proposal:	Public Toilets, Barbecue Shelter and Associated Works
Application No:	PLN-21-249
Assessment Officer:	Michaela Nolan,

Referral Officer comments:

SUMMARY:

New DDA parking space proposed, within existing parking area for an outdoor park (passive recreation) area.

*Codes E5 identified as not substantially applicable, Code E6 is substantially applicable, and Code E7 is assessed exclusively via. ECA. See 'Officer Notes' for an **unofficial** chronological assessment summary.*

REFERAL RULE:

In a council related engineering context, Development Engineering can support this proposal, in principal, subject to the following conditions and advice.

Conditions:

ENG 1: Pay Costs
ENG 3a: P&A Design
ENG 4: Surface Treatment
ENG 5: Parking Delineation
ENG 9: DDA Delineation
ENG sw1: Stormwater Drainage
ENV 1: SWMP

ADVICE:

- Dial before you dig
- Fees and charges
- Building Permit
- Plumbing Permit
- Occupation of the Public Highway
- Driveway surfacing over Highway reservation
- Work in the Highway reservation
- Stormwater

E5.0 Road and railway access code

--	--	--	--

E5.1 Purpose		<p>E5.1.1</p> <p>The purpose of this provision is to:</p> <p>(a) protect the safety and efficiency of the road and railway networks; and</p> <p>(b) reduce conflicts between sensitive uses and major roads and the rail network.</p>
E5.2 Application of this Code	NO	
		This Code applies to use or development of land:
	No	(a) that will require a new vehicle crossing, junction or level crossing; or
	No	(b) that intensifies the use of an existing access; or
	No	(c) that involves a sensitive use, a building, works or subdivision within 50m metres of a Utilities zone that is part of:
	No	(i) a rail network;
	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.
Clause for Assessment		Comments / Discussion (in bold)
<p>Clause 5.5.1 Existing road accesses and junctions</p> <p>NOT APPLICABLE</p>		<p><u>Documentation submitted to date appears not to invoke clause E5.5.1.</u></p> <p>No intensification of existing road accesses and/or junctions proposed.</p>
<p>Clause 5.5.2 Existing level crossings</p> <p>NOT APPLICABLE</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>NOT APPLICABLE</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>NOT APPLICABLE</p>		<p><u>Documentation submitted to date appears not to invoke clause E5.6.2.</u></p> <p>No new accesses or access junctions proposed.</p>

Clause 5.6.3 new level crossings			<u>Documentation submitted to date appears not to invoke clause E5.6.3.</u>
NOT APPLICABLE			No new level crossings proposed.
Clause 5.6.4 sight distance at access and junctions			<u>Documentation submitted to date appears not to invoke clause E5.6.4.</u>
NOT APPLICABLE			No new accesses (road) and/or junctions proposed.

E 6.0 Parking and Access Code

E6.1 Purpose			E6.1.1
			The purpose of this provision is to:
	Yes		(a) ensure safe and efficient access to the road network for all users, including drivers, passengers, pedestrians and cyclists;
	Yes		(b) ensure enough parking is provided for a use or development to meet the reasonable requirements of users, including people with disabilities;
	Yes		(c) ensure sufficient parking is provided on site to minimise on-street parking and maximise the efficiency of the road network;
	Yes		(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		(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		(f) ensure that vehicle access and parking areas do not adversely impact on amenity, site characteristics or hazards;
	Yes		(g) recognise the complementary use and benefit of public transport and non-motorised modes of transport such as bicycles and walking;
		N/A	(h) provide for safe servicing of use or development by commercial vehicles.
E6.2 Application of this Code	YES	—	This code applies to all use and development.
Clause for Assessment			Comments / Discussion (in bold)

<p>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.</p> <p>ACCEPTABLE SOLUTION</p>		<p>The parking number assessment must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).</p> <p><u>Documentation submitted to date appears to satisfy the Acceptable Solution for clause E6.6.1.1 and E6.6.1.2</u></p> <p>Acceptable solution - A1: - COMPLIANT</p> <p>The number of on-site car parking spaces must be: (a) no less than and no greater than the number specified in Table E6.1;</p> <p>Passive Recreation = No requirement</p> <p>Six (6x) existing car parking spaces shown on site, as shown on the submitted plans. (1 new DDA space proposed)</p>
<p>Clause 6.7.1 number of vehicle accesses</p> <p>NOT APPLICABLE</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><u>Documentation submitted to date appears not to invoke clause E6.7.1.</u></p> <p>Submitted documentation appears to indicate no changes proposed to the number of vehicle accesses.</p>
<p>Clause 6.7.2 design vehicle access</p> <p>NOT APPLICABLE</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><u>Documentation submitted to date appears not to invoke clause E6.7.2.</u></p> <p>Submitted documentation appears to indicate no changes proposed to the existing vehicle access.</p>

<p>Clause 6.7.3 vehicle passing</p> <p>NOT APPLICABLE</p>		<p>Vehicle passing must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015). <u>Documentation submitted to date appears not to invoke clause E6.7.4.</u></p> <p>Submitted documentation appears to indicate no facility/requirement for vehicle passing.</p> <p>Acceptable solution - A1: Vehicular passing areas must: (a) be provided if any of the following applies to an access: (i) it serves more than 5 car parking spaces; - No (ii) is more than 30 m long; - No (iii) it meets a road serving more than 6000 vehicles per day; - No (b) be 6 m long, 5.5 m wide, and taper to the width of the driveway; - N/A (c) have the first passing area constructed at the kerb; - N/A (d) be at intervals of no more than 30 m along the access. - N/A</p>
<p>Clause 6.7.4 on-site turning</p> <p>NOT APPLICABLE</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). <u>Documentation submitted to date appears not to invoke clause E6.7.4.</u></p> <p>Acceptable solution - A1: On-site turning must be provided to enable vehicles to exit a site in a forward direction, except where the access complies with any of the following: (a) it serves no more than two dwelling units; - COMPLIES (b) it meets a road carrying less than 6000 vehicles per day. - COMPLIES</p> <p>Submitted documentation appears to indicate no facility/requirement for on-site turning.</p>

<p>Clause 6.7.5 layout of parking area</p> <p>ACCEPTABLE SOLUTION</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><u>Documentation submitted to date appears to satisfy the Acceptable Solution for clause 6.7.5.</u></p> <p>Acceptable Solution A1: - COMPLIANT</p> <p>The layout 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>Furthermore, the layout of DDA car parking spaces must be designed and constructed to comply with AS/NZS 2890.6:2009 Part 6: Off-street parking for people with disabilities.</p> <ul style="list-style-type: none"> • Car Parking Space Dimensions (AS2890.1 Fig 2.2 = 2.4x5.4m Class 1A and AS2890.6 Fig 2.2): - Submitted documentation appears to satisfy this requirement • Car Parking Space Design Envelope (AS2890.1 Fig 5.2 300mm clearance on side): - Submitted documentation appears to satisfy this requirement • Parking Space Gradient (1:33 ≈ 0.3%): - Submitted documentation appears to satisfy this requirement • Transitions (AS2890.1 Section 2.5.3 = 12.5% summit, 15% sag => 2m transition): - Submitted documentation appears to satisfy this requirement • Physical Controls (AS2890.1 Section 2.4.5 and AS2890.6 = Wheel stops, Bollard): - Submitted documentation appears to satisfy this requirement
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<p>Clause 6.7.6 surface treatment</p> <p>ACCEPTABLE SOLUTION</p>			<p>The surface treatment must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015). <u>Documentation submitted to date does satisfy the Acceptable Solution for clause E6.7.6.</u></p> <p>Acceptable Solution - A1: - COMPLIANT</p> <p>Parking spaces and vehicle circulation roadways must be in accordance with all of the following;</p> <p>(a) paved or treated with a durable all-weather pavement where within 75m of a property boundary or a sealed roadway; and</p> <p>(b) drained to an approved stormwater system, unless the road from which access is provided to the property is unsealed.</p> <p>Submitted plans indicate an Asphalt surface treatment and ability to be drained to an approved stormwater system.</p>
<p>Clause 6.7.7 Lighting of parking area</p> <p>Planner and health unit to assess</p>	—	—	Planner to assess
<p>Clause 6.7.8 Landscaping</p> <p>Planner to assess</p>	—	—	Planner to assess
<p>Clause 6.7.9 motor bike parking</p> <p>NOT APPLICABLE</p>			<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). <u>Documentation submitted to date appears not to invoke clause E6.7.9.</u></p> <p>Acceptable Solution A1 (E6.6.3):</p> <p>The number of on-site motorcycle parking spaces provided must be at a rate of 1 space to each 20 car parking spaces after the first 19 car parking spaces except if bulky goods sales, (rounded to the nearest whole number). Where an existing use or development is extended or intensified, the additional number of motorcycle parking spaces provided must be calculated on the amount of extension or intensification, provided the existing number of motorcycle parking spaces is not reduced.</p> <p>NO REQUIREMENT (<19 car parking spaces).</p>

<p>Clause 6.7.10 bicycle parking</p> <p>NOT APPLICABLE</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). <u>Documentation submitted to date appears not to invoke clause E6.7.10.</u></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.</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.</p> <p>User Class: Residential</p> <p>Table E6.2 sets out the number of bicycle parking spaces required. The requirement for spaces for a use or development listed in the first column of the table is set out in the second and forth columns of the table with the corresponding class set out in the third and fifth columns. If the result is not a whole number, the required number of (spaces) is the nearest whole number. If the fraction is one-half, the requirement is the next whole number.</p> <p>NO REQUIREMENT</p>
<p>Clause 6.7.11 bicycle end trip</p> <p>Planner to assess</p>	—	—	Planner to assess
<p>Clause 6.7.12 siting of car parking</p> <p>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>NOT APPLICABLE</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). <u>Documentation submitted to date appears not to invoke clause E6.7.13.</u></p> <p>Submitted documentation appears to indicate no commercial vehicles loading, unloading or manoeuvring.</p>

Clause 6.7.14 access to a road			<p>The access to a road must satisfy the Acceptable Solutions of the Hobart Interim Planning Scheme 2015 (HIPS 2015).</p> <p><u>Documentation submitted to date appears not to invoke clause E6.7.14.</u></p> <p>Submitted documentation appears to indicate no access to a road, existing or proposed.</p> <p>Submitted documentation appears to indicate no changes proposed to the existing access to a road.</p>
NOT APPLICABLE			

**7.1.5 14 THELMA DRIVE, WEST HOBART - DWELLING
PLN-21-123 - FILE REF: F21/54403**

Address: 14 Thelma Drive, West Hobart
Proposal: Dwelling
Expiry Date: 18 July 2021
Extension of Time: Not applicable
Author: Helen Ayers

RECOMMENDATION

That pursuant to the *Hobart Interim Planning Scheme 2015*, the Council approve the application for a dwelling, at 14 Thelma Drive, West 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-21-123 - 14 THELMA DRIVE WEST 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 2021/00366-HCC dated 13/05/2021 as attached to the permit.

Reason for condition

To clarify the scope of the permit.

PLN 4

Vegetation screening must be planted along the south western side of the dwelling, between the dwelling and the Thelma Drive frontage,

prior to first occupation. The screening must incorporate a variety of (preferably native) species, a variety of heights, and be of a suitable level of density.

Prior to commencement of works, a landscaping plan must be submitted and approved as a Condition endorsement, in accordance with the above requirement.

All work required by this condition must be undertaken in accordance with the approved landscaping plan. The vegetation must be maintained for the life of the dwelling, and replacement vegetation must be planted if any is lost.

Advice:

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

No plantings within the Council's road reservation is approved by this permit.

Reason for condition

To ensure that a safe and attractive landscaping treatment enhances the appearance of the site and assists to integrate the building into the streetscape and surrounds.

PLN s4

The proposed colour and material for the south western wall of the dwelling must help the dwelling integrate with the streetscape.

Prior to the issue of any approval under the *Building Act 2016*, revised plans must be submitted and approved as a Condition Endorsement showing the colour and finish of the south western wall in accordance with the above requirement. The finish should be in the form of a textured material.

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

Advice:

This condition requires further information to be submitted as a

Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.

Reason for condition

To assist with the integration of the dwelling into the streetscape.

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).

Any private or private shared stormwater system passing through third-party land must have sufficient receiving capacity.

Advice:

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

Reason for condition

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

ENG sw2.1

A pre-construction CCTV recording of the Council's stormwater main within/adjacent to the proposed development, along with photos of any drainage structures to be connected to or modified, must be submitted to Council prior to the commencement of work.

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

Reason for condition

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

ENG sw2.2

A post-construction CCTV recording of the Council's stormwater main within/adjacent to the proposed development, along with photos of any existing drainage structures connected to or modified as part of the development, must be submitted to Council upon completion of work.

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

Reason for condition

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

ENG sw3

The proposed development (footings and overhangs) must be designed to ensure the protection and access to the Council's stormwater main.

A detailed design must be submitted and approved as a Condition Endorsement prior to the issuing of any approval under the *Building Act 2016* or commencement of works (whichever occurs first). The detailed design must:

1. Demonstrate how the design will ensure the protection and provide access to the Council's stormwater main.

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

Advice:

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

Reason for condition

To ensure the protection of the Council's hydraulic infrastructure.

SW 9

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

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

1. include detailed design and supporting calculations of the detention tank showing:
 - a. detention tank sizing such that there is no increase in flows from the developed site up to 5% AEP event and no worsening of flooding;
 - b. the layout, the inlet and outlet (including long section), outlet size, overflow mechanism and invert level;
 - c. the discharge rates and emptying times; and
 - d. all assumptions must be clearly stated;
2. include a supporting maintenance plan, which specifies the required maintenance measures to check and ensure the ongoing effective operation of all systems, such as: inspection frequency; cleanout procedures; descriptions and diagrams of how the installed systems operate; details of the life of assets and replacement requirements.

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

Advice:

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

ENG 3a

Prior to first occupation or commencement of use (whichever occurs first), the access driveway, and parking module (parking spaces) must be designed and constructed in accordance with Australian Standard AS/NZS 2890.1:2004 (including the requirement for physical controls where required), or a Council approved alternate design certified by a suitably qualified engineer to provide a safe and efficient access, and enable safe, easy and efficient use.

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 3b

The access driveway, and parking module (parking spaces) design must be submitted and approved as a Condition Endorsement, prior to the commencement of work, issuing of any approval under the *Building Act 2016*.

The access driveway, and parking module (parking spaces) design must:

1. Be prepared and certified by a suitably qualified engineer,
2. Be generally in accordance with the Australian Standard AS/NZS 2890.1:2004,
3. Where the design deviates from AS/NZS 2890.1:2004 the designer must demonstrate that the design will provide a safe and efficient access, and enable safe, easy and efficient use,

and

4. Show dimensions, levels, gradients and transitions, and other details as Council deem necessary to satisfy the above requirement.

Advice:

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

It is 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, and parking module (parking spaces) must be constructed in accordance with the design drawings approved by Condition ENG 3b.

Prior to first occupation or commencement of use (whichever occurs first), documentation by a suitably qualified engineer certifying that the access driveway, 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

Prior to first occupation or commencement of use (whichever occurs

first), the access driveway and parking module (parking spaces) 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.

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 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.

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 r3

Prior to the commencement of use, the proposed driveway crossover

on the highway reservation for 14 Thelma Drive must be designed and constructed in general accordance with:

Urban - TSD-R09-v1 – Urban Roads Driveways;

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

1. Show the cross and long section of the driveway crossover within the highway reservation and onto the property;
2. Detail any services or infrastructure (ie light poles, pits, awnings) at or near the proposed driveway crossover;
3. If the design deviates from the requirements of the TSD, then demonstrate that a B85 vehicle or a B99 depending on use (AS/NZS 2890.1 2004, section 2.6.2), can access the driveway from the road pavement into the property without scraping the vehicle's underside;
4. Be prepared and certified by a suitable qualified person, to satisfy the above requirements.

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

Advice:

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

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

Reason for condition

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

ENV 1

Sediment and erosion control measures sufficient to prevent sediment from leaving the site must be installed prior to any disturbance of the site, and maintained until all areas of disturbance have been stabilized or re-vegetated.

Advice:

For further guidance in preparing a Soil and Water Management Plan – in accordance with Fact sheet 3 Derwent Estuary Program click [here](#).

Reason for condition

To avoid the sedimentation of roads, drains, natural watercourses, Council land that could be caused by erosion and runoff from the development, and to comply with relevant State legislation.

ADVICE

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

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

CONDITION ENDORSEMENT

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

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

the condition endorsement application.

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

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

BUILDING PERMIT

You may need building approval in accordance with the *Building Act 2016*. Click [here](#) for more information.

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

PLUMBING PERMIT

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

OCCUPATION OF THE PUBLIC HIGHWAY

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

BUILDING OVER AN EASEMENT

In order to build over the service easement, you will require the written consent of the person on whose behalf the easement was created, in accordance with section 74 of the *Building Act 2016*.

STORMWATER

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

WORK WITHIN THE HIGHWAY RESERVATION

Please note development must be in accordance with the Hobart City Council's Infrastructure By law. Click [here](#) for more information.

DRIVEWAY SURFACING OVER HIGHWAY RESERVATION

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

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.

NOISE REGULATIONS

Click [here](#) for information with respect to noise nuisances in residential areas.


FEES AND CHARGES

Click [here](#) for information on the Council's fees and charges.

DIAL BEFORE YOU DIG

Click [here](#) for dial before you dig information.

Attachment A: PLN-21-123 - 14 THELMA DRIVE WEST HOBART
TAS 7000 - Planning Committee or Delegated
Report ↓ 

Attachment B: PLN-21-123 - 14 THELMA DRIVE WEST HOBART
TAS 7000 - CPC Agenda Documents ↓ 

**APPLICATION UNDER HOBART INTERIM PLANNING SCHEME 2015**

Type of Report: Committee
Council: 21 June 2021
Expiry Date: 18 July 2021
Application No: PLN-21-123
Address: 14 THELMA DRIVE , WEST HOBART
Applicant: Richard Loney (Dock 4 Architects)
L 1 100 Collins Street
Proposal: Dwelling
Representations: Eight (8)
Performance criteria: Low Density Residential Zone Development Standards, Parking and Access Code

1. Executive Summary

- 1.1 Planning approval is sought for a Dwelling, at 14 Thelma Drive, West Hobart.
- 1.2 More specifically the proposal includes:
 - A three storey, 8.6m high dwelling with two car garage, four bedrooms, two living areas, a swimming pool, and various outdoor areas.
- 1.3 The proposal relies on performance criteria to satisfy the following standards and codes:
 - 1.3.1 Low Density Residential Zone - Setback and Building Envelope, Site Coverage, Sunlight, and Privacy
 - 1.3.2 Parking and Access Code - Design of Vehicular Accesses and Layout of Parking Areas
- 1.4 Eight (8) representations objecting to the proposal were received within the statutory advertising period between 18 May and 1 June 2021.
- 1.5 The proposal is recommended for approval subject to conditions.
- 1.6 The final decision is delegated to the Council, because eight (8) representations were received.

2. Site Detail

- 2.1 The application site is an irregularly shaped 1006m² corner lot, with a pedestrian walkway forming one of the two side boundaries. The site forms part of a recent subdivision above the Hobart Rivulet, and is surrounded by residential development, and Council bushland reserve.
- 2.2 Following public notification, a site visit was undertaken to assist in understanding the nature, scale and siting of development in the street and surrounding area. This visit identified a variety of architectural forms, scales and sitings for the nearby dwellings.



Figure 1: The location of the application site is highlighted in yellow



Figure 2: The Thelma Drive facade of 2 Stevens Farm Drive, as viewed from the driveway of the application site



Figure 3: The street front facade of 13 Thelma Drive, as viewed from the driveway of the application site



Figure 4: The street front facade of 15 Thelma Drive, as viewed from the application site



Figure 5: The street front facade of 16 Thelma Drive, as viewed from opposite the application site



Figure 6: The street front facade of 6 Stevens Farm Drive



Figure 7: The street front facade of 8 Stevens Farm Drive



Figure 8: The street front facade of 26 and 32 Thelma Drive

3. Proposal

3.1 Planning approval is sought for a Dwelling, at 14 Thelma Drive, West Hobart.

3.2 More specifically the proposal is for:

- A three storey, 8.6m high dwelling.
- The lower level includes a two car garage, open storage area, and covered patio and pool to the rear.
- The middle level includes an open kitchen / dining / living area, playroom, bedroom enclosed courtyard and a deck.
- The upper level includes a laundry, bathroom, two bedrooms, and a master suite including bedroom, ensuite, walk in wardrobes and a study.



Figure 9: 3D Rendering of the proposed dwelling as viewed from Thelma Drive near the Junction with Stevens Farm Drive

4. Background

4.1 The proposal includes works in the road reserve. General Manager consent to lodge the planning application was sought, and provided on 31 March 2021.

5. Concerns raised by representors

- 5.1 Eight (8) representations objecting to the proposal were received within the statutory advertising period between 18 May and 1 June 2021.
- 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.

Neighbourhood Character:
Representors have suggested that the proposed front wall is not in keeping with the dwellings in the area. They have suggested that the concrete wall will present as more of an industrial development, and is not readily recognisable as a house.
One representor has suggested that the proposed facade wall of the dwelling is not appropriate as it prevents human contact. They have compared the wall to the Berlin and Palestinian walls, suggesting that it is not appropriate for the neighbourhood.
One representor has suggested that the "design gives the appearance of a compound rather than a domestic dwelling".
One representor has suggested that the design and lack of windows addressing the street are out of character with the neighbourhood. they have suggested that the dwelling looks more like a "bunker" than a dwelling.
One representor has suggested that the proposed dwelling is out of character with the surrounding area and will result in a loss of amenity as a result of the design.
Several representors have suggested that a structure that resembles a more traditional dwelling design, or other dwellings in the street is more appropriate for the location.
Fencing:
Representors have indicated that the solid masonry wall that acts as a front fence is too high and is not compatible with others in the area.
Setbacks:
Representors have indicated that the setbacks to Thelma Drive appear to be less than 8m, which they suggest is inconsistent with the Tasmanian Planning Scheme.
Site Coverage:

Representors have noted that the site coverage is greater than 30%, which they suggest is too great for the site.
Building Height:
Representors have indicated that the building exceeds the permitted 8.5m height, and suggests that the permitted height is too great for the design and location of the dwelling. They have suggested reducing the permitted height to 6.5m to assist the dwelling in fitting better with the surrounding dwellings.
Sunlight:
Representors are concerned that the extent of overshadowing from the dwelling during winter is excessive and will unreasonably impact nearby dwellings.
Representors are concerned that the overshadowing of the road in winter will result in frost and ice on the road, causing traffic safety concerns.
Building Envelope:
Representors have indicated that they cannot determine whether the building is to be inside the permitted building envelope. They suggest that demonstration of the building envelope should be mandatory for all applications.

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 Low Density Residential Zone of the *Hobart Interim Planning Scheme 2015*.
- 6.3 The site is currently vacant. The proposed use is residential (single dwelling). The proposed use is a permitted use in the zone.
- 6.4 The proposal has been assessed against:
 - 6.4.1 Part D - 12.0 Low Density Residential

- 6.4.2 Part E - E6.0 Parking and Access Code
- 6.4.3 Part E - E7.0 Stormwater Management Code
- 6.5 The proposal relies on the following performance criteria to comply with the applicable standards:
- 6.5.1 Low Density Residential Zone:
- Setback and Building Envelope - 12.4.2 P1 and P3*
Site Coverage - 12.4.3 P2
Sunlight - 12.4.4 P1
Privacy – Part D 12.4.6 P1
- 6.5.2 Parking and Access Code:
- Design of Vehicular Accesses - E6.7.2 P1*
Layout of Parking Areas - E6.7.5 P1
- 6.6 Each performance criterion is assessed below.
- 6.7 Setback and Building Envelope - 12.4.2 P1 and P3
- 6.7.1 The acceptable solution at clauses 12.4.2 A1 and A3 require buildings and works to be contained within a three dimensional building envelope as described.
- 6.7.2 The proposal includes a dwelling which encroaches into all four 'front' boundary setbacks, and exceeds the maximum building height. It also encroaches into the building envelope for the northern side boundary setback.
- 6.7.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
- 6.7.4 The performance criterion at clauses 12.4.2 P1 and P3 provide as follows:
- P1 - A dwelling must:*
- (a) be compatible with the relationship of existing buildings to the road in terms of setback or in response to slope or other physical*

constraints of the site; and

(b) have regard to streetscape qualities or assist the integration of new development into the streetscape.

P3 - The siting and scale of a dwelling must:

(a) not cause unreasonable loss of amenity by:

(i) reduction in sunlight to a habitable room (other than a bedroom) of a dwelling on an adjoining lot; or

(ii) overshadowing the private open space of a dwelling on an adjoining lot; or

(iii) overshadowing of an adjoining vacant lot; or

(iv) visual impacts caused by the apparent scale, bulk or proportions of the dwelling when viewed from an adjoining lot; and

(b) provide separation between dwellings on adjoining lots that is compatible with that prevailing in the surrounding area.

- 6.7.5 Given the gradients and shape of the site, as well as the number of frontages (west, south west, south east and a portion of the northern boundary), the site is quite constrained in terms of the design of any new dwelling. That said, it is considered that the dwelling will present as a modest 1-2 storey dwelling when approached along Stevens Farm Drive. This is because the bulk of the dwelling is set back between 10m and 17m from this frontage, with only the fin wall extending to a setback of 1m from the frontage, with a height raking from 0.5m at this point, up to 3.5m at the first articulation in the wall, then up to approximately 4.2m as the wall joins the house proper, increasing in height as the property falls away down the slope of the site.

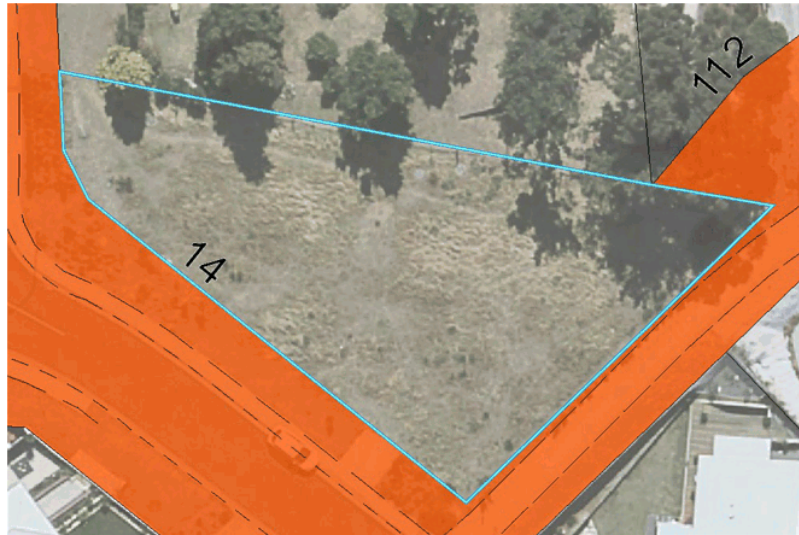


Figure 10: The site is bordered in blue. The orange is a road as per the Council's municipal map. A lot boundary adjoining a road is a frontage. The site therefore has a small frontage to Stevens Farm Drive, a longer frontage on Thelma Drive, and a frontage onto the public footway.

- 6.7.6 Whilst the dwelling design does not conform to the more traditional built form of some nearby dwellings, the siting and overall bulk of the dwelling are consistent with those surrounding it. There are several examples of two storey dwellings nearby, with setbacks ranging between 2m and 5m from the street front boundary. In this context, the proposed new dwelling is compatible with the relationship of existing buildings to the road.
- 6.7.7 In terms of streetscape integration, the proposed dwelling is slightly more difficult to categorise. The starting point for this assessment is a review of the different dwelling designs and types in the nearby area. A site visit was undertaken, and the street front facades of a number of dwellings were considered. This inspection identified a variety of dwelling designs, materials and scales. There were examples of similar facade treatments to that which is proposed, though not being on a corner site diminished the prominence of these other dwellings. On balance, given the variety of architectural expression present in the area, it is considered that the proposed dwelling will not be in stark contrast to other dwellings in the streetscape. The variation in architectural designs, scale and siting of dwellings for the surrounding streetscape is such that whilst this proposed built form is not replicated anywhere, it will integrate with existing surrounding dwellings. To assist the dwelling integrate into the streetscape, a condition is recommended detailing the landscaping to be provided between the Thelma Drive frontage and the south western

facade of the dwelling.

- 6.7.8 Sun shadow diagrams submitted as part of the application demonstrate that there will be overshadowing of dwellings over the road at 9am on the winter solstice, but that this shadow will be well clear of the dwellings by midday, and the dwelling will not overshadow any other dwellings for the remainder of the day. The diagrams also show limited overshadowing of the private open space of a dwelling to the west late in the day, but again, no overshadowing of private open space before this. As such, there is no unreasonable loss of amenity to adjoining properties through overshadowing or loss of sunlight as a result of the proposed dwelling.
- 6.7.9 The proposed dwelling is single storey toward the top (western side) of the property, increasing to two storey toward the bottom (eastern side) of the dwelling. The eastern, northern and western sides of the dwelling are articulated such that they present a scale that is reasonably anticipated for residential development in the area.
- 6.7.10 Whilst the southern facade is not the most traditional urban form, it is sufficiently separated from surrounding dwellings by virtue of the roads and walkways to three sides, and the substantial setback of the dwelling and its outdoor space to the north west that the bulk is considered reasonable.
- 6.7.11 The existing dwellings in the surrounding area are located close to property boundaries, with limited separation between. As such, the proposed location of the dwelling on site will be consistent with those surrounding it, and will maintain the prevailing separation between dwellings for the area.
- 6.7.12 The proposal complies with the performance criterion.
- 6.8 Site Coverage - 12.4.3 P2
- 6.8.1 The acceptable solution at clause 12.4.3 A2 requires a maximum site coverage of 25%.
- 6.8.2 The proposal includes site coverage of 38.3%.
- 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 12.4.3 P2 provides as follows:

Dwellings must have:

(a) private open space that is of a size and dimensions that are appropriate for the size of the dwelling and is able to accommodate:

(i) outdoor recreational space consistent with the projected requirements of the occupants; and

(ii) operational needs, such as clothes drying and storage; and

(b) have reasonable space for the planting of gardens and landscaping.

(c) not be out of character with the pattern of development in the surrounding area; and

(d) not result in an unreasonable loss of natural or landscape values.

6.8.5 There is sufficient outdoor space remaining on site for outdoor dining and recreation, outdoor play, the drying of washing, and for the planting of gardens. There is no remnant vegetation to conserve and retain on site. There are several examples of development occupying a similar footprint on site, and examples of similar frontage setbacks to those proposed in the immediate area, such that the spatial pattern of development for the area is retained by the proposal.

6.8.6 The proposal complies with the performance criterion.

6.9 Sunlight - 12.4.4 P1

6.9.1 The acceptable solution at clause 12.4.4 A1 requires dwellings to have a window to a habitable room facing within 30 degrees of north.

6.9.2 The proposal includes the habitable rooms of the dwelling facing 33 degrees east of north.

6.9.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.

6.9.4 The performance criterion at clause 12.4.4 P1 provides as follows:

A dwelling must be sited and designed so as to allow sunlight to

enter at least one habitable room (other than a bedroom).

- 6.9.5 The dwelling has been designed such that it will have windows facing east, north east and west, allowing all day sunlight to enter the habitable rooms of the dwelling.
- 6.9.6 The proposal complies with the performance criterion.
- 6.10 Privacy – Part D 12.4.6 P1
- 6.10.1 The acceptable solution at clause 12.4.6 A1 requires decks with a finished surface level greater than 1m above the natural ground line to have a minimum 3m setback to side boundaries, or to have a 1.7m high privacy screen.
- 6.10.2 The proposal includes a deck with a finished surface level 1.6m above the natural ground level at a setback of 2.85m from the northern boundary, with no privacy screen.
- 6.10.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
- 6.10.4 The performance criterion at clause 12.4.6 P1 provides as follows:
- A balcony, deck, roof terrace, parking space or carport (whether freestanding or part of the dwelling) that has a finished surface or floor level more than 1 m above natural ground level, must be screened, or otherwise designed, to minimise overlooking of:*
- (a) a dwelling on an adjoining lot or its private open space; or*
- (b) another dwelling on the same site or its private open space; or*
- (c) an adjoining vacant residential lot.*
- 6.10.5 The adjacent dwelling to the north has a retained, level garden area above the height of the proposed deck, that is set back approximately 15m from the shared boundary, and appears to act as the primary private open space for the dwelling. As such, the proposed deck will not result in unreasonable overlooking of the adjacent dwelling or its private open space.
- 6.10.6 The proposal complies with the performance criterion.

6.11 Design of Vehicular Accesses - E6.7.2 P1

- 6.11.1 The acceptable solution at clause E6.7.2 A1 requires vehicle access to be designed and constructed in accordance with the relevant Australian Standard.
- 6.11.2 The proposal includes vehicle access that has not been designed in accordance with the relevant Australian Standard.
- 6.11.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
- 6.11.4 The performance criterion at clause E6.7.2 P1 provides as follows:

Design of vehicle access points must be safe, efficient and convenient, having regard to all of the following:

(a) avoidance of conflicts between users including vehicles, cyclists and pedestrians;

(b) avoidance of unreasonable interference with the flow of traffic on adjoining roads;

(c) suitability for the type and volume of traffic likely to be generated by the use or development;

(d) ease of accessibility and recognition for users.

- 6.11.5 The application has been assessed by Council's Development Engineer, who has provided the following comment:

The design of the vehicle access must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).

Documentation submitted to date does not satisfy the Acceptable Solution for clause E6.7.2 (a) [sight distance: 2m x 2.5m sight triangles - These areas to be kept clear of obstructions to visibility] and as such, shall be assessed under Performance Criteria.

Submitted plans indicate 2m x 2.5m sight triangle areas abutting the driveway are kept clear of obstructions to visibility.

Location;

- Submitted documentation appears satisfactory

Sight distance;

- Submitted documentation appears satisfactory

Width; and

- Submitted documentation appears satisfactory

Gradient

- Submitted documentation appears satisfactory

Acceptable Solution - A1: - NON COMPLIANT

Design of vehicle access points must comply with all of the following:

(a) in the case of non-commercial vehicle access; the location, sight distance, width and gradient of an access must be designed and constructed to comply with section 3 – “Access Facilities to Off-street Parking Areas and Queuing Areas” of AS/NZS 2890.1:2004 Parking Facilities Part 1: Off-street car parking.

Performance Criteria - P1:

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;

- Acceptable, submitted documentation appears to satisfy this requirement

(b) avoidance of unreasonable interference with the flow of traffic on adjoining roads;

- Acceptable, submitted documentation appears to satisfy this requirement

(c) suitability for the type and volume of traffic likely to be generated by the use or development; and

- Acceptable, submitted documentation appears to satisfy this requirement

(d) ease of accessibility and recognition for users.

- Acceptable, submitted documentation appears to satisfy this requirement

Based on the above assessment and given the submitted documentation, sight lines that may be accepted under Performance Criteria P1:E6.7.2 of the Planning Scheme. Given the location of the access and driveway, and the low volume of traffic on the road from which the property gains access.

6.11.6 The proposal complies with the performance criterion.

6.12 Layout of Parking Areas - E6.7.5 P1

6.12.1 The acceptable solution at clause E6.7.2 A1 requires the layout of parking areas to comply with the relevant Australian Standard.

6.12.2 The proposal includes a car parking area that is not laid out in accordance with the relevant Australian Standard.

6.12.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.

6.12.4 The performance criterion at clause E6.7.5 P1 provides as follows:

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

6.12.5 The application has been assessed by Council's Development Engineer, who has provided the following comment:

The layout of the parking area must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).

Documentation submitted to date does not satisfy the Acceptable Solution for clause E6.7.5 and as such, shall be assessed under Performance Criteria.

Acceptable Solution A1: - NON COMPLIANT

The layout of car parking spaces, access aisles, circulation roadways and ramps must be designed and constructed to comply with section 2 "Design of Parking Modules, Circulation Roadways and Ramps" of AS/NZS 2890.1:2004 Parking Facilities Part 1: Off-street car parking and must have sufficient headroom to comply with clause 5.3 "Headroom" of the same Standard.

- *Car Parking Space Dimensions (AS2890.1 Fig 2.2 = 2.4x5.4m Class 1A):*
 - *Submitted documentation appears to satisfy this requirement*
- *Car Parking Space Design Envelope (AS2890.1 Fig 5.2 300mm clearance on side):*
 - *Submitted documentation appears to satisfy this requirement*
- *Headroom: (AS2890.1 Fig 5.3 = 2.2m clearance):*
 - *Submitted documentation appears to satisfy this requirement*
- *Parking Space Gradient (5%):*
 - *Submitted documentation appears to satisfy this requirement*
- *Garage Door Width & Apron (AS2890.1 Fig 5.4 = 2.4m wide => 7m wide apron):*
 - *Submitted documentation appears to satisfy this requirement*
- *Parking Module Gradient (manoeuvring area 5% Acceptable Soln, 10% Performance):*
 - *Submitted documentation appears to satisfy this requirement*
- *Driveway Gradient & Width (AS2890.1 Section 2.6 = 25% and 3m):*
 - *Submitted documentation appears to satisfy this requirement*
- *Transitions (AS2890.1 Section 2.5.3 = 12.5% summit, 15% sag => 2m transition):*
 - *Submitted documentation appears to satisfy this requirement*

6.12.6 The proposal complies with the performance criterion.

7. Discussion

- 7.1 Planning approval is sought for a Dwelling, at 14 Thelma Drive, West Hobart.
- 7.2 The application was advertised and received eight (8) representations. The representations raised concerns including Neighbourhood Character, Fencing, Setbacks, Site Coverage, Building Height, Sunlight, and Building Envelope.
- 7.3 The proposal has been assessed against the relevant provisions of the planning scheme and is considered to perform well.

- 7.4 Following advertising, some of the representor concerns regarding the streetscape appearance of the proposed dwelling were discussed with the applicant. The applicant has supplied 3D renderings of the dwelling to try to assist in understanding how the dwelling will appear in the streetscape. These have been included in the description of the proposal at section 3 above.
- 7.5 Further discussion with the applicant post advertising has resulted in an agreement that the applicant will landscape the area between the south western facade of the dwelling and the Thelma Drive boundary. A condition requiring this to be designed, installed and maintained is recommended to be included, should a permit be granted for the works.
- 7.6 The applicant has also agreed that the colour and surface treatment for the south western facade can be modified to assist in making the dwelling appear more compatible with the surrounding streetscape. A condition requiring this detail to be submitted and approved prior to commencement of works is recommended to be included, should a permit be granted for the works.
- 7.7 The proposal has been assessed by other Council officers, including the Council's Development Engineer, Stormwater Engineer, and Road Engineer. The officers have raised no objection to the proposal, subject to conditions.
- 7.8 The proposal is recommended for approval.

8. Conclusion

- 8.1 The proposed Dwelling, at 14 Thelma Drive, West 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 a Dwelling, at 14 Thelma Drive, West 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-21-123 - 14 THELMA DRIVE WEST 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 2021/00366-HCC dated 13/05/2021 as attached to the permit.

Reason for condition

To clarify the scope of the permit.

PLN 4

Vegetation screening must be planted along the south western side of the dwelling, between the dwelling and the Thelma Drive frontage, prior to first occupation. The screening must incorporate a variety of (preferably native) species, a variety of heights, and be of a suitable level of density.

Prior to commencement of works, a landscaping plan must be submitted and approved as a Condition endorsement, in accordance with the above requirement.

All work required by this condition must be undertaken in accordance with the approved landscaping plan. The vegetation must be maintained for the life of the dwelling, and replacement vegetation must be planted if any is lost.

Advice:

- *This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.*
- *No plantings within the Council's road reservation is approved by this permit.*

Reason for condition

To ensure that a safe and attractive landscaping treatment enhances the appearance of the site and assists to integrate the building into the streetscape and surrounds.

PLN s4

The proposed colour and material for the south western wall of the dwelling must help the dwelling integrate with the streetscape.

Prior to the issue of any approval under the *Building Act 2016*, revised plans must be submitted and approved as a Condition Endorsement showing the colour and finish of the south western wall in accordance with the above requirement. The finish should be in the form of a textured material.

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

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

Reason for condition

To assist with the integration of the dwelling into the streetscape.

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).

Any private or private shared stormwater system passing through third-party land must have sufficient receiving capacity.

Advice:

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

Reason for condition

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

ENG sw2.1

A pre-construction CCTV recording of the Council's stormwater main within/adjacent to the proposed development, along with photos of any drainage structures to be connected to or modified, must be submitted to Council prior to the commencement of work.

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

Reason for condition

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

ENG sw2.2

A post-construction CCTV recording of the Council's stormwater main within/adjacent to the proposed development, along with photos of any existing drainage structures connected to or modified as part of the development, must be submitted to Council upon completion of work.

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

Reason for condition

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

ENG sw3

The proposed development (footings and overhangs) must be designed to ensure the protection and access to the Council's stormwater main.

A detailed design must be submitted and approved as a Condition Endorsement prior to the issuing of any approval under the *Building Act 2016* or commencement of works (which ever occurs first). The detailed design must:

1. Demonstrate how the design will ensure the protection and provide access to the Council's stormwater main.

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

Advice:

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

Reason for condition

To ensure the protection of the Council's hydraulic infrastructure.

SW 9

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

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

1. include detailed design and supporting calculations of the detention tank showing:
 1. detention tank sizing such that there is no increase in flows from the developed site up to 5% AEP event and no worsening of

- flooding;
2. the layout, the inlet and outlet (including long section), outlet size, overflow mechanism and invert level;
 3. the discharge rates and emptying times; and
 4. all assumptions must be clearly stated;
2. include a supporting maintenance plan, which specifies the required maintenance measures to check and ensure the ongoing effective operation of all systems, such as: inspection frequency; cleanout procedures; descriptions and diagrams of how the installed systems operate; details of the life of assets and replacement requirements.

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

Advice:

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

ENG 3a

Prior to first occupation or commencement of use (whichever occurs first), the access driveway, and parking module (parking spaces) must be designed and constructed in accordance with Australian Standard AS/NZS2890.1:2004 (including the requirement for physical controls where required), or a Council approved alternate design certified by a suitably qualified engineer to provide a safe and efficient access, and enable safe, easy and efficient use.

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 3b

The access driveway, and parking module (parking spaces) design must be submitted and approved as a Condition Endorsement, prior to the commencement of work, issuing of any approval under the *Building Act 2016*.

The access driveway, and parking module (parking spaces) design must:

1. **Be prepared and certified by a suitably qualified engineer,**
2. **Be generally in accordance with the Australian Standard AS/NZS2890.1:2004,**
3. **Where the design deviates from AS/NZS2890.1:2004 the designer must demonstrate that the design will provide a safe and efficient access, and enable safe, easy and efficient use, and**
4. **Show dimensions, levels, gradients & transitions, and other details as Council deem necessary to satisfy the above requirement.**

Advice:

- *This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.*
- *It is 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, and parking module (parking spaces) must be constructed in accordance with the design drawings approved by Condition **ENG 3b**.

Prior to first occupation or commencement of use (whichever occurs first), documentation by a suitably qualified engineer certifying that the access driveway, 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

Prior to first occupation or commencement of use (whichever occurs first), the access driveway and parking module (parking spaces) 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.

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 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.**

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 r3

Prior to the commencement of use, the proposed driveway crossover on the highway reservation for 14 Thelma Drive must be designed and constructed in general accordance with:

- **Urban - TSD-R09-v1 – Urban Roads Driveways;**

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

1. **Show the cross and long section of the driveway crossover within the highway reservation and onto the property;**
2. **Detail any services or infrastructure (ie light poles, pits, awnings) at or near the proposed driveway crossover;**
3. **If the design deviates from the requirements of the TSD, then demonstrate that a B85 vehicle or a B99 depending on use (AS/NZS 2890.1 2004, section 2.6.2), can access the driveway from the road pavement into the property without scraping the vehicle's underside;**
4. **Be prepared and certified by a suitable qualified person, to satisfy the above requirements.**

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

Advice:

- *This condition requires further information to be submitted as a Condition Endorsement. Refer to the Condition Endorsement advice at the end of this permit.*
- *Please note that your proposal does not include adjustment of footpath levels. Any adjustment to footpath levels necessary to suit the design of proposed floor, parking module or driveway levels will require separate agreement from Council's Road Services Engineer and may require further planning approvals. It is advised to place a note to this effect on construction drawings*

for the site and/or other relevant engineering drawings to ensure that contractors are made aware of this requirement.

Reason for condition

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

ENV 1

Sediment and erosion control measures sufficient to prevent sediment from leaving the site must be installed prior to any disturbance of the site, and maintained until all areas of disturbance have been stabilized or re-vegetated.

Advice:

- *For further guidance in preparing a Soil and Water Management Plan – in accordance with Fact sheet 3 Derwent Estuary Program click [here](#).*

Reason for condition

To avoid the sedimentation of roads, drains, natural watercourses, Council land that could be caused by erosion and runoff from the development, and to comply with relevant State legislation.

ADVICE

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

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

CONDITION ENDORSEMENT

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

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

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

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

BUILDING PERMIT

You may need building approval in accordance with the *Building Act 2016*. Click [here](#) for more information.

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

PLUMBING PERMIT

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

OCCUPATION OF THE PUBLIC HIGHWAY

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

BUILDING OVER AN EASEMENT

In order to build over the service easement, you will require the written consent of the person on whose behalf the easement was created, in accordance with section 74 of the *Building Act 2016*.

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.

WORK WITHIN THE HIGHWAY RESERVATION

Please note development must be in accordance with the Hobart City Council's Infrastructure By law. Click [here](#) for more information.

DRIVEWAY SURFACING OVER HIGHWAY RESERVATION

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

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.

NOISE REGULATIONS

Click [here](#) for information with respect to noise nuisances in residential areas.

FEES AND CHARGES

Click [here](#) for information on the Council's fees and charges.

DIAL BEFORE YOU DIG

Click [here](#) for dial before you dig information.



(Helen Ayers)

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: 3 June 2021

Attachment(s):

Attachment B - CPC Agenda Documents

PROJECT INFORMATION

Project Architect: RICHARD LONEY

Accredited Designer: Richard Loney CC 6198Y

Land title Volume: 163474/1

Design Wind Speed: N3

Climate Zone: 7

BAL rating: 12.5 TBC

Site Classification: CLASS M

Areas:

TOTAL SITE AREA 1,006 SQM

PROPOSED SITE COVERAGE 385 SQM

14 THELMA DRIVE

for

JASON HAY + KATHERINE MIGUEL

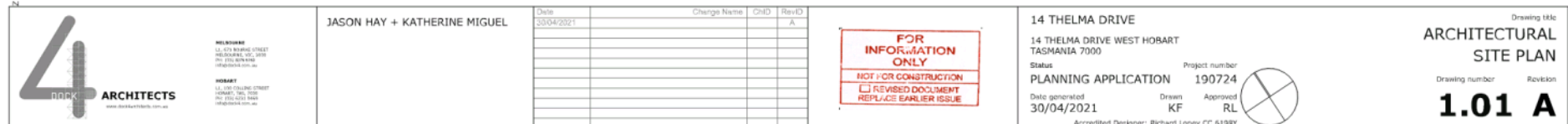
Project Number: 190724

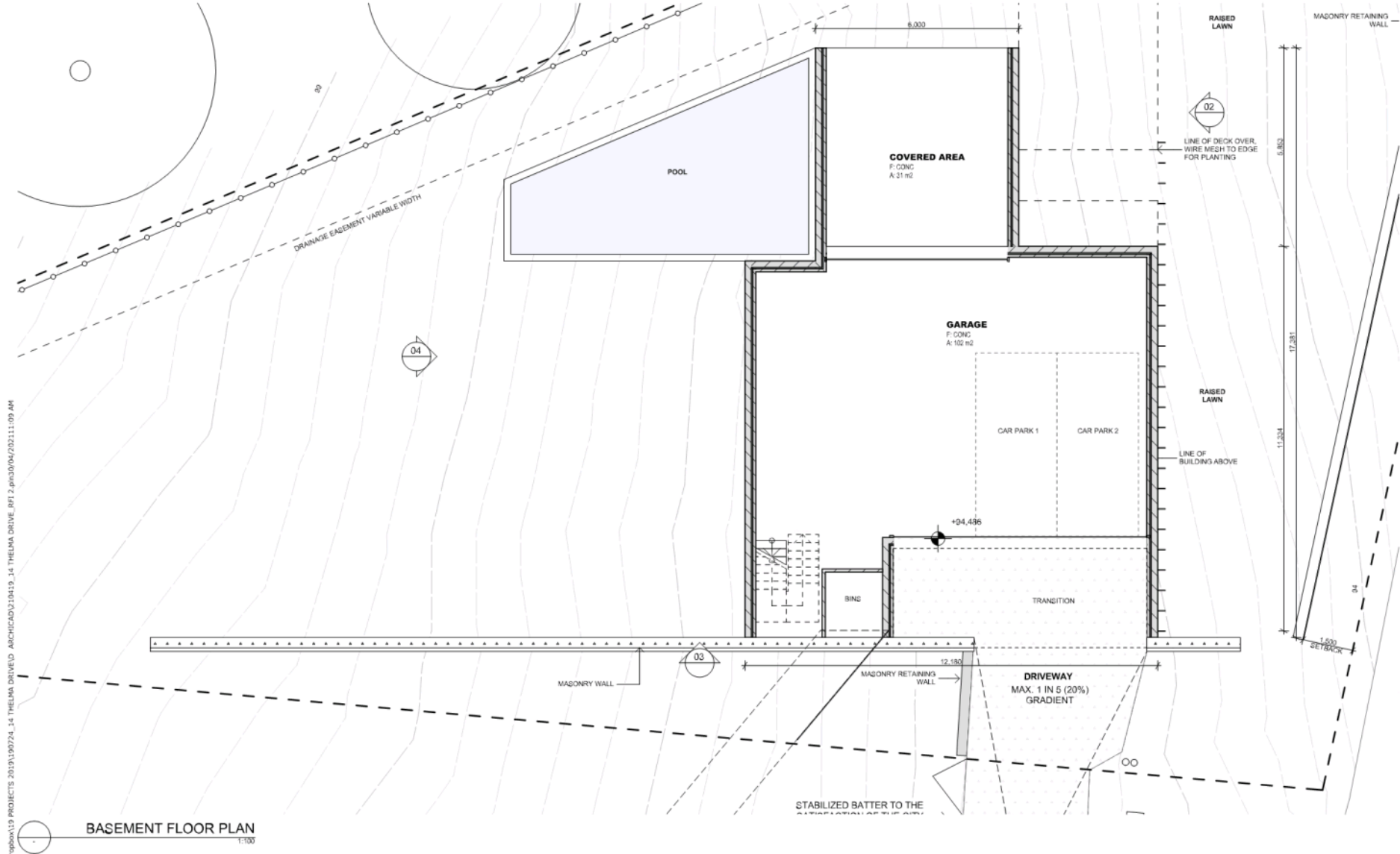
Date: 30/04/2021

Status

PLANNING APPLICATION | REV A

ID	SHEET	REV.
	COVER	A
1.01	SITE PLAN	A
1.02	BASEMENT FLOOR PLAN	A
1.03	GROUND FLOOR PLAN	A
1.04	FIRST FLOOR PLAN	A
1.05	ELEVATIONS	A
1.06	ELEVATIONS	A
1.08	ASSET PLAN	A
1.09	DRIVEWAY	A
1.09	ASSET SECTION	A
1.10	SUN STUDY	A







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11/11A MARLBOROUGH STREET
HOBART TAS 7000
PH: 03 6233 1111
WWW.ROCKARCHITECTS.COM.AU

JASON HAY + KATHERINE MIGUEL

Date	Change Name	CHD	RevID
30/04/2021			A

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REPLACE EARLIER ISSUE

14 THELMA DRIVE
14 THELMA DRIVE WEST HOBART
TASMANIA 7000

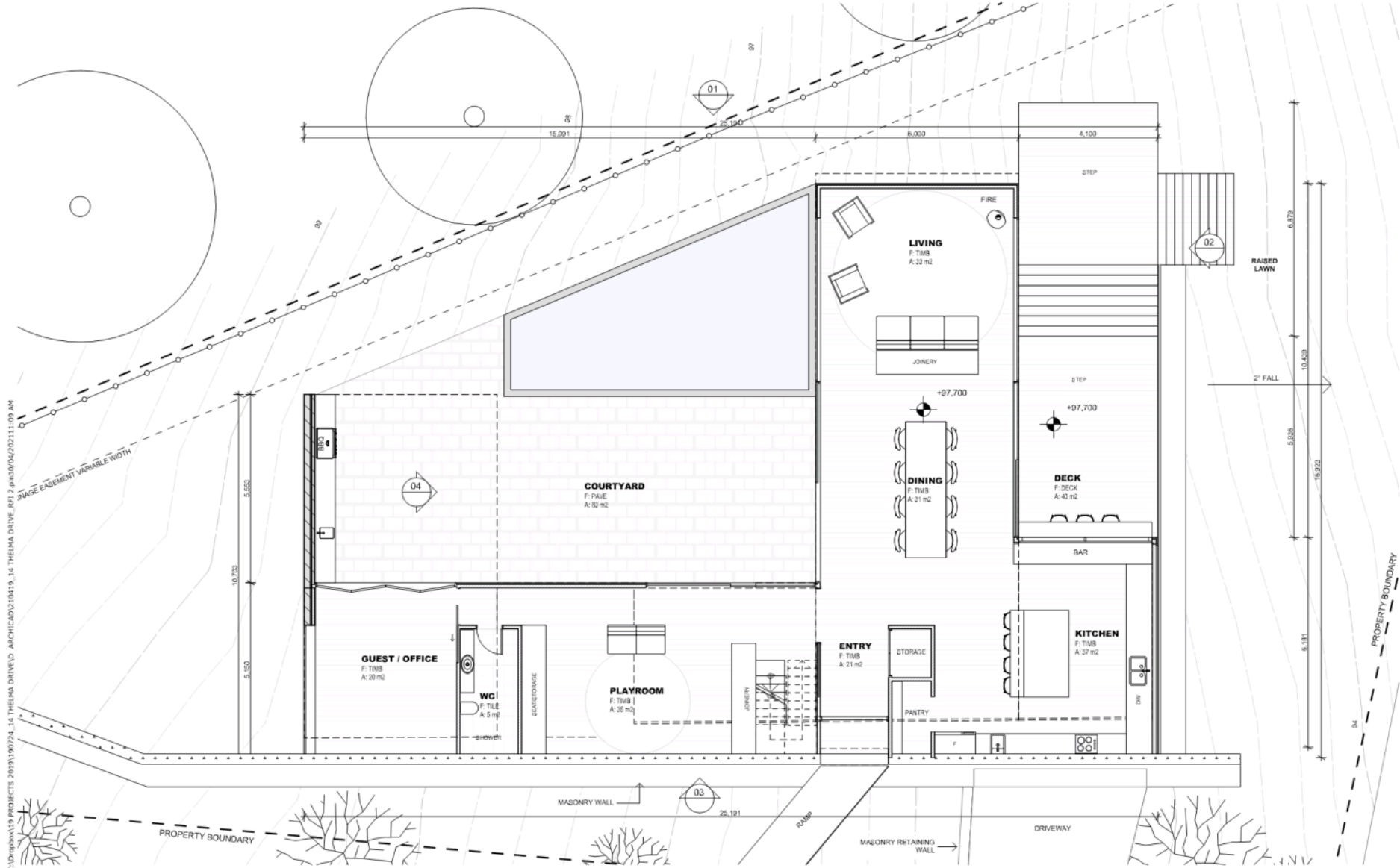
Status: PLANNING APPLICATION
Date generated: 30/04/2021

Project number: 190724
Drawn: KF
Approved: RL

Accredited Designer: Richard Loney CC 5198Y

ARCHITECTURAL
BASEMENT FLOOR PLAN

Drawing number: 1.02
Revision: A





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GROUND FLOOR PLAN
1:100

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14 THELMA DRIVE
14 THELMA DRIVE WEST HOBART
TASMANIA 7000

Status
PLANNING APPLICATION

Date generated
30/04/2021

Project number
190724

Drawn
KF

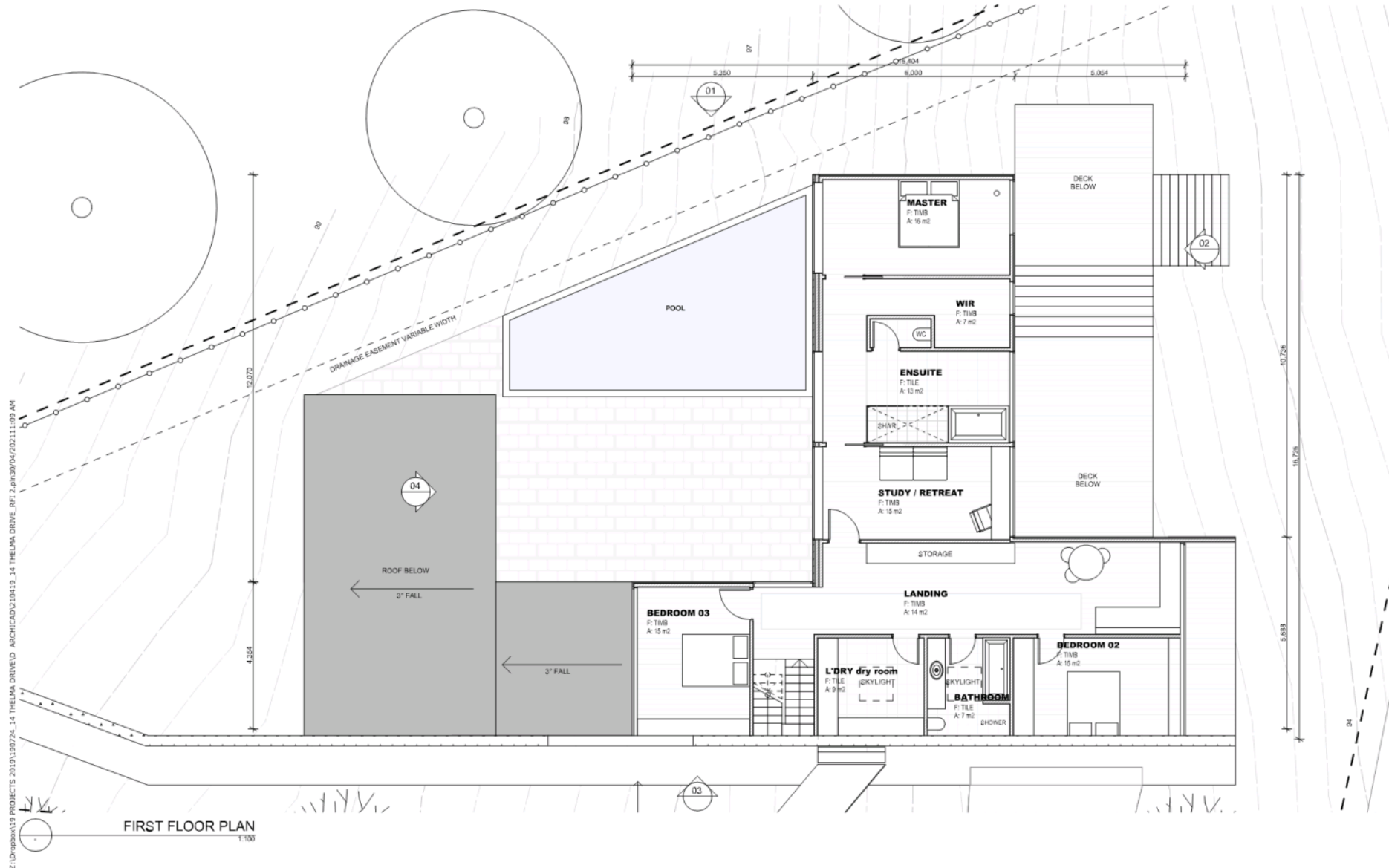
Approved
RL

Accredited Designer: Richard Loney CC 6198Y

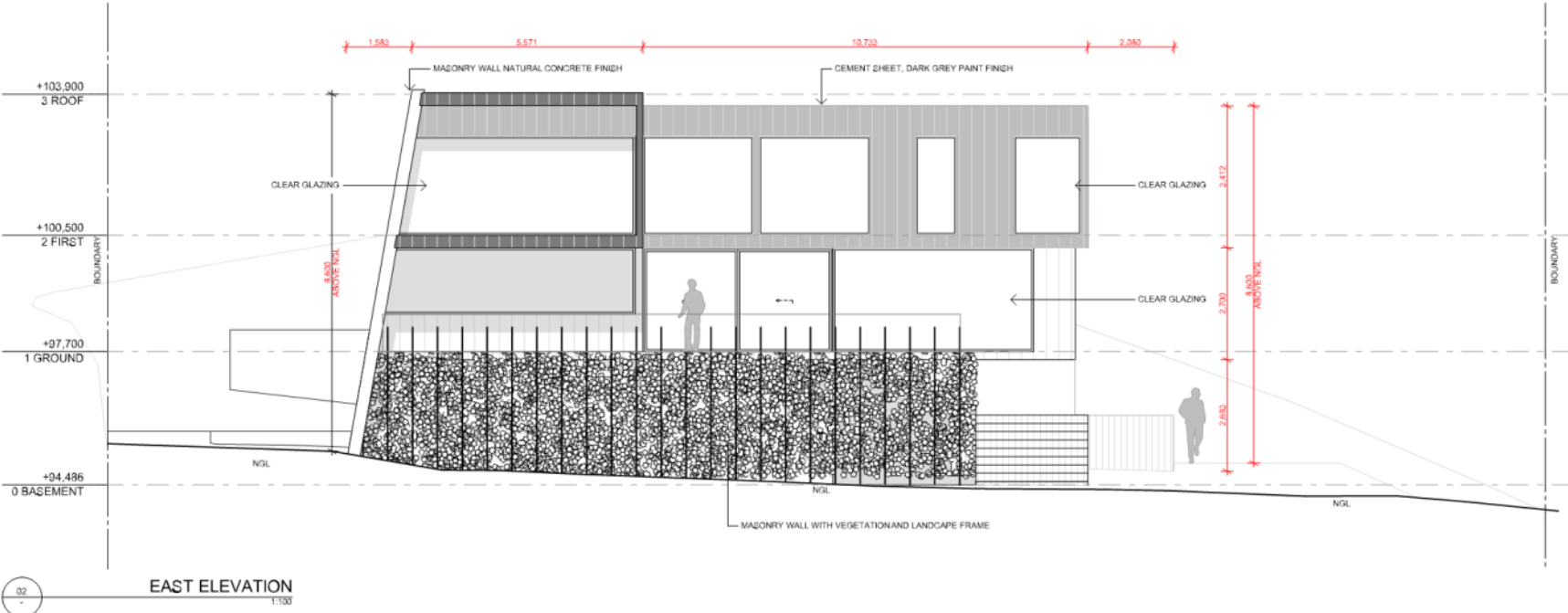
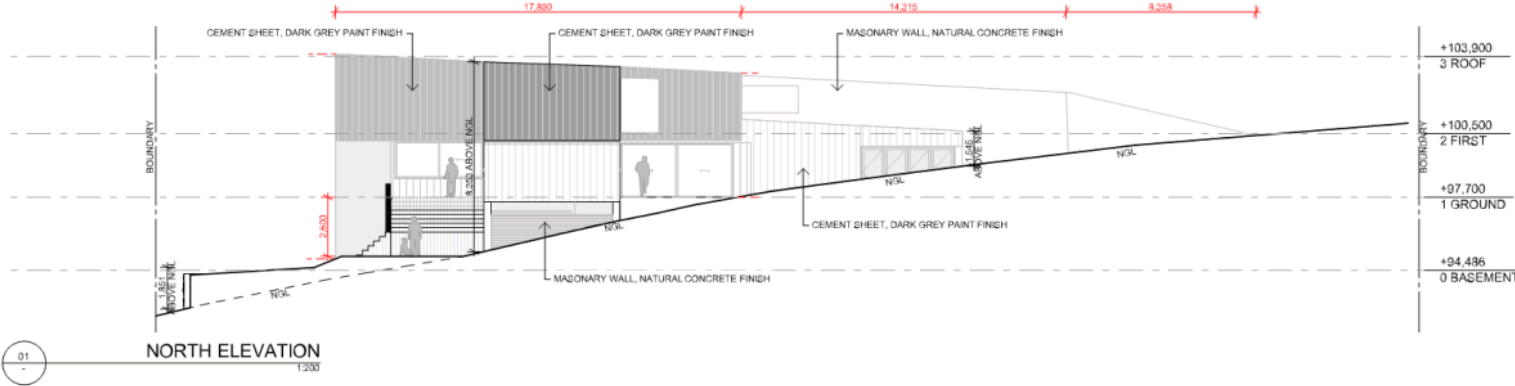
Drawing title
**ARCHITECTURAL
GROUND FLOOR PLAN**

Drawing number
1.03

Revision
A



<p>ROCK ARCHITECTS 11/11A MARLBOROUGH STREET HOBART TAS 7000 TEL: 03 6231 1111 WWW.ROCKARCHITECTS.COM.AU</p>	<p>JASON HAY + KATHERINE MIGUEL</p>	Date	30/04/2021	Change Name	CHD	RevID	A
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<p>14 THELMA DRIVE</p> <p>14 THELMA DRIVE WEST HOBART TASMANIA 7000</p> <p>Status: PLANNING APPLICATION</p> <p>Date generated: 30/04/2021</p> <p>Accredited Designer: Richard Loney CC 6198Y</p>		<p>Project number: 190724</p> <p>Drawn: KF</p> <p>Approved: RL</p>		<p>Drawing title: ARCHITECTURAL FIRST FLOOR PLAN</p> <p>Drawing number: 1.04 A</p>			





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14 THELMA DRIVE
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Status: PLANNING APPLICATION

Date generated: 30/04/2021

Project number: 190724

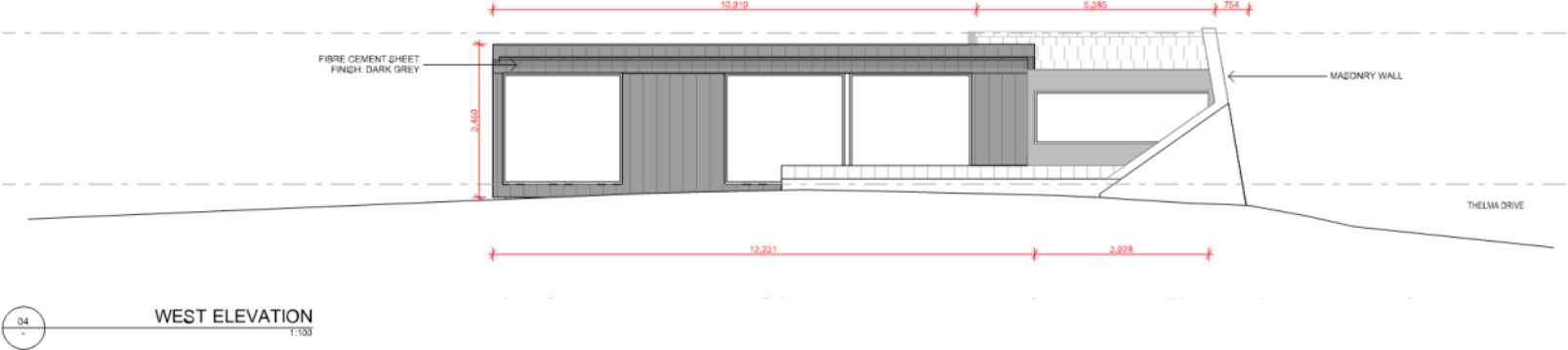
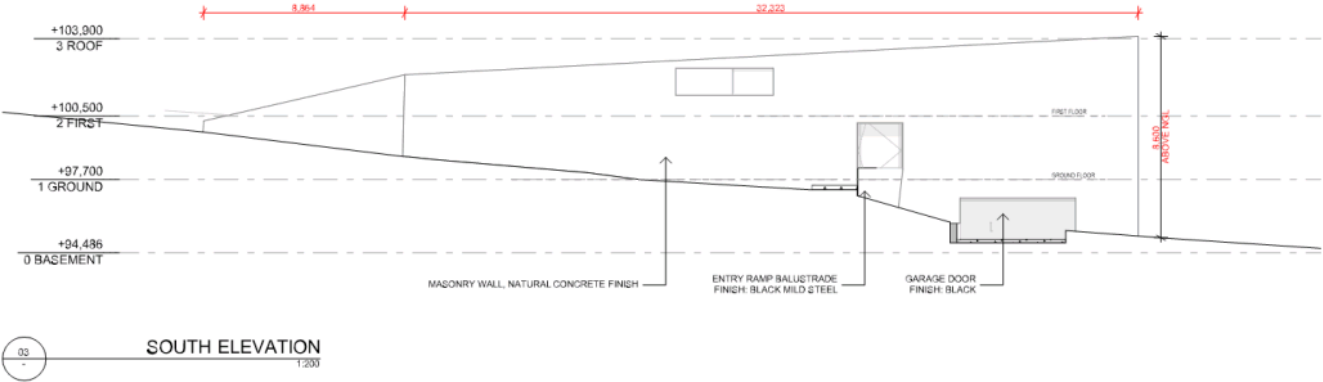
Drawn: KF

Approved: RL

Accredited Designer: Richard Loney CC 6198Y

Drawing title: ARCHITECTURAL ELEVATIONS

Drawing number: 1.05 A



4

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info@rockarch.com.au

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30/04/2021			A

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TASMANIA 7000

Status

PLANNING APPLICATION

Date generated

30/04/2021

Project number

190724

Drawn

KF

Approved

RL

Accredited Designer: Richard Loney CC 6198Y

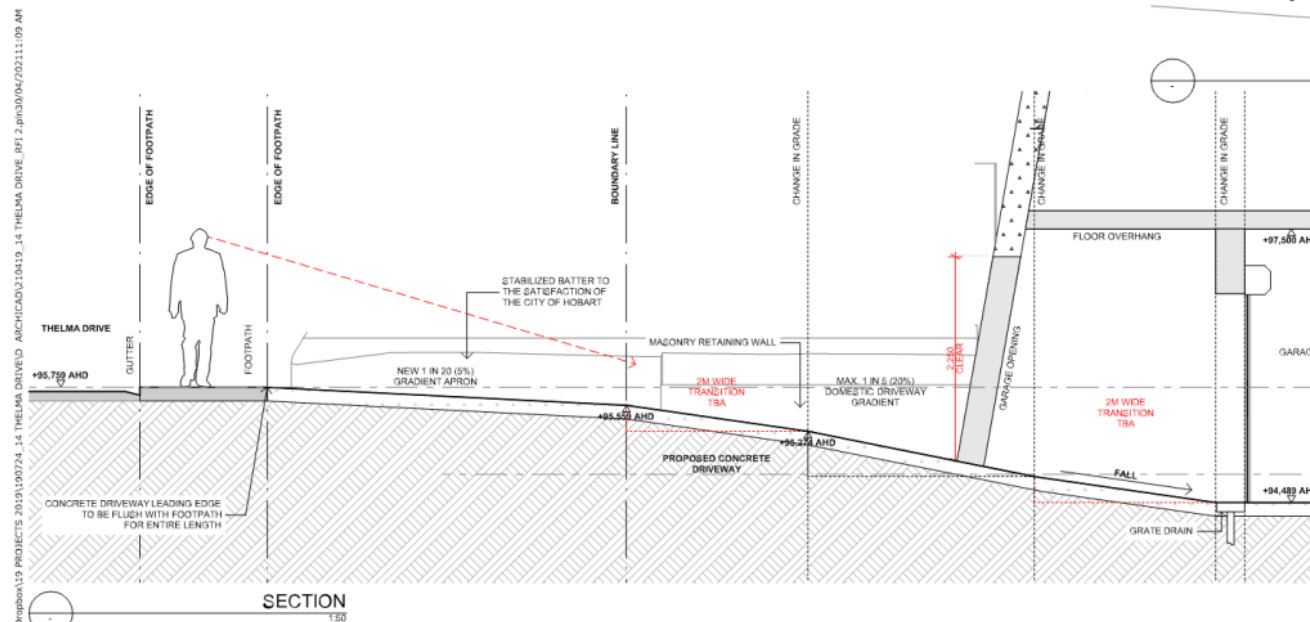
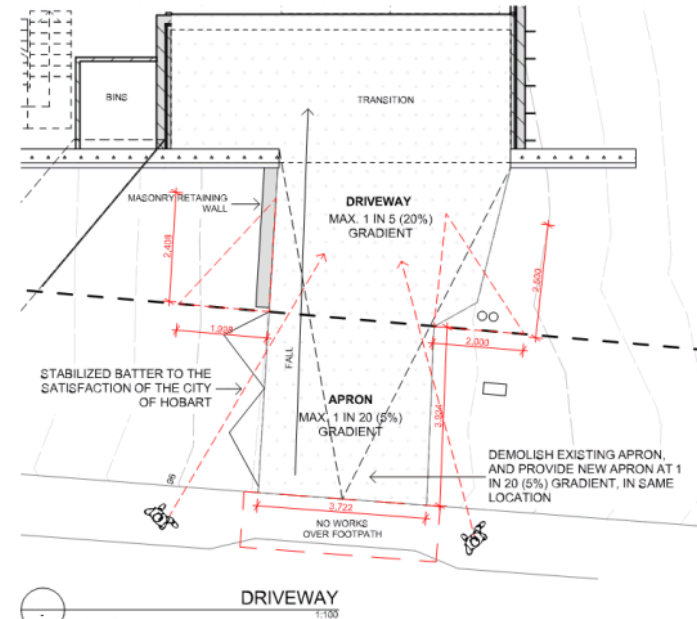
Drawing title



ARCHITECTURAL ELEVATIONS

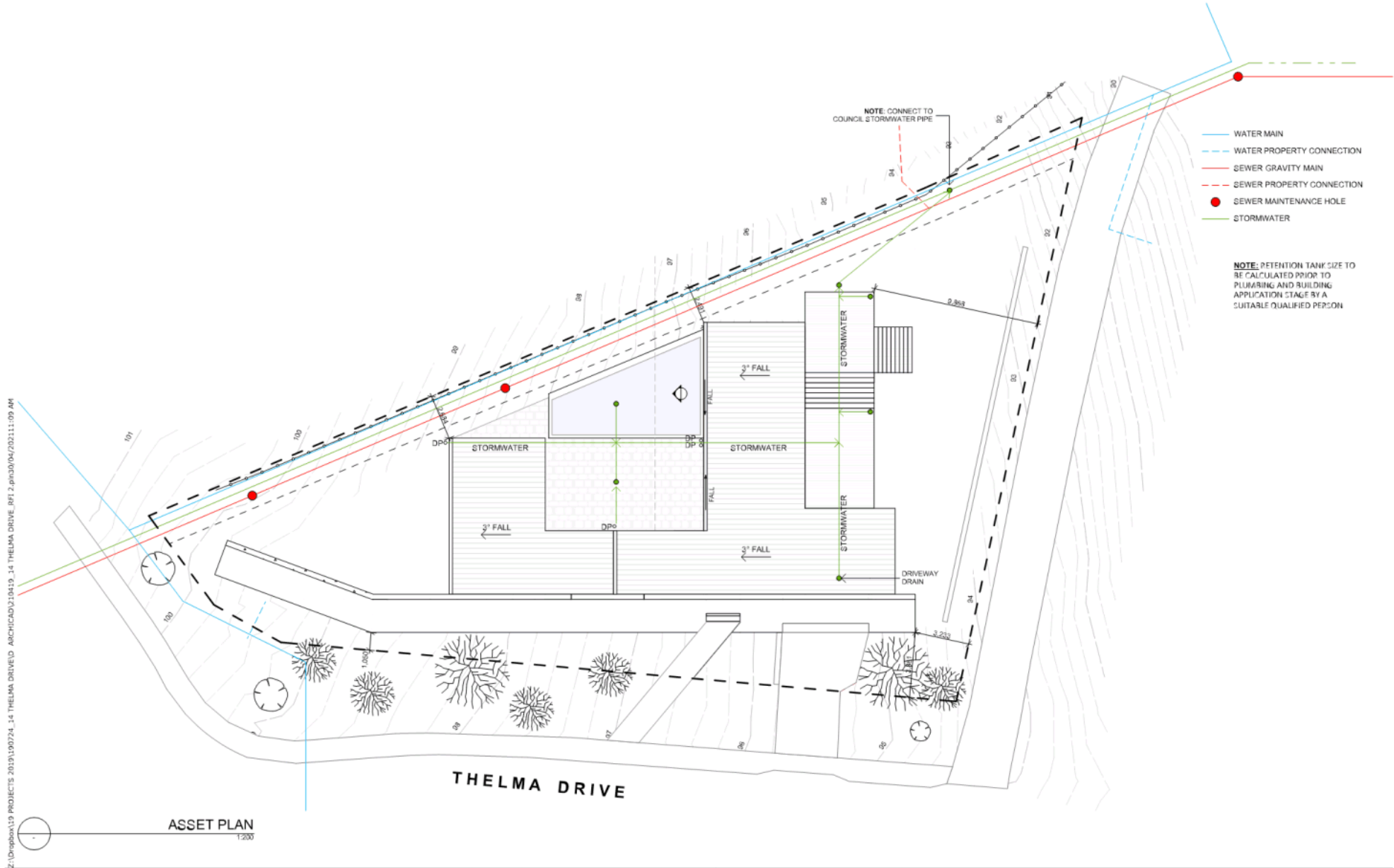
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Revision

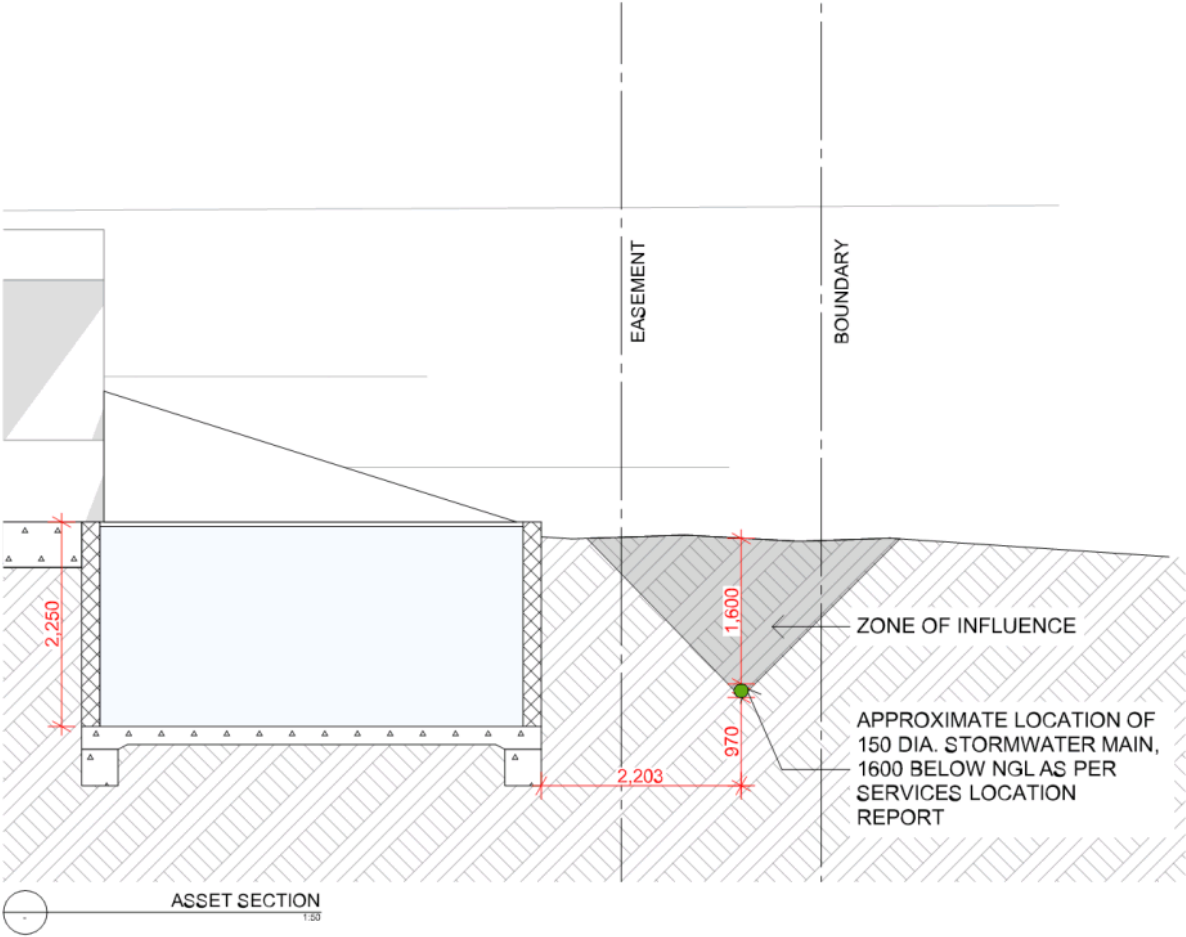
1.06 A



	<p>REQUIRED</p> <p>14 THIELMA DRIVE WEST HOBART, TAS 7000 TASMANIA 7000 tel: 03 6233 6666 info@4mark.com.au</p> <p>HOBART</p> <p>14/1501 THIELMA STREET HOBART TAS 7000 tel: 03 6233 6666 info@4mark.com.au</p>	<p>JASON HAY + KATHERINE MIGUEL</p>		<p>Date</p> <p>20/04/2021</p>	<p>Change Name</p> <p>CHD</p> <p>Rev/D</p> <p>A</p>	<div style="border: 2px solid red; padding: 5px; margin: 10px auto; width: 100px;"> <p style="text-align: center; color: red; font-weight: bold;">FOR INFORMATION ONLY</p> <p style="text-align: center; color: red; font-weight: bold;">NOT FOR CONSTRUCTION</p> <p style="text-align: center; color: red; font-weight: bold;">REVISSED DOCUMENT</p> <p style="text-align: center; color: red; font-weight: bold;">REPLACE EARLIER ISSUE</p> </div>	<p>14 THIELMA DRIVE</p> <p>14 THIELMA DRIVE WEST HOBART TASMANIA 7000</p> <p>Status</p> <p>PLANNING APPLICATION</p> <p>Date generated</p> <p>30/04/2021</p>	<p>Project number</p> <p>190724</p> <p>Drawn</p> <p>KF</p>	<p>Approved</p> <p>RL</p>		<p style="font-size: small;">Drawing title</p> <p style="font-size: x-large; font-weight: bold;">ARCHITECTURAL DRIVEWAY</p> <p style="font-size: small;">Drawing number</p> <p style="font-size: x-large; font-weight: bold;">1.08</p> <p style="font-size: x-large; font-weight: bold;">A</p> <p style="font-size: small;">Revision</p>



<div><div>4</div><div>mark</div><div>ARCHITECTS</div><div>www.rockmarkarchitects.com.au</div></div>	<div><div>HELMSBURGH</div><div>141-143 BRUNNEN STREET</div><div>HELMERSBURGH TAS 7000</div><div>TEL: 03 6231 1111</div><div>WWW.ROCKARCHITECTS.COM.AU</div></div> <div><div>HOBART</div><div>11/11A MARLBOROUGH STREET</div><div>HOBART TAS 7000</div><div>TEL: 03 6231 1111</div><div>WWW.ROCKARCHITECTS.COM.AU</div></div>	JASON HAY + KATHERINE MIGUEL		<div>Date</div> <div>30/04/2021</div>	<div>Change Name</div>	<div>CHD</div>	<div>RevID</div> <div>A</div>	<div><div>FOR INFORMATION ONLY</div><div>NOT FOR CONSTRUCTION</div><div>REVISOR'S DOCUMENT</div><div>REPLACE EARLIER ISSUE</div></div>	<div>14 THELMA DRIVE</div> <div>14 THELMA DRIVE WEST HOBART</div> <div>TASMANIA 7000</div>		<div>Drawing title</div> <div>ARCHITECTURAL ASSET PLAN</div>
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		<div>Date generated</div> <div>30/04/2021</div>	<div>Drawn</div> <div>KF</div>	<div>Approved</div> <div>RL</div>							
		<div>Accredited Designer: Richard Loney CC 6198Y</div>									



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JASON HAY + KATHERINE MIGUEL

Date	Change Name	CHD	RevID
30/04/2021			A

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14 THELMA DRIVE
14 THELMA DRIVE WEST HOBART
TASMANIA 7000

Status: **PLANNING APPLICATION**

Date generated: **30/04/2021**

Accredited Designer: Richard Loney CC 6198Y

Drawing title: **ARCHITECTURAL ASSET SECTION**

Drawing number: **1.09**

Revision: **A**

Project number: **190724**

Drawn: **KF**

Approved: **RL**





	RELINQUISH 14, C/O BROADWAY STREET HOBART TASMANIA 7000 (08) 6824 6666 www.4tharchitects.com.au	JASON HAY & KATHERINE MIGUEL	Date 23/04/2021	Change Name CHD A	Rev'd A	<div style="border: 2px solid red; padding: 10px; margin: auto; width: fit-content;"> <p style="color: red; font-weight: bold; text-align: center;">FOR INFORMATION ONLY</p> <p style="color: red; font-weight: bold; text-align: center;">NOT FOR CONSTRUCTION</p> <p style="color: red; font-weight: bold; text-align: center;"><input type="checkbox"/> REVISED DOCUMENT REPLACE EARLIER ISSUE</p> </div>	14 THELMAS DRIVE 14 THELMAS DRIVE WEST HOBART TASMANIA 7000 Status PLANNING APPLICATION	Project number 190724		<div style="font-size: 2em; font-weight: bold;">1.10 A</div>
	HOBART 14, C/O BROADWAY STREET HOBART TASMANIA 7000 (08) 6824 6666 www.4tharchitects.com.au						Date generated 30/04/2021	Drawn KF		



Date 15 / 4 / 21

Protech Job No. 1001.....

Site

DBYD Job No: 21439117.....

Address:

..... 14 Thelma DR, West Hobart..... Post Code: 7000

Locations

Services	Located	Level	Notes
Telstra	x		
NBN	x		
TasNetworks	x		
TasWater Water	✓	D	Couldn't detect the water main through the property. Tried to locate it back up Thelma Dr to get an alignment on it but still couldn't detect it with our locating equipment. TasWater plans are possibly wrong and the pipe may not be DICL and could be PVC. Will need to physically pothole to confirm pipe location and pipe makeup.
TasWater Sewer	✓	B	
Stormwater	✓	B	

Locator..... H. Stone.....

Company..... Dock4 Architects.....

Name..... Georgina East.....

Signature..... H. Stone.....

Signature.....



Please note;

Location marks by our locators are guides only. All services must be uncovered and proven prior to mechanical excavation.



Pre Work Checklist

Before starting work:	Yes	No	N/A	Comments
Do you have access to appropriate emergency and first aid equipment?	✓			
If the work involves a high risk task (such as work at heights, hot-work, confined spaces), is a work permit/ safe work method statement required?			✓	
Do you have the correct procedures and equipment to do the work safely?	✓			
Is there appropriate separation of vehicles and people during the proposed work?	✓			
Is all required electrical/mechanical equipment in a safe condition?	✓			
Are hazardous/dangerous substances used and stored according to their safety data sheets?			✓	
Do you have all necessary PPE?	✓			
Have you got a safe way of getting in and out of your work area?	✓			
Have any manual handling risks been identified and accessed?	✓			

Additional information

If you answer "no" to any of those above, you may need to follow up with the person in charge before you start work to help ensure your safety.

Date: 15/ 4 /21

Job#...1201.....

Name.....H. Stone.....

SignatureH.....













Legend

White - Communications

Red - Sewer

Green - Stormwater



Orange - Power

Pink - Unknown

Blue - Water

[illegible]



	REQUIREE 11 ALBERT STREET MELBOURNE VIC 3000 PH: 03 9247 8888 info@4tharch.com.au	JASON HAY + KATHERINE MIGUEL		Date	Change Name	CNS	RevisD	<div style="border: 2px solid red; padding: 5px; margin-bottom: 5px;"> <p style="color: red; font-weight: bold; text-align: center;">FOR INFORMATION ONLY</p> <p style="color: red; font-weight: bold; text-align: center;">NOT FOR CONSTRUCTION</p> <p style="color: red; font-weight: bold; text-align: center;"><input type="checkbox"/> REVISED DOCUMENT REPLACE EARLIER ISSUE</p> </div>	14 THELMIA DRIVE 14 THELMIA DRIVE WEST HOBBART TASMANIA 7000 Status PLANNING APPLICATION Date generated 10/05/2021 Drawn KF Approved RL Appointed KF Project number 190724 Drawing number 1.09 A		Drawing title <h2 style="margin: 0;">ARCHITECTURAL ASSET SECTION</h2> Revision <div style="font-size: 2em; font-weight: bold; display: inline-block;">A</div>
	HOBART 11 ALBERT STREET MELBOURNE VIC 3000 PH: 03 9247 8888 info@4tharch.com.au										



Enquiries to: City Planning
Phone: (03) 6238 2715
Email: coh@hobartcity.com.au

31 March 2021

Richard (DOCK4 ARCHITECTS)
L1, 100 Collins Street
HOBART TAS 7000

[mailto: richard@dock4.com.au](mailto:richard@dock4.com.au)

Dear Sir/Madam

**14 THELMA DRIVE, WEST HOBART - WORKS IN ROAD RESERVE NOTICE OF LAND
OWNER CONSENT TO LODGE A PLANNING APPLICATION - GMC-21-25**

Site Address:

14 Thelma Drive, West Hobart

Description of Proposal:

Dwelling involving the road reservation

Applicant Name:

Richard Loney
Dock4 Architects

PLN (if applicable):

PLN-21-123

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 as the statutory planning authority.

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
W hobartcity.com.au

 CityofHobartOfficial
ABN 39 055 343 428
Hobart City Council

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

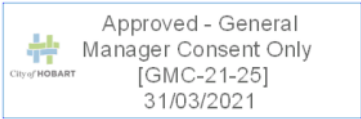
Relevant documents/plans:

Plans by Dock4 Architects

1.01 Rev A, 1.02 Rev A, 1.03 Rev A, 1.04 Rev A, 1.05 Rev A, 1.06 Rev A, 1.07 Rev A

PROJECT INFORMATION

Project Architect: RICHARD LONEY
Accredited Designer: Richard Loney CC 6198Y
Land title Volume: 163474/1
Design Wind Speed: N3
Climate Zone: 7
BAL rating: 12.5 TBC
Site Classification: CLASS M
Areas:
#Building areas



14 THELMA DRIVE

for
JASON HAY + KATHERINE MIGUEL
Project Number: 190724 Date: Work in Progress

Status
DEVELOPMENT APPLICATION | REV A - WIP

ID	SHEET	REV.
	COVER	A - WIP
1.01	SITE PLAN	A - WIP
1.02	BASEMENT FLOOR PLAN	A - WIP
1.03	GROUND FLOOR PLAN	A - WIP
1.04	FIRST FLOOR PLAN	A - WIP
1.05	ELEVATIONS	A - WIP
1.06	ELEVATIONS	A - WIP
1.07	DRIVEWAY	A - WIP

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MELBOURNE
1/1 675 BOURKE STREET
MELBOURNE VIC 3000
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info@4dock.com.au

HOBART
1/1 100 COLLINS STREET
HOBART TAS 7000
PH: (03) 6231 0483
info@4dock.com.au

Approved - General
Manager Consent Only
[GMC-21-25]
31/03/2021



SITE PLAN
1:200



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JASON HAY + KATHERINE MIGUEL

Date	Change Name	ChID	RevID
Work in Progress			A-1
			WIP

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14 THELMA DRIVE
14 THELMA DRIVE WEST HOBART
TASMANIA 7000

Status
CONCEPT

Date generated
29/03/2021

Project number
190724

Drawn
KF

Approved
RL


Accredited Designer: Richard Loney CC 6198Y

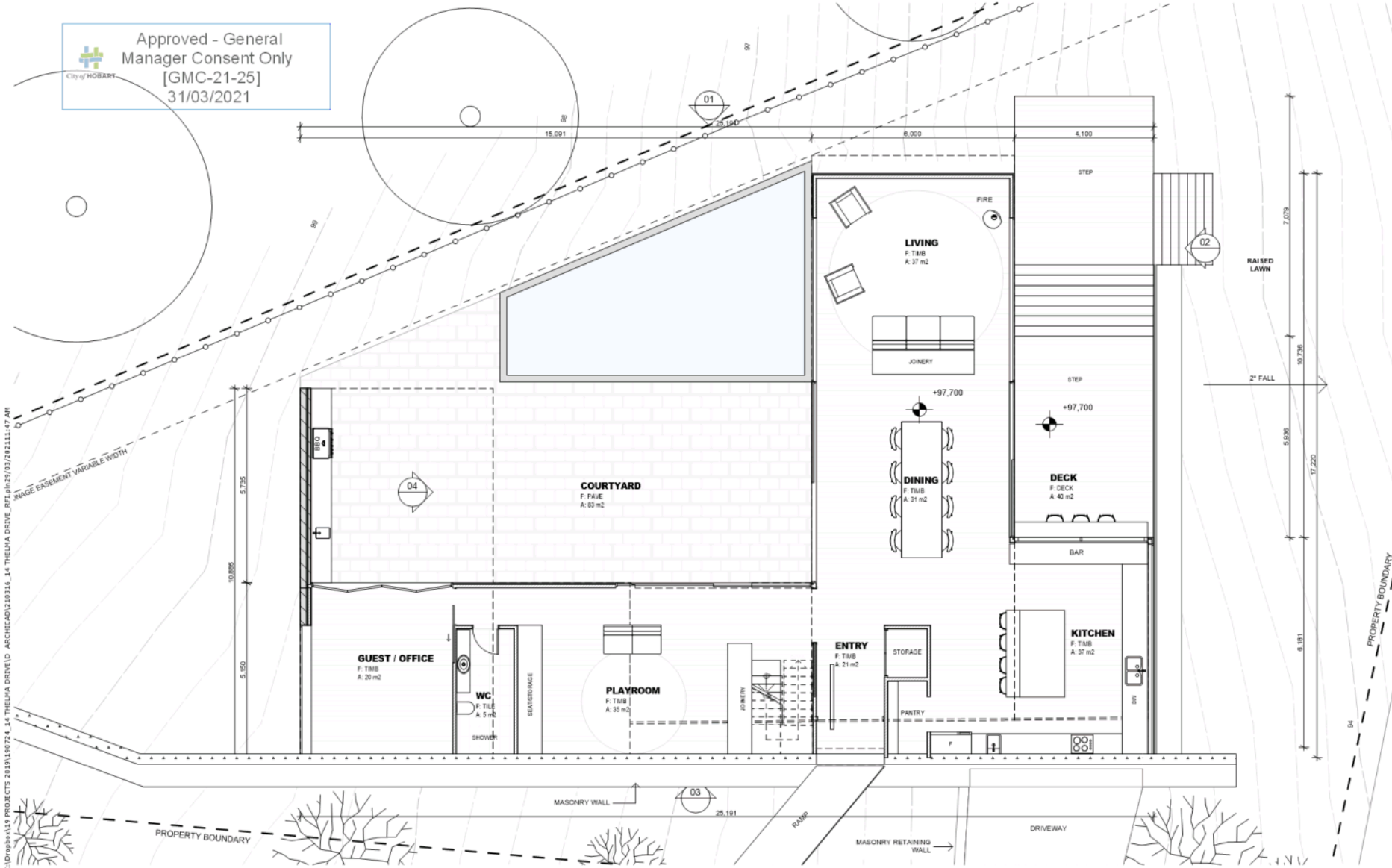
Drawing title
ARCHITECTURAL
SITE PLAN

Drawing number
1.01

Revision
A



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RELATIONS
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HOBART
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info@rockarch.com.au

JASON HAY + KATHERINE MIGUEL

Date	Change Name	ChID	RevID
Work in Progress		A-	WIP

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14 THELMA DRIVE
14 THELMA DRIVE WEST HOBART
TASMANIA 7000

Status: CONCEPT

Date generated: 29/03/2021

Project number: 190724

Drawn: KF **Approved:** RL

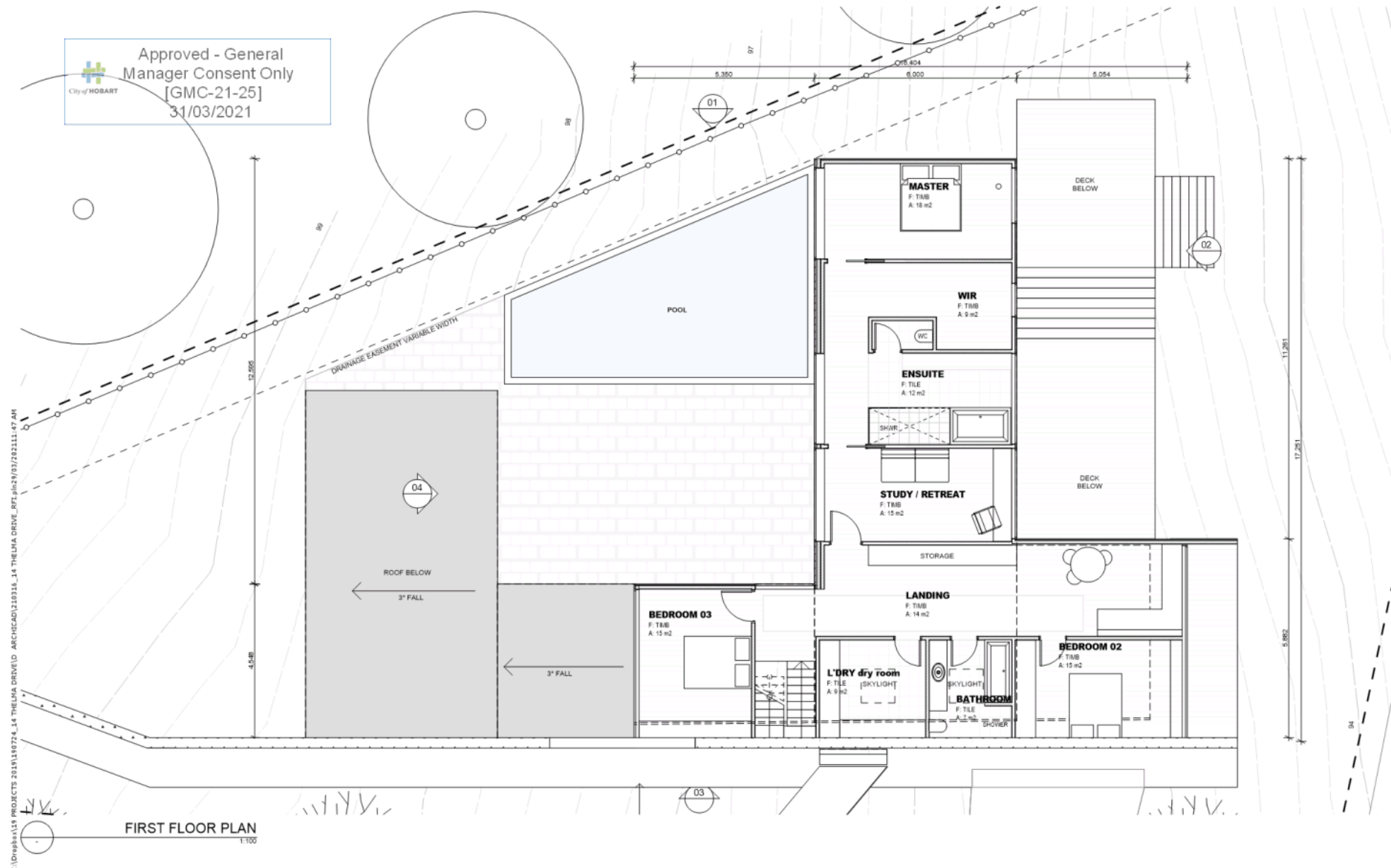
Accredited Designer: Richard Loney CC 6198Y




ARCHITECTURAL GROUND FLOOR PLAN

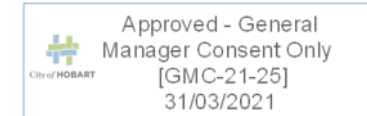
Drawing title

Drawing number **Revision**

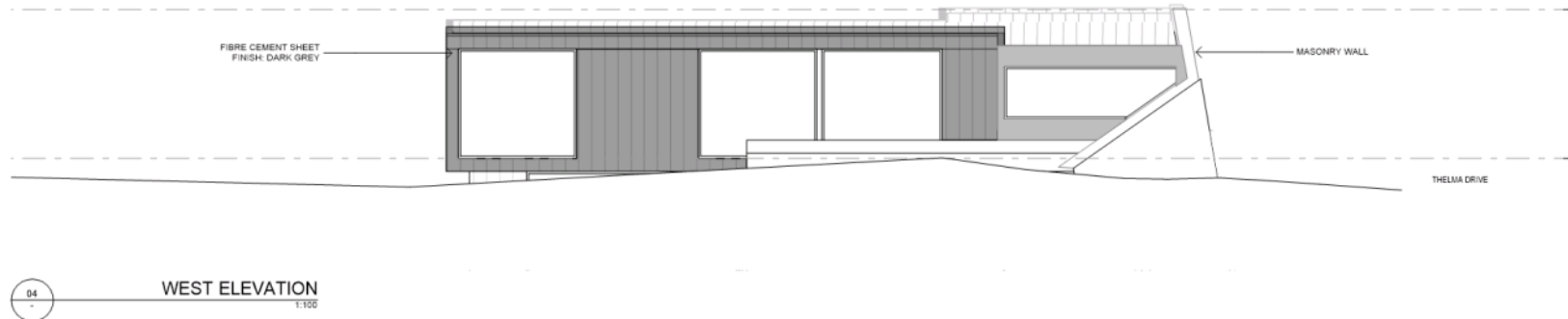
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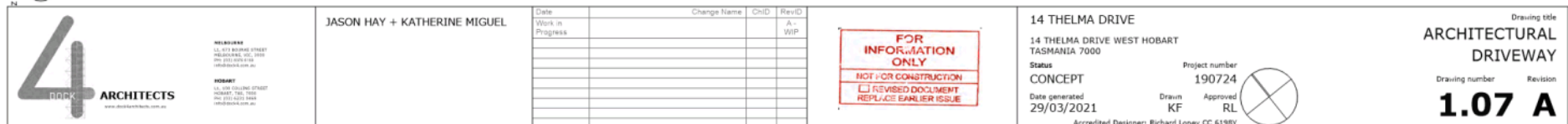
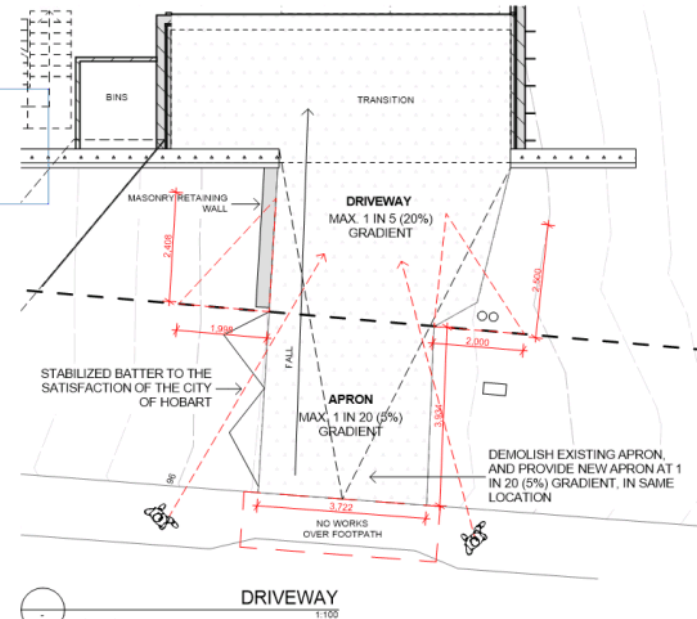


	<p>REQUIREMENTS</p> <p>14, 107 BELMORE STREET HOBART TAS 7000 PH: 081 422 1000 WWW.4MARKARCHITECTS.COM.AU</p> <p>PROJECT</p> <p>14, 107 BELMORE STREET HOBART TAS 7000 PH: 081 422 1000 WWW.4MARKARCHITECTS.COM.AU</p>	<p>JASON HAY + KATHERINE MIGUEL</p>	<p>Date</p> <p>Work in Progress</p>	<p>Change Name</p> <p>CHID</p> <p>Revised</p> <p>A - WIP</p>		<p>14 THELMA DRIVE</p> <p>14 THELMA DRIVE WEST HOBART TASMANIA 7000</p> <p>Status</p> <p>CONCEPT</p> <p>Date generated 29/03/2021</p>	<p>Project number 190724</p> <p>Drawn KF</p> <p>Approved RL</p>		<p>Drawing title</p> <p>ARCHITECTURAL FIRST FLOOR PLAN</p> <p>Drawing number</p> <p>1.04</p> <p>Revision</p> <p>A</p>



<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> <p>4</p> <p>ARCHITECTS</p> <p><small>ARCHITECTS PTY LTD</small></p> </div> <div style="text-align: center;"> <p>4</p> <p>ARCHITECTS</p> <p><small>ARCHITECTS PTY LTD</small></p> </div> </div>	<p>REQUIRE</p> <p>141 THIEL DRIVE, STREET AND HOBBART, TAS 7000</p> <p>REMARK</p> <p>141 THIEL DRIVE, STREET AND HOBBART, TAS 7000</p>	<p>JASON HAY + KATHERINE MIGUEL</p>	<p>Date</p> <p>Work in Progress</p>	<p>Change Name</p> <p>OnD</p> <p>RevisD</p> <p>A - WIP</p>	<div style="border: 2px solid red; padding: 5px; margin: 10px auto; width: 100px;"> <p style="color: red; font-weight: bold; text-align: center;">FOR INFORMATION ONLY</p> <p style="color: red; font-weight: bold; text-align: center;">NOT FOR CONSTRUCTION</p> <p style="color: red; font-weight: bold; text-align: center;"><input type="checkbox"/> REVISED DOCUMENT</p> <p style="color: red; font-weight: bold; text-align: center;">REPLACE EARLIER ISSUE</p> </div>	<p>14 THIELA DRIVE</p> <p>14 THIELA DRIVE WEST HOBBART TASMANIA 7000</p> <p>Status</p> <p>CONCEPT</p> <p>Date generated</p> <p>29/03/2021</p> <p>Approved Designer: Richard Jones CC 61 REV</p>	<p>Project number</p> <p>190724</p> <p>Drawn</p> <p>KF</p> <p>Approved</p> <p>RL</p>		<p>Architectural Elevations</p> <p>Drawing number</p> <p>1.05</p> <p>Revision</p> <p>A</p>





Richard Loney
Dock4 Pty Ltd
Level 2, 100 Collins Street
HOBART, TAS 7000

16 March 2021

Town Hall, Macquarie St
GPO Box 503
Hobart, Tasmania, 7001

Dear Sir/Madam:

In response to the request for additional information for **14 THELMA DRIVE, WEST HOBART - PLN-21-123**

The scope of the proposed works within the reservation include:

- the demotion of existing apron, and provide new apron at 1 in 20 (5%) gradient, in same location
- excavation of soil for the proposed driveway
- Concrete driveway leading edge to be flush with footpath for entire length.
- Stabilized batter in the reserve next to the proposed driveway to the satisfaction of the city of Hobart.

Sincerely,



Richard Loney
Dock4 Pty Ltd

**RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
163474	1
EDITION	DATE OF ISSUE
3	29-Jul-2015

SEARCH DATE : 22-Feb-2021

SEARCH TIME : 02.20 PM

DESCRIPTION OF LAND

City of HOBART

Lot 1 on Sealed Plan 163474

Derivation : Part of 25A-3R-34P Gtd to C. Swanston & R.
Pitcairn.

Prior CT 152664/1

SCHEDULE 1M529532 TRANSFER to JASON LEIGH HAY and KATHERINE MIGUEL
Registered 29-Jul-2015 at noonSCHEDULE 2

Reservations and conditions in the Crown Grant if any

SP163474 EASEMENTS in Schedule of Easements

SP163474 COVENANTS in Schedule of Easements

SP163474 FENCING PROVISION in Schedule of Easements

SP 51014 FENCING PROVISION in Schedule of Easements

D41506 AGREEMENT pursuant to Section 71 of the Land Use
Planning and Approvals Act 1993 Registered
23-Jan-2012 at noonE11831 MORTGAGE to Australia and New Zealand Banking Group
Limited Registered 29-Jul-2015 at 12.01 PMUNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations



FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



OWNER SUZANNE ROSE STEVENS		PLAN OF SURVEY		REGISTERED NUMBER SP163474
FOLIO REFERENCE C.T. 152664/1 & C.T. 135445/1		BY SURVEYOR DAVID B MILLER BROOKS LARK & CARRICK SURVEYORS PO BOX 910 ROSRY PARK 7018 PH 6244-6256 FAX 6244-6221 MOB. 0400-114-824		
GRANTEE PART OF 15A-3R-14.5P GTD TO EDWARD HAWSON & PART OF 25A-3R-34P s GTD TO CHARLES SWANSTON & ROBERT PITCAIRN		LOCATION CITY OF HOBART		APPROVED EFFECTIVE FROM - 8 MAY 2012 <i>Alice Kawa</i> Recorder of Titles
MAPSHEET MUNICIPAL CODE No. 114 (5225-52)		LAST UPI No. GJV53, GJV54	LAST PLAN P152664 No. SP135445	ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN

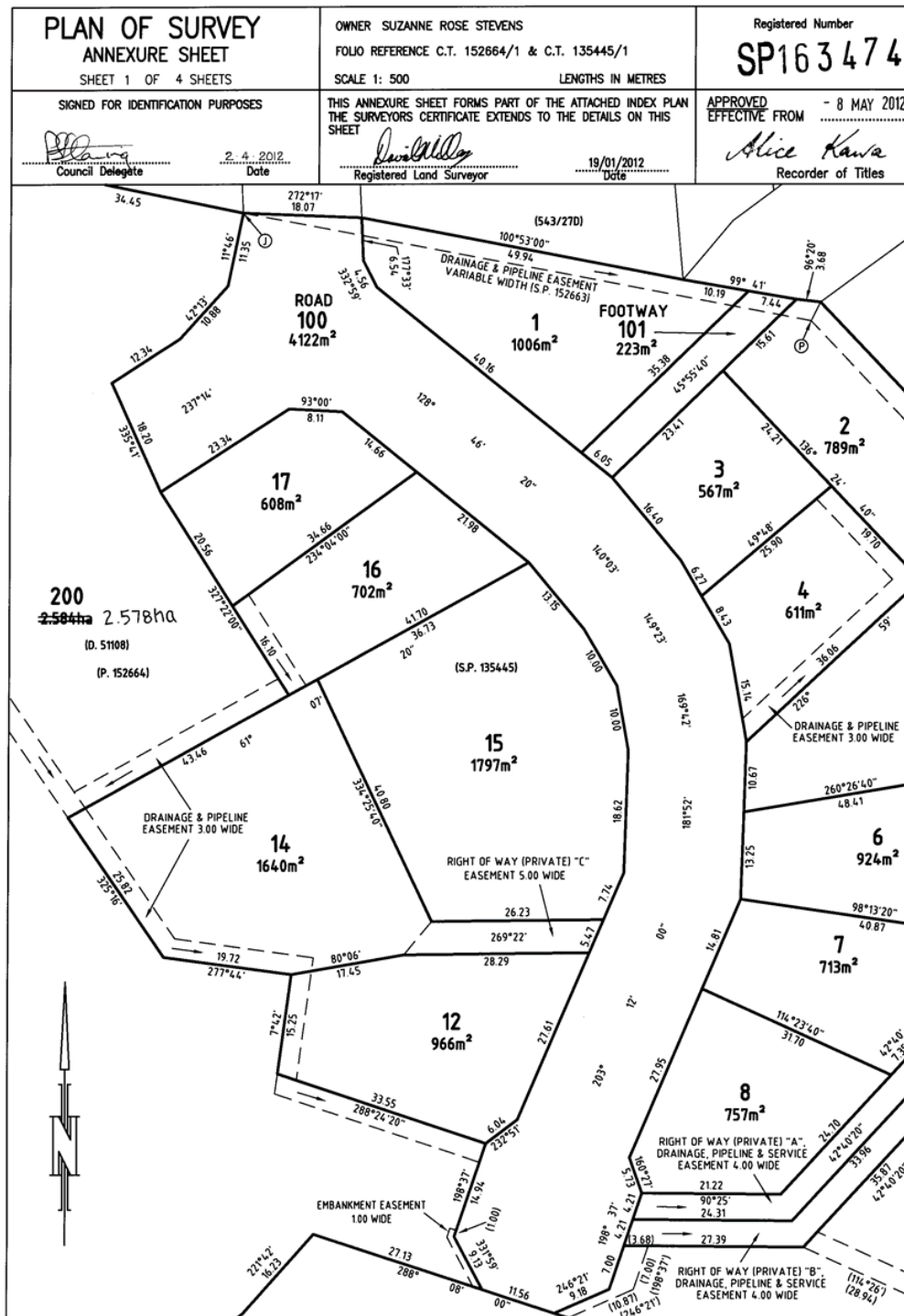
INDEX PLAN

SCALE 1: 1500 LENGTHS IN METRES

SEE ENLARGEMENT 1

ENLARGEMENT 1
SCALE 1:2500

COUNCIL DELEGATE *[Signature]* DATE 2.4.2012

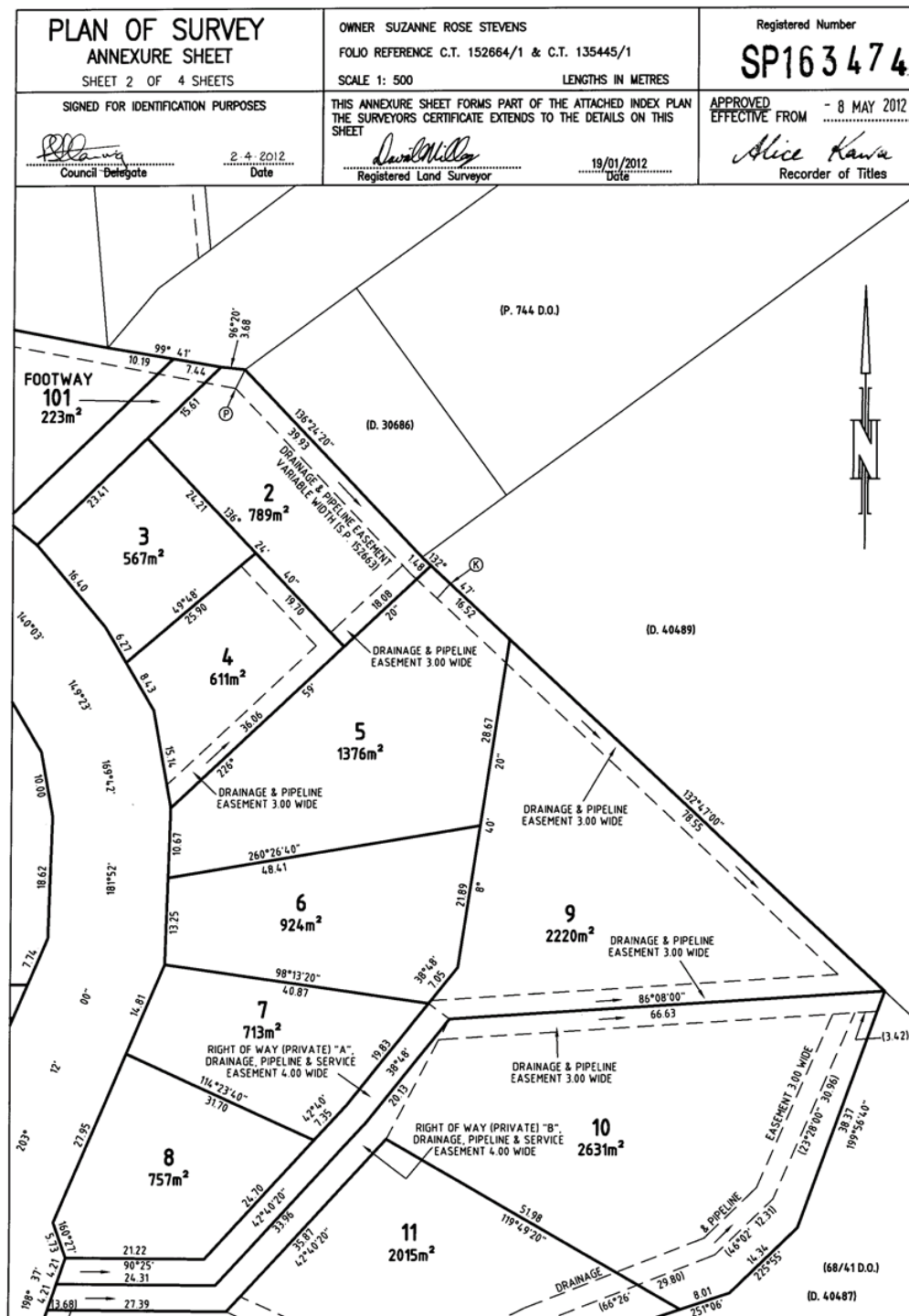




FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

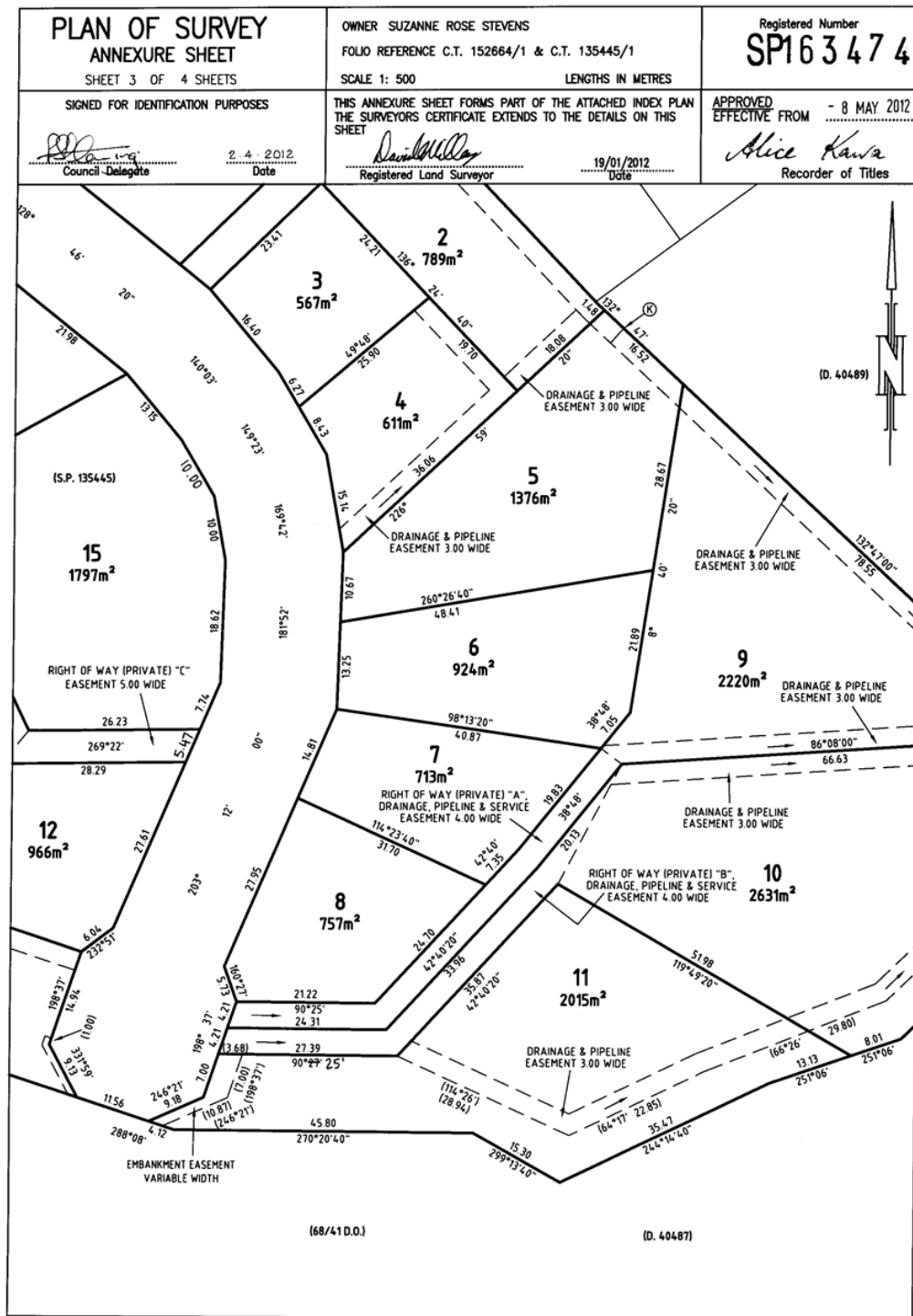




FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980





FOLIO PLAN

RECORDED OF TITLES

Issued Pursuant to the Land Titles Act 1980



<h1>PLAN OF SURVEY</h1> <h2>ANNEXURE SHEET</h2> <p>SHEET 4 OF 4 SHEETS</p>	<p>OWNER SUZANNE ROSE STEVENS</p> <p>FOLIO REFERENCE C.T. 152664/1 & C.T. 135445/1</p> <p>SCALE 1: 1000</p> <p>LENGTHS IN METRES</p>	<p>Registered Number</p> <h1>SP163474</h1>
<p>SIGNED FOR IDENTIFICATION PURPOSES</p> <p><i>[Signature]</i></p> <p>Council Delegate</p> <p>24/2012</p> <p>Date</p>	<p>THIS ANNEXURE SHEET FORMS PART OF THE ATTACHED INDEX PLAN THE SURVEYORS CERTIFICATE EXTENDS TO THE DETAILS ON THIS SHEET</p> <p><i>[Signature]</i></p> <p>Registered Land Surveyor</p> <p>19/01/2012</p> <p>Date</p>	<p>APPROVED</p> <p>EFFECTIVE FROM - 8 MAY 2012</p> <p><i>[Signature]</i></p> <p>Alice Kawa</p> <p>Recorder of Titles</p>

The plan shows a series of land parcels. Parcel 200 is a large triangular area on the left, measuring 2.584ha and 2.578ha. It is bounded by a 'DRAINAGE EASEMENT 3.00 WIDE' and a 'DRAINAGE & PIPELINE EASEMENT 3.00 WIDE'. To the right of parcel 200 is a road labeled 'THELMA DRIVE' and 'ROAD 100'. Along the road are several smaller parcels, numbered 1, 12, 14, 15, 16, and 17. These parcels are separated by 'DRAINAGE & PIPELINE EASEMENT VARIABLE WIDTH (S.P. 152663)' and 'EMBANKMENT EASEMENT 1.00 WIDE'. The plan also shows a 'DRAINAGE & PIPELINE EASEMENT 3.00 WIDE' and a 'DRAINAGE & PIPELINE EASEMENT 3.00 WIDE'. The plan includes a north arrow and a scale bar.

Planning: #225590

Property

14 THELMA DRIVE WEST HOBART TAS 7600

People**Applicant**

"
Dock 4 Architects
Richard Loney
L 1 100 Collins Street
HOBART TAS 7000
6231 0469
richard@dock4.com.au

Owner

"
Jason Hay Katherine Miguel
8/14A Main Road
MCCONAH TAS 7009
0438 229 709
jhay@klimatesolutions.com.au

Entered By
GEORGINA EAST
6231 0469
georgina@dock4architects.com.au

Use

Single dwelling

Details

Have you obtained pre application advice?

• No

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

Are you applying for permitted visitor accommodation as defined by the State Government Visitor Accommodation Standards? Click on help information button for definition. If you are not the owner of the property you MUST include signed confirmation from the owner that they are aware of this application.

• No

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

<input type="radio"/> No		
If this application is related to an enforcement action please enter Enforcement Number		
Details What is the current approved use of the land / building(s)? <input type="text" value="Residential"/>		
Please provide a full description of the proposed use or development (i.e. demolition and new dwelling, swimming pool and garage)		
<input type="text" value="New dwelling, pool and large garage"/>		
Estimated cost of development		
<input type="text" value="50000.00"/>		
Existing floor area (m2)	Proposed floor area (m2)	Site area (m2)
<input type="text"/>	<input type="text"/>	<input type="text"/>
Carparking on Site		
		N/A
Total parking spaces	Existing parking spaces	<input type="text" value="0"/> Other (to schedule shown)
<input type="text"/>	<input type="text"/>	
Other Details		
Does the application include signage?		
<input type="radio"/> No		
How many signs, please enter 0 if there are none involved in this application?		
<input type="text" value="0"/>		
Tasmania Heritage Register Is this property on the Tasmanian Heritage Register?		
<input type="radio"/> No		
Documents		
Required Documents		
Title (Folio text and Plan and Schedule of Easements)		
<input type="text" value="FolioPlan-163474-1 (1).pdf"/>		
Title (Folio text and Plan and Schedule of Easements)		
<input type="text" value="FolioText-163474-1.pdf"/>		
Plans (proposed, existing)		
<input type="text" value="210222_THELMA_DA.pdf"/>		



Submission to Planning Authority Notice

Council Planning Permit No.	PLN-21-123	Council notice date	10/03/2021
TasWater details			
TasWater Reference No.	TWDA 2021/00366-HCC	Date of response	13/05/2021
TasWater Contact	Jake Walley	Phone No.	0467 625 805
Response issued to			
Council name	CITY OF HOBART		
Contact details	coh@hobartcity.com.au		
Development details			
Address	14 THELMA DR, WEST HOBART	Property ID (PID)	3174575
Description of development	New dwelling		
Schedule of drawings/documents			
Prepared by	Drawing/document No.	Revision No.	Date of Issue
4 Dock Architects	Architectural Asset Plan 1.08	A	10/05/2021
Conditions			
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:			
CONNECTIONS, METERING & BACKFLOW			
<ol style="list-style-type: none"> 1. A suitably sized water supply with metered connection and sewerage system and connection to the development must be designed and constructed to TasWater's satisfaction and be in accordance with any other conditions in this permit. 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 commencing construction/use of the development, any water connection utilised for construction/the development must have a backflow prevention device and water meter installed, to the satisfaction of TasWater. 			
56W CONSENT			
<ol style="list-style-type: none"> 4. Prior to the issue of the Certificate for Certifiable Work (Building) and/or (Plumbing) by TasWater the applicant or landowner as the case may be must make application to TasWater pursuant to section 56W of the <i>Water and Sewerage Industry Act 2008</i> for its consent in respect of that part of the development which is built within two metres of TasWater infrastructure. 			
DEVELOPMENT ASSESSMENT FEES			
<ol style="list-style-type: none"> 5. The applicant or landowner as the case may be, must pay a development assessment fee of \$211.63 to TasWater, as approved by the Economic Regulator and the fee will be indexed, until the date paid to TasWater. <p>The payment is required within 30 days of the issue of an invoice by TasWater.</p>			

**Advice****General**

For information on TasWater development standards, please visit
<http://www.taswater.com.au/Development/Development-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.

- (a) A permit is required to work within TasWater's easements or in the vicinity of its infrastructure.
Further information can be obtained from TasWater
- (b) TasWater has listed a number of service providers who can provide asset detection and location services should you require it. Visit www.taswater.com.au/Development/Service-location for a list of companies
- (c) TasWater will locate residential water stop taps free of charge
- (d) Sewer drainage plans or Inspection Openings (IO) for residential properties are available from your local council.

56W Consent

The plans submitted with the application for the Certificate for Certifiable Work (Building) and/or (Plumbing) will need to show footings of proposed buildings located over or within 2.0m from TasWater pipes and will need to be designed by a suitably qualified person to adequately protect the integrity of TasWater's infrastructure, and to TasWater's satisfaction, be in accordance with AS3500 Part 2.2 Section 3.8 to ensure that no loads are transferred to TasWater's pipes. These plans will need to also include a cross sectional view through the footings which clearly shows;

- (a) Existing pipe depth and proposed finished surface levels over the pipe;
- (b) The line of influence from the base of the footing must pass below the invert of the pipe and be clear of the pipe trench and;
- (c) A note on the plan indicating how the pipe location and depth were ascertained.
- (d) The location of the property service connection and sewer inspection opening (IO).

Boundary Trap Area

The proposed development is within a boundary trap area and the developer will need to provide a boundary trap that prevents noxious gases or persistent odours back venting into the property's sanitary drain. The boundary trap is to be contained within the property boundaries and the property owner remains responsible for the ownership, operation and maintenance of the boundary trap.

Declaration

The drawings/documents and conditions stated above constitute TasWater's Submission to Planning Authority Notice.

Authorised by

A handwritten signature in black ink, appearing to read "J. Taylor".

Jason Taylor
Development Assessment Manager



TasWater Contact Details			
Phone	13 6992	Email	development@taswater.com.au
Mail	GPO Box 1393 Hobart TAS 7001	Web	www.taswater.com.au

**7.1.6 4 /160 ELIZABETH STREET, HOBART - ALTERATIONS AND
CHANGE OF USE TO BULKY GOODS SALES AND FOOD
SERVICES
PLN-21-215 - FILE REF: F21/54689**

Address: 4 / 160 Elizabeth Street, Hobart

Proposal: Alterations and Change of Use to Bulky Goods
Sales and Food Services

Expiry Date: 22 June 2021

Extension of Time: Not applicable

Author: Tristan Widdowson

RECOMMENDATION

That pursuant to the *Hobart Interim Planning Scheme 2015*, the Council approve the application for alterations and change of use to bulky goods sales and food services at 4/160 Elizabeth Street, Hobart for the reasons outlined in the officer's report and a permit containing the following conditions be issued:

GEN

The use and/or development must be substantially in accordance with the documents and drawings that comprise PLN-21-215 4/160 ELIZABETH STREET HOBART TAS 7000 - Final Planning Documents except where modified below.

Reason for condition

To clarify the scope of the permit.

PLN s1

This permit does not approve: the obscuring of any of the existing glazing; or any signage.

Advice:

Obscuring the window is considered to be both placing physical obstructions in front of the window (e.g. office equipment) as well as attaching things to the window like signage or obscure film.

Reason for condition

To clarify the scope of the permit.

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.

A photographic record of the Council's infrastructure adjacent to the subject site must be provided to the Council prior to any approval under the *Building Act 2016*.

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 s1

A vehicle movement permit must be applied for and approved, prior to the commencement of use.

Reason for condition

To ensure that the Council's road infrastructure is protected.

ADVICE

The following advice is provided to you to assist in the implementation

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

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

BUILDING PERMIT

You may need building approval in accordance with the *Building Act 2016*. Click [here](#) for more information.

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

OCCUPATION OF THE PUBLIC HIGHWAY

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

You may require an occupational license for structures in the Hobart City Council highway reservation, in accordance with conditions to be established by the Council. Click [here](#) for more information.

You may require a road closure permit for construction or special event. Click [here](#) for more information.

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

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-21-215 - 4/160 ELIZABETH STREET
HOBART TAS 7000 - Planning Committee or
Delegated Report ↓
- Attachment B: PLN-21-215 - 4/160 ELIZABETH STREET
HOBART TAS 7000 - CPC AGENDA
DOCUMENTS ↓

**APPLICATION UNDER HOBART INTERIM PLANNING SCHEME 2015**

Type of Report: Committee
Council: 21 June 2021
Expiry Date: 22 June 2021
Application No: PLN-21-215
Address: 4 / 160 ELIZABETH STREET , HOBART
Applicant: (Lexus)
C/- All Urban Planning
19 Mawhera Avenue
Proposal: Alterations and Change of Use to Bulky Goods Sales and Food Services
Representations: Eight
Performance criteria: Use and Road and Railway Assets Code

1. Executive Summary

- 1.1 Planning approval is sought for Alterations and Change of Use to Bulky Goods Sales and Food Services at 4/160 Elizabeth Street, Hobart.
- 1.2 More specifically the proposal includes:
 - The proposal is for a cafe and car showroom in the vacant approximately 400m2 ground floor tenancy of the recently constructed multi-residential and commercial building "The Rox" on the corner of Elizabeth Street and Brisbane Street. The combined car display and café is to be a "The Lexus Lifestyle Hub" and presents an alternative format from traditional car showroom and sales yard. The test drive vehicles and stock will not be located on site with the only the display models present and rotated approximately four times a month. This will be undertaken out of retail hours and via use of temporary removable ramps over the curb and will to be the satisfaction of Council's Roads City Amenity Unit through the Vehicle Movement Permit process. The vehicles will enter and exit the space through glass entrance doors facing the internal courtyard. The cafe and car showroom space will be shared and undivided with the internal addition of a audio visual room and small office space.
- 1.3 The proposal relies on performance criteria to satisfy the following standards and codes:

- 1.3.1 Central Business Zone - Use
- 1.3.2 Road and Railway Assets Code - Sight Distance
- 1.4 Eight (8) representations objecting to the proposal were received within the statutory advertising period between 6 May and 20 May 2021.
- 1.5 The proposal is recommended for approval subject to conditions.

2. Site Detail

- 2.1 The subject site is the vacant approximately 400m² ground floor tenancy of the recently constructed multi-residential and commercial building “The Rox” on the corner of Elizabeth Street and Brisbane Street. The corner site is centrally located within the midtown section of Elizabeth Street, which features a variety of large and small retail business, food services, the University student accommodation and church on the opposite corner to the site.

2.2



Figure 1: GIS Map Image 1:1000

2.3



Figure 2: Elizabeth Street frontage

2.4



Figure 3: Brisbane Street frontage

3. Proposal

3.1 Planning approval is sought for Alterations and Change of Use to Bulky Goods Sales and Food Services at 4/160 Elizabeth Street, Hobart.

3.2 More specifically the proposal is for:

- The proposal is for a cafe and car showroom in the vacant approximately 400m² ground floor tenancy of the recently constructed multi-residential and commercial building "The Rox" on the corner of Elizabeth Street and Brisbane Street. The combined car display and café is to be a "The Lexus Lifestyle Hub" and presents an alternative format from traditional car showroom and sales yard. The test drive vehicles and stock will not be located on site with the only the display models present and rotated approximately four times a month. This will be undertaken out of retail hours and via use of temporary removable ramps over the curb and will to be the satisfaction of Council's Roads City Amenity Unit through the Vehicle Movement Permit process. The vehicles will enter and exit the space through glass entrance doors facing the internal courtyard. The cafe and car showroom space will be shared and undivided with the internal addition of a audio visual room and small office space.

3.3

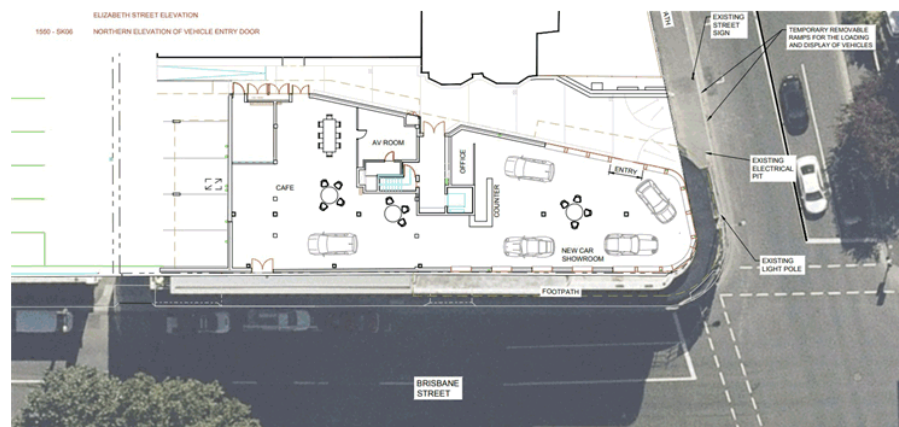


Figure 4: Proposed floor plan

4. Background

4.1 The subject building was approved under PLN-17-920 with 13 residential apartments above street level with an indicative commercial use of General Retail and Hire, Food Services on the ground floor however no tenants were determined at the time of application.

5. Concerns raised by representors

- 5.1 Eight (8) representations objecting to the proposal were received within the statutory advertising period between 6 May and 20 May 2021.
- 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.

How can Council approve big business in Mid Town with already so many cafes? Not protecting local business and letting big business create unhealthy completion. No more cafes should be approved.
Over saturation of cafes. With 5 locally run cafes in the one block between Brisbane and Melville Street, all of which are still struggling to build their businesses back up after the effects of COVID-19 restrictions. Midtown has become known as a local precinct, small independent retail, bars and cafes. I feel that introducing a multinational into this area could be detrimental to all the hard work HCC, and local traders have put it to this area.
The green areas in midtown have reduced parking and effecting business.
A car show room being placed beside a beautiful heritage building, amongst a thriving local precinct. Footpath pedestrian access is vital at all times of the day, with early morning cafes starting from 6 am, and bars open beyond midnight, with the proposed changing of cars on average once a week, this has the potential to deter people from accessing the area, as well as affecting access to the area from new residents who will be living in the above apartments.

Points 22.3.1,2,3 and 4 mention that these restrictions do not apply as the site is 50 m from the closest residential zone. Whilst this may be true consideration should be given to residents who are actually on site at 160 Elizabeth Street in the Rox. It is stated that there are to be 4 vehicles to be placed in the display area while 5 vehicles are in the illustration on pages 7 shows 5 cars in the area. I think to make the proposal acceptable no more than 4 cars should be on display at any time.

With five locally-owned café microbusinesses already on the block between Melville and Brisbane streets, I am concerned that the area is at market saturation in this category, especially given many of the family-run hospitality businesses are struggling to recover from the impacts of Covid-19 and ongoing capacity restrictions. How can HCC say it supports small business growth if it approves a multi-national, non-local company opening yet another café, in direct competition, within 100 metres of 5 others?

Concerned about the proposed changeover of vehicles in the area once a week (on average), because businesses in Midtown do not all close at 6pm. Some bars are just opening or at customer 'peak hour' at this time, in this major pedestrian thoroughfare. Pedestrian accessibility between all our bars, eateries and breweries is required at all times of day. Small businesses who are closed after 6pm still enjoy the benefits of visitors looking in our windows, and can often report that customers return the next day to make a purchase having seen an item while strolling past in the evening. Considerable community and business consultation has arrived at Midtown becoming a more walkable precinct – how does this proposal support that?

The development as outlined in the submitted plan documentation has not taken into account any of the content of the Elizabeth Street (Midtown) Streetscape Project, the concept design being endorsed by the Hobart City Council in December 2020 as a framework for future streetscape development in the project area which includes this development site.

In the Zone Purpose statement comments:

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.”

The proposed use will not complement this this statement as:

- no extraction system is proposed to remove car fumes from the showroom during changeover of vehicles;
- the proposed movement of vehicles into and out of the proposed showroom area does not address the proposed street changes and addition of street seating and bike lane in the accepted concept plans of the Midtown revitalisation - these making access to the building as proposed extremely problematic.
- the proposed movement of vehicles, and associated noise generated and disruption to vehicle and pedestrian movement, does not take into account surrounding building uses (accommodation in both the apartments above the proposed showroom; immediately next to the proposed showroom in The Rox or the UTAS student accommodation and B&B accommodation in Brisbane st).
- no bathroom facilities are provided in the proposed planning documents for use of workers or patrons of the cafe / sales area.
- no food prep / clean up facilities are provided for workers of the cafe / sales area in the layout documentation.
- no noise abatement comments for the vehicle changeover are made to address the residents of the apartments / accommodation areas immediately surrounding the development.

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.”

The proposed use will not complement this this statement as the proposed development does not complement the high density residential development and visitor accommodation due to the need to move vehicles into and out of the showroom causing pedestrian disruption and noise. It also does not provide a use complimentary to visitor accommodation.

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.”

The proposed use will not complement this this statement as the proposal does not indicate how a new car display / sales area enhances or contributes to the historic cultural heritage character of the immediate environment (Roxburgh House) buildings immediately opposite or in the general Midtown area with its multiple buildings of over 100 years of age.

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.”*

The proposed use will not complement this statement as the proposed development has vehicle movements not compatible with the concept designs of the streetscape in the Midtown revitalisation - bike lane; widened footpath and street landscaping / seating. It proposes vehicle movement outside business hours - is this of the proposed use because the business hours of the restaurants / bars in the surrounding area of Elizabeth Street generate pedestrian traffic well past the 6.00pm indicated. The plans of the development area do not provide staff area facilities; bathroom facilities for customers of the showroom or cafe; do not provide food prep / clean up facilities or areas for waste bin location. In fact the display of new pollution creating machines does nothing to compliment the aim of the area to be more pedestrian friendly or assist in creating a more vibrant and social main street environment.

This development proposes a use that is diagonally opposite the current commercial activities of the Midtown area (a flourishing precinct of family owned cafes, small bars and independent retail stores); provides an activity that does not compliment better conditions for walking and cycling, spaces to sit and rest, greenery, street furniture and public art within the Midtown area and proposes an ancillary use that is in direct competition with surrounding businesses (currently 5 the on one Midtown block between Melville & Brisbane Streets) - some of which are struggling to regain traction due to the ongoing COVID capacity restrictions (still at 50% for dine-in) and only domestic tourists, who are just starting to return.

Having luxury cars in the shop window completely goes against the streetscape character of Midtown. There is also no need for another coffee shop in this block. Concerned about the changing over of vehicles once a week in regards disruption to pedestrians and vehicles, the street traffic both pedestrian and vehicular starts early and then goes into the evening. It is a use that seems to counteract the great work recently done to the streetscape. An independent grocer would be a great fit.

My objection is due to access issues and maintaining the streetscape of Midtown Hobart. The issue of access when The car dealership requires footpaths to be blocked off at least once a week to swap out "bulky goods" I believe pedestrian access to be vital to this area at all times due to limited parking and the reliance on foot traffic of the businesses in the area. The businesses in Midtown are majority owner operated small businesses that have worked exceptionally hard over the years to create a beautiful retail and cafe precinct. The work continues with HCCs proposed redevelopment of the area to commence in 2022. The addition of a multi-national company setting up a car showroom and cafe would not only add nothing of value to the area but would be detrimental.

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 use of the ground floor space is for a Food Services (Cafe) and Bulky Goods Sales (Car showroom). The Food Services use is Permitted in the Zone however the use for Bulky Goods Sales is discretionary use in the zone and therefore required to be assessed against the relevant Zone Purpose Statements of the Central Business Zone.
- 6.4 The proposal has been assessed against:
 - 6.4.1 Part D - 22 Central Business Zone
 - 6.4.2 E5.0 Road and Railway Assets Code
 - 6.4.3 E6.0 Parking and Access Code
- 6.5 The proposal relies on the following performance criteria to comply with the applicable standards:

6.5.1 Central Business Zone:

Use - Table 23.2 and clause 8.10.2

6.5.2 Road and Railway Access Code:

Sight distance at accesses, junctions and level crossings - E5.6.4 P1

6.6 Each performance criterion is assessed below.

6.7 Use - Table 23.2 and cl.8.10.2

6.7.1 The proposed Bulky Goods Sales use for a car showroom is discretionary use in the zone use table 23.2, and therefore is required to be assessed against the the relevant Zone Purpose Statements of the Central Business Zone in accordance with clause 8.10.2.

6.7.2 The Zone Purpose Statement provides as follows:

22.1.1 Zone Purpose Statements

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.

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.

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.

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.

22.1.1.5

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

22.1.1.6

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

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.

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.

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.

- 6.7.3 The proposed use, although for Bulky Goods Sales, is a significant departure from the traditional type and function of uses included under the use class. Although for the sale of vehicles, it's in a format that is unique from a traditional showroom or sale yard and stated as an approach for the brand that has previously only been undertaken in New York, Tokyo and Dubai. The scale of the space and inclusion of a café element limits the number of vehicles than can feature within the space. Vehicle stock and test drives will be managed off site with display models within the space to be circulated approximately four times a month. Therefore its operation will not detract from the function of the surrounding streetscape and pedestrian zones.

The timber exterior glazing and exterior elements of the building are not being altered in any way to accommodate the use. The significant glazing elements of a traditional car showroom do not feature as part of this proposed use. The high quality design of the facade is retained whilst still generating activity and interest at street level as well a shop front display, satisfying the relevant Zone Purpose Statements. Although not in the Active Frontage Overlay area the proposed use generates a greater

potential for interest and activity that might be achieved by other permitted uses in the zone such as offices, banks, consulting rooms, education facilities or fitness centres. The limited internal alterations and retention of existing facade also does not in any way prohibit or discourage alternative future uses within the space.

- 6.7.4 The proposed use is not considered to compromise the intent of the Zone Purpose Statements for the Central Business Zone.
- 6.8 Road and Railway Assets Code - Sight distance at accesses, junctions and level crossings - E5.6.4 P1
- 6.8.1 Although no formal access is proposed there will be approximately four vehicle movements a month across the curb to rotate the vehicle stock therefore consideration of sight distance is required.
- 6.8.2 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.*
- 6.8.3 The Council's Senior Development Engineer is satisfied that due to the temporary and limited vehicle movements in combination with the site characteristics the Performance Criteria is satisfied.
- 6.8.4 The proposal complies with the performance criterion.

7. Discussion

- 7.1 Planning approval is sought for Alterations and Change of Use to Bulky Goods Sales and Food Services at 4/160 Elizabeth Street, Hobart.

- 7.2 The application was advertised and no representations were received.
- 7.3 The application was advertised and received eight (8) representations. The representations raised concerns including:
- That there are already enough cafes in the Midtown area, who are already experiencing challenges as a consequence of Covid and a reduction in parking in the area. This proposal will exacerbate that situation.
 - A car showroom use is inappropriate in this location, given proximity to residential uses above, heritage buildings nearby, and the high pedestrian use of footpaths and therefore difficulty for the proposal to rotate cars as required.
 - The proposal hasn't taken into consideration the Elizabeth Street (Midtown) Streetscape Project, and is not complementary to it.
 - The proposal doesn't demonstrate compliance with the Zone Purpose Statements, in particular clauses 22.1.1.3, 22.1.1.4, 22.1.1.8 and 22.1.1.9.
 - The proposal will detract from the streetscape.

- 7.4 The proposal has been assessed against the relevant provisions of the planning scheme and is considered to satisfy the relevant provisions in respect of its discretionary use in the zone and discretion in respect of sight distance under the Road and Railway Assets Code.

The proposed car showroom use in this non-traditional format, although discretionary, is considered a significant departure from the other use types included under Bulky Goods Sales use class. The scale of the space and housing of display models only, with the retention of the quality facade and glazing eliminates the potential negative impact of a traditional car show room and sales yard that would be discouraged in such an inner city location. This is furthered by the fact that due to extremely limited rotation of vehicles on a monthly business it will not result in an unreasonable impact on pedestrian zones and amenity. The rotation of cars will also be subject to the approval of Council's City Amenity Division through the Vehicle Movement Permit process.

The limited internal alterations and retention of existing facade also does not in any way prohibit or discourage alternative future uses within the space. The proposal satisfies the relevant Zone Purpose Statements by generating activity and interest at street level as well a shop front display. It also presents a preferred approach compared to other potential permitted uses that may not achieve the same level of activation and passive surveillance. However, in the interest of clarity a condition is recommend to be included on the permit ensuring that the obscuring of the existing glazing or any signage is not approved as part the planning approval.

The Council's Senior Development Engineer is also satisfied that due to the temporary and limited vehicle movements in combination with the site characteristics the Performance Criteria is satisfied in respect of sight distance.

- 7.5 The proposal was also referred to the Council's City Place Making Unit who provided the following comments:

Background – Elizabeth Street Midtown Retail Precinct:

Elizabeth Street is a busy pedestrian route, with pedestrian volumes highest in the mornings and afternoons – it is possibly Hobart's busiest 'walk to work' street, and a busy walking route for school students accessing the public transport, shops and services of the city in the afternoons.

In recent years, City of Hobart staff have worked collaboratively with traders, residents, students and developers in the Elizabeth Street 'Midtown' precinct, using a co-design process to develop a future vision for Elizabeth Street as a greener, more accessible, sociable and welcoming high street, with better pedestrian and cycling facilities. In other words – a people place that supports the growing student

and residential population, as well as city workers and visitors. A concept design followed, developed in response to the community's vision, and endorsed by the Council in late 2020 as a framework for future streetscape development.

Despite funding setbacks, the community's vision is already being realised – including the Vibrance Festival and street art installations in March 2021, the Tasmanian Government supported 'ready for business' expanded footpath trial, providing enhanced COVID-19 safe outdoor dining spaces for some businesses, greenery, space for people to gather and a trial bike lane.

A pedestrian crossing upgrade at Patrick Street has attracted Australian Government road safety funding and will be built in 2021, and UTAS and CoH will co-invest in an upgrade to the block between Melville and Brisbane Streets, in 2022.

The Lexus showroom proposal at the Rox as it relates to the Elizabeth Street vision:

The concept streetscape design includes footpath widening with seating and a street tree, adjacent to the Rox property on Elizabeth Street. The rationale behind this design area included:

- to enlarge, enhance and improve access and amenity at the pedestrian crossing point. This crossing (over Brisbane Street) ranks poorly for disability access and pedestrian amenity, it is regularly used by vision impaired clients of Visibility Tas (just near Highfield House), and it is a busy pedestrian route which would benefit from more 'holding space' for pedestrians at peak times.
- install a street tree in a suitable location – street trees are a high priority of the community but suitable locations are difficult to find.
- opportunity for a pause point with public seating that provides 'breathing space' to the new courtyard of the Rox which is the point of pedestrian entry and exit to the commercial premises and apartments.
- pragmatically, this could all be achieved while causing minimal impact to on-street car parking.

The swept paths provided with the development application test vehicle movements against the existing street, not the proposed new kerblines. It looks to the eye that these turning paths could also be accommodated even when footpath is widened here.

But it is unlikely to be possible to install street tree or seating and retain vehicle access into the site.

Advice:

The Council should then be advised that to accommodate the loading and

unloading of vehicles into this site, the key impacts are:

- It could make installing a seat and tree (as proposed in the Council approved concept design) difficult to achieve, for as long as vehicle access is needed.
- However, the expanded footpath is still likely to be able to accommodate the occasional vehicle movements, with temporary ramps.

It should also be noted, however:

- The area has **not been designed in detail yet**, and any future design would respond to the approved use (should Council approve the DA).
- There is no budget allocation available to undertake the streetscape improvements in this location at the current time.

7.6 The proposal has been assessed by other Council officers, including the Council's Development Engineer, Road and Traffic Engineers, and Executive Manager City Place Making. The officers have raised no objection to the proposal, subject to conditions.

7.7 The proposal is recommended for approval.

8. Conclusion

8.1 The proposed Alterations and Change of Use to Bulky Goods Sales and Food Services at 4/160 Elizabeth Street, 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 Alterations and Change of Use to Bulky Goods Sales and Food Services at 4/160 Elizabeth Street, Hobart for the reasons outlined in the officer's report and a permit containing the following conditions be issued:

GEN

The use and/or development must be substantially in accordance with the documents and drawings that comprise PLN-21-215 4/160 ELIZABETH STREET HOBART TAS 7000 - Final Planning Documents except where modified below.

Reason for condition

To clarify the scope of the permit.

PLN s1

This permit does not approve: the obscuring of any of the existing glazing; or any signage.

Advice: Obscuring the window is considered to be both placing physical obstructions in front of the window (e.g. office equipment) as well as attaching things to the window like signage or obscure film.

Reason for condition

To clarify the scope of the permit.

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.**

A photographic record of the Council's infrastructure adjacent to the subject

site must be provided to the Council prior to any approval under the Building Act 2016.

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 s1

A [vehicle movement permit](#) must be applied for and approved, prior to the commencement of use.

Reason for condition

To ensure that the Council's road infrastructure is protected.

ADVICE

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

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

BUILDING PERMIT

You may need building approval in accordance with the *Building Act 2016*. Click [here](#) for more information.

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

OCCUPATION OF THE PUBLIC HIGHWAY

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

You may require an occupational license for structures in the Hobart City Council highway reservation, in accordance with conditions to be established by the Council. Click [here](#) for more information.

You may require a road closure permit for construction or special event. Click [here](#) for more information.

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

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: 8 June 2021

Attachment(s):

Attachment B - CPC Agenda Documents



28 April 2021

General Manager
Hobart City Council
GPO Box 503E
HOBART 7001

Attention: Tristan Widdowson

Dear Tristan

160 Elizabeth Street – New Development Application for a Planning Permit for change of Use for car showroom, café and alterations

This letter updates the original cover letter 27 March 2021 in response to Council's request for information 20 April 2021.

All Urban Planning Pty Ltd has been engaged by Lexus to prepare an application for a planning permit for a new concept "Lexus" car showroom/ café in the ground floor, Elizabeth Street fronting tenancy of the newly constructed Rox development at 160 Elizabeth Street.

The Proposal

The proposal is for a change of use of the tenancy for car display and café to be named "The Lexus Lifestyle Hub".

The site would not operate as a traditional car dealership. Whilst the purpose of the use will be to sell cars, it will be for display/engagement purposes mainly. Test drive cars will be stored on another site nearby. The concept for the site is the first in Australia but follows the only three other international examples in New York, Tokyo and Dubai. Please see the following links for the New York and Tokyo sites for information:

<https://www.intersect-nyc.com/#!/concept>

<https://lexus.jp/international/brand/intersect/tokyo/concept/>

The café and showroom aspects will not be internally divided. Amended plans removing the internal partition wall and the requested swept paths and vehicle sight lines are attached.

You will note that the vehicle crossover has been removed and temporary and removable ramps will be used.

The proposal would require occasional out of hours access over Council's footpath from Elizabeth Street to change the display vehicles. Like any retail business they will need to put stock in to display but do not envisage changing the display all of the time.

With respect to the frequency of vehicle movements, Lexus estimate that once the 4 vehicles are placed in the display area that they would require approximately 4 movements per month to rotate/update the display vehicles.

The applicant is happy to work with Council on the most appropriate hours for these movements but suggest that before 7.00am and after 6.00pm would suffice.

Vehicle movements into the display area would be through a set of glass sliding doors that face north into the internal courtyard then to Elizabeth Street.

The applicant would be happy to provide a basic traffic management plan for these movements as a condition of approval that confirms the procedures for these movements to Council's satisfaction.



Figure 1 - The proposed tenancy

Planning Scheme

The site is zoned Central Business.

The proposed use for the display and sale of cars falls within the Bulky goods sales Use Class meaning:

use of land for the sale of heavy or bulky goods which require a large area for handling, storage and display. Examples include garden and landscape suppliers, rural suppliers, timber yards, trade suppliers, showrooms for furniture, electrical goods and floor coverings, and motor vehicle, boat or caravan sales.

It is expected that the proposed café will be used by both people interested in purchasing a car and others and on this basis, I approach the café use as a separate *Food services* use in the terms of Clause 8.2.5.

Bulky goods sales is a Discretionary use in the Zone for this site that is not within the Active Frontage Overlay (Figure 22.1).



Figure 2 - Active Frontage Overlay - Figure 22.1

Food Services for a café is a Permitted Use.

The discretionary use is to be considered against the purpose of the zone, any relevant local area objective or desired future character statement and the purpose of any applicable code; Clause 8.10.2.

Zone Purpose

Zone Purpose Statements	Assessment
<p>22.1.1.1</p> <p><i>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.</i></p>	<p>The proposal will provide a unique retailing and café experience that will serve the region and is considered to further this purpose.</p>
<p>22.1.1.2</p> <p><i>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.</i></p>	<p>The proposed small format car dealership concept is a National trial for Lexus based on the New York, Tokyo and Dubai examples and will bring interest and variety to Hobart's retail and entertainment experiences. It is considered to further this purpose.</p>
<p>22.1.1.3</p> <p><i>To provide a safe, comfortable and pleasant environment for workers, residents and visitors through the provision of high quality urban spaces and urban design.</i></p>	<p>The proposed use will complement the high quality presentation of this newly developed site and will open to the adjacent pedestrian space for outdoor dining. It is considered to further this purpose.</p>

<p>22.1.1.4</p> <p><i>To facilitate high density residential development and visitor accommodation within the activity centre above ground floor level and surrounding the core commercial activity centre.</i></p>	<p>The proposed uses will form part of a mixed use development and will retain the desired upper floor residential uses. It will complement this Purpose.</p>
<p>22.1.1.5</p> <p><i>To ensure development is accessible by public transport, walking and cycling.</i></p>	<p>The conveniently located site will be accessible by all modes of transport and supports this Purpose.</p>
<p>22.1.1.6</p> <p><i>To encourage intense activity at pedestrian levels with shop windows offering interest and activity to pedestrians.</i></p>	<p>The proposed small format car display amongst the proposed café activities will provide interest and activity at street level and will further this Purpose.</p>
<p>22.1.1.7</p> <p><i>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.</i></p>	<p>The proposal will not impact this Purpose.</p>
<p>22.1.1.8</p> <p><i>To respect the unique character of the Hobart CBD and maintain the streetscape and townscape contribution of places of historic cultural heritage significance.</i></p>	<p>The proposal will advance the unique character of the Hobart CBD for the reasons outlined above and is considered to further this Purpose.</p>
<p>22.1.1.9</p> <p><i>To provide a safe, comfortable and enjoyable environment for workers, residents and visitors through the provision of high quality spaces and urban design.</i></p>	<p>The proposed car display and sale use will involve very few vehicle movements to and from the site for the changeover of display vehicles only. These can be conducted out of business hours and the use will otherwise further the Purpose to support high quality and safe pedestrian spaces.</p>

There are no Local Area Objectives and the Desired Future Character Statements relate to matters of development rather than use. They are not relevant to the assessment of the proposed discretionary use.

Having regard to the above the proposed uses are considered appropriate.

Use Standards

The proposal is considered to satisfy the Use Standards of 22.3 as follows:



22.3.1 – Hours of Operation – Not applicable in that the site is located more than 50m from the closest residential zone at 38 Patrick Street to the north.

22.3.2 - Noise – The proposal will not involve significant noise emissions and will comply with the limits of A1.

22.3.3 - External Lighting - Not applicable in that the site is located more than 50m from the closest residential zone.

22.3.4 – Commercial Vehicle Movements – Not applicable in that the site is located more than 50m from the closest residential zone.

The other Use Standards 22.3.5- 22.3.8 relate to other uses and do not apply to this proposal.

Development Standards

The proposed glass sliding doors to the pedestrian court replace conventional glazed doors in the same location and comply with all relevant development standards.

Code

The proposal does not involve excavation and the Potentially Contaminated Land Code and archaeological matters of Heritage Code do not apply.

The development aspect of the proposal is limited to the proposed sliding glass doors to the café space of the modern building and do not conflict with any of the other provisions of the Heritage Code.

Parking and Access Code

The proposed use does not require a conventional vehicle access, rather occasional access for display products (in this case vehicles) from Elizabeth Street, via the on site pedestrian court. These movements can occur out of business hours as discussed above.

The access is adjacent to an existing yellow line marking on the road and would not require the alteration to on street carparking.

The proposed access arguably does not constitute an access within the normal meaning: *land over which a vehicle enters or leaves a road from land adjoining a road*. However, if the access is assessed under E6.7.1 A2/P2 it would be discretionary and be assessed under P2:

In the areas covered by the Active Frontage Overlay (Figure 22.1) and Pedestrian Priority Street Overlay (Figure E6.7.12) and in Particular Purpose Zone 10 any new vehicular access point must not compromise any of the following:

- (a) *pedestrian safety, amenity and convenience;*
- (b) *traffic safety;*
- (c) *streetscape;*
- (d) *cultural heritage values if the site is subject to the Historic Heritage Code;*

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(e) *the enjoyment of any 'al fresco' dining or other outdoor activity in the vicinity.*

The proposed access, outside the Active Frontage Overlay and Pedestrian Priority Street areas of Figure 22.2 complies. It is considered that any potential conflicts with the proposed occasional access for the change of display vehicles can be managed by conditions on the permit.

The proposal complies with E6.6.5 in that no on site parking is to be provided – only showroom display.

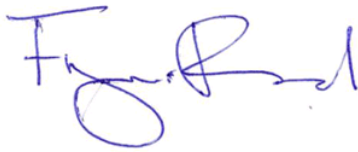
Conclusion

The proposal is for a new format car display and café concept that will provide interest and activity at street level. It is considered to further the Purpose of the Zone.

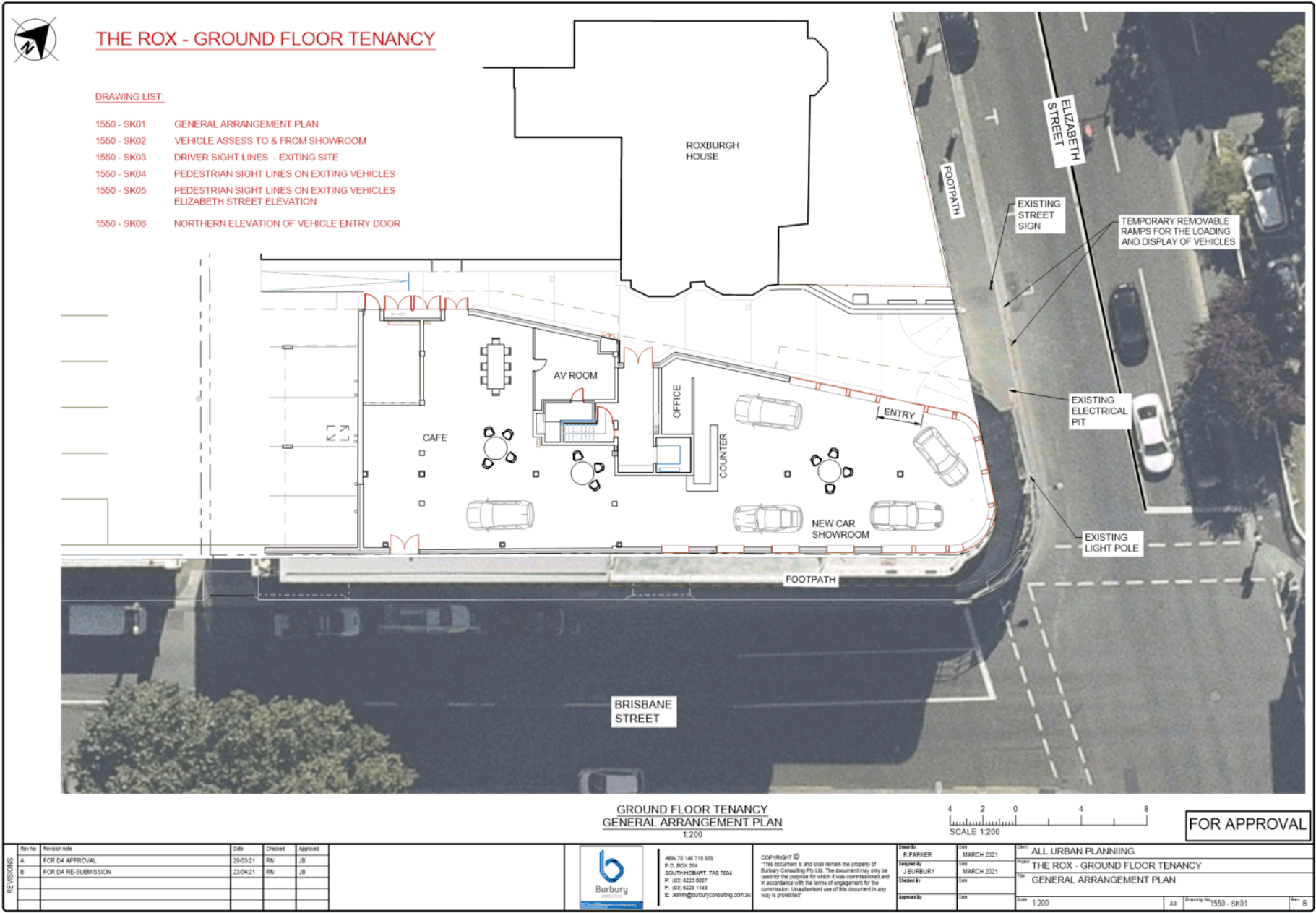
It is considered that any potential conflicts with the proposed occasional access for the change of display vehicles can be managed by conditions on the permit.

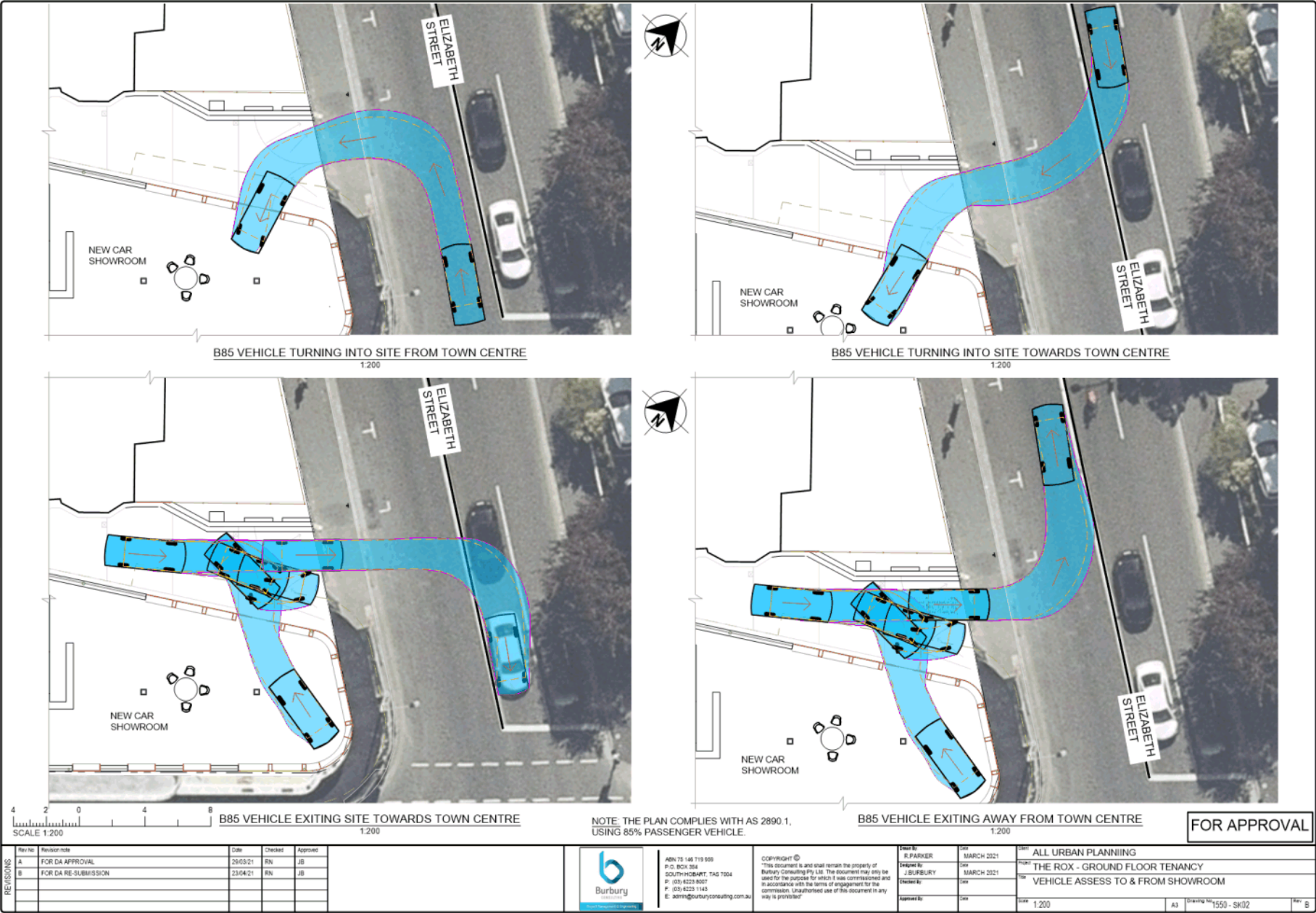
I would be pleased to discuss as necessary.

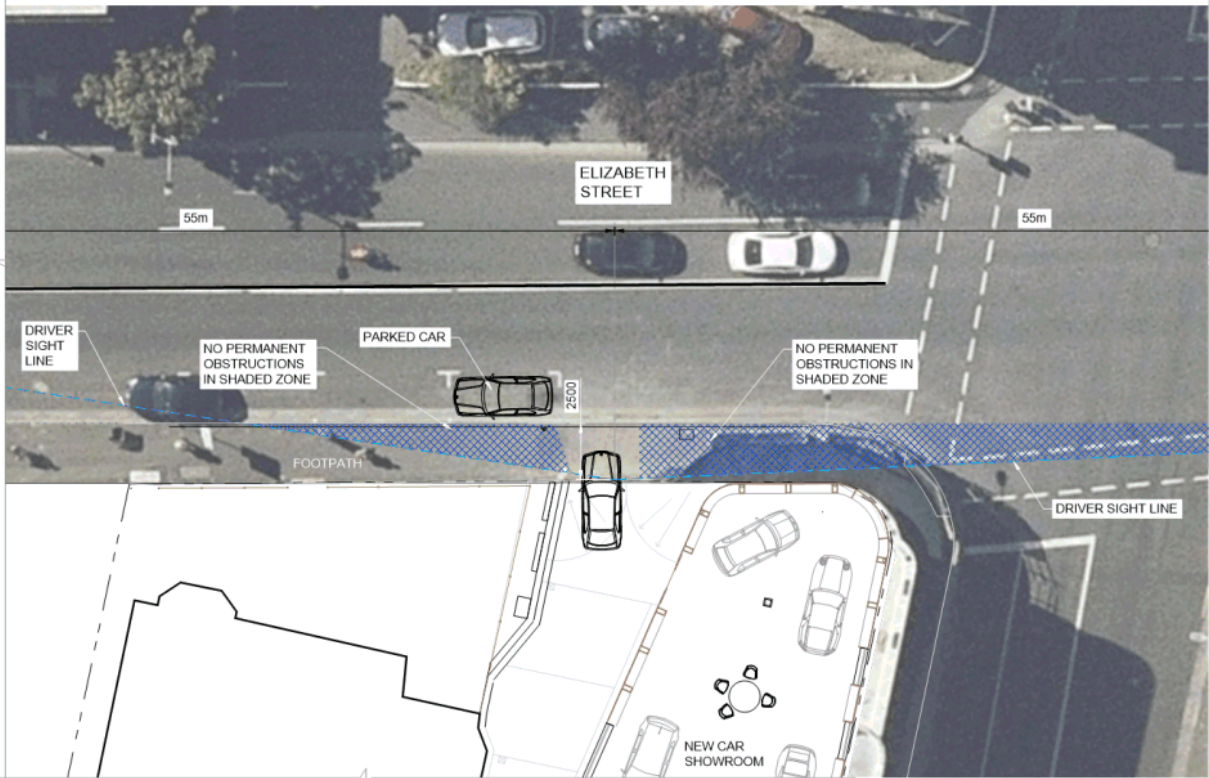
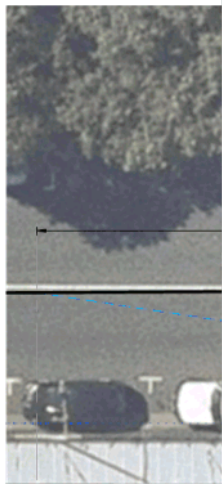
Yours sincerely



Frazer Read
Principal
All Urban Planning Pty Ltd







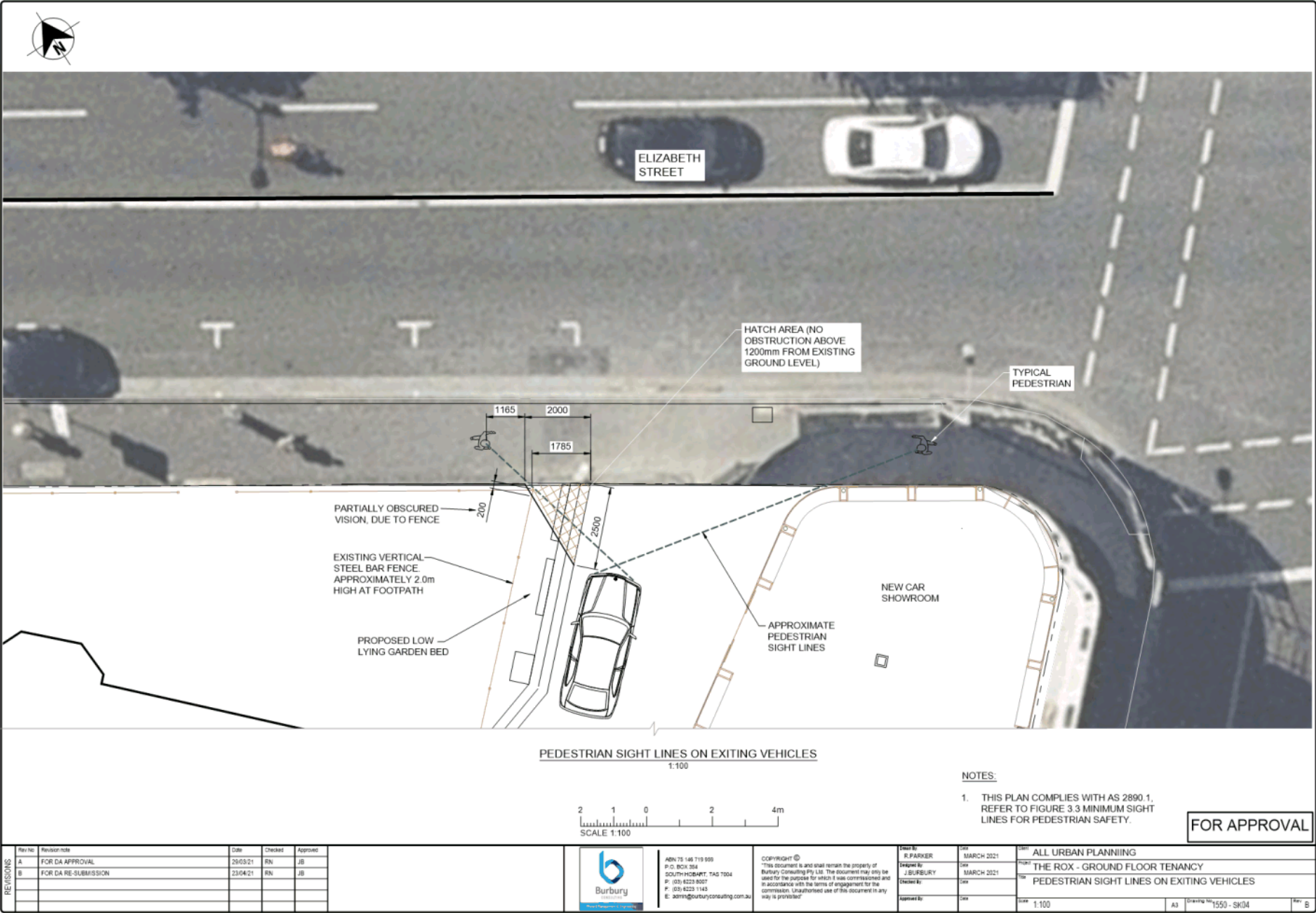
DRIVER SIGHT LINES - EXITING SITE
1:200

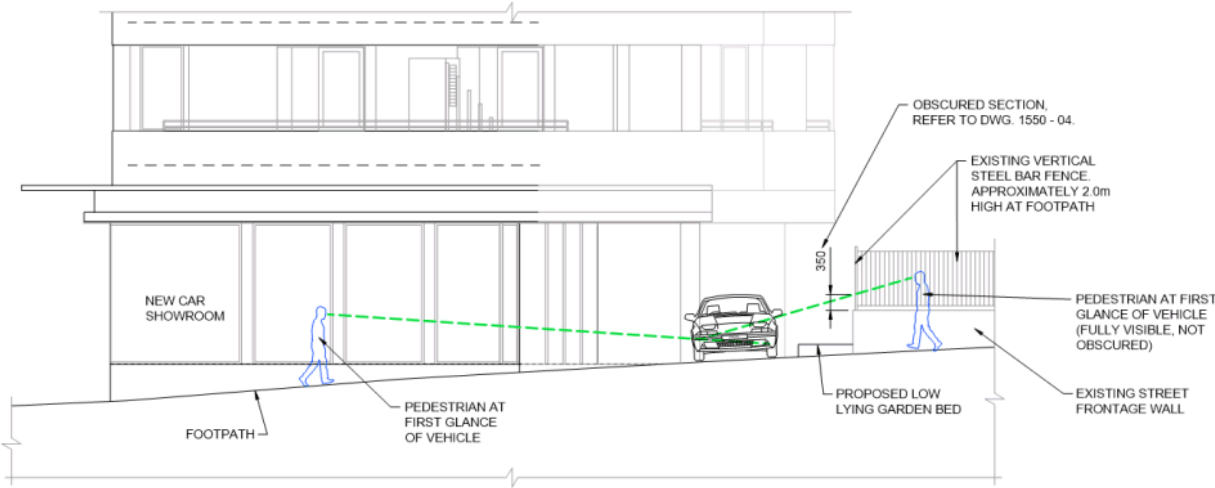


- NOTES:
- 1. THIS PLAN COMPLIES WITH AS 2890.1, 3.2.4 SITE DISTANCES AT ACCESS DRIVEWAY EXITS.

FOR APPROVAL

REVISIONS	Rev No	Revision note	Date	Checked	Approved		ABN 75 148 719 909 P.O. BOX 364 SOUTH COAST, TAS 7504 P: (03) 6223 8007 F: (03) 6223 1143 E: sarah@burburyconsulting.com.au	COPYRIGHT © This document is and shall remain the property of Burbury Consulting Pty Ltd. The document may only be used for the purpose for which it was commissioned and in accordance with the terms of engagement for the commission. Unauthorised use of this document in any way is prohibited.	Drawn By	Date	ALL URBAN PLANNING		
	A	FOR DA APPROVAL	26/03/21	RN	JB				R.PARKER	MARCH 2021		THE ROX - GROUND FLOOR TENANCY	
	B	FOR DA RE-SUBMISSION	23/04/21	RN	JB				Designed By	Date			
									J.SURBURY	MARCH 2021			DRIVER SIGHT LINES - EXITING SITE
									Checked By	Date			
								Approved By	Date				
									Scale 1:200	A3	Drawing No 1550 - SK03	Rev B	





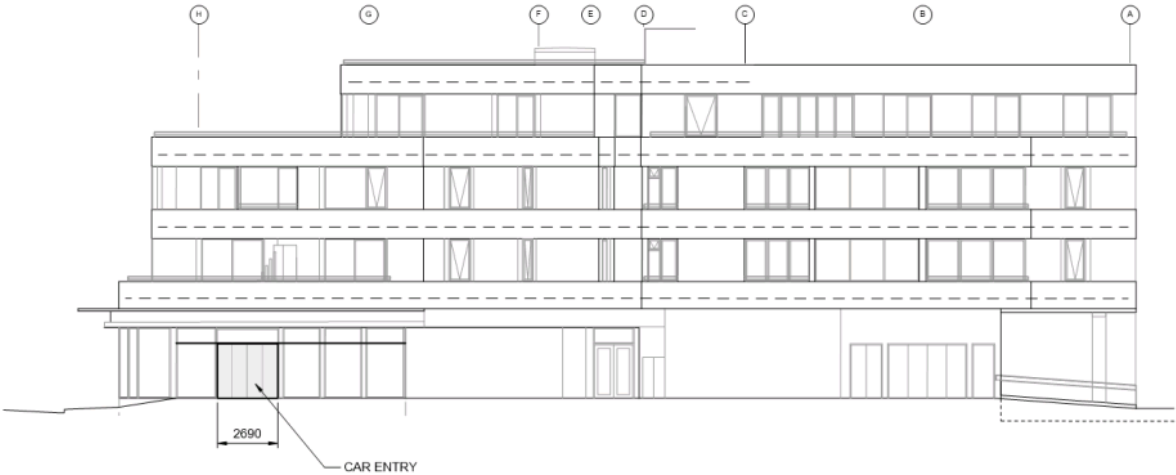
PEDESTRIAN SIGHT LINES ON EXITING VEHICLES
ELIZABETH STREET ELEVATION
1:100

- NOTES:
1. FOR FURTHER INFORMATION & DIMENSIONS REFER TO DWG. 1550 - SK04.



FOR APPROVAL

REV	NO	REVISION	DATE	CHECKED	APPROVED		ABN 75 148 719 909 P.O. BOX 354 SOUTH HOBBART, TAS 7504 P: (03) 6223 8007 F: (03) 6223 1143 E: sarah@burburyconsulting.com.au	COPYRIGHT © This document is and shall remain the property of Burbury Consulting Pty Ltd. The document may only be used for the purpose for which it was commissioned and in accordance with the terms of engagement for the commission. Unauthorised use of this document in any way is prohibited.	Drawn By:	Date:	Sheet:
									Checked By:	Date:	
	A	FOR DA APPROVAL	29/03/21	RN	JB				R.PARKER	MARCH 2021	ALL URBAN PLANNING
	B	FOR DA RE-SUBMISSION	23/04/21	RN	JB				J.SURBURY	MARCH 2021	THE ROX - GROUND FLOOR TENANCY
											PEDESTRIAN SIGHT LINES ON EXITING VEHICLES ELIZABETH STREET ELEVATION
										</	



NORTHERN ELEVATION OF VEHICLE ENTRY DOOR
1:200



FOR APPROVAL

REVISIONS	Rev No	Revision note	Date	Checked	Approved		ABN 75 148 719 909 P.O. BOX 354 SOUTH HOBBART, TAS 7504 P: (03) 6223 8007 F: (03) 6223 1143 E: sarah@burburyconsulting.com.au	COPYRIGHT © This document is and shall remain the property of Burbury Consulting Pty Ltd. The document may only be used for the purpose for which it was commissioned and in accordance with the terms of engagement for the commission. Unauthorised use of this document in any way is prohibited.	Drawn By	Date	Project: ALL URBAN PLANNING			
	A	FOR DA APPROVAL	29/03/21	RN	JB				R.PARKER	MARCH 2021	THE ROX - GROUND FLOOR TENANCY			
	B	FOR DA RE-SUBMISSION	23/04/21	RN	JB				J.SURBURY	MARCH 2021	NORTHERN ELEVATION OF VEHICLE ENTRY DOOR			
											Scale	1:200	Sheet	A3

**RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



SEARCH OF TORRENS TITLE

VOLUME 144699	FOLIO 4
EDITION 7	DATE OF ISSUE 27-Mar-2020

SEARCH DATE : 02-Apr-2021

SEARCH TIME : 08.05 AM

DESCRIPTION OF LAND

City of HOBART

Lot 4 on Strata Plan 144699 and a general unit entitlement
operating for all purposes of the Strata Scheme being a 3
undivided 1/6 interest

Derived from Strata Plan 144699

Derivation : Part of 0A-3R-12Ps. Sec. S.s. Gtd. to E.C.
Richards

SCHEDULE 1

C494680 TRANSFER to NORBLACK INVESTMENTS PTY LTD Registered
05-Nov-2003 at 12.02 PM

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
The registered proprietor holds the lot and unit entitlement
subject to any interest noted on common property
Folio of the Register volume 144699 folio 0

BURDENING EASEMENT a right of carriageway for Ernest Thomas
Crisp and Frank Lindsay Gunn over the land marked
"Roadway 3.05 wide" on Plan No. 247522

C90559 BENEFITING EASEMENT: A right of carriageway over the
land marked O.P.Q.R.S.T.U.N. on Plan No. 247522
Registered 09-Jul-1999 at noon

M805080 MORTGAGE to Murdoch Clarke Mortgage Management
Limited Registered 27-Mar-2020 at 12.01 PM

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

**RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



SEARCH OF TORRENS TITLE

VOLUME	FOLIO
144699	0
EDITION	DATE OF ISSUE
1	14-Nov-2005

SEARCH DATE : 02-Apr-2021

SEARCH TIME : 08.05 AM

DESCRIPTION OF LAND

City of HOBART

The Common Property for Strata Scheme 144699

Derivation : Part of 0A-3R-12Ps. Sec. S.s. Gtd. to E.C.

Richards

Prior CT 247522/1

SCHEDULE 1

STRATA CORPORATION NUMBER 144699, 160 ELIZABETH STREET, HOBART

SCHEDULE 2

Reservations and conditions in the Crown Grant if any

BURDENING EASEMENT a right of carriageway for Ernest Thomas
Crisp and Frank Lindsay Gunn over the land marked
"Roadway 3.05 wide" on Plan No. 247522C90559 BENEFITING EASEMENT: A right of carriageway over the
land marked O.P.Q.R.S.T.U.N. on Plan No. 247522
Registered 09-Jul-1999 at noonC90560 BURDENING EASEMENT: A right of carriageway
(appurtenant to Lot 1 on Plan No. 198304) over the
land marked N.O.W.V.U. on Plan No. 247522 Registered
09-Jul-1999 at 12.01 PMC762858 APPLICATION by owners to amend strata plan 144699 by
amending the vertical limitation on Lot 2 (Storage B)
on Ground Floor. Registered 10-Aug-2007 at noonM356835 APPLICATION by owners to amend strata plan 144699 by
amending Lots 1-4, increasing common property and
adding special unit entitlements to Lots 1-3
Registered 09-Mar-2012 at noonM363538 APPLICATION for registration of change of by-laws
Registered 09-Mar-2012 at 12.01 PMUNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations



FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



CITY/TOWN HOBART		STRATA PLAN SHEET 1 OF ⁵ SHEETS		REGISTERED NUMBER 144699
SUBURB/LOCALITY HOBART				STRATA TITLES ACT 1998 REGISTERED 14 NOV 2005
FOLIO REFERENCE C.T. 247522-1		NAME OF STRATA SCHEME 160 ELIZABETH STREET, HOBART		<i>Alice Kawa</i> Recorder of Titles
SITE COMPRISES THE WHOLE OF LOT 1 ON PLAN No. P.247522		LENGTHS IN METRES		
MAPSHEET MUNICIPAL CODE No. 114 (5225-42)	LAST UPI No. GJN59	SCALE 1: 250		

SITE PLAN

NOTES: (I) ALL BUILDINGS ON THE SITE TO BE SHOWN ON SHEET 1.
(II) BUILDING TO SITE BOUNDARY OFFSETS OF LESS THAN 2.00 METRES TO BE SHOWN ON SHEET 1.

STAGED/COMMUNITY DEVELOPMENT SCHEME No. (IF APPLICABLE)	<i>Nick Griggs</i> Council Delegate 11/10/2005 Date	<i>Nick Griggs</i> Registered Land Surveyor 29/6/05 Date
--	--	---

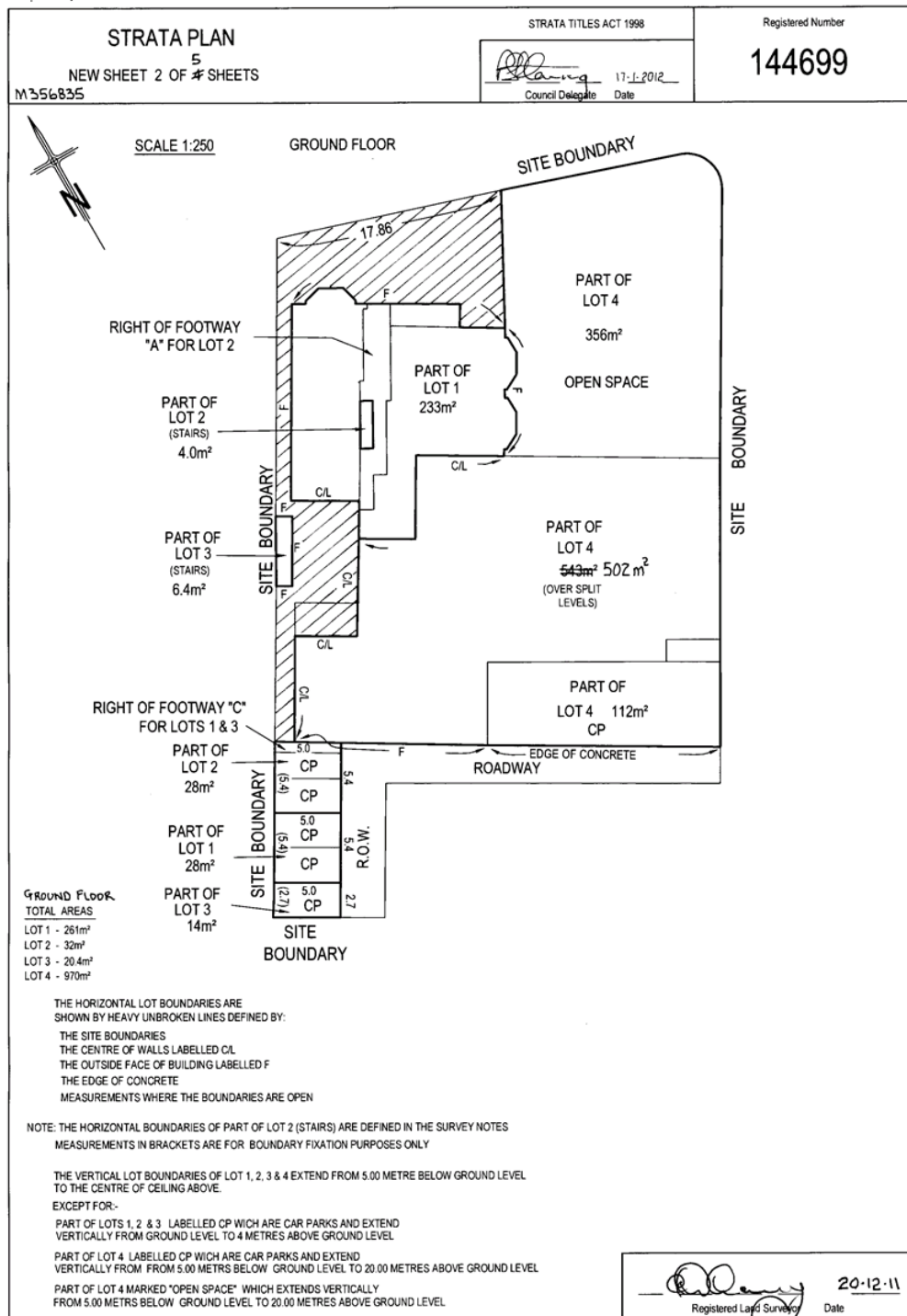
LODGED BY NICK GRIGGS & CO.



FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980





FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



<p style="text-align: center;">STRATA PLAN</p> <p style="text-align: center;">NEW SHEET 3 OF 4 SHEETS</p> <p>M356035</p>	<p>STRATA TITLES ACT 1998</p> <p><i>[Signature]</i> 17.1.2012</p> <p>Council Delegate Date</p>	<p>Registered Number</p> <p style="font-size: 1.2em;">144699</p>
---	--	---

SCALE 1:250

FIRST FLOOR

FIRST FLOOR TOTAL AREAS

LOT 2 - 187m²

LOT 3 - 173m²

LOT 4 - 443m²

THE HORIZONTAL LOT BOUNDARIES ARE SHOWN BY HEAVY UNBROKEN LINES DEFINED BY:

THE SITE BOUNDARIES

THE CENTRE OF WALLS LABELLED CIL

THE FACE OF BUILDINGS LABELLED F

THE VERTICAL LOT BOUNDARIES OF LOT 2 EXTEND FROM CENTRE OF FLOOR TO THE CENTRE OF CEILING ABOVE.

THE VERTICAL LOT BOUNDARIES OF LOT 3 EXTEND FROM CENTRE OF FLOOR OR THE PROLONGATION THEREOF TO THE OUTER FACE OF THE ROOF ABOVE OR THE PROLONGATION THEREOF.

THE VERTICAL LOT BOUNDARIES OF LOT 4 EXTEND FROM CENTRE OF FLOOR OR THE PROLONGATION THEREOF TO 20.00 METRES ABOVE GROUND LEVEL.

[Signature] 26.10.11

Registered Land Surveyor Date



FOLIO PLAN

RECORDED OF TITLES

Issued Pursuant to the Land Titles Act 1980

[illegible]



FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



STRATA PLAN		STRATA TITLES ACT 1998	Registered Number 144699
NEW SHEET 5 OF 5 SHEETS M356835			
NOTE: THIS SHEET SHOULD ONLY BE USED WHERE:- (i) THE LOTS HAVE A SPECIAL UNIT ENTITLEMENT, OR (ii) THE BODY CORPORATE HAS BEEN DIVIDED		 Registered Land Officer Date 26.10.11	 Council Delegate Date 17.1.2012
THE PURPOSES UNDER SECTION 16 FOR WHICH A SPECIAL UNIT ENTITLEMENT MAY BE USED		(i) for fixing the proportionate contribution to be made by the owner of the lot for the maintenance and use of the Roxburgh House (Lots 1 & 2) building, including, but not limited to, the structure, the exterior walls, roof and guttering. (ii) for fixing the proportionate contribution to be made by the owner of the lot for the maintenance and use of the common property shown halched on sheet 2.	
NAME OF (THIS) BODY CORPORATE STRATA CORPORATION No. 144699		The Body Corporate STR144699 C/- Tas Strata & Property Group P/L 83 Main Road MOONAH TAS 7009	
ADDRESS FOR THE SERVICE OF NOTICES 160 ELIZABETH STREET HOBART 7000			
LOT No.	UNIT ENTITLEMENT GENERAL	SPECIAL (IF ANY) (i)	(ii)
1	1	1	1
2	1	1	1
3	1	0	1
4	3	0	0
TOTAL	6	2	3

7.1.7 289 LENAH VALLEY ROAD, 269 LENAH VALLEY ROAD, LENAH VALLEY AND ADJACENT RIVULET - PARTIAL DEMOLITION, ALTERATION, EXTENSION AND ASSOCIATED HYDRAULIC INFRASTRUCTURE
PLN-21-111 - FILE REF: F21/54698

Address: 289 Lenah Valley Road, 269 Lenah Valley Road, Lenah Valley and Adjacent Rivulet

Proposal: Partial Demolition, Alteration, Extension and Associated Hydraulic Infrastructure

Expiry Date: 22 July 2021

Extension of Time: Not applicable

Author: Cameron Sherriff

RECOMMENDATION

That pursuant to the *Hobart Interim Planning Scheme 2015*, the Council approve the application for partial demolition, alteration, extension and associated hydraulic infrastructure, at 289 Lenah Valley Road, 269 Lenah Valley Road and adjacent rivulet, Lenah Valley 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-21-111 - 289 LENAH VALLEY ROAD AND 269 LENAH VALLEY ROAD LENAH VALLEY TAS 7008 & ADJACENT RIVULET - Final Planning Documents except where modified below.

Reason for condition

To clarify the scope of the permit.

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).

Any private or private shared stormwater system passing through third-party (in this case City of Hobart) land must have sufficient receiving capacity.

Advice:

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

Reason for condition

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

SW 5

Construction of the development connection must not adversely impact the New Town Rivulet.

A construction management plan (CMP) must be submitted and approved as a Condition Endorsement prior to commencement of works. The CMP must be prepared by a suitably qualified and experienced engineer and must:

1. detail the proposed construction methodology and identify all potential risks to the New Town Rivulet and the public reserve riparian zone during construction including but not limited to construction loading, traffic loading, excavation works, footing construction, vibrations, undermining, flood, and environmental harm;
2. provide treatment measures to eliminate or otherwise mitigate to as low as reasonably practicable all identified risks;
3. include a monitoring regime.

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

Advice:

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

the end of this permit.

SW 7

Prior to occupancy or the commencement of the use (whichever occurs first), any new stormwater connection must be constructed and existing redundant connection(s) be abandoned and sealed at the owner's expense.

Prior to the issuing of any approval under the *Building Act 2016* or commencement of works (whichever occurs first), detailed engineering drawings must be submitted via the City of Hobart's online request form which is available on its website and approved. The detailed engineering drawings must include:

1. the location of the proposed connections and all existing connections;
2. the size and design of the connection such that it is appropriate to safely service 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;
4. connections which are free-flowing gravity driven;
5. any connections to watercourse must demonstrate adequate erosion and scour control and minimise hydraulic intrusion. The cross-sections must clearly show the top of bank and invert of watercourse.

All work required by this condition must be undertaken in accordance with the approved detailed engineering drawings. The approved stormwater connection documents must be included in your plumbing permit application document set and listed in accompanying forms.

SW 9

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

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

report and design must be prepared by a suitably qualified engineer and must:

1. include detailed design and supporting calculations of the detention tank showing:
 - a. detention tank sizing such that there is no increase in flows from the developed site up to 5% AEP event and no worsening of flooding;
 - b. the layout, the inlet and outlet (including long section), outlet size, overflow mechanism and invert level;
 - c. the discharge rates and emptying times; and
 - d. all assumptions must be clearly stated;
2. include a supporting maintenance plan, which specifies the required maintenance measures to check and ensure the ongoing effective operation of all systems, such as: inspection frequency; cleanout procedures; descriptions and diagrams of how the installed systems operate; details of the life of assets and replacement requirements.

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

Advice:

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

ENG 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.

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.

ENV 10

An approved Construction Tree Protection Plan must be implemented and complied with.

A Construction Tree Protection Plan must be submitted and approved as a Condition Endorsement, prior to the commencement of works and prior to the granting of building consent (whichever occurs first). The Construction Tree Protection Plan must:

1. show the tree protection zones (TPZs) of the *Eucalyptus globulous* and *Acacia dealbata* trees identified in the Arboricultural Assessment by Element Tree Services dated 18 March 2021, as determined in accordance with Australian Standard AS 4970-2009 *Protection of trees on development sites*;
2. show all proposed works and development that would encroach into the TPZs and the area of the TPZs where works are to be excluded; and
3. include the location and construction details of fencing/barriers for the tree protection zone that will delineate areas where works are to be excluded.

Advice:

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

Reason for condition

To ensure the development does not result in unnecessary loss of priority biodiversity values

ENV 1

Sediment and erosion control measures sufficient to prevent sediment from leaving the site must be installed prior to any disturbance of the site, and maintained until all areas of disturbance have been stabilized or re-vegetated.

Advice:

For further guidance in preparing a Soil and Water Management Plan – in accordance with Fact sheet 3 Derwent Estuary Program click [here](#).

Reason for condition

To avoid the sedimentation of roads, drains, natural watercourses, Council land that could be caused by erosion and runoff from the development, and to comply with relevant State legislation.

OPS s1

Approval is granted for the stormwater design as shown on drawing H010

Revision B Project 20.0518 by Gandy and Roberts. If the pipe is proposed to be installed in a different position, this could result in more than a ten percent incursion into the Tree Protection Zone of park trees. Therefore, either the trenches would have to be dug by hand or vacuum pump, or the tree/s would have to be removed at the applicant's cost and the tree's amenity value paid by the applicant.

A Public Spaces By-law permit will be required for the installation

works within New Town Rivulet Linear Park. To apply for a by-law permit to undertake works, use this link;
hobartcity.com.au/Community/Parks-reserves-and-sporting-facilities/Apply-for-a-permit

Advice:

Please note that if the pipe is not installed substantially in accordance with the location in the Final Planning Documents, further planning approval may be required.

Reason for condition

To protect the City's trees and the amenity of public parks.

ADVICE

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

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

CONDITION ENDORSEMENT

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

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

Once approved, the Council will respond to you via email that the

condition has been endorsed (satisfied).

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

BUILDING PERMIT

You may need building approval in accordance with the *Building Act 2016*. Click [here](#) for more information.

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

PLUMBING PERMIT

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

PERMIT TO CONSTRUCT PUBLIC INFRASTRUCTURE

You will require a permit to construct public infrastructure for the new connection, with a 12 month maintenance period and bond (please contact the Hobart City Council's City Amenity Division to initiate the permit process).

NEW SERVICE CONNECTION

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

COUNCIL RESERVES





A Public Spaces By-law permit is required for installation of the new stormwater pipe within New Town Rivulet Linear Park. You can apply for a permit to undertake works here;
<https://www.hobartcity.com.au/Community/Parks-reserves-and-sporting-facilities/Apply-for-a-permit>.

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-21-111 - 289 LENA VALLEY ROAD LENA VALLEY TAS 7008 - Planning Committee or Delegated Report ↓ 
- Attachment B: PLN-21-111 - 289 LENA VALLEY ROAD AND 269 LENA VALLEY ROAD LENA VALLEY TAS 7008 & ADJACENT RIVULET - Attachment B - CPC Agenda Documents ↓ 
- Attachment C: PLN-21-111 - 289 LENA VALLEY ROAD AND 269 LENA VALLEY ROAD LENA VALLEY TAS 7008 & ADJACENT RIVULET - Declaration of Service - Display of Public Notice - Elijah Paine - 21.5.2021 ↓ 
- Attachment D: PLN-21-111 - 289 LENA VALLEY ROAD LENA VALLEY TAS 7008 - Referral Officer Report - Planning Referral Officer Environmental Development Planner Report ↓ 

**APPLICATION UNDER HOBART INTERIM PLANNING SCHEME 2015**

Type of Report: Committee
Council: 21 June 2021
Expiry Date: 22 July 2021
Application No: PLN-21-111
Address: 289 LENA VALLEY ROAD , LENA VALLEY
269 LENA VALLEY ROAD , LENA VALLEY
ADJACENT RIVULET
Applicant: ELI JORGENSEN
6 HILLTOP PLACE
Proposal: Partial Demolition, Alteration, Extension & Associated Hydraulic
Infrastructure
Representations: Nil
Performance criteria: Zone Use Standards

1. Executive Summary

- 1.1 Planning approval is sought for Partial Demolition, Alteration, Extension & Associated Hydraulic Infrastructure, at 289 Lenah Valley Road, 269 Lenah Valley Road and Adjacent Rivulet, Lenah Valley.
- 1.2 More specifically the proposal includes:
- Partial demolition of and extension to the rear of the existing single storey, single dwelling on 289 Lenah Valley Road. The extension adds a fourth bedroom with ensuite, and an enlarged kitchen/dining and lounge area. Total floor area is increased from 93m² to 146m². A low, partially screened deck with steps down into the rear yard extends from the rear of the extension. A new landing and steps are added for external access from the new lounge.
 - A new stormwater connection to service the site and proposed development, extending beyond 289 Lenah Valley Road and into the adjacent Council-owned 269 Lenah Valley Road reserve lot, where it connects to an existing line already servicing an adjacent site. The outfall for this existing line where it meets New Town Rivulet is to be upgraded accordingly with a retrofitted mortared headstone.

- 1.3 The proposal relies on performance criteria to satisfy the following standards and codes:
 - 1.3.1 Open Space Zone - Use Standards
- 1.4 No representations were received during the statutory advertising period between 21/05 and 04/06/2021.
- 1.5 The proposal is recommended for approval subject to conditions.
- 1.6 The final decision is delegated to the Council, because the proposed development includes work upon Council-owned land.

2. Site Detail



Image 1: Aerial view of the subject site and surrounds.

- 2.1 289 Lenah Valley Road, Lenah Valley is a 625m² residential property occupied by a single storey dwelling located towards the front of the site. The property is set within a row of similarly developed properties along the northern side of Lenah Valley Road. Ancanthe Park lies opposite, across the road. To the rear, northern side, 269 Lenah Valley Road is a portion of Council-owned reserve land that incorporates a recreational trail running along the rear of 289 Lenah Valley Road. The northern boundary of 269 Lenah Valley Road abuts New Town Rivulet.
- ## 3. Proposal
- 3.1 Planning approval is sought for Partial Demolition, Alteration, Extension & Associated Hydraulic Infrastructure, at 289 Lenah Valley Road, 269 Lenah Valley Road and Adjacent Rivulet, Lenah Valley.

3.2 More specifically the proposal is for:

- Partial demolition of and extension to the rear of the existing single storey, single dwelling on 289 Lenah Valley Road. The extension adds a fourth bedroom with ensuite, and an enlarged kitchen/dining and lounge area. Total floor area is increased from 93m² to 146m². A low, partially screened deck with steps down into the rear yard extends from the rear of the extension. A new landing and steps are added for external access from the new lounge.
- A new stormwater connection to service the site and proposed development, extending beyond 289 Lenah Valley Road and into the adjacent Council-owned 269 Lenah Valley Road reserve lot, where it connects to an existing line already servicing an adjacent site. The outfall for this existing line where it meets New Town Rivulet is to be upgraded accordingly with a retrofitted mortared headstone.

4. Background

4.1 Discussions appear to have occurred between the applicant and Council Stormwater Engineers prior to the submission of this planning application. General Manager's consent for the works on Council land was sought and granted prior to the application for planning approval being submitted.

5. Concerns raised by representors

5.1 No representations were received during the statutory advertising period between 21/05 and 04/06/2021.

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.

6.2 289 Lenah Valley Road is located within the General Residential Zone of the *Hobart Interim Planning Scheme 2015*. 269 Lenah Valley Road is located within the Open Space Zone of the *Hobart Interim Planning Scheme 2015*.

- 6.3 The existing use of 289 Lenah Valley Road is Residential (single dwelling). The existing use of 269 Lenah Valley Road is Passive Recreation. The proposed use is Residential. The existing use is a No Permit Required use in the General Residential Zone. The proposed use is a No Permit Required use in the General Residential Zone, and a Prohibited use in the Open Space Zone. Part C 9.7.1 of the *Hobart Interim Planning Scheme 2015* provides the special provision that allows Council to apply discretion to approve the provision of infrastructure associated with a use that would normally be considered prohibited by the provisions of the different zone, having regard to:

(a) whether there is no practical and reasonable alternative for providing the access or infrastructure to the site;

(b) the purpose and provisions of the zone and any applicable code for the land over which the access or provision of infrastructure is to occur; and

(c) the potential for land use conflict with the use or development permissible under the planning scheme for any adjoining properties and for the land over which the access or provision of infrastructure is to occur.

As the proposal seeks to connect into and upgrade what is existing stormwater infrastructure currently servicing other residential uses, and the proposed works have been deemed necessary and guided by Council Stormwater Engineers, it is considered that discretion should be exercised in this case. The proposed work would only temporarily interrupt the existing use of the Council-owned land and once complete would have no ongoing impact upon it. Upgrading the existing infrastructure would also ensure no adverse impacts upon this adjoining land caused by the lack of proper servicing of adjacent development, and further to this the work should also ensure the system is built to an appropriate specification to allow it to adequately service adjoining properties into the future without the risk of failure.

- 6.4 The proposal has been assessed against:

6.4.1 Part D - 10 General Residential Zone

6.4.2 Part D - 19 Open Space Zone

6.4.3 E7.0 Stormwater Management Code

6.4.4 E10.0 Biodiversity Code

- 6.5 The proposal relies on the following performance criteria to comply with the applicable standards:

6.5.1 Open Space Zone:

Discretionary Use – Part D 19.3.5 P1

- 6.6 Each performance criterion is assessed below.

6.7 Discretionary Use – Part D 19.3.5 P1

- 6.7.1 There is no acceptable solution for discretionary use within the Open Space Zone.
- 6.7.2 The proposal includes the provision and upgrade of stormwater infrastructure within the Council-owned reserve land at 269 Lenah Valley Road. Stormwater detention within 289 Lenah Valley Road will ensure the upgraded services within the Council-owned land will be sized accordingly to support the adjacent residential properties. The connection to and upgrade of the stormwater system will be shared by 289 and 287A Lenah Valley Road, with 287A Lenah Valley Road already connected to the system. 289 Lenah Valley Road's stormwater runoff is currently directed to sewer.
- 6.7.3 There is no acceptable solution; therefore assessment against the performance criterion is relied on.
- 6.7.4 The performance criterion P1 at clause Part D 19.3.5 provides as follows:
- Discretionary use must complement and enhance the use of the land for recreational purposes by providing for facilities and services that augment and support Permitted use or No Permit Required use.*
- 6.7.5 The proposed works will complement the use of the land for recreational purposes as the provision and upgrade of services will ensure the potential for adverse impacts upon users of the land through lack of drainage or lack of capacity are either rectified or adequately managed.
- 6.7.6 The proposal complies with the performance criterion.

7. Discussion

- 7.1 Planning approval is sought for Partial Demolition, Alteration, Extension & Associated Hydraulic Infrastructure, at 289 Lenah Valley Road, 269 Lenah Valley Road and Adjacent Rivulet, Lenah Valley.
- 7.2 The application was advertised and no representations were received.
- 7.3 The proposal has been assessed against the relevant provisions of the planning scheme and is considered to perform well.
- 7.4 The proposal has been assessed by other Council officers, including the Council's Development Engineer, Environmental Engineer and Environmental Development Planner. The officers have raised no objection to the proposal, subject to conditions. The proposal was also reviewed by the Council's Park Planner, who notably makes the following comment with regard to the works on Council land: *'The location of the stormwater line appears to have been moved and is now further from the trees, running parallel to the northern boundary fence. Ruby and I measured the trees and there will be less than ten percent incursion into the Tree Protection Zones and thus, no significant impact - possibly no impact at all. Good outcome'.*
- 7.5 The proposal is recommended for approval.

8. Conclusion

- 8.1 The proposed Partial Demolition, Alteration, Extension & Associated Hydraulic Infrastructure, at 289 Lenah Valley Road, 269 Lenah Valley Road and Adjacent Rivulet, Lenah Valley 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 Partial Demolition, Alteration, Extension & Associated Hydraulic Infrastructure, at 289 Lenah Valley Road, 269 Lenah Valley Road and Adjacent Rivulet, Lenah Valley 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-21-111 - 289 LENA VALLEY ROAD AND 269 LENA VALLEY ROAD LENA VALLEY TAS 7008 & ADJACENT RIVULET - Final Planning Documents except where modified below.

Reason for condition

To clarify the scope of the permit.

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).

Any private or private shared stormwater system passing through third-party (in this case City of Hobart) land must have sufficient receiving capacity.

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

Reason for condition

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

SW 5

Construction of the development connection must not adversely impact the

New Town Rivulet.

A construction management plan (CMP) must be submitted and approved as a Condition Endorsement prior to commencement of works. The CMP must be prepared by a suitably qualified and experienced engineer and must:

1. detail the proposed construction methodology and identify all potential risks to the New Town Rivulet and the public reserve riparian zone during construction including but not limited to construction loading, traffic loading, excavation works, footing construction, vibrations, undermining, flood, and environmental harm;
2. provide treatment measures to eliminate or otherwise mitigate to as low as reasonably practicable all identified risks;
3. include a monitoring regime.

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

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

SW 7

Prior to occupancy or the commencement of the use (whichever occurs first), any new stormwater connection must be constructed and existing redundant connection(s) be abandoned and sealed at the owner's expense.

Prior to the issuing of any approval under the Building Act 2016 or commencement of works (whichever occurs first), detailed engineering drawings must be submitted via the City of Hobart's online request form which is available on its website and approved. The detailed engineering drawings must include:

1. the location of the proposed connections and all existing connections;
2. the size and design of the connection such that it is appropriate to safely service 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;
4. connections which are free-flowing gravity driven;
5. any connections to watercourse must demonstrate adequate erosion and scour control and minimise hydraulic intrusion. The cross-sections must clearly show the top of bank and invert of watercourse.

All work required by this condition must be undertaken in accordance with the approved detailed engineering drawings. The approved stormwater connection documents must be included in your plumbing permit application document set and listed in accompanying forms.

SW 9

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

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

1. include detailed design and supporting calculations of the detention tank showing:
 1. detention tank sizing such that there is no increase in flows from the developed site up to 5% AEP event and no worsening of flooding;
 2. the layout, the inlet and outlet (including long section), outlet size, overflow mechanism and invert level;
 3. the discharge rates and emptying times; and
 4. all assumptions must be clearly stated;
2. include a supporting maintenance plan, which specifies the required maintenance measures to check and ensure the ongoing effective operation of all systems, such as: inspection frequency; cleanout procedures; descriptions and diagrams of how the installed systems operate; details of the life of assets and replacement requirements.

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

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

ENG 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.

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.

ENV 10

An approved Construction Tree Protection Plan must be implemented and complied with.

A Construction Tree Protection Plan must be submitted and approved as a Condition Endorsement, prior to the commencement of works and prior to the granting of building consent (whichever occurs first). The Construction Tree Protection Plan must:

1. show the tree protection zones (TPZs) of the *Eucalyptus globulous* and *Acacia dealbata* trees identified in the Aboricultural Assessment by Element Tree Services dated 18 March 2021, as determined in accordance with Australian Standard AS 4970-2009 *Protection of trees on development sites*;
2. show all proposed works and development that would encroach into

the TPZs and the area of the TPZs where works are to be excluded; and

3. **include the location and construction details of fencing/barriers for the tree protection zone that will delineate areas where works are to be excluded.**

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

Reason for condition

To ensure the development does not result in unnecessary loss of priority biodiversity values

ENV 1

Sediment and erosion control measures sufficient to prevent sediment from leaving the site must be installed prior to any disturbance of the site, and maintained until all areas of disturbance have been stabilized or re-vegetated.

Advice: For further guidance in preparing a Soil and Water Management Plan – in accordance with Fact sheet 3 Derwent Estuary Program click [here](#).

Reason for condition

To avoid the sedimentation of roads, drains, natural watercourses, Council land that could be caused by erosion and runoff from the development, and to comply with relevant State legislation.

OPS s1

Approval is granted for the stormwater design as shown on drawing H010 Revision B Project 20.0518 by Gandy and Roberts. If the pipe is proposed to be installed in a different position, this could result in more than a ten percent incursion into the Tree Protection Zone of park trees. Therefore, either the trenches would have to be dug by hand or vacuum pump, or the tree/s would have to be removed at the applicant's cost and the tree's amenity value paid by the applicant.

A Public Spaces By-law permit will be required for the installation works within New Town Rivulet Linear Park. To apply for a by-law permit to undertake works, use this link; <https://www.hobartcity.com.au/Community/Parks-reserves-and-sporting-facilities/Apply-for-a-permit>.

Advice: Please note that if the pipe is not installed substantially in accordance with the location in the Final Planning Documents, further planning approval may be required.

Reason for condition

To protect the City's trees and the amenity of public parks.

ADVICE

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

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

CONDITION ENDORSEMENT

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

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

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

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

BUILDING PERMIT

You may need building approval in accordance with the *Building Act 2016*. Click [here](#) for more information.

This is a Discretionary Planning Permit issued in accordance with section 57 of

the *Land Use Planning and Approvals Act 1993*.

PLUMBING PERMIT

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

PERMIT TO CONSTRUCT PUBLIC INFRASTRUCTURE

You will require a permit to construct public infrastructure for the new connection, with a 12 month maintenance period and bond (please contact the Hobart City Council's City Amenity Division to initiate the permit process).

NEW SERVICE CONNECTION

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

COUNCIL RESERVES

A Public Spaces By-law permit is required for installation of the new stormwater pipe within New Town Rivulet Linear Park. You can apply for a permit to undertake works here; <https://www.hobartcity.com.au/Community/Parks-reserves-and-sporting-facilities/Apply-for-a-permit>.

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.



(Cameron Sherriff)

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: 7 June 2021

Attachment(s):

Attachment B - CPC Agenda Documents

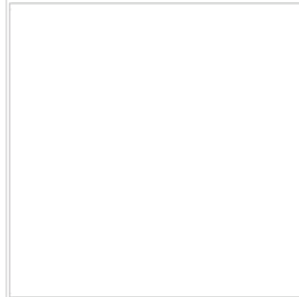
Attachment C - Referral Officer Report - Planning Referral Officer Environmental Development Planner Report

Attachment D - Referral Officer Report - Planning Referral Officer Road and Environmental Engineering - Enviro Report

Planning: #225278

Property

289 LENA VALLEY ROAD LENA VALLEY TAS 7008

**People**

Applicant

*

ELI JORGENSEN

0408 056 040

eli@clrtbuildingdesign.com.au

Owner

*

Susan Johnston

289 Lenah Valley Road

LENAH VALLEY TAS 7008

0400 127 093

susan_christiejohnston@flightcentre.com

Entered By

ELI JORGENSEN

0408 056 040

eli@clrtbuildingdesign.com.au

Use

Other

Details

Have you obtained pre application advice?

☐ No

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

Are you applying for permitted visitor accommodation as defined by the State Government Visitor Accommodation Standards? Click on help information button for definition. If you are not the owner of the property you MUST include signed confirmation from the owner that they are aware of this application.

*

☐ No

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

*

☐ No

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

Details

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

*

main use

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

*

rear addition

Estimated cost of development

*

120000.00

Existing floor area (m2)

Proposed floor area (m2)

Site area (m2)

93.00

53.00

627

Carparking on Site

N/A

Total parking spaces

Existing parking spaces

☐ Other (no selection chosen)**Other Details**

Does the application include signage?

*

☐ No

How many signs, please enter 0 if there are none involved in this application?

*

0

Tasmania Heritage Register

Is this property on the Tasmanian Heritage Register?

• ☐ No**Documents****Required Documents**

Title (Folio text and Plan and Schedule of Easements)

*

FolioPlan-18187-6.pdf

Title (Folio text and Plan and Schedule of Easements)

*

FolioText-18187-6.pdf

Plans (proposed, existing)

*

DA2-289 Lenah Valley rd Lenah Valley-2.9.2020.pdf

GM or Crown consent

GMC-20-87 - 289 LENA VALLEY ROAD LENA VALLEY TAS 7008 - Notice of Land Owner Consent to Lodge a Planning Application (including documentation).pdf



Enquiries to: City Planning
Phone: (03) 6238 2715
Email: coh@hobartcity.com.au

17 February 2021

Eli Jorgensen (Dirt Building Design)
6 Hilltop Place
DODGES FERRY TAS 7173

[mailto: Eli@dirtybuildingdesign.com.au](mailto:Eli@dirtybuildingdesign.com.au)

Dear Sir/Madam

**289 LENAH VALLEY ROAD, LENAH VALLEY - WORKS TO COUNCIL STORMWATER
NOTICE OF LAND OWNER CONSENT TO LODGE A PLANNING APPLICATION - GMC-
20-87**

Site Address:

289 Lenah Valley Road, Lenah Valley

Description of Proposal:

Extension to Dwelling

Applicant Name:

Eli Jorgensen
Dirt Building Design

PLN (if applicable):

n/a

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 as the statutory planning authority.

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
W hobartcity.com.au

 CityofHobartOfficial
ABN 39 055 343 428
Hobart City Council

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

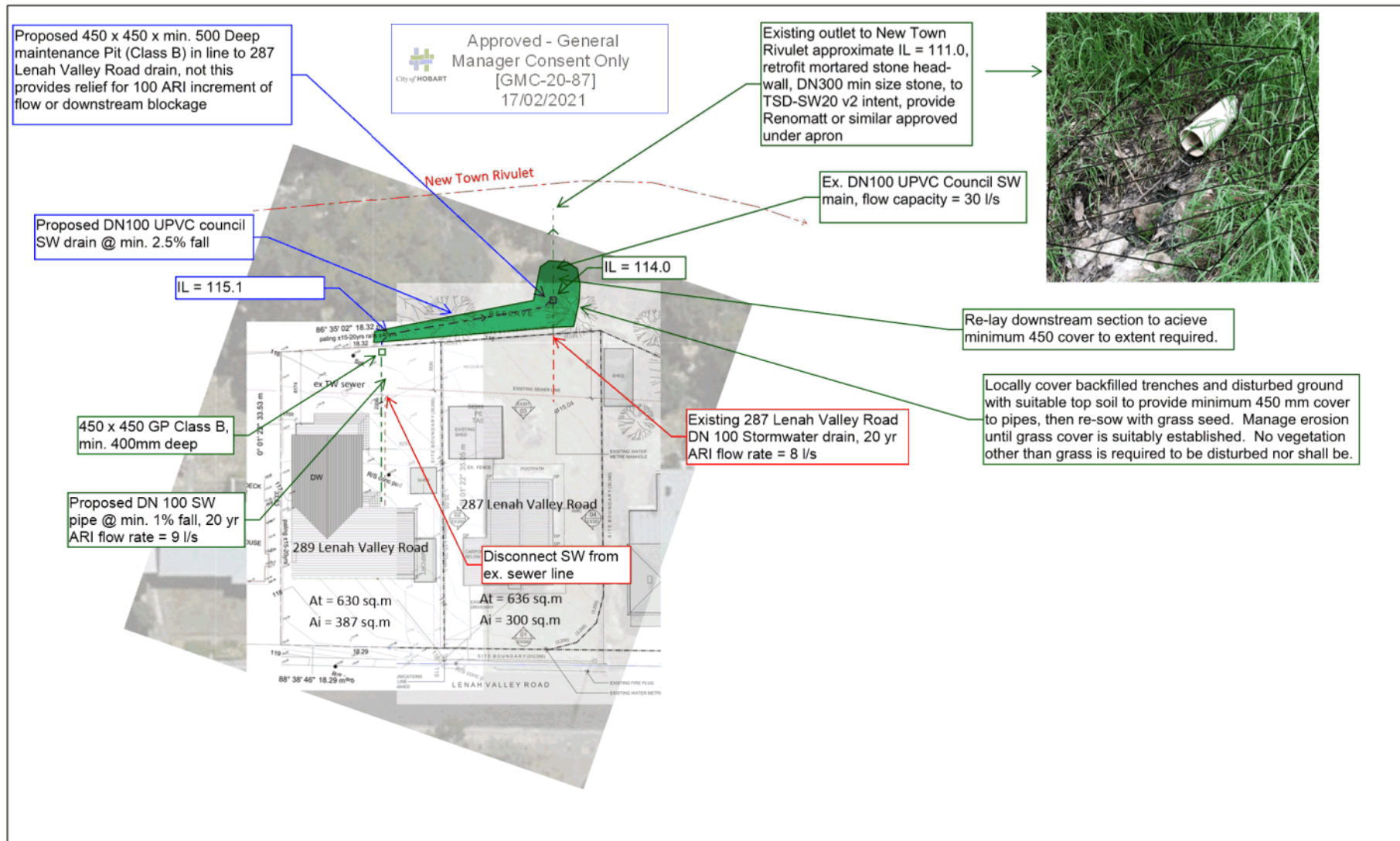


(N D Heath)

GENERAL MANAGER

Relevant documents/plans:

Gandy and Roberts Site Plan - SW - SK.C101 Rev C



REV	DESCRIPTION	APP'D	DATE
C	Update for GMC application	RL	29-01-21
B	Update for GMC application	RL	28-01-21
A	DA RFI - SW	RL	27-11-20

GANDY AND ROBERTS
CONSULTING ENGINEERS

159 DAVEY ST, HOBART
 TASMANIA, AUSTRALIA 7000
www.gandyandroberts.com.au
mail@gandyandroberts.com.au
 ph 03 6223 8877 fx 03 6223 7183

287A Lenah Valley Road - Alterations
 287A Lenah Valley Road
 Lenah Valley
 DRAWING TITLE
 Site Plan - SW

DESIGNED	DRAWN	CHECKED
RL	RL	RL
PROJECT	DRAWING	REVISION
20.0518	SK.C101	C

**RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
18187	6
EDITION	DATE OF ISSUE
7	11-Oct-2018

SEARCH DATE : 01-Sep-2020

SEARCH TIME : 12.09 PM

DESCRIPTION OF LAND

City of HOBART

Lot 6 on Plan 18187

Derivation : Part of 10A-0R-0P Gtd to E.S.P. Bedford & J. Price

Derived from A18876

SCHEDULE 1

C655016, D92863 & D121071 SCOTT WILLIAM CHRISTIE-JOHNSTON and
SUSAN ELIZABETH CHRISTIE-JOHNSTON Registered
04-Apr-2014 at 12.02 PM

SCHEDULE 2

Reservations and conditions in the Crown Grant if any

E142319 MORTGAGE to Members Equity Bank Limited Registered
11-Oct-2018 at 12.01 PM

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations



FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



Owner: DECEASED PERSONS ESTATE	PLAN OF SURVEY by Surveyor of land situated in the	Registered Number: P.18187
Title Reference: Z. 1740	CITY OF HOBART	APPROVED 31 MAY 1982 Effective from:
Grantee: PART OF 10-0-0 GTD. TO EDWARD SAMUEL PICKARD BEDFORD AND JOHN PRICE	Scale 1:600 Measurements in Metres	ACTING DEPUTY Recorder of Titles



**RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME 18187	FOLIO 10
EDITION 2	DATE OF ISSUE 30-Jun-2015

SEARCH DATE : 24-Feb-2021

SEARCH TIME : 08.27 AM

DESCRIPTION OF LAND

City of HOBART

Lot 10 on Plan 18187

Derivation : Part of 10 Acres Gtd. to E.S.P. Bedford & Anor.

Prior CT 4652/78

SCHEDULE 1

HOBART CITY COUNCIL

SCHEDULE 2

Reservations and conditions in the Crown Grant if any

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations



**PROPOSED EXTENTION TO DWELLING**

Susan Christie-johnston

POSTAL ADDRESS:

AS BELOW

CONTACT:**0400 127 093****EMAIL:**

Susan Christie-johnston
 <susan_christiejohnston@flightcentre.com>

SITE ADDRESS:

289 Lenah Vally rd, Lenah Valley

SITE INFORMATION

LOT:	6
TITLE:	18187
LAND AREA:	627m ²
HOUSE SIZE:	93m ²
ADDITION:	53m ²
DECK:	25m ² PLUS STAIRS
COUNCIL:	HOBART COUNCIL
ZONING:	GENERAL RESIDENTIAL
BAL:	TBA
WIND CLASSIFICATION:	N3
SOIL CLASSIFICATION:	TBA
CLIMATE ZONE:	7
ENERGY RATING:	XX STARS
DEVELOPMENT CLASS:	1A

DOCUMENTS BY OTHERS: *TO BE READ IN CONJUNCTION WITH BUILDING PLANS*

FORM 55 & DRAWINGS		DD/MM/YYYY
FORM 11A - CERTIFICATE OF LIKELY COMPLIANCE - BUILDING WORK		DD/MM/YYYY
FORM 55 - SOIL TEST		DD/MM/YYYY
FORM 35 - CERTIFICATE OF RESPONSIBLE DESIGNER	DIRT BUILDING DESIGN	DD/MM/YYYY
FORM 2	OWNER OR AUTHORISED AGENT	DD/MM/YYYY
FORM 3	OWNER OR AUTHORISED AGENT	DD/MM/YYYY
FORM 35 - WASTE WATER DESIGN		DD/MM/YYYY

GENERAL NOTES:

BUILDERS, TRADESMEN, SUB-CONTRACTORS AND PREFABRICATORS TO VERIFY ALL DIMENSIONS AND LEVELS PRIOR TO COMMENCING ANY BUILDING WORKS. USE WRITTEN DIMENSION ONLY. DO NOT SCALE FROM DRAWINGS.

SURVEYOR TO VERIFY ALL DIMENSIONS, SET-OUTS, LEVELS, LOCATION OF SERVICES, EASEMENTS AND ANY OTHER INFORMATION RELEVANT TO THE PROPOSED BUILDING WORKS.

ENGINEER TO PROVIDE ALL STRUCTURAL CERTIFICATES AS REQUIRED BY LOCAL COUNCIL AND RELEVANT AUTHORITIES. ENGINEERING DETAILS TO OVERRIDE ARCHITECTURAL DRAWING AND SPECIFICATION.

ALL CONSTRUCTION WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH THE PLANNING AND BUILDING PERMITS. MATERIALS AND WORKMANSHIP TO CONFORM WITH THE STATE BUILDING REGULATIONS, LOCAL COUNCIL BY-LAWS AND RELEVANT CURRENT EDITIONS OF BCA CODES, AUSTRALIAN STANDARDS, PLANS, SPECIFICATIONS AND MANUFACTURER'S WRITTEN INSTRUCTIONS.

BUILDER AND SURVEYOR TO REPORT TO THE DESIGNER ALL RELEVANT DISCREPANCIES, VARIATIONS AND CHANGES PRIOR TO ANY WORKS COMMENCING. 24 HOURS MINIMUM REQUIRED FOR DRAWINGS TO BE AMENDED.

CONFIRMATION OF ANY CHANGES BY THE BUILDER, CLIENT, OR BUILDING SURVEYOR MUST BE IN WRITING AND CONFIRMED BY THE DESIGNER.

ALL WORKS ARE TO FOLLOW THE 'DIAL-BEFORE-YOU-DIG' PROCESS IN ORDER TO OBTAIN INFORMATION ON EXISTING INFRASTRUCTURE AND UNDERGROUND SERVICES.

PAGE INDEX

A00	COVER PAGE
A01	SITE PLAN
A02	EXISTING FLOOR LEVEL
A03	NEW FLOOR PLAN
A04	ELEVATIONS
A05	SECTIONS
A06	3D IMAGES
A07	LIGHTING PLAN
A08	PLUMBING PLAN
A09	CONSTRUCTION NOTES - 1
A10	CONSTRUCTION NOTES - 2
A11	WORK HEALTH & SAFETY
A12	ENGINEERING NOTES
A13	TIMBER FRAMING N3
A14	BCA REFERENCE LIST

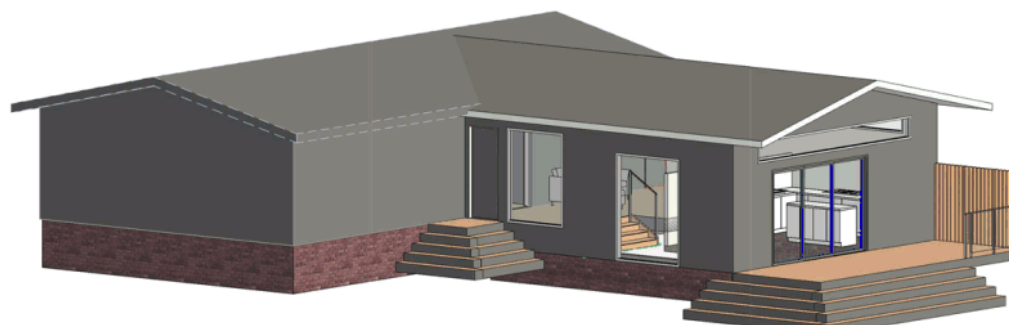


IMAGE IS AN INTERPRETATION ONLY



Dirt Building Design
 6 Hiltop Place
 Dodges Ferry 7173
 Email: admin@dirtdesign.com.au
 PH: 03 6112 0402
 Building Designer:
 Eli Jorgensen
 Accreditation No: CC62365
 Bush Fire Accreditation: BFA-139



Client:
 Susan Christie-johnston
 Address:
 289 Lenah Vally rd, Lenah Valley

Sheet Name:
 COVER PAGE
 Title:
 18187/6

Revision Number	Description	Date
2	DR2	19.7.2020
3	DR4	20.7.2020
4	DR5	23.7.2020
5	DA plans	10.8.2020

Issue: DA2-289 Lenah Vally rd, Lenah Valley

Drawn: ELI JORGENSEN

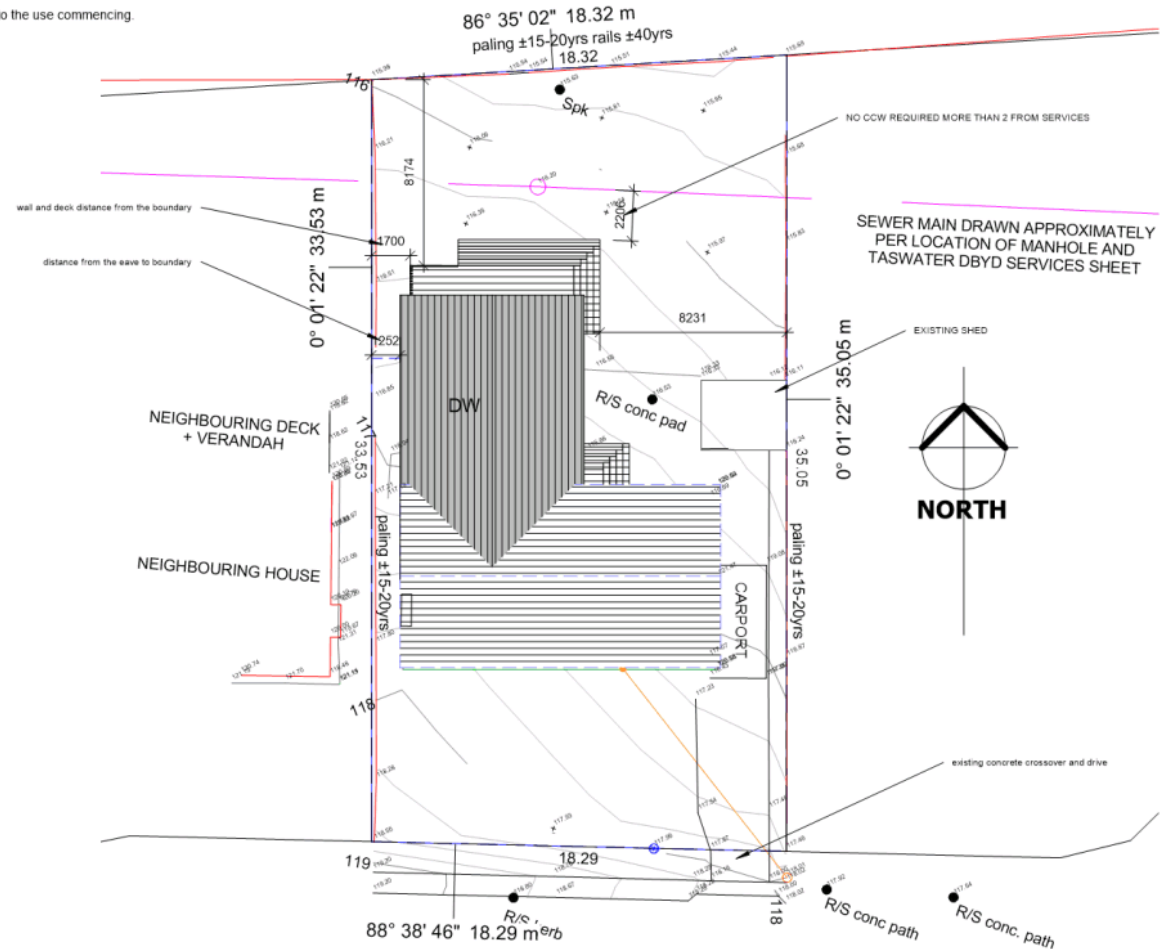
Scale: 1 : 1	Size: A3	Date: 2.9.2020
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Project: 19338	Sheet: A00	Rev: 5
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The access will need to be sealed from the property boundary to the edge of the road seal. The seal is to be hot bitumen two coat seal (as a minimum standard) over a minimum 200mm thick compacted FCR base material, in accordance with Council's current Standard Drawing TSD-R03-v1 and to the satisfaction of Council's Municipal Engineer prior to the use commencing.

DRIVEWAY DRAINAGE IS TO BE DIRECTED INTO THE ROAD SIDE TABLE DRAIN WITH APPROPRIATE MEASURES TO MITIGATE EROSION - ROCK LINED DRAIN FOR THE LENGTH OF THE DRIVEWAY

DRIVEWAY TO BE CONSTRUCTED USING A SUB-BASE 300mm USING 60mm ROCK, WELL GRADED AND A FINISHED PAVEMENT 150mm USING 20mm FCR CLASS A MATERIAL OR TO ENGINEERS INSTRUCTIONS



SITE INFORMATION

LOT: 6
TITLE: 18187
LAND AREA: 627m²
HOUSE SIZE: 93m²
ADDITION: 44m²
DECK: 21m² PLUS STAIRS
COUNCIL: HOBART COUNCIL
ZONING: GENERAL RESIDENTIAL
BAL: TBA
WIND CLASSIFICATION: N3
SOIL CLASSIFICATION: TBA
CLIMATE ZONE: 7
ENERGY RATING: XX STARS
DEVELOPMENT CLASS: 1A

IT IS THE BUILDERS RESPONSIBILITY TO CHECK ALL MEASUREMENTS, HEIGHTS, AND LOCATIONS ON SITE BEFORE STARTING



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Building Designer:
Eli Jorgensen
Accreditation No: CC62365
Bush Fire Accreditation: BFA-139



Client:
Susan Christie-johnston
Address:
289 Lenah Valley rd, Lenah Valley

Sheet Name:
SITE PLAN
Title:
18187/6

Revision Number	Description	Date
2	DR2	19.7.2020
5	DA plans	10.8.2020

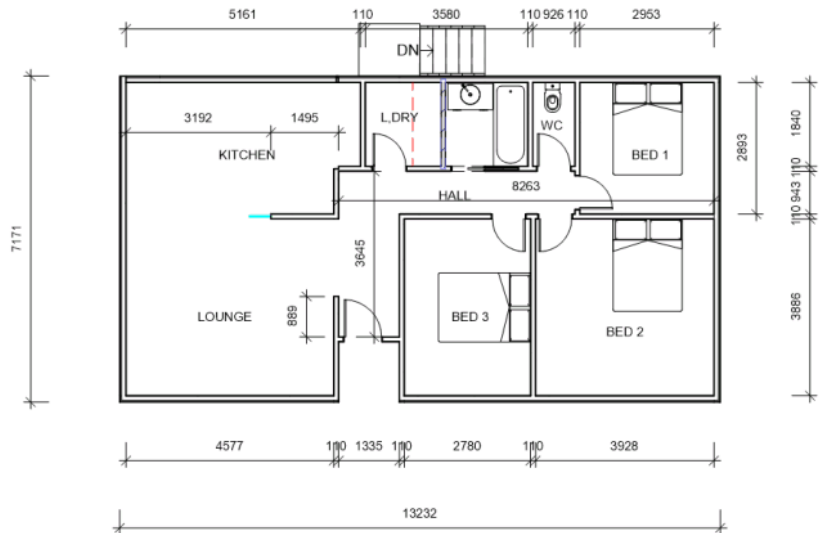
SITE PLAN

1 : 200

Issue: DA2-289 Lenah Valley rd, Lenah Valley		
Drawn: ELI JORGENSEN		
Scale: 1 : 200	Size: A3	Date: 2.9.2020
Project: 19338	Sheet: A01	Rev: 5

SITE INFORMATION

LOT: 6
TITLE: 18187
LAND AREA: 627m²
HOUSE SIZE: 93m²
ADDITION: 53m²
DECK: 25m² PLUS STAIRS
COUNCIL: HOBERT COUNCIL
ZONING: GENERAL RESIDENTIAL
BAL: TBA
WIND CLASSIFICATION: N3
SOIL CLASSIFICATION: TBA
CLIMATE ZONE: 7
ENERGY RATING: XX STARS
DEVELOPMENT CLASS: 1A



WINDOWS			
Mark	Height	Width	Comments
W1	2400	1800	
W2	2100	1600	
W3	600	2400	
W4	600	2400	
W5	500	5400	
W6	600	1500	

DOORS			
Mark	Height	Width	Comments
D1	2040	720	
D2	2040	720	
D3	2040	720	
D4	2040	720	
D5	2040	720	
D6	2040	720	
D7	2040	820	
D8	2040	820	
D9	2040	820	
D10	2040	820	
D11	2040	820	
D12	2040	820	
D13	2040	720	
D14	2100	3300	
D15	2040	720	

ALL WINDOWS AND DOORS TO
BE ALUMINIUM, THERMALLY BROKEN
AND DOUBLE GLAZED

KEY

- CP CARPET
- TF TIMBER FLOOR
- CO CONCRETE
- TI TILES
- PC POLISHED CONCRETE FLOOR
- RC RAKED CEILING
- (F) FLAT CEILING
- SL SKYLIGHT
- S HARD WIRED SMOKE DETECTORS
- INTERCONNECTED
- A/C AIR CONDITIONING UNIT
- FR FIRE PLACE
- BH BULKHEAD
- MB METER BOX



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Address:
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Sheet Name:
EXISTING FLOOR LEVEL
Title:
18187/6

Revision Number	Description	Date
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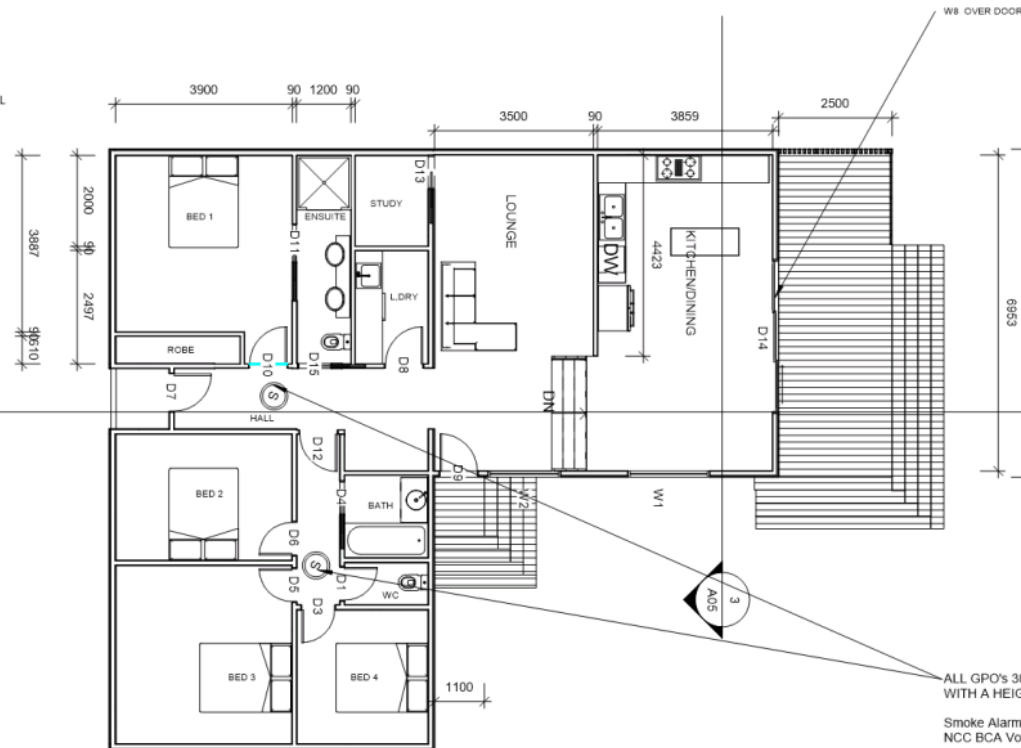
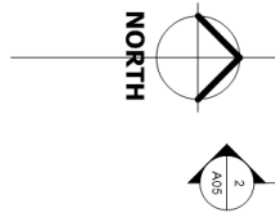
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Drawn: ELI JORGENSEN			
Scale: 1 : 100	Size: A3	Date: 2.9.2020	
Project: 19338	Sheet: A02	Rev:	

SITE INFORMATION

LOT:	6
TITLE:	18187
LAND AREA:	627m ²
HOUSE SIZE:	93m ²
ADDITION:	53m ²
DECK:	25m ² PLUS STAIRS
COUNCIL:	HOBART COUNCIL
ZONING:	GENERAL RESIDENTIAL
BAL:	TBA
WIND CLASSIFICATION:	N3
SOIL CLASSIFICATION:	TBA
CLIMATE ZONE:	7
ENERGY RATING:	XX STARS
DEVELOPMENT CLASS	1A



WINDOWS			
Mark	Height	Width	Comments
W1	2400	1800	
W2	2100	1600	
W3	600	2400	
W4	600	2400	
W5	500	5400	
W6	600	1500	

DOORS			
Mark	Height	Width	Comments
D1	2040	720	
D2	2040	720	
D3	2040	720	
D4	2040	720	
D5	2040	720	
D6	2040	720	
D7	2040	820	
D8	2040	820	
D9	2040	820	
D10	2040	820	
D11	2040	820	
D12	2040	820	
D13	2040	720	
D14	2100	3300	
D15	2040	720	

ALL WINDOWS AND DOORS TO
BE ALUMINIUM, THERMALLY BROKEN
AND DOUBLE GLAZED

ALL GPO's 300mm ABOVE FLOOR UNLESS OTHERWISE INDICATED
WITH A HEIGHT SHOWN ADJACENT TO THE ICON

Smoke Alarms: Smoke Alarms are to install in accordance with NCC BCA Vol 2 Part 3.7.5 Smoke Alarms

HARD WIRED AND INTERCONNECTED



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Sheet Name:
NEW FLOOR PLAN
Title
18187/6

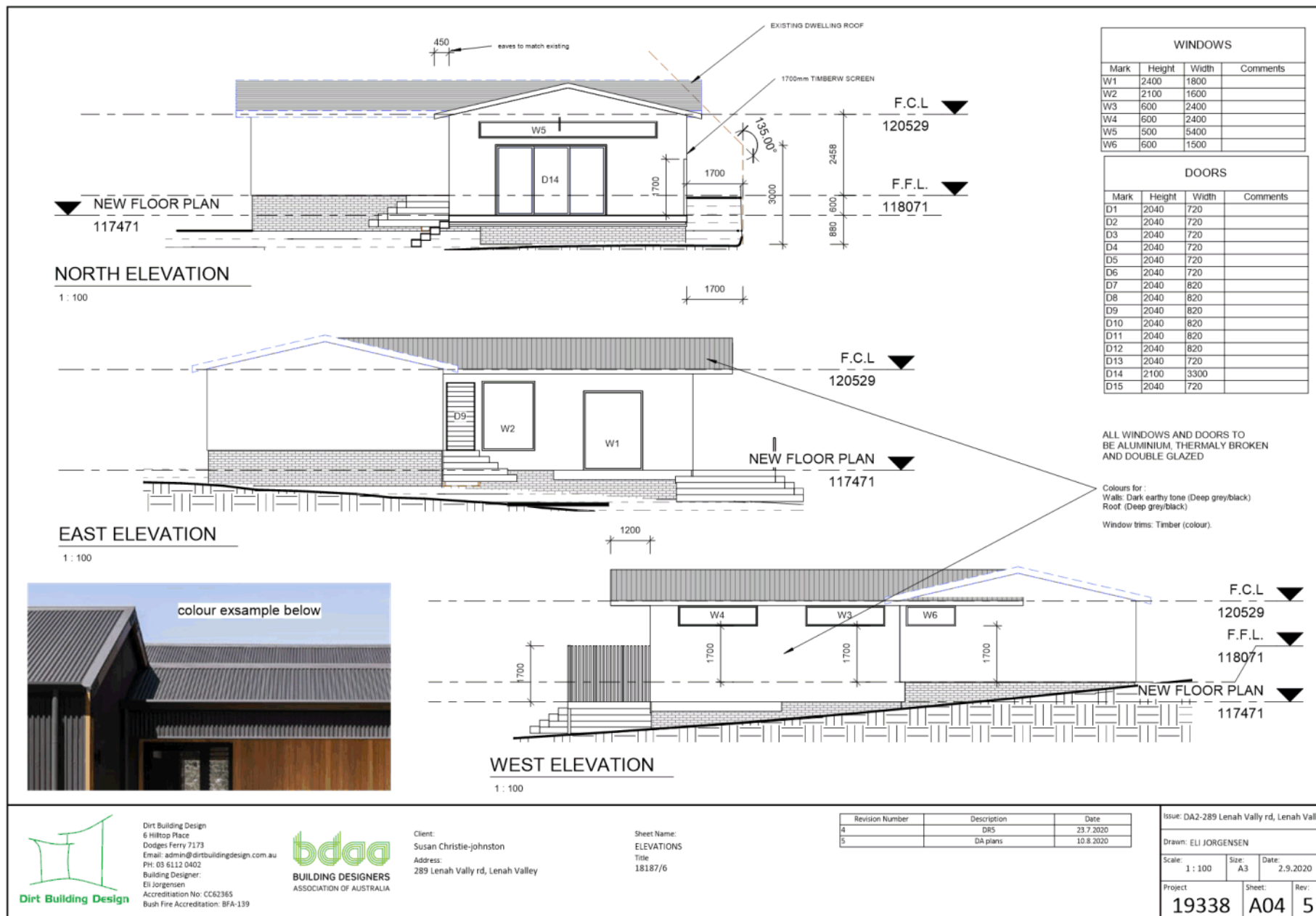
Revision Number	Description	Date
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3	DR4	20.7.2020
5	DA plans	10.8.2020

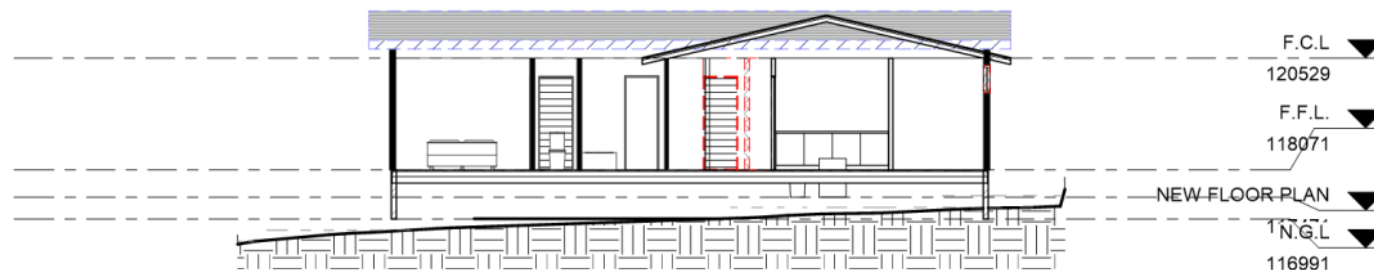
Issue: DA2-289 Lenah Vally rd, Lenah Valley

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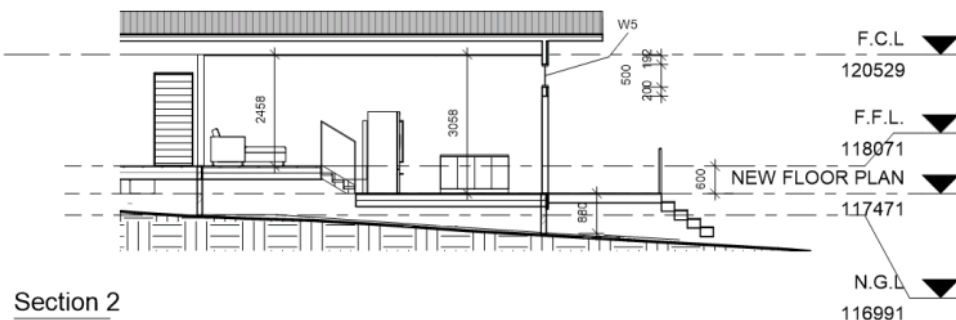
Project	Sheet:	Rev:
19338	A03	5





Section 1

1 : 100



Section 2

1 : 100

INSULATION NOTE

- ROOF - R5.0 Batts To Manufactures Specifications with proctor wrap membrane or equivalent
- WALLS:
Internal - R2.5 Batts To Manufactures Specifications
External - R2.5 Batts To Manufactures Specifications with proctor wrap membrane or equivalent
- TIMBER FLOORS - Suspended timber floor with Kingspan Aircell Permifloor under joists.
- CONCRETE FLOOR- 50mm Kooltherm K3 floorboard or similar beneath slab.
- VENTILATION - All bathroom, kitchen and laundry vents to external eave lines with one way flaps.

WINDOWS

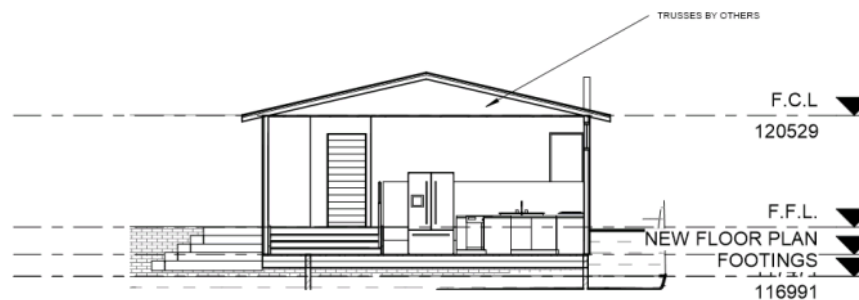
Mark	Height	Width	Comments
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W2	2100	1600	
W3	600	2400	
W4	600	2400	
W5	500	5400	
W6	600	1500	

DOORS

Mark	Height	Width	Comments
D1	2040	720	
D2	2040	720	
D3	2040	720	
D4	2040	720	
D5	2040	720	
D6	2040	720	
D7	2040	820	
D8	2040	820	
D9	2040	820	
D10	2040	820	
D11	2040	820	
D12	2040	820	
D13	2040	720	
D14	2100	3300	
D15	2040	720	

ALL WINDOWS AND DOORS TO
BE ALUMINIUM, THERMALLY BROKEN
AND DOUBLE GLAZED

IF THE DECK IS CONSTRUCTED OVER 1000mm ABOVE NATURAL GROUND LEVEL
A HANDRAIL MUST BE PROVIDED.
ANY CHANGES TO THE CLADDINGS MUST HAVE WRITTEN CONCENT FROM THE DESIGN
ALL STRUCTURAL ELEMENTS TO THE ENGINEERINGS SPECIFICATIONS
AND THE AUSTRALIAN STANDARDS



Section 3

1 : 100



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SECTIONS
Title:
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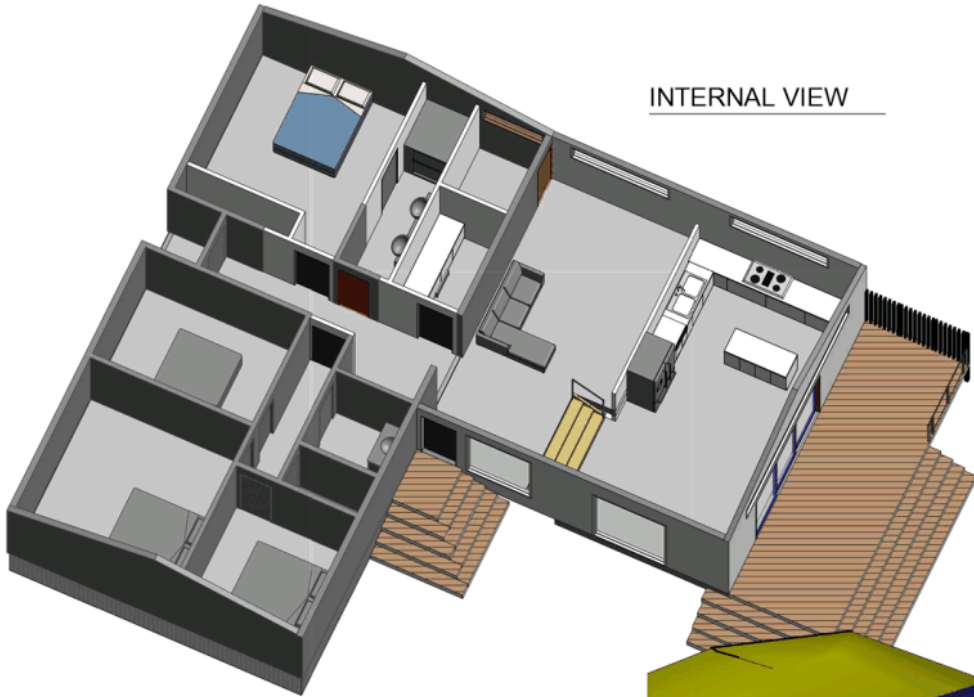
Revision Number	Description	Date
2	DR2	19.7.2020
4	DR5	23.7.2020

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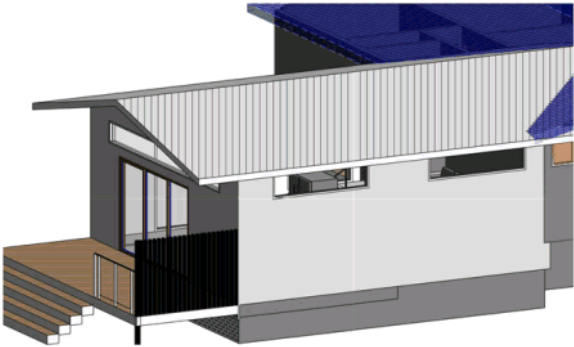
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Project: 19338 Sheet: A05 Rev: 4



INTERNAL VIEW



NORTH EAST ELEVATION



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3D IMAGES
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18187/6

Revision Number	Description	Date
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Project: 19338 Sheet: A06 Rev: 2

TBC ON SITE BY OWNER AND BUILDER

SYMBOL	FIXTURE / FITTING	No.
	LIGHT - WALL MOUNTED EXTERIOR	
	LIGHT - WALL MOUNTED INTERIOR	
	LIGHT - LED RECESSED DOWNLIGHT IC-F or IC-4 RATED	
	LIGHT - DOWNLIGHT EXTERIOR	
	LIGHT - LED CEILING MOUNTED	
	BOLLARD	
	EXHAUST FAN WITH HEAT LAMP- CEILING	
	LIGHT - WALL MOUNTED STAIR LIGHT 300mm ABOVE GROUND	
	EXHAUST FAN	
	SWITCH - SINGLE POLE ONE WAY	
	SWITCH - SINGLE POLE ONE WAY WITH DIMMER	
	SWITCH - SINGLE POLE TWO WAY	
	SWITCH - TWO POLE	
	SWITCH - THREE POLE	
	GPO - SINGLE	
	GPO - DOUBLE	
	GPO - SINGLE EXTERIOR	
	OUTLET - SPEAKERS WALL MOUNTED	
	OUTLET - SPEAKERS CEILING MOUNTED	
	LED SLIM CEILING BATTEN TUBES LIGHT	
	TELEVISION	
	INTERCOM WALL MOUNTED	
	HEAT LAMP- CEILING MOUNTED	
	CEILING MOUNTED FAN WITH LIGHT AND REMOTE CONTROL	
	LIGHT- WALL MOUNTED UNDERWATER LIGHT	
	PENDENT LIGHT	
	SMOKE ALARM - HARD WIRED & INTERCONNECTED IF MORE THAN ONE	
ALL LIGHT SWITCHES 1000mm ABOVE FLOOR UNLESS OTHERWISE STATED LIFT, OVEN AND SMOKE DETECTORS TO BE HARDWIRED ALL GPO's 300mm ABOVE FLOOR UNLESS OTHERWISE INDICATED WITH A HEIGHT SHOWN ADJACENT TO THE ICON Smoke Alarms: Smoke Alarms are to install in accordance with NCC BCA Vol 2 Part 3.7.5 Smoke Alarms		



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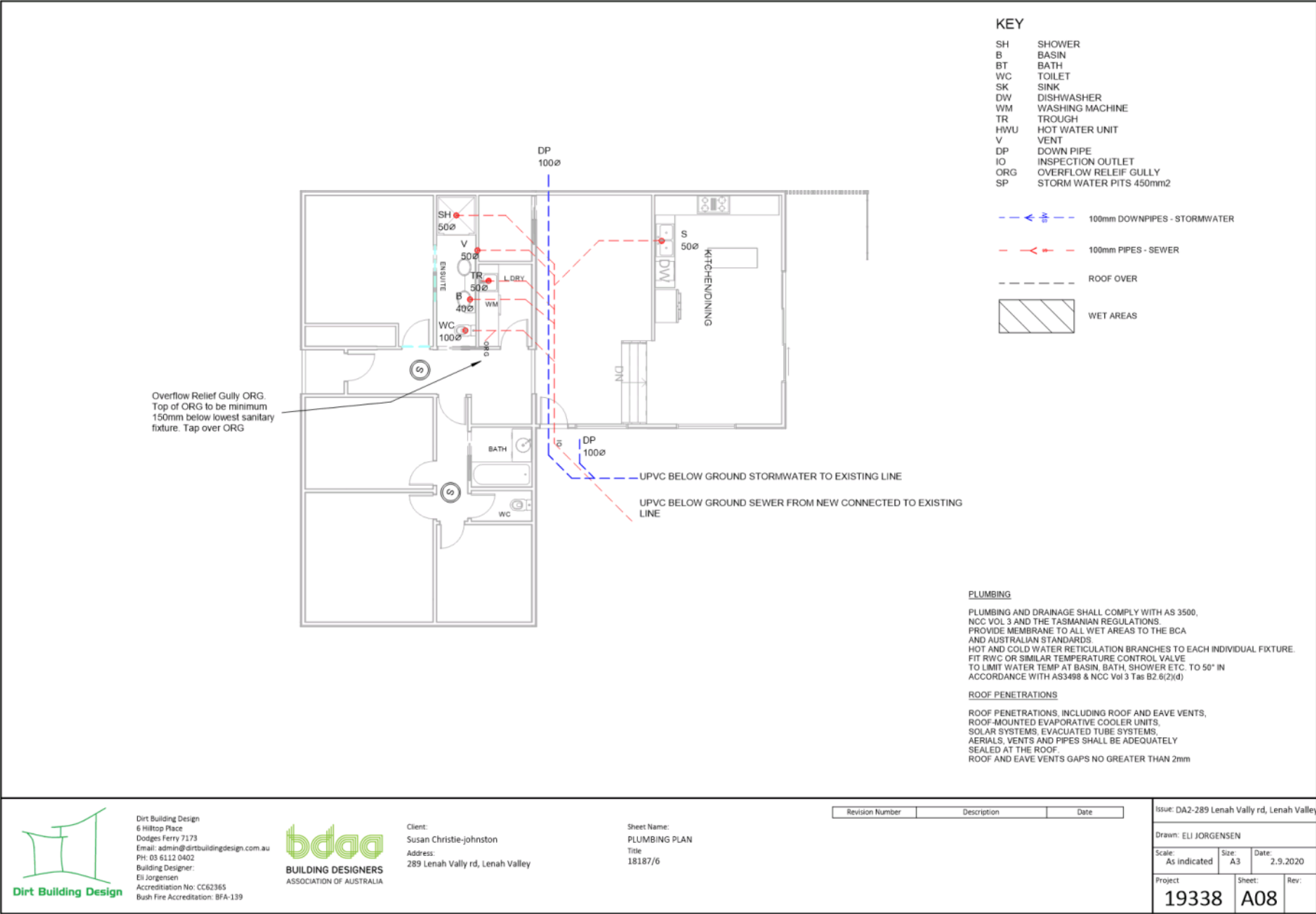
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ASSOCIATION OF AUSTRALIA

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LIGHTING PLAN
Title:
18187/6

Revision Number	Description	Date
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Issue: DA2-289 Lenah Vally rd, Lenah Valley		
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Scale: 1 : 150	Size: A3	Date: 2.9.2020
Project: 19338	Sheet: A07	Rev:



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bdaa
BUILDING DESIGNERS
ASSOCIATION OF AUSTRALIA

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Sheet Name:
PLUMBING PLAN
Title:
18187/6

Revision Number	Description	Date
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Scale: As indicated	Size: A3	Date: 2.9.2020
Project: 19338	Sheet: A08	Rev:

GENERAL CONSTRUCTION NOTES

All construction to be in accordance with current building regulations, The Building code of Australia (BCA), relevant Australian Standards (AS) and Local Authority requirements.

Site preparation and excavation to Council, BCA (part 3.1) and Australian Standards.

Soil Classification: **See soil report and Cover Page for classification**
 Refer to BCA part 3.2.4.

Design Wind Classification: **See report and Cover Page for classification**

FOOTINGS 7 SLABS BCA 3.2

All workmanship to be in accordance with BCA 3.2 and AS 2870 (current edition) and Engineering Specifications. 3.2.2.1(c) Topsoil containing grass roots must be removed from the area on which the footings will rest. All concrete to be placed with a mechanical vibrator and to be cured for a minimum of 7 days and shall be no less than grade N20.

Steel reinforcing to comply with AS1302-1991

3.2.2.3 Footings and Slabs, including internal and edge beams, must be founded on soil with an allowable bearing pressure as follows:

- | | |
|-----|--|
| (a) | Slab panels, load support panels and internal beams (refer BCA for more details) |
| (b) | Edge beams connected to slab (refer BCA for more details) |
| (c) | Pad footings, strip footings and edge beams not connected to slab (refer BCA for more details) |

MASONRY BCA 3.3

- | | |
|--|---|
| 1. General compliance with BCA 3.3 & 3.3.1 and AS3700 unreinforced masonry | BCA 3.3.5.7 Damp-proof Courses & Flashings - materials |
| BCA 3.3.1 Unreinforced Masonry | BCA 3.3.5.8 Damp-proof Courses & Flashings - installation |
| BCA 3.3.2 Reinforced Masonry | BCA 3.3.5.9 Weepholes |
| BCA 3.3.3 Masonry Accessories | BCA 3.3.5.10 Wall ties |
| BCA 3.3.4 Weatherproofing of Masonry | BCA 3.3.5.11 Openings in Masonry Veneer |
| BCA 3.3.5 Masonry Veneer | BCA 3.3.5.12 Lintels |
| BCA 3.3.5.2 Height of Wall Limitation | BCA 3.3.5.13 Vertical Articulation Joints |
| BCA 3.3.5.3 Masonry Units | BCA 3.3.5.14 Engaged Piers |
| BCA 3.3.5.4 Mortar Mixes | BCA 3.3.6 Isolated Masonry Piers |
| BCA 3.3.5.5 Mortar Joints | |
| BCA 3.3.5.6 Cavities | |

VERTICAL ARTICULATION JOINTS BCA 3.3.5.13

(A) Vertical articulation joints must be provided in masonry veneer walls in accordance with (b), except in walls constructed on sites where the soil classification is A or S (see Part 3.2.4).

Explanatory information:

- For the purposes of 3.3.5.13, the vertical articulation joint also performs the function of a contraction or expansion joint.
- (B) Articulation joints between masonry elements must have a width not less than 10mm and be provided:
- (i) in straight, continuous walls having no openings — at not more than 6 m centres and within 4.5 m, but not closer than 470 mm of all corners; and
 - (ii) in straight, continuous walls with openings more than 900 x 900 mm — at not more than 5 m centres and located so that they are not more than 1.2 m away from openings; and
 - (iii) where the height of the wall changes by more than 20% — at the position of change in height; and
 - (iv) where a wall changes in thickness; and
 - (v) at control or construction joints in footings or slabs; and
 - (vi) at junctions of walls constructed of different masonry materials.
- (C) Articulation joints must not be constructed adjacent to arched openings.
- (D) Articulation joints must either be filled with—
- (i) a compressible foam or polystyrene filler and a flexible sealant; or
 - (ii) a purpose made backer rod and a flexible sealant.

Masonry wall ties to be installed in accordance with AS3700, have suitable corrosion protection and comply with **WALL TIES BCA 3.3.5.10**

Veneer wall ties must—

- (A) comply with AS/NZS 2699.1 and be—
 - (i) light duty veneer ties in areas where the design wind speed is not more than N2; and
 - (ii) medium duty ties—
 - (a) in areas where the design wind speed is more than N2; and
 - (b) where engaged piers are provided; and
- (B) be spaced and fixed in accordance with Table 3.3.5.3a and Table 3.3.5.3b of the BCA; and
- (C) be protected against corrosion in accordance with Table 3.3.5.4 of the BCA.

FRAMING PART 3.4

TIMBER FRAMING, TIE DOWN AND WIND BRACING

details to AS 1684, AS1720.1 and part 3.4.3 of current BCA.

Roof truss manufacturer to provide specifications and certification for manufactured roof trusses & bracing prior to construction.

SUB-FLOOR VENTILATION BCA 3.4.1

3.4.1.2 Subfloor ventilation

(A) Subfloor spaces must—

- (i) be provided with openings in external walls and internal subfloor walls in accordance with Table 3.4.1.1 for the climatic zones given in Figure 3.4.1 of the BCA; and
- (ii) have clearance between the ground surface and the underside of the lowest horizontal member in the subfloor in accordance with Table 3.4.1.1 (see Figure 3.4.3a and Figure 3.4.3b) of the BCA.

(B) In addition to (a), a subfloor space must—

- (i) be cleared of all building debris and vegetation; and
 - (ii) have the ground beneath the suspended floor graded in accordance with 3.1.3.3; and
 - (iii) contain no dead air spaces; and
 - (iv) have openings evenly spaced as far as practicable (see Figure 3.4.2) of the BCA; and
 - (v) have openings placed not more than 600 mm in from corners.
- (C) In double leaf masonry walls, openings specified in (A) must be provided in both leaves of the masonry, with openings being aligned to allow an unobstructed flow of air (see Figure 3.4.2 of the BCA).
- (D) Openings in internal subfloor walls specified in (A) must have an unobstructed area equivalent to that required for the adjacent external openings (see Figure 3.4.2 of the BCA).
- (E) Where the ground or subfloor space is excessively damp or subject to frequent flooding, in addition to the requirements of (A) to (D)—
- (i) the subfloor ventilation required in (a) must be increased by 50%; or
 - (ii) the ground within the subfloor space must be sealed with an impervious membrane; or
 - (iii) subfloor framing must be—
 - (a) where above-ground — above ground durability Class 1 or 2 timbers or H3 preservative treated timbers in accordance with AS 1684.2, AS 1684.3 or AS 1684.4; or
 - (b) where in-ground — in-ground durability Class 1 or 2 timbers or H5 preservative treated timbers in accordance with AS 1684.2, AS 1684.3 or AS 1684.4; or
- (C) steel in accordance with NASH Standard 'Residential and Low-Rise Steel Framing' Part 2.

ROOF AND WALL CLADDING BCA 3.5

Roof cladding and guttering and downpipes to AS1562 and parts 3.5.1, 3.5.2 & 3.5.3 of current BCA. Installation to be in accordance with manufacturer's specifications and recommendations.

Installation of pliable building membrane in roofing to be in accordance with AS/NZS 4200

Wall cladding to be in accordance with parts 3.5.4 & 3.5.5 of current BCA and manufacturer's specifications.

GLAZING BCA 3.6

Windows and glazing to AS 1288, AS 2047 and part 3.6 of current BCA.

Manufacturers to provide certification of compliance

Refer window and door schedules for specific glazing requirements.

All aluminium window framing to comply with AS2047

See energy assessment reports for glazing details.

FIRE SAFETY BCA 3.7

- BCA 3.7.2 Fire Separation of External Walls
- BCA 3.7.3 Fire Protection of Separating Walls & Floors
- BCA 3.7.4 Fire Separation of Garage Top Dwellings
- BCA 3.7.5 Smoke Alarms

3.7.5.2 Smoke alarm requirements

Smoke alarms must—

- (A) be located in—
 - (i) Class 1a buildings in accordance with 3.7.5.3 and 3.7.5.5 of the BCA; and
 - (ii) Class 1b buildings in accordance with 3.7.5.4 and 3.7.5.5 of the BCA
- (B) comply with AS 3786, except that in a Class 10a private garage where the use of the area is likely to result in smoke alarms causing spurious signals, any other alarm deemed suitable in accordance with AS 1670.1 may be installed provided that smoke alarms complying with AS 3786 are installed elsewhere in the Class 1 building; and
- (C) be powered from the consumer mains source where a consumer mains source is supplied to the building; and
- (D) be interconnected where there is more than one alarm.

BCA 3.7.5.3 Location - Class 1a Buildings

BCA 3.7.5.4 Location - Class 1b Buildings

BCA 3.7.5.5 Installation of Smoke Alarms

Smoke alarms required by 3.7.5.3 and 3.7.5.4 must be installed on or near the ceiling, in accordance with the following:

- (A) Where a smoke alarm is located on the ceiling it must be—
 - (i) a minimum of 300 mm away from the corner junction of the wall and ceiling; and
 - (ii) between 500 mm and 1500 mm away from the high point and apexes of the ceiling, if the room has a sloping ceiling.
- (B) Where (A) is not possible, the smoke alarm may be installed on the wall, and located a minimum of 300 mm and a maximum of 500 mm off the ceiling at the junction with the wall.

BCA 3.7.5.6 Lighting to Assist Evacuation - Class 1b Buildings

HEALTH & AMENITY PART 3.8

Health & Amenity in accordance with BCA 3.8

WET AREAS

Wet areas to be in accordance with AS3740 - Current Edition & BCA 3.8.1.2

FACILITIES PART 3.8.3

BCA 3.8.3.2 Required Facilities

- (A) A Class 1 building must be provided with—
 - (i) a kitchen sink and facilities for the preparation and cooking of food; and
 - (ii) a bath or shower; and
 - (iii) clothes washing facilities, comprising at least one washtub and space in the same room for a washing machine; and
 - (iv) a closet pan; and
 - (v) a washbasin.
- (B) If any of the facilities in (A) are detached from the main building, they must be set aside for the exclusive use of the occupants of the building.

BCA 3.8.3.3 Construction of Sanitary Compartments

The door to a fully enclosed sanitary compartment must—

- (a) open outwards; or
 - (b) slide; or
 - (c) be readily removable from the outside of the compartment.
- unless there is a clear space of at least 1.2 m, measured in accordance with Figure 3.8.3.3 of the BCA, between the closet pan within the sanitary compartment and the doorway.

State and Territory variations

Part 3.8.3.4 is added as follows in Tasmania

Installation of closet fixtures

(A) If a sufficient sewerage system is not available, an authorised alternative means of disposal of sewage may be installed.

(B) If sanitary facilities are not water-flushed, the following provisions apply

- (i) A pit latrine, an incinerating toilet, a chemical toilet, a removable pan or a non-flushing urinal must not be within 2 m of a building containing habitable rooms.
- (ii) The floor on which a removable pan is placed must be impervious.
- (iii) A room containing a composting toilet must be separated from habitable rooms by way of a permanently ventilated air lock (which may be a circulation space).
- (iv) The minimum ventilation required under (ii) shall be the greater of—
 - (a) 8000 mm²; or
 - (b) 1/500th of the floor area of the circulation space.
- (v) Access for maintenance or removal of waste from a composting toilet must be by way of an access door which opens directly to the outside of the building.

BCA 3.8.4 LIGHT

BCA 3.8.4.2 Natural Light

BCA 3.8.4.3 Artificial Lighting

VENTILATION Part 3.8.5

The requirements of this Part are to be read in conjunction with the condensation management requirements in Part 3.8.7 and the air movement requirements in Part 3.12.4 of the BCA. However, it should be noted that Part 3.12.4 of the BCA does not apply in all States and Territories.

BCA 3.8.6 Sound Insulation

- 3.8.6.2 Sound Insulation Requirements
- 3.8.6.3 Determination of Airborne Sound Insulation Ratings
- 3.8.6.4 Construction of Sound Insulated Walls
- 3.8.6.5 Services
- 3.8.6.3 General Installation Requirements for Walls
- 3.8.6.4 Soil & Waste Pipes

BCA 3.8.7 Condensation Management

Refer to the guidance in the 'Guide for Control of Condensation and Mould in Tasmanian Homes' that should be adhered to where possible.

BCA 3.8.7.2 Pliable Building Membrane

(A) Where a pliable building membrane is installed in an external wall, it must—

- (i) comply with AS/NZS 4200.1; and
- (ii) be installed in accordance with AS 4200.2; and
- (iii) be a vapour permeable membrane for climate zones 6, 7 and 8; and
- (iv) be located on the exterior side of the primary insulation layer of wall assemblies that form the external envelope of a building.

(B) Except for single skin masonry or single skin concrete, where a pliable building membrane is not installed in an external wall, the primary water control layer must be separated from water sensitive materials by a drained cavity.

BCA 3.8.7.3 Flow Rate and Discharge of Exhaust Systems

BCA 3.8.7.4 Ventilation of Roof Spaces

SAFE MOVEMENT & ACCESS BCA 3.9

1. Alpine areas:

The requirements of this Part are to be read in conjunction with Part 3.10.4 of the BCA where a building is located in an alpine area and contains an external stairway or ramp.

2. Room heights:

3.8.2.2 of the BCA contains the required height for a ceiling above a stairway, ramp or landing, measured vertically above the nosing line of stairway treads or the floor surface of a ramp or landing

BCA 3.9 Safe Movement & Access

BCA 3.9.1.2 Stairway Construction

(A) A stairway must be designed to take loading forces in accordance with AS/NZS 1170.1 and must have—

- (i) not more than 18 and not less than 2 risers in each flight; and
- (ii) Goings (G), risers (R) and a slope relationship quantity (2R + G) in accordance with Table 3.9.1.1 of the BCA, except as permitted by (B) and (C); and

GENERAL INFORMATION - FOR FULL AND COMPLETE DETAILS REFER CURRENT BCA AND RELEVANT AUSTRALIAN STANDARDS



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 CONSTRUCTION NOTES - 1
 Title:
 18187/6

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GENERAL CONSTRUCTION NOTES - 1		
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GENERAL CONSTRUCTION NOTES - cont.

- (iii) constant goings and risers throughout each flight, except as permitted by (C) and (D), and the dimensions of goings (G) and risers (R) in accordance with (A), (B) and (C) are considered constant if the variation between—
- (a) adjacent risers, or between adjacent goings, is no greater than 5 mm; and
 - (b) the largest and smallest riser within a flight, or the largest and smallest going within a flight, does not exceed 10 mm; and
 - (iv) risers which do not have any openings that would allow a 125 mm sphere to pass through between the treads; and
 - (v) treads of solid construction (not mesh or other perforated material) if the stairway is more than 10 m high or connects more than 3 storeys.

(B) In the case of a stairway serving only non-habitable rooms, such as attics, storerooms and the like that are not used on a regular or daily basis—

- (i) the going (G), riser (R) and slope relationship quantity (2R + G) in accordance with Table 3.9.1.1 may be substituted with those in Table 3.9.1.2; and
- (ii) need not comply with 3.9.1.2(a)(iv).

(C) In the case of a stairway with winders—

- (i) a maximum of 3 consecutive winders in lieu of a quarter landing in a flight and a maximum of 6 consecutive winders in lieu of a half landing in a flight; and
 - (ii) the going (G) of all winders in lieu of a quarter or half landing may vary from the going of the straight treads within the same flight provided that the going (G) of such winders is constant.
- (D) The point of measurement of the going (G) in the slope relationship quantity (2R + G) for tapered treads and treads in spiral stairways as described in Table 3.9.1.1 (see Figure 3.9.1.1a to Figure 3.9.1.1c) must be—
- (i) for tapered treads, other than treads in a spiral stairway—
 - (a) not more than 1 m in width, the middle of the unobstructed width of the stairway (see Figure 3.9.1.1b); and
 - (b) more than 1 m in width, 400 mm from the unobstructed width of each side of the stairway (see Figure 3.9.1.1c); and
 - (ii) for treads in spiral stairways, the point seven tenths of the unobstructed width from the face of the central pole or support towards the handrail side (see Figure 3.9.1.2a and Figure 3.9.1.2b).

BCA 3.9.1.3 Ramps

BCA 3.9.1.4 Slip-resistance

BCA 3.9.1.5 Landings

BARRIERS & HANDRAILS BCA 3.9.2

Intent:

The intent of the barrier requirements is to prescribe provisions to minimise the risk of a person falling from a stairway, raised floor level (such as a balcony) or the like. 3.9.2.2 sets out when barriers are required to be provided and 3.9.2.3 contains the requirements for the construction of barriers.

Barriers and children:

Children are at particular risk of falling off, over or through ineffectively designed or constructed barriers. Accordingly the requirements of this Part aim to ensure that a barrier reduces the likelihood of children being able to climb over a barrier or fall through a barrier.

BCA 3.9.2.3 Construction of Barriers to Prevent Falls

BCA 3.9.2.4 Handrails

Explanatory information:

1. 3.9.2.4 of the BCA, addresses requirements regarding location, height and extent of handrails. Where a barrier and handrail are installed together, 3.9.2.4 is to be read in conjunction with 3.9.2.2, 3.9.2.3 and 3.9.2.5 of the BCA.
2. A handrail is required on at least one side of the stairway flight or ramp. The top rail of a barrier may be suitable as a handrail if it meets 3.9.2.4 of the BCA and is able to be grasped by hand to provide support to the person using the stairway or ramp.
3. 3.9.2.4(a)(ii) of the BCA requires a continuous handrail which must extend the full length of the stairway flight or ramp except where the handrail is associated with the barrier, in which case the handrail can terminate where the barrier is allowed to terminate. This allows for the barriers to geometric stairways such as elliptical, spiral, circular or curved stairways to finish a few treads from the bottom of the stairway.
4. 3.9.2.4(a)(iii) of the BCA requires a minimum handrail height of 865 mm. This height provides comfort, stability, support and assistance for most users.
5. 3.9.2.4(b) outlines where a handrail need not be provided, this includes—
 - where a stairway or ramp is providing a change in elevation less than 1 m; or
 - a landing for a stairway or ramp; or
 - winder in a stairway if a newel post is installed to provide a handhold.

BCA 3.9.2.5 Construction of Wire Barriers

BCA 3.9.2.6 Protection of Openable Windows - bedrooms

BCA 3.9.2.7 Protection of Openable Windows - rooms other than bedrooms

ANCILLARY PROVISIONS AND ADDITIONAL CONSTRUCTION REQUIREMENTS PART 3.10

BCA 3.10.1 Swimming Pools

Explanatory information:

Part 3.12.5 contains requirements for swimming pool and spa pool heating and pumping. In specific circumstances:

Part 3.12.5 requires a swimming pool or spa pool to have a cover to reduce evaporation and subsequent heat loss, and time switches to control the operation of the heater.

In addition to the requirements of this Part, a swimming pool must comply with the structural requirements of the Housing Provisions. The structural requirements refer to the swimming pool being designed and constructed to withstand any combinations of loads and other actions to which it may reasonably be subjected and the structural resistance of the materials and forms of construction used in the swimming pool.

BCA 3.10.1.0 Acceptable Construction Manuals

Explanatory information:

The BCA definition of swimming pool is specific in including a bathing or wading pool and a spa. The requirements of AS 1926.3 apply to all types of pools defined as swimming pools under the BCA, irrespective of the definition in the Standard.

The swimming pool water recirculation system requirements seek to minimise the risk of entrapment or injury of people using the swimming pool and provide for the safe operation of skimmer boxes and outlet systems.

BCA 3.10.3 Flood Hazard Areas

BCA 3.10.4 Alpine Areas - if applicable

Explanatory information:

Buildings constructed in alpine areas need special consideration because of sub-zero temperatures which can create elements which restrict free movement to and from the building. The additional measures in this Part include—

- having external doorways open in a way that is not impeded by snow and ice outside; and
 - for external trafficable structures forming part of the means of egress, being constructed so that they remain useable under snow conditions; and
 - minimising the impact of snow build up between and around buildings.
- Part 3.0 (structural provisions) and Part 3.12 (energy efficiency) also contain specific additional requirements for a building located in an alpine area.

BCA 3.10.5 Construction in Bushfire Prone Areas - also refer to site specific BAL reports if applicable

BCA 3.10.6 Attachment of Decks / Balconies to External Walls of Buildings

Explanatory information:

A 2 kPa imposed load is commensurate with domestic and residential activities associated with Class 1 buildings (e.g. dwellings with limited occupancy and restricted public access) and is not appropriate for applications where the deck or balcony supports heavy equipment, spa/bathing pools or circumstances where the deck or balcony is intended for community access (e.g. applications with a mid-high occupancy and possibility of public access). If the design live load of the deck or balcony is more than 2 kPa, the framing members of the deck or balcony must be designed by a professional engineer or other appropriately qualified person in accordance with the relevant structural design manuals in Part 3.0.

BCA 3.10.7 Boilers, Pressure Vessels, Heating Appliances, Fireplaces, Chimneys and Flues

ENERGY EFFICIENCY BCA 3.12

In Tasmania, from 1 May 2019 to 30 April 2020 Part 3.12 of BCA 2016 may apply in lieu of Part 3.12 of BCA 2019.

From 1 May 2020 Part 3.12 of BCA 2019 applies.

To comply with the BCA 3.12 Climate Zone 7

See Energy Reports for Star Ratings and requirements.

SERVICES PART 3.12.5

- BCA 3.12.5.1 Insulation of Services
- BCA 3.12.5.2 Central Heating Water Piping
- BCA 3.12.5.3 Heating & Cooling Ductwork
- BCA 3.12.5.4 Electric Resistance Space Heating
- BCA 3.12.5.5 Artificial Lighting
- BCA 3.12.5.6 Water Heater in a Heated Water Supply System
- BCA 3.12.5.7 Swimming Pool Heating & Plumbing
- BCA 3.12.5.8 Spa Pool Heating & Plumbing

Schedule 1 - STATE & TERRITORY APPENDICES - Tasmania

Builder to verify all dimensions, details and other associated documentation e.g. Engineer's documents, Building Surveyor's, Council Permits and other Professional Consultants reports for this set of plans prior to commencement of work on site.

Use written dimension in preference to measuring off the plan.

Council / contractor to contact Dirt Building Design if necessary information is not provided on the set of plans.

GENERAL INFORMATION - FOR FULL AND COMPLETE DETAILS REFER CURRENT BCA AND RELEVANT AUSTRALIAN STANDARDS

ENERGY EFFICIENCY PROVISIONS

Energy efficiency measures are provided under the Alternative Solution Verification method and comply with Part P2.6.1 and P2.6.2 of The Building Code of Australia.

The building, if constructed in accordance with these plans, specifications and orientation will achieve a minimum 6 STAR energy rating using FirstRate5 second generation house energy rating software (or other accredited software). See Energy Rating Report for full rating & details.

BUILDING FABRIC:

Insulation material is to comply with the requirement of AS/NZS 4859.1 and be installed so that it abuts or overlaps adjoining insulation. Insulation is to be installed so that it butts up to building elements such as studs, noggin, joists, rafters and the like. Insulation is to form a continuous barrier within ceilings, walls, roofs and the like. Bulk insulation is to maintain it's position and thickness other than where it crosses battens, piping or the like. DO NOT COMPRESS BULK INSULATION.

INSULATION: (refer BCA Table 3.12.1.1a to 3.12.1.1g)

ROOF:

Provide R4.0 bulk insulation material in new roof spaces
 R1.3 Permastop blanket beneath roof sheeting is optional
 Min Total R-Value for Upper surface solar absorbance value >0.5 = 5.1

EXTERNAL WALLS:

Provide min total value of R2.4. Bulk insulation between new external wall studs. Reflective foil wrap is to be placed externally to the stud frame or similar approved wall wrapping materials.

FLOORS:**WINDOWS:**

Provide min R2.75 bulk insulation in suspended timber floors.
 Window in the assessment model are based upon double glazed windows with standard aluminium frames.
 The window / external glazed door glass and frames supplied to site: must comply with BCA 3.12.2.1 External Glazing

The builder or window supplier must ensure these minimum and maximum values are met. If windows are supplied which fall outside these parameters, the house energy rating will be affected.
 The attachment of a Class 10a building, such as a garage, glasshouse, solarium, pool enclosure or the like should not compromise the thermal performance of the Class 1 building. In addition, the Class 10a building may be insulated and so assist the Class 1 building achieve the required thermal performance. Refer BCA 3.12.1.6 Attached Class 10a Buildings

CLASS 10a:

External Windows & Doors 3.12.3.3
 (a) An external door, internal door between a Class 1 building and an unconditioned Class 10a building, openable window and other such opening must be sealed when serving—

- (i) a conditioned space; or
 - (ii) a habitable room in climate zones 4, 5, 6, 7 and 8.
- (b) A seal to restrict air infiltration—
- (i) for the bottom edge of a door, must be a draft protection device; and
 - (ii) for the other edges of a door or the edges of an openable window or other such opening, may be a foam or rubber compressible strip, fibrous seal or the like.
- (c) A window complying with the maximum air infiltration rates specified in AS 2047 need not comply with (b)(ii).

Other requirements - refer to BCA Part 3.12.3 Building Sealing

1. External doors, openable windows and other such openings must be fitted with a foam, rubber or fibrous seal or the like compressible sealing strip to restrict air filtration to each edge.
2. Exhaust fans and evaporative coolers must be fitted with a sealing device such as a self closing damper, filter or the like.
3. Chimneys or flues of an open solid fuel burning appliance must be provided with a damper or flap that can be closed to deal the chimney or flue.

SERVICES Part 3.12.5:

3.12.5.0 Application

A heated water supply system must be designed and installed in accordance with Part B2 of NCC Volume Three - Plumbing Code of Australia.

1. All central heating water piping that is not within a condition space must be thermally insulated to achieve a minimum 'R' value as follows:
 - All flow and return internal piping that is within an unventilated wall space or within an internal floor between storey/s or between ceiling insulation and a ceiling or all hot water piping encased within a concrete floor slab is to be insulated to achieve R0.4
2. Piping located within a ventilated wall space or an enclosed building sub-floor or a roof space:
 - All flow and return piping, cold water supply piping and relief valve piping within 500mm of the connection to the central heating system is to be insulated to achieve R0.9
3. Piping located outside the building or in an unenclosed building sub-floor or roof space:
 - All flow and return piping, cold water supply piping and relief valve piping within 500mm of the connection to the central heating system is to be insulated to achieve R1.3
4. Heating and cooling ductwork and fittings must be insulated in accordance with the following:
 - Evaporative cooling ductwork R1.0
 - Heating only or refrigerated cooling only R1.5
 - Combined heating and cooling R1.5



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THIS SAFETY REPORT IS PROVIDED UNDER THE WORK HEALTH AND SAFETY ACT 2012

THESE NOTES MUST BE READ AND UNDERSTOOD BY ALL INVOLVED IN THE PROJECT.

THIS INCLUDES (but is not excluded to): OWNER, BUILDER, SUB-CONTRACTORS, CONSULTANTS, RENOVATORS, OPERATORS, MAINTAINERS, DEMOLISHERS

1. FALLS, SLIPS, TRIPS

(A) WORKING AT HEIGHTS DURING CONSTRUCTION

Wherever possible, components for this building should be prefabricated off-site or at ground level to minimize the risk of workers falling more than two metres. However, construction of this building will require workers to be working at heights where a fall in excess of two metres is possible and injury is likely to result from such a fall. The builder should provide a suitable barrier wherever a person is required to work in a situation where falling more than two metres is a possibility.

DURING CONSTRUCTION OR MAINTENANCE

For houses or other low-rise buildings where scaffolding is appropriate:

Cleaning and maintenance of windows, walls, roof or other components of this building will require persons to be at a height in excess of two metres is possible. Where this type of activity is required, scaffolding, fall barriers or Personal Protective Equipment (PPE) should be used in accordance with relevant codes of practice, regulations or legislation

PREVENTION OF FALLS

Where a person is exposed to the hazard of falling from a structure during construction or while cleaning or maintenance work is carried out, the building shall provide:

1. A work system designed to prevent such falls; and
2. Where safety belt anchorage points are used they must be positioned on the building or structure so that a lifeline or safety harness may be attached before proceeding to a point where it is possible to fall; and
3. Anchorage points for the attachment of safety harness must comply with AS2626; and
4. The anchorage points and associated structure shall be capable of withstanding a force of at least 15kN(1500kg); and
5. The builder shall inform the owner prior to occupancy of the building, that a fall arrest system is constructed and must be used in accordance with AS2626 when exposed to the hazards of falling from the building.

(B) SLIPPERY OR UNEVEN SURFACES

FLOOR FINISHES (Specified)

If finishes have been specified by the designer, these have been selected to minimize the risk of floors and paved areas becoming slippery when wet or when walked on with shoes/feet. Any changes to the specified finish should be made in consultation with the designer or, if this is not practical, surfaces with and equivalent or better slip resistance should be chosen.

FLOOR FINISHES (by owner)

If the designer has not been involved in the selection of surface finishes, the Owner is responsible for the selection of surface finishes in the pedestrian trafficable areas of this building. Surfaces should be selected in accordance with AS HB 197:1999 and AS/NZ4586:2004

STEPS, LOOSE OBJECTS AND UNEVEN SURFACES

Due to design restrictions for this building, steps and/or ramps are included in the building which may be a hazard to workers carrying objects or otherwise occupied. Steps should be clearly marked with both visual and tactile warning during construction, maintenance, demolition and at all times when the building operates as a workplace.

Building owners and occupiers should monitor the pedestrian access ways and in particular access to areas when maintenance is routinely carried out to ensure that surfaces have not moved or cracked so that they become uneven and present a trip hazard. Spills, loose materials, stray objects or other matter that may cause a slip or trip hazard should be cleaned or removed from access ways. Contractors should be required to maintain a tidy work site during construction, maintenance or demolition to reduce the risk of trips and falls in the workplace. Materials for construction or maintenance should be stored in designated areas away from access ways and work areas.

2. FALLING OBJECTS

LOOSE MATERIALS OR SMALL OBJECTS

Construction, maintenance or demolition work on or around this building is likely to involve persons working above ground level or above floor levels. Where this occurs one or more of the following measures should be taken to avoid objects falling from the area where the work is being carried out onto a person below:

1. Prevent or restrict access to scaffolding or work platforms
2. Provide toeboards to scaffolding or work platforms

3. Provide a protective structure below the work area.

4. Ensure that all persons below the work area have Personal Protective Equipment (PPE)

BUILDING COMPONENTS

During construction, renovation or demolition of this building, parts of the structure including fabricated steelwork, heavy panels and many other components will remain standing prior to or after supporting parts are in place. Contractors should ensure that temporary bracing or other required support is in place at all times where a collapse which may injure persons in the area is possible.

Mechanical lifting of materials and components during construction, maintenance or demolition presents a risk of falling objects. Contractors should ensure that appropriate lifting devices are used, that loads are properly secured and that access to areas below the load is prevented or restricted.

3. TRAFFIC MANAGEMENT

For buildings on major roads, narrow roads or steeply sloping roads:

Parking of vehicles or loading/unloading of vehicles on this roadway may cause a traffic hazard. During construction, maintenance or demolition of this building, a designated parking for workers and loading areas should be provided. Trained traffic management personnel should be responsible for the supervision of these areas.

For buildings where on-site loading/unloading is restricted. Construction of this building will require loading and unloading of materials on the roadway. Deliveries should be well planned to avoid congestion of loading areas and trained traffic management personnel should be used to supervise loading/unloading areas.

For all buildings:

Busy construction and demolition sites present a risk of collision where deliveries and other traffic are moving within the site. A traffic management plan supervised by trained traffic management personnel should be adopted for the work site.

4. SERVICES

GENERAL

Rupture of services during excavation or other activity creates a variety of risks including release of hazardous materials. Existing services are located on or around this site. Where known, these are identified on the plans but the exact location and extent of services may vary from that indicated. Services should be located using appropriate service (such as Dial-Before-You-Dig), appropriate excavation practice, and where necessary, specialists contractors should be used.

Location with underground power:

Underground power lines MAY be located in or around this site. All underground power lines must be disconnected or carefully located and adequate warning signs used prior to any construction, maintenance or demolition commencing.

Locations of overhead power line:

Overhead power lines MAY be near or on this site. These pose a risk of electrocution if struck or approached by lifting devices or other plant and persons working above ground level. Where there is a danger of this occurring, power lines should be, where practical, disconnected or relocated. Where this is not practical, adequate warning in the form of bright coloured tape or signage should be used or a protective barrier provided.

5. MANUAL TASKS

Components within this design with a mass in excess of 25kg should be lifted by two or more workers or by a mechanical lifting device. Where this is not practical, suppliers or fabricators should be required to limit the component mass. All material packaging, building and maintenance components should clearly show the total mass of packages and where practical all items should be stored on site in a way which minimizes bending before lifting. Advice should be provided on safe lifting methods in all areas where lifting may occur.

6. PORTABLE TOOLS & EQUIPMENT

Construction, maintenance and demolition of this building will require the use of portable tools and equipment. These should be fully maintained in accordance with manufacturers specifications and not used where faulty or (in the case of electrical equipment) not carrying a current electrical safety tag. All safety guards or devices should be regularly checked and Personal Protective Equipment (PPE) should be used in accordance with manufacturer's specifications

7. HAZARDOUS SUBSTANCES

ASBESTOS

For alterations to a building constructed prior to 1990:

If this existing building was construction prior to:

1990 - it therefore may contain asbestos
 1986 - it therefore is likely to contain asbestos either in cladding materials or in fire retardant insulation materials.

In either case, the builder should check and if necessary, take appropriate action before demolishing, cutting, sanding, drifting or otherwise disturbing the existing structure.

POWDERED MATERIALS

Many materials used in the construction of this building can cause harm if inhaled in powdered form. Persons working on or in the building during construction, operational maintenance or demolition should ensure good ventilation and wear Personal Protective Equipment (PPE) including protection against inhalation while using powdered materials or when sanding, drilling, cutting or otherwise disturbing or creating powdered materials.

TREATED TIMBER

The design of this building may include provisions for the inclusions of treated timber within the structure. Dust of fumes from this material can be harmful. Persons working on or in the building during construction, operation maintenance or demolition should ensure good ventilation and wear Personal Protective Equipment (PPE) including protection against inhalation or harmful materials when sanding, drilling, cutting or using treated timber in any way that may cause harmful materials to be released. DO NOT BURN TREATED TIMBER.

VOLATILE ORGANIC COMPOUNDS

Many types of glue, solvents, spray packs, paints, varnishes and some cleaning materials and disinfectants have dangerous emissions. Areas where these are used should be kept well ventilated while the materials is being used and for a period after installation. Personal Protective Equipment (PPE) may also be required. The manufacturer's recommendations for use must be carefully considered at all times.

SYNTHETIC MINERAL FIBRE

Fibreglass, rockwool, ceramic and other material used for thermal or sound insulation may contain synthetic mineral fibres which may be harmful if inhaled or if it comes in contact with the skin, eyes or other sensitive parts of the body. Personal Protective Equipment (PPE) including protection against inhalation of harmful materials should be used when installing, removing or working near bulk insulation materials.

TIMBER FLOORS

This building by contain timber floors which have and applied finishes. Areas where finishes are applied should be kept well ventilated during sanding and application for a period after installation. Personal Protective Equipment may also be required. The manufacturer's recommendations for use may be carefully considered at all times.

8. CONFINED SPACES

EXCAVATION

Construction of this building and some maintenance on the building may require excavation and installation of items within excavations. Where practical, installation should be carried out using methods which do not require workers to enter the excavation, where this is not practical, adequate support for the excavated are should be provided to prevent collapse. Warning signs and barriers to prevent accidental or unauthorized access to all excavations should be provided.

ENCLOSED SPACES

For buildings with enclosed spaces where maintenance or other access may be required: Enclosed spaces within this building may present a risk to persons entering for construction, maintenance or any other purpose. The design documentation calls for warning signs and barriers to unauthorized access. These should be maintained throughout the life of the building. Where workers are required to enter enclosed spaces, air testing equipment and Personal Protective Equipment should be provided.

9. PUBLIC ACCESS

Public access to construction and demolition sites and to areas under maintenance causes risk to workers and the public. Warning signs and secure barriers to unauthorized access should be provided. Where electrical installations, excavations, plant or loose materials are present, they should be secured when not fully supervised.

10. OPERATIONAL USE OF BUILDING RESIDENTIAL BUILDINGS

This building has been designed as a residential building. If, at a later date, it is used or intended to be used as a workplace, the provisions of the Work Health and Safety Act 2011 or subsequent replacement Act should be applied to the new use.

11. OTHER HIGH RISK ACTIVITY

All electrical work should be carried out in accordance with Code of Practice: Managing Electrical Risks at the Workplace, AS/NZ3012 and all licensing requirements. All work using 'plant' should be carried out in accordance with Code of Practice: Managing risks of Plant at the Workplace. All work should be carried out in accordance with Code of Practice: Managing Noise and Preventing Hearing Loss at Work. Due to the history of serious incidents, it is recommended that particular care be exercised when undertaking work involving steel construction and concrete placement. All the above applies.



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TIMBER FRAMING - WIND RATING - N3

- ALL FRAMING TO CONFORM TO AS1684.2 AND NCC REQUIREMENTS U.N.O.
- TIE DOWN CONNECTIONS AND BRACING SHALL BE PROVIDED IN ACCORDANCE WITH AS1684.2 ENGINEERING NOTES MAY BE USED AS A GUIDE.
- BRACING SHALL BE PROVIDED IN ACCORDANCE WITH AS1684.2 TABLE 8.18.
- PROPRIETARY TIMBER BEAMS AND JOISTS U.N.O. SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS. ALTERNATIVE OPTIONS TO BE APPROVED BY ENGINEER OR CERTIFIED BY SUPPLIER.
- SHEET METAL TIMBER CONNECTIONS SHALL BE GANGNAIL, TECO, PRYDA BRAND STANDARD ITEMS FIXED IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES.
- SPLICES IN SPEED-BRACES SHALL BE MADE OVER TIMBER MEMBERS WITH A MINIMUM OF 3 NAILS THROUGH THE 2-SPEED-BRACES INTO THE TIMBER SHEET STEEL CONNECTORS SHALL BE GALVANIZED.
- NAILS USED EXTERNALLY SHALL BE ZINC PLATED.
- BOLTS SHALL BE ZINC PLATED.
- INTELS SHALL BE CHECKED BY TRUSS MANUFACTURER FOR ABILITY TO SUPPORT CONCENTRATED LOADS IMPARTED BY GIRDER TRUSSES WHERE THE NAIL LENGTH IS NOT SPECIFIED THE MINIMUM DEPTH OF PENETRATION INTO THE RECEIVING MEMBER SHALL BE A MINIMUM OF 10 TIMES THE NAIL DIAMETER INTO SIDE GRAIN AND 15 TIMES THE NAIL DIAMETER INTO END GRAIN.
- UNLESS SPECIFIED OTHERWISE THE MINIMUM DIAMETER OF GUN DRIVEN NAILS SHALL BE 3.05mm FOR HARDWOOD AND 3.33mm FOR SOFTWOOD. WHERE PLAIN SHANK HAND DRIVEN NAILS ARE USED IN LIEU OF GUN DRIVEN NAILS THEY SHALL BE A MINIMUM DIAMETER OF 3.15mm FOR HARDWOOD AND 3.75mm FOR SOFTWOOD.

TIE DOWN FOR N3

JOINT	MINIMUM FIXING REQUIREMENT
BEARER TO FOOTING (BRICK VENEER)	30 x 1.0 G.I. STRAP WRAPPED AROUND BEARER AND CAST INTO FOOTING
BEARER TO CONCRETE STUMP	M10 TREADED ROD COGGED AND EMBEDDED MIN. 300mm INTO FOOTING AND FIXED THROUGH BEARER WITH NUT AND WASHER
BEARER TO STEEL/TIMBER STUMP	1 / M10 BOLT THROUGH BEARER AND STUMP
F.J JOIST TO BEARER	MINIMUM NAIL FIXING + 30 x 08 G.I. STRAP NAILED TO FACE OF STUD AND WRAPPED UNDER BEARER WITH MIN. 4 / 2.8 Ø CLOUDS EACH END SPACED AS FOLLOWS:
UPLIFT LOAD WIDTH	MIN. SPACING
≤1500	SKEW NAILS ONLY
≤7500	1800 cns
BOTTOM PLATE TO FJ	MINIMUM NAIL FIXING + 1 / 75MM TYPE 17 BUGLE SCREW TO JOIST SPACED AS FOLLOWS:
UPLIFT LOAD WIDTH	MIN. SPACING
≤1500	SKEW NAILS ONLY
≤5500	1800 cns
≤7500	900 cns
BOTTOM PLATE TO SLAB	ONE M10 DYNABOLT EMBEDDED MIN. 100mm AT MAX. 900 cns
TOP / BOTTOM PLATE TO STUD	MINIMUM NAIL FIXING + 30 x 0.8 G.I. STRAP NAILED TO FACE OF STUD AND WRAPPED UNDER PLATE WITH MIN. 4 / 20 Ø CLOUDS EACH END SPACED AS FOLLOWS:
UPLIFT LOAD WIDTH	MIN. SPACING
≤1500	1800 cns
≤5500	900 cns
≤7500	450 cns

TIE DOWN FOR N3

JOINT	MINIMUM FIXING REQUIREMENT
CEILING JOIST TO TOP PLATE	SKEWED MINIMUM NAIL FIXING
CEILING JOIST TO RAFTER	MINIMUM NAIL FIXING
TOP PLATE TO RAFTER/TRUSS:	
• COUPLED ROOF	SKEWED MINIMUM NAIL FIXING + 30 X 0.8 G.I. STRAP LOOPED OVER EACH RAFTER AND WRAPPED UNDER THE TOP PLATE WITH MIN. 4 / GALV. CLOUDS EACH END (2.8 Ø x 25 FOR HARDWOOD, 2.8 Ø x 30 FOR PINE) PLUS 2 / 75mm SKEW NAILS THROUGH RAFTER INTO TOP PLATE
• NON COUPLED ROOF	AS PER COUPLED ROOF
• TRUSS ROOF	AS PER TRUSS MANUFACTURER'S TIE DOWN SPECIFICATION. IN THE ABSENCE OF MANUFACTURER'S TIE DOWN SPECIFICATION ADOPT AS A MINIMUM 30 X 0.8 G.I. STRAP LOOPED OVER EACH TRUSS AND WRAPPED UNDER THE TOP PLATE WITH 4 GALV. CLOUDS EACH END (2.8 Ø x 25 FOR HARDWOOD, 2.8 Ø x 30 OR PINE) PLUS 2 / 75mm SKEW NAILS THROUGH RAFTER INTO TOP PLATE
COLLAR TIES TO RAFTERS	1 / M10 BOLT FOR TIES OVER 4.2m OR 3 / 75mm NAILS FOR TIES UP TO 4.2m
STEEL BEAM TO RAFTER / TRUSS	WELD 75 X 6 STEEL CLEATS OF SUITABLE LENGTH TO STEEL BEAM AT RAFTER / TRUSS LOCATIONS, PROVIDE 2 / M10 OR 1 / M12 BOLT AND WASHERS THROUGH RAFTER / TRUSS AND CLEAT
PURLIN TO RAFTER	PROVIDE 1 / MIN. 100mm LONG TYPE 17 BUGLE SCREW AT EVERY PURLIN TO RAFTER / TRUSS JUNCTION (MAX. 900 cns) FOR PINE RAFTERS / TRUSSES. PROVIDE 1 / 75mm TYPE 17 BUGLE SCREW AT EVERY PURLIN TO RAFTER / TRUSS JUNCTION (MAX. 900 cns) FOR HARDWOOD RAFTERS / TRUSSES

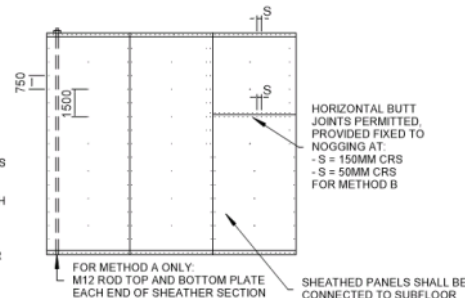
NOTES:

- A MINIMUM NAIL FIXING SHALL BE 2 / 75 x 3.15 (HARDWOOD) OR 2 / 75 x 3.33 (SOFTWOOD) GLUE COATED GUN DRIVEN NAILS.
- ADDITIONAL ANCHORS MAY BE REQUIRED AT ENDS OF BRACING UNITS TO COMPLY WITH AS1684.2 REFER TO BRACING DETAILS.
- TO DETERMINE UPLIFT WIDTH REFER AS1684.2 FIGURE 9.5

AS1684.2 BRACING TYPE (H) TABLE 8.18

(H) METHOD A - PLYWOOD 6.4 kN/m
 METHOD B - PLYWOOD 6.0 kN/m

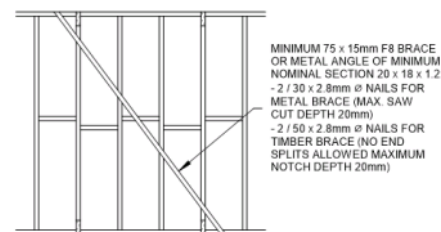
PLYWOOD SHALL BE NAILED TO FRAME USING 30 x 2.8 Ø FLAT HEAD NAILS OR EQUIVALENT. METHOD A REQUIRES M12 RODS AT EACH END OF SHEATHED SECTION TOP PLATE TO BOTTOM PLATE OR FLOOR FRAME. METHOD B HAS NO RODS BUT SHEATHING SHALL BE NAILED AT 50mm CENTRES, TO TOP AND BOTTOM PLATES AND ANY HORIZONTAL JOISTS.



NOTE: EACH 900mm PANEL = ONE TYPE B BRACING UNIT

AS1684.2 BRACING TYPE (C) TABLE 8.18

(C) TIMBER AND METAL ANGLE BRACES 1.5 kN/m

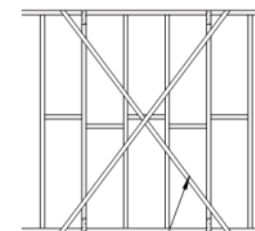


30 x 0.8mm (OR EQUIVALENT) TENSIONED GALVANISED METAL STRAPS NAILED TO PLATES WITH 4 / 30 x 2.8mm Ø GALVANISED FLAT HEAD NAILS TO EACH END.

ALTERNATIVELY, PROVIDE SINGLE STRAPS TO BOTH SIDES, WITH 4 / NAILS PER STRAP END, OR EQUIVALENT ANCHORS OR OTHER FASTENERS

AS1684.2 BRACING TYPE (D) TABLE 8.18

(D) DOUBLE DIAGONAL TENSION OR METAL STRAP BRACES 3.0kN/m



30 x 0.8mm (OR EQUIVALENT) TENSIONED GALVANISED METAL STRAPS NAILED TO PLATE WITH 4 / 30 x 2.8mm Ø GALVANISED FLAT HEAD NAILS TO EACH END



ALTERNATIVELY, PROVIDE SINGLE STRAPS TO BOTH SIDES, WITH 4 NAILS PER STRAP END OR EQUIVALENT ANCHORS OR OTHER FASTENERS



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Sheet Name:
 TIMBER FRAMING N3
 Title:
 18187/6

Revision Number	Description	Date
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TIMBER FRAMING N3

1 : 100

Issue: DA2-289 Lenah Vally rd, Lenah Valley

Drawn: Author

Scale: 1 : 100 Size: A3 Date: 2.9.2020

Project: 19338 Sheet: A13 Rev:

SCHEDULE OF REFERENCED DOCUMENTS

The Standards and other documents listed are referred to in the National Construction Code - Building Code of Australia (NCC BCA) Volumes 1, 2 and 3 - see Table 1 Schedule of reference documents for further references to the NCC BCA:

- AS ISO 717 Part 1 - 2004 Acoustics - Rating of sound insulation in buildings and of building elements - Airborne sound insulation
- AS ISO 717 Part 2 - 2004 Acoustics - Rating of sound insulation in buildings and of building elements - Impact sound insulation
- AS 1056 Part 1 - 1991 Storage water heaters - General requirements (incorporating amendments 1,2,3,4 and 5)
- AS/NZS 1170 Structural design actions**
- AS/NZS 1170.0:2002 General principles
- AS/NZS 1170.1:2002 Permanent, imposed and other actions
- AS/NZS 1170.2:2011 Wind actions
- AS/NZS 1170.3:2003 Snow and ice actions
- AS/NZS 1170.4:2007 Earthquake actions in Australia
- AS 1191-2002 Acoustics - Method for laboratory measurement of airborne sound transmission insulation of building elements
- AS 1273-1991 Unpasteurized PVC (UPVC) downpipe and fittings for rainwater
- AS 1288-2006 Glass in buildings - Selection and installation
- AS 1289.6.3.3-1997 Methods of testing soils for engineering purposes - Soil strength and consolidation tests - Determination of the penetration resistance of a soil - Perth sand penetrometer test
- AS 1397-2011 Steel sheet and strip - Hot-dipped zinc-coated or aluminium/zinc-coated
- AS 1428 Design for access and mobility**
- AS 1428.1-2001/2009 General requirements for access - New building work
- AS 1428.1-1993 (Supplement 1) - Design for access and mobility - General requirements for access - Buildings-Commentary
- AS 1428.2-1992 Enhanced and additional requirements - Buildings and facilities
- AS 1428.4-1992 Tactile ground surface indicators for the orientation of people with vision impairment
- AS/NZS 1428.4.1-2009 Means to assist the orientation of people with vision impairment - Tactile ground surface indicators
- AS 1428.1 Supp 1-1993 General requirements for access - Buildings - Commentary (Supplement to AS 1428.1-1993)
- AS 1530 Methods for fire tests on building materials, components and structures**
- AS 1530.1-1994 Combustibility test for materials
- AS 1530.2-1993 Test for flammability of materials
- AS/NZS 1530.3-1999 Simultaneous determination of ignitability, flame propagation, heat release and smoke release
- AS 1530.4-2014 Fire-resistance tests for elements of construction
- AS 1562 Design and installation of sheet roof and wall cladding**
- AS 1562.1-1992 Metal
- AS/NZS 1562.2-1999 Corrugated fibre-reinforced cement
- AS/NZS 1562.3-1996 Plastic
- AS 1657-2018 - Fixed platforms, walkways, stairways and ladders - Design, construction and installation
- AS/NZS 1596-2008 The storage and handling of LP Gas
- AS 1603-1996 Automatic fire detection and alarm systems - Heat alarms
- AS 1657-2013 Fixed platforms, walkways, stairways and ladders - Design, construction and installation
- AS/NZS 1664 Aluminium structures**
- AS/NZS 1664.1-1997 Limit state design
- AS/NZS 1664.2-1997 Allowable stress design
- AS/NZS 1668 The use of ventilation and airconditioning in buildings**
- AS 1668.1-2015 Fire and smoke control in multi-compartment buildings
- AS 1668.2-2012 Mechanical ventilation for acceptable indoor-air quality
- AS 1668.4-2012 Natural ventilation of buildings
- AS 1670 Fire detection, warning, control and intercom systems**
- System design, installation and commissioning
- AS 1670.1-2018 Fire
- AS 1670.3-2018 Fire alarm monitoring
- AS 1670.4-2018 Emergency warning and intercom systems
- AS/NZS 1680 Interior lighting**
- AS/NZS 1680.0-2009 Safe movement
- AS 1684 Residential timber-framed construction**
- AS 1684.2-2010 Non-cyclonic areas
- AS 1684.3-2010 Cyclonic areas
- AS 1684.4-2010 Simplified - Non-cyclonic areas
- AS 1720 Timber Structures**
- AS 1720.1-2010 Timber Structures - Design methods (incorporating amendments 1,2 and 3)
- AS 1720.4-2006 Timber structures - Fire resistance for structural adequacy of timber members
- AS 1720.5-2015 Timber Structures - Nailplated timber roof trusses

- AS 1735 Lifts, escalators and moving walks**
- AS 1735.11-1986 Fire-rated landing doors
- AS 1735.12-1999 Facilities for persons with disabilities
- AS/NZS 1859.4-2018 Reconstituted wood-based panels - Specifications - Wet-processed fibreboard
- AS 1860.2-2006 Particleboard flooring - Installation
- AS 1905 Components for the protection of openings in fire-resistant walls**
- AS 1905.1-2015 Fire-resistant doorsets
- AS 1905.2-2005 Fire-resistant roller shutters
- AS 1926 Swimming pool safety**
- AS 1926.1-2012 Fencing for swimming pools
- AS 1926.2-2007 Location of fencing for private swimming pools
- AS 1926.3-2010 Water recirculation systems
- AS 2047-2014 Windows and external glazed doors in buildings - (incorporating amendments 1 and 2)
- AS 2049-2002 Roof tiles (incorporating amendments 1)
- AS 2050-2018 Installation of roof tiles
- AS 2118 Automatic fire sprinkler systems**
- AS 2118.1-2017 General systems (incorporating amendment 1)
- AS 2118.4-2012 Sprinkler protection for accommodation buildings not exceeding four storeys in height
- AS 2118.6-2012 Combined sprinkler and hydrant systems in multistorey buildings
- AS 2159-2009 Piling - Design and installation (incorporating amendment 1)
- AS/NZS 2179.1-2014 Specifications for rainwater goods, accessories and fasteners - Metal shape or sheet rainwater goods, and metal accessories and fasteners
- AS/NZS 2269.0-2012 Plywood - Structural - Specifications
- AS 2293 Emergency escape lighting and exit signs for buildings**
- AS 2293.1-2018 System design, installation and operation
- AS 2327-2017 Composite structures - Composite steel - concrete construction in buildings
- AS 2419.1-2005 Fire hydrant installations - System design, installation and commissioning
- AS 2441-2005 Installation of fire hose reels
- AS 2444-2001 Portable fire extinguishers and fire blankets - Selection and location
- AS 2665-2001 Smoke/heat venting systems - Design, installation and commissioning
- AS/NZS 2699 Built-in components for masonry construction**
- AS/NZS 2699.1-2000 Wall ties
- AS/NZS 2699.3-2002 Lintels and shelf angles (durability requirements)
- AS 2870-2011 Residential slabs and footings
- AS/NZS 2890.6-2009 Parking facilities - Off-street parking for people with disabilities
- AS/NZS 2904-1995 Damp-proof courses and flashings
- AS/NZS 2908 Cellulose-cement products**
- AS/NZS 2908.1-2000 Corrugated sheets
- AS/NZS 2908.2-2000 Flat sheet
- AS/NZS 2918-2018 Domestic solid fuel burning appliances - Installation
- AS/NZS 3013-2005 Electrical installations - Classification of the fire and mechanical performance of wiring system elements
- AS/NZS 3500 Plumbing and drainage**
- AS/NZS 3500.0-2003 Glossary of terms
- AS/NZS 3500.1-2018 Water services
- AS/NZS 3500.2-2018 Sanitary plumbing and drainage
- AS/NZS 3500.3-2018 Stormwater drainage
- AS/NZS 3500.4-2018 Heated water services
- AS 3600-2018 Concrete structures
- AS 3660 Termite management**
- AS 3660.1-2014 New building work (incorporating amendment 1)
- AS 3660.2-2014 Assessment criteria for termite management systems
- AS/NZS 3666.1-2011 Air-handling and water systems of buildings - Microbial control - Design, installation and commissioning
- AS 3700-2018 Masonry structures
- AS 3740-2010 Waterproofing of domestic wet areas (incorporating amendment 1)
- AS 3786-2014 Smoke alarms using scattered light, transmitted light or ionization (incorporating amendment 1 and 2)
- AS/NZS 3823.1-2-2012 Performance of electrical appliances - Airconditioners and heat pumps - Ducted airconditioners and Heat pumps - Testing and rating for performance
- AS 3959-2018 Construction of buildings in bushfire-prone areas
- AS/NZS 4020-2018 Testing of products for use in contact with drinking water
- AS 4055-2012 Wind loads for housing (incorporating amendment 1)
- AS 4072.1-2005 Components for the protection of openings in fire-resistant separating elements - Service penetrations and control joints (incorporating amendment 1)
- AS 4100-1998 Steel structures (incorporating amendment 1)
- AS/NZS 4200 Pliable building membranes and underlays**
- AS/NZS 4200.1-2017 Materials
- AS/NZS 4200.2-2017 Installation requirements
- AS/NZS 4234-2008 Heated water systems - Calculation of energy consumption (incorporating amendments 1,2 and 3)
- AS 4254 Ductwork for air handling systems in buildings**
- AS 4254.1-2012 Flexible duct
- AS 4254.2-2012 Rigid duct

- AS 4256 Plastic roof and wall cladding materials**
- AS 4256.1-1994 General requirements
- AS 4256.2-1994 Unplasticized polyvinyl chloride (uPVC) building sheets
- AS 4256.3-1994 Glass fibre reinforced polyester (GRP)
- AS/NZS 4256.5 Polycarbonate
- AS/NZS 4284-2008 Testing of building facades
- AS/NZS 4505-2012 Garage doors and other large access doors (incorporating amendment 1)
- AS 4562-2005 Gas fire water heaters for hot water supply and for central heating
- AS 4586-2013 Slip resistance classification of new pedestrian surface materials (incorporating amendment 1)
- AS 4597-1999 Installation of roof slates and shingles (Non-interlocking type)
- AS 4600-2018 Cold-formed steel structures
- AS 4654 Waterproofing membranes for external above-ground use**
- AS 4654.1-2012 Materials
- AS 4654.2-2012 Design and installation
- AS 4678-2002 Earth-retaining structures
- AS 4773 Masonry in small buildings**
- AS 4773.1-2015 Design (incorporating amendment 1)
- AS 4773.2-2015 Construction
- AS/NZS 4859 Thermal insulation materials for buildings**
- AS/NZS 4859.1-2018 - General criteria and technical provisions
- AS/NZS 4859.2-2018 - Design
- AS 5113-2016 Classification of external walls of buildings based on reaction-to-fire performance (incorporating amendment 1)
- AS 5146.1-2015 Reinforced Autoclaved Aerated Concrete - Structures (incorporating amendment 1)
- AS 5216-2018 Design of post-installed and cast-in fasteners in concrete
- AS 5637.1-2015 Determination of fire hazard properties - Wall and ceiling linings
- AS ISO 9239.1-2003 Reaction to fire tests for floor coverings
- AS/NZS ISO 9972-2015 Thermal performance of buildings - Determination of air permeability of buildings - fan pressurization method
- AIRAH-DA09-1998 Air conditioning load estimation
- AIRAH-DA28-2011 Building management and control systems
- ANSIASHRAE Standard 55-2013 Thermal environmental condition for human occupancy
- ANSIASHRAE Standard 140-2007 Standard method of test for the evaluation of building energy analysis computer programs
- ASTM E2073-10-2010 Standard test method for Photopic Luminance of Photoluminescent (Phosphorescent) Markings
- ASTM E72-15-2015 Standard test methods of conduction strength test of panels for building construction
- ASTM E695-03-2003 Standard test method of measuring relative resistance of wall, floor and roof construction to impact loading
- ASTM E903-2012 Standard test method for solar absorptance, reflectance, and transmittance of materials using integrating spheres
- AHRI 460-2005 Performance rating of remote mechanical-draft air-cooled refrigerant condensers
- AHRI 551/591-2005 Performance rating of water-chilling and heat pump water-heating packages using the vapour compression cycle
- ABCB-2011 Protocol for structural software, version 2011.2
- ABCB-2012 Standard construction of buildings in flood hazard areas, version 2012.3
- ABCB-2019 Standard For NatHERS heating and cooling load limits, version 2019.1
- CIBSE Guide A 2015 Environmental design
- Disability Standards for Accessible Public Transport 2002
- European Union Commission Regulation 547/2012 2012 Ecodesign requirements for water pumps
- European Union Commission Regulation 622/Annex A, point 2 2012 Eco-design requirements for glandless standalone circulators and glandless circulators integrated in products
- FPAA101D-2018 Automatic Fire Sprinkler System Design and Installation - Drinking Water Supply
- FPAA101H-2018 Automatic Fire Sprinkler system Design and Installation - Hydrant Water Supply
- ISO 140 Part 6-1993E Acoustics - Measurement of sound insulation in buildings and of building elements - Laboratory measurement of impact sound insulation of floors
- ISO 540-2008 Hard coal and coke - Determination of ash fusibility
- ISO 25745 Part 2-2015 Energy performance of lifts, escalators and moving walks: Energy calculation and classification for lifts (elevators)
- NASH Standard-2014 Steel Framed Construction in Bushfire Areas (incorporating amendment A)
- NASH Standard Part 1: 2005 Residential and low-Rise Steel Framing - Design Criteria (incorporating amendments A, B and C)
- NASH Standard Part 2: 2014 Residential and Low Rise Steel Framing - Design Solutions (incorporating amendment A)
- TN61 Cement Concrete and Aggregates Australia - Technical note - Articulated walling



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 BCA REFERENCE LIST
 Title:
 18187/6

Revision Number	Description	Date
1 : 10		

BCA REFERENCE LIST

Issue: DA2-289 Lenah Vally rd, Lenah Valley

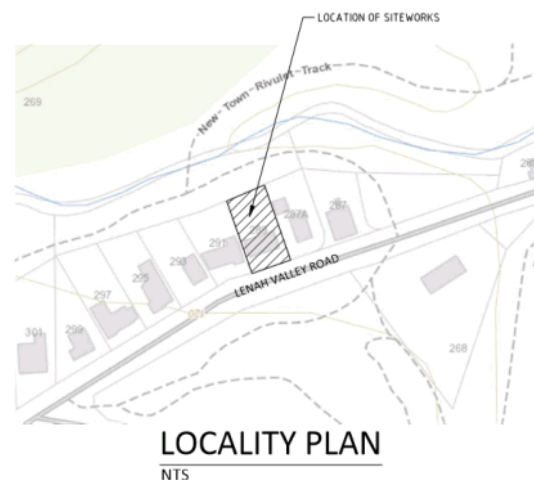
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Scale: 1 : 10	Size: A3	Date: 2.9.2020
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Project: 19338	Sheet: A14	Rev:
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ALTERATIONS AND ADDITIONS 289 LENAH VALLEY ROAD LENAH VALLEY TAS 7008

DWG	DRAWING TITLE	REV	ISSUE DATE
H001	DRAWING INDEX AND NOTES	B	30.04.2021
H002	NOTES 2	B	30.04.2021
H010	SITE PLAN	B	30.04.2021
H100	DRAINAGE PLAN	B	30.04.2021
H101	STORMWATER LONG SECTION	B	30.04.2021



LEGEND

— EX W — EX W — EX W —	Existing water supply external to building	○ c ○	Riser / Dropper
— W — W — W —	Proposed water supply external to building	→	Water Outlet
— EX FS — EX FS — EX FS —	Existing fire supply	→ HBC	Hose Bib Cock
— FS — FS — FS —	Proposed fire supply	→	Stop Valve
— EX S — EX S — EX S —	Existing sewer drain	→	Reduced Pressure Zone Device
— S — S — S —	Proposed sewer drain	→	Double Check Valve (medium hazard)
— GW — GW — GW —	Proposed sewer drain (greasy waste)	→	Dual Check Valve (low hazard)
— TW — TW — TW —	Proposed sewer drain (trade waste)	→	Pressure Reduction Valve
— EX SW — EX SW — EX SW —	Existing stormwater drain	→	Water Meter
— SW — SW — SW —	Proposed stormwater drain	→	Thermostatic Mixing Valve (Enware Aquablend 1000 uno.)
— AG — AG — AG —	Proposed DN100 ag. drain and geofabric sock	→	Air Admittance Valve
— CW — CW — CW —	Proposed cold water supply internal to building	→	Pump
— HW — HW — HW —	Proposed hot water supply	→	FHB Fire Hydrant Booster
— HWF — HWF — HWF —	Proposed hot water supply (flow)	→	DFH Fire Hydrant Dual
— HWR — HWR — HWR —	Proposed hot water supply (return)	→	FH Fire Hydrant Single
— TMW — TMW — TMW —	Proposed tempered water supply	→	H Fire Plug
— — — —	Proposed sediment fence	→	FHR Fire Hose Reel
		→	HWL Hot Water Unit
		→	PIT Grated Stormwater Pit

ABBREVIATIONS

AAV.	AIR ADMITTANCE VALVE	IL.	INVERT LEVEL
CO.	CLEAR OUT	L/L.	LOW LEVEL
EXS.	EXISTING	L/P.	LOW POINT
F/A.	FROM ABOVE	ORG.	OVERFLOW RELIEF GULLY
F/B.	FROM BELOW	PAPA.	POSITIVE AIR PRESSURE ATTENUATOR
FFL	FINISHED FLOOR LEVEL	RWO.	RAIN WATER OUTLET
FSL.	FINISHED SURFACE LEVEL	T/A.	TO ABOVE
GP.	GRADED PIT	T/B.	TO BELOW
H/L.	HIGH LEVEL	UNO.	UNLESS NOTED OTHERWISE
H/P.	HIGH POINT	WM.	WATER METER

4/30/2021 9:42:22 AM 5 Projects/2020/2018 2891 Lenah Valley Road Additions - GP drawing/H101 - Working Drawings - water/20.0518 14 day

B	PLANNING APPROVAL	RL	30.04.2021
REV	DESCRIPTION	APP'D	DATE

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ALTERATIONS AND ADDITIONS
289 LENAH VALLEY ROAD
LENAH VALLEY TAS 7008
 DRAWING TITLE
DRAWING INDEX AND NOTES

DESIGNED DH	DRAWN PH	CHECKED AK
PROJECT 20.0518	DRAWING H001	REVISION B

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BUILDING HYDRAULIC NOTES


GENERAL

- G1. These drawing are to be read in conjunction with Architectural and Landscape Architectural drawings, Project Contract and Project Specifications.
- G2. All works are to be done by the Contractor unless noted otherwise. Contractor must also make an allowance for works by others (eg. service connections).
- G3. Where there is a contract for this project that has a role for a Superintendent, in these notes the "Engineer" is this Superintendent.
- G4. The council for this project is Hobart City Council, and they should be contacted for required inspections of public roads, public stormwater, private car parks and drives with the Engineer, and also for private building/plumbing works. The sewer and water authority is TasWater Corporation, they should be contacted for required inspections of municipal sewer and water infrastructure during construction.
- G5. Locate all existing gas, electrical, telecommunications, water mains, sewer mains and stormwater mains etc. prior to the commencement of construction and advise the Engineer of anything that appears not to have been considered in the design.
- G6. Confirm all levels on site prior to the commencement of works.
- G7. Contractor is to allow for all set out requirements.
- G8. The Contractor shall be responsible for damages caused by them or their sub-contractors, any service damaged is to be reinstated immediately.
- G9. Remove all surplus materials from site.
- G10. Following agreement with the Engineer, terminate and abandon redundant existing services discovered during construction and make a note on as-constructed drawing.
- G11. On completion of works provide three sets of as-constructed drawings to AS1100.401 by a registered surveyor (measurement of building service hydraulics close to and within a permanent building can be undertaken by an experienced plumber) and full service manual along with electronic drawing files in DXF or DWG formats suitable for reading with a recent version of Autocad to the Engineer. Results of tests with associated commissioning reports and as constructed survey are required to allow the Engineer to confirm in writing to the Local Authority that construction has been substantially completed in accordance with the design drawings and are part of the works, and should form part of the service manual.
- G12. It is assumed that adjacent to the development site is adequate infrastructure provided by the Local Authority and other Statutory Authorities to supply road access, water, power, telecommunications and gas as required by this design; and there is adequate infrastructure or environmental capacity to receive stormwater and sewerage drainage.
- G13. Any departures from the design drawings are to be at the written approval of the Engineer, and approval from authority - except during emergencies when temporary changes can be made prior to seeking approval for a permanent change. Changes includes conflicts with existing services. Rework to make installed system comply the the design will be at the Contractor's expense.
- G14. Prior to the connection of new services to any part of an existing drainage system or water supply, the contractor shall confirm that the pipework being connected to in approved working order and fit for purpose.

APPROVALS

- A1. The contractor is responsible for ensuring that a valid building and plumbing permit is in place for the work and that the Building Surveyor is notified of all site inspection requests. Where work is within a road reserve, a road opening permit must be obtained from local council prior to work. Workplace Standards approval must also be gained where appropriate.
- A2. The contractor is responsible for organising all site inspections and observing all hold points nominated within the contract, by the Building Surveyor or Plumbing Surveyor.
- A3. A minimum of one working day of notice is required for the Engineer to attend the site. Do not rely upon facsimile or email to communicate requests - make contact with our office to confirm attendance.
- A4. Photographic documentation is not an adequate basis to proceed beyond a hold point unless approved by the Engineer.

WORK HEALTH AND SAFETY

- HS1. The main contractor and all sub contractors shall comply with the State *Work Health and Safety Act, Regulations*, and all relevant codes of practice.
- HS2. The Gandy and Roberts Design Safety Report 20.0518 revision A forms an integral part of this documentation. This report identifies safety risks and proposes control measures to be followed by the contractor and the building operator. Controls and hazards requiring more explanation than in the safety report are highlighted in our drawings with an exclamation mark in the triangle symbol shown: 
- HS3. Should the main contractor or sub contractors identify omissions or errors in the report related to the scope of Gandy and Robert's work on the project, or have safer ways of working, they should contact Gandy and Roberts prior to construction.
- HS4. Should the main contractor propose an alternative design, they need to present these with appropriate safety risk planning to Gandy and Roberts for review.

BUILDING HYDRAULICS

- H1. All materials and workmanship shall be done in accordance with AS3500, the Tasmanian Plumbing Code and local council requirements.
- H2. All drainage pipework shall be uPVC class SWHD, all waste and vent shall be DWV class pipe unless noted otherwise.
- H3. Supply and install all fixtures, valves, tapware and sundry items as scheduled within the specification.
- H4. Contract drawings are diagrammatic and as such show the intent of design. Installation to be as per AS/NZS3500. Allow for all bends, offsets and other measures as necessary to avoid interference with the structure and/or other building services.
- H5. Hot water at high temperature (65°C) to kitchen and laundry. Hot water tempered to 50°C to bathroom fixtures. Hot water tempered to 45°C in disabled, child care and aged care facilities.
- H6. Tempered and hot water pipework shall be lagged with 13 mm Bradflex or equivalent, hot water circulating line to be lagged using 25 mm sectional rockwool with foil outer cover. Solar flow and return pipework (internal and external) shall be lagged with 13 mm Armaflex Solar or equivalent with weather and UV protection, R-value of 0.6, for pipe temperatures up to 150°C, and PVC free.
- H7. Conceal all pipework in ceiling spaces, ducts, wall cavities, wall chases, cupboards, etc unless otherwise approved.
- H8. Refer to architects demolition plan for removal of existing fixtures and fittings. The removal of existing plumbing fixtures shall include all associated waste and vent pipes, floor drains, water service pipework brackets, supports, etc and seal off existing services. seal off and make good all floor, wall and roof penetrations.
- H9. The location of existing services where shown are approximate only and shall be confirmed on site. where possible, determine location of existing power, Telstra, water and drainage services prior to commencing new work.
- H10. Co-ordinate all pipework with existing services on site.
- H11. Make good all disturbed surfaces to match existing.
- H12. Plumbing contractor to arrange for all new works by local authority and for sealing off and making good existing as required. Pay all fees associated with the works.
- H13. Maintain services to existing fixtures at all times. where changeover is required, liaise with the architect prior to the shutting down of any service.
- H14. Arrange work by local authority in accordance with the builders works program.
- H15. Contractor to provide all documents, approvals, certificates, warranties, log books, etc. upon completion of works to the architect. All fees and inspections to be included and arranged by the contractor.
- H16. Confirm all invert levels prior to trench excavation.
- H17. The plumber shall arrange for all inspections and testing of services required by the local authority prior to concealment.
- H18. Following completion of the works, flush all piping systems and leave free of foreign matter; clean out aerators, strainers, filters, etc.; flow test all hydrants and hose reels.
- H19. For class M and above soil types additional requirements for drainage installation shall be in accordance with AS2870.

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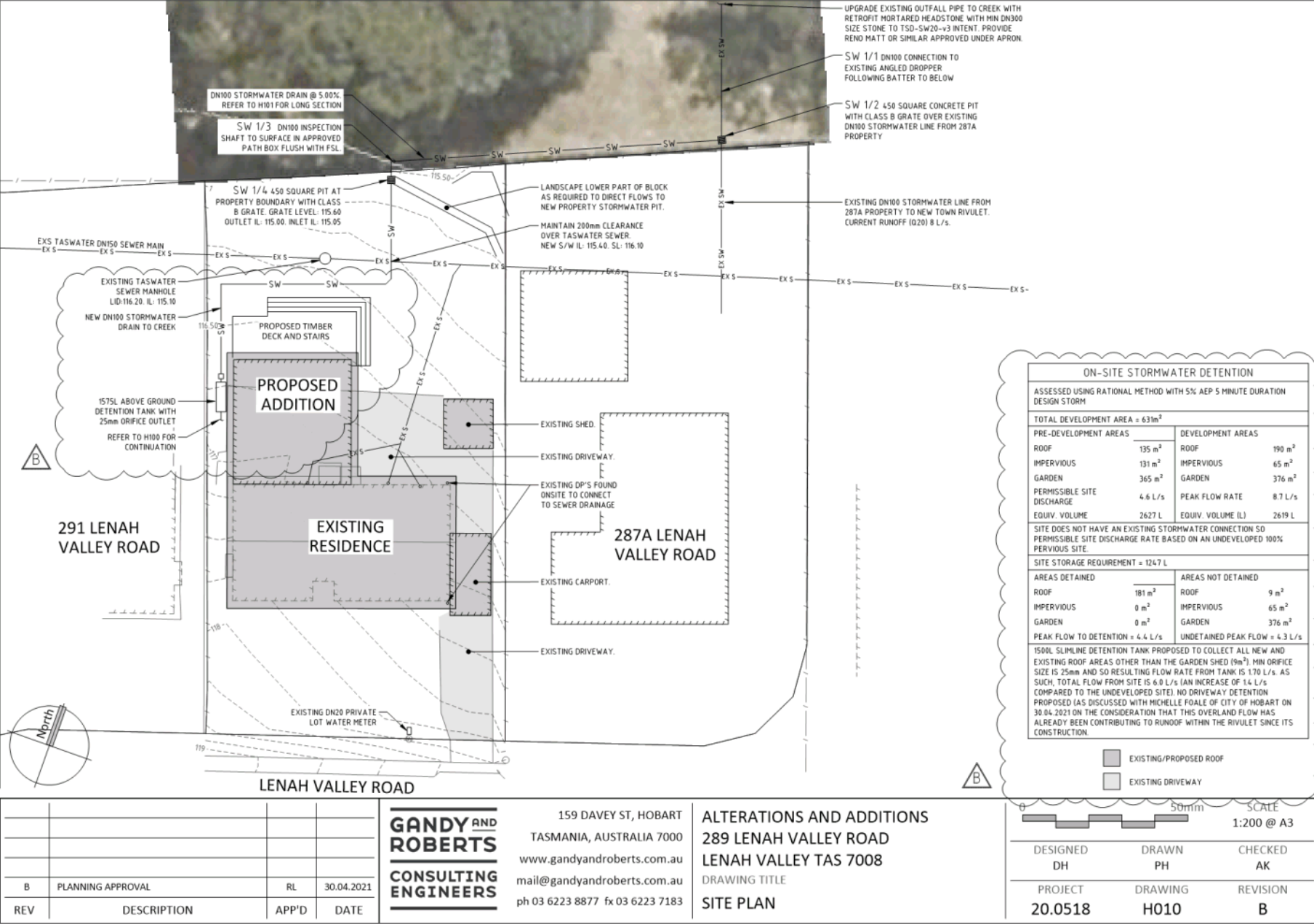
B	PLANNING APPROVAL	RL	30.04.2021
REV	DESCRIPTION	APP'D	DATE

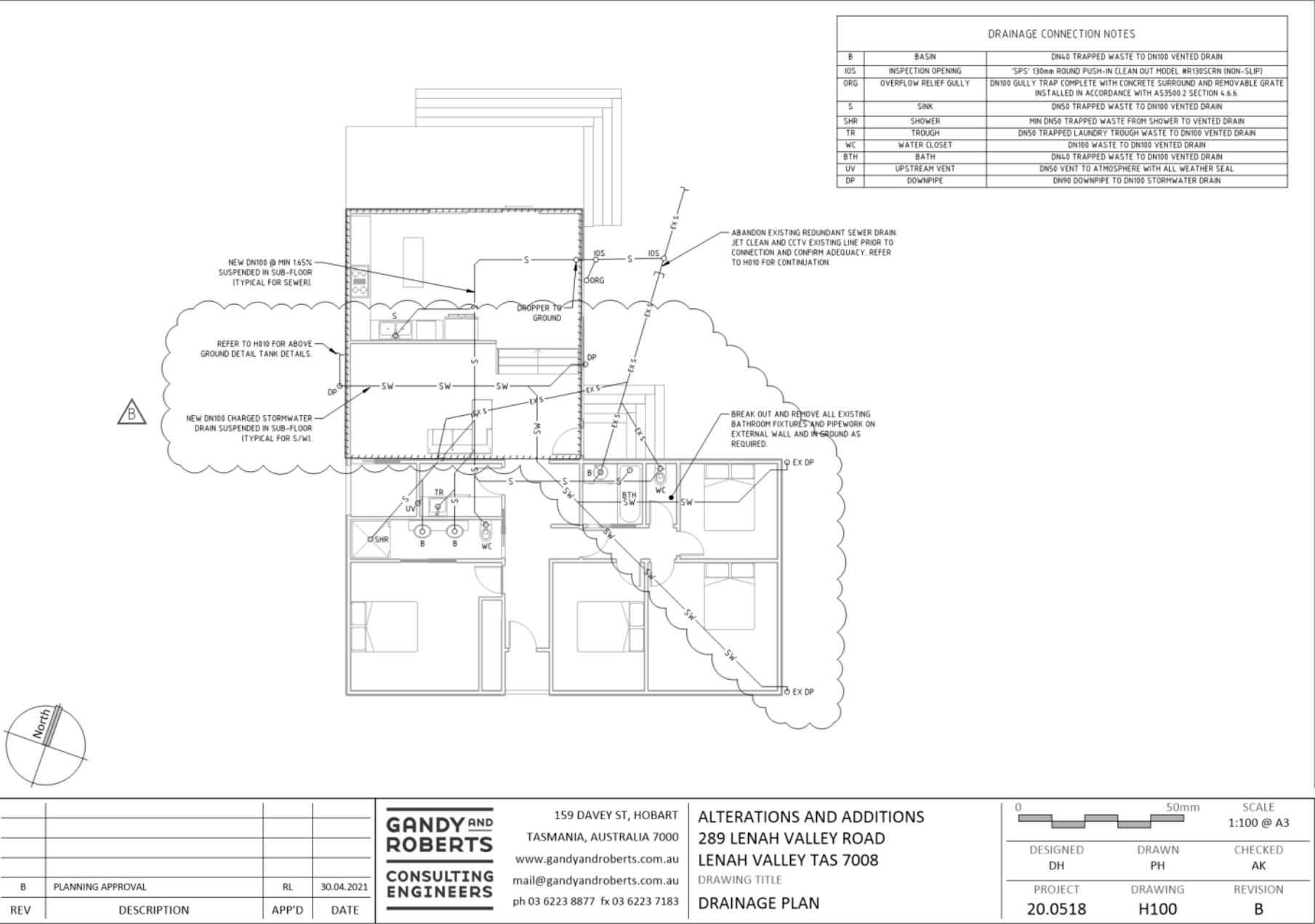
GANDY AND ROBERTS
CONSULTING ENGINEERS

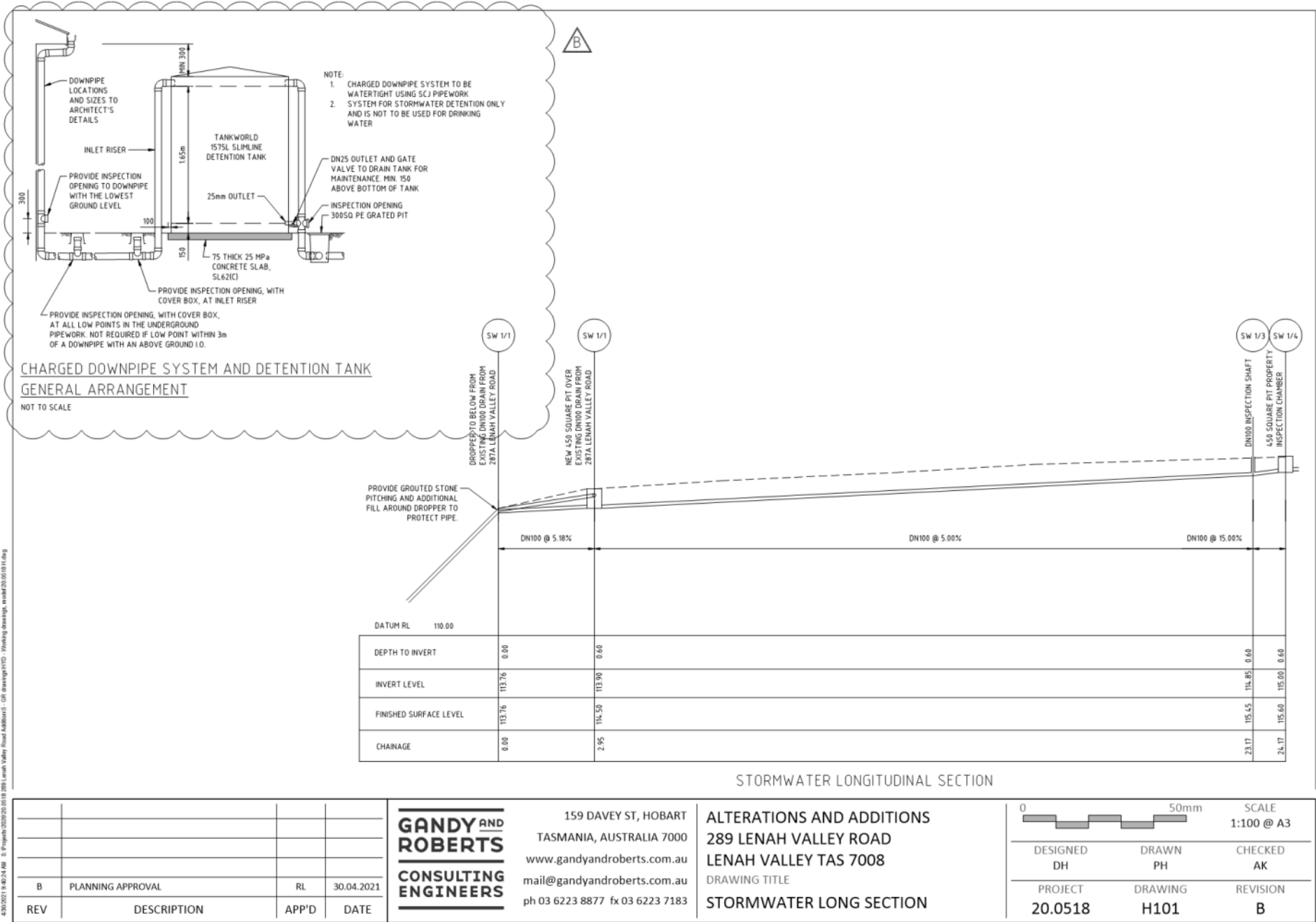
159 DAVEY ST, HOBART
 TASMANIA, AUSTRALIA 7000
 www.gandyandroberts.com.au
 mail@gandyandroberts.com.au
 ph 03 6223 8877 fx 03 6223 7183

ALTERATIONS AND ADDITIONS
289 LENAH VALLEY ROAD
LENAH VALLEY TAS 7008
 DRAWING TITLE
NOTES 2

			SCALE - @ A3
DESIGNED DH	DRAWN PH	CHECKED AK	
PROJECT 20.0518	DRAWING H002	REVISION B	









ARBORICULTURAL ASSESSMENT

Stormwater Upgrade – 289 Lenah Valley Road

18th March 2021

For: Scott Johnston
289 Lenah Valley Road
Lenah Valley
TAS 7008

Alistair Hodgman
Diploma (Hort/Arb)

Element Tree Services
ph.: 0417144192

alister@elementtree.com.au

1. Terms of Reference

This report was requested by Scott Johnston to assess the impacts of a proposed storm water upgrade through the council reserve to the north of 289 Lenah Valley Road. A visual inspection was completed from the ground on the 17th of March 2021 and referenced the site plans completed by Gandy and Roberts updated on the 29/01/2021. Site findings and future management options will be presented in this report.

2. Site Findings

The inspection identified one large blue gum (*Eucalyptus globulus*) growing 11.1m north of the boundary fence to 289 Lenah Valley Road. Vitality of the tree appears good, and there were no significant tree risk features noted. In its current situation, the tree is likely to contribute to the landscape for many years to come.

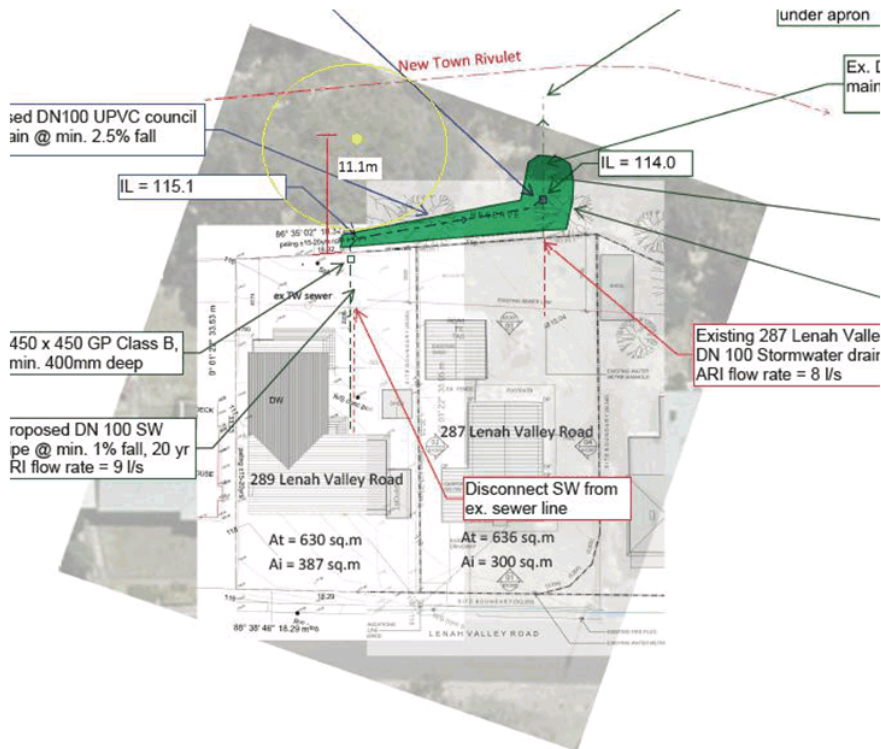


Fig. 1 - the site plan indicating the proposed works and the approximate location of the blue gum (yellow circle). A smaller silver wattle is also subject to these works which is situated north of the boundary fence to 289 and 287 Lenah Valley Road.

Although the additional request from council did not ask for identification of species outside *E. globulus* and *E. ovata*, there is potential that a mature silver wattle may be impacted by the proposed works. This tree is of fair vitality and structure but is likely to expire within the next 10 years.

3. Development Impacts

The following table will provide data on the species, tree protection zone (TPZ), structural root zone (SRZ) and the potential incursions¹.

Scientific	Basal Dia.	SRZ	DBH	TPZ	TPZ Incursion	Incursion %
<i>Eucalyptus globulus</i>	1.60m	4.03m	1.34m	15m	21.2m ²	3%
<i>Acacia dealbata</i>	0.62m	2.71m	0.50m	6.0m	≈35m ²	≈30%

The impact on the large blue gum appears to be minor (<10%). There is adequate free space surrounding the tree for this amount of damage to be offset and no design changes are required.

It appears that a major incursion will occur at the base of the silver wattle. Traditional excavation will likely sever the structural root zone which may increase the likelihood of failure for this specimen. If this tree is to be retained, it may require hand digging through the tpz to avoid severing roots, or a realignment of the services. It should be noted that this species is not nominated in the biodiversity code.



Fig. 2 - the proposed alignment. The silver wattle can be seen in to foreground of the blue gum trunk.

¹ The TPZ and SRZ are both radial measurements from the centre of the trunk.

4. Tree Protection Measures

If the current proposal proceeds, tree protection fencing should be installed, and signage erected to indicate its purpose. Where the proposed works encroach on the TPZ, the fencing should be installed along this alignment.

It is important to keep the TPZ's free from the following activities:

- Machine excavation including trenching;
- Excavation for silt fencing;
- Cultivation;
- Storage;
- Preparation of chemicals, including preparation of cement products;
- Parking of vehicles and plant;
- Refuelling;
- Dumping of waste;
- Wash down and cleaning of equipment;
- Placement of fill;
- Lighting of fires;
- Soil level changes;
- Temporary or permanent installation of utilities and signs, and
- Physical damage to the tree(s).

5. Conclusion

- If correct tree protection measures are implemented, I do not expect there to be a negative impact on the viability of the blue gum.
- If the smaller silver wattle is to remain, the TPZ will either have to be hand dug or a realignment of the plumbing to reduce the incursion to 10%.
- Prior to the commencement of works, tree protection fencing, and signage should be installed.

Yours sincerely,



Alister Hodgma

PUBLIC NOTICE

NOTICE IS HEREBY GIVEN THAT PLANS AND/OR APPLICATION HAS BEEN SUBMITTED TO THE CITY OF HOBART FOR

PARTIAL DEMOLITION, ALTERATION, EXTENSION & ASSOCIATED HYDRAULIC INFRASTRUCTURE

ON THIS SITE

**289 LENA VALLEY ROAD & 269 LENA VALLEY ROAD,
LENA VALLEY & ADJACENT RIVULET
APPLICATION NUMBER:
PLN-21-111**

PLANS AND/OR APPLICATION MAY BE INSPECTED AT THE HOBART COUNCIL CENTRE, 16 ELIZABETH STREET OR AT www.hobartcity.com.au/advertised_applications.

INTERESTED PERSONS ARE INVITED TO MAKE WRITTEN REPRESENTATIONS TO THE CHIEF EXECUTIVE OFFICER, GPO BOX 503, HOBART 7001 OR representation@hobartcity.com.au BY 4 JUNE 2021.



(Kelly Grigsby)
CHIEF EXECUTIVE OFFICER

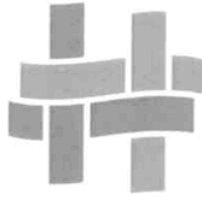
DATE: 21 MAY 2021



It is an infringement offence to remove or obscure this public notice before the period to make a representation has expired.



City of **HOBART**



City of HOBART

DECLARATION OF SERVICE

I, Elijah Price, Compliance Administration Officer of the City of Hobart, do solemnly and sincerely declare that I displayed the notice of application for permit in accordance with Regulation 8 (1)(d) Land Use Planning and Approvals Regulations 2004.

at **269 LENA VALLEY ROAD & 289 LENA VALLEY ROAD, LENA VALLEY & ADJACENT RIVULET**

on **21 MAY 2021**

and I make this solemn declaration by virtue of Section 14 of the Oaths Act, 2001.

Signed EP
(Elijah Price)
Compliance Administration Officer

Declared at Hobart this 20th day of May 2021


Before Me
Justice of the Peace
Ex-Officio / Commissioner for Declarations

Advertising Signage Instructions

Application Number:	PLN-21-111
Officer	Cameron Sherriff
Address:	269 LENA VALLEY ROAD LENA VALLEY
Proposal Description:	Partial Demolition, Alteration, Extension & Associated Hydraulic Infrastructure

INSTRUCTIONS

Planning Permit - Public Notice (Advertising) -

1 How many signs?	4 signs. One in front of 289 LVR; One at the western edge of the HCC lot over of the public path behind (directly back from the shared rear corner of 297/299/301 LVR), facing west; one on the eastern edge of the HCC lot over the public path behind (back from the shared rear corner of 287A/287 LVR), facing east; one on the northern boundary of the HCC lot to the rear, where it becomes the bank of the rivulet, preferably at the existing stormwater outfall directly back from and behind 287A LVR, facing north (towards the rivulet)
2 Location of signs	
3 Other instructions	eg street view

Location of Neighbouring Properties Shown Below

Application Referral Environmental Development Planner - Response

From:	Rowan Moore Environmental Development Planner 27 May 2021
Recommendation:	Proposal is acceptable subject to conditions.
Date Completed:	
Address:	289 LENA VALLEY ROAD, LENA VALLEY 269 LENA VALLEY ROAD, LENA VALLEY ADJACENT RIVULET
Proposal:	Partial Demolition, Alteration, Extension & Associated Hydraulic Infrastructure
Application No:	PLN-21-111
Assessment Officer:	Cameron Sherriff,

Referral Officer comments:

Codes Applicable:

Code	Applicable	Exempt	Permitted	Discretionary
E1.0 Bushfire- Prone Areas	No			
E3.0 Landslide	No			
E9.0 Attenuation	No			
E10.0 Biodiversity	Yes	Yes - E10.4.1(m)		
E11.0 Waterway & Coastal	Yes	Yes - E11.4.1(c) (ii)		
E15.0 Inundation Prone Areas	No			
E16.0 Coastal Erosion	No			
E18.0 Wind & Solar Energy	No			
E20.0 Acid Sulfate Soils	No			

Assessment:

The standards of the Biodiversity and Waterway and Coastal Protection Codes do not apply to this proposal.

Recommended Conditions:

Construction Management Plan (SWU)

Tree protection measures

Recommended Advice:

N/A

8. REPORTS

8.1 Golf Links Estate Heritage Precinct Provisions File Ref: F21/41661

Memorandum of the Development Planner and the Director City Planning of 9 June 2021 and attachment.

Delegation: Council



City of **HOBART**

MEMORANDUM: CITY PLANNING COMMITTEE

Golf Links Estate Heritage Precinct Provisions

At its meeting of 9 March 2021, Council resolved the following:

That a report be prepared for consideration in relation to implementing appropriate planning scheme amendments in regards to heritage provisions that would assist in greater protection for the Golflinks Heritage Precinct.

This resolution arose from consideration of an application (PLN-20-705) for an extension to a dwelling within the Golf Links Estate heritage precinct (precinct SB6 under the *Hobart Interim Planning Scheme 2015* (HIPS)).

The HIPS contains descriptions of significance for each heritage precinct. In the case of SB6 – Golf Links Estate, the Statement of Historic Cultural Heritage Significance is as follows:

This precinct is significant for reasons including:

- 1. Its value as the largest single subdivision in Sandy Bay with a very fine group of c1920-1930 houses, the best such group in Hobart.*
- 2. Its predominantly single storey Edwardian character with very intact streetscapes. The houses are all very good examples of Edwardian cottages and Californian Bungalow styles.*
- 3. The predominantly intact building stock.*
- 4. The connection of the site with the former golf links which is still readable in the subdivision pattern.*

This statement of significance is relatively brief and mainly addresses the architectural details of the dwellings themselves, as well as the general subdivision pattern. There is no specific mention of broader values of the precinct, such as building scale and garden settings.

Under the Local Provisions Schedule (LPS) of the Tasmanian Planning Scheme, it is proposed to introduce heritage precinct datasheets with a much greater level of detail than the precinct statements under the HIPS. The LPS datasheet for the Golf Links Estate precinct (which will become heritage precinct HOB-C6.2.9.9 under the LPS) is attached (**Attachment A**).

This LPS datasheet contains a more detailed description of the values of the Golf Links Estate precinct, and sets out design criteria/conservation policy to assist with assessment of development proposals in the area. The Statement of Local Historic Heritage Significance for the Golf Links Estate precinct specifically mentions front and rear gardens of properties being significant visual features that reinforce the precinct's residential character. The Design Criteria/Conservation Policy include (but are not limited to) the following guidelines:

- Elements which contribute to the precinct should be retained;
- Alterations and additions should not dominate or detract from the original building;
- New buildings, extensions or structures should be compatible with and sympathetic to the height, bulk, setback, materials and finishes and general character of contributory and heritage listed places;
- New buildings, extensions or additions to contributory and heritage listed buildings should be compatible and visually subservient when viewed from any road or public open space;
- Alterations and additions should respect the uniformity of properties which form part of a consistent row, semi-pair or group of buildings;
- Maintain a curtilage/usable open space that provides an appropriate setting to the scale of the house;
- New development should not interrupt building patterns where a subdivision pattern has resulted in a distinctive built form;
- Established and/or significant planted garden settings, hedges and visually prominent trees should be retained.

Development standards under the Local Historic Heritage Code of the Tasmanian Planning Scheme (TPS) require proposals for development in heritage precincts to meet the provisions detailed in the LPS precinct datasheets. Below is an example (relating to the exercise of discretion for buildings and works in heritage precincts):

<p>A1</p> <p>Within a local heritage precinct or local historic landscape precinct, building and works, excluding demolition, must:</p> <ul style="list-style-type: none"> (a) not be on a local heritage place; (b) not be visible from any road or public open space; and (c) not involve a value, feature or characteristic specifically part of a local heritage precinct or local historic landscape precinct listed in the relevant Local Provisions Schedule. 	<p>P1.1</p> <p>Within a local heritage precinct, design and siting of buildings and works, excluding demolition, must be compatible with the local heritage precinct, except if a local heritage place of an architectural style different from that characterising the precinct, having regard to:</p> <ul style="list-style-type: none"> (a) the streetscape or townscape values identified in the local historic heritage significance of the local heritage precinct, as identified in the relevant Local Provisions Schedule; (b) the character and appearance of the surrounding area; (c) the height and bulk of other buildings in the surrounding area; (d) the setbacks of other buildings in the surrounding area; and (e) any relevant design criteria or conservation policies for the local heritage precinct, as identified in the relevant Local Provisions Schedule. <p>P1.2</p> <p>Within a local heritage precinct, extensions to existing buildings must be compatible with the local heritage precinct, having regard to:</p> <ul style="list-style-type: none"> (a) the streetscape or townscape values identified in the local historic heritage significance of the local heritage precinct, as identified in the relevant Local Provisions Schedule; (b) the character and appearance of the surrounding area; (c) the height and bulk of other buildings in the surrounding area; (d) the setbacks of other buildings in the surrounding area; and (e) any relevant design criteria or conservation policies for the local heritage precinct, as identified in the relevant Local Provisions Schedule.
--	--

The Acceptable Solution (A1 above) requires buildings and works not to involve ‘a value, feature or characteristic specifically part of a local heritage precinct’ in order to be permitted. These values, features and characteristics are detailed in the LPS datasheets. The Performance Criteria (P1.1 and P1.2 above) refer to values identified in the local historic heritage significance of the precinct and any relevant

design criteria or conservation policy, all of which are covered by the LPS precinct datasheets. The performance criteria also require additional consideration of the general character and appearance of the precinct, including the height, bulk and setbacks of other buildings in the surrounding area.

These development standards under the TPS code provide the statutory mechanism to refer to the LPS datasheets when assessing applications, and ensure the requirements of the datasheets are considered.

It is considered that the detailed provisions provided by the proposed LPS datasheets are sufficient to ensure that the Golf Links Estate heritage precinct is adequately protected.

It is not considered necessary to introduce any further controls into the HIPS given the TPS is close to being publicly exhibited. If the LPS datasheets were to be brought forward into the current scheme, this would be a significant scheme amendment and it is likely it would not be finalised significantly earlier than the commencement of the TPS.

RECOMMENDATION

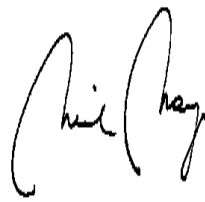
That:

- 1. No further controls be introduced into the Hobart Interim Planning Scheme 2015 given the Tasmanian Planning Scheme is close to being publicly exhibited.***

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.




Sarah Crawford
DEVELOPMENT PLANNER



Neil Noye
DIRECTOR CITY PLANNING

Date: 9 June 2021
File Reference: F21/41661

Attachment A: Golf Links Estate Heritage Precinct - LPS Datasheet  

**City of Hobart Local Heritage Precincts
Description, Statement of Local Historic Heritage Significance and
Design Criteria / Conservation Policy
January 2021**

**HOB-C6.2.9.9
Golf Links Estate – Sandy Bay**



DESCRIPTION**Component streets:**

Adams Street	Grace Street	Proctors Road	York Street
Alexander Street	Grosvenor Street	Regent Street	
French Street	Lord Street	View Street	

Historical background

Following European Settlement, the land on which the Heritage Precinct sits was originally granted to Norfolk Islanders John Hall, Zachariah Chaffey, and Henry Hathaway. In 1818 these were later merged into a single dairy farm by a David Lord. Shortly thereafter the homestead 'Blink Bonney' was constructed, which still stands as one of the earliest houses in the Sandy Bay area. By 1900, public interest in Golf led to the purchase of much of the land for the laying out of an 18 hole links course, tennis and croquet lawns which proved highly popular with the general public. However, rising costs and demand for land led to the selling of the course to the Golf Links Estate in 1915 for residential development. Sub-divisions occurred between 1915 and 1922, with additional areas being added by 1928. The initial area was divided into 270 lots of 60' x 140' and laid out in a regular pattern in accordance with reference to the garden city philosophies. This became the largest single sub-division in Sandy Bay and forms one of the most consistent large groups of Federation housing in Hobart. A slightly later addition to the Golf Links Estate was the extension to the southern side of Alexander Street, this occurred between 1923 -1928, and by 1928 seventeen houses had been constructed along the southern side of Alexander Street.



House at bottom of Lord Street c. 1930
(AOT NS10131)



Auction sale advertisement for Golf Links Estate
c.1917 (Lord, G. 1998.)



Worker laying the foundations of a new house on Lord
Street c. 1919. (Lord, G. 1998.)



The Mariners Church on Franklin Wharf before
relocation to Lord Street in 1917. (AOT PH30-1-
2959)

Precinct character and features:***Streetscape and townscape*****Design and topography**

The Golf Links conservation area is marked by long uninterrupted grid street layout and steadily rising topography with streets falling more steeply at the top of the Estate. This creates extensive and sweeping views down streets from the upper sections. Changes in topography running south to north also effect street features and a number of properties are located above or below the street level, most prominently within parts of York Street, Alexander Street, and Proctors Road. The southern side of Alexander Street backs onto Proctors Creek and features a sloping gully with native vegetation.

There are a network of pedestrian links through the estate, footpaths are wide and generous and several lines of street trees all indicate the influence of the garden suburb movement in its original layout. The road at the top of View Street features a concreted surface which was constructed to withhold the weight of trolley buses, and now provides distinct tangible evidence of Hobart's public transport history.

Vegetation

Streets are wide and there are long areas of central lawns with important street tree plantings. Of particular note are the mature street plantings on both Lord and York Streets. The established native plantings and trees along Proctors Creek provide a vegetated backdrop for the southern side of Alexander Street.

Views and vistas

Many streets feature views of kunanyi / Mount Wellington. The tops of View and Lord Street have particularly sweeping views across Sandy Bay towards the River Derwent.

Built form**Materials**

External cladding materials within the precinct are an even mix of brick, and timber weatherboard residences. Roof cladding is primarily corrugated iron roofing, with a number of dwellings featuring terracotta tile roofing.

Architectural styles and scales

Although the precinct is characterised by several areas of differing development, it is notable that the built form is predominantly single storey. The upper slopes are characterised by modest weatherboard cottages on smaller allotments, whilst the lower slopes of the precinct contain more substantial Californian bungalow style houses, along with some very limited apartment blocks. The lower section of Lord Street contains the grandest of properties, notably containing properties that weren't built as part of the original Estate. Architectural styles within the precinct include: Victorian Georgian, Victorian Carpenter Gothic, Federation Queen Anne, Federation Bungalow, Inter-War Old English, and Inter-War Californian Bungalow.

Orientation

Small houses on small allotments are generally orientated towards the street with a modest setback. Larger houses on bigger blocks have a more generous setback, whilst early houses often relate and are orientated more within their garden setting than towards the street.

Building stock

Consistency and coherency is one of the defining qualities of the Precinct with most of the housing stock being fine examples of minor variances within identifiable single storey styles. Buildings of note within the precinct include; No.15 Lord Street is a stone Victorian Gothic church, relocated from Franklin Wharf in 1917 and known as the Mariner's Church. Within View Street, No.1, once part of

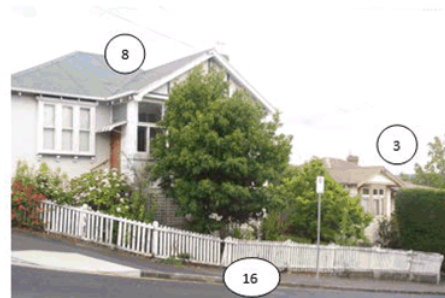
the Friends School, was built in 1925 by architect Bernard Walker; No.2 was the original Golf Club House, now used as a residence; No.32 features a large Federation Queen Anne house and No.34 is the original homestead, 'Blink Bonney'. No.7 Lord Street is a fine example of a Federation Queen Anne house, and 15a Lord Street is a shingle clad Federation Bungalow. Number 85 York Street features a small 1920s timber Federation Gothic styled church now converted into a house.

Fencing

The desired fencing type is low-level Victorian picket, Federation picket, Federation brick or masonry, and Inter-War timber, brick, and ironwork.

Contributory elements

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. Prominent brick chimneys 2. Unpainted brickwork 3. Timber weatherboard houses 4. Original iron and timber detailing 5. Traditional corrugated iron roofing 6. Projecting gables 7. Generally light and neutral colour schemes 8. Fine examples of architectural styles 9. Small cottage style front gardens | <ol style="list-style-type: none"> 10. Buildings set close to the street frontage, with a consistent setback from the front boundary 11. Small scale cottages 12. Large houses on substantial blocks 13. Groupings of houses sharing similar features 14. Street plantings 15. Wide streets 16. Low fencing |
|--|--|

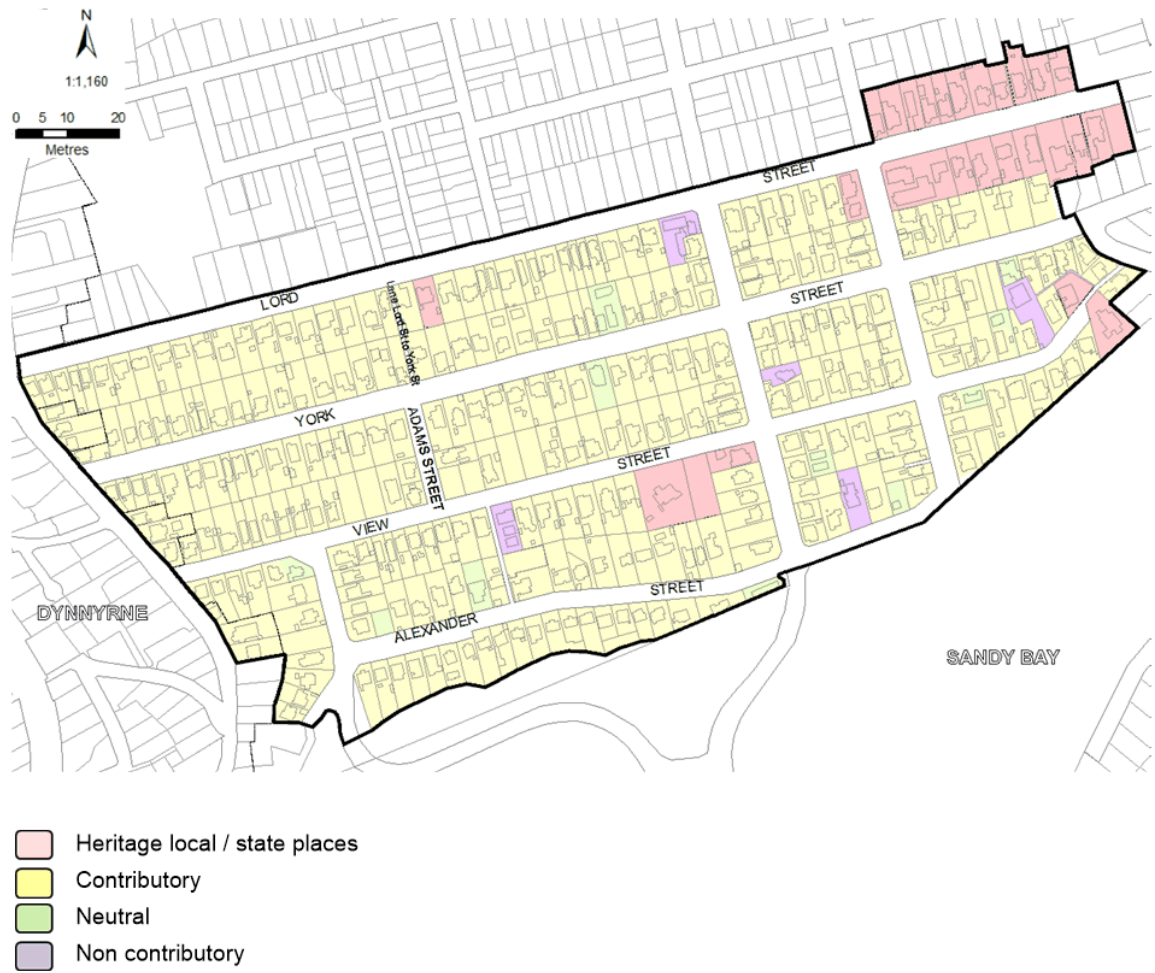


Non contributory elements

1. Intrusive buildings and structures that are unsympathetic to the streetscape and contributory characteristics of the precinct.
2. Development of car parking facilities that are unsympathetic to the streetscape
3. Development apartment blocks with large off street parking facilities that have greatly impacted on the streetscape.
4. 'Pop top' or roof extensions that detract from original features of houses.
5. High and solid fences are an intrusive element within the precinct and obscure houses and gardens.
6. Introduction of unsympathetic materials e.g. synthetic roof tiles, and grey brickwork.



HOB-C6.2.9.9 Heritage Precinct - Map



STATEMENT OF LOCAL HISTORIC HERITAGE SIGNIFICANCE

Significance because of the collective heritage value of individual places as a group for their streetscape or townscape values and the precinct's role in, representation of, or potential for contributing to the understanding of:

For contributing to the understanding of local history

- Its significance as the largest single sub-division in Sandy Bay with a very fine group of 1915 -1930 period houses, the best such group in Hobart.
- The connection of the site with the former golf links and the local interpretation of the then popular garden city movement which is still readable in the sub-division pattern.

For the representation of aesthetic characteristics

- The street plantings, and front and rear gardens of properties are significant visual features that reinforce the precincts residential character.
- The significant streetscape elements such as kerbing, grass road islands, split street levels and pedestrian laneways

For the representation of a class of building or place

- The predominantly intact building stock and groupings of houses sharing architectural styles, features, and original external finishes and detailing.
- The significant grouping of large, finely detailed Victorian and Federation residences positioned along Lord Street between Grosvenor Street, and Sandy Bay Road.
- The predominantly single storey Federation and Inter-War character of the precinct with fine examples of variances within the Federation cottages and Californian Bungalow styles, producing a coherent and cohesive intact street and townscape.

For the association with a particular community or cultural group for social or spiritual reasons

- The area has significance to the local and broader community due to the location of two major structures that were/and are currently places of social and spiritual gathering; St Peters Anglican Church / Well Spring Church (formerly The Mariners Church), and the former Friends School at Number 1 View Street.

DESIGN CRITERIA / CONSERVATION POLICY

1. Elements which contribute to the precinct should be retained.
2. Non-contributory elements may be removed to enhance the character of the precinct.

3. Alterations and additions should not dominate or detract from the original building.
4. New buildings, extensions or structures should be compatible with and sympathetic to the height, bulk, setback, materials and finishes and general character of contributory and heritage listed places.
5. New buildings, extensions or additions to contributory and heritage listed buildings should be compatible and visually subservient when viewed from any road or public open space.
6. Alterations and additions should respect the uniformity of properties which form part of a consistent row, semi-pair or group of buildings.
7. Fences and gates should be appropriate in form, scale, height and materials appropriate to the architecture of the main building. Styles include *Federation/Victorian timber picket*, *Inter-War masonry*, *brick and ironwork fences and gates (choose as appropriate)* Detailed design guidance may be found in the City of Hobart publication, *New fences for old houses*.
8. Garages, carports, and ancillary structures should be setback from the principal facade to enable the original building form to remain unobscured and prominent within the streetscape.
9. Driveways and hard stand areas should be located at the side of the house.
10. Maintain a curtilage/usable open space should provide an appropriate setting to the scale of the house.
11. Lot boundary changes should not occur in areas where the original subdivision pattern is significant and remains intact.
12. New development should not interrupt building patterns where a subdivision pattern has resulted in a distinctive built form.
13. Unpainted and unrendered masonry and brick exterior surfaces should remain as such.
14. Established and/or significant planted garden settings, hedges, and visually prominent trees should be retained.
15. Concrete road surfaces associated with historical trolley bus routes should be retained. Where repairs and patching are necessary new work should match the original material and finish.
16. All sandstone construction, generally seen in walls, kerbing or other site elements should be retained.

References

Archives Office of Tasmania Subject Index, AOT, Hobart.

Davies, P., et al, 1998, Sandy Bay Heritage Study Conservation Area Policies, Prepared for Hobart City Council, Paul Davies Pty Ltd in association with Ian Terry, Hobart.

Goc, N., 1997, Sandy Bay: A Social History, Gentrx Publishing, Sandy Bay.

Lord, G., 1998, Sandy Bay: A History of the Golf Links District, Published by Richard Lord and Partners, Hobart.

8.2 Monthly Planning Statistics - 1 May - 31 May 2021
File Ref: F21/54429

Memorandum of the Director City Planning of 9 June 2021 and attachments.

Delegation: Council



City of **HOBART**

MEMORANDUM: CITY PLANNING COMMITTEE

Monthly Planning Statistics - 1 May - 31 May 2021

Attached is the Planning Permit statistics for the period 1 May 2021 - 31 May 2021

RECOMMENDATION

That:

The Director City Planning reports:

Planning Statistical Report:

During the period 1 May 2021 to 31 May 2021, 90 permits were issued to the value of \$14,148,684 which included:

- (i) 13 new single dwellings to the value of \$7,579,759;
- (ii) 6* multiple dwellings to the value of \$110,000 (*includes the change of use of an existing dwelling to two dwellings; and internal alterations to an existing building to create four new dwellings);
- (iii) 36 extensions/alterations to dwellings to the value of \$5,069,830;
- (iv) 12 extensions/alterations to commercial properties to the value of \$1,032,758;
- (v) No major projects:

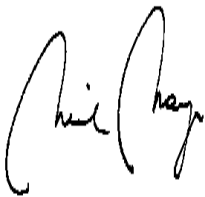
During the period 1 May 2020 to 31 May 2020, 48 permits were issued to the value of \$46,131,446 which included:

- (i) 3 new single dwellings to the value of \$910,000;
- (ii) 93 multiple dwellings to the value of \$38,242,335;
- (iii) 22 extensions/alterations to dwellings to the value of \$3,559,000;

- (iv) 7 extensions/alterations to commercial properties to the value of \$2,004,611;
- (v) 2 major projects:
 - (a) 9 Sandy Bay Road, Hobart - Demolition and New Building for 28 Multiple Dwellings and Associated Works within Adjacent Road Reserve - \$7,000,000;
 - (b) 127 Bathurst Street, 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 - \$30,000,000

This report includes permits issued, exempt and no permit required applications





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.

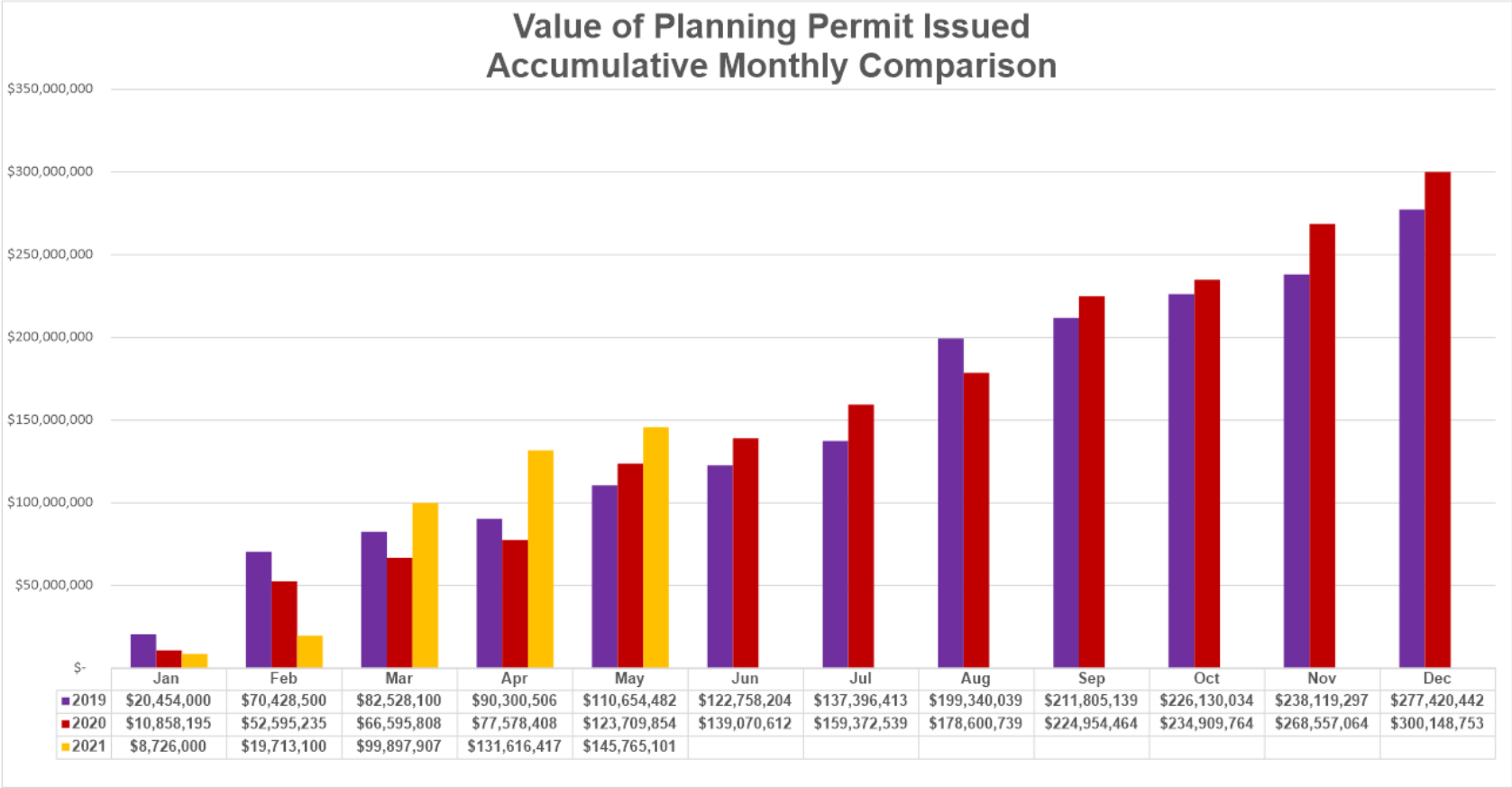


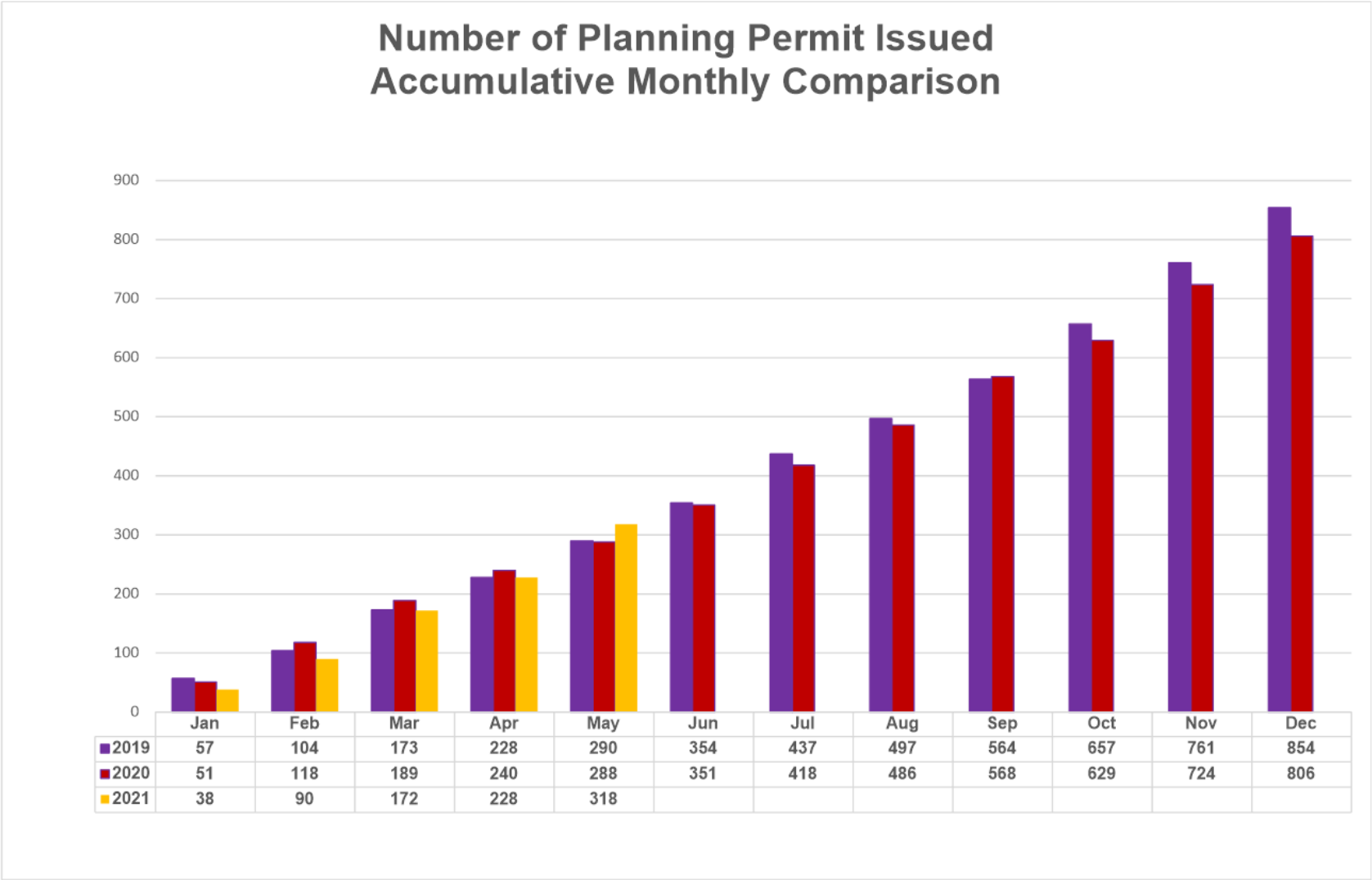
Neil Noye

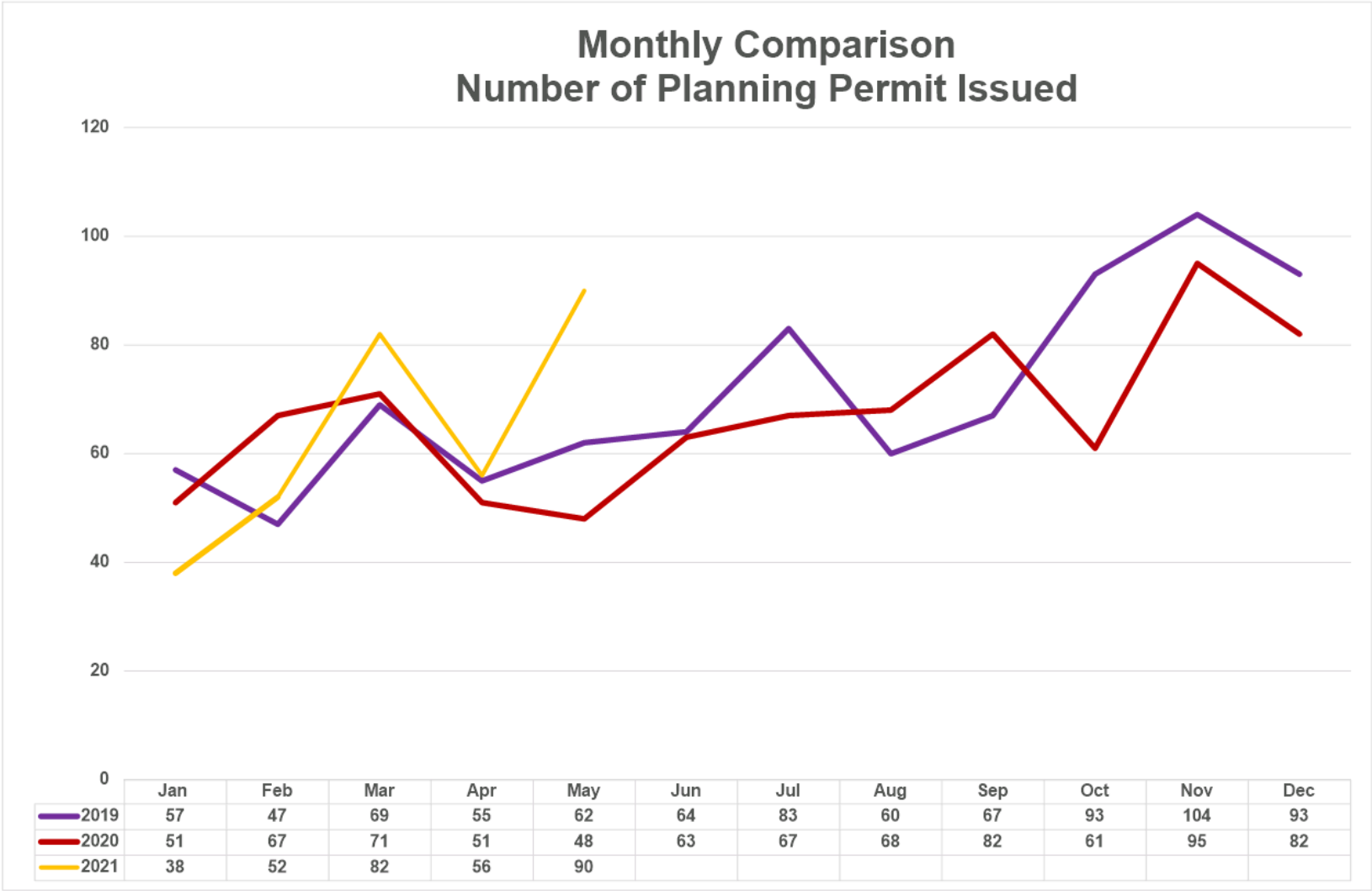
DIRECTOR CITY PLANNING

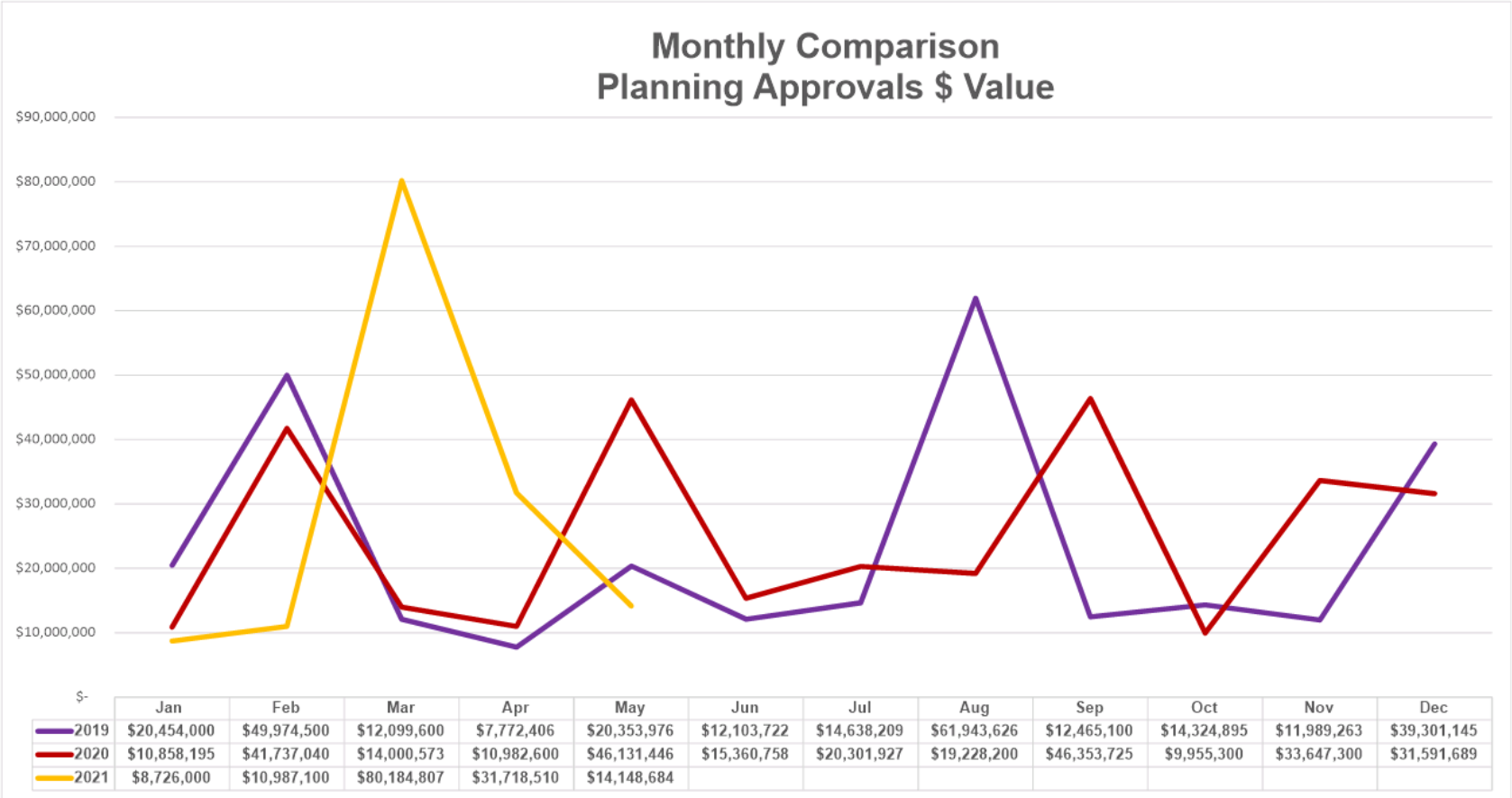
Date: 9 June 2021
File Reference: F21/54429

- Attachment A: Value of Planning Permit Issued Bar Graph May 2021 ↓ 
- Attachment B: Number of Planning Permit Issued Accumulative Monthly Comparison Bar Graph May 2021 ↓ 
- Attachment C: Monthly Comparison - Number of Planning Permit Issued Line Graph May 2021 ↓ 
- Attachment D: Monthly Comparison Planning Approval Value Line Graph May 2021 ↓ 









8.3 Monthly Building Statistics 1 May - 31 May 2021
File Ref: F21/54408

Memorandum of the Director City Planning of 8 June 2021 and attachments.

Delegation: Council



City of **HOBART**

MEMORANDUM: CITY PLANNING COMMITTEE

Monthly Building Statistics 1 May - 31 May 2021

Attached is the Building Permit Statistics for the period 1 May 2021 – 31 May 2021

RECOMMENDATION

That:

Building Statistical Report:

During the period 1 May 2021 to 31 May 2021, 55 permits were issued to the value of \$19,187,498 which included:

- (i) 36 for extensions/alterations to dwellings to the value of \$4,129,609;
- (ii) 10 new dwellings to the value of \$3,033,800;
- (iii) 0 new multiple dwellings; and
- (iv) 1 major project:
 - (a) 85-99 Collins Street, Hobart - Commercial Internal Alterations \$8,480,000

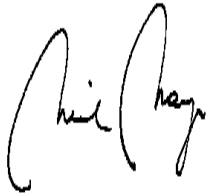
During the period 1 May 2020 to 31 May 2021, 36 permits were issued to the value of \$9,947,195 which included:

- (i) 15 for extensions/alterations to dwellings to the value of \$2,056,000;
- (ii) 6 new dwellings to the value of \$3,146,228;
- (iii) 0 new multiple dwellings; and
- (iv) 0 major projects:

In the twelve months ending May 2021, 686 permits were issued to the value of \$214,649,847; and

In the twelve months ending May 2020, 575 permits were issued to the value of \$243,777,218

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.







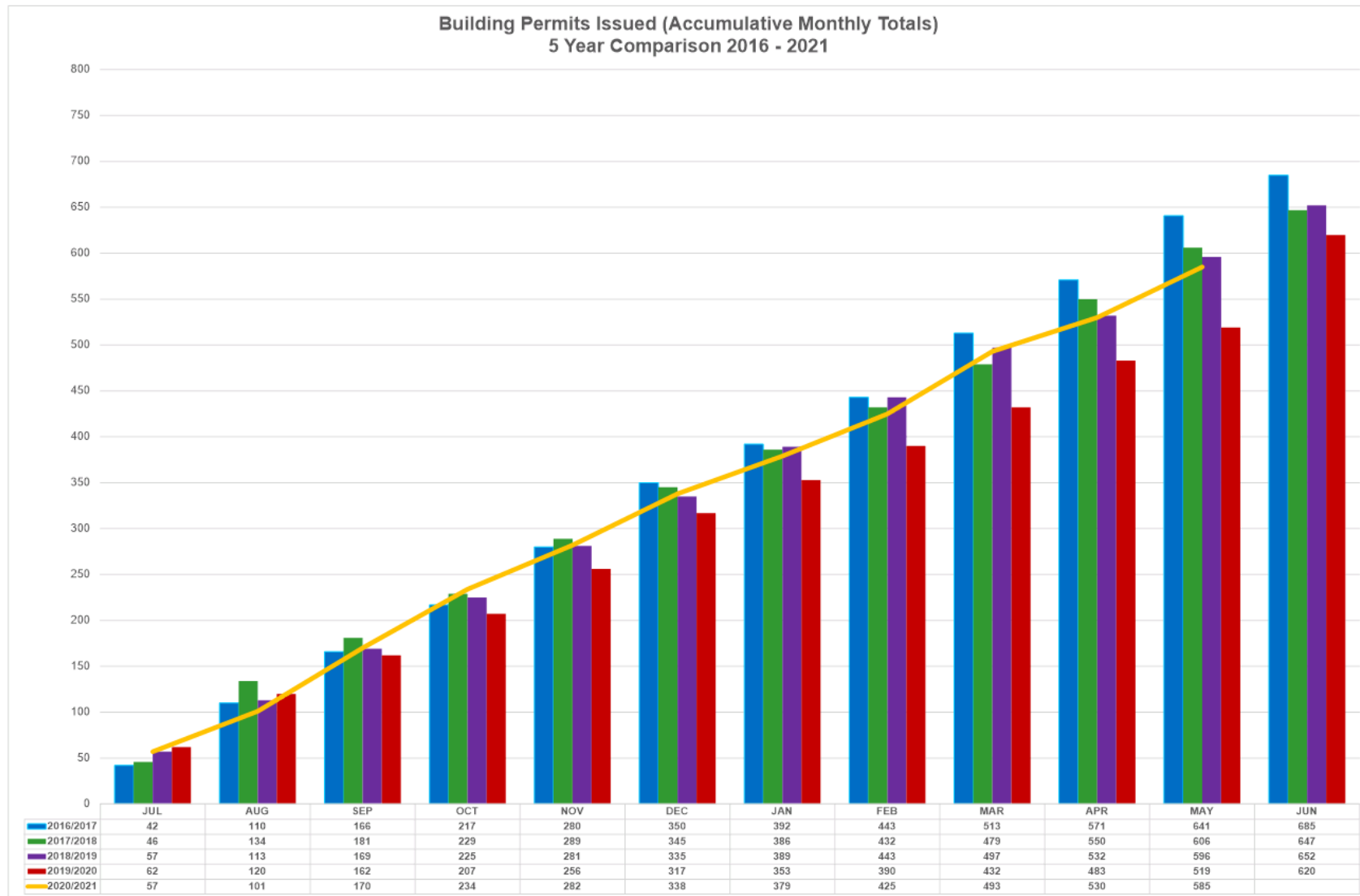
Neil Noye

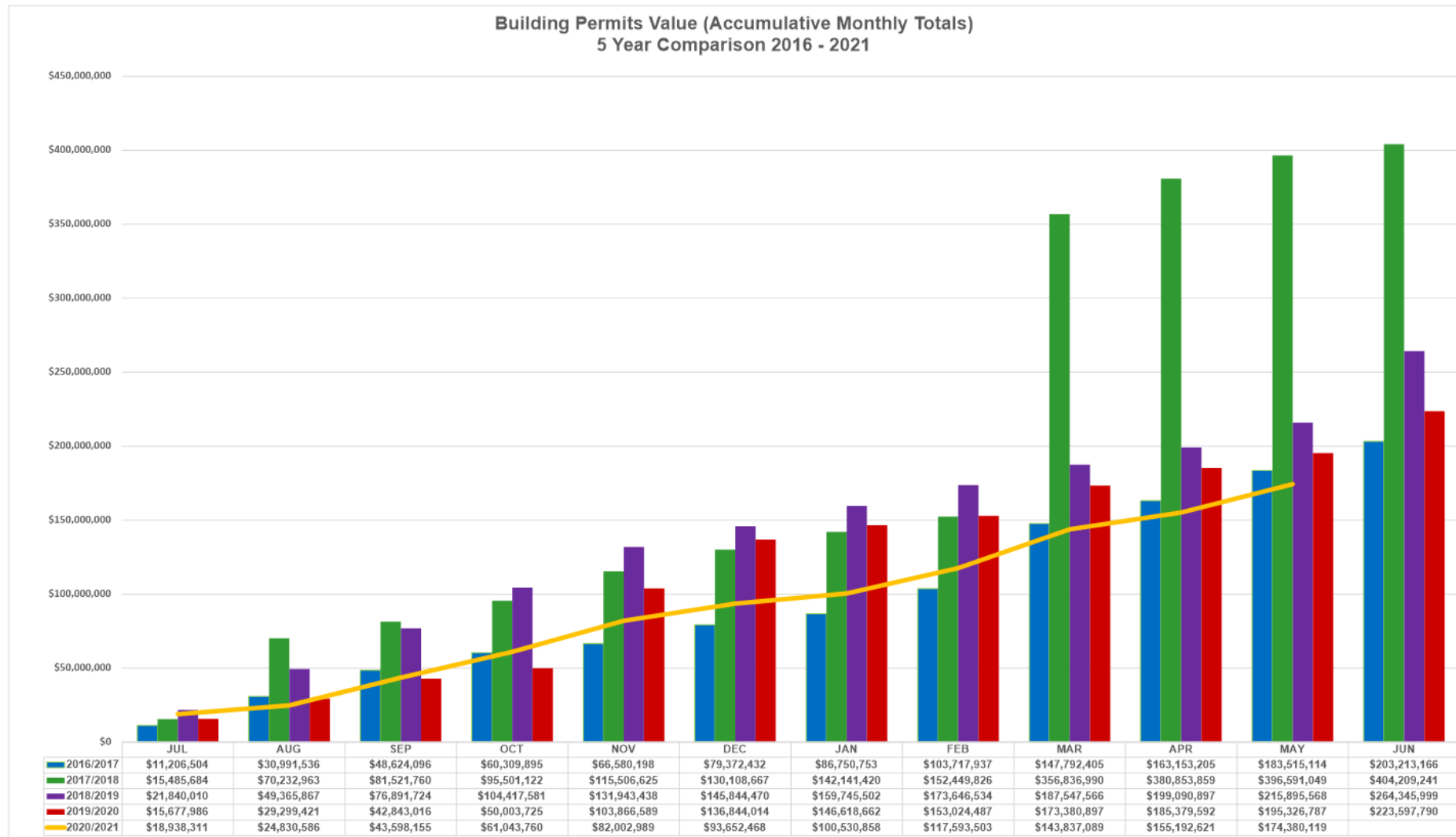
DIRECTOR CITY PLANNING

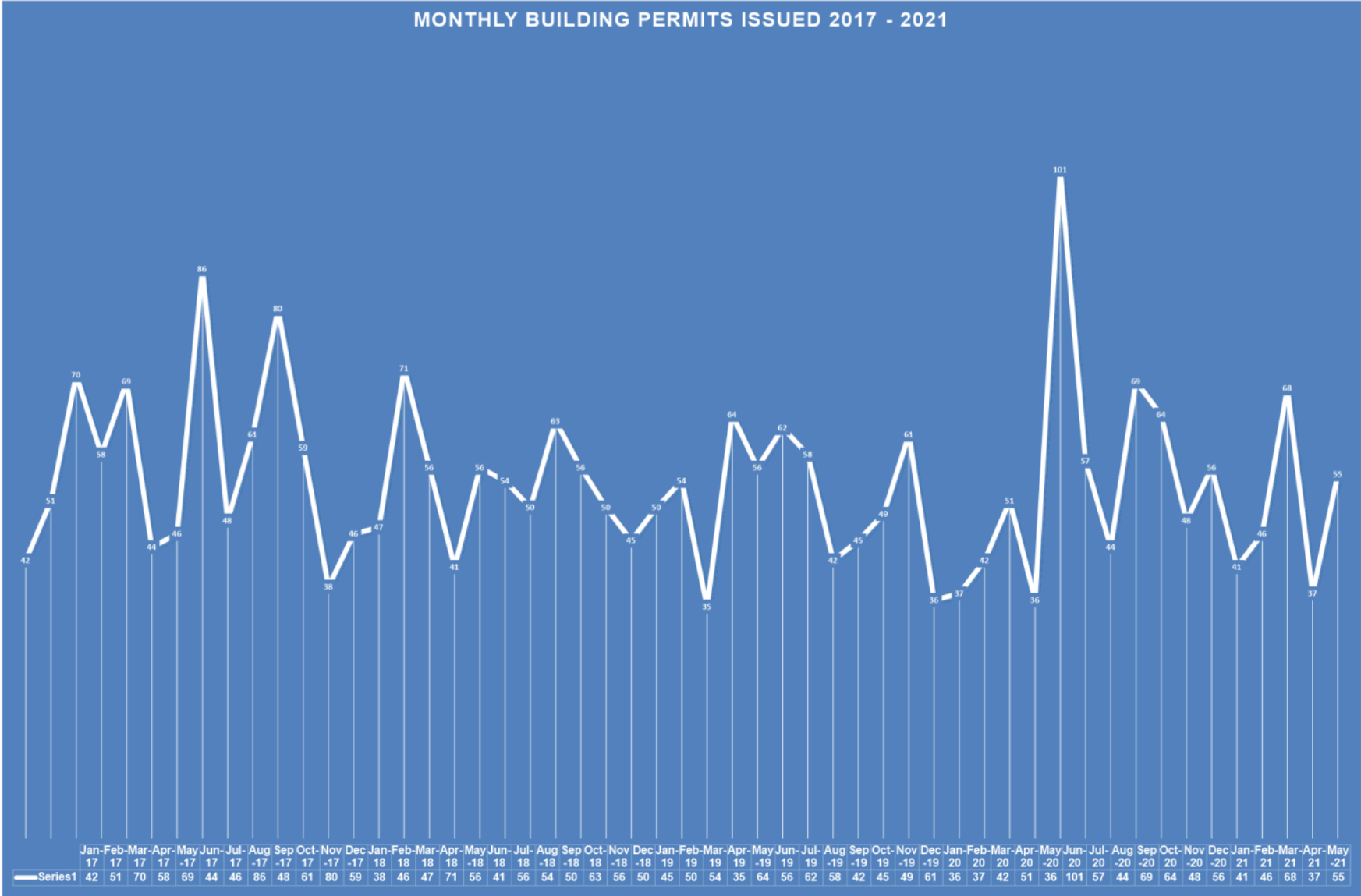
Date: 8 June 2021

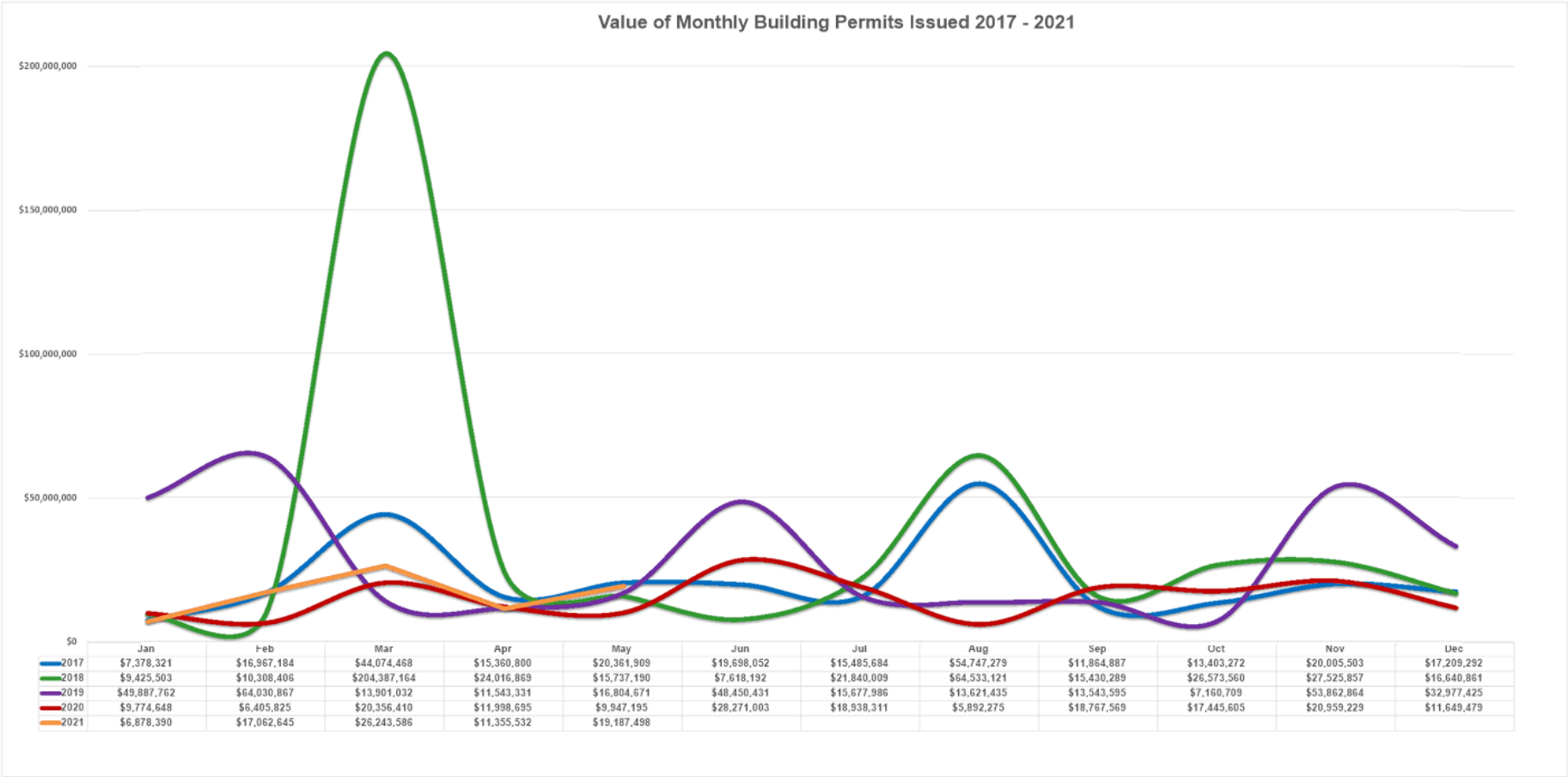
File Reference: F21/54408

- Attachment A: Building Permits Issued Accumulative Monthly Totals Bar Graph - May 2021 ↓ 
- Attachment B: Building Permits Value Accumulative Monthly Bar Graph - May 2021 ↓ 
- Attachment C: Monthly Building Permits Issued Line Graph 2017 - 2021 - May 2021 ↓ 
- Attachment D: Value of Monthly Building Permits Issued 2017 - 2021 Line Graph - May 2021 ↓ 









8.4 Delegated Decision Report (Planning)
File Ref: F21/54223

Memorandum of the Director City Planning of 8 June 2021 and attachment.

Delegation: Committee



City of **HOBART**

MEMORANDUM: CITY PLANNING COMMITTEE

Delegated Decision Report (Planning)

Attached is the delegated planning decisions report for the period 24 May 2021 to 4 June 2021.

RECOMMENDATION

That:

- 1. That the information be received and noted.***

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

Neil Noye
DIRECTOR CITY PLANNING

Date: 8 June 2021
File Reference: F21/54223

Attachment A: Delegated Decision Report (Planning) ↓

8 June 2021

Delegated Decisions Report (Planning)

26 applications found.

Planning Description	Address	Works Value	Decision	Authority
PLN-20-907 Dwelling and Studio	4A GREGSON AVENUE NEW TOWN TAS 7008	\$ 320,000	Approved	Delegated
PLN-21-116 Partial Demolition, Garage and Front Fencing	5 MELLIFONT STREET WEST HOBART TAS 7000	\$ 50,000	Approved	Delegated
PLN-21-12 Dwelling	42 BEAUMONT ROAD LENA VALLEY TAS 7008	\$ 596,554	Approved	Delegated
PLN-21-148 Change of Use to Two Multiple Dwellings	1/6 ELLERSLIE ROAD BATTERY POINT TAS 7004	\$ 10,000	Approved	Delegated
PLN-21-171 Partial Demolition, Alterations and Extension	2 GREYSTANES PLACE SANDY BAY TAS 7005	\$ 75,000	Approved	Delegated
PLN-21-175 Dwelling	6 TABART STREET NEW TOWN TAS 7008	\$ 500,000	Approved	Delegated
PLN-21-188 Signage	80 ELIZABETH STREET HOBART TAS 7000	\$ 0	Approved	Delegated
PLN-21-202 Partial Demolition, Alterations, Signage, and Partial Change of Use to Food Services, and Business and Professional Services	100-102 CAMPBELL STREET HOBART TAS 7000	\$ 100,000	Approved	Delegated
PLN-21-226 Partial Demolition, Alterations, Signage and Partial Change of Use to General Retail and Hire and Food Services	143 SANDY BAY ROAD SANDY BAY TAS 7005	\$ 140,000	Approved	Delegated
PLN-21-229 Outbuilding	63 LOCHNER STREET WEST HOBART TAS 7000	\$ 60,000	Approved	Delegated
PLN-21-230 Change of Use to Visitor Accommodation	308 MURRAY STREET NORTH HOBART TAS 7000	\$ 80,000	Approved	Delegated
PLN-21-234 Partial Demolition, Alterations, Extension, Partial Change of Use to Service Industry and Extension of Bulky Goods Sales Use, Fencing, and Signage	107-119 ARGYLE STREET HOBART TAS 7000	\$ 200,000	Approved	Delegated
PLN-21-241 Partial Demolition, Alterations, Partial Change of Use to Food Services and Signage	147-167 LIVERPOOL STREET (CT 113307/1) HOBART TAS 7000	\$ 60,000	Approved	Delegated
PLN-21-258 Partial Demolition, Alterations, Extension, and Garage	4 RAYMONT TERRACE MOUNT STUART TAS 7000	\$ 212,000	Approved	Delegated
PLN-21-262 Partial Demolition and Alterations	74 NAPOLEON STREET BATTERY POINT TAS 7004	\$ 8,000	Approved	Delegated
PLN-21-266 Partial Demolition, Alterations, and Extension	FRANKLIN WHARF HOBART TAS 7000	\$ 300,000	Approved	Delegated
PLN-21-274 Partial Demolition, Alterations, and Change of Use to General Retail and Hire	365 ELIZABETH STREET NORTH HOBART TAS 7000	\$ 50,000	Approved	Delegated
PLN-21-278 Partial Demolition, Alterations and Extension	18 EARL STREET SANDY BAY TAS 7005	\$ 210,000	Approved	Delegated
PLN-21-285 Change of Use to Hostel	281 LIVERPOOL STREET HOBART TAS 7000	\$ 0	Approved	Delegated
PLN-21-295 Alterations	2/19 SHIRLEY BOULEVARD LENA VALLEY TAS 7008	\$ 14,143	Approved	Delegated
PLN-21-313 Extension to Operating Hours	279 ELIZABETH STREET NORTH HOBART TAS 7000	\$ 0	Approved	Delegated
PLN-21-341 Partial Demolition, Alterations, and Extension	12 GRAYLING AVENUE SOUTH HOBART TAS 7004	\$ 400,000	Not Required	Delegated

CITY OF HOBART

Planning Description	Address	Works Value	Decision	Authority
PLN-21-343 Change of Use to Visitor Accommodation	75 BARRACK STREET HOBART TAS 7000	\$ 25,000	Approved	Delegated
PLN-21-366 Alterations (Solar Panels)	66 FORSTER STREET NEW TOWN TAS 7008	\$ 7,000	Exempt	Delegated
PLN-21-371 Partial Demolition and Alterations	20 BROUGHTON AVENUE MOUNT NELSON TAS 7007	\$ 180,000	Approved	Delegated
PLN-21-48 Partial Demolition, Alterations, Retaining Walls, Screening and New Car Parks	9 CLARKE AVENUE BATTERY POINT TAS 7004	\$ 80,000	Approved	Delegated

8.5 City Planning - Advertising Report
File Ref: F21/54133

Memorandum of the Director City Planning of 8 June 2021 and attachment.

Delegation: Committee



City of **HOBART**

MEMORANDUM: CITY PLANNING COMMITTEE

City Planning - Advertising Report

Attached is the advertising list for the period 24 May 2021 to 4 June 2021.

RECOMMENDATION

That:

- 1. That the information be received and noted.***

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

Neil Noye
DIRECTOR CITY PLANNING

Date: 8 June 2021
File Reference: F21/54133

Attachment A: City Planning - Advertising Report ↓

Application	Street	Suburb	Development	Works Value	Expiry Date	Referral	Proposed Delegation	Advertising Period Start	Advertising Period End
PLN-19-345	100 PINNACLE ROAD	MOUNT WELLINGTON	Cableway and Associated Facilities, Infrastructure and Works	\$54,000,000	26/06/2021	rileye	Council (Objection)	24/05/2021	07/06/2021
PLN-21-260	72 SANDY BAY ROAD	BATTERY POINT	Signage	\$0	13/06/2021	mcclenahan m	Director	26/05/2021	09/06/2021
PLN-21-268	5 DUKE STREET	SANDY BAY	Outbuilding	\$10,000	19/06/2021	maxwellv	Director	26/05/2021	09/06/2021
PLN-21-273	202 A NELSON ROAD	MOUNT NELSON	Partial Demolition, Alterations and Extension	\$45,000	01/07/2021	langd	Director	26/05/2021	09/06/2021
PLN-21-287	14 WILLOWDENE AVENUE	SANDY BAY	Partial Demolition, Alterations and Extension	\$400,000	21/06/2021	nolanm	Director	26/05/2021	09/06/2021
PLN-21-320	423 SANDY BAY ROAD	SANDY BAY	Ancillary Dwelling	\$135,325	24/06/2021	mcclenahan m	Director	26/05/2021	09/06/2021
PLN-21-318	406 PARK STREET	NEW TOWN	Partial Demolition, Alterations and Front Fencing	\$15,000	23/06/2021	sherriffc	Director	27/05/2021	10/06/2021
PLN-21-324	227 NEW TOWN ROAD	NEW TOWN	Alterations (Solar Panels)	\$16,000	25/06/2021	smeea	Director	27/05/2021	10/06/2021
PLN-20-515	177 WATERWORKS ROAD	DYNNYRNE	Subdivision (Boundary Adjustment)	\$0	18/06/2021	ayersh	Director	28/05/2021	11/06/2021
PLN-20-846	26 MARLBOROUGH STREET	SANDY BAY	Dwelling	\$140,000	17/06/2021	smeea	Director	28/05/2021	11/06/2021
PLN-21-174	4 STOKE STREET	NEW TOWN	Partial Demolition, Alteration and Extension	\$500,000	20/06/2021	smeea	Director	28/05/2021	11/06/2021
PLN-21-195	251 MACQUARIE STREET	HOBART	Partial Demolition, Alterations and Extension	\$250,000	24/06/2021	smeea	Director	28/05/2021	11/06/2021
PLN-21-231	7 BEDDOME STREET	SANDY BAY	Alterations and Landscaping	\$15,000	15/06/2021	mcclenahan m	Director	28/05/2021	11/06/2021

Application	Street	Suburb	Development	Works Value	Expiry Date	Referral	Proposed Delegation	Advertising Period Start	Advertising Period End
PLN-21-279	396 - 396A ELIZABETH STREET	NORTH HOBART	Partial Demolition, Alterations, Signage and Partial Change of Use to Hotel Industry	\$100,000	20/06/2021	widdowsont	Director	31/05/2021	15/06/2021
PLN-21-282	180 HARRINGTON STREET	HOBART	Partial Demolition, Alterations and Extension	\$4,000,000	07/07/2021	smeea	Director	31/05/2021	15/06/2021
PLN-20-902	1/8 BROOKE STREET AND ADJACENT ROAD RESERVE		Outdoor Dining, Associated Furniture and Alterations	\$25,000	09/07/2021	widdowsont	Council (Council Land)	03/06/2021	18/06/2021
PLN-21-155	91 A FOREST ROAD	WEST HOBART	Partial Demolition, Alterations, Extension, and Front Fencing	\$30,000	26/06/2021	maxwellv	Director	03/06/2021	18/06/2021
PLN-21-217	82 REGENT STREET	SANDY BAY	Partial Demolition, Alterations, and Extension	\$250,000	03/07/2021	nolanm	Director	03/06/2021	18/06/2021
PLN-21-272	35 LIPSCOMBE AVENUE	SANDY BAY	Two Multiple Dwellings (One Existing, One New)	\$230,000	14/07/2021	sherriffc	Director	03/06/2021	18/06/2021
PLN-21-276	1 BAY ROAD	NEW TOWN	Outbuilding	\$7,000	29/06/2021	maxwellv	Director	03/06/2021	18/06/2021
PLN-21-309	21 BOA VISTA ROAD	NEW TOWN	Partial Demolition, Alterations and Extension	\$25,000	04/07/2021	langd	Director	03/06/2021	18/06/2021
PLN-21-333	20 MCAULAY ROAD	SANDY BAY	Partial Demolition and Alterations	\$25,000	29/06/2021	smeea	Director	03/06/2021	18/06/2021
PLN-21-355	2 / 23 RANDALL STREET	SANDY BAY	Change of Use to Visitor Accommodation	\$0	06/07/2021	smeea	Director	03/06/2021	18/06/2021
PLN-21-349	BOATSHED 6 QUEENS WALK	NEW TOWN	Partial Demolition and Alterations	\$30,000	05/07/2021	mcclenahan m	Director	04/06/2021	19/06/2021

Application	Street	Suburb	Development	Works Value	Expiry Date	Referral	Proposed Delegation	Advertising Period Start	Advertising Period End
PLN-21-290	31 FARADAY STREET	WEST HOBART	Partial Demolition, Alterations, and Extension	\$450,000	25/06/2021	langd	Director	04/06/2021	19/06/2021

9. MOTIONS OF WHICH NOTICE HAS BEEN GIVEN

9.1 Local Housing Solutions FILE REF: F21/54013; 13-1-9

Deputy Lord Mayor Burnet

Motion

“That a report be prepared that investigates ways Council can provide advice to property owners regarding dwelling and property modifications, with a view to increase accommodation options across Hobart.

The advice be tailored for people who might want the flexibility to remain living at their property as their lifestyles might change or as they age, and also to increase the dwelling capacity on their property.

The report would:

- 1) Structure “plain English” explanations as to options for home modifications, planning requirements and how to meet building codes
- 2) Identify suitable properties where an increase in the number of dwellings could be possible
- 3) Provide more information for such opportunities in partnership with organisations such as the Australian Institute of Architects or Housing Industry Association
- 4) Consider allocating officer time as point of contact on finding these local housing solutions
- 5) Consider the financial return to Council in order for the program to be successful.”

Rationale:

“ABS figures suggest that in 2016, there were 2.6 occupants per dwelling in Hobart. Much of Hobart’s housing stock is free standing on large blocks. Some properties have been used as family homes and whilst children have since moved on, family homes are still being used with many empty rooms. There may be the chance to down-size on the same property and to increase the number of dwellings, even within the footprint of the original house for example, that may not have been thoroughly contemplated.

The current housing shortage provides Council with good reason to be proactive in finding more solutions by both pointing out what is possible, and where the Planning Schemes limit such options.

Some properties, depending on their zone may lend themselves to having greater numbers of dwellings on the site. This could be floors or

sections of a free-standing house that may be strata titled, or could have other freestanding dwellings such as granny flats built on the property.

Providing proactive advice as to possible options that fit with the Planning Schemes and the neighbourhood could help provide dwellings that are low cost but that provide tangible outcomes to Hobart's housing shortage."

The Chief Executive Officer advises:

"That this matter relates to planning and building controls and the promotion of housing outcomes consistent with current controls."

10. RESPONSES TO QUESTIONS WITHOUT NOTICE

Regulation 29(3) *Local Government (Meeting Procedures) Regulations 2015*.
File Ref: 13-1-10

The Chief Executive Officer reports:-

"In accordance with the procedures approved in respect to Questions Without Notice, the following responses to questions taken on notice are provided to the Committee for information.

The Committee is reminded that in accordance with Regulation 29(3) of the *Local Government (Meeting Procedures) Regulations 2015*, the Chairman is not to allow discussion or debate on either the question or the response."

10.1 Central Business District - Amenity

File Ref: F21/14019; 13-1-10

Memorandum of the Director City Planning of 9 June 2021.

10.2 Golf Links Estate - Possible Subdivision

File Ref: F21/24434; 13-1-10

Memorandum of the Director City Planning of 9 June 2021.

10.3 Residential Density

File Ref: F21/41381; 13-1-10

Memorandum of the Director City Planning of 9 June 2021.

That the information be received and noted.

Delegation: Committee



City of **HOBART**

Memorandum: Lord Mayor
Deputy Lord Mayor
Elected Members

Response to Question Without Notice

CENTRAL BUSINESS DISTRICT - AMENITY

Meeting: City Planning Committee

Meeting date: 15 February
2021

Raised by: Deputy Lord Mayor Burnet

Question:

Can the Acting Director City Planning advise in relation to the amenity of residents within the commercial area of the CBD, is there a likelihood that bar areas would be retained away from residential establishments and in zoned areas such as along Elizabeth Street?

Response:

Unless it is proposed to change the zoning within the CBD to prohibit bars in certain areas then it is unlikely that bars will be limited spatially within the CBD.

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

Date: 9 June 2021
File Reference: F21/14019; 13-1-10



City of **HOBART**

Memorandum: Lord Mayor
Deputy Lord Mayor
Elected Members

Response to Question Without Notice

GOLF LINKS ESTATE - POSSIBLE SUBDIVISION

Meeting: City Planning Committee

Meeting date: 15 March 2021

Raised by: Alderman Briscoe

Question:

Can the Acting Director advise how many residential lots in the Golf Links Estate could be possibly subdivided?

Response:

It is not possible to definitively say without detailed analysis of each site taking into account location of existing dwellings and assessment of performance criteria.

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

Date: 9 June 2021
File Reference: F21/24434; 13-1-10



City of **HOBART**

Memorandum: Lord Mayor
Deputy Lord Mayor
Elected Members

Response to Question Without Notice

RESIDENTIAL DENSITY

Meeting: City Planning Committee

Meeting date: 19 April 2021

Raised by: Deputy Lord Mayor Burnet

Question:

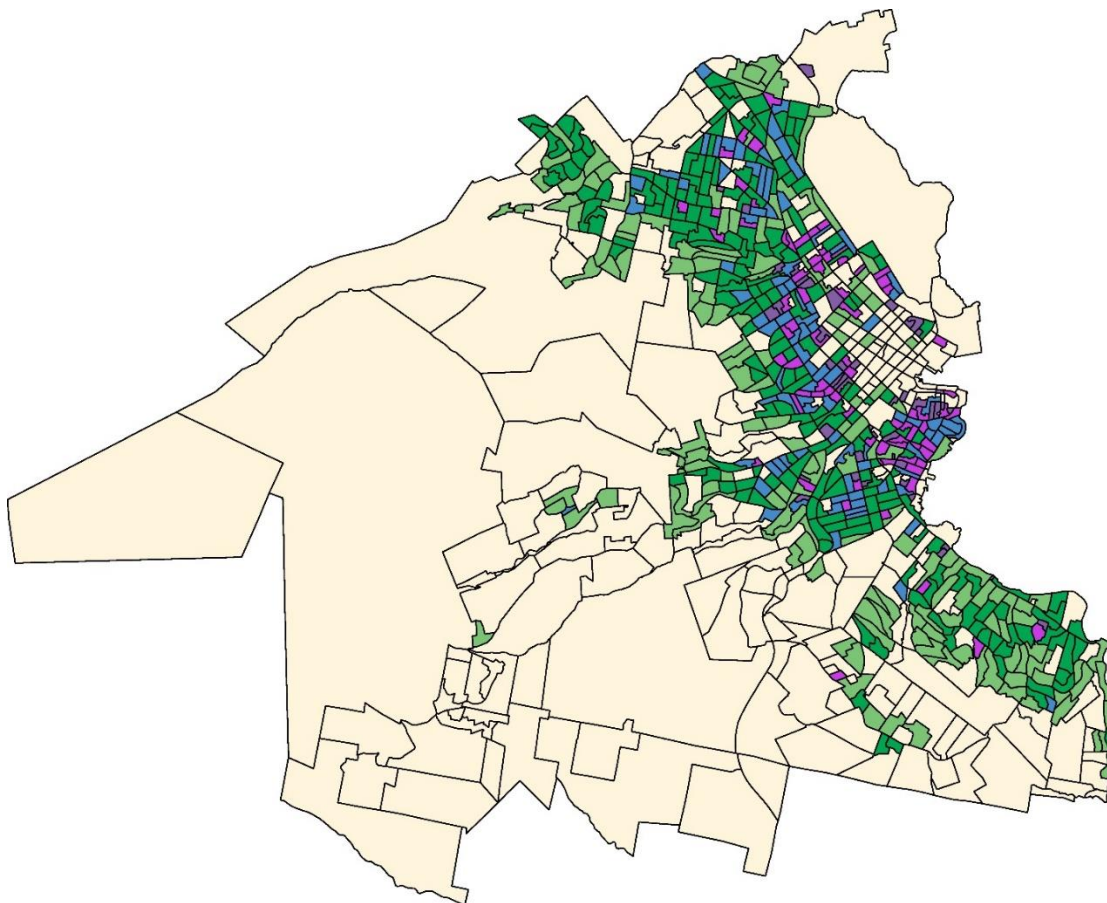
Could the Director please provide advice as to which areas of Hobart have the greatest residential density presently, and what that density is (in broad terms)?

Response:

Below is a map of the City of Hobart outlining the density of dwellings per hectare based on the 2016 ABS census.

Legend

Dwelling per hectare



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

Date: 9 June 2021
File Reference: F21/41381; 13-1-10

11. QUESTIONS WITHOUT NOTICE

Section 29 of the *Local Government (Meeting Procedures) Regulations 2015*.
File Ref: 13-1-10

An Elected Member may ask a question without notice of the Chairman, another Elected Member, the Chief Executive Officer or the Chief Executive Officer's representative, in line with the following procedures:

1. The Chairman will refuse to accept a question without notice if it does not relate to the Terms of Reference of the Council committee at which it is asked.
2. In putting a question without notice, an Elected Member must not:
 - (i) offer an argument or opinion; or
 - (ii) draw any inferences or make any imputations – except so far as may be necessary to explain the question.
3. The Chairman must not permit any debate of a question without notice or its answer.
4. The Chairman, Elected Members, Chief Executive Officer or Chief Executive Officer's representative who is asked a question may decline to answer the question, if in the opinion of the respondent it is considered inappropriate due to its being unclear, insulting or improper.
5. The Chairman may require a question to be put in writing.
6. Where a question without notice is asked and answered at a meeting, both the question and the response will be recorded in the minutes of that meeting.
7. Where a response is not able to be provided at the meeting, the question will be taken on notice and
 - (i) the minutes of the meeting at which the question is asked will record the question and the fact that it has been taken on notice.
 - (ii) a written response will be provided to all Elected Members, at the appropriate time.
 - (iii) upon the answer to the question being circulated to Elected Members, both the question and the answer will be listed on the agenda for the next available ordinary meeting of the committee at which it was asked, where it will be listed for noting purposes only.

12. CLOSED PORTION OF THE MEETING

That the Committee resolve by majority that the meeting be closed to the public pursuant to regulation 15(1) of the *Local Government (Meeting Procedures) Regulations 2015* because the items included on the closed agenda contain the following matters:

- Confirm the minutes of the Closed portion of the meeting
- Questions without notice in the Closed portion

The following items were discussed: -

- | | |
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| Item No. 1 | Minutes of the last meeting of the Closed Portion of the Committee Meeting |
| Item No. 2 | Consideration of supplementary items to the agenda |
| Item No. 3 | Indications of pecuniary and conflicts of interest |
| Item No. 4 | Responses to Questions Without Notice |
| Item No. 4.1 | Economic Impact Assessment Report
LG(MP)R 15(2)(c)(i) |
| Item No. 4.2 | Aboriginal Heritage Site Assessment
LG(MP)R 15(4)(a) |
| Item No. 5 | Questions Without Notice |