CITY OF HOBART

AGENDA

City Planning Committee Meeting

Open Portion

Tuesday, 26 April 2022

at 5:00 pm
Council Chamber, Town Hall

THE MISSION

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

THE VALUES

The Council is:

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

ORDER OF BUSINESS

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

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City Planning Committee Meeting (Open Portion) held Tuesday, 26 April 2022 at 5:00 pm in the Council Chamber, Town Hall.

This meeting of the City Planning Committee is held in accordance with a Notice issued by the Premier on 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)
Alderman J Briscoe
Councillor W F Harvey
Alderman S Behrakis
Councillor M Dutta
Councillor W Coats

Apologies:

Leave of Absence: Nil.

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

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

2. CONFIRMATION OF MINUTES

The minutes of the Open Portion of the City Planning Committee meeting held on Monday, 4 April 2022, are submitted for confirming as an accurate record.

3. CONSIDERATION OF SUPPLEMENTARY ITEMS

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

Recommendation

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

4. INDICATIONS OF PECUNIARY AND CONFLICTS OF INTEREST

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

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

5. TRANSFER OF AGENDA ITEMS

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

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

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

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

6. PLANNING AUTHORITY ITEMS - CONSIDERATION OF ITEMS WITH DEPUTATIONS

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

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

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

RECOMMENDATION

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

7. COMMITTEE ACTING AS PLANNING AUTHORITY

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

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

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

7.1 APPLICATIONS UNDER THE HOBART INTERIM PLANNING SCHEME 2015

7.1.1 83 MELVILLE STREET, 80 MELVILLE STREET, HOBART AND ADJACENT ROAD RESERVE - PARTIAL DEMOLITION, ALTERATIONS, EXTENSION, CHANGE OF USE TO EDUCATIONAL AND OCCASIONAL CARE, AND ASSOCIATED WORKS IN ROAD RESERVE PLN-21-869 - FILE REF: F22/35906

Address:	83 Melville Street, 80 Melville Street, Hobart and Adjacent Road Reserve
Proposal:	Partial Demolition, Alterations, Extension, Change of Use to Educational and Occasional Care, and Associated Works in Road Reserve
Expiry Date:	3 May 2022
Extension of Time:	Not applicable
Author:	Michael McClenahan

RECOMMENDATION

That pursuant to the *Hobart Interim Planning Scheme 2015*, the Council approve the application for partial demolition alterations, extension, change of use to educational and occasional care, and associated works in road reserve at 83 Melville Street, 80 Melville Street, Hobart TAS 7000 and adjacent road reserve 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-21-869 - 83 MELVILLE STREET HOBART TAS 7000 - Final Planning Documents except where modified below.

Reason for condition
To clarify the scope of the permit.

TW
The use and/or development must comply with the requirements of TasWater as detailed in the form Submission to Planning Authority Notice, Reference No. TWDA 2022/00056-HCC dated 10/03/2022 as attached to the permit.

Reason for condition
To clarify the scope of the permit.

THC
The use and/or development must comply with the requirements of the Tasmanian Heritage Council as detailed in the Notice of Heritage Decision, THC Works Ref: 6812 dated 20 March 2022, as attached to the permit.

Reason for condition
To clarify the scope of the permit.

PLN s4
Prior to the issue of any approval under the *Building Act 2016,* revised plans must be submitted and approved as a Condition Endorsement showing:

1. Detailed landscaping plan of Brisbane Street laneway, including species and maximum heights of vegetation, to ensure passive surveillance between Brisbane Street and the entrance at the end of the laneway.

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 building design provides for the safety of the public.

ENG 12
A demolition and construction waste management plan must be submitted and approved as a Condition Endorsement, prior to issue of any building approval, or commencement of work, including demolition (whichever occurs first).

The demolition and construction waste management plan submitted for approval must include:

- Provisions for the handling, storage, transport, and disposal, of demolition material including any contaminated waste and recyclables,
- Provisions for the handling, storage, transport, and disposal, of post-construction solid waste and recycle bins from the development, and
- Any other details the Council deem necessary.

The approved demolition and construction waste management plan must be implemented throughout demolition and construction works approved by this permit.

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

It is recommended that the developer liaise with the Council's City Resilience Unit regarding reducing, reusing, and recycling materials associated with demolition on the site to minimize 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).

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

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

SW 1
Prior to the issue of any approval under the *Building Act 2016* or the commencement of work on the site (whichever occurs first), a pre-construction structural condition assessment and visual record (eg video and photos) of the Hobart City Council's stormwater infrastructure within and adjacent to the proposed development must be submitted to the City of Hobart as a Condition Endorsement.

The condition assessment must include at least:

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

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

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

SW 2
Prior to occupancy or the commencement of the approved use (whichever occurs first), a post-construction structural condition assessment and visual record (eg video and photos) of the existing and new Hobart City Council's stormwater infrastructure within and adjacent to the proposed development, must be submitted to the City of Hobart.

The condition assessment must include at least:

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

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

Advice:

This may be able to be combined with the condition assessments of the new public assets required under the Permit to Construct Public Infrastructure, depending on timing of works.

SW 3
The proposed works including foundations and overhangs must be designed to ensure the long term protection of and access to the Council's stormwater infrastructure.

A detailed design certified by a suitably qualified engineer must be submitted and approved prior to issue of any consent under *Building Act 2016* / commencement of works (whichever occurs first).

The detailed design must:

a. Demonstrate how the design will maintain the overland flow path, provide adequate access to the main, impose no additional loads onto the main and that the structure will be fully independent of the main and its trenching.
b. Include cross-sections clearly showing the relationship both vertically and horizontally between Council's stormwater infrastructure and the proposed works (including footings), and stating the minimum setbacks from the works to the nearest external surface of the main.
c. Include a long-section of Council's stormwater main clearly showing proposed cover. If the cover is less than 600mm, engineering details and full calculations to relevant Australian standards (including construction traffic loading) must be submitted to demonstrate the mains can withstand the likely forces and will be adequately protected. All assumptions must be stated.
d. Be certified by a suitably qualified engineer

Prior to issue of any Certificate of Completion a suitably qualified engineer must confirm the installation of the works within two metres of Council's stormwater main / construction of the retaining wall is in accordance with the approved drawings and complies with this condition. Should any remediation works be required, these must be carried out at the developer's cost.

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

You will need specific permission from Council's Stormwater Unit under s73 of the Building Act 2016 *and s13 of the* Urban Drainage Act *for the final certified detailed design plans.*

SW 5
Construction of the development must not adversely impact the Council's stormwater infrastructure.

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 public assets 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;
4. incorporate the tree protection measures referred to in conditions OPS4 and OPS5;and
5. demonstrates how service to the upstream catchment will be maintained

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 6
The new stormwater infrastructure must be designed and constructed prior to occupancy or the commencement of the approved use (whichever occurs first).

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

1. be substantially in accordance with the Local Government Association of Tasmania: Tasmanian Municipal Standard Drawings (May 2020), as varied by the City of Hobart's published departures from those Drawings (available from here), and the Local Government Association of Tasmania, Tasmanian Subdivision Guidelines (October 2013);
2. clearly distinguish between public and private infrastructure;
3. show in both plan and long-section the final design of the proposed

stormwater mains, including but not limited to, connections, flows, velocities, hydraulic grade lines, clearances, cover, gradients, sizing, material, pipe class, adequate working platforms around manholes, easements and inspection openings;

4. The stormwater system (including defined overland flow paths) must cater for all 1% AEP event flows as at 2100 (i.e including climate change loading) from a fully developed catchment. The main itself must be sized to accommodate at least the 5% AEP event flows from a fully-developed catchment;
5. any backflow prevention required must be privately owned and maintained

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

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

A Permit to Construct Public Infrastructure will be required. This will include requirements for a maintenance period, bond, and condition assessments.

SW 9
Prior to occupancy or the commencement of the approved use (whichever occurs first), stormwater pre-treatment for stormwater discharges from the development must be installed.

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

1. include detailed design of the proposed treatment train, including estimations of contaminant removal sufficient to achieve the stormwater quality and quantity targets in accordance with the State Stormwater Strategy 2010, unless it is not feasible to do so;
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. Council notes and supports the proposed capture and reuse of roofwater.

SW 11
Measures to adequately convey the overland flow path through the site and mitigate flood risk from the critical 1% AEP at 2100 event must be installed prior to occupancy or issue of any completion (whichever occurs first).

Detailed engineering drawings accompanied with a report must be submitted 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). These must include (but are not limited to):

1. certification from an accredited and qualified structural engineer that all proposed structures within the flood zone are designed to resist inundation, erosion, undermining and likely forces from a flood event (including debris loading);
2. The final building plans must be in general accordance with the submitted details of the JMG "Flood Analysis and Stormwater Report" dated December 2021, and detail the flood mitigation/ overland flow path measures.
3. details of management of the flood zone including signage and measures to prevent blockage of the overland flow path (such as bollards, gratings, surface treatment, and restrictions on use of the area including furniture, minor works); This must also clearly address when the building is not occupied.
4. a flood management summary plan from a suitably qualified and experienced expert that outlines the obligations for future property owners to flood and overland flow management, including:

5.

a) the flood risk to the site, including depth, extent and hazard ratings for the 1% AEP at 2100 event;

b) key assumptions included in the flood modelling and resultant uncertainty in the model results.

c) identification of all measures to maintain and maximise the overland flow path through the site and their maintenance;

d) identification of all flood management measures and their required maintenance

All work required by this permit must be undertaken and maintained in accordance with the approved detailed drawings and report.

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 Flood Management Summary Plan is not a Flood Study, but rather a plain English document summarising risk and actions required by a future site manager.

ENG 13
A waste management plan must be submitted and approved as a Condition Endorsement, prior to issue of any building approval, or commencement of work, including demolition (whichever occurs first).

The waste management plan submitted for approval must include;

- Provisions for commercial waste services and facilities for the handling, storage, transport, and disposal of waste generated by the development, and
- Any other details the Council deem necessary.

All works required to satisfy this condition must be undertaken in accordance with the approved waste management plan.

The approved waste management plan must be also be implemented on an ongoing basis post construction, prior to first occupation or commencement of use (whichever occurs first).

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 2a
Prior to first occupation or commencement of use (whichever occurs first), physical controls (i.e. barriers, wheel stops, kerbs, and other protective devices) must be designed by a suitably qualified person and installed in accordance with the Australian Standard AS/NZS 2890.1:2004. Physical controls designed and installed must contain and limit vehicle travel appropriately, and shall not introduce conflicts with the plans approved by this permit.

Advice:
Any drop heights off trafficable areas as a result of the development, be it for existing or proposed parking areas both within neighboring/adjacent sites or the subject site, form part of the scope of this condition and as such must be addressed.

Designers are advised to consult the National Construction Code 2016 *to determine if pedestrian handrails or safety barriers compliant with the Code 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 3b
Drawings must be submitted and approved as a Condition Endorsement, prior to the issue of any building approval, or commencement of work (whichever occurs first).

The following aspects of the proposed parking area require further attention:

1. Detailed design of parking bays, including dimensioned commercial vehicle service bay(s), and bays for people with disabilities.

The drawings submitted for approval must:

1. Be prepared and certified by a suitably qualified person,
2. Be in accordance with AS/NZS 2890.1:2004, AS/NZS 2890.2-2002, AS/NZS 2890.6:2009, and related Australian Standards,
3. Where the design deviates from the relevant Australian Standards, the designer must demonstrate the provision of a safe and efficient access, and enable safe, easy and efficient use, and
4. Show dimensions, levels, gradients and transitions, and any other details as Council deem necessary for granting approval.

Prior to first occupation or commencement of use (whichever occurs first), the parking area must be constructed in accordance with the drawings approved by 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 4
Prior to first occupation or commencement of use (whichever occurs first), the parking area approved by this permit must be constructed to a sealed standard (e.g. spray seal, asphalt, concrete, pavers, or other Council approved equivalent) and surface drained to the City'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
Prior to first occupation or commencement of use (whichever occurs first), 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 Standard AS/NZS 2890.1:2004.

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

ENG 9
Prior to first occupation or commencement of use (whichever occurs first), all parking spaces for people with disabilities must be identified and delineated in accordance with Australian Standard AS/NZS 2890.6:2009.

Reason for condition
In the interests of vehicle user safety and the amenity of the development.

ENG 11
Prior to first occupation or commencement of use (whichever occurs first), all crossovers deemed redundant must be reinstated in accordance with the design details approved under GMC-21-84.

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

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

Reason for condition
In the interests of vehicle user safety and the amenity of the development.

ENG 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 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.

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 9
Revised plans for 83 Melville Street (Building 1 - Crisp and Gunn workshop/store) and 79 Melville Street (Building 2 - Crisp and Gunn Offices) must be submitted.

The revised plans must:

- show the retention and conservation of the flag pole on the front facade, the door identified as element 10 (p.140) and safe door.
- show additional detailed design that results in a reduction in the demolition on the ground floor between the main chamber, the stair hall and the service area in order to retain the spatial qualities of the main chamber. Where there is a conflict between the recommendations of the Heritage Impact Statement and the significance identified in the Praxis report (section 6, pp. 96-102), the features with high significance in the Praxis report will prevail.
- show additional detailed design that results in a reduction in the demolition on the first floor and roof structures of Building 2. Where there is a conflict between the recommendations of the Heritage Impact Statement and the significance identified in the Praxis report (section 6, pp. 96-102), the features with high significance in the Praxis report will prevail.
- show additional detailed design that reduces the demolition on the first floor/ceiling of Building 1.

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 detailed design 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.

It is recommended that in the resolution of the use and spatial requirements to the space shown in Building 1 - 83 Melville Street the original floor between the basement and first floor be retained to a greater extent to reduce the impact on the structural integrity and an ability to discern the spatial layout of the building as per the advice of the Praxis report (p.131)

Reason for condition
To ensure that demolition in whole or part of a heritage place does not result in the loss of historic cultural heritage values.

HER 10
Drawings must be submitted showing how any secondary glazing to the original windows is detailed. The design of the secondary glazing must be sympathetic in detail, materials and colour to ensure the original windows and window furniture is retained, protected, conserved and maintained.

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 detailed design 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 demolition in whole or part of a heritage place does not result in the loss of historic cultural heritage values.

HER 6
All on-site excavation and disturbance with the area designate as being of high and low/no archaeological sensitivity in the Praxis report “Statement of Historical Archaeological Potential” (see section 7.6 of the Praxis report) must be undertaken in accordance with the above report by a suitably qualified archaeologist.

1. A qualified archaeologist must be engaged to undertake archaeological excavations and provide advice and assessment of the features and/or deposits discovered and make recommendations on all and further excavation and/or disturbance; and
2. All and any recommendations made by the archaeologist engaged in accordance with 1.above must be complied with in full; and
3. All features and/or deposits discovered must be reported to the Council with 1 day of the discovery; and
4. A qualified archaeologist must undertake an audit of bulk archaeological material, should any be uncovered. The bulk

archaeological material may include worked sandstone blocks, 19th century bricks or cobblestones and be suitable for reuse. These bulk archaeological materials must be retained on site unless approval for removal to a secure site is given by Council.

5. A copy of the archaeologist's advice, assessment and recommendations obtained in accordance with 1, 2 and 4 above must be provided to Council within 60 days of receipt of the advice, assessment and recommendations.

Excavation and/or disturbance must not recommence unless and 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 commencement of construction.

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 installed prior to the issue of a certificate of completion.

Reason for condition
To ensure that there is public benefit from archaeological investigations.

HER 8
The audit report prepared in accordance with condition HER 6 must be submitted and approved as a Condition Endorsement prior to the commencement of building work.

The audit report must also demonstrate how the finds described in HER 6 sub-clause 4 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 process showing the recommendations of the audit report in accordance with a above requirement.

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

Advice:
This conditions 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
Prior to the issue of any approval under the *Building Act 2016*, the following must be submitted and approved as Condition Endorsement:

PCL1 ENVIRONMENTAL SITE ASSESSMENT
A full contamination Environmental Site Assessment report prepared by a suitably qualified and experienced person in accordance with the procedures and practices detailed in the National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPM) as amended 2013 must be provided. The report must conclude:

- Whether any site contamination presents a risk to workers involved in redevelopment of the site, or future users of the site, as a result of proposed excavation of the site.
- Whether any site contamination presents an environmental risk from excavation conducted during redevelopment of the site.
- Whether any specific remediation and/or protection measures are required to ensure proposed excavation does not adversely impact human health or the environment before excavation commences.

REMEDIATION AND PROTECTION MEASURES

If the Environmental Site Assessment report concludes that remediation and/or protection measures are necessary to avoid risks to human health or the environment, a proposed remediation and/or management plan must be submitted. Any remediation or management plan involving soil disturbance must include a detailed soil and water management plan to prevent off-site transfer of potentially-contaminated soil or stormwater.

STATEMENT OF SUITABILITY

A statement based on the results of the Environmental Site Assessment that the excavation as part of the planned works will not adversely impact on human health or the environment is to be provided (subject to implementation of any identified remediation and/or protection measures as required).

The Environmental Site Assessment submitted must address the four target aspects representing potential site contamination that require further assessment, listed in the cover letter by GHD dated 15 February 2022 and titled 'Application No. PLN-21-869 83 Melville Street - Assessment against the Potentially Contaminated Land Code.'

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

Advice:
This conditions 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 risk to human health and the environment remains low.

OPS 3
All works within the tree protection zone (TPZ) as defined in the Australian Standard *AS 4970 – 2009 Protection of trees on developments sites*, including works on the footpath as well as works to install underground services, of trees 1-3 in the Development Impact Assessment 79-83 Melville Street, Hobart dated 16/2/2022, by Element Tree Services, must be overseen by a suitably qualified and experienced arborist. Site workers

are to follow all directions from the Project Arborist regarding measures required to protect the tree. The Project Arborist must document all works within the TPZ and provide a written report that includes photos of the works, including any roots that were encountered, and certification that the works did not impact on the tree's long-term health and stability.

Reason for condition
To maintain the amenity value of street trees as per the City of Hobart Street Tree Strategy.

OPS 4
Two *Platanus x acerifolia* (London plane) trees in Brisbane Street must be protected from damage during the works, as per chapter 4 Tree protection of Element Tree Services' DEVELOPMENT IMPACT ASSESSMENT 79-83 Melville Street, Hobart 16/02/2022. Therefore, prior to works commencing, all of the tree protection zones of both trees are to be fenced off and signs erected stating that the fencing is for tree protection. Where works encroach into the tree protection zones, the fencing should be erected as close to the edge of the zone as possible, to the satisfaction of the Project Arborist. No works are to occur within the fenced areas.

Reason for condition
To maintain the amenity value of street trees as per the City of Hobart Street Tree Strategy.

OPS 5
Details of the street tree protection measures specified in permit condition OPS 4 must be clearly notated on any plans submitted to the Council under the *Building Act 2016.*

Advice:
Once the plans showing tree protection measures have been approved, the City will issue a condition endorsement (see general advice on how to obtain condition endorsement). 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 maintain the amenity value of street trees as per the City of Hobart Street Tree Strategy.

Part 5 1
The owner(s) of the property must enter into an agreement with the planning authority pursuant to Part 5 of the *Land Use Planning and Approvals Act 1993* prior to the issue of occupancy or any completions under the Building Act 2016 (whichever occurs first). The Agreement must:

- prohibit any development, works or use of the land which alters the level of the land or interferes with the free flow of water within the identified overland flow path beyond that approved under this planning permit without the written permission of Council;
- agree to comply with the approved Flood Management Summary Plan;
- indemnify Council against any costs or claims arising from the works within the identified 1% AEP flood extent;
- indemnify Council against any costs or claims arising from building over or within two metres of the Council's stormwater mains or for damages incurred in the act of performing operation, maintenance, or replacement tasks on the stormwater mains;
- not perform any future works to the structure within two metres of the main, including replacement of footings without written permission from Council

The Council will have its solicitors prepare the Agreement for signing by property owner(s). The Council will then lodge the Agreement with the Lands Titles Office. The cost of preparing the Agreement and registration with the Land Titles Office is to be met by the applicant.

Advice:
Please contact the Development Appraisal Planner to initiate preparation of the Agreement.

Please note the Flood Management Summary plan is that referred to in condition SW11. This will need to be submitted and approved prior to the Part 5.

Reason for condition
To ensure that the risks associated with building in a flood zone and near Council's stormwater infrastructure are managed.

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 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.

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.*

PERMIT TO CONSTRUCT PUBLIC INFRASTRUCTURE
You may require a permit to construct public infrastructure, with a 12 month maintenance period and bond (please contact the Hobart City Council's City Life Division to initiate the permit process).

NEW SERVICE CONNECTION
Please contact the Hobart City Council's City Life Division to initiate the application process for your new stormwater connection.

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

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

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

CBD AND HIGH VOLUME FOOTPATH CLOSURES
Please note that the City of Hobart does not support the extended closure of public footpaths or roads to facilitate construction on adjacent land.

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

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

For more information about this requirement please contact the Council's Mobility Unit on 6238 2711.

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

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

STORMWATER / 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.

NOISE REGULATIONS

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

WASTE DISPOSAL

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

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

FEES AND CHARGES

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

DIAL BEFORE YOU DIG

Click here for dial before you dig information.

HERITAGE

It is recommended that a Construction Management Plan address impacts on adjacent heritage listed buildings/foundations and structures to ensure that these structures are not negatively impacted on by vehicular movements, excavation, construction and vibration.

Further investigation and exploratory work within the interior of building 2 may be necessary to inform the additional design work. Works to investigate can be undertaken on the basis that no heritage fabric is damage.

Further investigations to ascertain if the original signage for Crisp and Gunn are behind the blue banner signs on Building 1 and 2 can be undertaken. If present the signage should be retained, conserved and revealed.

Attachment A:	PLN-21-869 - 83 MELVILLE STREET HOBART TAS 7000 - Planning Committee or Delegated Report ⇩
Attachment B:	PLN-21-869 - 83 MELVILLE STREET HOBART TAS 7000 - Attachment B Part 1 ⇩
Attachment C:	PLN-21-869 - 83 MELVILLE STREET HOBART TAS 7000 - CPC Agenda Documents Part 2 (Contaminated Land Report and Traffic Impact Assessment) ⇩
Attachment D:	PLN-21-869 - 83 MELVILLE STREET HOBART TAS 7000 - ~ CPC Agenda Documents Part 3 (Stormwater Report and Concept Services Report)(2) ⇩
Attachment E:	PLN-21-869 - 83 MELVILLE STREET HOBART TAS 7000 - CPC Agenda Documents Part 4 (Heritage Report and Arborist Assessment) ⇩
Attachment F:	PLN-21-869 - 83 MELVILLE STREET HOBART TAS 7000 - CPC Agenda Documents Part 5 (Correspondence and TasWater Details) ⇩
Attachment G:	PLN-21-869 - 83 MELVILLE STREET HOBART TAS 7000 - Attachment G - Site Details ⇩
Attachment H:	PLN-21-869 - 83 MELVILLE STREET HOBART TAS 7000 - Heritage Referral Officer Report ⇩
Attachment I:	PLN-21-869 - 83 MELVILLE STREET HOBART TAS 7000 - Development Engineer Officer Report ⇩
Attachment J:	PLN-21-869 - 83 MELVILLE STREET HOBART TAS 7000 - Urban Design Advisory Panel Report ⇩
Attachment K:	Notice of Heritage Decision WA6812 ⇩

City of HOBART

APPLICATION UNDER HOBART INTERIM PLANNING SCHEME 2015

Type of Report:	Committee
Council:	2 May 2022
Expiry Date:	3 May 2022
Application No:	PLN-21-869
Address:	83 MELVILLE STREET , HOBART 80 BRISBANE STREET , HOBART ADJACENT ROAD RESERVE
Applicant:	(University of Tasmania) C/- All Urban Planning Pty Ltd 19 Mawhera Avenue
Proposal:	Partial Demolition, Alterations, Extension, Change of Use to Educational and Occasional Care, and Associated Works in Road Reserve
Representations:	119
Performance criteria:	Central Business Zone Development Standards, Potentially Contaminated Land Code, Parking and Access Code, Stormwater Management Code Attenuation Code, Historic Heritage Code, and Inundation Prone Areas Code

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1. Executive Summary

1.1 Planning approval is sought for Partial Demolition, Alterations, Extension, Change of Use to Educational and Occasional Care, and Associated Works in Road Reserve, at 83 Melville Street, 80 Brisbane Street, and Adjacent Road Reserve.

1.2 More specifically the proposal includes:

- Partial demolition and redevelopment of the existing buildings on the site for Educational use by the University of Tasmania
- Partial demolition of existing building at 80 Brisbane Street including removal of sections of Brisbane Street façade, existing driveway and steps, infill of existing lower floor car park, and internal demolition of stairs and partitions
- Partial demolition of existing building at 83 Melville Street including removal of internal partitions and walls, internal demolition of staircases and new openings in upper floors, and demolition of existing roof structure
- Level 01: Internal alterations and works including new entry and winter garden at Melville Street frontage, collaborative classrooms, project and meeting rooms, office space secure bicycle storage (5 spaces), end of trip facilities (66 lockers and 6 showers), utilities, waste storage, and services rooms, and a single tenancy space on Melville Street frontage
- Level 02: Internal alterations and works including collaborative classrooms, project and meeting rooms, office space, new façade at Brisbane street frontage and new vehicle and bicycle entry from Brisbane Street frontage
- Installation of new roofing on buildings
- Five car parking spaces (including one disabled access space) and loading dock will be provided with access from the Brisbane Street frontage
- Creation of a landscaped pedestrian link from Brisbane Street along the north eastern boundary and providing access to Melville Street using the glazed dome space as a thoroughfare
- Revitalisation of the glazed dome as an internal garden space that will form part of a pedestrian link
- Trunk sewer and stormwater infrastructure upgrade and relocation which will include works in the Brisbane Street road reserve

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

1.3.1 Central Business Zone Development Standards - Passive Surveillance, Waste Storage and Collection
1.3.2 Potentially Contaminated Land Code - Excavation
1.3.3 Parking and Access Code - Layout of Parking Area, Siting of Car Parking
1.3.4 Stormwater Management Code - Stormwater Drainage and Disposal
1.3.5 Attenuation Code - Development for Sensitive Use in Proximity to Use with Potential to Cause Environmental Harm
1.3.6 Historic Heritage Code - Demolition on a Listed Place, Building and Works other than Demolition on a Listed Place Place, Building and Works and Demolition in a Place of Archaeological Potential
1.3.7 Inundation Prone Areas Code - Riverine, Coastal Investigation Area, Low, Medium, High Inundation Hazard Areas

1.4 One hundred and nineteen (119) representations were received within the statutory advertising period between 16/03/2022 - 10/04/2022. Of the representations received, ninety six (96) objected to the proposal and twenty three (23) supported the proposal.

1.5 The application was considered by the Urban Design Advisory Panel at its meeting of 2 February 2022. In the context of the provisions on which they were asked to comment, the Panel was broadly supportive of the proposal.

1.5 The proposal is recommended for approval subject to conditions.

1.6 The final decision is delegated to the Council, because the application includes work in Council's Road Reserve, more than five (5) objections were received during the public representation period, and involves a building in excess of 2000m^2 of floor area.

2. Site Detail

Refer to Attachment G of this report for the Site Details.

3. Proposal

3.1 Planning approval is sought for Partial Demolition, Alterations, Extension, Change of Use to Educational and Occasional Care, and Associated Works in Road Reserve, at 83 Melville Street, 80 Brisbane Street, and Adjacent Road Reserve.

3.2 More specifically the proposal is for:

- Partial demolition and redevelopment of the existing buildings on the site for Educational use by the University of Tasmania
- Partial demolition of existing building at 80 Brisbane Street including removal of sections of Brisbane Street façade, existing driveway and steps, infill of existing lower floor car park, and internal demolition of stairs and partitions
- Partial demolition of existing building at 83 Melville Street including removal of internal partitions and walls, internal demolition of staircases and new openings in upper floors, and demolition of existing roof structure
- Level 01: Internal alterations and works including new entry and winter garden at Melville Street frontage, collaborative classrooms, project and meeting rooms, office space secure bicycle storage (5 spaces), end of trip facilities (66 lockers and 6 showers), utilities, waste storage, and services rooms, and a single tenancy space on Melville Street frontage
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4/20/2022

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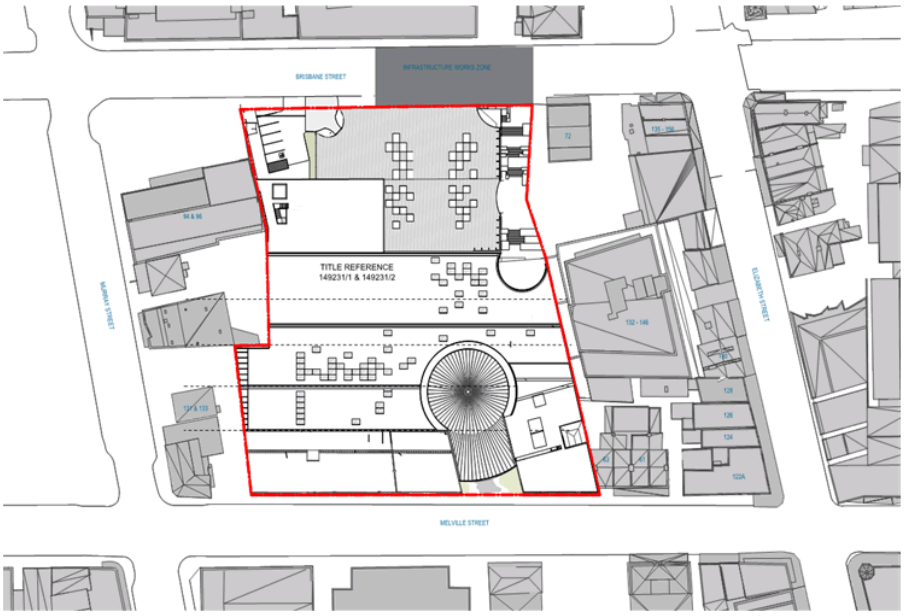

Figure 7: Site plan

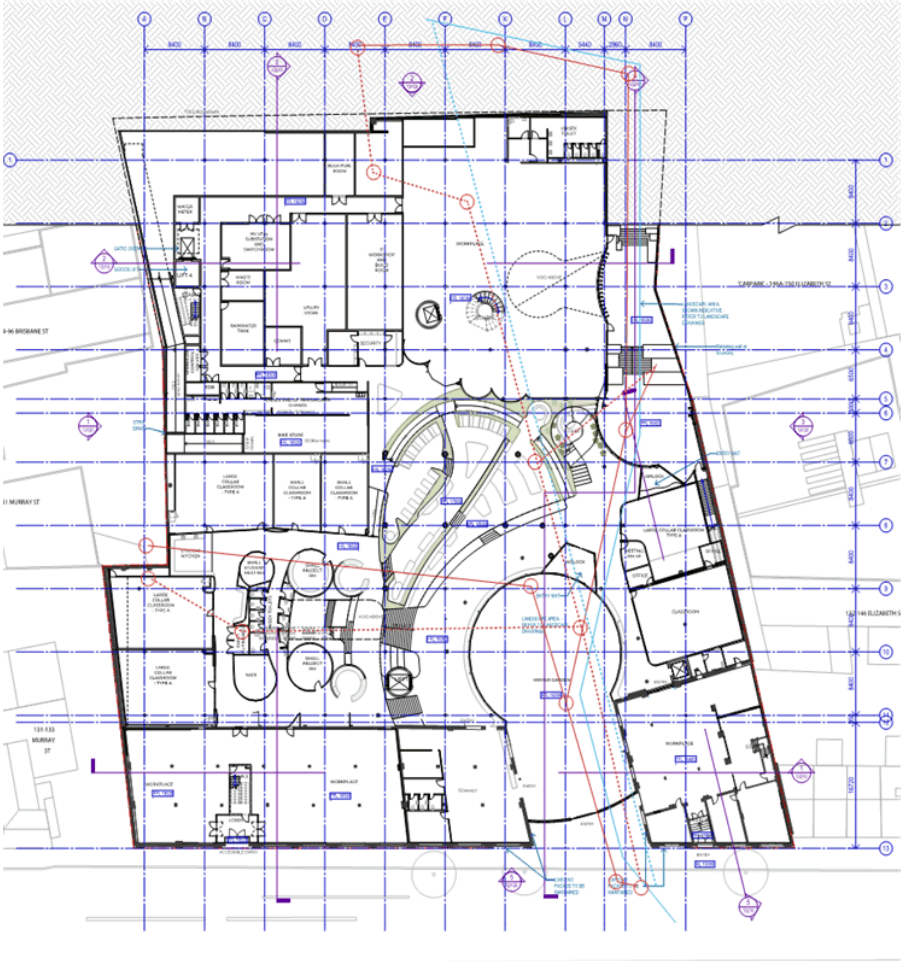

Figure 8: Proposed first floor plan.

4/20/2022

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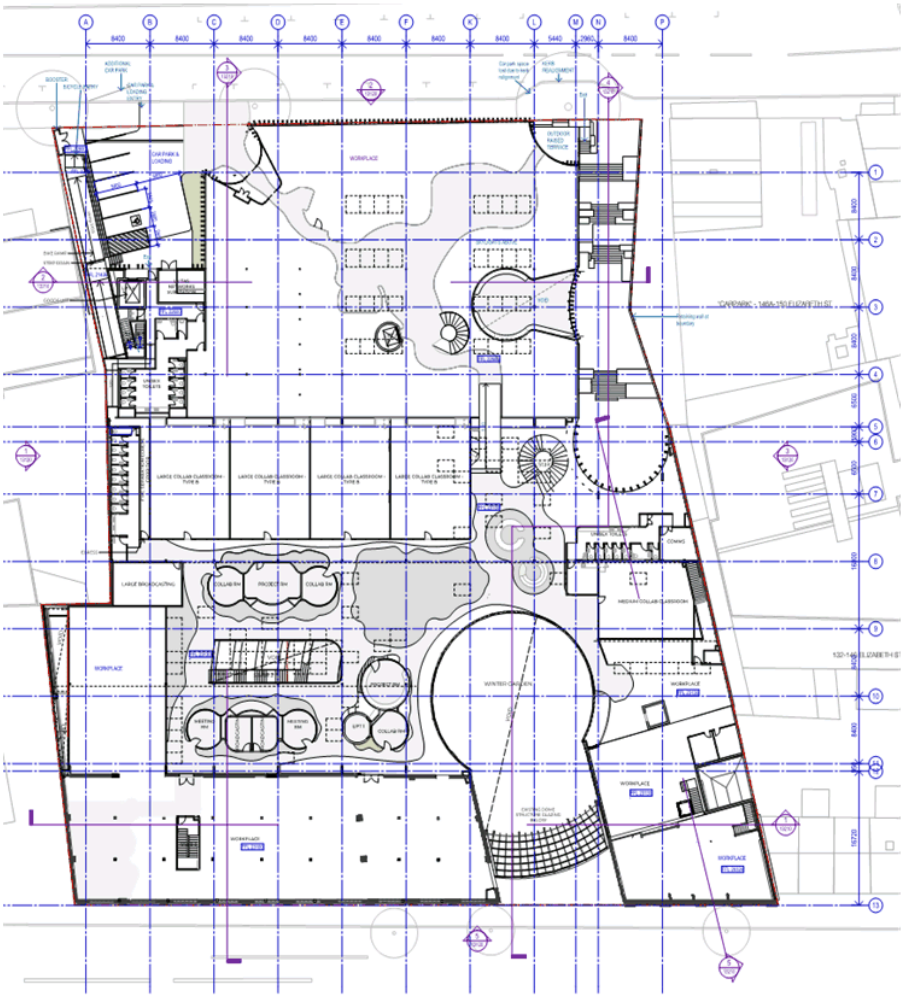

Figure 9: Proposed second floor plan.

4/20/2022

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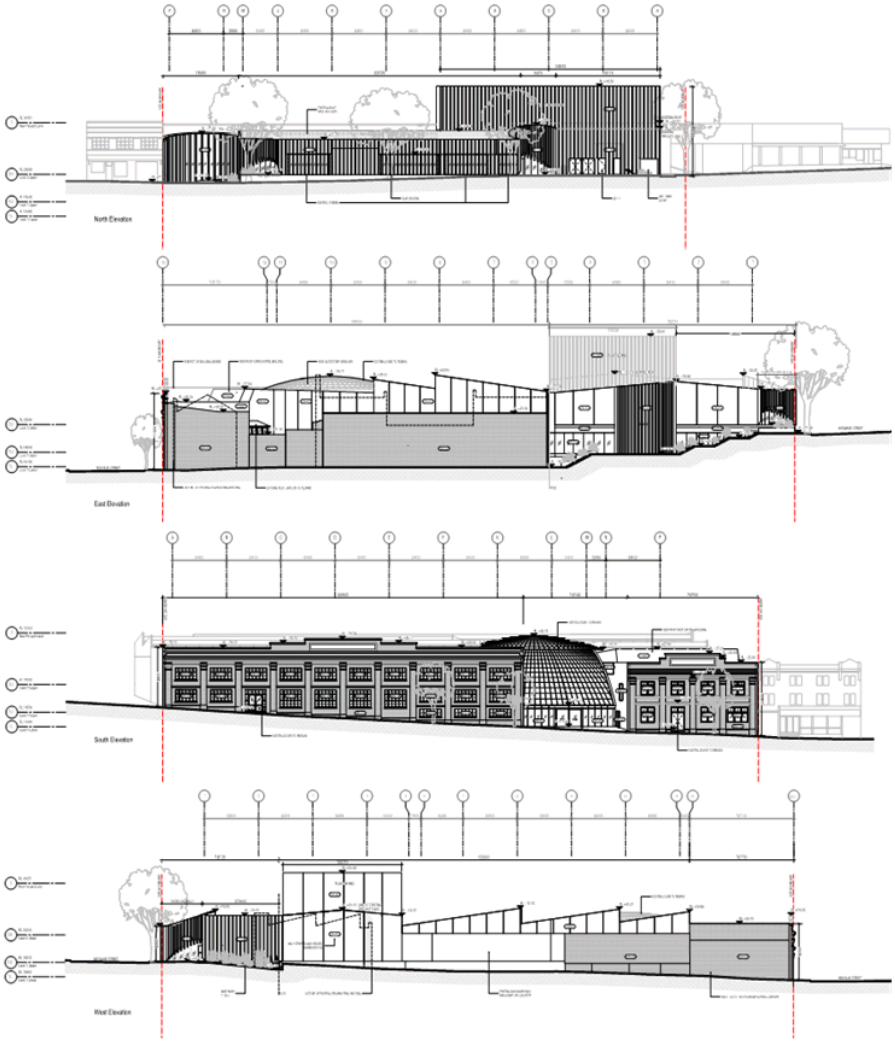


Figure 10: Proposed elevations of subject site.

4/20/2022 Icon Software Administration

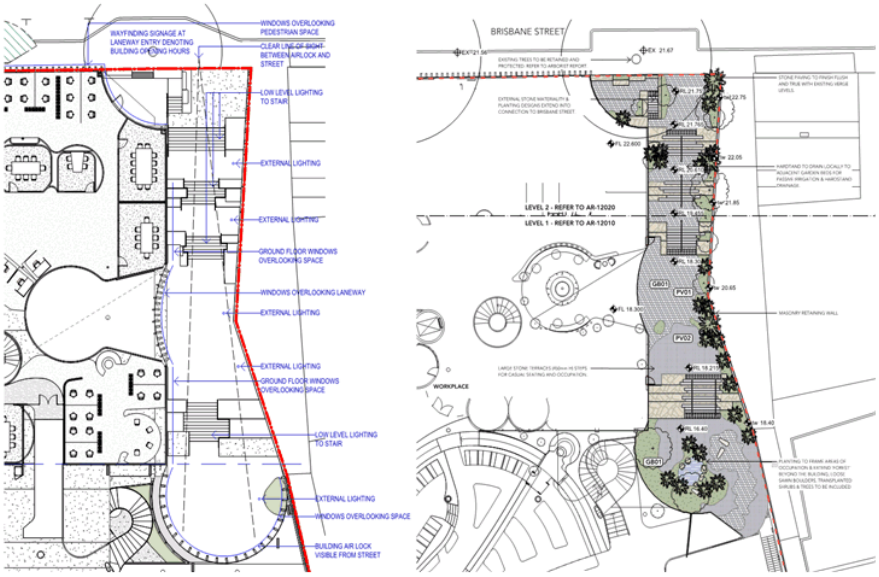


Figure 11: Details of pedestrian link and landscape plan

4. Background

4.1 The proposal includes work in the Melville and Brisbane Street Road Reserves and was granted General Manager Consent on 17 January 2022 to include the work in the Development Application.

4.2 The application was considered by the Urban Design Advisory Panel at its meeting of 2 February 2022. In the context of the provisions on which they were asked to comment, the Panel was broadly supportive of the proposal. The Panel's comments are included where relevant in section 6 of this report, and are discussed in section 7. The Panel's report is provided in full as an attachment to this report.

5. Concerns raised by representors

5.1 One hundred and nineteen (119) representations were received within the statutory advertising period between 16/03/2022 - 10/04/2022. Of the representations received, ninety six (96) objected to the proposal and twenty three (23) supported the proposal.

5.2 The original fourteen (14) day representation period was extended by an additional five (5) days and was to conclude on 04/04/2022, accessibility issues with advertised documents on the Council website during this additional period saw the extension of the advertising period a further six (6) days until 10/04/22.

5.3 The following table outlines the concerns raised in the representations received. Those concerns which relate to a discretion invoked by the proposal are addressed in Section 6 of this report.

Use
- Primary function of the Hobart CBD is to serve retail and business not education - A large education use will distort the activity centre hierarchy and is inconsistent with Zone Purpose Statements
Impacts to Hobart CBD
- Application does not address impacts of proposal on nearby businesses - Change will distort commercial values of land and impact upon small business - Loss of amenity through noise and rubbish due to increased activity of students and staff in the surrounding area - Dilapidation survey of adjoining properties should be required to be undertaken prior to commencement of works
Traffic
- Application does not address influence and impact on traffic flow in Hobart CBD and wider city network as a result of the proposal and modelling should be undertaken - Temporary closure of city streets during construction is unacceptable - Risk of future street closures to benefit University - City bypass would alleviate issues
Parking and Transportation

- There is insufficient parking provided for the projected numbers of students and staff - Will be impact on wider CBD parking availability as a result of proposal - Current alternative transport provision is not sufficient (bike lanes, public transport routes etc) - Flawed assumption that public transport and cycling will address parking shortfall - Further study required on parking impact and on alternative modes of transport expected to be used - Inadequate provision of disabled access car parks on the site - Impacts to on-street parking in CBD fringe and inner city residential streets
Access and Design
- Poor disabled access into and within the building and no disabled access for the laneway and cross-block link, provision of ramps would be beneficial - Many curved walls that create difficulties for people with vision impairment - Number of bike storage spaces and end of trip facilities not sufficient for projected numbers - Suitability of longevity of timber battens on external surfaces - Pedestrian link dependent on access through the University building and is unlikely to be available to the general public after-hours, on weekends, or during semester breaks - Landscaping along pedestrian link will restrict passive surveillance - Possible conflicts with parking area and waste storage collection procedures
Contaminated Land
- Further exposure risk and no certainty of contaminant removal from the site
Street Trees
- Impact of new Brisbane Street footpath on root systems of London Plane Trees
Planning Scheme Operation and Council Policies

- Failure in planning process to allow exemption of parking requirements in the Hobart CBD - Application should not be viewed as a simple, straight forward planning process where you look at the pros and cons for the building itself. The wider implications for all of Hobart, needs to be considered. - Planning scheme has limited capacity to address the scale of a change of use for the University of Tasmania's proposal through individual development applications - - Impact of proposal on future City Central Precincts Plan - Permitted education use was only referring to schools and small education institutes, not a large University - Public position of Hobart City Council on University move should not influence the decision making process - Perception of bias between organisations
University of Tasmania Activities
- Objections to the University of Tasmania move and that the Sandy Bay Campus should be retained - Questions as to future intention of the return to in-person teaching methods - Questions as to student enrolment numbers and how this would function in the same CBD location - Questions about the funding model of the University of Tasmania
Support
- The proposal will bring move vibrancy and activity into the Hobart CBD across all hours of the day/night and will benefit commercial enterprise - Sympathetic design and retention of heritage buildings on Melville Street - Adaptive repurposing of the derelict site at 83 Melville St makes complete sense, particularly when considered in conjunction with the City of Hobart's draft Hobart Precincts Plan - Proposal will unlock future investment in building and constructions jobs - Central location of University will provide greater accessibility and visibility to all residents, students, and workers -the development will act as a catalyst for additional development which is sympathetic to the streetscape, character of the area, and which strongly aligns with the intent of the Central Hobart Precinct Plan - The proposal demonstrates a high degree of compliance with the relevant planning scheme provisions and should be approved

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 existing use is Business and Professional Services, Bulky Goods Sales, and General Retail and Hire. The proposed use is Education and Occasional Care. The existing use is a discretionary use in the zone. The proposed use is a permitted use in the zone.

6.4 The proposal has been assessed against:

6.4.1 D22.0 Central Business Zone

6.4.2 E2.0 Potentially Contaminated Land Code

6.4.3 E5.0 Road and Railway Assets Code

6.4.4 E6.0 Parking and Access Code

6.4.5 E7.0 Stormwater Management Code

6.4.6 E9.0 Attenuation Code

6.4.7 E13.0 Historic Heritage Code

6.4.8 E15.0 Inundation Prone Areas Code

6.5 The proposal relies on the following performance criteria to comply with the applicable standards:

6.5.1 Central Business Zone

Passive Surveillance - D22.4.4 P1
Waste Storage and Collection - D22.4.10 P3

6.5.2 Potentially Contaminated Land Code

Excavation - E2.6.2 P1

6.5.3 Parking and Access Code:

Layout of Parking Area - E6.7.5 P1
Siting of Car Parking - E6.7.12 P2

6.5.4 Stormwater Management Code

Stormwater Drainage and Disposal - E7.7.1 P2

6.5.5 Attenuation Code

Development for Sensitive Use in Proximity to Use with Potential to Cause Environmental Harm - E9.7.2 P1

6.5.6 Historic Heritage Code:

Demolition on a Listed Place - E13.7.1 P1
Building and Works other than Demolition on a Listed Place - E13.7.2 P1, P2, P4, P4
Building, Works and Demolition in a Place of Archaeological Potential - E13.10.1 P1

6.5.7 Inundation Prone Areas Code

Riverine, Coastal Investigation Area, Low, Medium, High Inundation Hazard Areas - E15.7.5 P1, P2

6.6 Each performance criterion is assessed below.

6.7 Passive Surveillance - D22.4.4 P1

6.7.1 The acceptable solution at clause 22.4.4 A1 requires a building design must avoid creating entrapment spaces around the building site, such as concealed alcoves near public spaces.

6.7.2 The proposal includes conversion of an existing vehicle access from the Brisbane Street frontage, along the eastern boundary, to a pedestrian laneway which will present the potential for creation of an entrapment space

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

6.7.4 The performance criterion at clause 22.4.4 P1 provides as follows:

Building design must provide for passive surveillance of public spaces by satisfying all of the following:

(a) provide the main entrance or entrances to a building so that they are clearly visible from nearby buildings and public spaces;

(b) locate windows to adequately overlook the street and adjoining public spaces;

(c) incorporate shop front windows and doors for ground floor shops and offices, so that pedestrians can see into the building and vice versa;

(d) locate external lighting to illuminate any entrapment spaces around the building site;

(e) provide external lighting to illuminate car parking areas and pathways;

(f) design and locate public access to provide high visibility for users and provide clear sight lines between the entrance and adjacent properties and public spaces;

(g) provide for sight lines to other buildings and public spaces.

6.7.5 The proposed entrance to the building at the lower portion of the laneway will be clearly visible from the Brisbane Street frontage, with a direct line of sight between the public footpath and entrance. Whilst the laneway follows the fall of the land and will sit lower than the street level this difference in ground level will not impact visibility and with new extensions the entrance will be located approximately 17 metres closer to the Brisbane Street frontage than what presently exists. Concern was raised about the potential for entrapment when the proposal was presented to the Urban Design Advisory Panel. The panel requested further details demonstrating how the proposal would increase safety in the space which the applicant responded to with further detail on external lighting and visibility in the area .One representation received during the statutory notification period raised concerns that landscaping would limit visibility and passive surveillance creating a "highly concealed space".

6.7.6 Whilst the vegetation planting in this laneway will be positioned between the street and the building entrance, the provided site plan and landscaping plans demonstrate that there will be appropriate sight lines

that would satisfy the requirement of passive surveillance. Whilst the height and species of trees and shrubs are not specified in the assessed documents a condition requiring a final landscaping plan will be included in the permit requiring further details on these species and how their planting will maintain this line of sight.

Figure 12: View of present vehicle access and rear of Forestry Building from Brisbane Street frontage, the proposed entrance will be located around location of orange poles at center rear. Source: Council image.

6.7.7 The proposed laneway will also feature external lighting throughout its entire length and will have visibility from the surrounding building on the same site. The applicant has also proposed wayfinding signage on the Brisbane Street frontage to inform of hours of building closure to reduce use of the laneway when the cross-block link will be inaccessible. The alterations to the existing building on Brisbane Street will have over 50% openings on the ground floor facacde and more than 30% openings facing a car park. The building design is considered to provide suitable passive surveillance.

6.7.8 The proposal complies with the performance criterion.

6.8 Waste Storage and Collection - E22.4.10 P3

6.8.1 The acceptable solution at clause 22.4.10 A3 requires that access to bulk waste storage areas must include a dedicated pedestrian walkway,

alongside or independent of vehicle access ways.

6.8.2 The proposal does not adequately demonstrate a dedicated pedestrian walkway to access bulk waste storage areas.

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

6.8.4 The performance criterion at clause 22.4.10 P3 provides as follows:

A waste collection plan demonstrates the arrangements for collecting waste do not compromise the safety, amenity and convenience of surrounding occupants, vehicular traffic, cyclists, pedestrians and other road and footpath users, having regard to:

(a) the number of bins;

(b) the method of collection;

(c) the time of day of collection;

(d) the frequency of collection;

(e) access for vehicles to bin storage areas, including consideration of gradient, site lines, manoeuvring, direction of vehicle movement and pedestrian access;

(f) distance from vehicle stopping point to bins if not collected on site;

(g) the traffic volume, geometry and gradient of the street; and

the volume of pedestrians using the street and whether it is a pedestrian priority street (Figure E6.7.12).

6.8.5 Assessment for this performance criterion was referred to Council's Development Engineer. Assessment concluded that a waste collection plan will be required be sufficiently addressed with the condition endorsement of a waste management plan (prepared by a suitably qualified person), prior to commencement of works or any approval being granted under the Building Act.

6.8.6 The proposal complies with the performance criterion.

6.9 Excavation - E2.6.2 P1

6.9.1 There is no acceptable solution at clause 2.6.2 A1.

6.92 The proposal includes excavation of a potentially contaminated site.

6.9.3 There is no acceptable solution; therefore assessment against the performance criterion is relied on.

6.9.4 The performance criterion at clause 2.6.2 P1 provides as follows

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

(a) an environmental site assessment that demonstrates there is no evidence the land is contaminated; or

(b) a plan to manage contamination and associated risk to human health and the environment that includes:

(i) an environmental site assessment;

(ii) any specific remediation and protection measures required to be implemented before excavation commences; and

(iii) a statement that the excavation does not adversely impact on human health or the environment.

6.9.5 Referral was made to Council's Environmental Health Officer who has assessed the proposal as meeting the performance criterion subject to a condition requiring submission of a full Environmental Site Assessment.

6.9.6 The proposal complies with the performance criterion.

6.10 Layout of Parking Area - E6.7.5 P1

6.10.1 The acceptable solution at clause 6.7.5 A1 requires that the layout of car parking spaces, access aisles, circulation roadways and ramps must be designed and constructed to comply with section 2 “Design of Parking Modules, Circulation Roadways and Ramps” of AS/NZS 2890.1:2004 Parking Facilities Part 1: Off-street car parking.

6.10.2 The proposal included documentation which did not satisfy the acceptable solution standards.

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 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.

6.10.5 Referral was made to Council's Development Engineer who has provided the following assessment:

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 the relevant standards for design**

• Car Parking Space Dimensions (AS2890.1 Fig 2.2 = 2.4x5.4m Class 1A):

- **Submitted design documentation appears able to satisfy this requirement, bays detailed in accordance**

• Car Parking Space Design Envelope (AS2890.1 Fig 5.2 300mm clearance on side):

- **Submitted documentation appears able to satisfy this requirement, not shown albeit achievable**

• Headroom: (AS2890.1 Fig 5.3 = 2.2m clearance):

- **N/A**

• Parking Space Gradient (5%):

- **Submitted documentation appears able to satisfy this requirement, existing parking area**

• Aisle Width (AS2890.1 Fig 2.2 = 5.8m Class 1A):

- **Submitted documentation appears able to satisfy this requirement, minimum 5.8m detailed**

• Garage Door Width & Apron (AS2890.1 Fig 5.4 = 2.4m wide = >7m wide apron):

- **N/A**

• Parking Module Gradient (5% Acceptable, 10% Performance):

- **Submitted documentation appears able to satisfy this requirement, existing parking area**

• Driveway Gradient & Width (AS2890.1 Section 2.6 = 25% and 3m):

- **Submitted documentation appears able to satisfy this requirement, existing parking area in accordance**

• Transitions (AS2890.1 Section 2.5.3 = 12.5% summit, 15% sag = >2m transition):

- **Submitted documentation appears able to satisfy this requirement, existing parking area**

• Vehicular Barriers (AS2890.1 Section 2.4.5.3 = 600mm drop, 1:4 slope):

- **N/A**

• Blind Aisle End Widening (AS2890.1 Fig 2.3 = 1m extra):

- **N/A**

• "Jockey Parking" (Performance Assessment):

- **N/A**

Submitted design documentation appears to meet the parameters of a performance based solution that may be accepted by the City, this is primarily due to the layout essentially being a minor reconfiguration of an existing parking area without any major civil works being required or identified.

6.10.6 The proposal complies with the performance criterion.

6.11 Siting of Car Parking - E6.7.12 P2

6.11.1 The acceptable solution at clause 6.7.12 A2 requires that in the Central Business Zone on-site parking at ground level adjacent to a street block frontage must not allow parked cars to be visible from the street.

6.11.2 The proposal includes a reconfiguration of an on-site parking area whereby parked cars will be visible from the street block frontage.

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 6.7.12 P2 provides as follows:

Any car parking structure or area must satisfy all of the following:

(a) be designed to screen the views of cars from public places in the adjacent streets, without blanks walls facing onto a street;

(b) not detract from the streetscape or any heritage values of the site or the vicinity;

(c) avoid significant adverse impacts on the amenity of the occupants of neighbouring property,

(d) not prejudice opportunities for active uses on a street frontage in pedestrian priority streets (Figure E6.7.12);

(e) not prejudice opportunities for pedestrian links through street blocks.

6.11.5 The provided parking area will be a reconfiguration of an existing parking area visible from the street frontage. The parking area will not feature blank walls facing onto the street and will feature landscaping on the frontage boundary. The area will not detract from the streetscape or any heritage values on the site. The area will not present any adverse impacts to amenity of occupants of neighbouring property or impact upon active uses of the street frontage. There will be no restriction on opportunities for pedestrian links through street blocks.

6.11.6 The proposal complies with the performance criterion.

6.12 Stormwater Drainage and Disposal - E7.7.1 P2

6.12.1 The acceptable solution at clause 7.7.1 A2 requires that a stormwater system for a new development must incorporate water sensitive urban design principles for the treatment and disposal of stormwater where the size of new impervious area is more than 600m^2.

6.12.2 The proposal includes new impervious area of more than 600m^2 and documentation provided has not satisfied the requirement for water sensitive urban design principles.

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 7.7.1 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.

6.12.5 Referral was made to Council's Stormwater Engineer who has made the assessment that the proposed stormwater drainage system will satisfy the performance criterion.

6.12.6 The proposal complies with the performance criterion.

6.13 Development for Sensitive Use in Proximity to Use with Potential to Cause Environmental Harm - E9.7.2 P1

6.13.1 There is no acceptable solution at clause 9.7.2 A1.

6.13.2 The proposal includes development for a sensitive use within the attenuation distance of an activity listed in Table E9.1 of the Code. The proposed development site is within the attenuation distance (200m) of a 'late night music venue at 112 Murray Street ('Altar').

6.13.3 There is no acceptable solution; therefore assessment against the performance criterion is relied on.

6.13.4 The performance criterion at clause 9.7.2 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

6.13.5 Referral was made to Council's Environmental Development Planner who has provided the following asessment:

'Altar' is a nightclub for live music and DJs. Currently the venue operates on Friday and Saturday nights, from 7pm to 3am. It is primarily an indoor venue and the potential for environmental harm is noise emissions from the venue.

The minimum separation distance between the two sites is 198m, and most of the proposed development site is outside the attenuation area of music venue.

No specific design measures are specified in the application with regard to managing noise.

At this separation distance there is no risk of noise nuisance to the school from the music venue. In addition, the music venue will not be operating when the university site is generally operating.

The application complies with E9.7.2 P1 and the exercise of discretion is recommended

6.13.6 The proposal complies with the performance criterion.

6.14 Historic Heritage Code - E13.0

6.14.1 The subject site is listed as Heritage Place and located within the area of Archaeological Potential and as such was referred to Council's Senior Cultural Heritage Officer who has provided the following assessment:

This application is for demolition and new work on a site that is heritage listed in Table E13.1 and also within a Place of Archaeological Potential as defined in Table E13.1 and shown in Figure E13.4.1 of the Historic Heritage Code of the *Hobart Interim Planning Scheme 2015*. Details of the applicable heritage listings from the Scheme are shown below. It is also described in the accompanying heritage report as buildings 1 and 2.

The Scheme defines the extent of the heritage listing in Figure E13.1.11 and it equates to the footprint of the buildings of the former Crisp and Gunn buildings from 1923. Rear extensions and other buildings on the site are not heritage listed, therefore demolition and work proposed elsewhere is not subject to the provisions of the Historic Heritage Code.

2061		83	MELVILLE STREET	149231/2	Former Crisp & Gunn buildings (Previously known as 79-85 Melville Street, also known as 80 Brisbane Street)	Refer to Figure E13.1.11

Heritage listing of site from Table E13.1. Source: *Hobart Interim Planning Scheme 2015*

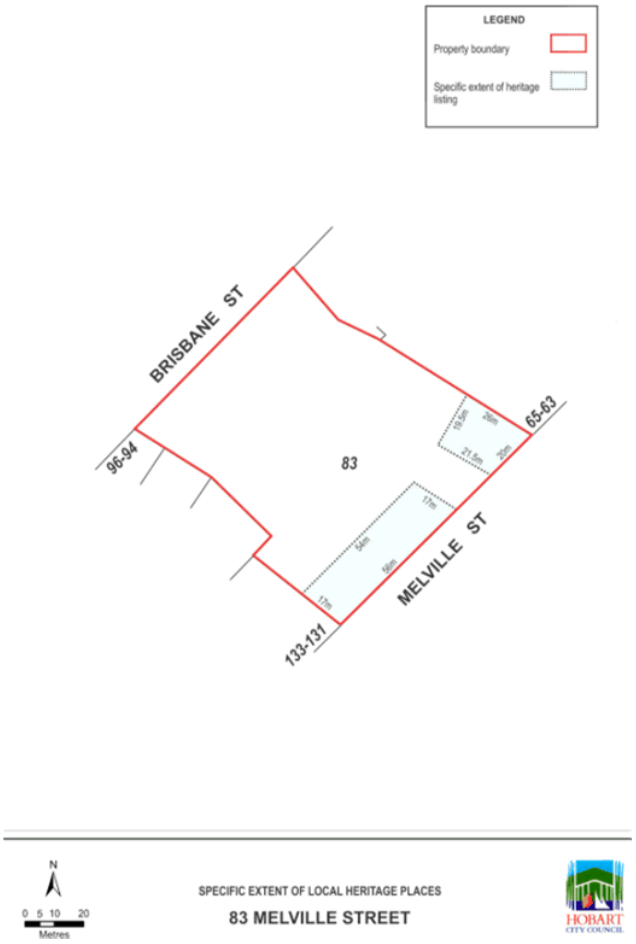


Figure 13: E13.1.11 Specific Extent 83 Melville Street. Source: *Hobart Interim Planning Scheme 2015*

The proposal is for demolition and new work both within and outside the defined heritage specific extent of the subject site.

The following heritage provisions apply:
E13.7.1 P1 Demolition within a heritage place
E13.7.2 P1, P2, P3, P4 - New work within a heritage place
E13.10.1 P1 Development in a Place of Archaeological Potential
22.4.1 A4 - Development within the Central Business Zone on the same

The application is supported by the following documentation: Historic Heritage Management Strategy by Praxis Environment, May 2021 with a Heritage Impact Assessment dated December 2021.

That document covers the following:

1. Detailed review and confirmation of heritage requirements,
2. An overview of the site history,
3. Statement of Archaeological Potential,
4. A Conservation Brief for the listed portion of the site,
5. Heritage Impact Assessment

The heritage listed parts of the site as described above in Table E13.1 and Figure E13.1.11 are known as the former Crisp and Gunn hardware store and workshop (a 3 and 2 storey 1923 building facing Melville Street respectively - Building 1) and the former Crisp and Gunn office (a 2 storey 1923 building facing Melville Street - Building 2). Both buildings were designed by architect George Stanley Crisp, the son of Alfred Crisp of Crisp Bros in brick after a fire destroyed all of the Crisp and Gunn's timber yards, mill and factory in May 1922. The original plans for the 2 and 3 storey buildings exist and are reproduced in the Praxis report. No original plans for the Crisp and Gunn office building (Building 2) have been found. Works occurred in 1972 to the Crisp and Gunn office building when the State Government took up occupancy of the building. Subsequent renovations were assessed in a heritage study in 1990 and 1995 in which it was concluded that the 1970s renovations were considered to detract from the significance of the building. In 1997 the site was redeveloped and the dome constructed and much of the 1972 works were removed. The Brisbane Street site was divested and the central part of the current site and Crisp and Gunn buildings in Melville Street were redeveloped for use by Forestry Tasmania, who operated from the building till 2017. The site was purchased by UTAS in 2018.

Works to the Forestry Dome (1997) are not assessed under the Historic Heritage Code of the Scheme, but are assessed separately under the *Historic Cultural Heritage Act 1995.*

Representations:
119 representations were received during the advertising period, 96 against and 23 for. The following heritage related comments were received:

- 'To protect the building fabric and ensure any damage caused by the building works at 83 Melville Street, Hobart, I believe UTAS should be required to conduct at their cost a Dilapidation survey of the property at 61, 63, 65 and 67 Melville Street, Hobart. This will

allow for a property assessment report undertaken to provide a visual assessment of constructional and cosmetic fabric defects, which are or may be related to movement of the structure or fabric of the subject property evident on the day of the inspection prior to the commencement of neighbouring construction works at 83 Melville Street, Hobart.'

- 'I believe the proposed development ... represents a sympathetic adaptive reuse of buildings of heritage significance. ,.. is sympathetic to the streetscape, character of the area...'
- 'while it is good to have the Forestry building restored other uses may be more appropriate.'
- 'I have reviewed designs and understand the renovation is within the existing building envelope. It not only protects the heritage aspects of the Forestry Building but also enhances some of the core architectural features.'
- 'The building comfortably conforms with the relevant Development Standards for the Central Business Zone and will contribute positively to the streetscape and the heritage character of the site and surrounding area.'
- 'The proposal has been sensitively designed to conserve and enhance the heritage attributes of the site including the Crisp and Gunn buildings and the Forestry Dome and complies with the provisions of the Heritage Code of the planning scheme.'

Response:
Use or change of use is not a consideration under the Historic Heritage Code (see clause E13.2.2). The Code applies only to development.

The application is confined to the subject site as 83 Melville St, 80 Brisbane St, adjacent road reserve and as such Council is unable to impose a condition relating to land outside the subject land. However, it is recommended that advice be included if a permit were issued, that UTAS look to including adjacent heritage listed sites in a Construction Management Plan for the subject site, and that it consider any impact from construction, vibration on neighbouring heritage listed properties.

Such advice could be:
Advice:
It is recommended that a Construction Management Plan address impacts on adjacent heritage listed buildings/foundations and structures to ensure that these structures are not negatively impacted on by vehicular movements, excavation, construction and vibration.

Relevant Provisions and Assessment/Response:
Demolition
Clause E13.7.1 P1 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

Response:
Demolition is proposed within the both heritage listed buildings of both original fabric and non-original fabric.

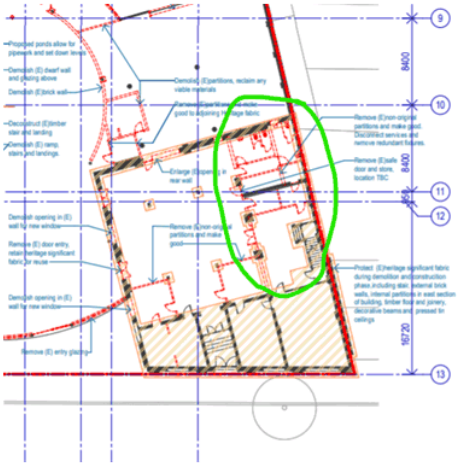
Crisp and Gunn Office (79 Melville St - Building 2):
There is no change to the facade (street elevation) of the building with demolition elsewhere relating largely, but not entirely, to non-significant, low significance or intrusive building and fabric. The description section in the Praxis report indicates the interior joinery as high quality and finely executed, recommending it be retained with the exception of the 1997 replica partitions. In addition, it identifies joinery which 'may' be removed or modified.

The architectural plans show the demolition of the safe door for storage and 'location TBC' and the demolition of the glazed double doors between the staircase and the main chamber, additional walls and elements within the space shown by the area circled in green. While the Praxis report explores each of the elements in this part of the building and identified some of these as being non-significant, low significance and intrusive, it is recommended that a condition be included should a permit be issued requiring the lodgement of additional assessment and clarification and design work done to the satisfaction of Council. Further physical exploratory investigations may be necessary to inform further design work. It is advised that retention of the safe door in situ and the walls/doors and joinery to the north east side of the main chamber be a high priority to ensure
the characteristics and spatial qualities of the main chamber are retained.

The upper floor has been previously removed of walls and fitout from the 1970s. No changes to the lantern light over the barrel vault are proposed, although some additional clarification is required as there is also demolition shown, as well as a new roof over the existing. A condition of permit is required to clarify the details of demolition and new work, with the focus on the retention of historic fabric and the minimisation of demolition.

Externally, the flag pole on the Crisp and Gunn offices building is not shown on all of the drawings submitted as part of this application, although it is shown on the east elevation as 'retain flagpole structure and reinstate walkway.' While original drawings for the office building were not found during the historical research, the flag pole is shown in a photo of 1946 and again in 1995 documentation. It is therefore concluded that it is likely to be original given the Praxis report concludes that the exterior envelope largely retains its original 1923 form and the facade is wholly original. It is therefore recommended that in the absence of full details a condition be included to clarify the flag pole must be retained, conserved and protected. In addition, the 1995 report also concludes that the banner pediment may still retain the name of Crisp and Gunn behind the blue banner. Any future signage must take into account the potential for the original Crisp and Gunn signage to be in situ and again, further investigations may be necessary to inform this work.

The removal of the original door on the ground floor is contrary to heritage advice and is not supported. It is recommended that this not be approved. Further resolution of the use and configuration of the ground floor can work with the retention of this element.



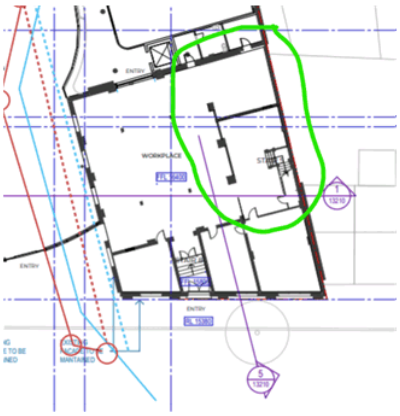


Figure 14: Demolition plan and proposed floor plan of the Crisp and Gunn office building: area requiring further review is shown circled in green. source: Applicant's submission

Crisp and Gunn warehouse and hardware store (83 Melville St - Building 1):

Demolition within this part of the heritage listed site includes: internal partitions from the 1997 fitout and the demolition of the original timber floor between the ground and first floor in the 3 storey section described on the plans as Crisp and Gunn original hardware store 1923 to create a 'tenancy'. This is shown on plan level 1M Overall Plan Demolition, Sheet number AR-12210. The original timber truss frame within the roof is to be retained.

Figure 15: Original timber floor (to first floor) ceiling 9to ground floor) proposed to be demolished. Source: Council image

The Heritage Impact Assessment in the Praxis report examines the floor and states: 'The timber floors should be retained and preferably remain exposed/polished to highlight the use of timber in the building (associated with its long association with the timber industry). Remove the floating floor in the stairs hall and assess underlying flooring. Retain the tiled entry foyer.' and 'The timber floors in the front section should be retained and preferably remain exposed/polished to highlight the use of timber in the building (associated with its long association with the timber industry).' and identified as having high significance. and with the following policy 'Buildings deemed to be of high significance must be conserved, restored and maintained (namely the former Crisp and Gunn buildings). Significant fabric associated with those buildings must also be conserved, restored and maintained.' The proposed removal of the floor is in conflict with the identified significance and policy approach. The Praxis report states; 'This will have a heritage impact in terms of removal of a substantial amount of structural fabric and inhibiting the ability to discern the spatial layout of the original building', followed by a response by the architects which states: 'Removal of this floor allows for the creation of larger, continuous workspace areas and for the space to open up considerably. This area is currently

significantly constrained.' Demolition is driven by architecture and an unclear use/tenancy, rather than guidance from the impact on heritage values. It is considered appropriate for advice to be included, should a permit be issued, advising the applicant the further resolution of the ground floor space and its currently unresolved use, could involve the retention/reduction in demolition of the existing timber floor.

Remainder of site:
The historic masonry walls in the basement area under the current Freedom Furniture shop are shown to be retained even though these walls are not heritage listed under the Scheme and there is no statutory basis for their retention or conservation. Plan notation states: 'Inspect condition of masonry walls. Clean and repair where necessary.' Given, no demolition of historic fabric is proposed this component of the proposal is considered a positive heritage outcome.

Development and new work:
Clause E13.7.2 P1 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 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 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.

Clause E13.7.2 P4 states:
Extensions to existing buildings must not detract from the historic cultural heritage significance of the place.

Response:
The proposed development within the 83 Melville St retains and reveals the form, 'the bones' and character of the Crisp and Gunn

store/warehouse. The removal of the original timber floor between the ground and first floor is not a desirable heritage outcome, but in terms of the proposed design of, scale, height as described in E13.7.2 P1, there is no over arching loss of heritage values through the new development. The new floor with 79 Melville St is an unfortunate outcome given it is doubled with the demolition of the roof lantern superstructure. While subservient in scale, a better resolution could be achieved to ensure it is complementary to the place in the sense of 'completes' or 'makes whole' the place. The level of detail within the mezzanine does not provide adequate detail, but could be acceptable with a condition should a permit be issued, that the detailing is to the satisfaction of Council. On this basis the proposal will satisfy E13.7.2 P2 and P3.

Under clause E13.7.2 P4, the roof top extension to 79 Melville St is the only part of the proposal that is assessed as the proposed extension to the heritage listed building (83 Melville St) is outside the footprint of the specific extent described in the Historic Heritage Code of the Scheme. The roof top extension or changed roof line sits over the significant roof lantern and barrel vault with the form and connection requiring further resolution. In general, the roof form is modest in scale and form, largely hidden behind the parapet of 79 Melville St. However, the proposed changes internally in floor levels around the barrel vault are a heritage outcome outcome that requires further resolution. A condition of permit would require this work to be detailed to the satisfaction of Council.

Archaeology:
Clause E13.10.1 P1 states:
Buildings, works and demolition must not unnecessarily impact on archaeological resources at places of archaeological potential, having regard to:
(a) the nature of the archaeological evidence, either known or predicted;
(b) measures proposed to investigate the archaeological evidence to confirm predictive statements of potential;
(c) strategies to avoid, minimise and/or control impacts arising from building, works and demolition;
(d) where it is demonstrated there is no prudent and feasible alternative to impacts arising from building, works and demolition, measures proposed to realise both the research potential in the archaeological evidence and a meaningful public benefit from any archaeological investigation;
(e) measures proposed to preserve significant archaeological evidence 'in situ'.

Response:
The applicant responds to and addresses the fact that the site is

located within a Place of Archaeological Potential as defined under the Scheme with a Statement of Archaeological Potential prepared by Praxis.

The Praxis report identifies areas of high archaeological potential, but notes that no excavation is proposed for within those part of the site. However, it also concludes that there is some excavation as part of the proposed bathroom and kitchen facilities, but notes that detailed building documentation will clarify the extent, location or need for excavation. In the event that excavation is required, the Praxis report recommends that it be archaeologically monitored. As such, with conditions of permit the proposal will satisfy E13.10.1 P1.

Building height on a site with a 'Specific Extent':
Clause 22.4.1 A4 states:
Building height of development on the same title as a place listed in the Historic Heritage Code, where the specific extent of the heritage place is specified in Table E13.1, and directly behind that place must:
(a) not exceed 2 storeys or 7.5m higher (whichever is the lesser) than the building height of any heritage building within the place, and be set back between 5m and 10m from the place (refer figures 22.4 i and 22.4 ii); and
(b) not exceed 4 storeys or 15m higher (whichever is the lesser) than the building height of any heritage building within the place, and be set back more than 10m from the place (refer figures 22.4 i and 22.4 ii);
or
(c) comply with the building height in clauses 22.4.1 A1 and A2; whichever is the lesser.

Response:
There is no change to the building height to 83 Melville Street (building 1) and there is additional roof height to 79 Melville Street (building 2). It does not exceed 2 storeys (it is only 1 storey) and is between approximately 2 metres and 4.2 metres in height with a set back approximately 8 metres. The proposal satisfies the Acceptable Solution (Clause 22.4.1 A4).

Conclusion:
The proposal satisfies the relevant performance criteria of the Historic Heritage Code of the Scheme and the acceptable solution for the Central Business Zone - development standards for buildings and works within the specific extent of a heritage listed building. Conditions and Advice are appropriate should a permit be issued.

Sarah Waight

Senior Cultural Heritage Officer
14 April 2022

6.14.2 The proposal complies with the performance criterion.

6.15 Riverine, Coastal Investigation Area, Low, Medium, High Inundation Hazard Areas - E15.7.5 P1

6.15.1 There is no acceptable solution at clause 15.7.5 A1 where landfill, or solid walls greater than 5m in length are proposed

6.15.2 The proposal includes a solid wall greater than 5m in length.

6.15.3 There is no acceptable solution; therefore assessment against the performance criterion is relied on.

6.15.4 The performance criterion at clause 15.7.5 A1 provides as follows

Landfill, or solid walls greater than 5 m in length and 0.5 m in height, must satisfy all of the following:

(a) no adverse affect on flood flow over other property through displacement of overland flows;

(b) the rate of stormwater discharge from the property must not increase;

(c) stormwater quality must not be reduced from pre-development levels.

6.15.5 Referral was made to Council's Stormwater Engineer who has made the assessment that there will be no adverse impact, no increase in the rate of discharge, and no decrease in stormwater quality. The conclusion was that the proposed development will satisfy the performance criterion.

6.15 The proposal complies with the performance criterion.

6.16 Riverine, Coastal Investigation Area, Low, Medium, High Inundation Hazard Areas - E15.7.5 P2

6.16.1 There is no acceptable solution at clause 15.7.5 A2.

6.16.2 The proposal includes work in a hazard area.

6.16.3 There is no acceptable solution; therefore assessment against the performance criterion is relied on.

6.16.4 The proposal criterion at clause 15.7.5 P2 provides as follows:

Mitigation measures, if required, must satisfy all of the following:

(a) be sufficient to ensure habitable rooms will be protected from flooding and will be able to adapt as sea levels rise;

(b) not have a significant effect on flood flow.

6.16.5 Referral was made to Council's Stormwater Engineer who has made the assessment that some mitigation measures will be provided and that there will be no adverse impact to third party land. A Part 5 Agreement will be conditioned to ensure ongoing mitigation measures. The conclusion was that the proposed development will satisfy the performance criterion.

6.16.6 The proposal complies with the performance criterion.

7. Discussion

7.1 Planning approval is sought for Partial Demolition, Alterations, Extension, Change of Use to Educational and Occasional Care, and Associated Works in Road Reserve, at 83 Melville Street, 80 Brisbane Street, and Adjacent Road Reserve.

7.2 The application was advertised and received one hundred and nineteen (119) representations. The representations raised concerns including appropriateness of the use in the zone, impacts to the Hobart CBD retailers and businesses, impacts of works to the road network and the traffic congestion this would cause, the lack of parking provided on the site, the reliance on public transport for staff and students, impacts of parking demand on other uses in the Hobart CBD, the poor disabled access options on the site, the passive surveillance risk, risks from existing contaminated land, and impacts to street trees,

7.3 A number of representations in support of the proposal cited the level of activity and vibrancy that the proposal would bring to the Hobart CBD as a reason for approval. These representations also supported to appropriate repurposing of heritage buildings and sympathetic design and stated that the proposal demonstrated an intent with the strategic intent of the Central Hobart Precinct Plan.

7.4 The main recurring concern raised in the received representations was in regards to the number of parking spaces provided on the site. The proposal includes five spaces (including one disabled access space) which was raised as a significant issue as it could not cater for the projected numbers of students and staff expected to attend the facility. The site is located within the Central Business Zone and under clause E6.6.5 of the Parking and Access Code, the acceptable solution can be met by providing no car parking spaces or or on-site parking provided at a maximum rate of 1 space per 200m^2 of gross floor area for commercial uses. The objective of this clause is to ensure that "pedestrian activity generated by retailing, entertainment and multi -storey office uses in the central business district is not compromised through the provision of on-site car parking." Whilst no retailing, entertainment or multi-storey office uses are proposed, these uses all occur within close proximity of the subject site. This matter was referred to Council's Development Engineer for assessment and the provision of spaces in the proposal is considered to meet this acceptable solution.

7.5 A number of the representations raised a general objection to the University of Tasmania's proposed move to the Hobart CBD and the wider policy and practical issues that could be raised by such an undertaking. These included, but were not limited to, concerns over government funding, ratepayer contributions, teaching policy, student enrolment numbers, transport policy, future infrastructure needs, and the relationship between the Hobart City Council and University of Tasmania. It is important to note that many of the concerns raised relating to this matter are not directly relevant to the planning assessment under the *Hobart Interim Planning Scheme 2015* and as such cannot be addressed in this report. This limitation was recognised by several representations which noted that "there is no capacity in the planning review process to assess the broader and concurrent issues that this Development Application will generate".

7.6 The proposal has been assessed against the relevant provisions of the planning scheme and is considered to perform well.

7.7 The proposal has been assessed by other Council Officers, including the Council's Development Engineer, Stormwater Engineer, Environmental Development Planner, Environmental Health Officer, Open Space and Recreation Officer, Roads Engineer, Traffic Engineer, and Cultural Heritage Officer. The Officers have raised no objection to the proposal, subject to conditions.

7.8 The site is listed as a Heritage Place under the Tasmanian Heritage Register and as such referral was made to the Tasmanian Heritage Council. At the time of writing the THC had not made their final decision, but the decision will be tabled at the City Planning Committee meeting as Attachment E to this report. It is understood that the officer recommendation is for approval.

7.9 The application was considered by the Urban Design Advisory Panel at its meeting of 2 February 2022. The Panel's report is provided in full as an attachment to this report. In the context of the provisions on which they were asked to comment, the Panel was broadly supportive of the proposal. A number of the Panel's comments have been included above in section 6 of the report. The Panel also made the following comments:

The Panel questioned the veracity of the through-site link created out of the existing access off Melville Street in and through the dome, connecting with the existing vehicle laneway on the side of the Brisbane Street building. The Panel noted there is great potential for a through-block link but were concerned with the public access it provided particularly after hours, due to the requirement to pass through internal University-controlled space and the absence of disabled access. The Panel were also concerned that the area may become an entrapment space within the lower area of the link off Brisbane Street. The proponent advised that the area would be locked down after-hours (post 10PM).

The Panel were concerned about disability access within the building and levels. The proponent explained that accessibility through the building between Melville and Brisbane Streets would be via multiple lifts and ramps. The Panel noted that the interconnecting links between building levels were not considered from the user's experience.

The Panel were concerned with the external treatment of the existing buildings, including the edge of the existing 'Freedom' building on Brisbane Street. The proponent shared that they did not want to contradict themselves by demolishing everything so intended to strip back paint, reseal and restore as much as possible. The Panel were concerned about the under-developed plans for the external blades – in particular the proportionality and materiality. The Panel were concerned about the ambiguity around the timber sizes in the documents and noted that this needs to be addressed as an RFI or condition of the planning permit. On the information provided, the Panel were concerned with the perceived monolithic design of the building to Brisbane Street, especially when viewed at an angle. The Panel questions how the proposal could successfully relate to its surrounds instead of "walling it off". It was also noted that proposed blades, being 450 mm deep, were to be fixed to the existing building wall on the property boundary, thus reducing the public pedestrian space of the currently narrow footpath especially as the existing Plane trees are proposed to be retained.

The Panel were concerned that this project may be a major under-development of the site, especially given its central location. The Panel questioned why the project is only 1-2 storeys and whether the plans are utilising the space effectively. The proponent noted that although they were keeping it single/double storey, they were addressing the brief provided. The proponent explained that from a design point of view they wanted something that sat sympathetically with the existing untouched building and wanted to follow the same typology through

the additions. Their priorities were to ensure they weren't designing a tall mass and instead of building up, wanted to speak to neighbouring buildings by utilising natural light on lower levels.

The Panel would have liked to see more public benefit from the proposal through opening the space up and merely using this as a "doorway to the university". The Panel were concerned with the buildings feeling closed off and queried whether activity inside the buildings would be visible from the street.

In conclusion the Panel supports the development application from an urban design perspective, subject to further consideration of their concerns. The Panel is looking forward to future development and believes this is an important project that has the potential to revitalise existing buildings, reinstate the unique qualities of the extant Dome and force change through considered design with public benefit.

7.8 The proposal is recommended for approval.

8. Conclusion

8.1 The proposed Partial Demolition, Alterations, Extension, Change of Use to Educational and Occasional Care, and Associated Works in Road Reserve, at 83 Melville Street, 80 Brisbane Street, and Adjacent Road Reserve 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, Extension, Change of Use to Educational and Occasional Care, and Associated Works in Road Reserve, at 83 Melville Street, 80 Brisbane Street, and Adjacent Road Reserve 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-21-869 - 83 MELVILLE STREET HOBART TAS 7000 - Final Planning Documents except where modified below.

Reason for condition

To clarify the scope of the permit.

TW

The use and/or development must comply with the requirements of TasWater as detailed in the form Submission to Planning Authority Notice, Reference No. TWDA 2022/00056-HCC dated 10/03/2022 as attached to the permit.

Reason for condition

To clarify the scope of the permit.

THC

The use and/or development must comply with the requirements of the Tasmanian Heritage Council as detailed in the Notice of Heritage Decision, THC Works Ref: 6812 dated 20 March 2022, as attached to the permit.

Reason for condition

To clarify the scope of the permit.

PLN s4

Prior to the issue of any approval under the *Building Act 2016,* revised plans must be submitted and approved as a Condition Endorsement showing:

1. **Detailed landscaping plan of Brisbane Street laneway, including species and maximum heights of vegetation, to ensure passive**

surveillance between Brisbane Street and the entrance at the end of the laneway.

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 building design provides for the safety of the public.

ENG 12

A demolition & construction waste management plan must be submitted and approved as a Condition Endorsement, prior to issue of any building approval, or commencement of work, including demolition (whichever occurs first).

The demolition & construction waste management plan submitted for approval must include:

- **Provisions for the handling, storage, transport, and disposal, of demolition material including any contaminated waste and recyclables,**
- **Provisions for the handling, storage, transport, and disposal, of post-construction solid waste and recycle bins from the development, and**
- **Any other details the Council deem necessary.**

The approved demolition & construction waste management plan must be implemented throughout demolition and construction works approved by this permit.

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

It is recommended that the developer liaise with the Council's City Resilience Unit regarding reducing, reusing, and recycling materials associated with demolition on the site to minimize 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).

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

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

SW 1

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

The condition assessment must include at least:

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

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

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

SW 2

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

The condition assessment must include at least:

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

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

Advice: This may be able to be combined with the condition assessments of the new public assets required under the Permit to Construct Public Infrastructure, depending on timing of works.

SW 3

The proposed works including foundations and overhangs must be designed to ensure the long term protection of and access to the Council's stormwater infrastructure.

A detailed design certified by a suitably qualified engineer must be submitted and approved prior to issue of any consent under Building Act / commencement of works (whichever occurs first). The detailed design must:
a. Demonstrate how the design will maintain the overland flow path, provide adequate access to the main, impose no additional loads onto the main and

that the structure will be fully independent of the main and its trenching.
b. Include cross-sections clearly showing the relationship both vertically and horizontally between Council's stormwater infrastructure and the proposed works (including footings), and stating the minimum setbacks from the works to the nearest external surface of the main.
c. Include a long-section of Council's stormwater main clearly showing proposed cover. If the cover is less than 600mm, engineering details and full calculations to relevant Australian standards (including construction traffic loading) must be submitted to demonstrate the mains can withstand the likely forces and will be adequately protected. All assumptions must be stated.
d. Be certified by a suitably qualified engineer

Prior to issue of any Certificate of Completion a suitably qualified engineer must confirm the installation of the works within two metres of Council's stormwater main / construction of the retaining wall is in accordance with the approved drawings and complies with this condition. Should any remediation works be required, these must be carried out at the developer's cost.

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

You will need specific permission from Council's Stormwater Unit under s73 of the Building Act 2016 and s13 of the Urban Drainage Act for the final certified detailed design plans.

SW 5

Construction of the development must not adversely impact the Council's stormwater infrastructure.

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 public assets 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.
4. incorporate the tree protection measures referred to in conditions OPS4 and OPS5

5. demonstrates how service to the upstream catchment will be maintained

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 6

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

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

1. **be substantially in accordance with the Local Government Association of Tasmania: Tasmanian Municipal Standard Drawings (May 2020), as varied by the City of Hobart's published departures from those Drawings (available from here), and the Local Government Association of Tasmania, Tasmanian Subdivision Guidelines (October 2013);**
2. **clearly distinguish between public and private infrastructure;**
3. **show in both plan and long-section the final design of the proposed stormwater mains, including but not limited to, connections, flows, velocities, hydraulic grade lines, clearances, cover, gradients, sizing, material, pipe class, adequate working platforms around manholes, easements and inspection openings;**
4. **The stormwater system (including defined overland flow paths) must cater for all 1% AEP event flows as at 2100 (i.e including climate change loading) from a fully developed catchment. The main itself must be sized to accommodate at least the 5% AEP event flows from a fully-developed catchment;**
5. **any backflow prevention required must be privately owned and maintained**

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

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

A Permit to Construct Public Infrastructure will be required. This will include requirements for a maintenance period, bond, and condition assessments.

SW 9

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

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

1. **include detailed design of the proposed treatment train, including estimations of contaminant removal sufficient to achieve the stormwater quality and quantity targets in accordance with the State Stormwater Strategy 2010, unless it is not feasible to do so;**
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. Council notes and supports the proposed capture and reuse of roofwater.

SW 11

Measures to adequately convey the overland flow path through the site and mitigate flood risk from the critical 1% AEP at 2100 event must be installed prior to occupancy or issue of any completion (whichever occurs first).

Detailed engineering drawings accompanied with a report must be submitted 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). These must include (but are not limited to):

(1) **certification from an accredited and qualified structural engineer that all proposed structures within the flood zone are designed to resist**

inundation, erosion, undermining and likely forces from a flood event (including debris loading);

(2) **The final building plans must be in general accordance with the submitted details of the JMG "Flood Analysis and Stormwater Report" dated December 2021, and detail the flood mitigation/ overland flow path measures.**

(3) **details of management of the flood zone including signage and measures to prevent blockage of the overland flow path (such as bollards, gratings, surface treatment, and restrictions on use of the area including furniture, minor works); This must also clearly address when the building is not occupied.**

(4) **a flood management summary plan from a suitably qualified and experienced expert that outlines the obligations for future property owners to flood and overland flow management, including:**

(5)
- (a) **the flood risk to the site, including depth, extent and hazard ratings for the 1% AEP at 2100 event;**
- (b) **key assumptions included in the flood modelling and resultant uncertainty in the model results.**
- (c) **identification of all measures to maintain and maximise the overland flow path through the site and their maintenance;**
- (d) **identification of all flood management measures and their required maintenance.**

All work required by this permit must be undertaken and maintained in accordance with the approved detailed drawings and report.

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 Flood Management Summary Plan is not a Flood Study, but rather a plain english document summarising risk and actions required by a future site manager.

ENG 13

A waste management plan must be submitted and approved as a Condition Endorsement, prior to issue of any building approval, or commencement of work, including demolition (whichever occurs first).

The waste management plan submitted for approval must include;

- **Provisions for commercial waste services & facilities for the handling, storage, transport, and disposal of waste generated by the development, and**
- **Any other details the Council deem necessary.**

All works required to satisfy this condition must be undertaken in accordance with the approved waste management plan.

The approved waste management plan must be also be implemented on an ongoing basis post construction, prior to first occupation or commencement of use (whichever occurs first).

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 2a

Prior to first occupation or commencement of use (whichever occurs first), physical controls (i.e. barriers, wheel stops, kerbs, and other protective devices) must be designed by a suitably qualified person and installed in accordance with the Australian Standard AS/NZS 2890.1:2004. Physical controls designed & installed must contain and limit vehicle travel appropriately, and shall not introduce conflicts with the plans approved by this permit.

Advice:

Any drop heights off trafficable areas as a result of the development, be it for existing or proposed parking areas either within neighboring/adjacent sites or the subject site, form part of the scope of this condition and as such must be addressed.

Designers are advised to consult the National Construction Code 2016 *to determine if pedestrian handrails or safety barriers compliant with the Code 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 3b

Drawings must be submitted and approved as a Condition Endorsement, prior to the issue of any building approval, or commencement of work (whichever

occurs first).

The following aspects of the proposed parking area require further attention:

1. Detailed design of parking bays, including dimensioned commercial vehicle service bay(s), and bays for people with disabilities.

The drawings submitted for approval must:

1. Be prepared and certified by a suitably qualified person,
2. Be in accordance with AS/NZS 2890.1:2004, AS/NZS 2890.2-2002, AS/NZS 2890.6:2009, and related Australian Standards,
3. Where the design deviates from the relevant Australian Standards, the designer must demonstrate the provision of a safe and efficient access, and enable safe, easy and efficient use, and
4. Show dimensions, levels, gradients & transitions, and any other details as Council deem necessary for granting approval.

Prior to first occupation or commencement of use (whichever occurs first), the parking area must be constructed in accordance with the drawings approved by 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 4

Prior to first occupation or commencement of use (whichever occurs first), the parking area approved by this permit must be constructed to a sealed standard (e.g. spray seal, asphalt, concrete, pavers, or other Council approved equivalent) and surface drained to the City'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

Prior to first occupation or commencement of use (whichever occurs first), 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 Standard AS/NZS 2890.1:2004.

Reason for condition

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

ENG 9

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

Reason for condition

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

ENG 11

Prior to first occupation or commencement of use (whichever occurs first), all crossovers deemed redundant must be reinstated in accordance with the design details approved under GMC-21-84.

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

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

Reason for condition

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

ENG 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 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.

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 9

Revised plans for 83 Melville Street (Building 1 - Crisp and Gunn workshop/store) and 79 Melville Street (Building 2 - Crisp and Gunn Offices) must be submitted.
The revised plans must:

- **show the retention and conservation of the flag pole on the front facade, the door identified as element 10 (p.140) and safe door.**

- **show additional detailed design that results in a reduction in the demolition on the ground floor between the main chamber, the stair hall and the service area in order to retain the spatial qualities of the main chamber. Where there is a conflict between the recommendations of the Heritage Impact Statement and the significance identified in the Praxis report (section 6, pp. 96-102) , the features with high significance in the Praxis report will prevail.**
- **show additional detailed design that results in a reduction in the demolition on the first floor and roof structures of Building 2. Where there is a conflict between the recommendations of the Heritage Impact Statement and the significance identified in the Praxis report (section 6, pp. 96-102) , the features with high significance in the Praxis report will prevail.**
- **show additional detailed design that reduces the demolition on the first floor/ceiling of Building 1.**

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 detailed design 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.

It is recommended that in the resolution of the use and spatial requirements to the space shown in Building 1 - 83 Melville Street the original floor between the basement and first floor be retained to a greater extent to reduce the impact on the structural integrity and an ability to discern the spatial layout of the building as per the advice of the Praxis report (p.131)

Reason for condition

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

HER 10

Drawings must be submitted showing how any secondary glazing to the original windows is detailed. The design of the secondary glazing must be sympathetic in detail, materials and colour to ensure the original windows and window furniture is retained, protected, conserved and maintained.

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

detailed design 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 demolition in whole or part of a heritage place does not result in the loss of historic cultural heritage values.

HER 6

All on-site excavation and disturbance with the area designate as being of high and low/no archaeological sensitivity in the Praxis report "Statement of Historical Archaeological Potential" (see section 7.6 of the Praxis report) must be undertaken in accordance with the above report by a suitably qualified archaeologist.

1. **A qualified archaeologist must be engaged to undertake archaeological excavations and provide advice and assessment of the features and/or deposits discovered and make recommendations on all and further excavation and/or disturbance; and**
2. **All and any recommendations made by the archaeologist engaged in accordance with 1. above must be complied with in full; and**
3. **All features and/or deposits discovered must be reported to the Council with 1 day of the discovery; and**
4. **A qualified archaeologist must undertake an audit of bulk archaeological material, should any be uncovered. The bulk archaeological material may include worked sandstone blocks, 19th century bricks or cobblestones and be suitable for reuse. These bulk archaeological materials must be retained on site unless approval for removal to a secure site is given by Council.**
5. **A copy of the archaeologist's advice, assessment and recommendations obtained in accordance with 1. 2. and 4 above must be provided to Council within 60 days of receipt of the advice, assessment and recommendations.**

Excavation and/or disturbance must not recommence unless and 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 commencement of construction.

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 installed prior to the issue of a certificate of completion.**

Reason for condition

To ensure that there is public benefit from archaeological investigations.

HER 8

The audit report prepared in accordance with condition HER 6 must be submitted and approved as a Condition Endorsement prior to the commencement of building work.

The audit report must also demonstrate how the finds described in HER 6 sub-clause 4 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 process showing the recommendations of the audit report in accordance with a above requirement.

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

Advice: This conditions 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

Prior to the issue of any approval under the Building Act 2016, the following must be submitted and approved as Condition Endorsement:

PCL1 ENVIRONMENTAL SITE ASSESSMENT
A full contamination Environmental Site Assessment report prepared by a suitably qualified and experienced person in accordance with the procedures and practices detailed in the National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPM) as amended 2013 must be provided. The report must conclude:

• Whether any site contamination presents a risk to workers involved in redevelopment of the site, or future users of the site, as a result of proposed excavation of the site.
• Whether any site contamination presents an environmental risk from excavation conducted during redevelopment of the site.
• Whether any specific remediation and/or protection measures are required to ensure proposed excavation does not adversely impact human health or the environment before excavation commences.

REMEDIATION AND PROTECTION MEASURES
If the Environmental Site Assessment report concludes that remediation and/or protection measures are necessary to avoid risks to human health or the environment, a proposed remediation and/or management plan must be submitted. Any remediation or management plan involving soil disturbance must include a detailed soil and water management plan to prevent off-site transfer of potentially-contaminated soil or stormwater.

STATEMENT OF SUITABILITY
A statement based on the results of the Environmental Site Assessment that the excavation as part of the planned works will not adversely impact on human health or the environment is to be provided (subject to implementation of any identified remediation and/or protection measures as required).

The Environmental Site Assessment submitted must address the four target aspects representing potential site contamination that require further assessment, listed in the cover letter by GHD dated 15 February 2022 and titled 'Application No. PLN-21-869 83 Melville Street - Assessment against the Potentially Contaminated Land Code.'

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

Advice: This conditions 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 risk to human health and the environment remains low.

OPS 3

All works within the tree protection zone (TPZ) as defined in the Australian Standard *AS 4970 – 2009 Protection of trees on developments sites*, including works on the footpath as well as works to install underground services, of trees 1-3 in the Development Impact Assessment 79-83 Melville Street, Hobart dated 16/2/2022, by Element Tree Services, must be overseen by a suitably qualified and experienced arborist. Site workers are to follow all directions from the Project Arborist regarding measures required to protect the tree. The Project Arborist must document all works within the TPZ and provide a written report that includes photos of the works, including any roots that were encountered, and certification that the works did not impact on the tree's long-term health and stability.

Reason for condition

To maintain the amenity value of street trees as per the City of Hobart Street Tree Strategy.

OPS 4

Two *Platanus x acerifolia* (London plane) trees in Brisbane Street must be protected from damage during the works, as per chapter 4 Tree protection of Element Tree Services' DEVELOPMENT IMPACT ASSESSMENT 79-83 Melville Street, Hobart 16/02/2022. Therefore, prior to works commencing, all of the tree protection zones of both trees are to be fenced off and signs erected stating that the fencing is for tree protection. Where works encroach into the tree protection zones, the fencing should be erected as close to the edge of the zone as possible, to the satisfaction of the Project Arborist. No works are to occur within the fenced areas.

Reason for condition

To maintain the amenity value of street trees as per the City of Hobart Street Tree Strategy.

OPS 5

Details of the street tree protection measures specified in permit condition OPS 4 must be clearly notated on any plans submitted to the Council under

the *Building Act 2016.*

Advice: Once the plans showing tree protection measures have been approved, the City will issue a condition endorsement (see general advice on how to obtain condition endorsement). 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 maintain the amenity value of street trees as per the City of Hobart Street Tree Strategy.

Part 5 1

The owner(s) of the property must enter into an agreement with the planning authority pursuant to Part 5 of the Land Use Planning and Approvals Act 1993 prior to the issue of occupancy or any completions under the Building Act 2016 (whichever occurs first). The Agreement must:

- **prohibit any development, works or use of the land which alters the level of the land or interferes with the free flow of water within the identified overland flow path beyond that approved under this planning permit without the written permission of Council;**
- **agree to comply with the approved Flood Management Summary Plan;**
- **indemnify Council against any costs or claims arising from the works within the identified 1% AEP flood extent;**
- **indemnify Council against any costs or claims arising from building over or within two metres of the Council's stormwater mains or for damages incurred in the act of performing operation, maintenance, or replacement tasks on the stormwater mains**
- **not perform any future works to the structure within two metres of the main, including replacement of footings without written permission from Council**

The Council will have its solicitors prepare the Agreement for signing by property owner(s). The Council will then lodge the Agreement with the Lands Titles Office. The cost of preparing the Agreement and registration with the Land Titles Office is to be met by the applicant.

Advice: Please contact the Development Appraisal Planner to initiate preparation of the Agreement.
Please note the Flood Management Summary plan is that referred to in condition SW11. This will need to be submitted and approved prior to the Part 5.

Reason for condition

To ensure that the risks associated with building in a flood zone and near Council's stormwater infrastructure are managed.

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 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.

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.*

PERMIT TO CONSTRUCT PUBLIC INFRASTRUCTURE

You may require a permit to construct public infrastructure, with a 12 month maintenance period and bond (please contact the Hobart City Council's City Life Division to initiate the permit process).

NEW SERVICE CONNECTION

Please contact the Hobart City Council's City Life Division to initiate the application process for your new stormwater connection.

STORMWATER

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

STRUCTURES CLOSE TO COUNCILS' STORMWATER MAIN

The design of structures (including footings) must provide protection for the Council’s infrastructure. For information regarding appropriate designs please contact the Council's City Life Division. You may need the General Manager's

consent under section 13 of the *Urban Drainage Ace 2013* and consent under section 73 or 74 of the *Building Act 2016*.

WORK WITHIN THE HIGHWAY RESERVATION

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

CBD AND HIGH VOLUME FOOTPATH CLOSURES

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

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

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

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

DRIVEWAY SURFACING OVER HIGHWAY RESERVATION

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

REDUNDANT CROSSOVERS

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

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.

NOISE REGULATIONS

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

WASTE DISPOSAL

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

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

FEES AND CHARGES

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

DIAL BEFORE YOU DIG

Click here for dial before you dig information.

HERITAGE

It is recommended that a Construction Management Plan address impacts on adjacent heritage listed buildings/foundations and structures to ensure that these structures are not negatively impacted on by vehicular movements, excavation, construction and vibration.

Further investigation and exploratory work within the interior of building 2 may be necessary to inform the additional design work. Works to investigate can be undertaken on the basis that no heritage fabric is damage.

Further investigations to ascertain if the original signage for Crisp and Gunn are

behind the blue banner signs on Building 1 and 2 can be undertaken. If present the signage should be retained, conserved and revealed.

(Michael McClenahan)
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: 20 April 2022

Attachment(s):

Attachment B - CPC Agenda Documents

Attachment C - Heritage Referral Officer Report

Attachment D - Development Engineer Officer Report

Attachment E- Urban Design Advisory Panel Report

nian Heritage Council Notice of Heritage Decision

Attachment G - Site Details

Planning: #248038

Property

83 MELVILLE STREET HOBART TAS 7000

People

Applicant
*
University of Tasmania

C/- All Urban Planning Pty Ltd
19 Mawhera Avenue
SANDY BAY TAS 7005
0400 109 582
frazer@allurbanplanning.com.au

Owner
*
University of Tasmania

C/- Glenn Evans, Director – Program Management
44 Melville Street
HOBART TAS 7000
0417 379 607
glenn.evans@utas.edu.au

Entered By
FRAZER ERIC READ
0400 109 582
frazer@allurbanplanning.com.au

Use

Educational facility

Details

Have you obtained pre application advice?

- ☐ Yes

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

Are you applying for permitted visitor accommodation as defined by the State Government Visitor 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)?
*

vacant (Forestry Building) and general retail and hire (Freedom Building)

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

Redevelopment- see accompanying description in the planning report

Estimated cost of development
*

85900000.00

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

Carparking on Site

Total parking spaces	Existing parking spaces	N/A
		Other (no selection chosen)

Other Details

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?

- Yes

Documents

Required Documents

Title (Folio text and Plan and Schedule of Easements)
*
Certificates of title.pdf

Plans (proposed, existing)
*
Appendix A - Architectural Drawings.pdf

Supporting Documents

Concept Servicing Plan
Appendix C1 - Civil.pdf

Traffic Impact Assessment
Appendix E - Traffic Report.pdf

Landscape Plan
Appendix B - Landscape Plan.pdf

Architectural Description
UTas Forestry & Timber Yards DA Report rev B.pdf

Planning Report
Planning Report - Forestry Building Redevelopment.pdf

Heritage Report
Appendix D - Heritage Report.pdf

Contaminated Land Assessment

Appendix F - Site Contamination Report.pdf
Stormwater Assessment
Appendix C2 - Stormwater.pdf

RESULT OF SEARCH

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
149231	0
EDITION	DATE OF ISSUE
2	22-Feb-2017

SEARCH DATE : 17-Dec-2021
SEARCH TIME : 12.44 PM

DESCRIPTION OF LAND

City of HOBART
The Common Property for Strata Scheme 149231
Derivation : SEE PLAN.
Prior CT 125745/1

SCHEDULE 1

E70820 STRATA CORPORATION NO. 149231-1, 80 BRISBANE STREET, HOBART (in relation to that part of the site comprising Lot 1 on Strata Plan No. 149231) and STRATA CORPORATION NO. 149231-2, 79-83 MELVILLE STREET, HOBART (in relation to that part of the site comprising Lot 2 on Strata Plan No. 149231)

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
B971184 ADHESION ORDER under Section 110 of the Local Government (Building and Miscellaneous Provisions) Act 1993 Registered 26-Sep-1996 at 12.01 PM
M607987 APPLICATION by body corporate to amend strata plan 149231 by increasing the vertical boundaries of Lots 1 & 2 and decreasing the common property Registered 22-Feb-2017 at noon
E70820 NOTICE of division of body corporate Registered 22-Feb-2017 at 12.01 PM

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

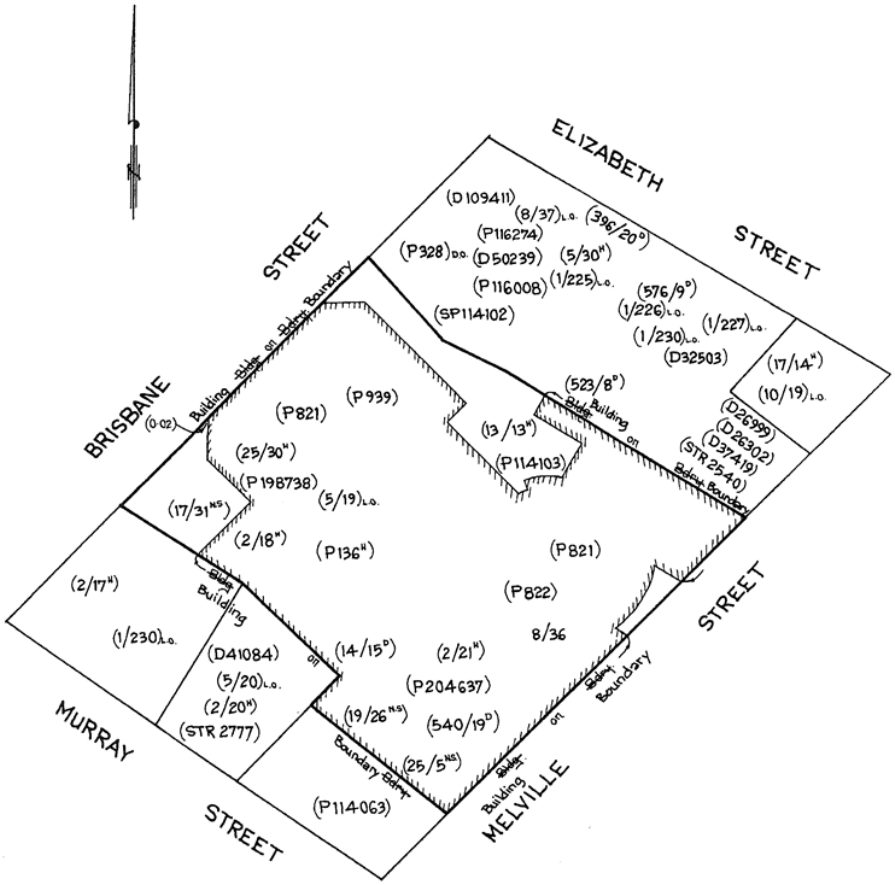
FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

CITY/TOWN HOBART SUBURB FOLIO REFERENCE C.T.125745-1 SITE COMPRISES THE WHOLE OF LOT 1 ON PLAN No. P125745	STRATUM PLAN SHEET 1 OF 4 SHEETS NAME OF BUILDING 79-83 Melville Street & 80 Brisbane Street - Hobart.	REGISTERED NUMBER 149231 REGISTERED - 3 OCT 2007 Alice Kawa Recorder of Titles.
MAPSHEET MUNICIPAL CODE No. 114 / LAST UPI No. FEZ64	SCALE 1: 750 / LENGTHS IN METRES	

SITE PLAN



NOTES: ALL BUILDINGS ON THE SITE TO BE SHOWN ON SHEET 1.
BUILDING TO SITE BOUNDARY OFFSETS OF LESS THAN 2·00 METRES TO BE SHOWN ON SHEET 1.
THE FEE SIMPLE OF THE SITE IS CONTAINED WITHIN THE STRATUM PLAN/BODY CORPORATE FOLIO.
FLAT FOLIOS ARE HELD SUBJECT TO STRATUM PLAN ENDORSEMENTS.

STRATA DEVELOPMENT CONTRACT No. (IF APPLICABLE)

LODGED BY PAGE SEAGER

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FOLIO PLAN

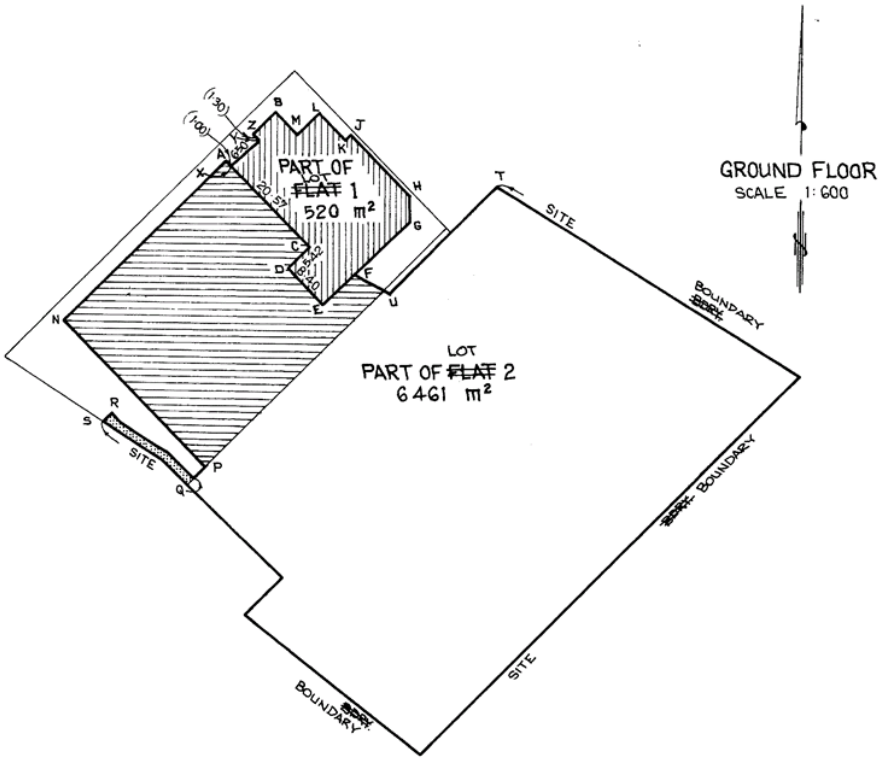
RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

STRAT~~UM~~A PLAN

NEW M607987 SHEET 2 OF 4 SHEETS

Registered Number **149231**



The horizontal ~~flat~~ lot boundaries are shown by heavy unbroken lines and defined by:

- site boundaries
- edge of bitumen or extension thereof labelled YZ B & A.N.P.Q.
- centre of concrete & steel posts & extension there of labelled AXC.
- open & perpendicular to A.C. & through the centre of column where labelled D.C.
- open & perpendicular to D.C. where labelled D.E.
- open & through the centre of concrete columns & extension thereof where labelled E.F.
- open & from centre of concrete column at F. to inside face of brick wall where labelled F.G.
- inside face of brick wall labelled G.H.J.K.L.
- edge of concrete steps & extension there of labelled L.M.
- inside face of brick wall & extension thereof labelled M.B.
- centreline of wall Q.R.S.
- northwest face of low block wall and extension thereof labelled T.U.
- edge of concrete labelled U.F.

U. & F. are the centres of columns.

- open & parallel to NA where labelled XY.

The vertical ~~flat~~ lot boundaries extend from 5m below ground level to a height of ~~14~~ 50m above ground level except for:

- the hachured portions which extend from 5m below ground level to the centre of the concrete slab above and
- the dotted portion which extends from 5m below ground level to the centre of the ceiling of the fire escape tunnel above.

FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

STRAT~~UM~~A PLAN

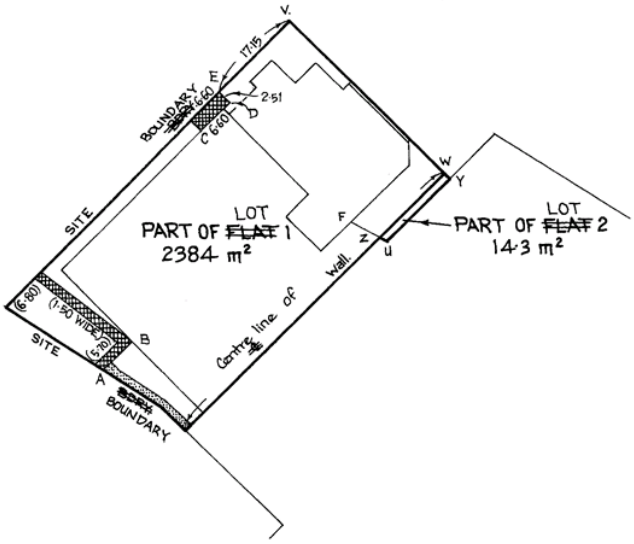
NEW SHEET 3 OF 4 SHEETS

M607987

Registered Number **149231**

IF FURTHER SHEETS ARE REQUIRED USE STRATUM PLAN ANNEXURE SHEETS COMMENCING AT SHEET 4

FIRST FLOOR
SCALE 1:600



The horizontal ~~flat~~ lot boundaries are shown by heavy unbroken lines defined by:
- site boundaries
- centreline of wall
- outer face of wall V.W. & extension thereof labelled W.Y.
- open where labelled Y.U.Z.

U.Y. is on the line of the vertical extension of the north west face of the low block wall below labelled U.T on sheet 2.
U.Z. is on the line between the centre of columns (~~U. & F.~~) below labelled U F on sheet 2.

The vertical ~~flat~~ lot boundaries extend from the centre of the concrete slab floor below to a height of ~~14~~ 50m above ground level except for:
- the dotted portion which extends from the centre of the ceiling of the fire escape tunnel below to 14m above ground level.

The cross hachured portions of Lot 1 are restricted under Section 151(b) for use by Lot 2 as emergency access ways.

AB is the centreline of a wall.

~~B is the intersection of the centreline of the wall AB & the outer face of the wall perpendicular thereto.~~

CDE is the face of wall or the extension thereof.

the List

FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

STRAT~~UM~~A PLAN

SHEET 4 OF ~~4~~ 5 SHEETS

Registered Number
149231

POSTAL ADDRESS FOR SERVICE OF NOTICES ON THE BODY CORPORATE:

Trust Company of Australia
C/- Heine Property Management
P.O. Box 7639
Melbourne 3004.

NAME OF BODY CORPORATE: STRATA CORPORATION Nº 149231, 79-83 MELVILLE STREET & 80 BRISBANE STREET, HOBART

SURVEYORS CERTIFICATE

I. Craig McDowall Terry
of Hobart
a surveyor registered under the Land Surveyors Act 1909 hereby certify that the building erected on the site and drawn on sheet 1 of this plan is within the external boundaries of the folio stated on sheet 1.

Registered Surveyor — 16/12/97 date — W405C ref no

UNIT ENTITLEMENTS FOR THIS BODY CORPORATE

~~LOT~~ ~~FLAT~~	UNIT ENTITLEMENT	~~LOT~~ ~~FLAT~~	UNIT ENTITLEMENT
1	1897		
2	8103		

TOTAL ENTITLEMENTS FOR STRAT~~UM~~A PLAN = 10,000

COUNCIL CERTIFICATE

I certify that the HOBART CITY Council has:
(a) approved the subdivision shown in this plan and
(b) issued a building certificate in respect of each flat in this plan, in accordance with Section 119 of the Local Government (Building & Miscellaneous Provisions) Act 1993

~~General Manager~~ SURVEYING SERVICES MANAGER — 22.1.2001 date — 5669571 ref no

(FOR OFFICE USE ONLY)
MEMORIALS AFFECTING THE STRATUM PLAN

FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

STRATA PLAN

~~NEW~~ SHEET 5 OF 5 SHEETS

E70820

STRATA TITLES ACT 1998

Registered Number

149231

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 Surveyor

Date 22/9/2016

Council Delegate

Date

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 to the body corporate; or
(ii) for fixing the owner's proportionate interest in the common property; or
(iii) for fixing the number of votes to be exercisable by the owner of the lot at a general meeting of the body corporate; or
(iv) for fixing the proportion of the body corporate's income to be apportioned to the owner of the lot.

NAME OF (THIS) BODY CORPORATE	NAME OF (THIS) BODY CORPORATE	NAME OF (THIS) BODY CORPORATE
STRATA CORPORATION NO. 149231-1, ~~79-83 MELVILLE ST AND~~ 80 BRISBANE ~~ST~~ HOBART STREET,	STRATA CORPORATION NO. 149231-2, 79-83 MELVILLE ~~ST AND~~ STREET, ~~80 BRISBANE ST HOBART~~ HOBART	
ADDRESS FOR THE SERVICE OF NOTICES STRATA CORPORATION No. 149231-1, 80 BRISBANE ST, HOBART c/- HEINE PROPERTY MANAGEMENT PO BOX 7639 MELBOURNE 3004	ADDRESS FOR THE SERVICE OF NOTICES STRATA CORPORATION No. 149231-2, 79-83 MELVILLE ST, HOBART c/- HEINE PROPERTY MANAGEMENT PO BOX 7639 MELBOURNE 3004	ADDRESS FOR THE SERVICE OF NOTICES

LOT No.	UNIT ENTITLEMENT GENERAL	SPECIAL (IF ANY) (i)	(ii)	(iii)	(iv)	LOT No.	UNIT ENTITLEMENT GENERAL	SPECIAL (IF ANY) (i)	(ii)	(iii)	(iv)	LOT No.	UNIT ENTITLEMENT GENERAL	SPECIAL (IF ANY) (i)	(ii)	(iii)	(iv)
1	1897					2	8103										
TOTAL	1897					TOTAL	8103					TOTAL					

RESULT OF SEARCH

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
149231	1
EDITION	DATE OF ISSUE
8	04-Nov-2021

SEARCH DATE : 17-Dec-2021
SEARCH TIME : 12.45 PM

DESCRIPTION OF LAND

City of HOBART
Lot 1 on Strata Plan 149231 and a general unit entitlement operating for all purposes of the Strata Scheme being a 1897 undivided 1/10,000 interest
Derived from Strata Plan 149231
Derivation : SEE PLAN.

SCHEDULE 1

M915268 TRANSFER to UNIVERSITY OF TASMANIA Registered 04-Nov-2021 at 12.01 PM

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
The registered proprietor holds the lot and unit entitlement subject to any interest noted on common property Folio of the Register volume 149231 folio 0

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

FOLIO PLAN

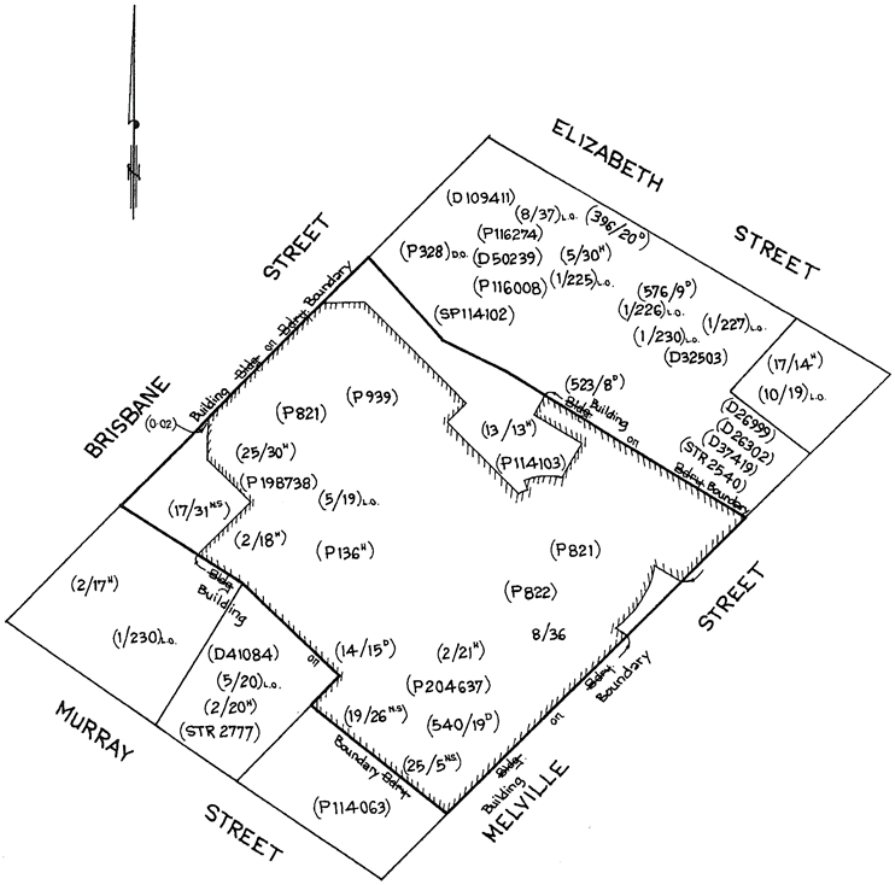
RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

CITY/TOWN HOBART SUBURB FOLIO REFERENCE C.T. 125745-1 SITE COMPRISES THE WHOLE OF LOT 1 ON PLAN No. P125745	STRATUM PLAN SHEET 1 OF 4 SHEETS	REGISTERED NUMBER 149231
	NAME OF BUILDING 79-83 Melville Street & 80 Brisbane Street - Hobart.	REGISTERED - 3 OCT 2007 Alice Kawa Recorder of Titles.
MAPSHEET MUNICIPAL CODE No. 114 / LAST UPI No. FEZ64	SCALE 1: 750 / LENGTHS IN METRES	

SITE PLAN



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STRATA DEVELOPMENT CONTRACT No. (IF APPLICABLE)

LODGED BY PAGE SEAGER

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FOLIO PLAN

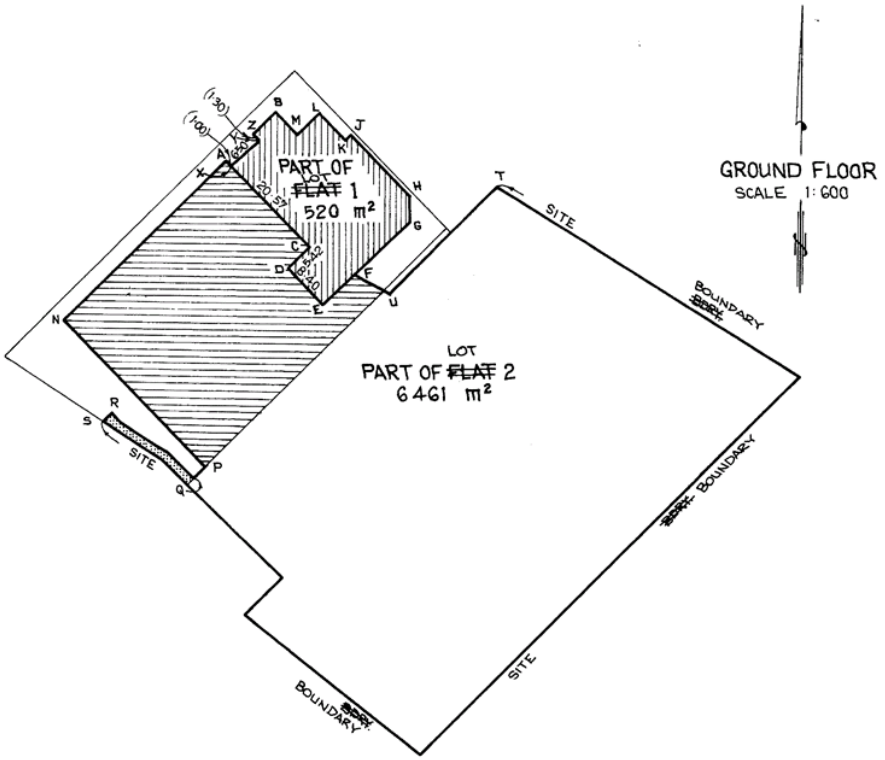
RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

STRAT~~UM~~A PLAN

NEW M607987 SHEET 2 OF 4 SHEETS

Registered Number **149231**



The horizontal ~~flat~~ lot boundaries are shown by heavy unbroken lines and defined by:

- site boundaries
- edge of bitumen or extension thereof labelled YZ B & A.N.P.Q.
- centre of concrete & steel posts & extension there of labelled AXC.
- open & perpendicular to A.C. & through the centre of column where labelled D.C.
- open & perpendicular to D.C. where labelled D.E.
- open & through the centre of concrete columns & extension thereof where labelled E.F.
- open & from centre of concrete column at F. to inside face of brick wall where labelled F.G.
- inside face of brick wall labelled G.H.J.K.L.
- edge of concrete steps & extension there of labelled L.M.
- inside face of brick wall & extension thereof labelled M.B.
- centreline of wall Q.R.S.
- northwest face of low block wall and extension thereof labelled T.U.
- edge of concrete labelled U.F.

U. & F. are the centres of columns.

- open & parallel to NA where labelled XY.

The vertical ~~flat~~ lot boundaries extend from 5m below ground level to a height of ~~14~~ 50m above ground level except for:

- the hachured portions which extend from 5m below ground level to the centre of the concrete slab above and
- the dotted portion which extends from 5m below ground level to the centre of the ceiling of the fire escape tunnel above.

FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

STRAT~~UM~~A PLAN

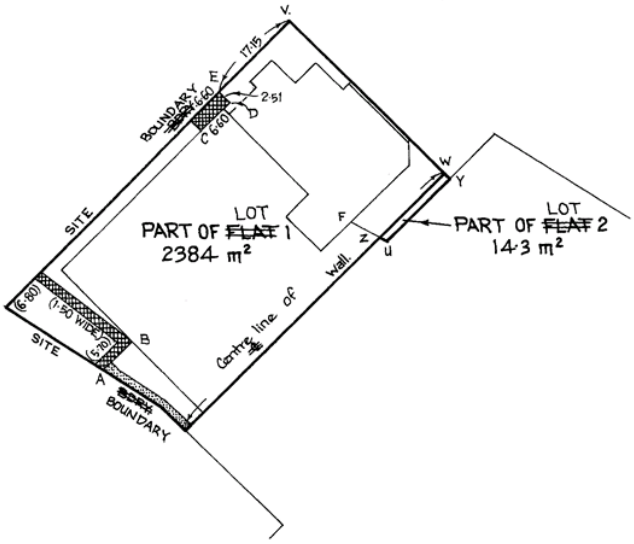
NEW SHEET 3 OF 4 SHEETS

M607987

Registered Number **149231**

IF FURTHER SHEETS ARE REQUIRED USE STRATUM PLAN ANNEXURE SHEETS COMMENCING AT SHEET 4

FIRST FLOOR
SCALE 1:600



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- site boundaries
- centreline of wall
- outer face of wall V.W. & extension thereof labelled W.Y.
- open where labelled Y.U.Z.

U.Y. is on the line of the vertical extension of the north west face of the low block wall below labelled U.T on sheet 2.
U.Z. is on the line between the centre of columns (~~U. & F.~~) below labelled U F on sheet 2.

The vertical ~~flat~~ lot boundaries extend from the centre of the concrete slab floor below to a height of ~~17~~ 50m above ground level except for:
- the dotted portion which extends from the centre of the ceiling of the fire escape tunnel below to 14m above ground level.

The cross hachured portions of Lot 1 are restricted under Section 151(b) for use by Lot 2 as emergency access ways.

AB is the centreline of a wall.

~~B is the intersection of the centreline of the wall AB & the outer face of the wall perpendicular thereto.~~

CDE is the face of wall or the extension thereof.

the List

FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

STRAT~~UM~~A PLAN

SHEET 4 OF ~~4~~ 5 SHEETS

Registered Number
149231

POSTAL ADDRESS FOR SERVICE OF NOTICES ON THE BODY CORPORATE:

Trust Company of Australia
C/- Heine Property Management
P.O. Box 7639
Melbourne 3004.

NAME OF BODY CORPORATE: STRATA CORPORATION N° 149231, 79-83 MELVILLE STREET & 80 BRISBANE STREET, HOBART

SURVEYORS CERTIFICATE

I, Craig McDowall Terry
of Hobart
a surveyor registered under the Land Surveyors Act 1909 hereby certify that the building erected on the site and drawn on sheet 1 of this plan is within the external boundaries of the folio stated on sheet 1.

Registered Surveyor — 16/12/97 date — W405C ref no

UNIT ENTITLEMENTS FOR THIS BODY CORPORATE

~~LOT~~ ~~FLAT~~	UNIT ENTITLEMENT	~~LOT~~ ~~FLAT~~	UNIT ENTITLEMENT
1	1897		
2	8103		

TOTAL ENTITLEMENTS FOR STRAT~~UM~~A PLAN = 10,000

COUNCIL CERTIFICATE

I certify that the HOBART CITY Council has:
(a) approved the subdivision shown in this plan and
(b) issued a building certificate in respect of each flat in this plan, in accordance with Section 119 of the Local Government (Building & Miscellaneous Provisions) Act 1993

~~General Manager~~ SURVEYING SERVICES MANAGER — 22.1.2001 date — 5669571 ref no

(FOR OFFICE USE ONLY)
MEMORIALS AFFECTING THE STRATUM PLAN

FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

STRATA PLAN

~~NEW~~ SHEET 5 OF 5 SHEETS

E70820

STRATA TITLES ACT 1998

Registered Number

149231

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 Surveyor

Date 22/9/2016

Council Delegate

Date

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 to the body corporate; or
(ii) for fixing the owner's proportionate interest in the common property; or
(iii) for fixing the number of votes to be exercisable by the owner of the lot at a general meeting of the body corporate; or
(iv) for fixing the proportion of the body corporate's income to be apportioned to the owner of the lot.

NAME OF (THIS) BODY CORPORATE	NAME OF (THIS) BODY CORPORATE	NAME OF (THIS) BODY CORPORATE
STRATA CORPORATION NO. 149231-1, ~~79-83 MELVILLE ST AND~~ 80 BRISBANE ~~ST~~ HOBART STREET,	STRATA CORPORATION NO. 149231-2, 79-83 MELVILLE ~~ST AND~~ STREET, ~~80 BRISBANE ST HOBART~~ HOBART	
ADDRESS FOR THE SERVICE OF NOTICES STRATA CORPORATION No. 149231-1, 80 BRISBANE ST, HOBART c/- HEINE PROPERTY MANAGEMENT PO BOX 7639 MELBOURNE 3004	ADDRESS FOR THE SERVICE OF NOTICES STRATA CORPORATION No. 149231-2, 79-83 MELVILLE ST, HOBART c/- HEINE PROPERTY MANAGEMENT PO BOX 7639 MELBOURNE 3004	ADDRESS FOR THE SERVICE OF NOTICES

LOT No.	UNIT ENTITLEMENT GENERAL	SPECIAL (IF ANY) (i)	(ii)	(iii)	(iv)	LOT No.	UNIT ENTITLEMENT GENERAL	SPECIAL (IF ANY) (i)	(ii)	(iii)	(iv)	LOT No.	UNIT ENTITLEMENT GENERAL	SPECIAL (IF ANY) (i)	(ii)	(iii)	(iv)
1	1897					2	8103										
TOTAL	1897					TOTAL	8103					TOTAL					

RESULT OF SEARCH

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
149231	2
EDITION	DATE OF ISSUE
8	04-Feb-2019

SEARCH DATE : 17-Dec-2021
SEARCH TIME : 12.44 PM

DESCRIPTION OF LAND

City of HOBART
Lot 2 on Strata Plan 149231 and a general unit entitlement operating for all purposes of the Strata Scheme being a 8103 undivided 1/10,000 interest
Derived from Strata Plan 149231
Derivation : SEE PLAN.

SCHEDULE 1

E109603 TRANSFER to UNIVERSITY OF TASMANIA Registered 04-Feb-2019 at 12.01 PM

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
The registered proprietor holds the lot and unit entitlement subject to any interest noted on common property Folio of the Register volume 149231 folio 0

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

FOLIO PLAN

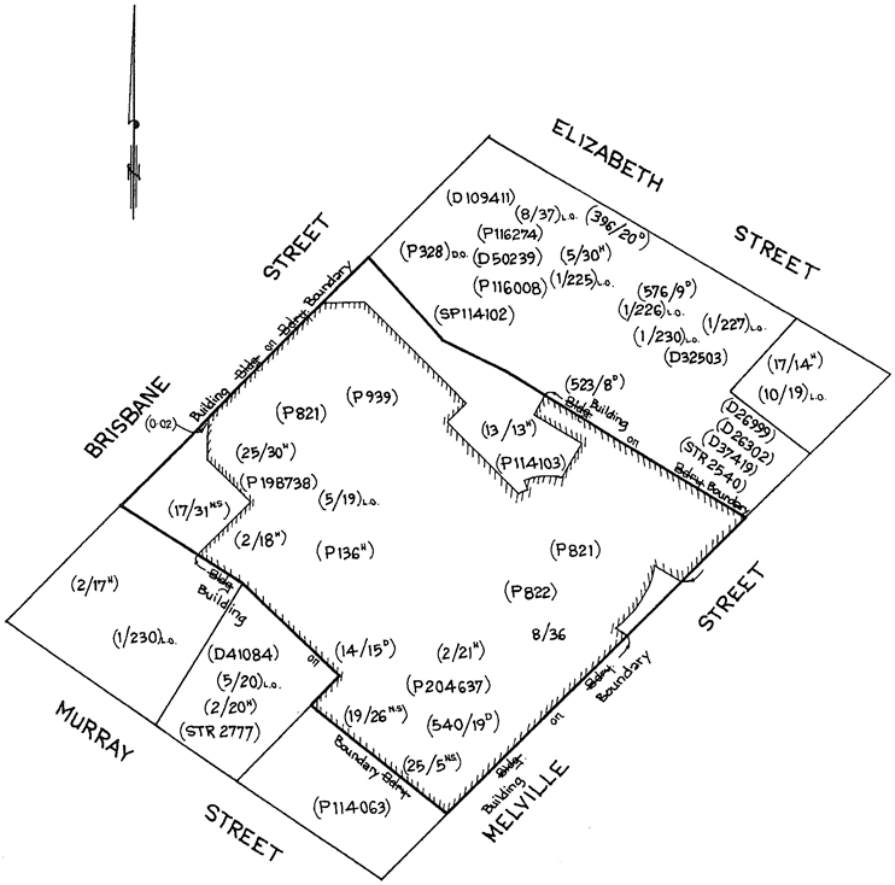
RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

CITY/TOWN HOBART SUBURB FOLIO REFERENCE C.T.125745-1 SITE COMPRISES THE WHOLE OF LOT 1 ON PLAN No. P125745	STRATUM PLAN SHEET 1 OF 4 SHEETS	REGISTERED NUMBER 149231
	NAME OF BUILDING 79-83 Melville Street & 80 Brisbane Street - Hobart.	REGISTERED - 3 OCT 2007 Alice Kawa Recorder of Titles.
MAPSHEET MUNICIPAL CODE No. 114 / LAST UPI No. FEZ64	SCALE 1: 750 / LENGTHS IN METRES	

SITE PLAN



NOTES: ALL BUILDINGS ON THE SITE TO BE SHOWN ON SHEET 1.
BUILDING TO SITE BOUNDARY OFFSETS OF LESS THAN 2·00 METRES TO BE SHOWN ON SHEET 1.
THE FEE SIMPLE OF THE SITE IS CONTAINED WITHIN THE STRATUM PLAN/BODY CORPORATE FOLIO.
FLAT FOLIOS ARE HELD SUBJECT TO STRATUM PLAN ENDORSEMENTS.

STRATA DEVELOPMENT CONTRACT No. (IF APPLICABLE)

LODGED BY PAGE SEAGER

A-149

FOLIO PLAN

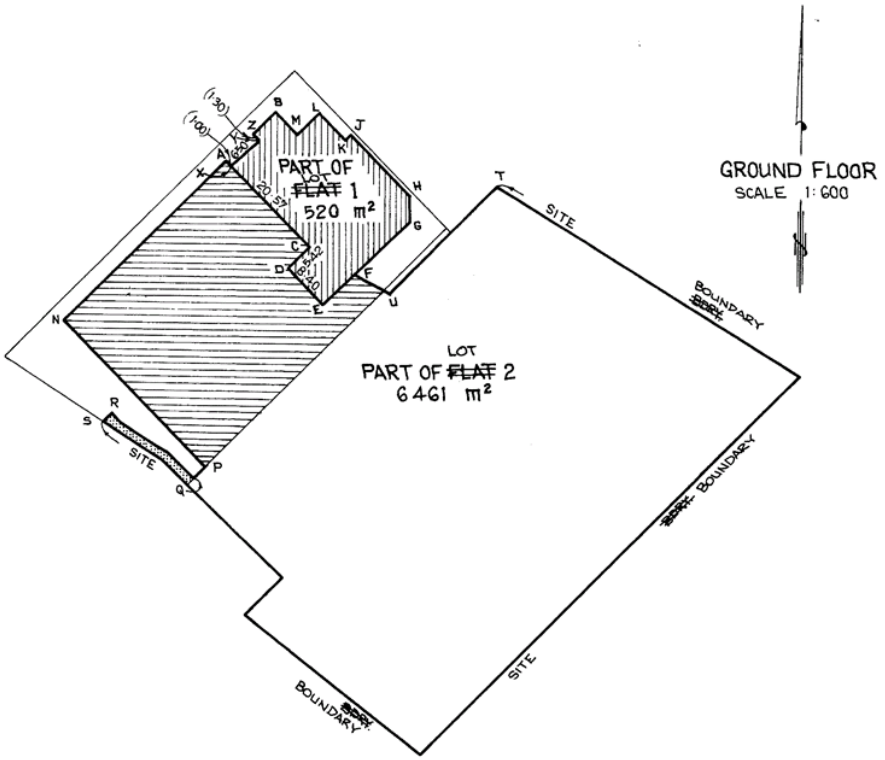
RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

STRAT~~UM~~A PLAN

NEW M607987 SHEET 2 OF 4 SHEETS

Registered Number **149231**



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FOLIO PLAN

RECORDER OF TITLES

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Tasmanian Government

STRAT~~UM~~A PLAN

NEW SHEET 3 OF 4 SHEETS

M607987

Registered Number **149231**

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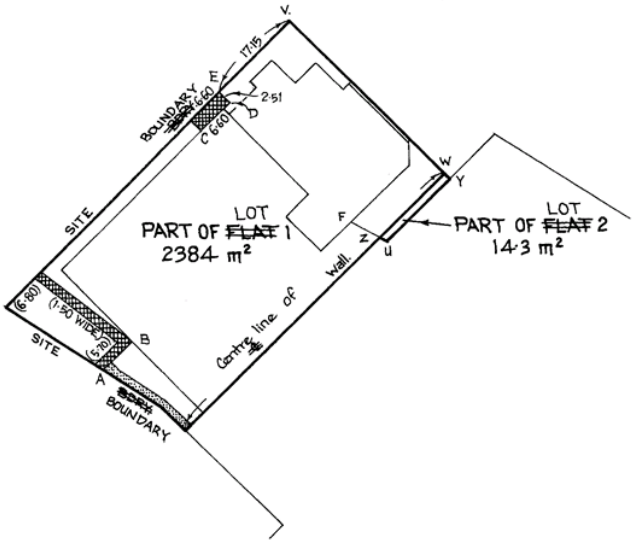
FIRST FLOOR
SCALE 1:600



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FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

STRAT~~UM~~A PLAN

SHEET 4 OF ~~4~~ 5 SHEETS

Registered Number
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Trust Company of Australia
C/- Heine Property Management
P.O. Box 7639
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NAME OF BODY CORPORATE: STRATA CORPORATION N° 149231, 79-83 MELVILLE STREET & 80 BRISBANE STREET, HOBART

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I, Craig McDowall Terry
of Hobart
a surveyor registered under the Land Surveyors Act 1909 hereby certify that the building erected on the site and drawn on sheet 1 of this plan is within the external boundaries of the folio stated on sheet 1.

Registered Surveyor — 16/12/97 date — W405C ref no

UNIT ENTITLEMENTS FOR THIS BODY CORPORATE

~~LOT FLAT~~	UNIT ENTITLEMENT	~~LOT FLAT~~	UNIT ENTITLEMENT
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~~General Manager~~ SURVEYING SERVICES MANAGER — 22.1.2001 date — 5669571 ref no

(FOR OFFICE USE ONLY)
MEMORIALS AFFECTING THE STRATUM PLAN

FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

STRATA PLAN

~~NEW~~ SHEET 5 OF 5 SHEETS

E70820

STRATA TITLES ACT 1998

Registered Number

149231

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Registered Land Surveyor

Date 22/9/2016

Council Delegate

Date

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TOTAL	1897					TOTAL	8103					TOTAL					

RESULT OF SEARCH

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
149231	0
EDITION	DATE OF ISSUE
2	22-Feb-2017

SEARCH DATE : 17-Dec-2021
SEARCH TIME : 12.45 PM

DESCRIPTION OF LAND

City of HOBART
The Common Property for Strata Scheme 149231
Derivation : SEE PLAN.
Prior CT 125745/1

SCHEDULE 1

E70820 STRATA CORPORATION NO. 149231-1, 80 BRISBANE STREET, HOBART (in relation to that part of the site comprising Lot 1 on Strata Plan No. 149231) and STRATA CORPORATION NO. 149231-2, 79-83 MELVILLE STREET, HOBART (in relation to that part of the site comprising Lot 2 on Strata Plan No. 149231)

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
B971184 ADHESION ORDER under Section 110 of the Local Government (Building and Miscellaneous Provisions) Act 1993 Registered 26-Sep-1996 at 12.01 PM
M607987 APPLICATION by body corporate to amend strata plan 149231 by increasing the vertical boundaries of Lots 1 & 2 and decreasing the common property Registered 22-Feb-2017 at noon
E70820 NOTICE of division of body corporate Registered 22-Feb-2017 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

Tasmanian Government

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
149231	0
EDITION	DATE OF ISSUE
2	22-Feb-2017

SEARCH DATE : 17-Dec-2021
SEARCH TIME : 12.44 PM

DESCRIPTION OF LAND

City of HOBART
The Common Property for Strata Scheme 149231
Derivation : SEE PLAN.
Prior CT 125745/1

SCHEDULE 1

E70820 STRATA CORPORATION NO. 149231-1, 80 BRISBANE STREET, HOBART (in relation to that part of the site comprising Lot 1 on Strata Plan No. 149231) and STRATA CORPORATION NO. 149231-2, 79-83 MELVILLE STREET, HOBART (in relation to that part of the site comprising Lot 2 on Strata Plan No. 149231)

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UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

A

Appendix A:

Architectural Drawings

DA Architectural Drawing Set

Sheet Number	Sheet Name	Status	Current Revision
AR- 00000	Cover Sheet	For Information	C
AR- 11000	Location Plan	For Information	C
AR- 12110	Level 01 and Mezzanine	For Information	B
AR- 12120	Level 02	For Information	B
AR- 12130	Roof	For Information	B
AR- 12210	Level 01 and Mezzanine	For Information	C
AR- 12220	Level 02	For Information	D
AR- 12230	Roof	For Information	D
AR- 12310	Level 1	For Information	A
AR- 12320	Level 2	For Information	A
AR- 12330	Roof	For Information	A
AR- 13110	Elevations	For Information	B
AR- 13120	Elevations	For Information	D
AR- 13210	Sections	For Information	D

Project
Southern Futures: Forestry / Timber Yards

Address
80 Brisbane Street / 79-83 Melville Street, Hobart

Client
University of Tasmania

Title
W–B
WOODS BAGOT

Project number
130807

Date Issued
Zone

Checked
AF

Approved
SB

Drawn
AS

Scale
A0

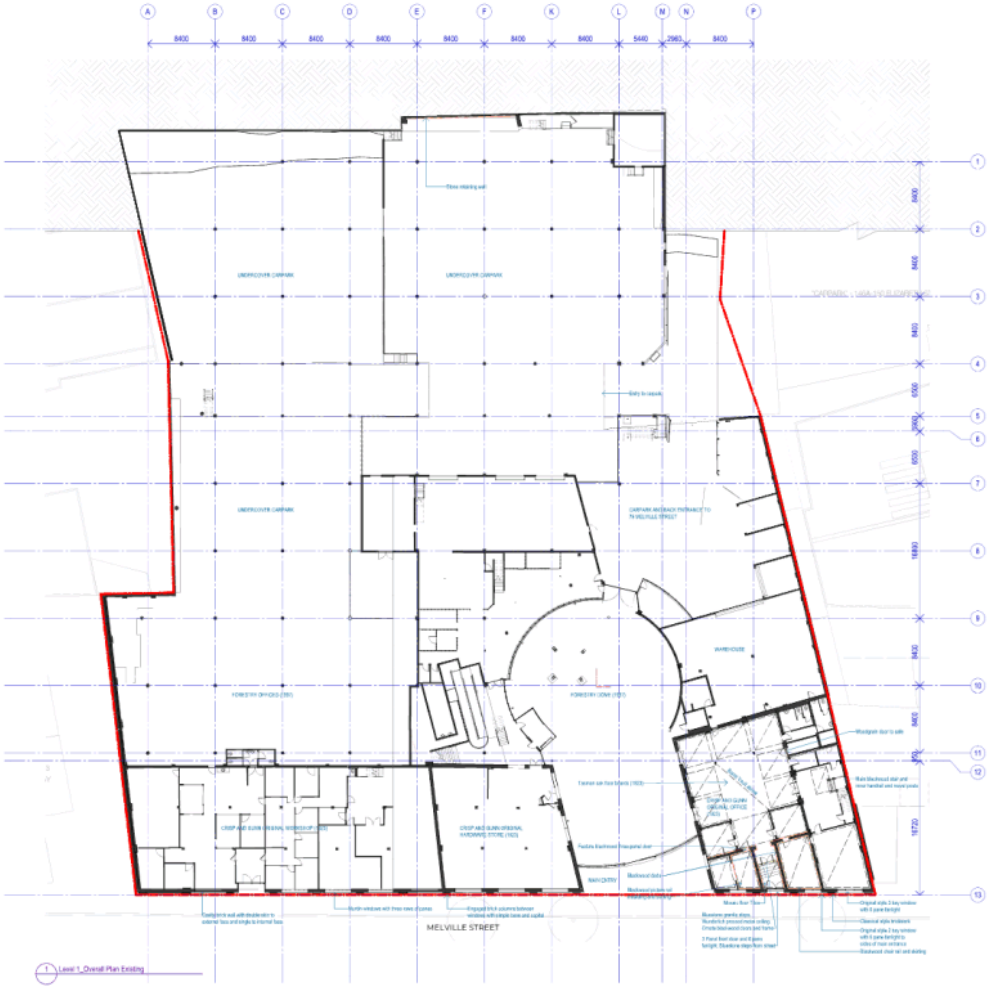
Sheet title
Cover Sheet
Cover Sheet

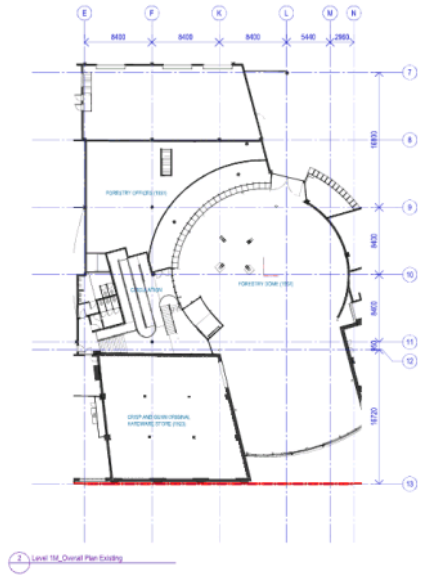
Sheet number
AR-00000

Number
C

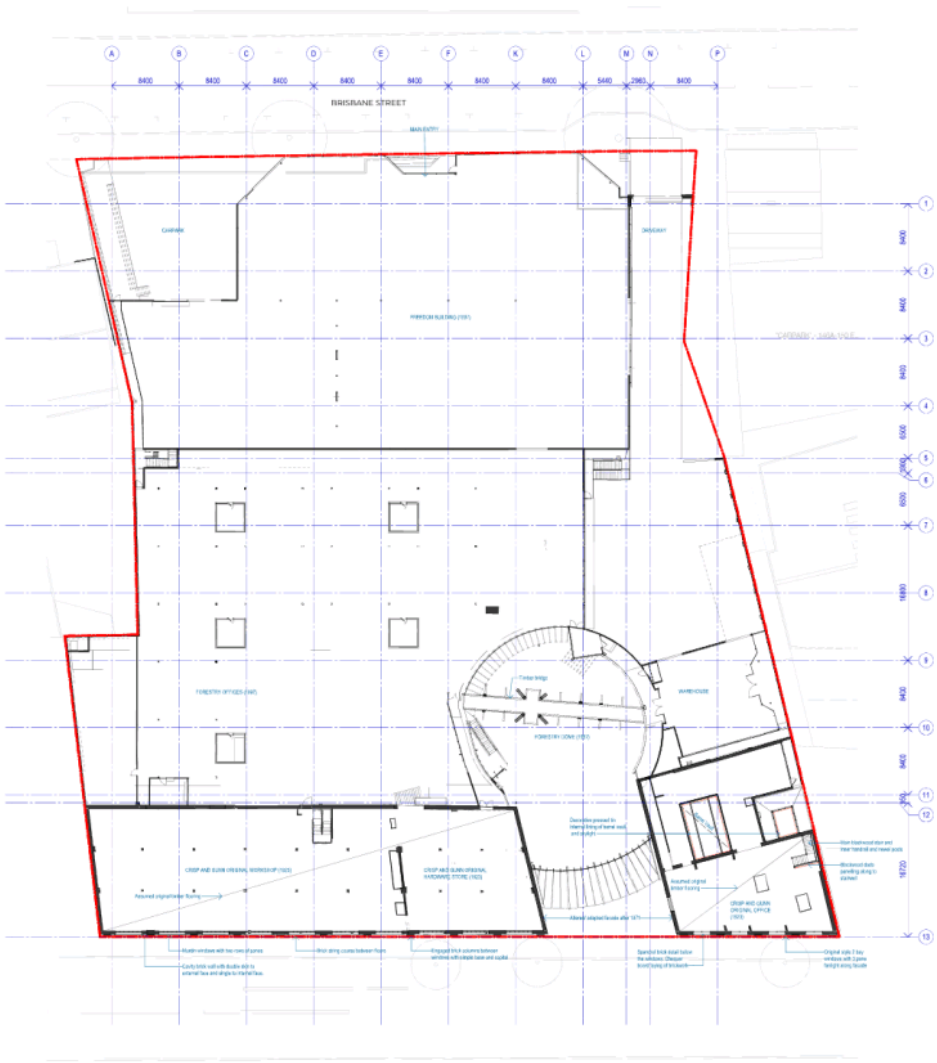
Status
For Information

TITLE REFERENCE
149231/1 & 149231/2
Project
Southern Futures: Forestry / Timber Yards
Address
80 Brisbane Street / 79-83 Melville Street, Hobart
Client
University of Tasmania
W–B
WOODS BAGOT
Project number
130907
Checked
Checker
Approved
Approver
Drawn
All
Scale
1 : 500
Sheet title
Site Plan
Location Plan
Sheet number
AR-11000
Revision
C
Status
For Information


MELVILLE STREET
1 Level 1_Overall Plan Existing


2 Level 1M_Overall Plan Existing

Southern Futures: Forestry / Timber Yards
80 Brisbane Street / 79-83 Melville Street, Hobart
University of Tasmania
W-B
WOODS BAGOT
Existing Plan
Level 01 and Mezzanine
AR-12110
For Information



Southern Futures: Forestry / Timber Yards

80 Brisbane Street / 79-83 Melville Street, Hobart

University of Tasmania

W–B
WOODS BAGOT

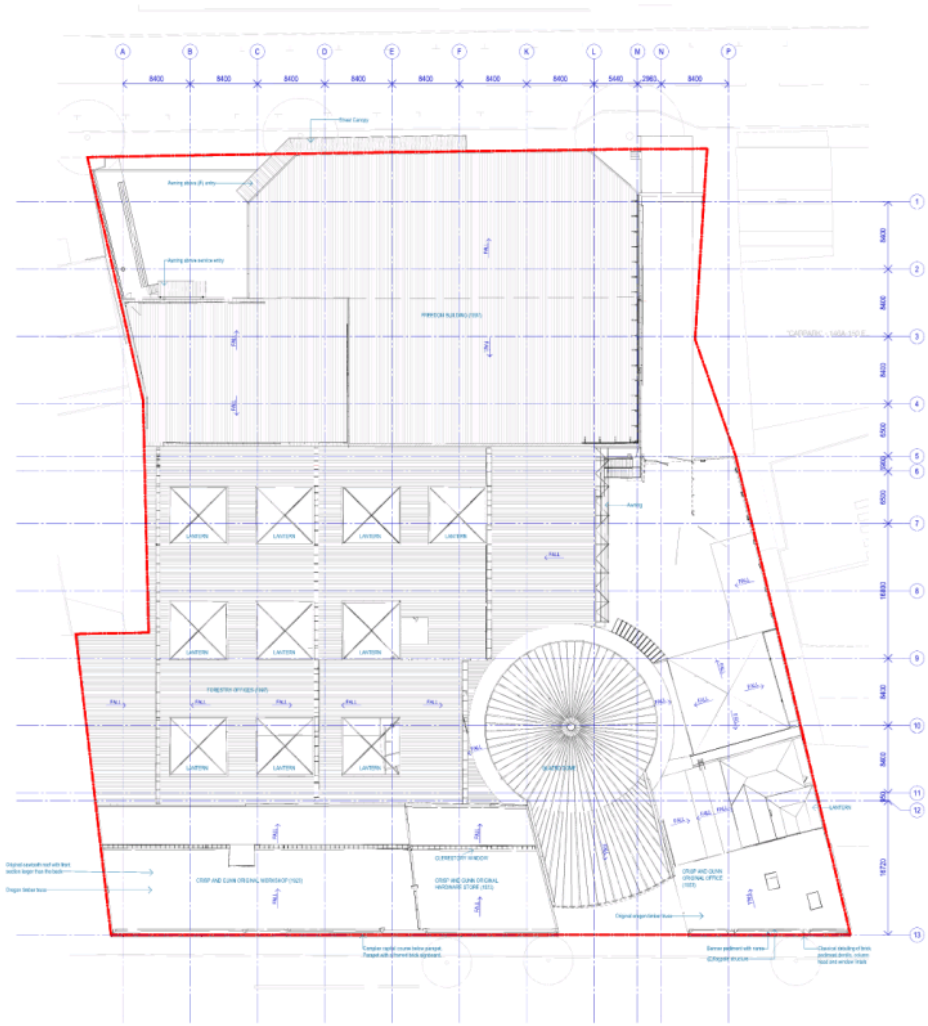
139907

Existing Plan
Level 02

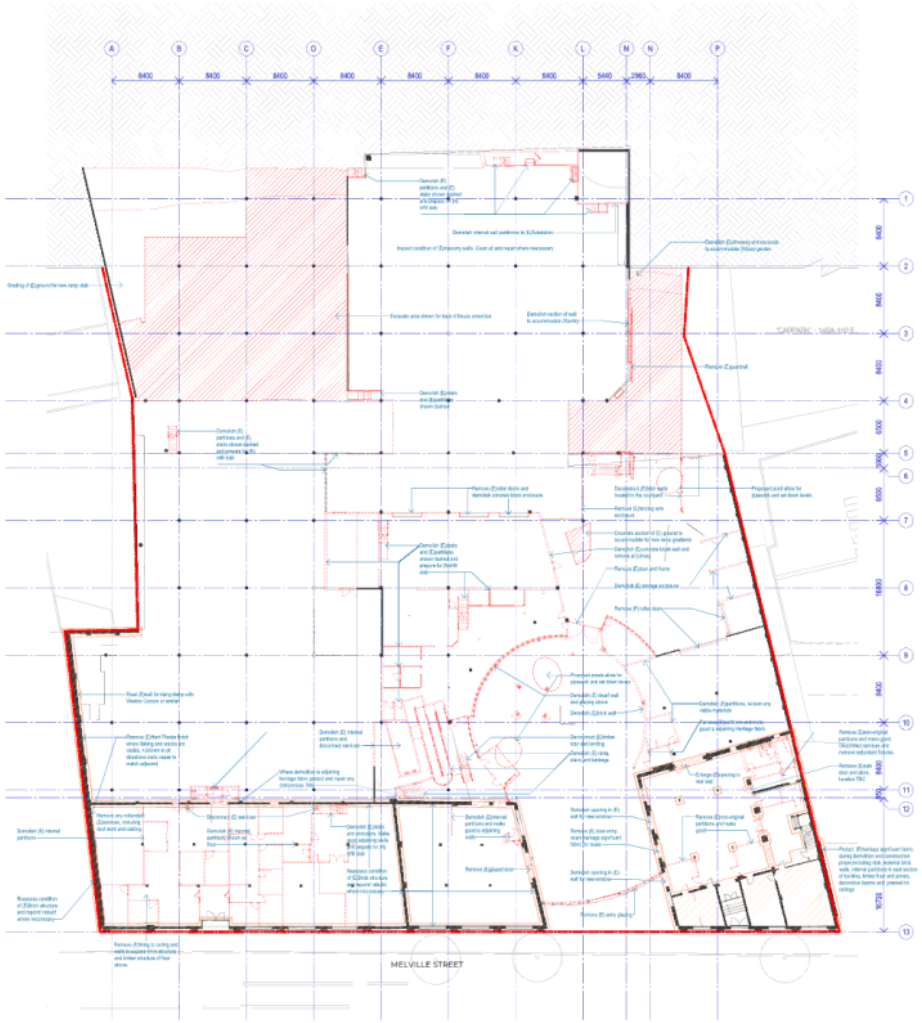
AR-12120

B

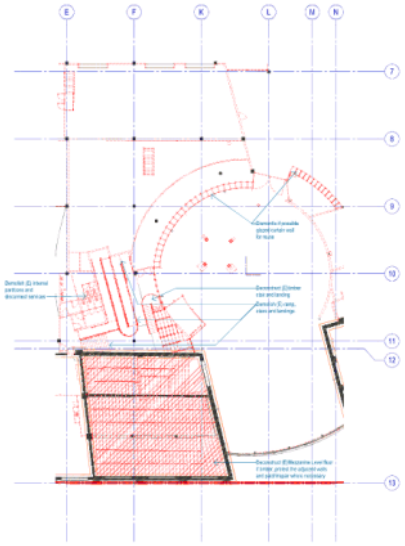
For Information



Southern Futures: Forestry / Timber Yards
80 Brisbane Street / 79-83 Melville Street, Hobart
University of Tasmania
W–B
WOODS BAGOT
Existing Plan Roof
AR-12130
For Information



1 Level 1_Overall Plan Demolition



2 Level 1M_Overall Plan Demolition

Revision schedule (Main)

R	Status	Description	Date
A	For Information	Draft DA issue	15.11.21
B	For Information	Draft DA issue	15.11.21
C	For Information	DA Issue	10.12.21

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Contractors must verify all dimensions on site before commencing work or preparing shop drawings.

Do not scale drawings.

Demolition

Heritage Significant Fabric

KEEPING ON SITE
R Existing
N New
TMC To Match Existing

DEMOLITION
-Terminate and carefully remove redundant fixtures, fittings and services
-Carefully dismantle elements for reuse, upcycling and recycling

INSPECT
-Analyse removalist goods, including gutters, downpipes, waterheads, flashing and drains
-Existing joinery, glazing, seals and operability if necessary

REPAIR ADJOINING HERITAGE FABRIC
-Protect existing heritage fabric including, walls, ceiling, floors, detail joinery and the like during demolition and construction works.

REMEDIAL WORKS
HERITAGE
-Any work to heritage fabric should be undertaken under the direction of material conservation professional

JOINERY
-Remove all joinery, patch and repair. Paint finish. New glazing to be installed and new seals applied.

MASONRY
CLEAN ALL OF MASONRY
-Clean all masonry with approved water mist or pressure assisted method, sample to be approved.

REPAIR DEFECTIVE MORTAR
-Carefully rake-out and repoint, failing, incompatible, pressed or defective mortar joints. Existing profile to match adjacent. Mortar mix sample to be approved

REPAIR MISSING, ERODED OR CRACKED MASONRY
-Masonry with visible cosmetic or structural deterioration other than, which or reconstruct sections of damaged brickwork, match original brick type, bond and pointing style

Project
Southern Futures: Forestry / Timber Yards

Address
83 Brisbane Street / 79-83 Melville Street, Hobart

Client
University of Tasmania

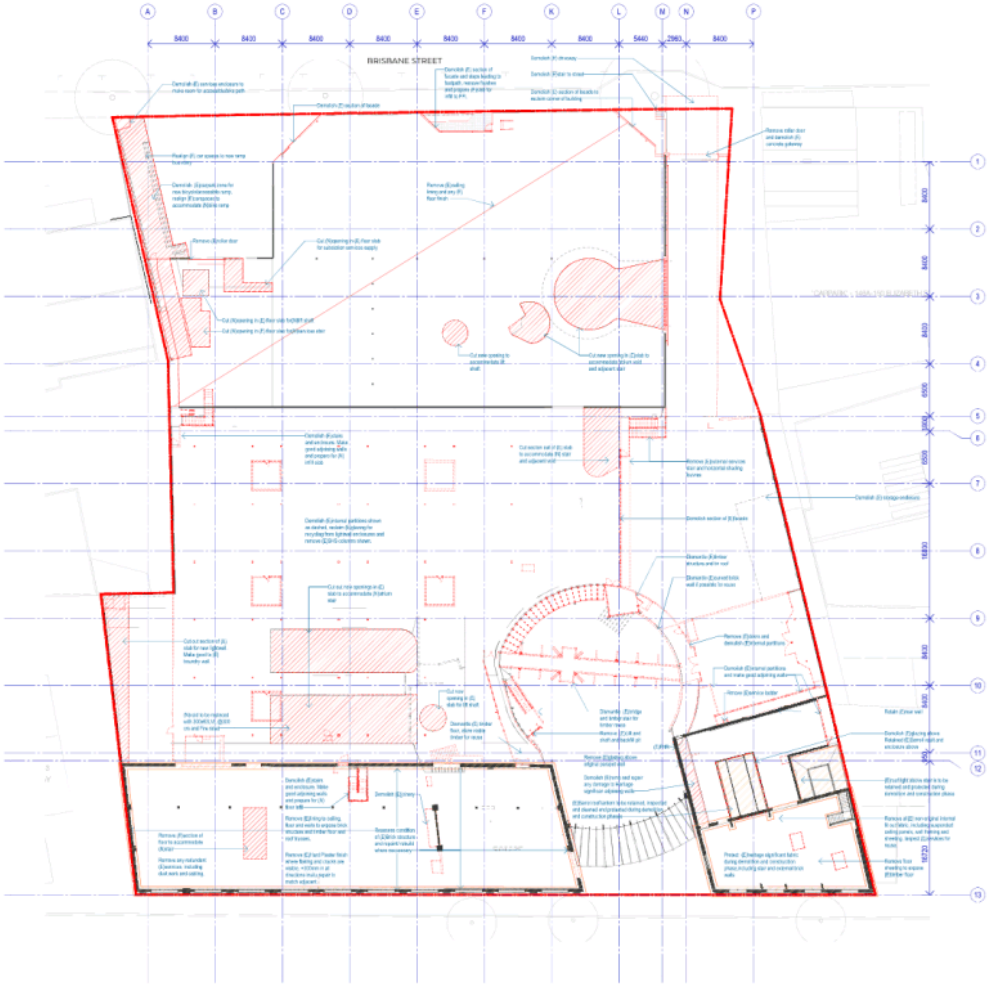
W–B
WOODS BAGOT

Project number 139807
Date drawn Jan 22
Checked AF
Approved SB
Drawn AG
Scale 1 : 200

Drawing title
Demolition Plan
Level 01 and Mezzanine

Drawing number AR-12210
Revision C

Status
For Information



Southern Futures: Forestry / Timber Yards

80 Brisbane Street / 79-83 Melville Street, Hobart

University of Tasmania

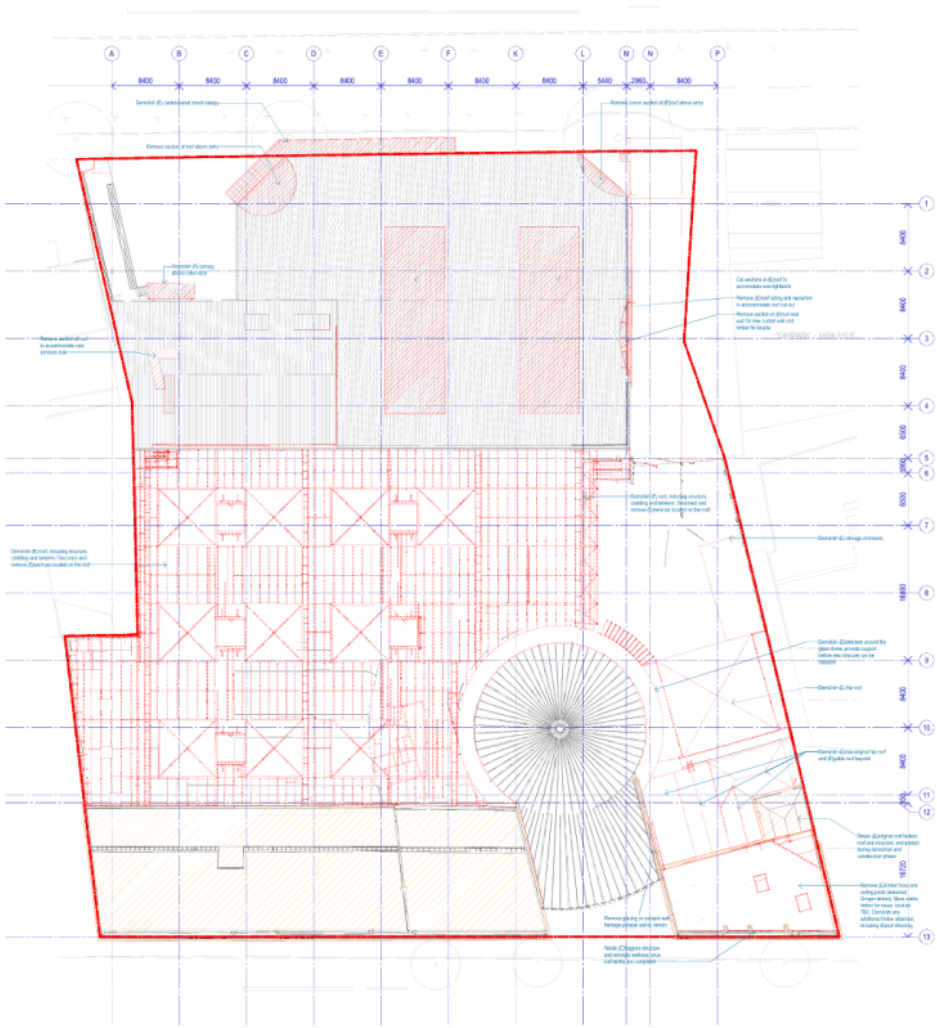
W–B
WOODS BAGOT

Demolition Plan
Level 02

AR-12220

D

For Information



Revision Schedule History

R	Status	Description	Date
A	For Information	Draft DA issue	15.11.21
B	For Information	Draft DA issue	15.11.21
C	For Information	Draft DA issue	22.11.21
D	For Information	Draft DA + Updated Issue	22.11.21
E	For Information	DA Issue	26.10.22

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Contractors must verify all dimensions on site before commencing work or preparing shop drawings.

Do not scale drawings.

Demolition

Heritage Significant Fabric

NOMENCLATURE
R Existing
N New
TBC To Match Existing

DEMOLITION
-Terminate and carefully remove redundant fixtures, fittings and services
-Carefully dismantle elements for reuse, upcycling and recycling

INSPECT
-Analyse removalist goods, including gutters, downpipes, waterheads, flashing and drains
-Existing joinery, glazing, seals and operability if necessary

REPAIR ADJOINING HERITAGE FABRIC
-Protect existing heritage fabric including, walls, ceiling, floors, metal joinery and the like during demolition and construction works.

REMEDIAL WORKS
HERITAGE
-Any work to heritage fabric should be undertaken under the direction of material conservation professional

JOINERY
-Remove all joinery, patch and repair. Paint finish. New glazing to be installed and new seals applied.

MASONRY
CLEANING OF MASONRY
-Clean all masonry with approved water mist or pressure assisted method, sample to be approved.

REPAIR DEFECTIVE MORTAR
-Carefully rake out and repoint, failing, incompatible, pressed or defective mortar joints. Finishing profile to match adjacent. Mortar mix sample to be approved

REPAIR MISSING, ERODED OR CRACKED MASONRY
-Masonry with visible cracking, or structural deterioration other than, which or reconstruct sections of damaged brickwork, match original brick type, bond and pointing style

Project
Southern Futures: Forestry / Timber Yards

Address
80 Brisbane Street / 79-83 Melville Street, Hobart

Client
University of Tasmania

Architect
W–B™
WOODS BAGOT

Project number 130807
Drawn AF
Checked SB
Date check 26nov
Approved AB
Sheet size A0
Scale 1 : 200

Sheet title
Demolition Plan
Roof

Sheet number AR-12230
Revision D

Status
For Information

New Sewer
Existing Sewer
New Stormwater
Existing Stormwater
Manhole
Southern Futures: Forestry / Timber Yards
83 Brisbane Street / 79-83 Melville Street, Hobart
University of Tasmania
W–B
WOODS BAGOT
Overall Plan
Level 1
AR-12310
A
For Information

94-96 BRISBANE ST
143 MURRAY ST
141 MURRAY ST
131-133 MURRAY ST
CARPARK - 145A-150 ELIZABETH ST
132-144 ELIZABETH ST
WORKPLACE
WINTER GARDEN
Southern Futures: Forestry / Timber Yards
80 Brisbane Street / 79-83 Melville Street, Hobart
University of Tasmania
W–B
WOODS BAGOT
139907
Overall Plan
Level 2
AR-12320
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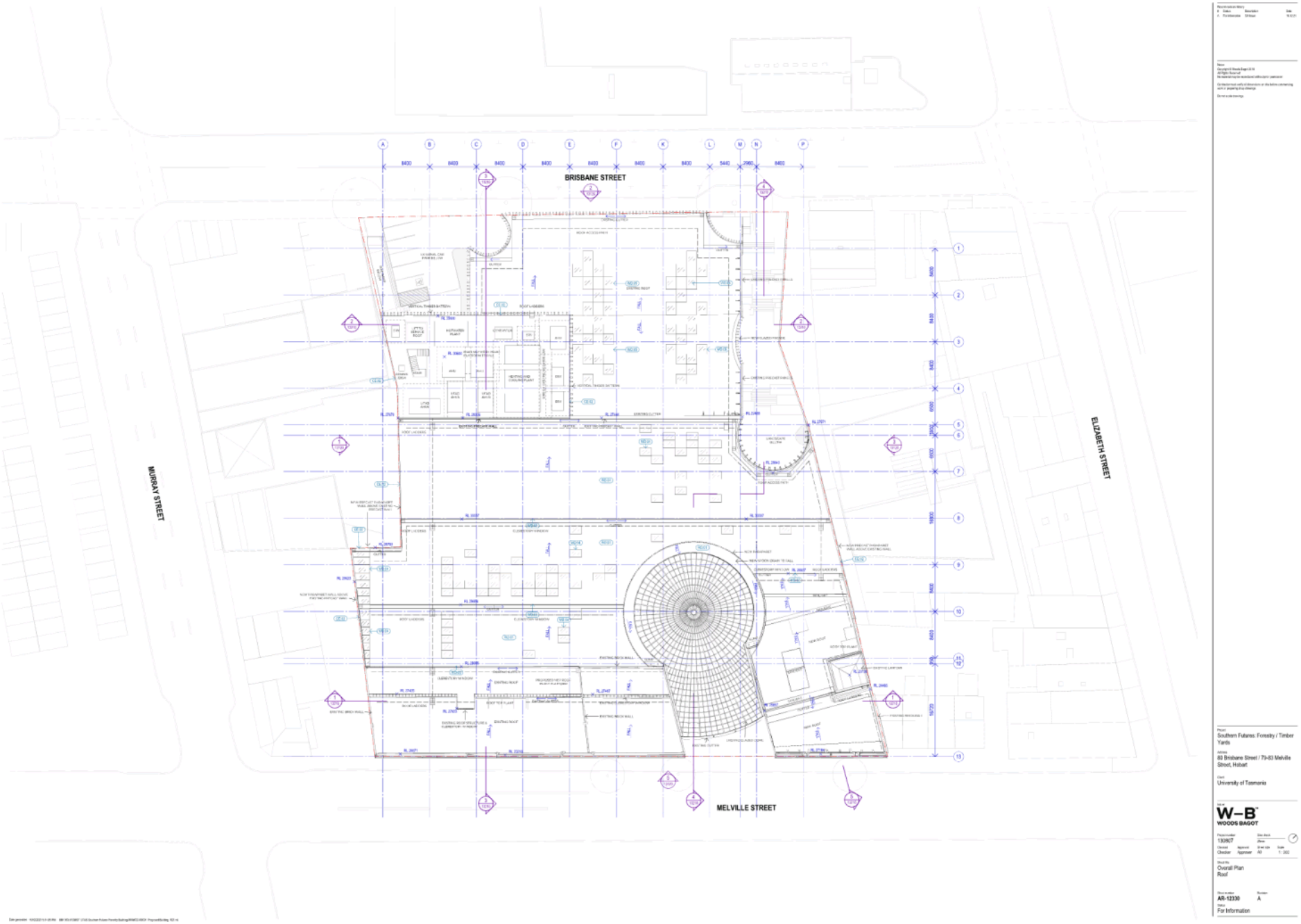
For Information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MELVILLE STREET
MURRAY STREET
ELIZABETH STREET
Southern Futures: Forestry / Timber Yards
80 Brisbane Street / 79-83 Melville Street, Hobart
University of Tasmania
W–B
WOODS BAGOT
Overall Plan
Roof
AR-12330
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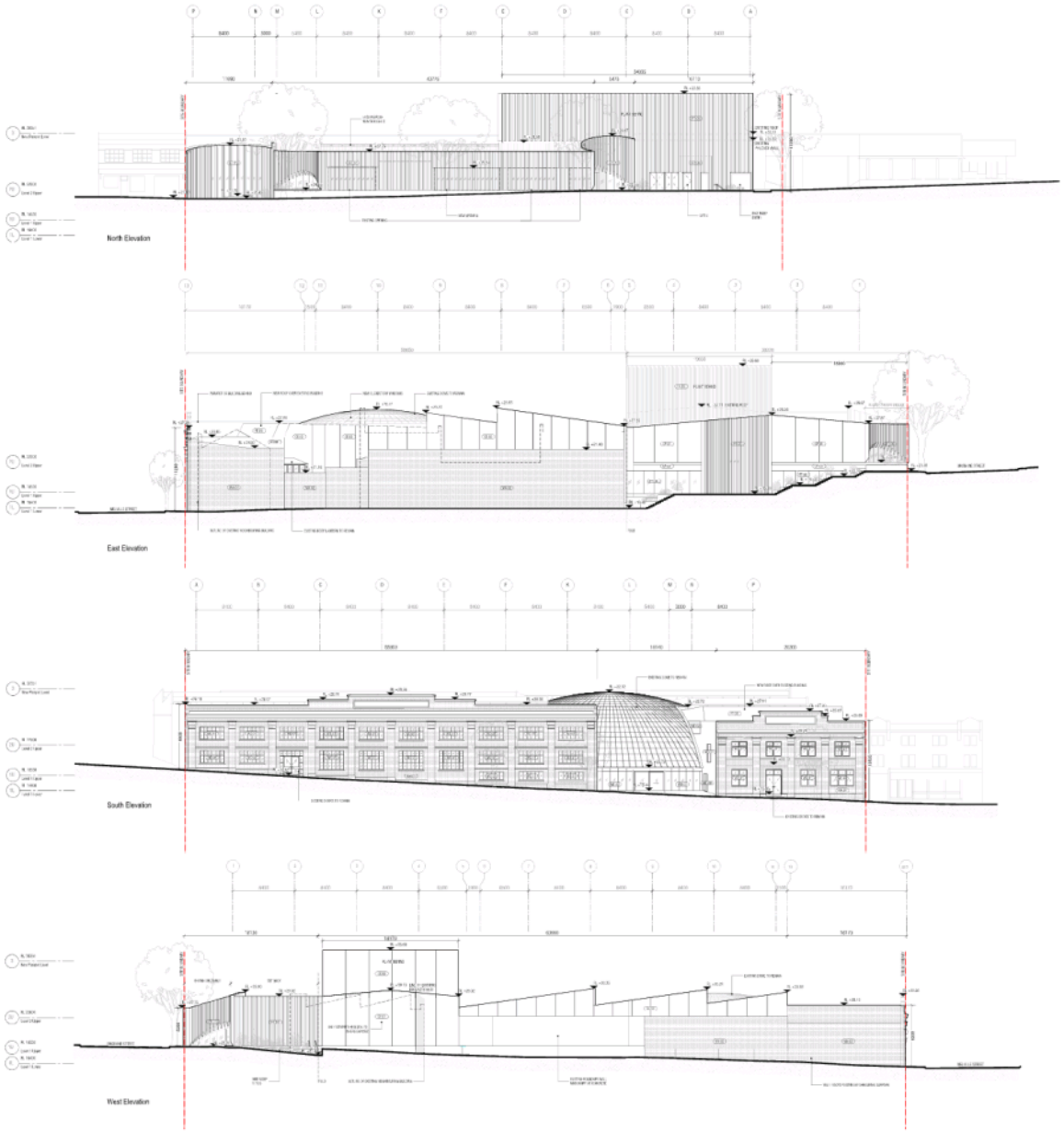
For Information



Project
Forestry Building Revitalisation

Client
University of Tasmania

Name
W–B
WOODS BAGOT

Project number
130807

Drawn by
AF

Approved by
BM

Scale
A0

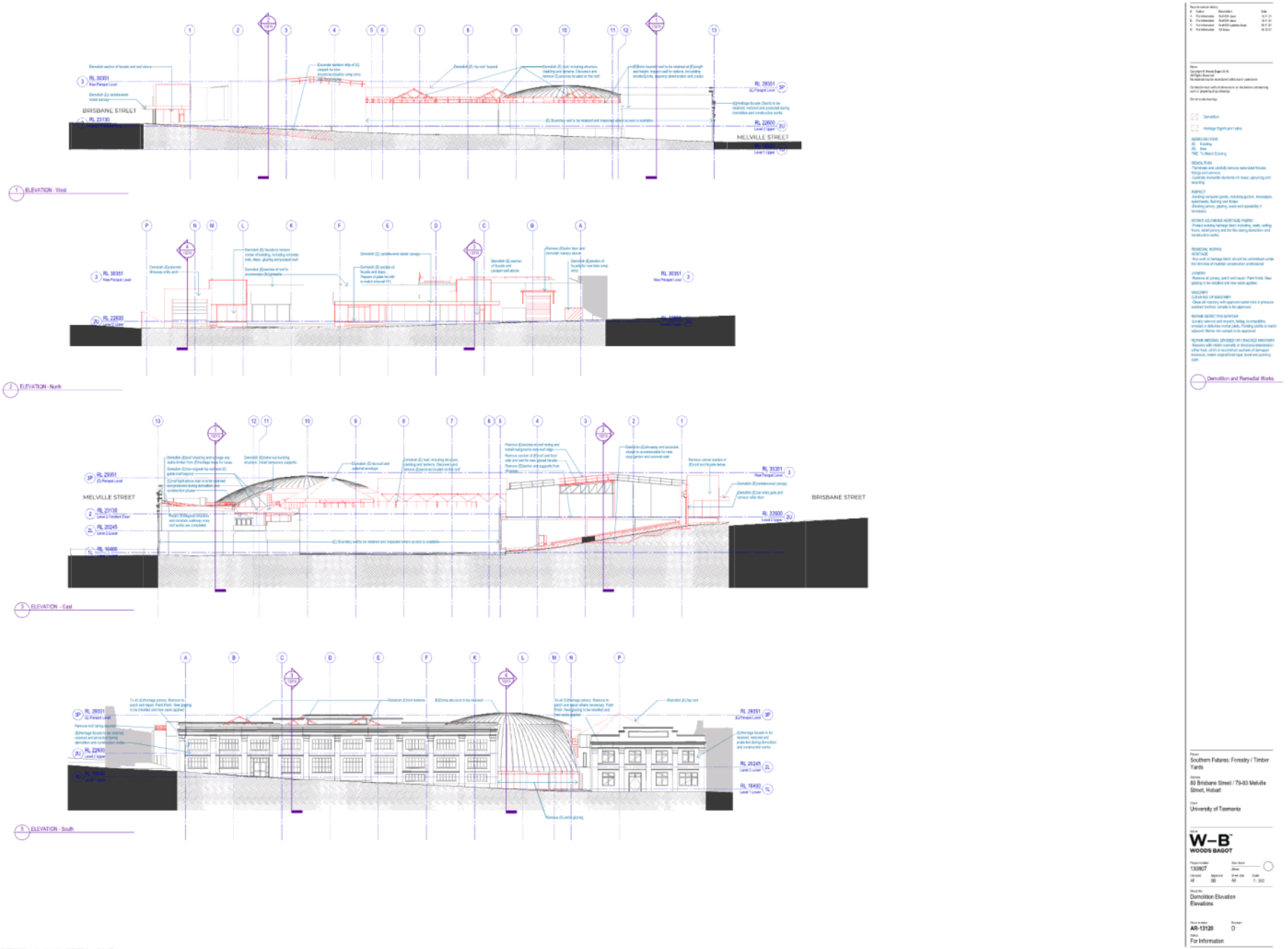
Scale
1 : 200

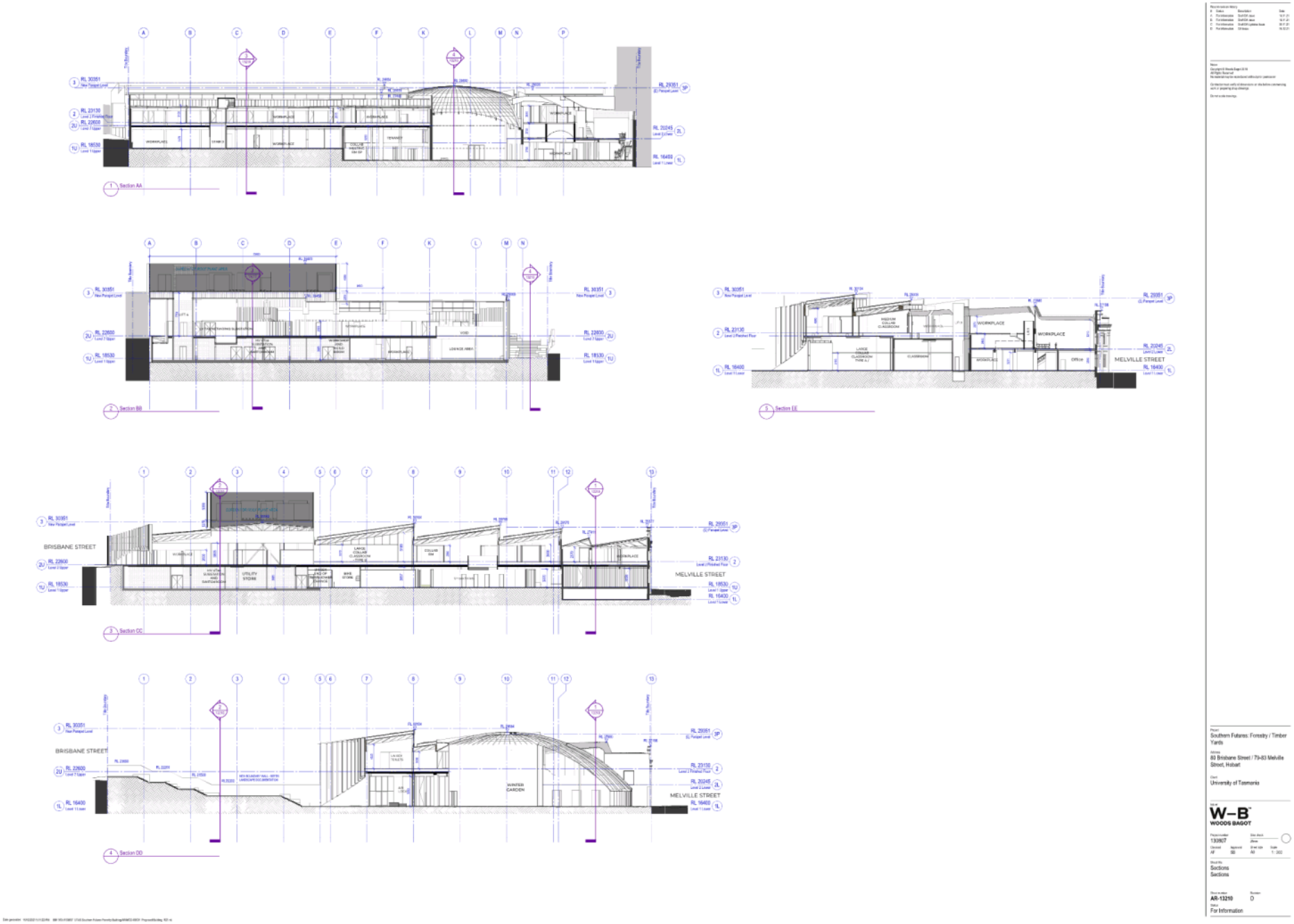
Drawing title
Overall Elevations

Drawing number
AR-13110

Revision
A

Status
For Information


BRISBANE STREET
MELVILLE STREET
1 ELEVATION - West
2 ELEVATION - North
3 ELEVATION - East
5 ELEVATION - South
Demolition and Remedial Works
Southern Futures: Forestry / Timber Yards
83 Brisbane Street / 79-83 Melville Street, Hobart
University of Tasmania
W–B
WOODS BAGOT
Demolition Elevation Elevations
AR-13120
For Information


Section AA
Section BB
Section CC
Section DD
Section EE
BRISBANE STREET
MELVILLE STREET
WORKPLACE
UTILITY STORE
WINTER GARDEN
Southern Futures: Forestry / Timber Yards
80 Brisbane Street / 79-83 Melville Street, Hobart
University of Tasmania
W-B
WOODS BAGOT
Sections
Sections
AR-13210
For Information

B

Appendix B:

Landscape Plan

BRISBANE STREET
MELVILLE STREET
CARPARK
BEAUREPAIRES
94 BRISBANE STREET
141 MURRAY STREET
131-133 MURRAY STREET
132-146 ELIZABETH ST
WORKPLACE
END OF TRIP FACILITIES
CLASSROOM
MC CANN'S MODEL WORLD
ADIEA BLINDS
LEVEL 2 - REFER TO AR-12020
LEVEL 1 - REFER TO AR-12010
GENERAL
EXTENT OF WORKS
BUILDING LINE
EXISTING TREE TO BE RETAINED
PROPOSED TREES
EXISTING RL
PROPOSED RL
TOP OF WALL
SURFACE FINISHES
PV01 NATURAL STONE LARGE FORMAT
PV02 NATURAL STONE SMALL FORMAT
VEGETATION TYPES
GB01 PLANTING - DRY MIX
GB02 PLANTING - INTERNAL ATRIUM MIX
GB03 PLANTING - INTERNAL BUILDING MIX
WT01 EPHEMERAL WATER BODY
FURNITURE & STRUCTURES
FOREST WALK
FEATURE ARTWORK SEAT
PAVEMENT INLAY
STAIRS AND TERRACE
RAW NATURAL STONE BOULDERS
NOTES
CERTIFICATION
WARNING
DIAL BEFORE YOU DIG
DATE REV AMENDMENTS
REALM studios
CLIENT
UNIVERSITY OF TASMANIA
79 MELVILLE STREET, HOBART TAS 7000
PROJECT
UNIVERSITY OF TASMANIA
FORESTRY
LANDSCAPE WORKS
DRAWING
GENERAL ARRANGEMENT PLAN
DRAWN CHECKED SCALE @ A1
DP 1:200
STATUS
DRAFT DA
DRAWING NO. REVISION
20343-DA-L200 A

W–B
WOODS BAGOT

17.12.2021

REVISION B

University of Tasmania Forestry / Timber Yards Planning Report

Issue Register

Issue Date	Revision	Issued For	Comments	Issued To:
14.12.21	A	Review	Draft Issue - for review	UTAS
17.12.21	B	Development Approval	For submission	UTAS

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Woods Bagot acknowledges Australia's Aboriginal and Torres Strait Islander peoples as the Traditional Custodians of the land on which we live and work and pay our respects to their Elders past, present and emerging. We believe each and every project is an opportunity to engage and respond to Indigenous Australians' cultural connections to country. By respecting and celebrating the value and significance of both the heritage and contemporary culture of Indigenous Australians, our built environment is enriched and anchored into its location, its story, and varied experience.

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- 02.02 Site History 8
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- B Landscape Plan
- C Civil Engineering Documentation
- D Heritage Report
- E Traffic Report
- F Site Contamination Report

01

Introduction

01.01 Introduction

01.01 Introduction

This report has been prepared by Woods Bagot on behalf of The University of Tasmania (UTAS).

It provides the rationale for the design, architecture and urban response to public realm and landscape to support the planning application for the development at 79 - 83 Melville St / 80 Brisbane Street, Hobart (subject site).

The report includes commentary, images, plans and diagrams to illustrate the existing and proposed conditions and provides a basis for the proposed scheme.

The report demonstrates the design progression as it responds to UTAS' aspiration to ensure the Forestry and Timber Yards building's rejuvenated presence as a cultural institution for the community and city of Hobart for generations to come.

The broad themes explored in the report include:

- Site conditions and context
- Design rationale and progression
- Response to heritage
- Architectural planning
- Facade strategy, palette and materials

UTAS is currently in the process of moving its Sandy Bay Campus to the Hobart CBD. A masterplan has been developed which outlines a new proposal for a distributed City Campus encompassing several zones, including a Campus Heart.

The existing Forestry and Timber Yards buildings front onto Melville Street and Brisbane Street respectively.

The objective for the new refurbishment of the Forestry and Timber Yards buildings is to design a highly connected, porous campus of welcoming spaces that invite community access and use of the campus and its facilities. The buildings will house the College of Business & Economics (CoBE), Law, UTAS Corporate Services and a component of University College to create an environment for business innovation and partnership with local business.

The proposal includes teaching and learning spaces, student informal learning spaces, academic and corporate workplace, end of trip facilities, associated back-of-house / services areas, and a commercial tenancy fronting onto Melville Street.

The Forestry and Timber Yards development is located at 79 - 83 Melville Street / 80 Brisbane Street, Hobart, title reference 149231 (lots 1 & 2). The property is divided into two lots via a strata scheme. This development concerns both lots.

The site is zoned 22.0 Central Business under the Hobart Interim Planning Scheme 2015.

The Forestry building (previously occupied by the Forestry Tasmania) is currently unoccupied and comprises a total site area of approximately 7873m2 and a building GLA of approximately 7,020 m2. It contains heritage elements and is located adjacent to heritage properties. The Forestry site is listed as a Heritage place reference 2061 under the Hobart Interim Planning Scheme 2015, and place THR 12028, under the Tasmanian Heritage Register.

The Timber Yards building is currently in use as a commercial tenancy (Freedom Furniture).

Contributors and Consultation

This Development Application is underpinned by a collaborative process that has involved extensive input across all disciplines. This process has resulted in a design that has been rigorously tested and developed to meet the client brief and create a contextual response. The entire project team is listed below.

UTAS and the design team have engaged with the City of Hobart a number of times during the design phases of the project. Initial council heritage consultation took place on 31/07/21, parallel with engagement with TasHeritage, and consultation on stormwater/sewer realignment works took place on 07/09/21, 29/09/21 and 30/11/21.

Consultation has also taken place with TasWater, TasNetworks and the Tasmanian Fire Service. Finallly, we have engaged a number of times with Robert Morris-Nunn, the original architect of the Dome.

Project Team

The design team consists of:

Architect:	Woods Bagot
Landscape Architect:	Realm
Town Planning:	All Urban Planning
Heritage:	Praxis Environment
Services, ESD & Facades:	Arup
Fire Engineering:	Arup
Civil & Structure Engineering:	JMG
Traffic Engineering:	GHD
Access Consultant:	Equality Building
Building Code Certification:	Lee Tyers & Associates
Quantity Surveyor:	Exsto Management / Slattery
Arborist:	Element Tree Services

02

Project Vision

02.01 Project Vision
02.02 Site History
02.03 Existing Built Form

02.01 Project Vision

The Forestry / Timber Yards development is intended to be part of the fabric of both the city of Hobart and the University of Tasmania's city campus, and at the same time honouring and giving life to the heritage nature of the existing buildings.

Four key pillars form the vision for the project:

01 Found Conditions

The site has a rich sense of place and history. Our approach is to embrace the existing and let that drive the conceptual direction of the new, in order to develop a consistent visual language.

- Strong geometry of the dome drives new focus points
- Existing brick, timber and concrete palette to be maintained
- Building less, by retaining as much of the existing building fabric as possible, is a great way to reduce carbon emissions, in line with the university's overarching desire.

02 Craft and Materiality

Through an authentic commitment to materials and craft that carries a sense of place, Forestry / Timber Yards will have a strong connection to Hobart and its ecology.

- Natural, locally sourced materials
- Reuse and restoration of existing building fabric
- Custom designed and locally manufactured joinery

03 Integration of Architecture and Landscape

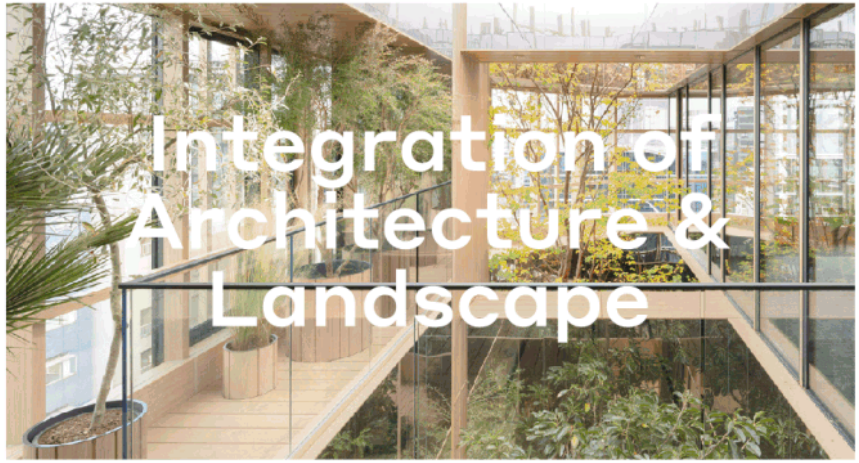
Connectivity both inside and to the broader campus and city is an essential principle of the university's masterplan. Running the landscape palette through the interior 'streets' within the building help create this connectivity.

- Consistent material palette throughout
- Significant planting within the wintergarden
- Landscape elements to be used throughout the workplace interiors

04 Building as a Campus

Although the development is part of the overall city campus, it contains a mini campus within, which will hold various spaces for students to exchange ideas and share in the University of Tasmania experience.

- A place for student life
- Exchange of ideas
- Sticky spaces
- Events and celebrations



02.02 Site History

The project consists of four key existing built elements to be retained, stitched together by a number of less significant later additions, which are proposed to be removed:

- The Crisp & Gunn office at 83 Melville Street (1923)

- The Crisp & Gunn warehouse at 79 Melville Street (1923), both designed by George Stanley Crisp

- The Foresty Tasmania dome (1997), designed by Morris-Nunn and Associates

- The Timber Yards building, currently in use as a Freedom furniture showroom (1990s)

The heritage significance of the Crisp & Gunn buildings and the Forestry Tasmania dome is well described in the accompanying heritage report authored by Brad Williams of Praxis Environment.

Of particular significance are the office interiors, including Tasmanian hardwood joinery, wall panelling and a stair, as well as pressed metal ceilings.

The Forestry Tasmania dome is framed with Tasmanian oak beams, and originally housed a microclimate patterned on a Tasmanian rainforest.

Both the original 1923 buildings and the 1997 addition are considered to be consistent with the story of the timber industry in Hobart.

The existing Timber Yards building does not have heritage significance. A mill and store building was built in this location in 1923, and was demolished in the 1990s to make way for the existing building. This building is being retained for sustainability and carbon reduction reasons.

Images circa 1923 showing the office and warehouse on Melville Street

Images circa 1997 showin the Forestry Tasmania dome and the original planting within the wintergarden

02.03 Existing Built Form

The site has a variety of unique found conditions that provide the grounding for a rich design response, and individual 'neighbourhood' identities within the overall precinct.

The proposal is to retain built elements that contribute to the project's sense of place, and to remove some of the accretive additions that currently constrain the space.

This section presents a typology of found conditions which contribute to the design response, as well as some examples of the challenges of the existing built fabric.

Timber framing

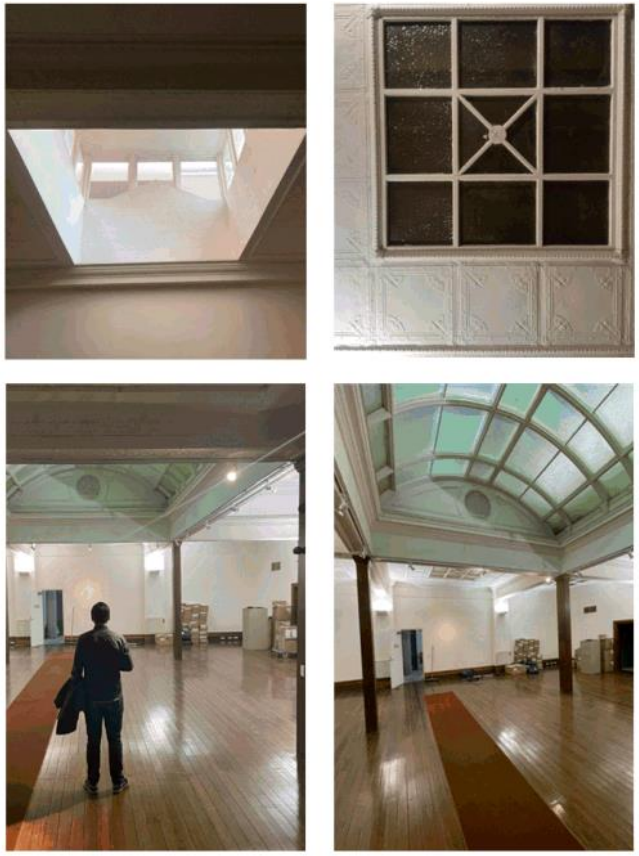
Timber beams supporting Forestry dome

Timber roof trusses and timber framed doors and sidelights within Crisp & Gunn workshop.

Brickwork

Masonry facades facing Melville Street to Crisp & Gunn office & workshop

Skylights and decorative ceilings



Skylights within Crisp & Gunn office, ground floor.

Challenges

Accretive additions, low ceiling heights and insufficient spaces for services

Unremarkable painted precast facades

03

Site and Context

03.01 Masterplan Principles
03.02 Design Response

03.01 Masterplan Principles

The Forestry / Timber Yards project forms part of the Southern Futures Program, which will deliver on the long-term plan to move the University's campus from Sandy Bay to the Hobart CBD, in turn activating the University's properties across the city.

Key Concepts

The key concepts for development of the University's city campus, as outlined in their urban design framework and the Forestry / Timber Yards project brief, are:

- A university of and for the City, not just in the City
- A university for the Southern Region
- A campus that is easy to access, close to employment, and close to partners
- A university where we do distinctive things for Tasmania and from Tasmania
- A university that gives expression to Hobart's unique qualities of place
- A university that enriches the civic, social, cultural and economic life of the city.

Urban Design Principles

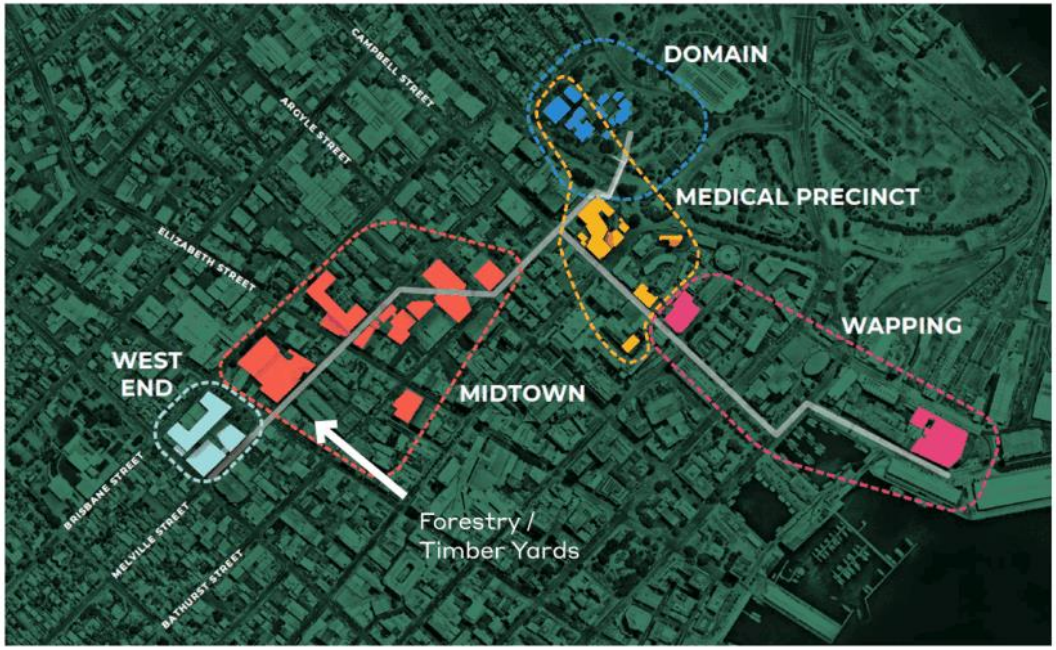
The Southern Campus Urban Design Framework clearly articualtes the following four guiding principles:

The Place Principle: Enhance the distinctive natural and human qualities of nipaluna/Hobart

The Sustainability Principle: Bring nature into the city as an integral part of a sustainable campus

The Accessibility Principle: Create a highly accessible campus that enhances connections across the city and from the Southern Region

The Community Principle: Create an inviting heart to a connected series of University and city communities



Masterplan diagram from the University of Tasmania's Southern Campus Urban Design Framework

03.02 Design Response

Design Response

The design principles informing our approach to Forestry / Timber Yards are underpinned by the same ideas:

The Place Principle: This is articulated through integration of architecture and landscape, and the idea of revealing the rivulet within the site within the Wintergarden, as well as through the adaptive reuse of existing heritage buildings. The context-sensitive scale of the development also keys back to this principle

The Sustainability Principle: The ambitious carbon reduction target set by the university ties into this principle, as does the idea behind reinstating the landscaped atrium space originally designed as part of the Forestry dome.

The Accessibility Principle: The landscaped path through the Forestry building creates a new through-block pedestrian link between Melville and Brisbane Streets, with the intent that the development is porous and activated

The Community Principle: The Wintergarden and the surrouding informal learning and collaboration areas and intended to be welcoming and support a diversity of uses. The tenancy fronting Melville Street is designed to enable a variety of community and commercial partnerships.

Site-specific Strategies

The Urban Design Framework lists a number of specific strategies for the Forestry / Timber Yards site. These straegies were contained within the design brief for the architecture and landscape design and have been responded to.

04

Design Concepts

04.01 Integration of Architecture & Landscape
04.02 Project Approach
04.03 Heritage Response
04.04 Facade Strategy

04.01 Integration of Architecture and Landscape

With the atrium at its heart, Forestry / Timber Yards has an unmistakable link to landscape. With this in mind, the project accentuates a blended typology whereby thresholds no longer separate architecture and landscape. The design team identified a series of landscape propositions that ultimately informed the design narrative.

The existing landscape

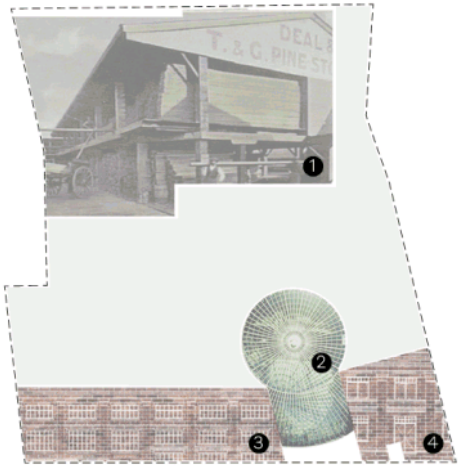
The site has a rich sense of character with layers of history visible. These layers of the past assert a distinct identity and foundation for the project. The dome at its heart is undeniably linked to landscape through its timber construction and the ecology housed within. Whilst less obvious, the Crisp and Gunn site and red brick warehouse buildings share a past linked to the Tasmania timber industry and its landscape through proxy.

New functions through landscape

New functional elements are inserted within the existing buildings or "landscapes". These elements are considered in a fashion which looks to depart from the typical conventions of a structure. Instead, these elements are regarded in a manner that will seek to form strong connections to landscape through form, appearance, texture and the considered use of ecology and planting.

Linking through landscape

Vegetation rich landscape arms together with external surface finishes will bleed from the central atrium space stitching together the numerous discrete functional elements, spaces and structures. This 'street like' network will ensure the project is cohesive, way-finding is clear and the idea of 'designing a campus experience and not a building' is expressed.

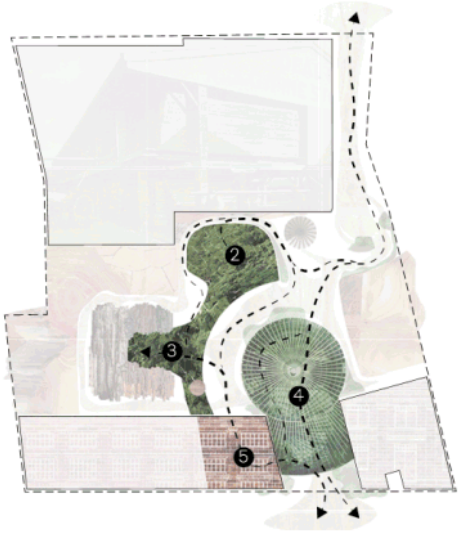


Destination within a landscape

Nestled within the various landscapes are a series of distinct destinations dispersed throughout the levels. Each destination will provide a different functional and social function and cater to the varied requirements of students and staff.

A new material landscape

The material palette will borrow from the landscapes of the site and Tasmania wide. This material palette will be explicitly linked and inherently identifiable to Tasmania's colours, textures, and materials, promising a unique environment.

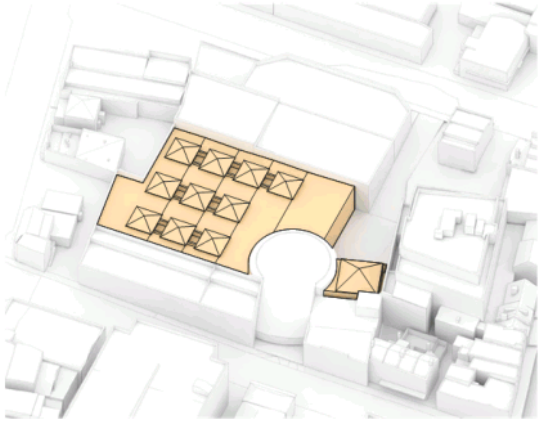


04.02 Project Approach

The following diagrams outline the defining architectural interventions for the project.

1. Demolish existing roof

The current roof over the non-heritage component of Forestry creates a low ceiling height over Level 2, provides limited light amenity and has an inflexible compromised structural grid.

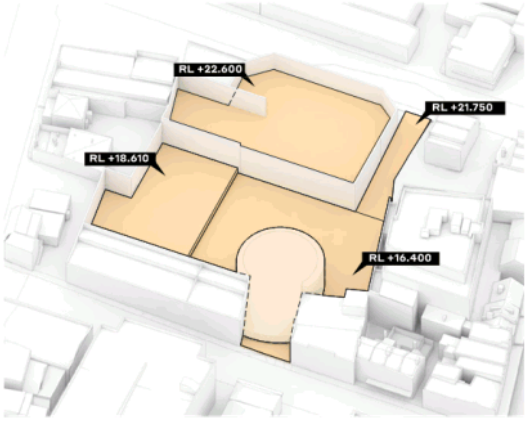


2. Axis

The axis joining Brisbane St and Melville St down the current carpark ramp and through the atrium was identified as a desirable new pedestrian link in the University's broader campus masterplan.

3. Existing ground planes

There are several ground plane level changes throughout the site. These level changes provide both interesting challenges and opportunities for the project.



4. Connecting Existing Ground Planes

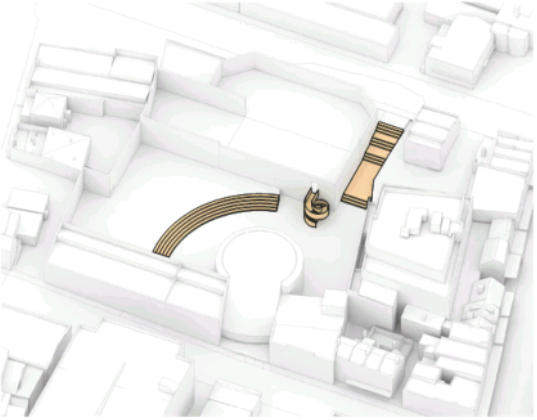
The connection of these level changes create a rich and layered ground plane, each change in level provides an opportunity for integration of unique shared functions.

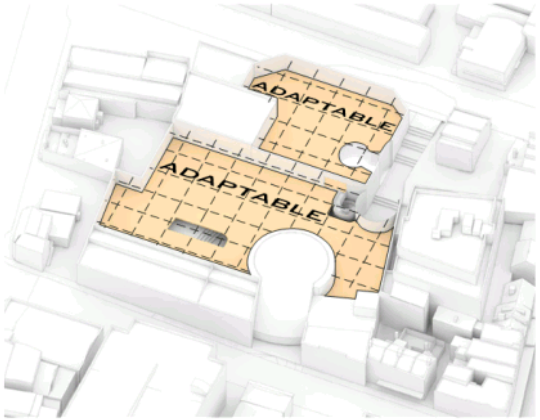
5. Interiors/Landscape

Extending from the central atrium, the idea of a living landscape is continued through and within the site.

6. Flexible Structure

A new flexible structural grid has been adopted on Level 2 of Forestry. Large structural spans are adopted in zones throughout the floor to allow the floor plate to be adaptable (for future alterations to the layout). This adaptaibilty is extended through to the Timber Yards.



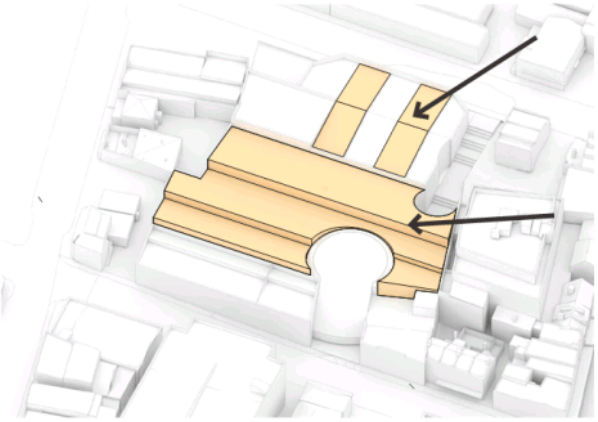


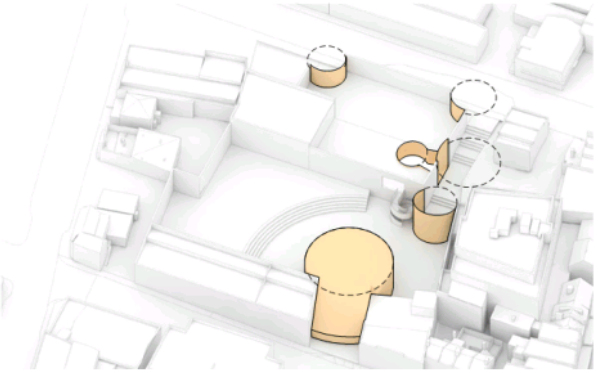
7. Solar Amenity

Each of the adaptable zones on the Forestry floor plate are punctuated by a new sawtooth structure. Each zone has uninterrupted south east solar amenity - providing excellent ambient light to the floor plate without the solar heat gain.

8. Consistent Geometry

The found geometry of the dome is used to shape cutouts and insertions within the existing Timber Yards building, to create an identifable, consistent language across the development.





04.03 Heritage Response

Heritage Fabric

The Forestry site contains three built elements with heritage significance, as outlined in the Heritage Tasmania draft listing, and as described in detail in the heritage report accompanying this planning submission:

- The Crisp & Gunn office facing Melville Street, including intact interiors at ground level

- The Crisp & Gunn workshops also facing Melville Street, which with the offices forms a consistent street wall condition

- The Forestry Tasmania dome, added in 1997.

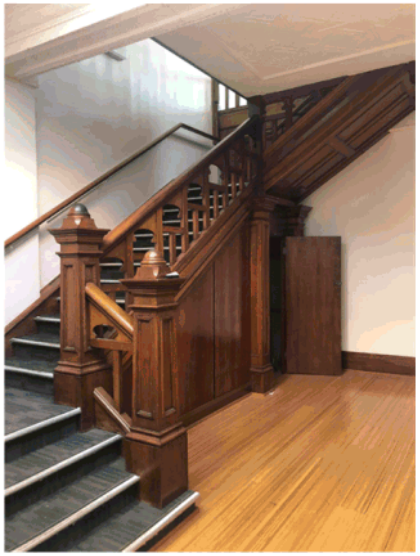
Brief

The initial design brief for the project called for a mix of academic workplace and teaching and learning spaces within the Forestry building. Our preliminary assessment was that the two Crisp & Gunn heritage buildings were better suited for academic workplace due to the existing rhythms of the windows and roof trusses, and the interior fabric (stair, ceiing finish, existing walls) within the C&G Office. The teaching and learning brief calls for larger, flexible spaces, which are less suited to these heritage interiors.

The workplace brief for the Law faculty was developed during the design phases to include a large open workspace area as well as a number of enclosed offices. This planning is still under development and isn't detailed as part of this DA submission, however the requirement is for a large contiguous floorplate at level 2, partially within the Crisp & Gunn office. Our planning of this space was developed in close consultation with Brad Williams at Praxis Environment and is driven by the heritage requirements.

Existing Crisp & Gunn Workshop and Office, with the Dome between the two. This image shows the consistent masonry facades to Melville Street.

Existing Crisp & Gunn Office interior, ground level, showing barrel vault



Existing Crisp & Gunn Office interior, ground level, original stair

Significant Heritage Fabric

The significance of the heritage components of Forestry is outlined in detail in the heritage consultant's report. From a design perspective, the key elements which our design approach celebrates are:

- The timber framed Dome, which is really the key element on the site and informs many other architectural interventions

- The consistent brickwork street facade to Melville Street.

- The original ceiling treatments and skylights / lanterns within the ground floor office building

- The Tasmanian hardwood stair, flooring and wall panelling

- The roof trusses and clerestory windows within the Crisp & Gunn workshop

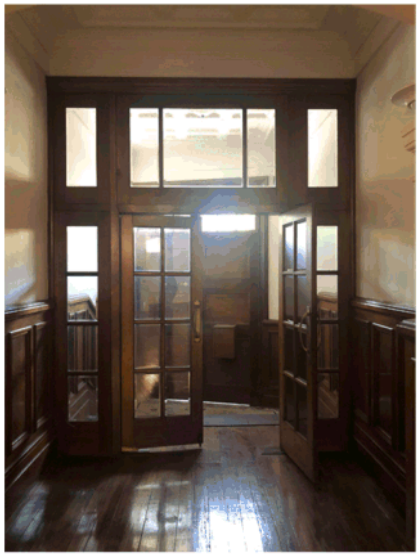
Challenges and design responses

Overlaying the university's design brief as well as modern functionality onto the existing buildings does carry a number of challenges.

The existing walls within the Crisp & Gunn office space were a limiting factor in the development of the planning for this space. Our proposal retains the walls deems to have high heritage value and removes others, in order to make the space as flexible as possible.

The first floor as it currently is, with the barrel vault protruding into the space, is a highly constrained space. The barrel vault was originally designed as a skylight and was not intended to be viewed from above. Our approach to create a larger, contiguous floor plate at the first floor, above, proposes to build over the already interior barrel vault, retaining it as a ceiling feature below and linking the new and heritage parts of the space at the level above.

The existing roof over the Crisp and Gunn Office creates a low ceiling at first floor level, which leaves little space for services. The roof fabric itself (trusses and roofing) is not in great condition and is mostly concealed behind the street-facing parapet. In order to create a consistent, open spatial experience at the first floor, we are proposing to replace this roof with a new one, which will also be concealed behind the parapet.



Existing Crisp & Gunn Office interior, ground level, showing glazed doors and sidelights / fanlights

Existing Crisp & Gunn Office interior, showing pressed metal ceiling to Eastern roof light

04.04 Facade Strategy

Our intent is to create a unified, consistent experience across Forestry and Timber Yards. Our approach to Timber Yards facades centres around two key concepts:

- Working with found conditions
- Consistency of materials

These concepts also guided our proposed design interventions within Forestry.

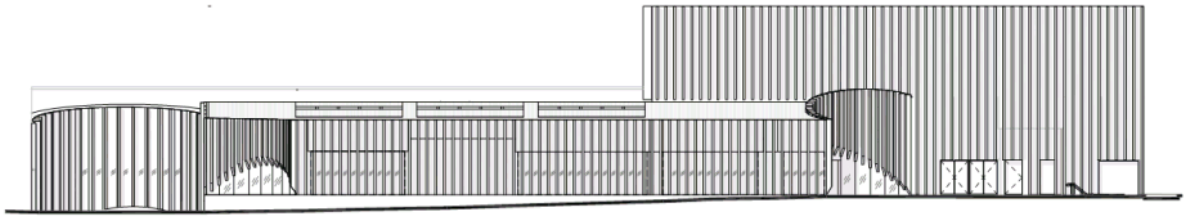
There is considerable variance in the quality and heritage value of the existing building fabric across the site, however there is real value from a carbon reduction perspective in retaining as much of the existing built form as possible. This practical requirement can also be extended as an architectural design concept - letting the primacy of the found conditions drive the new interventions

When developing these concepts, we set ourselves the following key goals/constraints:

- Minimise use of any new materials that are not part of the current precinct palette
- Retain and refurbish a significant portion of the existing precast concrete panels, rather than demolishing or concealing the existing facade
- Focus on timber as the key new material. This helps in creating an identifiable / consistent language across the entire precinct, and also conceptually references the original Timber Yards buildings, now demolished.
- Maximise possibilities for carbon reduction
- Maintain the overall primary circular geometry approach to the key corners of the building
- Adopt a consistent facade language across the various built elements facing Brisbane Street. The approach needs to unify the various existing facade conditions
- Let functionality drive the approach to fenestration - the vertical timber fins help to control solar glare and heat while allowing some views out and restricting views in from the street.

Brisbane Street entry showing new glazing and mass timber fins

Precedent image showing mass timber vertical fins - Royal Arena, Copenhagen, Denmark by 3XN Architects



Diagrammatic Brisbane Street elevation showing consistent facade treatment unifying the new and existing facades

05

Visualisation

05.01 Renders

05.01 Renders

Melville Street view showing main entry through existing Dome and addition to Crisp & Gunn Office.

Melville Street view showing main entry through existing Dome and glimpse into Wintergarden..

View into Wintergarden.

View showing Forestry entry at base of landscaped terrace from Brisbane Street

View on Brisbane Street looiking down landscaped terrace to Forestry entry

View on Brisbane Street showing main entry to Timber Yards.

A

Appendix A:

Architectural Drawings

B

Appendix B:

Landscape Plan

C

Appendix C:

Civil Engineering Documentation

D

Appendix D:

Heritage Report

E

Appendix E:

Traffic Report

F

Appendix F:

Site Contamination Report

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AllUrbanPlanning PTY LTD

University of Tasmania
Redevelopment of 79-83 Melville Street and 80 Brisbane Street
Planning Report

Date 17 December 2021

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1. Introduction

All Urban Planning Pty Ltd has been engaged by the University of Tasmania to provide planning advice in relation to the proposed redevelopment of the former Forestry and Freedom buildings for educational use. The following assessment has been prepared to address the provisions of the *Hobart Interim Planning Scheme 2015* (planning scheme) as part of an application for a planning permit.

1.1Site

The site is shown in Figure 1 below and has a combined area of 7873m^2. The site is strata titled and includes the former Forestry building as Lot 2 (CT 149231/2) and the current Freedom building on the Brisbane Street frontage known as Lot 1 (CT 149231/1).

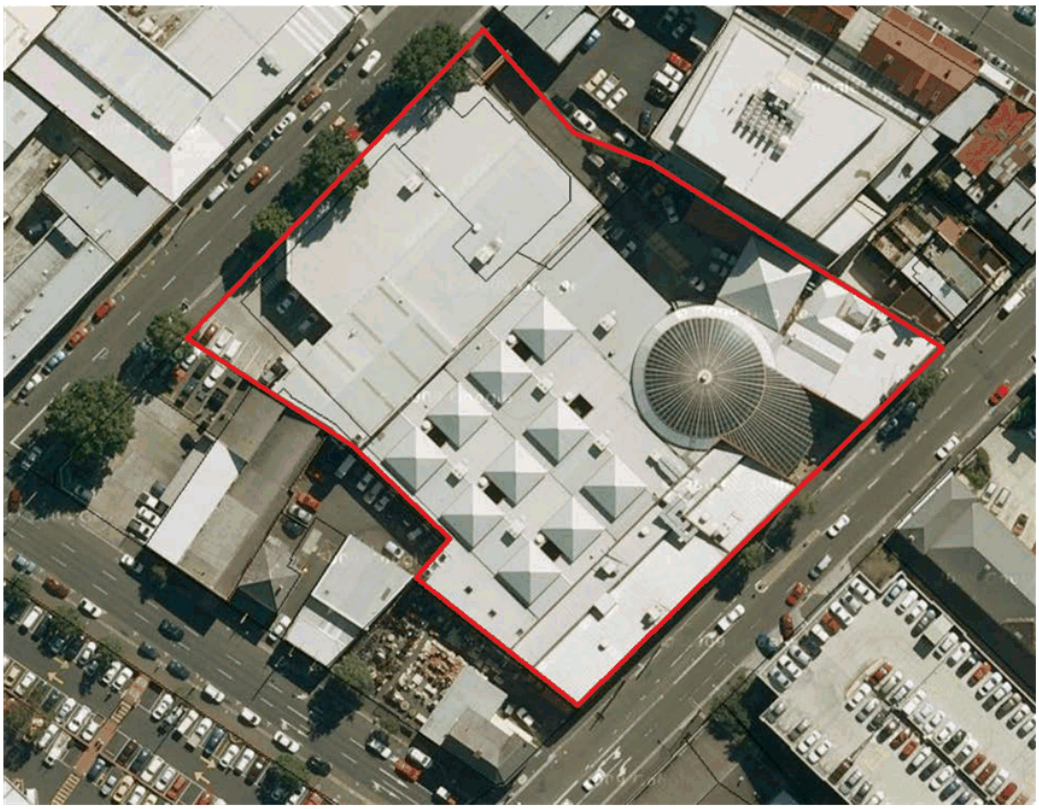

Figure 1 – the site (source: theList)

As part of preparation of the proposal a package of stormwater upgrade works involving Council land in Melville and Bathurst Street has been identified and discussed with Council officers. These works are detailed in a report prepared by JMG and are the subject of a request for General Managers Consent (GMC-21-84).

2. Proposal

The proposal is for redevelopment of the site for educational use as detailed in the accompanying plans prepared by Woods Bagot. The proposal retains the two red brick heritage buildings on the Melville Street frontage of the site and the central modern glazed dome of the former Forestry building and refurbishes the site for educational use over two main floors.

An architectural design statement by Woods Bagot accompanies the application and in connection with the proposed demolition plan, floor plans and sections describe the proposed work in detail. This includes a description of the proposed design rationale, use, materials and finishes.

The proposal has been prepared in consultation with Robert Morris-Nunn, the architect of the previous "Forestry" adaptation of the site.

Key features of the proposed design include:

- revitalisation of the glazed dome as a winter garden and connecting pedestrian link through to Brisbane Street
- a diverse range of teaching spaces, collaborative areas, meeting rooms, ancillary space along with office space for staff and services for UTAS' operations in the CBD
- end of trip showers and change facilities (66 lockers, 6 Showers, secure storage for 51 bikes)
- south lit saw tooth roofing

The upper floor frontage to Brisbane Street includes administration offices

The proposal also includes a screened rooftop plant deck setback from the Brisbane Street frontage. The existing carpark adjacent to the Brisbane Street frontage of the site will be reconfigured to provide 5 off street carparking spaces including 1 accessible space as well as a loading entry to lift access. An enclosed waste management area of 45m^2 is to be provided at the lower level with direct access via this lift to the loading area.

The existing carpark located under the Freedom building is to be infilled with services associated with the operation of the new building and office space.

Trunk sewer and stormwater mains currently running through the centre of the site are to be relocated to the eastern site boundary to allow for the infill of the basement level with the new office area and upsizing of the services to provide for future upstream development and stormwater capacity to lessen or remove the impact of overland flows on the site.

The works in Brisbane Street are supported by an arboricultural assessment by Element Tree Services which confirms that it is unlikely that the health of the existing street trees tree will be compromised providing correct tree protection measures are implemented.

These works in Brisbane Street involve the displacement of one on site carparking space. A proposal for relocation of this car space for no net loss of on street parking is provided with the application.

3. The Planning Scheme

Under Clause 8.10.1 of the planning scheme the planning authority must, in addition to the matters required by ss51(2) of the Act, take into consideration:

(a) all applicable standards and requirements in this planning scheme; and

(b) any representations received pursuant to and in conformity with ss57(5) of the Act,

but in the case of the exercise of discretion, only insofar as each such matter is relevant to the particular discretion being exercised.

Relevantly, a standard is applicable if the site is within the relevant zone and the standard deals with a matter that could affect or be affected by the proposed development; cl.7.5.2.

A standard is defined to mean the objective for a particular planning issue and the means for satisfying that objective through either an acceptable solution or corresponding performance criterion.

Compliance with a standard is achieved by complying with either the acceptable solution or corresponding performance criterion; cl.7.5.3.

The objective of the standard may be considered to help determine whether the proposed use or development complies with the performance criterion of that standard; cl.7.5.4. The acceptable solution is not relevant to the assessment of the corresponding performance criteria.

3.1 Central Business Zone

The site is zoned Central Business.

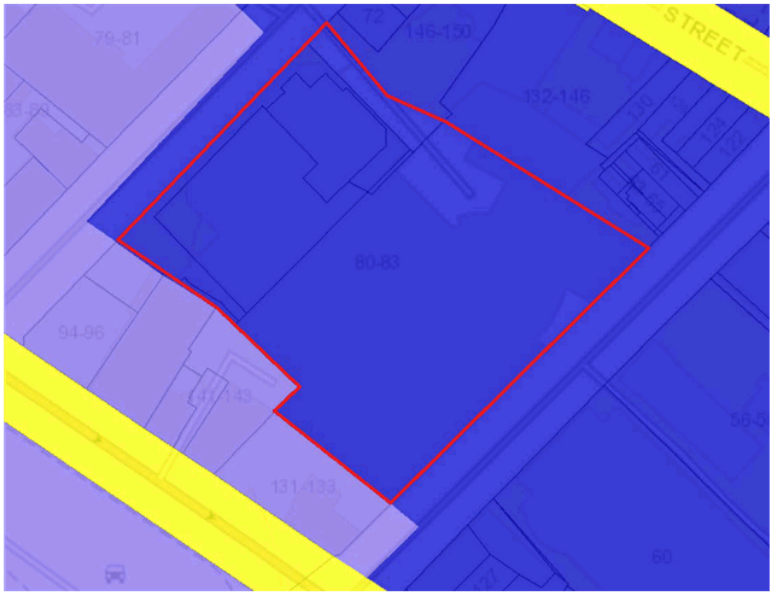

Figure 2 - Zoning plan (Source: iplan)

The Zone Purpose Statements under Clause 22.1.1 are as follows:

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

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.***

The aspects of these Purpose Statements considered most relevant to the proposal are highlighted in bold above. They encourage higher order uses, pedestrian activity, active frontages at street level, a high standard of urban design and preservation of heritage.

Although educational use is not specifically identified in the Purpose Statements, given the permitted use status below, it is reasonable to assume that the use would fall within the broader descriptions of community use and therefore desirable.

3.2 Use Table

The zone provides flexibility for a broad range of commercial and community uses.

Tertiary education falls within the *Educational and occasional care* Use Class. Educational and occasional care is a Permitted Use under the Use Table 22.2 for a site such as this that is outside the Active Frontage Overlay shown in Figure 22.1 of the planning scheme (Figure 3 below).

The proposed administration offices are also Permitted in the zone whether they are treated as ancillary to the educational use or separately classed as a *Business and professional services* use.

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Figure 3 –The site is located outside the Active Frontage Area (Figure 22.1 of the planning scheme)

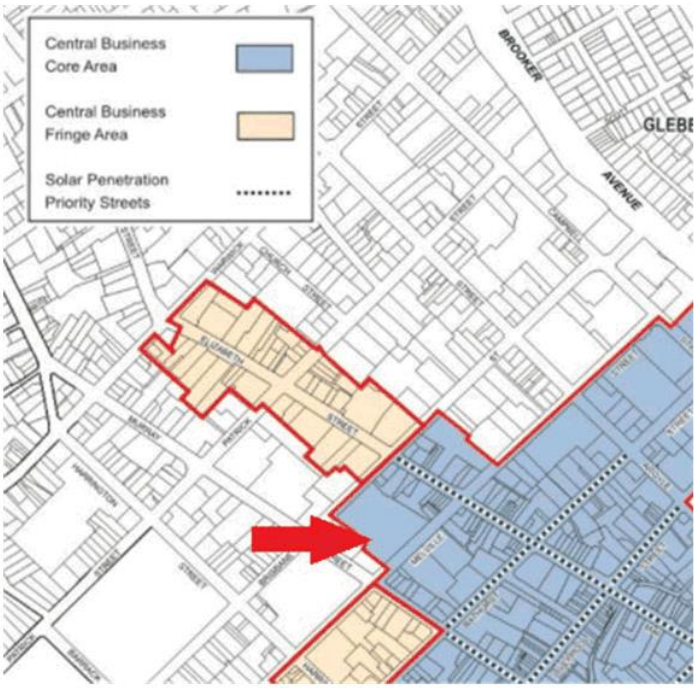

Figure 4 –The site is located outside the Pedestrian Priority Area (Figure 22.2 of the planning scheme)

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3.3 Use Standards

Hours of Operation (22.3.1)

Use Standard	***Assessment***
A1 Hours of operation of a use within 50 m 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.	The site is not within 50m of a Residential Zone. This Standard is therefore not applicable.

Noise (22.3.2)

Use Standard	***Assessment***
A1 *Noise emissions measured at the boundary of a residential zone must not exceed the following:* *(a) 55dB(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) (LAmax) 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. The proposal will not involve significant noise emissions that would exceed these limits at the boundary of a residential zone. In this case the closest area of residential zoning is approximately 190m west on the upper side of Harrington Street.

External Lighting (22.3.3)

Use Standard	***Assessment***
A1 *External lighting within 50 m of a residential zone must comply with all of the following:* *(a) be turned off between 11:00 pm and 6:00 am, except for security lighting;* *(b) security lighting must be baffled to ensure they do not cause emission of light outside the zone.*	The site is not within 50m of a Residential Zone. This Standard therefore does not apply.

Commercial Vehicle Movements (22.3.4)

Use Standard	***Assessment***
A1 *Commercial vehicle movements, (including loading and unloading and garbage removal) to or from a site within 50 m 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.*	The site is not within 50m of a Residential Zone. This Standard therefore does not apply.

The proposal does not involve a take Away Food Premises, Hotel Industry, Manufacturing, Processing Use or an Adult Entertainment Venue. The Uses Standards under 22.3.5 and 22.3.8 therefore do not apply.

3.4 Development Standards for Buildings and Works

The Development Standards for the Central Business Zone apply differently depending on whether a site is within the Core or Fringe Area, on a Solar Penetration Priority Street or within the Active Frontage Overlay.

In this case the site is:

- located within the Central Business Core Area (Figure 3);
- not located on a Solar Penetration Priority Street (Figure 3); and
- located outside the Active Frontage Overlay (Figure 4).

Having regard to these overlays the following Development Standards apply to height and setback on the land.

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22.4.1 Building Height

Objective

That building height:

(a) contributes positively to the streetscape and townscape;

(b) does not unreasonably impact on historic heritage character;

(c) does not unreasonably impact on important views within the urban amphitheatre;

(d) does not unreasonably impact on residential amenity of land in a residential zone; and

(e) provides significant community benefits if outside the Amenity Building Envelope.

Acceptable Solutions	***Performance Criteria***
A1 *Building height within the Central Business Core Area in Figure 22.2 must be no more than:* *(a) 15m if on, or within 15m of, a south-west or south-east facing frontage;* *(b) 20m if on, or within 15m of, a north-west or north-east facing frontage;* *(c) 30m if set back more than 15m from a frontage;* *unless an extension to an existing building that:* *(i) is necessary solely to provide access, toilets, or other facilities for people with disabilities;* *(ii) is necessary to provide facilities required by other legislation or regulation.*	The proposal complies with A1 as follows: a) the proposal does not exceed 15m in height within 15m of the south east facing Melville Street frontage of the site. b) The proposal does not exceed 20m in height within 15m of the north west facing Brisbane Street frontage. c) The proposal is well below the 30m maximum height for other areas of the site that are setback more then 15m from either frontage.
A4 *Building height of development on the same title as a place listed in the Historic Heritage Code, where the specific extent of the heritage place is specified in Table E13.1, and directly behind that place must:* *(a) not exceed 2 storeys or 7.5m higher (whichever is the lesser) than the building height of any heritage building within the place, and be set back between 5m and 10m from the place (refer figures 22.4 i and 22.4 ii); and* *(b) not exceed 4 storeys or 15m higher (whichever is the lesser) than the building height*	The specific extent of the heritage place is defined as the shaded blue areas in Figure E13.1.11 of the planning scheme as shown below. These represent the two redbrick heritage buildings on the Melville Street frontage. The proposal complies with A4 in that it will not exceed 2 storeys or 7.5m (whichever is lesser) within 10m of the heritage place or 4 storeys or 15m higher than the heritage buildings.

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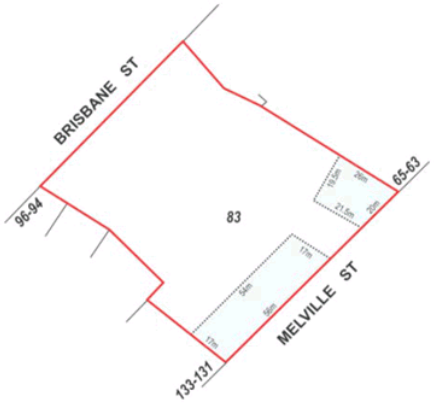
of any heritage building within the place, and be set back more than 10m from the place (refer figures 22.4 i and 22.4 ii); *or* *(c) comply with the building height in clauses 22.4.1 A1 and A2;* *whichever is the lesser.*	
A5 *Building height of development within 15m of a frontage and not separated from a place listed in the Historic Heritage Code by another building, full lot (excluding right of ways and lots less than 5m width) or road (refer figure 22.5 i), must:* *(a) not exceed 1 storey or 4m (whichever is the lesser) higher than the facade building height of a heritage building on the same street frontage (refer figure 22.5 ii); and* *(b) not exceed the facade building height of the higher heritage building on the same street frontage if the development is between two heritage places (refer figure 22.5 ii);* *or* *(c) comply with the building height in Clauses 22.4.1 A1 and A2;* *whichever is the lesser.*	The proposal complies with A5.

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22.4.2 Setback

Objective:

To ensure that building setback contributes positively to the streetscape and does not result in unreasonable impact on residential amenity of land in a residential zone.

Acceptable Solutions	***Performance Criteria***
A1 *Building setback from frontage must be parallel to the frontage and must be no more than:* *0 m*	The proposed new works on Brisbane Street align the frontage and complies with A1.

Design (22.4.3)

Objective

To ensure that building design contributes positively to the streetscape, the amenity and safety of the public and adjoining land in a residential zone.

Development Standard	***Assessment***
A1 *Building design must comply with all of the following:* *(a) provide the main pedestrian entrance to the building so that it is clearly visible from the road or publicly accessible areas on the site;* *(b) for new building or alterations to an existing façade provide windows and door openings at ground floor level in the front façade no less than 40% of the surface area of the ground floor level façade;* *(c) for new building or alterations to an existing facade ensure any single expanse of blank wall in the ground level front façade and facades facing other public spaces is not greater than 30% of the length of the facade;* *(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;*	The proposal complies with A1 as follows: a) the main pedestrian entrances will be provided to Melville and Brisbane Streets. b) the proposal includes extensive glazing as part of the Brisbane Street elevation; c) the proposed Brisbane Street façade is articulated and avoids the creation of blank walls on the ground floor frontage; d) mechanical plant will be screened from public view; e) the rooftop plant is incorporated within the design of the roof as shown on the northern elevation. f) the proposal does not include security shutters.

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(f) not include security shutters over windows or doors with a frontage to a street or public place.	
A2 *Walls of a building facing a residential zone must be coloured using colours with a light reflectance value not greater than 40 percent.*	The proposal complies with A2 in that the external colours and finishes do not face a residential zone.
A3 *The facade of buildings constructed within 15m of a frontage and not separated from a place listed in the Historic Heritage Code by another building, full lot (excluding right of ways and lots less than 5m width) or road (refer figure 22.5 i), must:* *(a) include building articulation to avoid a flat facade appearance through evident horizontal and vertical lines achieved by setbacks, fenestration alignment, design elements, or the outward expression of floor levels; and* *(b) have any proposed awnings the same height from street level as any awnings of the adjacent heritage building.*	72 Brisbane Street is a heritage listed place located adjacent to the east of the site. A3 therefore applies to the new façade and building works within 15m of the Brisbane Street frontage. The proposal complies with A3 in that: a) the façade of the proposed Brisbane Street elevation is articulated with vertical fins, glazing and corner entry returns that present both horizontal and vertical articulation; and b) no pedestrian awnings are proposed.
A4 *For new buildings or alterations to existing façades within the Active Frontage Overlay (Figure 22.1) provide windows with clear glazing and door openings at ground floor level in the front façade and façades facing other public space boundaries no less than 80% of the surface area;*	The site is not within the Active Frontage Overlay area. This Standard does not apply.
A5 *For new buildings or alterations to existing façades within the Active Frontage Overlay (Figure 22.1) awnings must be provided over public footpaths.*	The site is not within the Active Frontage Overlay area. This Standard does not apply.

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Passive Surveillance (22.4.4)

Objective:

To ensure that building design provides for the safety of the public.

Development Standard	***Assessment***
A1 *Building design must comply with all of the following:* *(a) provide the main pedestrian entrance to the building so that it is clearly visible from the road or publicly accessible areas on the site;* *(b) for new buildings or alterations to an existing facade provide windows and door openings at ground floor level in the front façade which amount to no less than 40 % of the surface area of the ground floor level facade;* *(c) for new buildings or alterations to an existing facade provide windows and door openings at ground floor level in the façade of any wall which faces a public space or a car park which amount to no less than 30 % of the surface area of the ground floor level facade;* *(d) avoid creating entrapment spaces around the building site, such as concealed alcoves near public spaces;* *(e) provide external lighting to illuminate car parking areas and pathways;* *(f) provide well-lit public access at the ground floor level from any external car park.*	The proposal satisfies A1 in that: a) the main pedestrian entrances to the site will be clearly visible from the street; b) complies c) complies d) the proposal avoids the creation of concealed spaces; e) the external forecourt on Melville Street and pedestrian link will be safely lit to accepted standards. f) the external carpark on Brisbane Street will be safely lit.

Landscaping (22.4.5)

Clause 22.4.5 confirms that landscaping is not regulated in this zone in this planning scheme. It is not considered necessary in the Hobart context.

Notwithstanding the above, the proposal includes a concept for integrated landscaping enhancements. It is intended that a detailed plan will be prepared and works completed prior to completion of the project.

Outdoor Storage Areas (22.4.6)

Objective:

To ensure that outdoor storage areas for non-residential use do not detract from the appearance of the site or the locality.

Development Standard	***Assessment***
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.*	Not applicable. The proposal does not include any outdoor storage areas.

Fencing (22.4.7)

No fences are proposed and this Standard therefore does not apply.

Pedestrian Links (22.4.8)

This standard relates to the preservation of existing through site links. It does not apply to this site that does not have existing through site links.

Notwithstanding that the planning scheme does not require through site links, a new pedestrianised link is proposed between Brisbane and Melville Streets via the glazed done of the former Forestry building.

Waste Storage and Collection (22.4.10)

Development Standard	***Assessment***
A1 *Bulk waste bins that are commercially serviced must be provided for sites:* *(a) with more than one commercial tenancy;* *(b) with one commercial tenancy that is greater than 100m2;* *(c) with more than 4 dwellings or visitor accommodation units (or 3 if a mixed use site); and* *(d) with more than 2 dwellings or visitor accommodation units (or 1 if a mixed use site) if fronting a pedestrian priority street (Figure E6.7.12);* *unless:*	The proposal complies with A1 in that a designated waste storage room is included in the lower level with direct access via lift to the loading area on Brisbane Street.

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(i) there are no more than 4 individual bins for kerbside collection at any one time per commercial site or any site fronting a pedestrian priority street (Figure E6.7.12); *(ii) There are no more than 8 individual bins for kerbside collection at any one time per residential or mixed use site not fronting a pedestrian priority street (Figure E6.7.12); or* *(iii) Individual bins are commercially serviced without being placed on the kerbside for collection.*	
A2 *An on-site storage area, with an impervious surface (unless for compostables), must be provided for bins that:* *(a) if for separate bins per dwelling, visitor accommodation or commercial tenancy:* *(i) provides an area for the exclusive use of each dwelling, accommodation unit or tenancy, and is not located between the building and a frontage;* *(ii) is set back not less than 4.5m from a frontage unless within a fully enclosed building;* *(iii) is not less than 5.5m horizontally from any dwelling or accommodation unit unless for bins associated with that dwelling, or within a fully enclosed building; and* *(iv) is screened from the frontage and any dwelling or accommodation unit by a wall to a height not less than 1.2m above the finished surface level of the storage area.* *(b) If for bulk waste bins:* *(i) is located on common property;* *(ii) includes dedicated areas for storage and management of recycling and compostables;* *(iii) is not less than 5.5m from any dwelling or accommodation unit unless within a fully enclosed building;* *(iv) is set back not less than 4.5m from a frontage if fronting a pedestrian priority street (Figure E6.7.12);*	The proposal complies with A1 in that a designated waste storage room is included in the lower level away from public view .

(v) is screened from any public road, dwelling or accommodation unit by a wall to a height not less than 1.8m above the finished surface level of the storage area; *(vi) is accessible to each dwelling, accommodation unit or tenancy without the requirement to travel off-site; and* *where the development is mixed use, have separate storage spaces for commercial and residential bins with separate access to each.*	
A3 *Bulk waste bins must be collected on site by private commercial vehicles, and access to storage areas must:* *(a) in terms of the location, sight distance, geometry and gradient of an access, as well as off-street parking, manoeuvring and service area, be designed and constructed to comply with* *AS2890.2:2018: Parking Facilities - Off-Street Commercial Vehicle Facilities;* *(b) ensure the vehicle is located entirely within the site when collecting bins; and* *(c) include a dedicated pedestrian walkway, alongside or independent of vehicle access ways.*	The proposed loading access via Brisbane Street is considered to satisfy the requirements of A3.

4. Planning Scheme Codes

The site is not within any specific mapped planning scheme overlays. The proposal is considered in relation to the relevant codes below.

4.1 Potentially Contaminated land Code

The accompanying environmental site assessment addresses the requirements of this Code.

4.2 Road and Railway Assets Code and Parking and Access Code

The proposal is assessed against the requirements of these Codes in the accompanying traffic impact assessment.

4.3 Stormwater Management Code

The application is supported by an engineering assessment by JMG of the stormwater requirements of the site to address this Code.

4.4 Historic Heritage Code

The requirements of this Code are assessed in the accompanying Heritage Impact Assessment prepared by Praxis.

4.5 Signage

No signage is proposed at this stage and will form a separate application.

5. Conclusion

The proposal seeks to revitalise and transform the former Forestry and Freedom buildings for educational and administrative spaces for the UTAS' operations in the CBD. The proposal has been prepared in consultation with Robert Morris-Nunn the architect of the previous award winning "Forestry" architecture. The proposal seeks to respect and enhance both this work and the heritage listed characteristics of the two redbrick buildings on the Melville Street frontage.

The proposal is for a Permitted Use in the Zone and complies with the relevant Use and Development Standards of the Central Business Zone.

The proposal is also supported by environmental, heritage, traffic and civil engineering assessments that demonstrate that the relevant planning scheme Codes are met.

The proposal demonstrates a high degree of compliance with the relevant planning scheme provisions and is recommended for approval following public advertisement pursuant to Section 57 of the Act.

Frazer Read

Principal

17 December 2021

City of HOBART

Enquiries to: City Planning
Phone: (03) 6238 2711
Email: coh@hobartcity.com.au

17 January 2022

(University of Tasmania)
C/- All Urban Planning Pty Ltd
19 Mawhera Avenue
SANDY BAY TAS 7005

mailto: frazer@allurbanplanning.com.au

Dear Sir/Madam

83 MELVILLE STREET & 80 BRISBANE STREET, HOBART & ADJACENT ROAD RESERVE
WORKS IN ROAD RESERVE NOTICE OF LAND OWNER CONSENT TO LODGE A PLANNING APPLICATION - GMC-21-84

Site Address:

83 Melville Street, 80 Brisbane Street and Adjacent Road Reserve, Hobart

Description of Proposal:

Stormwater Upgrade Works and Works in Road Reserve

Applicant Name:

University of Tasmania
C/- All Urban Planning Pty Ltd

PLN *(if applicable)*:

PLN-21-869

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

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

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

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

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

Yours faithfully

(John Fisher)
ACTING DIRECTOR CITY AMENITY

Relevant documents/plans:

Documentation package by JMG including:
Report by JMG - December 2021
Plans by JMG - C01-C13
Arborist Report by Element Tree Services - 1/12/21

City of Hobart

INSTRUMENT OF DELEGATION

General Delegation

Director City Amenity

I, Kelly Grigsby, Chief Executive Officer, being the General Manager of the Hobart City Council as appointed by Council pursuant to section 61 of the *Local Government Act 1993* ("the Act") hereby delegate pursuant to Section 64 of the Act, the following powers and functions to the **Director City Amenity**, or to such persons who may be acting in that position:

1. to sign an application; and
2. to provide written permission to make an application;

pursuant to section 52(1B) of the *Land Use Planning and Approvals Act 1993*, EXCEPT where an application is recommended for refusal.

Dated this 20 day of August 2021

(Kelly Grigsby)
CHIEF EXECUTIVE OFFICER

Being the General Manager as appointed by the Council pursuant to Section 61 of the Local Government Act 1993 (tas)

City of HOBART
Approved - General Manager Consent Only
[GMC-21-84]
17/01/2022

REPORT

UNIVERSITY OF TASMANIA
FORESTRY & FREEDOM BUILDINGS DEVELOPMENT

PROPOSED WORKS IN MELVILLE & BATHURST STREETS FOR HCC GENERAL MANAGER CONSENT

December 2021

JMG
Engineers & Planners

Engineers & Planners

Johnstone McGee & Gandy Pty Ltd
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City of HOBART
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[GMC-21-84]
17/01/2022

Issuing Office: 117 Harrington Street, Hobart 7000
JMG Project No. J205082SH

Document Issue Status

Ver.	Issue Date	Description	Originator		Checked		Approved	
P1	2 Dec 2021	Issue for Client Review	CJM		CCM		GLA	
DA	3 Dec 2021	Issued for HCC Approval	CJM		CCM		GLA	

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Appendix A - Drawings J205082SH-C01 to C13

Appendix B - Element Tree Services Arborist Report

City of HOBART
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1. Introduction

The University of Tasmania, Forestry and Freedom Building Project forms part of the Southern Transformation Program, which will deliver on their long-term plan to consolidate the University's campus to the Hobart CBD.

JMG in partnership with Arup have been appointed to provide Building Services Engineering design for the Project which encompasses 79-83 Melville Street & 80 Brisbane Street, Hobart.

The architectural design is being undertaken by Woods Bagot.

The following summarises the key information about the project:

- The project is a refurbishment of existing buildings, which were formerly a showroom and office space for Forestry Tasmania & Freedom Furniture. The glazed, domed atrium over the central courtyard was a feature of the 1997 redevelopment for Forestry Tasmania.
- The building is currently unoccupied and comprises a site area and building GLA of approximately 12,400 M^2.
- The university spaces will comprise a mixture of teaching spaces, collaborative areas, meeting rooms, ancillary space and workplace spaces for University staff and services groups.
- The existing carpark located under the Freedom building is to be infilled with services associated with the operation of the new building and office space.
- Trunk sewer and stormwater mains currently running through the centre of the Freedom site are to be relocated to the eastern site boundary to allow for the infill of the basement level with the new office area and upsizing of the services to provide for future upstream development and stormwater capacity to lessen or remove the impact of overland flows on the site.

The purpose of this report is to provide a summary of the works proposed within the Hobart City Council road reservations of Melville & Brisbane Streets for the purposes of Council providing General Manager Consent to allow the submission of the Development Application.

2. Existing Site

Existing Council and TasWater services cross through the site from Brisbane Street to Melville Street. These are currently located under the Freedom building within the carpark and through the atrium area of the Forestry site.

Figure 1 Existing Site Services

2.1 Stormwater

A DN1050 stormwater main conveys stormwater flowing through the site from the Warwick Street catchment upstream of the site. This pipe originates at a series of inlet pits in a sag point of Murray Street, opposite 250-270 Murray Street. The upstream Warwick Street catchment has previously been disconnected from the downstream pipework with the installation of a DN1800 pipe down Murray Street circa 1976.

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Figure 2 - Murray Street Sag Inlet Pits

Figure 3 - Commencement of Stormwater Pipework Upstream of Site

A secondary catchment flowing in from North Hobart via Elizabeth Street enters the existing main with a DN900 connection within the vehicle parking and hardstand area of 222-228 Elizabeth Street, this connection, together with overland flows collected by the Murray Street inlet pits contribute the majority of the flow to the existing pipework flowing through the site.

Within the existing site the stormwater was laid with the redevelopment of the Forestry building which occurred in 1997, the DN1050 size of the pipework is less than the adjoining upstream and downstream pipes which are DN1350, as such the existing pipework provides a restriction in the flow capacity of Councils system through the site. The main is laid at depths which provide between 0.5 & 2 m of cover to the existing carpark and building floor slab. Under Brisbane Street the main has close to 4m of cover.

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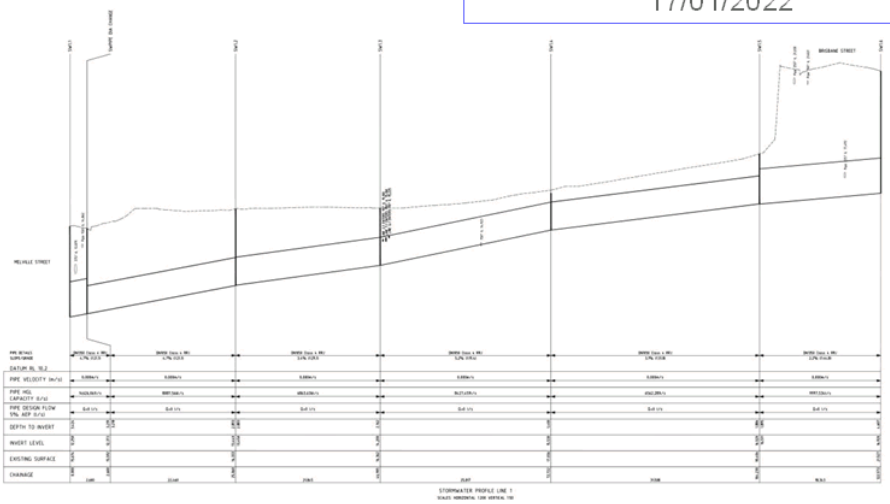

Figure 4 - Existing DN1050 Stormwater Pipe Profile

2.2 Sewer

TasWater have a DN300 Concrete trunk sewer passing through the site which collects sewage from North and West Hobart. This main follows a similar alignment to the stormwater through the site and is generally located with a similar invert level to the stormwater and as such has significantly more cover.

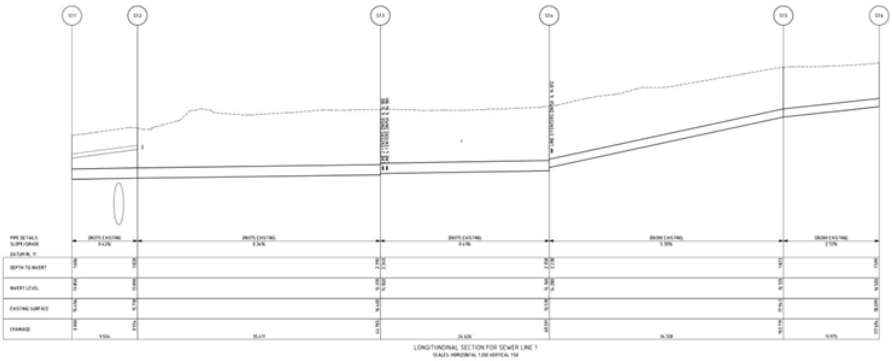

Figure 5 - Existing Sewer Main Pipe profile

It is proposed that with the relocation of the stormwater main the sewer will also be relocated to run parallel with the new stormwater.

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3. Brisbane Street Works

Significant works are proposed within the road reservation of Brisbane Street to allow for the relocation of the sewer and stormwater running through the site as described in the sections below.

3.1 Sewer

In order to allow for the redevelopment of the site and particularly the development of office space within the current basement carpark under Freedom it is proposed that the existing DN300 sewer be relocated into the future footway which is to be constructed along the alignment of the current carpark driveway on the eastern side of the site. Associated with this relocation the pipe it is to be upsized to DN375 to provide for future increases in flows from upstream in the catchment. Refer the red bold line in Figure 6. The width of the line reflects the diameter of the sewer.

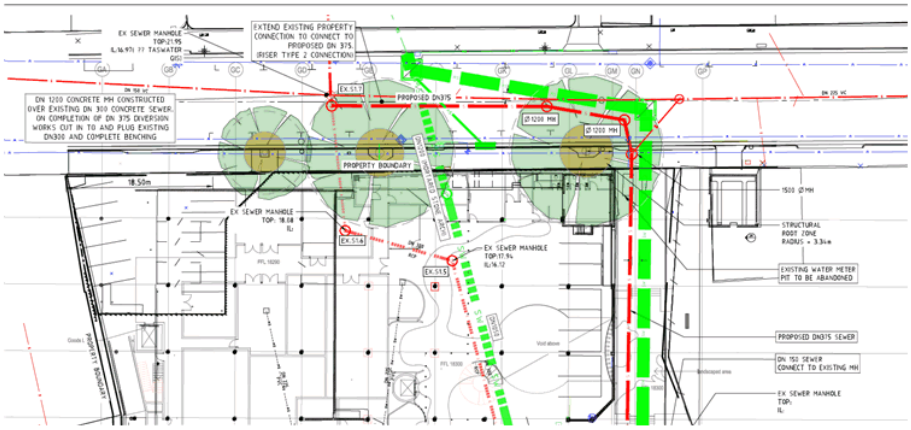

Figure 6 -Brisbane Street Sewer Relocation

The invert level of the sewer will be similar to that of the relocated stormwater, refer discussion in section 3.2 for the implications of this on the operation of Brisbane Street during the works.

3.2 Stormwater

In order to allow for the redevelopment of the site, and particularly the development of office space within the current basement carpark under Freedom, it is proposed that the existing DN1050 stormwater be relocated into the future footway which is to be constructed along the alignment of the current carpark driveway on the eastern side of the site. Associated with the relocation of the pipe it is to be upsized to DN1350 to provide for upstream flows and to reduce the risk of overland flows impacting the site in a 1% AEP flood event. The proposed alignment for this new DN1350 is shown by a dashed green line in Figure 7. The width of the line reflects the diameter of the stormwater.

A full flood assessment report for the site detailing the capacity of the existing and proposed system and overland flows implications will be provided as part of the DA submission for the development.

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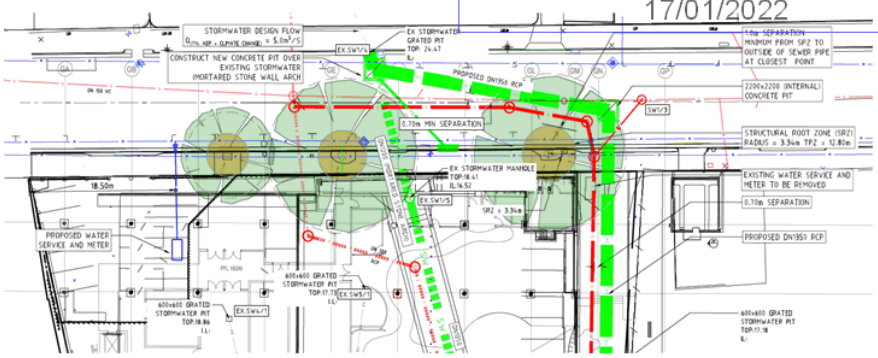

Figure 7 - Brisbane Street Stormwater Relocation

Construction of the stormwater from SW1/3 to SW1/4 will necessitate excavation depths of up to 5.2m in Brisbane Street, this cannot be achieved without the closure of the existing street, either side of the works. Depending on the geotechnical conditions encountered this closure could be for up to a month. Staging of the works between these two pits, with appropriate site security management would permit a single pedestrian path to be maintained along the street at all times. Vehicle movements along this section of roadway and into the laneway between 79-81 Brisbane Street and 160 Elizabeth Street will be restricted as will existing on-street parking. Alternative access into the laneway is available via its connection to Patrick Street.

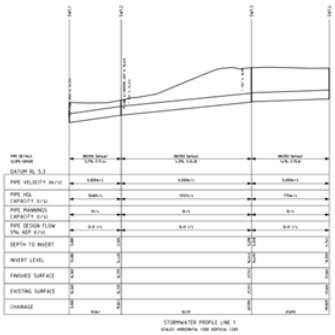

Figure 8 - Stormwater Profile

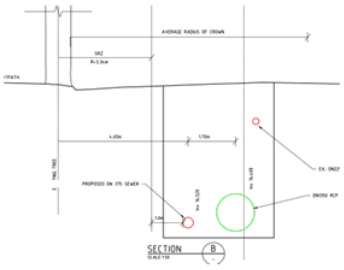

Figure 9 - Stormwater Typical Section

3.3 Water

A new water connection is required to the property, this is to be located towards the western end of the site near the existing Freedom loading dock entry. In order to make the connection to the existing water main it will be necessary to excavate the existing footpath and kerb and channel so as the main can be located and the connection made to it. The depth of the existing main is unknown at this stage but is expected to be about 1m below existing pavement level. All proposed works will be clear of the drip line of the existing Plane tree at the western end of the site

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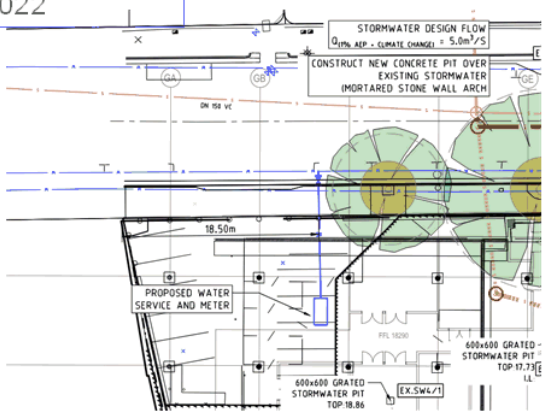

Figure 10 - Proposed New Water Connection

3.4 Existing Street Trees Road & Footpath Impacts

The existing Plane trees located in Brisbane Street, along the Freedom store frontage are causing deformation of the existing kerb and footpath, in order that these trees can be retained and protected from damage when the surfaces are reconstructed it is proposed that the footpath level be raised by up to 200mm adjacent to the trees.

Figure 11 - Street Tree Impacting Kerb and Footpath

It is proposed that a new kerb extension be constructed around the eastern most tree, this will permit the construction of a new kerb without having to disturb the base of the existing tree which has grown out over the existing kerb. See figures 11 & 12 below showing the kerb realignment in plan and typical section. The realignment of the kerb will result in the loss of one existing parking space adjacent to this tree.

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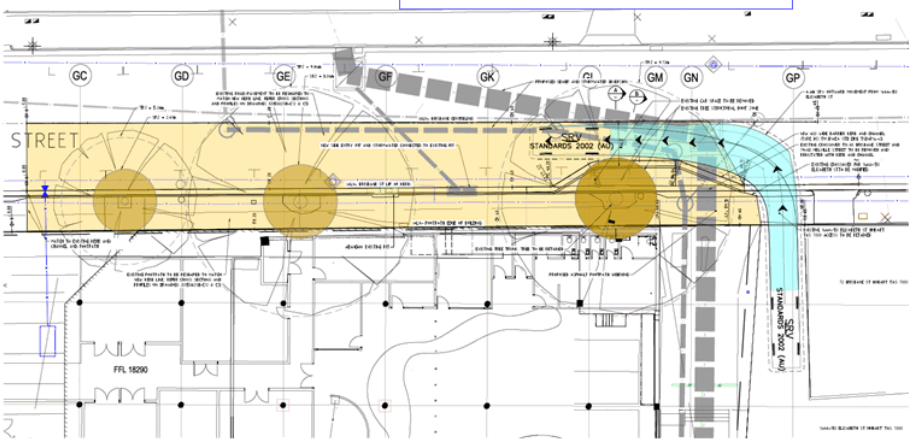

Figure 12 - Road Reconstruction Works Brisbane Street

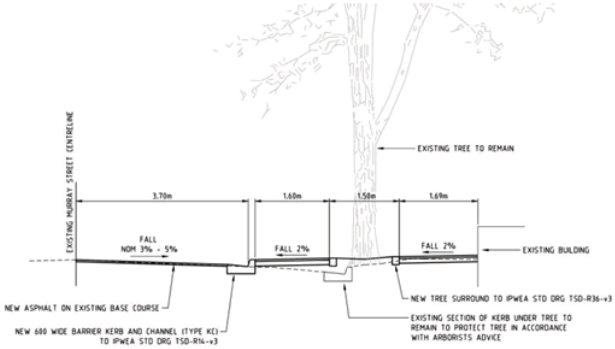

Figure 13- Typical Section Brisbane Street

Along the rest of the road frontage the kerb and channel will be replaced on the same alignment but at a higher level to the existing allowing the footpath levels to be raised. The cross fall of Brisbane Street will be adjusted by re-sheeting of the road to match the new lip of kerb levels. A new Side Entry Pit and DN300 RCP drainage pipe will be installed outside of the drip line of the two trees and discharge into the new stormwater pit on the northern side of Brisbane Street. Cross sections of the road showing proposed crossfalls, and the vertical profile of the new lip of kerb and back edge of footpath are included on drawings J205082SH-C12 & C13 in Appendix A

4. Melville Street Works

Works are proposed within the road reservation of Melville Street to allow for the duplication of the stormwater running through the site as described in the sections below. The existing TasWater sewer is not proposed to be modified with the Brisbane Street realignment connecting into the existing main on the northern side of the Forestry Atrium.

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4.1 Stormwater

A new DN750 stormwater line is proposed to be constructed through the "Forestry" building atrium to Melville Street in order to supplement the capacity of the existing DN1050 stormwater through the site. This pipe is proposed to be connected directly to the existing DN1800 main running parallel to the site on the southern side of Melville Street. Refer Figure 14 below.

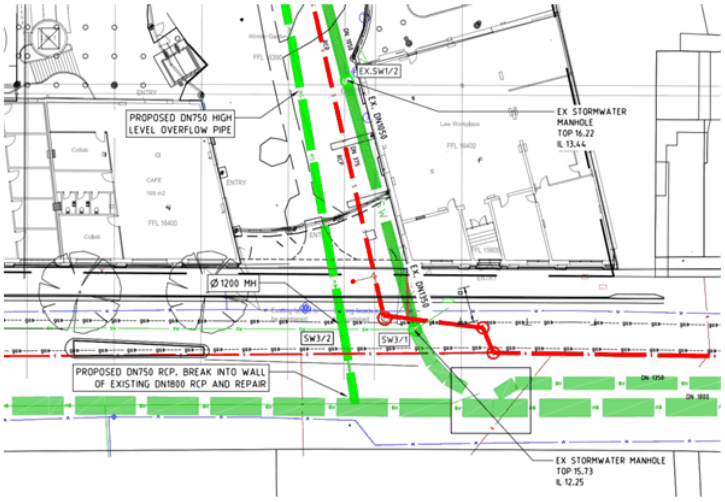

Figure 14 - Melville Street Stormwater Works

4.2 Road & Footpath Impacts

In order to make the new stormwater connection to the existing main it will be necessary to temporarily close Melville Street to the east of the Melville Street carpark access to allow a new trench to be constructed across the road to the DN1800 pipe.

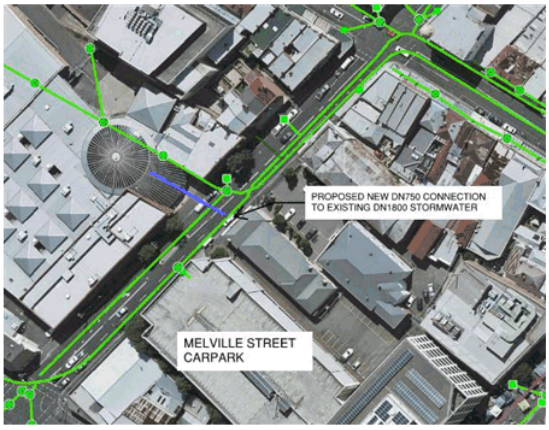

Figure 15 - Melville Street Stormwater Connection

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5. References

- LGAT Tasmanian Standard Subdivision Drawings - December 2020
- Sewerage Code of Australia Melbourne Retail Water Agencies Integrated Code
- Water Supply Code of Australia Melbourne Retail Water Agencies Integrated Code
- TasWater Supplement to WSAA Water Supply Code of Australia - MRWA Edition - Standard Drawings
- TasWater Supplement to WSA 02 2014 3.1
- TasWater Sewer and Water GIS Data
  https://www.arcgis.com/apps/webappviewer/index.html?id=8a46c12587ed40afa3360f76271d48b7
- HCC Stormwater GIS Data

  https://hub.arcgis.com/maps/hobartcc::city-of-hobart-stormwater-network-1/explore?location=-42.894800%2C147.333650%2C17.01

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[GMC-21-84]
17/01/2022

APPENDIX A

Drawings J205082SH-C01 to C13

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WARNING - DEGREE OF UNDERGROUND SERVICES
THE LOCATION OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THE EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL SERVICES ARE SHOWN.

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DRAWING REGISTER

DRAWING	DESCRIPTION
C01	DRAWING REGISTER AND LOCALITY
C02	EXISTING SITE SERVICES PLAN
C03	EXISTING STORMWATER PROFILE
C04	EXISTING SEWER PROFILE
C05	PROPOSED WORKS - COMBINED SERVICES PLAN
C06	PROPOSED WORKS - STORMWATER RELOCATION PLAN
C07	PROPOSED WORKS - SEWERAGE RELOCATION
C08	PROPOSED STORMWATER - LINE 1,2 & 3 LONGITUDINAL SECTION
C09	PROPOSED GRAVITY SEWER - LINE 1 LONGITUDINAL SECTIONS
C10	PROPOSED GRAVITY SEWER - LINE 2 & 3 LONGITUDINAL SECTIONS
C11	BRISBANE STREET KERB MODIFICATION
C12	BRISBANE STREET KERB AND FOOTPATH LONGITUDINAL PROFILES
C13	BRISBANE STREET CROSS SECTIONS

REV	DATE	REMARK
DA	03.02.2021	ISSUE FOR HCC GENERAL MANAGEMENT CONSENT
P1	05.02.2021	ISSUED FOR REVIEW

SAFETY IN DESIGN REPORT
In accordance with the Workplace Health & Safety Act, and Regulations JMG have considered the potential hazards and risks that are specific to this design.

Are there any hazards that are not adequately addressed by the design?	No
Is a design hazard identified?	No

The work is to be carried out in accordance with the requirements of the Work Health and Safety Act and Regulations.

Engineers & Planners
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49-51 Elizabeth Street, Launceston, Tas (03) 6334 5548
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PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT

TITLE
DRAWING REGISTER
AND LOCALITY PLAN

Accepted: GMA/M. (Decision Maker)	Date
Accepted: CDH (Chief Engineer)	Date
Approved: GLG (Principal)	Date

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SCALES @ A1	DESIGNED BY	DRAWN BY
1:250	CJW	CAG
	PLOT DATE	03/02/2021

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PLOT DETAILS GA DATAPRINTS PLANS.DWG

PROJECT NO. P205082SH

DWG NO. C01 REVISION DA

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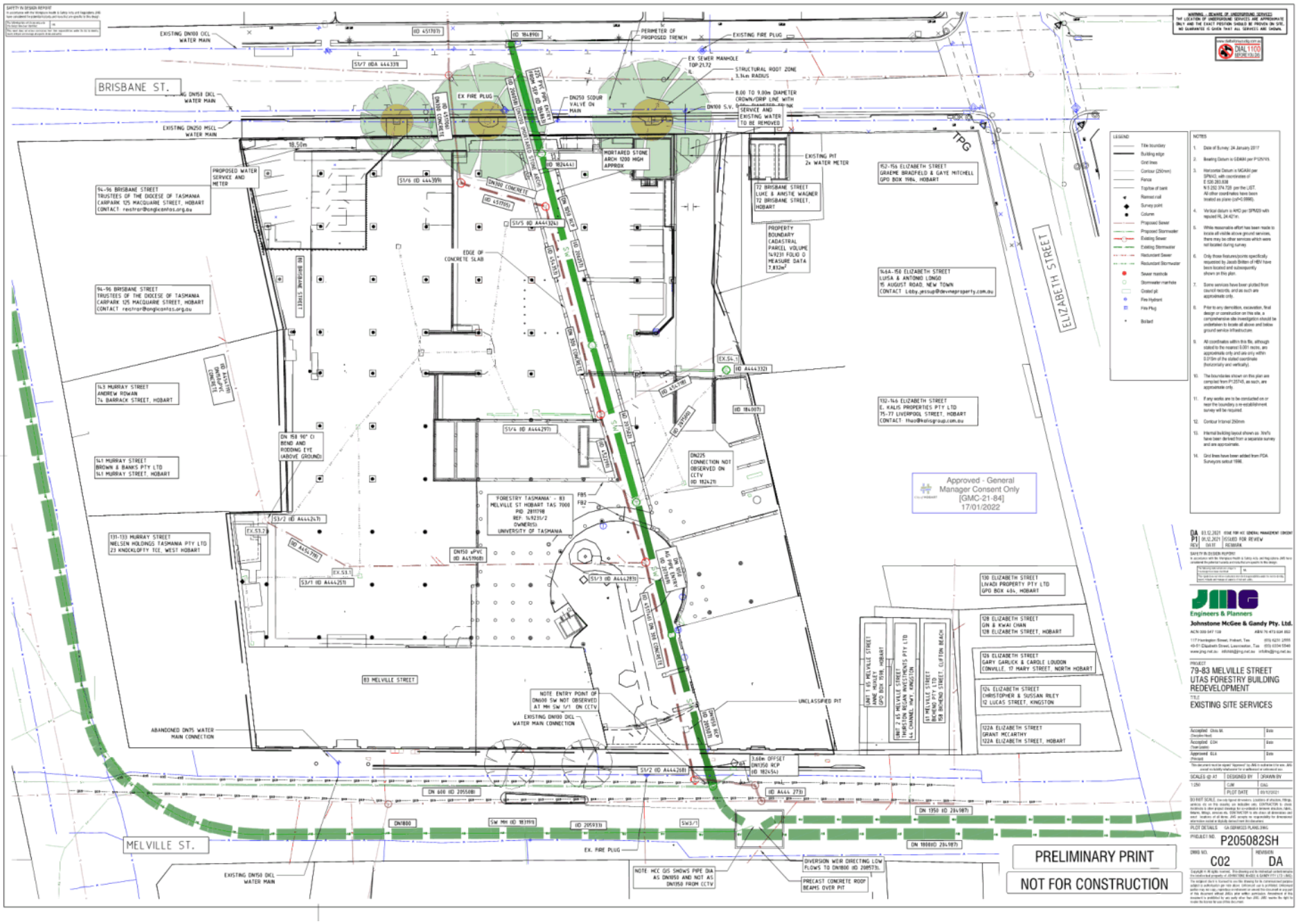
BRISBANE ST.
MELVILLE ST.
ELIZABETH STREET
TPG
EXISTING DN100 DICL WATER MAIN
EXISTING DN250 MSCL WATER MAIN
PERIMETER OF PROPOSED TRENCH
EXISTING FIRE PLUG
EX SEWER MANHOLE TOP 21.72
STRUCTURAL ROOT ZONE 3.14m RADIUS
8.00 TO 9.00m DIAMETER CROWN/DRIP LINE WITH
DN250 SCOUR VALVE ON MAIN
SERVICE AND EXISTING WATER TO BE REMOVED
MORTARED STONE ARCH 1200 HIGH APPROX
EXISTING PIT 2x WATER METER
PROPOSED WATER SERVICE AND METER
94-96 BRISBANE STREET
TRUSTEES OF THE DIOCESE OF TASMANIA
CARPARK 125 MACQUARIE STREET, HOBART
CONTACT: registrar@anglicanfas.org.au
72 BRISBANE STREET
LUKE & AINSTIE WAGNER
72 BRISBANE STREET, HOBART
PROPERTY BOUNDARY CADASTRAL PARCEL VOLUME %9231 FOLIO 0 MEASURE DATA 7.812m²
152-156 ELIZABETH STREET
GRAEME BRADFIELD & GAYE MITCHELL
GPO BOX 1984, HOBART
EDGE OF CONCRETE SLAB
144-150 ELIZABETH STREET
LUISA & ANTONIO LONGO
15 AUGUST ROAD, NEW TOWN
CONTACT: Libby.jessup@devmeproperty.com.au
143 MURRAY STREET
ANDREW ROWAN
74 BARRACK STREET, HOBART
DN 158 90° CI BEND AND RODDING EYE (ABOVE GROUND)
141 MURRAY STREET
BROWN & BANKS PTY LTD
141 MURRAY STREET, HOBART
132-146 ELIZABETH STREET
E. KALIS PROPERTIES PTY LTD
75-77 LIVERPOOL STREET, HOBART
CONTACT: thao@kalisgroup.com.au
DN225 CONNECTION NOT OBSERVED ON CCTV
FORESTRY TASMANIA : 83 MELVILLE ST HOBART TAS 7000
PID 2811798
REF. %9231/2
OWNER(S)
UNIVERSITY OF TASMANIA
131-133 MURRAY STREET
NELSEN HOLDINGS TASMANIA PTY LTD
23 KNOCKLOFTY TCE, WEST HOBART
DN150 uPVC
Approved - General Manager Consent Only [GMC-21-84] 17/01/2022
130 ELIZABETH STREET
LIVADI PROPERTY PTY LTD
GPO BOX 634, HOBART
128 ELIZABETH STREET
GIN & KWAI CHAN
126 ELIZABETH STREET
GARY GARLICK & CAROLE LOUDON
CONVILLE, 17 MARY STREET, NORTH HOBART
124 ELIZABETH STREET
CHRISTOPHER & SUSSAN RILEY
12 LUCAS STREET, KINGSTON
122A ELIZABETH STREET
GRANT MCCARTHY
122A ELIZABETH STREET, HOBART
UNIT 1 65 MELVILLE STREET
ANNE MONLEY
GPO BOX 1596, HOBART
UNIT 2 65 MELVILLE STREET
THURSTON REGAN INVESTMENTS PTY LTD
66 CHANNEL HWY, KINGSTON
131 MELVILLE STREET
RICHEND PTY LTD
158 RICHEND STREET, CLIFTON BEACH
83 MELVILLE STREET
NOTE ENTRY POINT OF DN600 SW NOT OBSERVED AT MH SW 1/1 ON CCTV
EXISTING DN100 DICL WATER MAIN CONNECTION
UNCLASSIFIED PIT
ABANDONED DN75 WATER MAIN CONNECTION
3.66m OFFSET DN1350 RCP
DN 600 (ID 205608)
DN1800
SW MH (ID 183199)
(ID 205933)
EX. FIRE PLUG
DN 1350 (ID 204987)
DN 1800(ID 204987)
NOTE HCC GIS SHOWS PIPE DIA AS DN1050 AND NOT AS DN1050 FROM CCTV
DIVERSION WEIR DIRECTING LOW FLOWS TO DN1800 (ID 208573)
PRECAST CONCRETE ROOF BEAMS OVER PIT
EXISTING DN150 DICL WATER MAIN
PRELIMINARY PRINT
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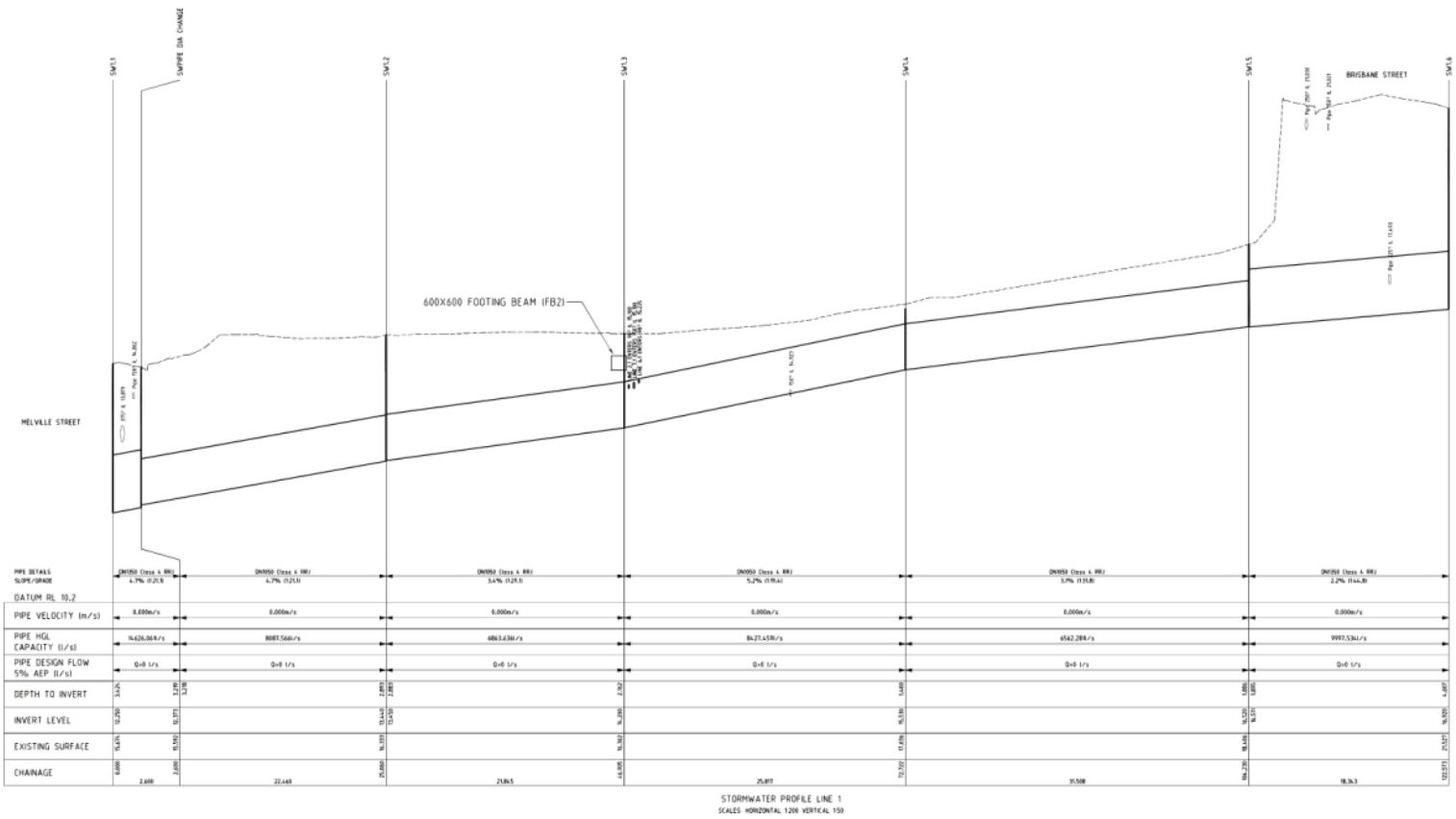
Engineers & Planners
Johnstone McGee & Gandy Pty. Ltd.
ACN 009 067 108
ABN 76 473 634 992
117 Harrington Street, Hobart, Tas (03) 6231 2555
49-51 Elizabeth Street, Launceston, Tas (03) 6334 5548
www.jmg.net.au info@jmg.net.au info@launceston@jmg.net.au
PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING REDEVELOPMENT
TITLE
EXISTING SITE SERVICES
SCALES @ A1
DESIGNED BY
DRAWN BY
1:250
CJW
CAG
PLOT DATE
03/12/2021
PLOT DETAILS
GA-SERVICES-PLAN.DWG
PROJECT NO.
P205082SH
DWG NO.
C02
REVISION
DA

Approved - General Manager Consent Only
[GMC-21-84]
17/01/2022



STORMWATER PROFILE LINE 1
SCALES HORIZONTAL 1:200 VERTICAL 1:50

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DA 03.12.2021 ISSUED FOR MCC GENERAL MANAGER CONSENT
P2 23.06.2021 ISSUED FOR SD REPORT
P1 31.05.2021 PRELIMINARY ISSUE
REV | DATE | REMARK

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Engineers & Planners
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PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT

TITLE
EXISTING STORMWATER
PROFILE

Accepted: Chris W. (Discipline Head) | Date
Accepted: CDH (Team Leader) | Date
Approved: GLA (Principal) | Date

SCALES @ A1 | DESIGNED BY | DRAWN BY
CJW | CAG
PLOT DATE | 03/12/2021

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PLOT DETAILS EXISTING SW PROFILES.DWG

PROJECT NO. P205082SH

DWG NO. C03 | REVISION DA

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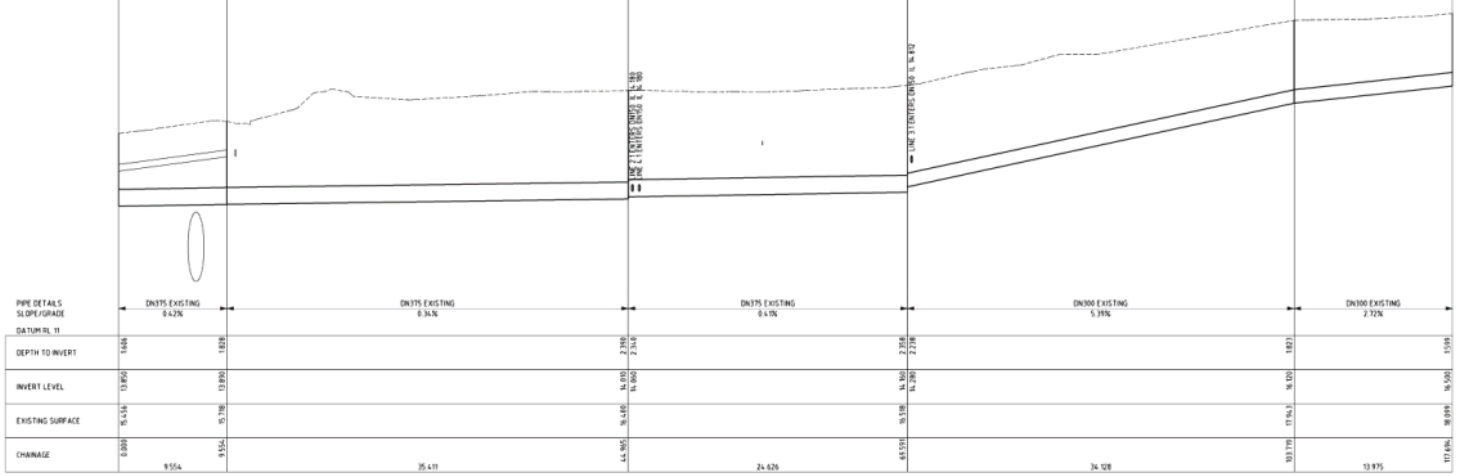
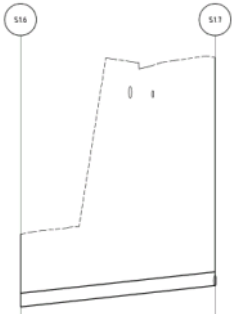
7/01/2022



PIPE DETAILS SLOPE/GRADE	DN375 EXISTING 0.42%	DN375 EXISTING 0.34%	DN375 EXISTING 0.41%	DN300 EXISTING 5.39%	DN300 EXISTING 2.72%
DATUM RL 11					
DEPTH TO INVERT	1.646 / 1.828	2.398 / 2.340	2.358 / 2.238	1.827	1.595
INVERT LEVEL	13.850 / 13.850	14.010 / 14.060	14.160 / 14.280	14.100	14.500
EXISTING SURFACE	15.496 / 15.798	16.440	16.598	17.943	18.095
CHAINAGE	0.000 / 9.554	44.905	69.591	103.719	117.694
	9.554	35.411	24.626	34.128	13.975

LONGITUDINAL SECTION FOR SEWER LINE 1
SCALES HORIZONTAL 1:200 VERTICAL 1:50



PIPE DETAILS SLOPE/GRADE	DN300 EXISTING 2.74%
DATUM RL 14	
DEPTH TO INVERT	1.595 / 5.823
INVERT LEVEL	14.500 / 14.970
EXISTING SURFACE	18.095 / 21.993
CHAINAGE	117.694 / 134.959
	17.265

LONGITUDINAL SECTION FOR SEWER LINE 1
SCALES HORIZONTAL 1:200 VERTICAL 1:50

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P1 31.05.2021 PRELIMINARY ISSUE
REV | DATE | REMARK

SAFETY IN DESIGN REPORT
In accordance with the Workplace Health & Safety Act and Regulations JMG have considered the potential hazards and risks that are specific to this design.

Are there any significant risks associated with this design?	No
If yes, have these been communicated to client?	

This work does not relieve contractors from their responsibilities under the Work Health and Safety Act and Regulations.

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PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT

TITLE
EXISTING SEWER PROFILE

Accepted: Chris M. (Decision Maker)	Date
Accepted: CDH (Town Planner)	Date
Approved: GLG (Principal)	Date

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SCALES @ A1	DESIGNED BY	DRAWN BY
	CJW	HVL
	PLOT DATE	02/12/2021

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PLOT DETAILS EXISTING SEWER PROFILES.DWG

PROJECT NO. P205028SH

DWG NO. C04 REVISION DA

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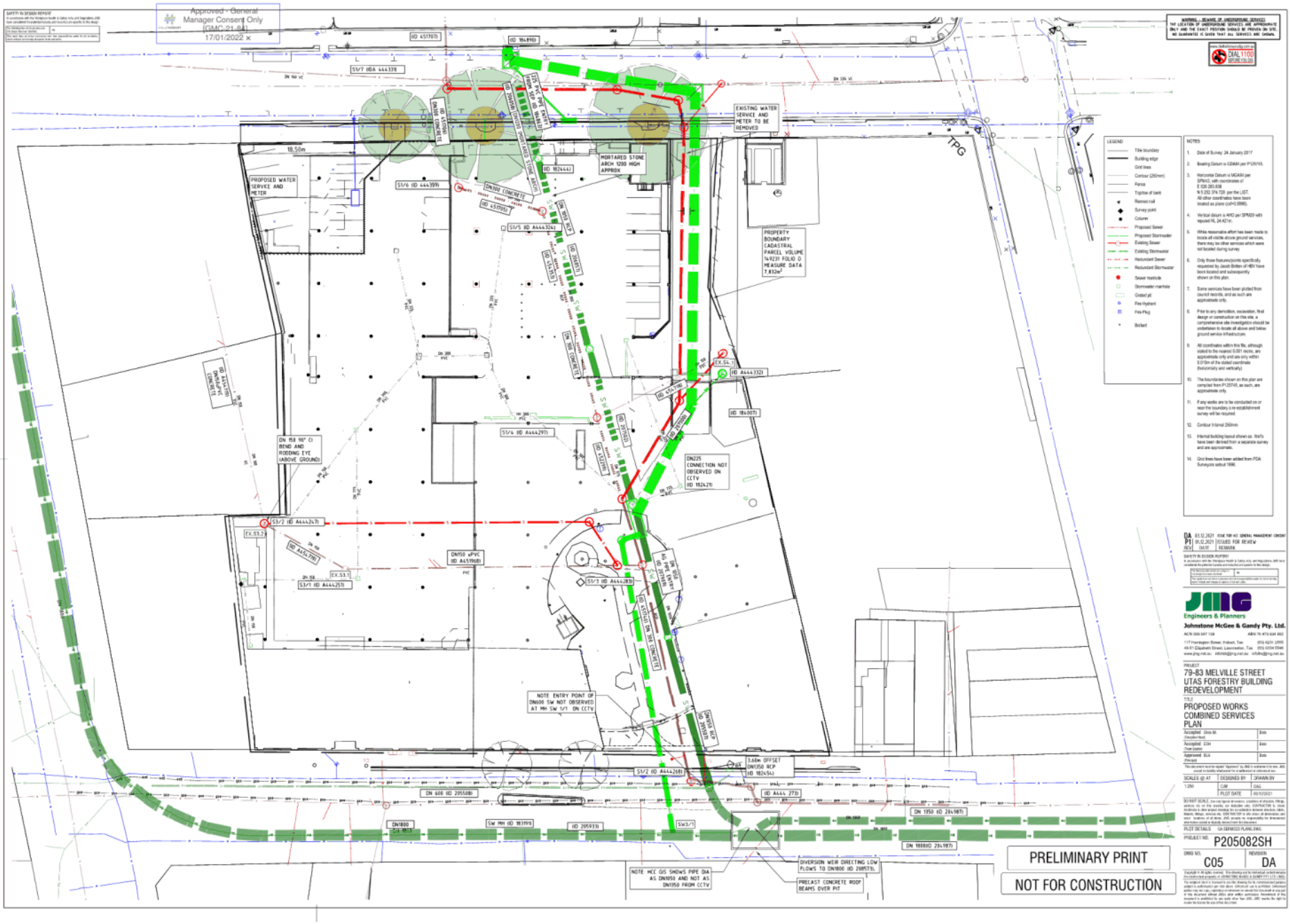
Approved - General Manager Consent Only [GMC-21-84] 17/01/2022
EXISTING WATER SERVICE AND METER TO BE REMOVED
MORTARED STONE ARCH 1200 HIGH APPROX
PROPOSED WATER SERVICE AND METER
PROPERTY BOUNDARY CADASTRAL PARCEL VOLUME 149231 FOLIO 0 MEASURE DATA 7,832m²
DN225 CONNECTION NOT OBSERVED ON CCTV (ID 182421)
DN 150 90° CI BEND AND RODDING EYE (ABOVE GROUND)
NOTE ENTRY POINT OF DN600 SW NOT OBSERVED AT MH SW 1/1 ON CCTV
DIVERSION WEIR DIRECTING LOW FLOWS TO DN1800 (ID 208573)
PRECAST CONCRETE ROOF BEAMS OVER PIT
NOTE HCC GIS SHOWS PIPE DIA AS DN1050 AND NOT AS DN1350 FROM CCTV
TPG
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NOT FOR CONSTRUCTION
Engineers & Planners
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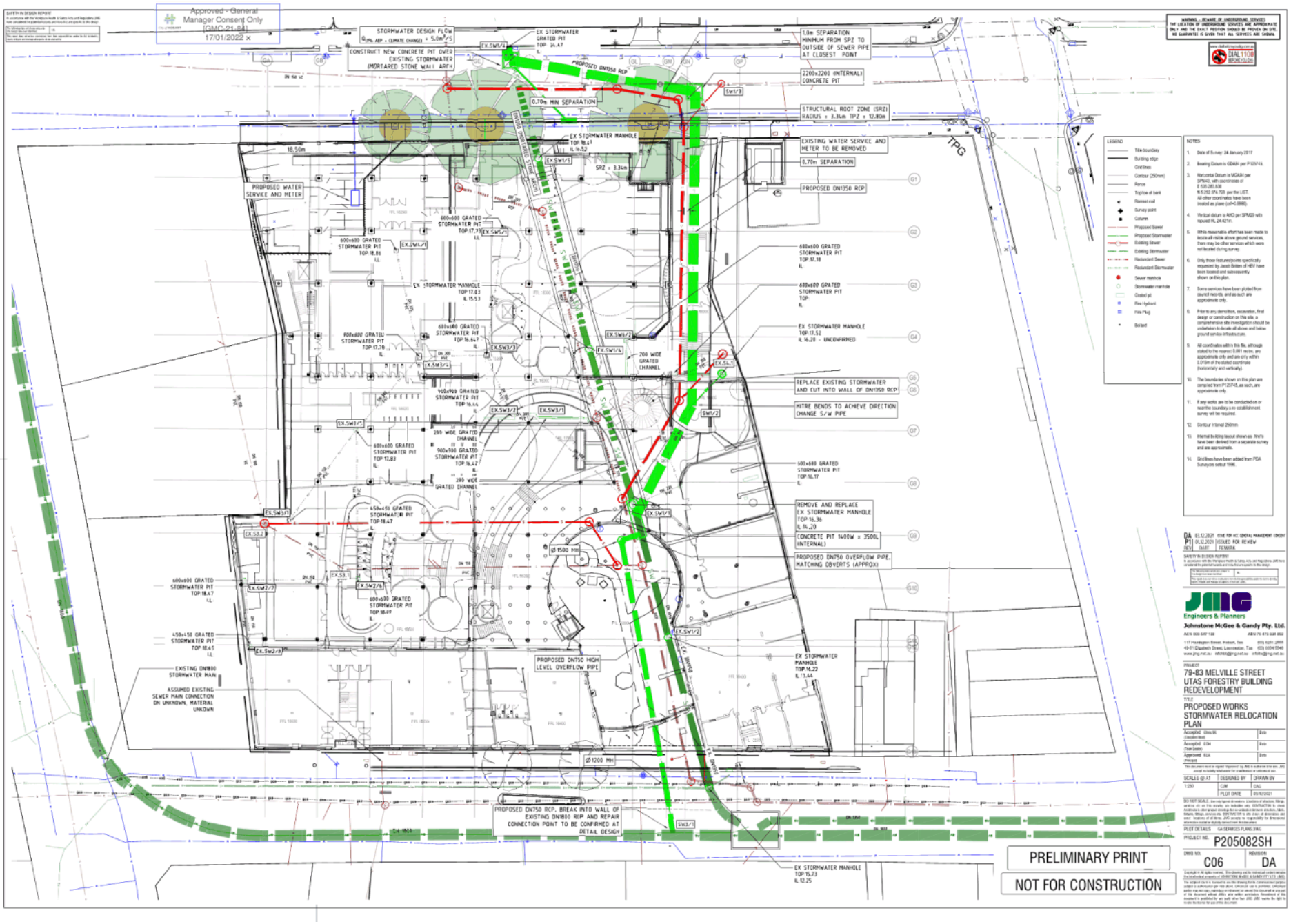
79-83 MELVILLE STREET UTAS FORESTRY BUILDING REDEVELOPMENT
PROPOSED WORKS COMBINED SERVICES PLAN
P205082SH
C05
DA


Approved - General Manager Consent Only [GMC-21-84] 17/01/2022
STORMWATER DESIGN FLOW
CONSTRUCT NEW CONCRETE PIT OVER EXISTING STORMWATER (MORTARED STONE WALL ARCH
EX STORMWATER GRATED PIT TOP 24.47
PROPOSED DN1350 RCP
1.0m SEPARATION MINIMUM FROM SPZ TO OUTSIDE OF SEWER PIPE AT CLOSEST POINT
2200x2200 (INTERNAL) CONCRETE PIT
0.70m MIN SEPARATION
STRUCTURAL ROOT ZONE (SRZ) RADIUS = 3.34m TPZ = 12.80m
EX STORMWATER MANHOLE TOP 16.61 IL 14.52
EXISTING WATER SERVICE AND METER TO BE REMOVED
0.70m SEPARATION
PROPOSED DN1350 RCP
TPG
PROPOSED WATER SERVICE AND METER
600x600 GRATED STORMWATER PIT TOP 17.77 IL
600x600 GRATED STORMWATER PIT TOP 18.86 IL
EX STORMWATER MANHOLE TOP 17.83 IL 15.53
600x600 GRATED STORMWATER PIT TOP 17.18 IL
600x600 GRATED STORMWATER PIT TOP IL
EX STORMWATER MANHOLE TOP 17.52 IL 16.28 - UNCONFIRMED
900x600 GRATED STORMWATER PIT TOP 17.78 IL
600x600 GRATED STORMWATER PIT TOP 16.67 IL
200 WIDE GRATED CHANNEL
REPLACE EXISTING STORMWATER AND CUT INTO WALL OF DN1350 RCP
MITRE BENDS TO ACHEVE DIRECTION CHANGE S/W PIPE
900x900 GRATED STORMWATER PIT TOP 16.44 IL
200 WIDE GRATED CHANNEL
600x600 GRATED STORMWATER PIT TOP 17.83 IL
900x900 GRATED STORMWATER PIT TOP 16.42 IL
200 WIDE GRATED CHANNEL
600x600 GRATED STORMWATER PIT TOP 16.17 IL
REMOVE AND REPLACE EX STORMWATER MANHOLE TOP 16.36 IL 14.20
CONCRETE PIT 14.00W x 3500L (INTERNAL)
PROPOSED DN750 OVERFLOW PIPE, MATCHING OBVERTS (APPROX)
450x450 GRATED STORMWATER PIT TOP 18.47 IL
Ø 1500 MH
600x600 GRATED STORMWATER PIT TOP 18.47 IL
600x600 GRATED STORMWATER PIT TOP 18.69 IL
450x450 GRATED STORMWATER PIT TOP 18.45 IL
EXISTING DN1800 STORMWATER MAIN
ASSUMED EXISTING SEWER MAIN CONNECTION ON UNKNOWN, MATERIAL UNKOWN
PROPOSED DN750 HIGH LEVEL OVERFLOW PIPE
EX STORMWATER MANHOLE TOP 16.22 IL 13.44
Ø 1200 MH
PROPOSED DN750 RCP, BREAK INTO WALL OF EXISTING DN1800 RCP AND REPAIR CONNECTION POINT TO BE CONFIRMED AT DETAIL DESIGN
EX STORMWATER MANHOLE TOP 15.73 IL 12.25
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LEGEND
NOTES
DIAL 1100 BEFORE YOU DIG
DA 03.12.2021 ISSUE FOR HCC GENERAL MANAGEMENT CONSENT
P1 09.12.2021 ISSUED FOR REVIEW
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43-51 Elizabeth Street, Launceston, Tas (03) 6334 5548
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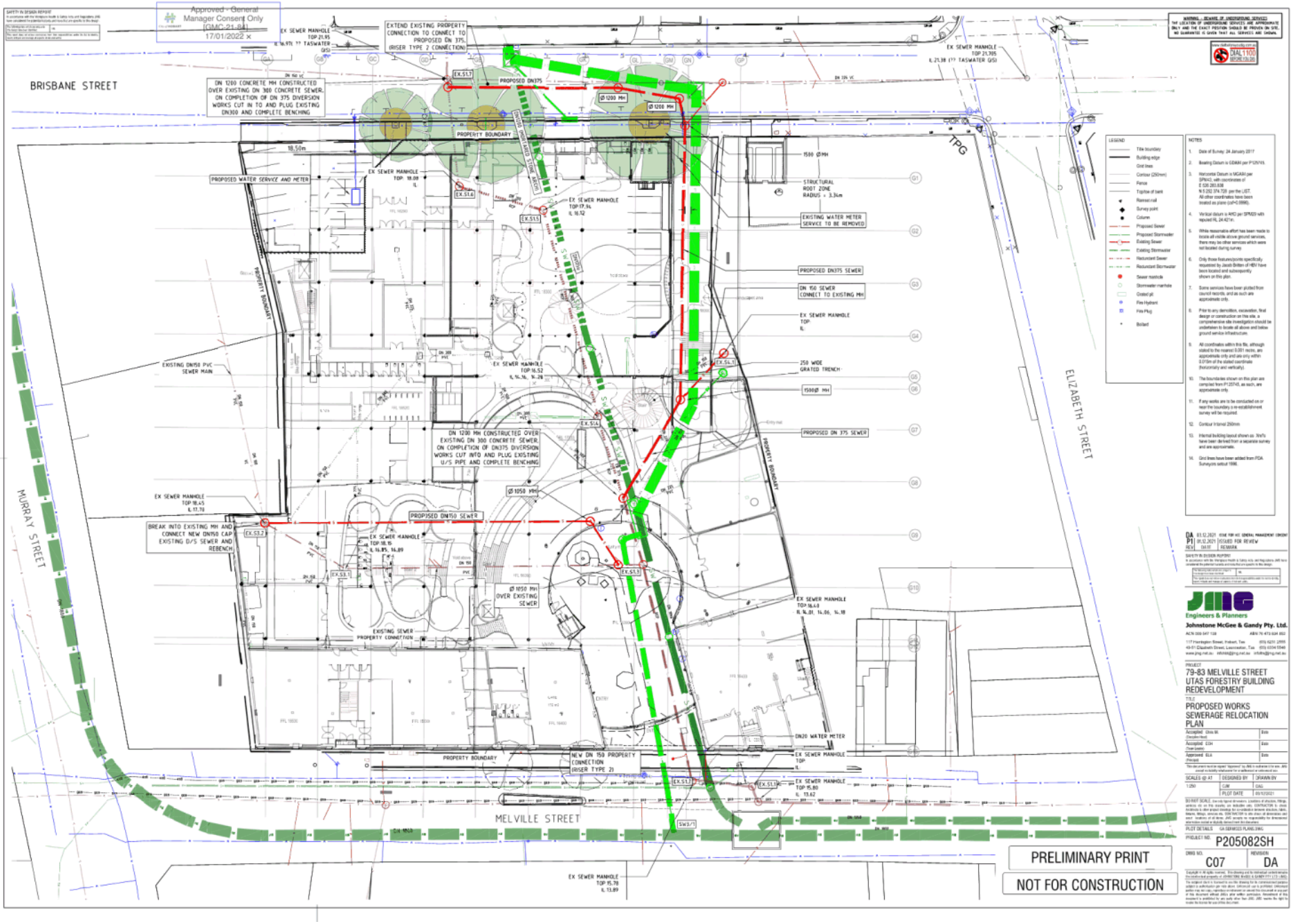
PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING REDEVELOPMENT
TITLE
PROPOSED WORKS
STORMWATER RELOCATION PLAN
Accepted: Chris Mc (Director/Hod)
Accepted: CGH (Team Leader)
Approved: GLA (Principal)
SCALES @ A1
DESIGNED BY
DRAWN BY
1:250
CJM
CAG
PLOT DATE
PLOT DETAILS
PROJECT NO.
P205082SH
DWG NO.
C06
REVISION
DA


Approved - General Manager Consent Only
[GMC-21-84]
17/01/2022
BRISBANE STREET
MURRAY STREET
ELIZABETH STREET
MELVILLE STREET
EXTEND EXISTING PROPERTY CONNECTION TO CONNECT TO PROPOSED DN 375. (RISER TYPE 2 CONNECTION)
DN 1200 CONCRETE MH CONSTRUCTED OVER EXISTING DN 300 CONCRETE SEWER. ON COMPLETION OF DN 375 DIVERSION WORKS CUT IN TO AND PLUG EXISTING DN300 AND COMPLETE BENCHING
PROPOSED DN375
PROPERTY BOUNDARY
PROPOSED WATER SERVICE AND METER
EXISTING DN150 PVC SEWER MAIN
BREAK INTO EXISTING MH AND CONNECT NEW DN150 CAP EXISTING D/S SEWER AND REBENCH
PROPOSED DN150 SEWER
DN 1200 MH CONSTRUCTED OVER EXISTING DN 300 CONCRETE SEWER ON COMPLETION OF DN375 DIVERSION WORKS CUT INTO AND PLUG EXISTING U/S PIPE AND COMPLETE BENCHING
EXISTING SEWER PROPERTY CONNECTION
NEW DN 150 PROPERTY CONNECTION (RISER TYPE 2)
STRUCTURAL ROOT ZONE RADIUS = 3.3m
EXISTING WATER METER SERVICE TO BE REMOVED
PROPOSED DN375 SEWER
DN 150 SEWER CONNECT TO EXISTING MH
250 WIDE GRATED TRENCH
PROPOSED DN 375 SEWER
DN20 WATER METER
TPG
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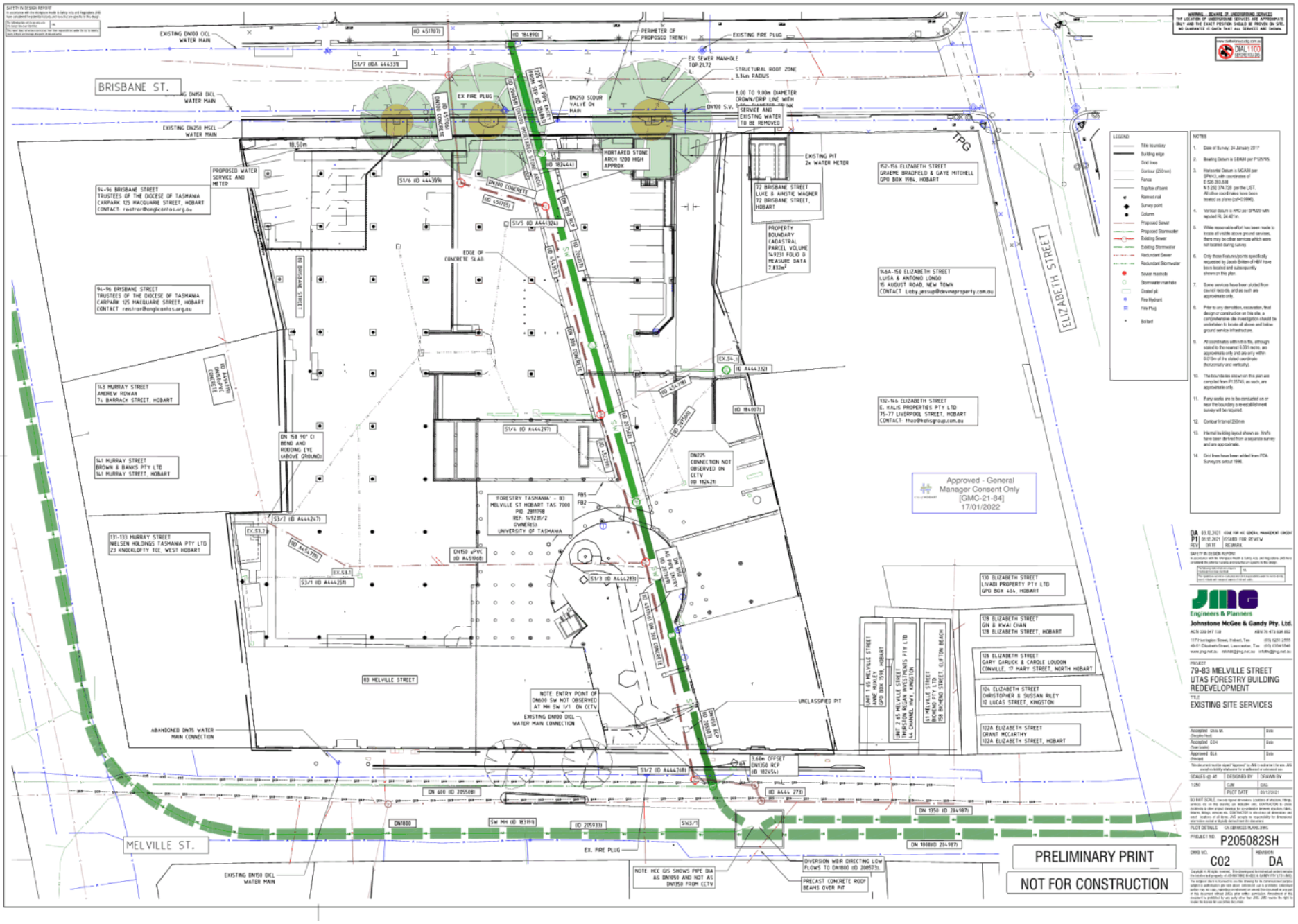
PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING REDEVELOPMENT
TITLE
PROPOSED WORKS SEWERAGE RELOCATION PLAN
PROJECT NO.
P205082SH
DWG NO.
C07
REVISION
DA


BRISBANE ST.
MELVILLE ST.
ELIZABETH STREET
TPG
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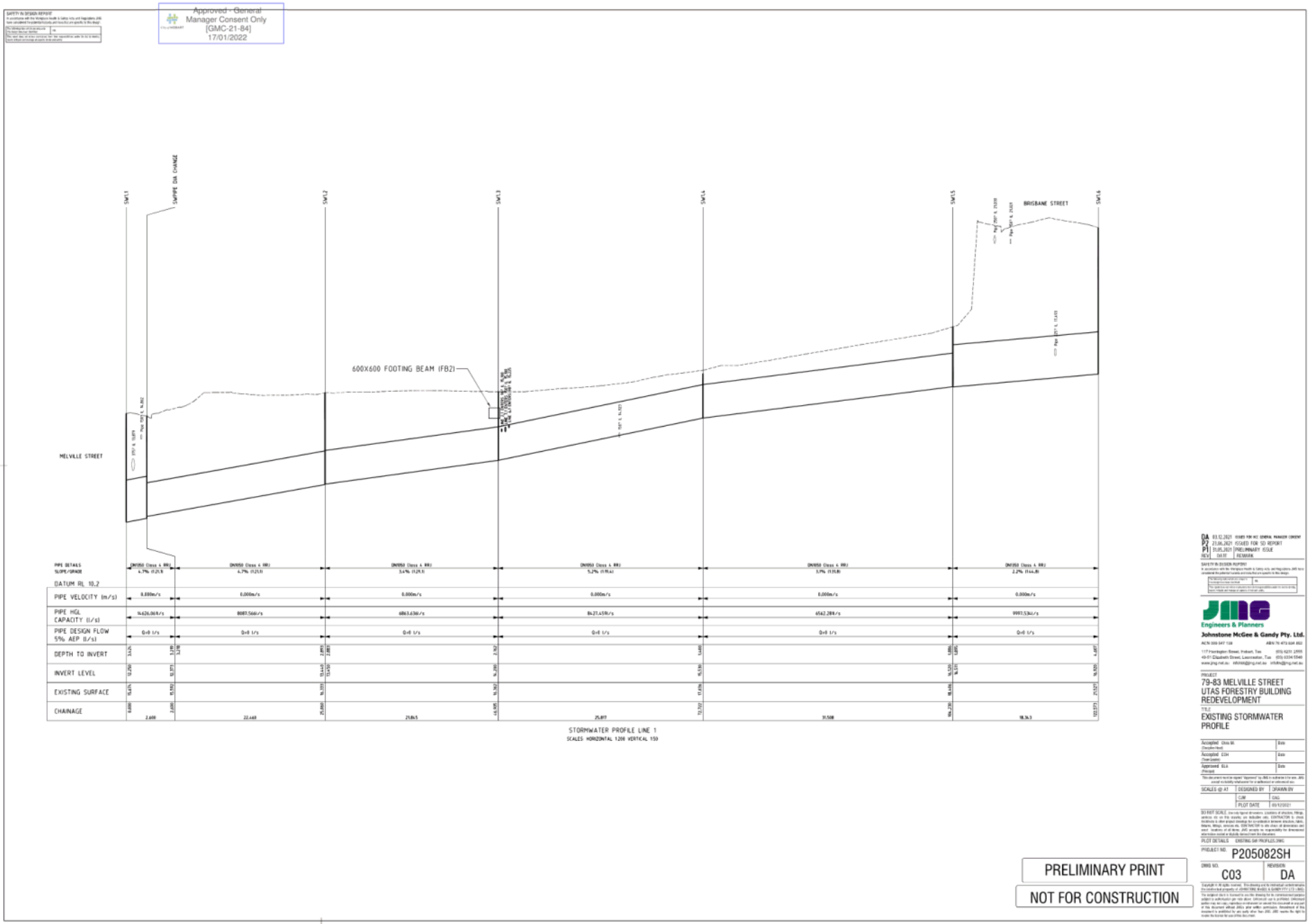
UTAS FORESTRY BUILDING REDEVELOPMENT
EXISTING SITE SERVICES
P205082SH
C02
DA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17/01/2022
SAFETY IN DESIGN REPORT
SWP1.1
SWP1.2
SWP1.3
SWP1.4
SWP1.5
SWP1.6
SWPIPE SIZE CHANGE
MELVILLE STREET
BRISBANE STREET
600X600 FOOTING BEAM (FB2)
PIPE DETAILS
SLOPE/GRADE
DN1050 Class 4 RRJ
4.7% (1:21.3)
DN1050 Class 4 RRJ
4.7% (1:21.3)
DN1050 Class 4 RRJ
3.4% (1:29.1)
DN1050 Class 4 RRJ
5.2% (1:19.4)
DN1050 Class 4 RRJ
3.7% (1:35.8)
DN1050 Class 4 RRJ
2.2% (1:44.8)
DATUM RL 10.2
PIPE VELOCITY (m/s)
0.000m/s
0.000m/s
0.000m/s
0.000m/s
0.000m/s
0.000m/s
PIPE HGL CAPACITY (l/s)
14626.069l/s
8087.566l/s
6863.636l/s
8427.659l/s
6562.289l/s
9997.534l/s
PIPE DESIGN FLOW 5% AEP (l/s)
0+0 l/s
0+0 l/s
0+0 l/s
0+0 l/s
0+0 l/s
0+0 l/s
DEPTH TO INVERT
3.426
3.195
3.476
2.895
2.886
2.762
3.400
3.886
3.495
4.497
INVERT LEVEL
12.292
12.073
12.552
13.445
13.520
16.390
16.338
16.520
16.116
16.920
EXISTING SURFACE
15.676
15.552
16.339
16.342
17.496
18.416
21.537
CHAINAGE
0.000
2.600
2.601
22.448
25.000
21.865
46.865
25.817
72.722
31.508
104.230
18.343
123.573
STORMWATER PROFILE LINE 1
SCALES HORIZONTAL 1:200 VERTICAL 1:50
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DA 03.12.2021 ISSUED FOR MCC GENERAL MANAGER CONSENT
P2 23.06.2021 ISSUED FOR SD REPORT
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PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT
TITLE
EXISTING STORMWATER
PROFILE
Accepted Chris W. (Discipline Head) Date
Accepted CGH (Team Leader) Date
Approved GLG (Principal) Date
SCALES @ A1
DESIGNED BY CJW
DRAWN BY CAG
PLOT DATE 03/12/2021
PLOT DETAILS EXISTING SW PROFILES.DWG
PROJECT NO. P205082SH
DWG NO. C03
REVISION DA

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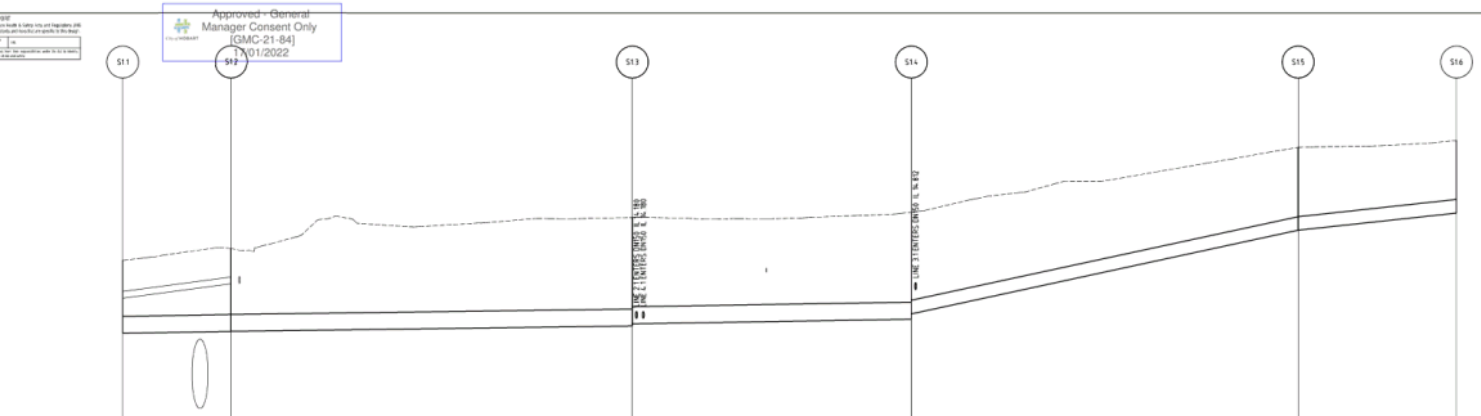
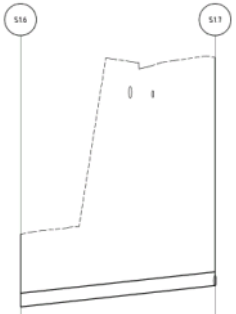
[GMC-21-84]
7/01/2022



PIPE DETAILS SLOPE/GRADE	DN375 EXISTING 0.42%	DN375 EXISTING 0.34%	DN375 EXISTING 0.41%	DN300 EXISTING 5.39%	DN300 EXISTING 2.72%
DATUM RL 11					
DEPTH TO INVERT	1.646 / 1.828	2.398 / 2.340	2.358 / 2.238	1.827	1.595
INVERT LEVEL	13.850 / 13.850	14.010 / 14.060	14.160 / 14.280	14.100	16.500
EXISTING SURFACE	15.496 / 15.718	16.440	16.598	17.963	18.095
CHAINAGE	0.000 / 9.554	44.965	65.591	103.719	117.694
	9.554	35.411	24.626	34.128	13.975

LONGITUDINAL SECTION FOR SEWER LINE 1
SCALES HORIZONTAL 1:200 VERTICAL 1:50



PIPE DETAILS SLOPE/GRADE	DN300 EXISTING 2.74%	
DATUM RL 14		
DEPTH TO INVERT	1.595	5.823
INVERT LEVEL	16.500	16.970
EXISTING SURFACE	18.095	21.993
CHAINAGE	117.694	124.059
	17.365	

LONGITUDINAL SECTION FOR SEWER LINE 1
SCALES HORIZONTAL 1:200 VERTICAL 1:50

PRELIMINARY PRINT

NOT FOR CONSTRUCTION

REV	DATE	REMARK
DA	03.12.2021	ISSUED FOR MCC GENERAL MANAGER CONSENT
P2	23.06.2021	ISSUED FOR SD REPORT
P1	31.05.2021	PRELIMINARY ISSUE

SAFETY IN DESIGN REPORT
In accordance with the Workplace Health & Safety Act and Regulations JMG have considered the potential hazards and risks that are specific to this design.

Are there any significant risks associated with this design?	No
This work does not relieve contractors from responsibilities under the Work Health and Safety Act and Regulations.	

Engineers & Planners
Johnstone McGee & Gandy Pty. Ltd.
ACN 009 047 108 ABN 76 473 634 852
117 Harrington Street, Hobart, Tas (03) 6231 2555
49-51 Elizabeth Street, Launceston, Tas (03) 6334 5548
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PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT

TITLE
EXISTING SEWER PROFILE

Accepted: Chris M. (Discipline Head)	Date
Accepted: CDH (Team Leader)	Date
Approved: GLA (Principal)	Date

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SCALES @ A1	DESIGNED BY	DRAWN BY
	CJW	HVL
	PLOT DATE	02/12/2021

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PLOT DETAILS EXISTING SEWER PROFILES.DWG

PROJECT NO. P205028SH

DWG NO. C04 REVISION DA

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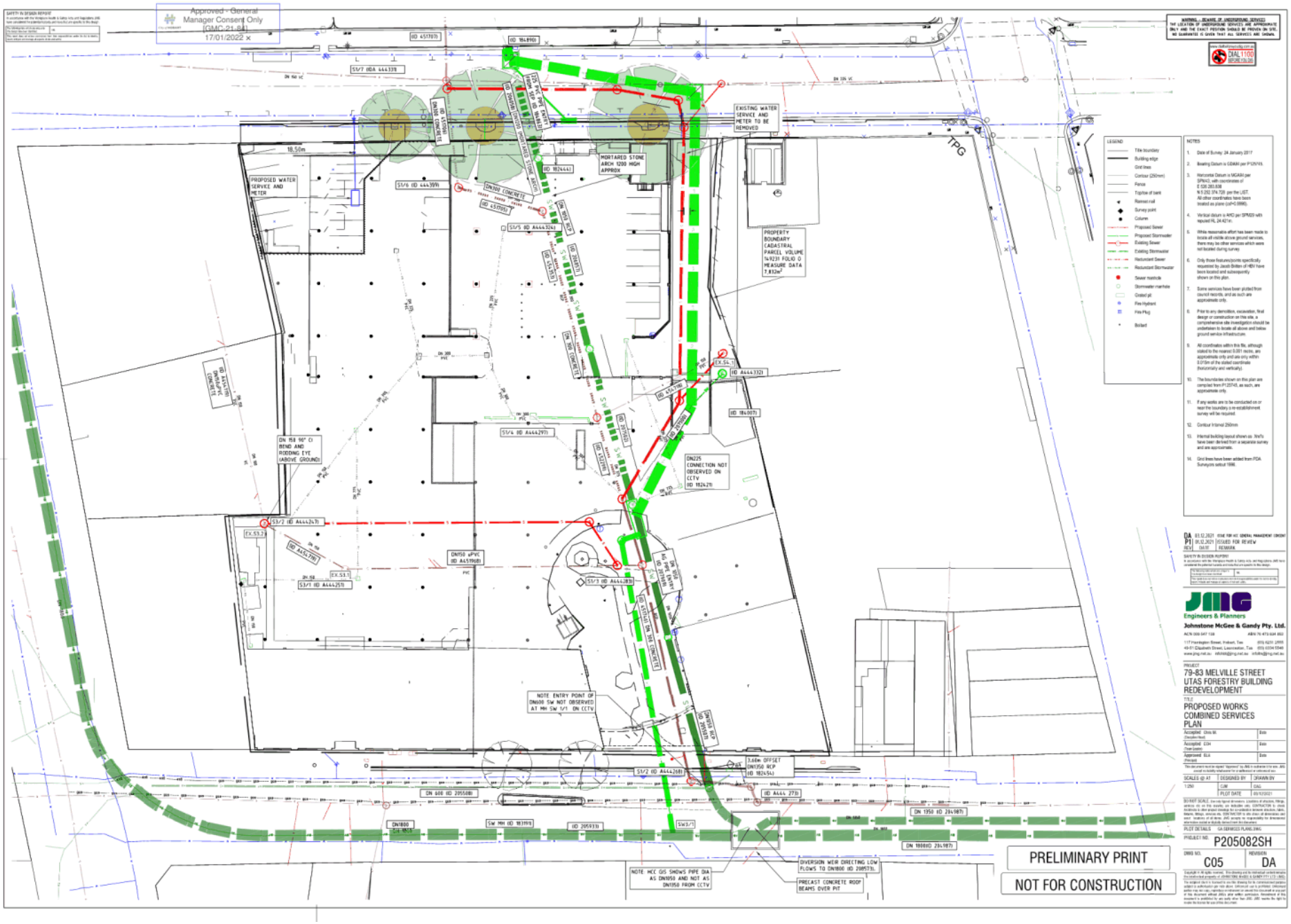
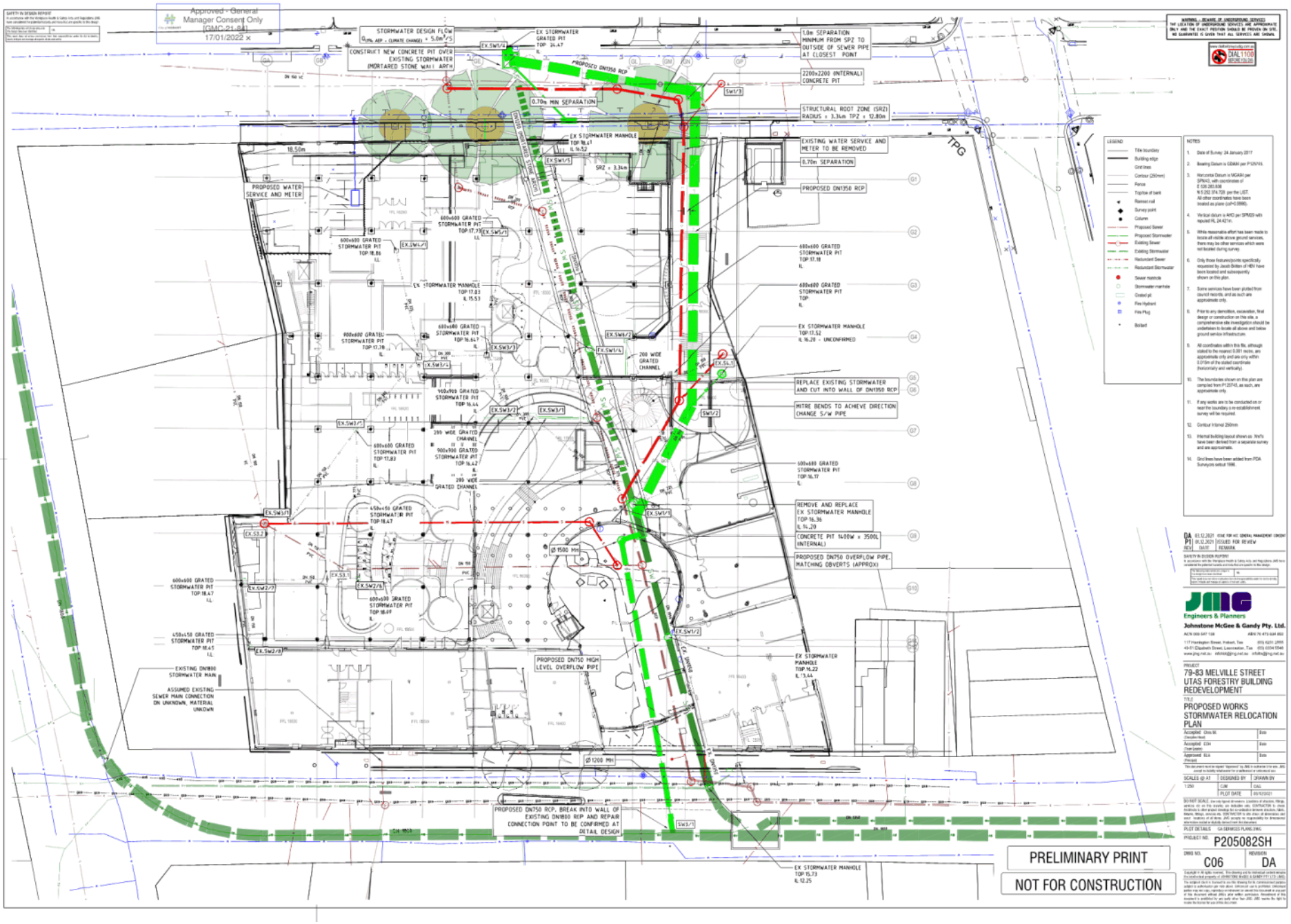
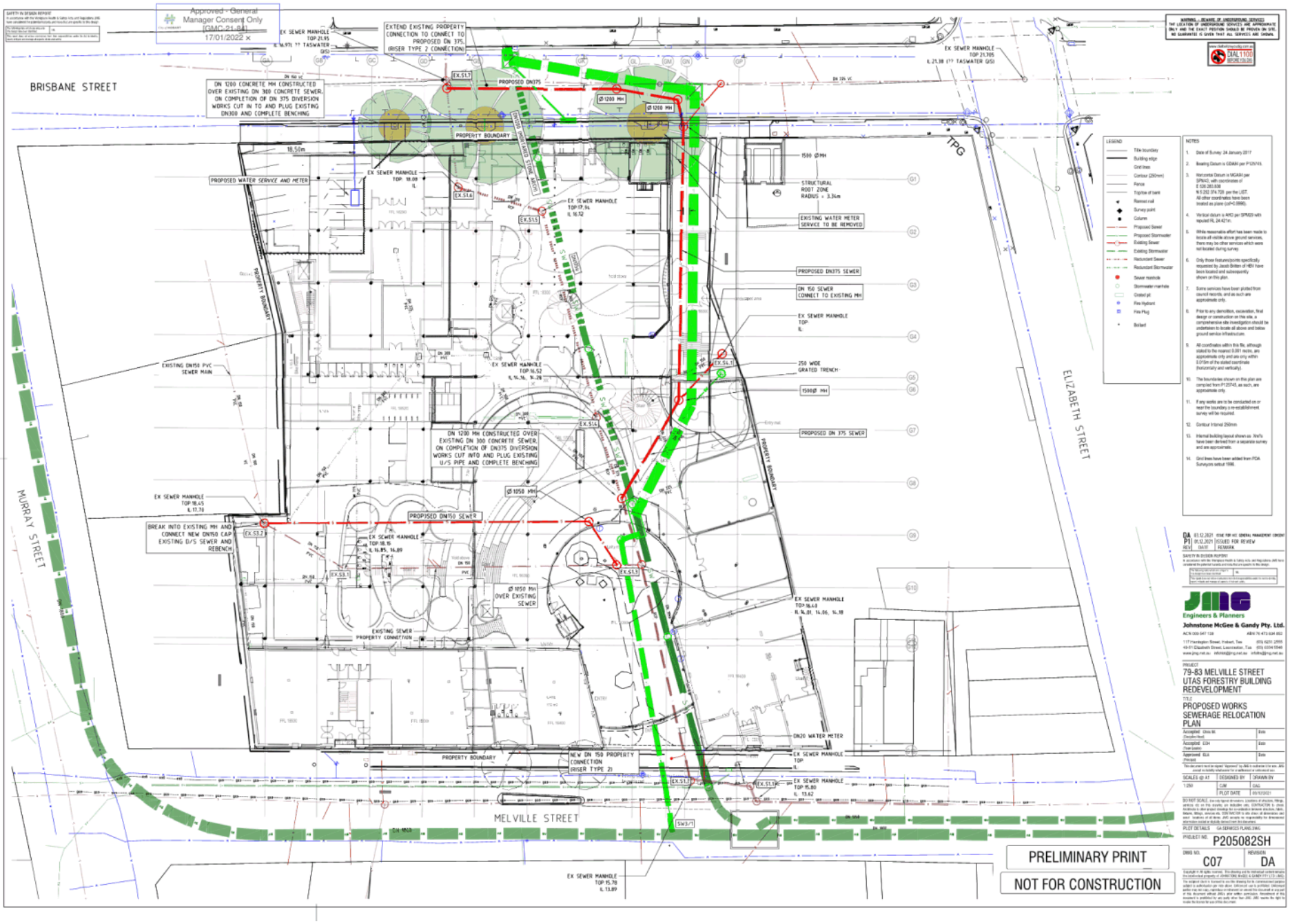

Approved - General Manager Consent Only [GMC-21-84] 17/01/2022
EXISTING WATER SERVICE AND METER TO BE REMOVED
MORTARED STONE ARCH 1200 HIGH APPROX
PROPOSED WATER SERVICE AND METER
PROPERTY BOUNDARY CADASTRAL PARCEL VOLUME 149231 FOLIO 0 MEASURE DATA 7,832m²
DN225 CONNECTION NOT OBSERVED ON CCTV (ID 182421)
DN 158 90° CI BEND AND RODDING EYE (ABOVE GROUND)
NOTE ENTRY POINT OF DN600 SW NOT OBSERVED AT MH SW 1/1 ON CCTV
DIVERSION WEIR DIRECTING LOW FLOWS TO DN1800 (ID 208573)
PRECAST CONCRETE ROOF BEAMS OVER PIT
NOTE: HCC GIS SHOWS PIPE DIA AS DN1050 AND NOT AS DN1350 FROM CCTV
TPG
PRELIMINARY PRINT
NOT FOR CONSTRUCTION
Engineers & Planners
Johnstone McGee & Gandy Pty. Ltd.
79-83 MELVILLE STREET UTAS FORESTRY BUILDING REDEVELOPMENT
PROPOSED WORKS COMBINED SERVICES PLAN
P205082SH
C05
DA


Approved - General Manager Consent Only [GMC-21-84] 17/01/2022
STORMWATER DESIGN FLOW
CONSTRUCT NEW CONCRETE PIT OVER EXISTING STORMWATER (MORTARED STONE WALL ARCH)
EX STORMWATER GRATED PIT TOP 24.47
1.0m SEPARATION MINIMUM FROM SPZ TO OUTSIDE OF SEWER PIPE AT CLOSEST POINT
2200x2200 (INTERNAL) CONCRETE PIT
STRUCTURAL ROOT ZONE (SRZ) RADIUS = 3.34m TPZ = 12.80m
0.70m MIN SEPARATION
EX STORMWATER MANHOLE TOP 18.41 IL 14.52
EXISTING WATER SERVICE AND METER TO BE REMOVED
0.70m SEPARATION
PROPOSED DN1350 RCP
PROPOSED WATER SERVICE AND METER
600x600 GRATED STORMWATER PIT TOP 17.73 IL 15.53
600x600 GRATED STORMWATER PIT TOP 18.86 IL
EX STORMWATER MANHOLE TOP 17.83 IL 15.53
900x900 GRATED STORMWATER PIT TOP 17.78 IL
600x600 GRATED STORMWATER PIT TOP 16.64 IL
600x600 GRATED STORMWATER PIT TOP 17.18 IL
600x600 GRATED STORMWATER PIT TOP IL
EX STORMWATER MANHOLE TOP 17.52 IL 16.20 - UNCONFIRMED
200 WIDE GRATED CHANNEL
REPLACE EXISTING STORMWATER AND CUT INTO WALL OF DN1350 RCP
MITRE BENDS TO ACHIEVE DIRECTION CHANGE S/W PIPE
900x900 GRATED STORMWATER PIT TOP 16.44 IL
600x600 GRATED STORMWATER PIT TOP 17.83 IL
900x900 GRATED STORMWATER PIT TOP 16.42 IL
600x600 GRATED STORMWATER PIT TOP 16.17 IL
REMOVE AND REPLACE EX STORMWATER MANHOLE TOP 16.36 IL 14.20
CONCRETE PIT 1400W x 3500L (INTERNAL)
PROPOSED DN750 OVERFLOW PIPE, MATCHING OBVERTS (APPROX)
450x450 GRATED STORMWATER PIT TOP 18.47 IL
600x600 GRATED STORMWATER PIT TOP 18.47 IL
600x600 GRATED STORMWATER PIT TOP 18.09 IL
450x450 GRATED STORMWATER PIT TOP 18.45 IL
EXISTING DN1800 STORMWATER MAIN
ASSUMED EXISTING SEWER MAIN CONNECTION ON UNKNOWN, MATERIAL UNKOWN
PROPOSED DN750 HIGH LEVEL OVERFLOW PIPE
EX STORMWATER MANHOLE TOP 16.22 IL 13.44
PROPOSED DN750 RCP, BREAK INTO WALL OF EXISTING DN1800 RCP AND REPAIR CONNECTION POINT TO BE CONFIRMED AT DETAIL DESIGN
EX STORMWATER MANHOLE TOP 15.73 IL 12.25
TPG
PRELIMINARY PRINT
NOT FOR CONSTRUCTION
Engineers & Planners
Johnstone McGee & Gandy Pty. Ltd.
79-83 MELVILLE STREET UTAS FORESTRY BUILDING REDEVELOPMENT
PROPOSED WORKS STORMWATER RELOCATION PLAN
P205082SH
C06
DA


Approved - General Manager Consent Only
[GMC-21-84]
17/01/2022
BRISBANE STREET
MURRAY STREET
ELIZABETH STREET
MELVILLE STREET
EXTEND EXISTING PROPERTY CONNECTION TO CONNECT TO PROPOSED DN 375. (RISER TYPE 2 CONNECTION)
DN 1200 CONCRETE MH CONSTRUCTED OVER EXISTING DN 300 CONCRETE SEWER. ON COMPLETION OF DN 375 DIVERSION WORKS CUT IN TO AND PLUG EXISTING DN300 AND COMPLETE BENCHING
PROPOSED WATER SERVICE AND METER
EXISTING DN150 PVC SEWER MAIN
BREAK INTO EXISTING MH AND CONNECT NEW DN150 CAP EXISTING D/S SEWER AND REBENCH
DN 1200 MH CONSTRUCTED OVER EXISTING DN 300 CONCRETE SEWER ON COMPLETION OF DN375 DIVERSION WORKS CUT INTO AND PLUG EXISTING U/S PIPE AND COMPLETE BENCHING
PROPOSED DN150 SEWER
EXISTING SEWER PROPERTY CONNECTION
NEW DN 150 PROPERTY CONNECTION (RISER TYPE 2)
PROPERTY BOUNDARY
STRUCTURAL ROOT ZONE RADIUS = 3.3m
EXISTING WATER METER SERVICE TO BE REMOVED
PROPOSED DN375 SEWER
DN 150 SEWER CONNECT TO EXISTING MH
250 WIDE GRATED TRENCH
PROPOSED DN 375 SEWER
DN20 WATER METER
TPG
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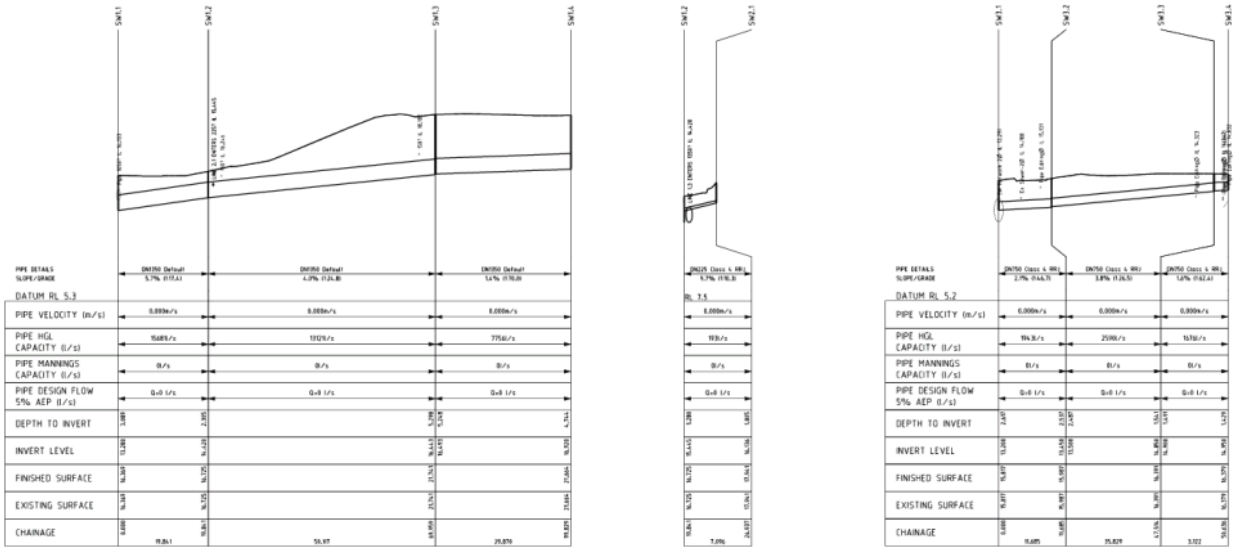
NOT FOR CONSTRUCTION
Engineers & Planners
Johnstone McGee & Gandy Pty. Ltd.
PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT
TITLE
PROPOSED WORKS
SEWERAGE RELOCATION
PLAN
PROJECT NO.
P205082SH
DWG NO.
C07
REVISION
DA

Approved - General Manager Consent Only
[GMC-21-84]
17/01/2022



STORMWATER PROFILE LINE 1
SCALES: HORIZONTAL 1500 VERTICAL 1200

STORMWATER PROFILE LINE 2
SCALES: HORIZONTAL 1500 VERTICAL 1200

STORMWATER PROFILE LINE 3
SCALES: HORIZONTAL 1500 VERTICAL 1200

PRELIMINARY PRINT

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Engineers & Planners
Johnstone McGee & Gandy Pty. Ltd.

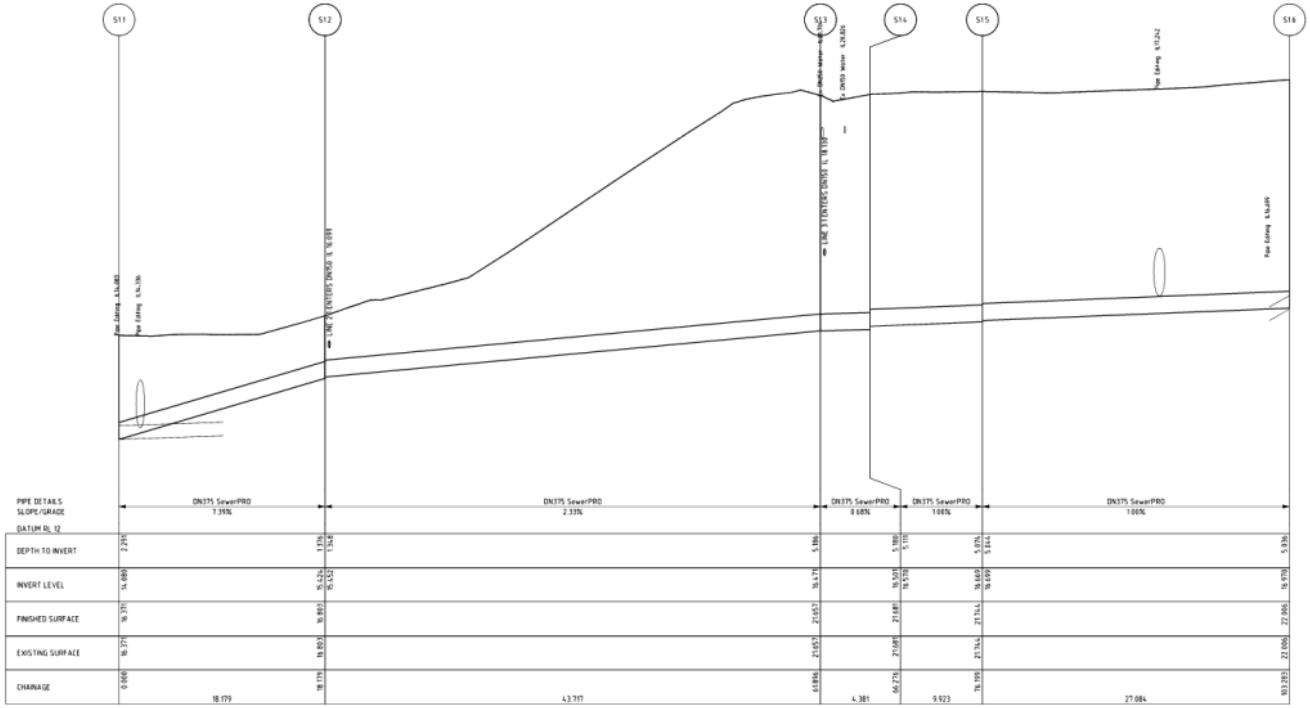
PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT

TITLE
PROPOSED STORMWATER
LINE 1,2 & 3 LONGITUDINAL
SECTION

PROJECT NO. P205082SH

DWG NO. C08 REVISION DA

Approved - General Manager Consent Only
[GMC-21-84]
17/01/2022



LONGITUDINAL SECTION FOR SEWER LINE 1
SCALES HORIZONTAL 1:200 VERTICAL 1:50

PRELIMINARY PRINT

NOT FOR CONSTRUCTION

DA 03.12.2021 ISSUED FOR MCC GENERAL MANAGER CONSENT
P2 23.06.2021 ISSUED FOR SD REPORT
P1 31.05.2021 PRELIMINARY ISSUE
REV DATE REMARK

SAFETY IN DESIGN REPORT
In accordance with the Workplace Health & Safety Act and Regulations JMG have considered the potential hazards and risks that are specific to this design.

Are there any hazardous substances used in the design?	No
The work does not require contractors to be responsible under Section 35 of the WHS Act. Hazards and risks of contractors are not specified.	

Engineers & Planners
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www.jmg.net.au info@jmg.net.au info@launceston@jmg.net.au

PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT

TITLE
PROPOSED GRAVITY SEWER LINE 1 LONGITUDINAL SECTION

Accepted: Chris Gil (Discipline Lead)	Date
Accepted: EGH (Team Leader)	Date
Approved: GLA (Principal)	Date

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	CJW	HVL
	PLOT DATE	03/12/2021

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PLOT DETAILS PROPOSED SEWER PROFILES.DWG

PROJECT NO. P205028SH

DWG NO. C09 REVISION DA

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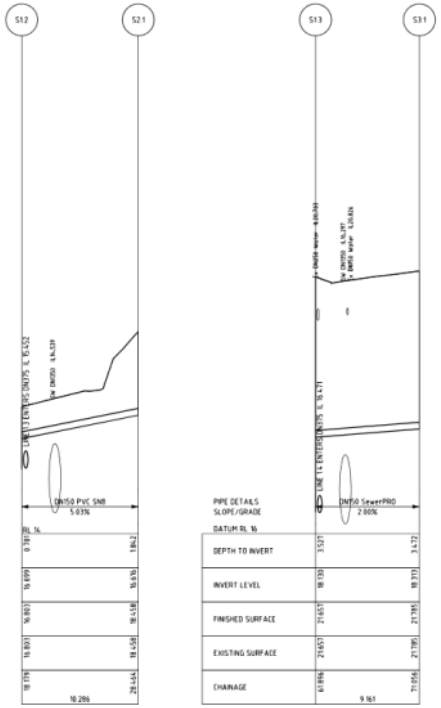
[GMC-21-84]
17/01/2022



LONGITUDINAL SECTION FOR SEWER LINE 2
SCALES HORIZONTAL 1:200 VERTICAL 1:50

LONGITUDINAL SECTION FOR SEWER LINE 3
SCALES HORIZONTAL 1:200 VERTICAL 1:50

PRELIMINARY PRINT

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DA 03.12.2021 ISSUED FOR GENERAL MANAGER CONSENT
P2 23.06.2021 ISSUED FOR SD REPORT
P1 31.05.2021 PRELIMINARY ISSUE
REV | DATE | REMARK

SAFETY IN DESIGN REPORT
In accordance with the Workplace Health & Safety Act and Regulations JMG have considered the potential hazards and risks that are specific to this design.

Are there hazards that are not obvious or not to be expected from a competent person?	No
This work does not require a duty holder to accept responsibilities under the Act to eliminate, hazards and manage or control risks arising.	

Engineers & Planners

Johnstone McGee & Gandy Pty. Ltd.
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49-51 Elizabeth Street, Launceston, Tas (03) 6334 5548
www.jmg.net.au info@jmg.net.au info@jmg-lnc.net.au

PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT

TITLE
PROPOSED GRAVITY SEWER
LINE 2 & 3 LONGITUDINAL
SECTION

Accepted: Chris Sh. (Discipline Lead)	Date
Accepted: EGH (Team Leader)	Date
Approved: GLA (Principal)	Date

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SCALES @ A1	DESIGNED BY	DRAWN BY
	CJW	HVL
	PLOT DATE	03/12/2021

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PLOT DETAILS PROPOSED SEWER PROFILES.DWG

PROJECT NO. P205028SH

DWG NO. C10 REVISION DA

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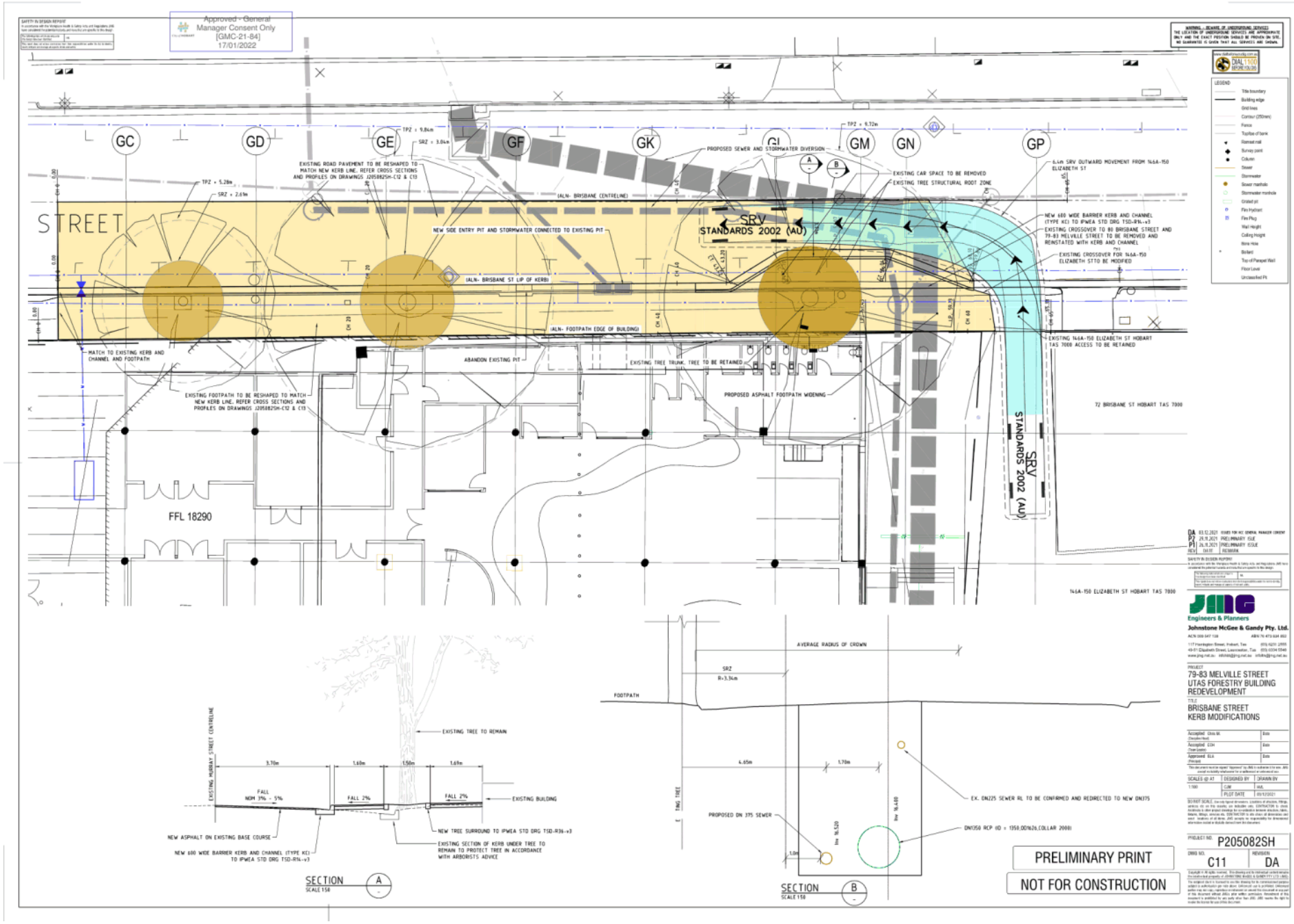
Approved - General Manager Consent Only [GMC-21-84] 17/01/2022
STREET
GC
GD
GE
GF
GK
GM
GN
GP
SRV STANDARDS 2002 (AU)
FFL 18290
PROPOSED SEWER AND STORMWATER DIVERSION
EXISTING CAR SPACE TO BE REMOVED
EXISTING TREE STRUCTURAL ROOT ZONE
NEW SIDE ENTRY PIT AND STORMWATER CONNECTED TO EXISTING PIT
ABANDON EXISTING PIT
EXISTING TREE TRUNK. TREE TO BE RETAINED
PROPOSED ASPHALT FOOTPATH WIDENING
MATCH TO EXISTING KERB AND CHANNEL AND FOOTPATH
72 BRISBANE ST HOBART TAS 7000
146A-150 ELIZABETH ST HOBART TAS 7000
EXISTING TREE TO REMAIN
EXISTING BUILDING
NEW ASPHALT ON EXISTING BASE COURSE
NEW 600 WIDE BARRIER KERB AND CHANNEL (TYPE KC) TO IPWEA STD DRG TSD-R14-v3
NEW TREE SURROUND TO IPWEA STD DRG TSD-R36-v3
EXISTING SECTION OF KERB UNDER TREE TO REMAIN TO PROTECT TREE IN ACCORDANCE WITH ARBORISTS ADVICE
SECTION A
SCALE 1:50
AVERAGE RADIUS OF CROWN
FOOTPATH
PROPOSED DN 375 SEWER
EX. DN225 SEWER RL TO BE CONFIRMED AND REDIRECTED TO NEW DN375
SECTION B
SCALE 1:50
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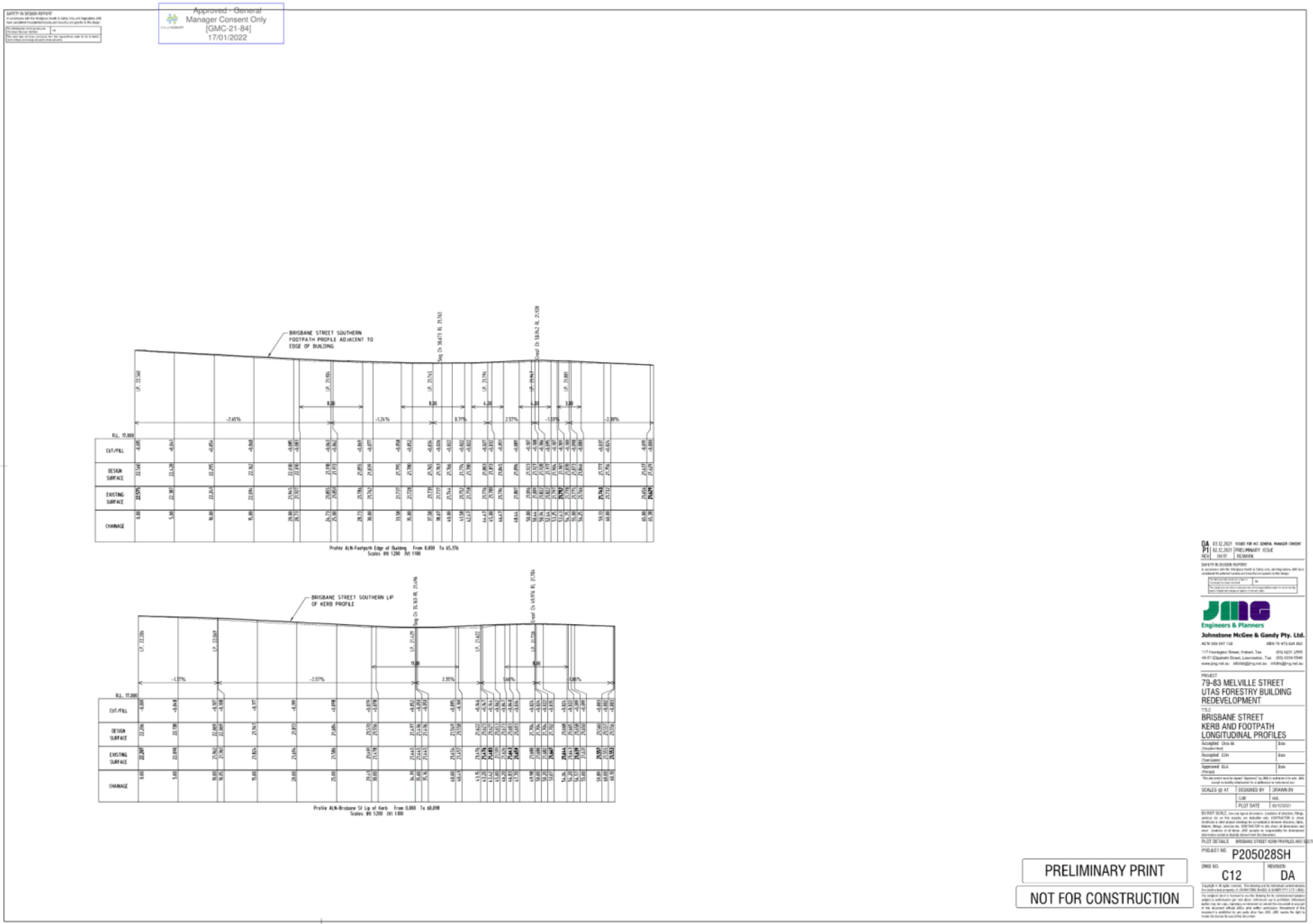
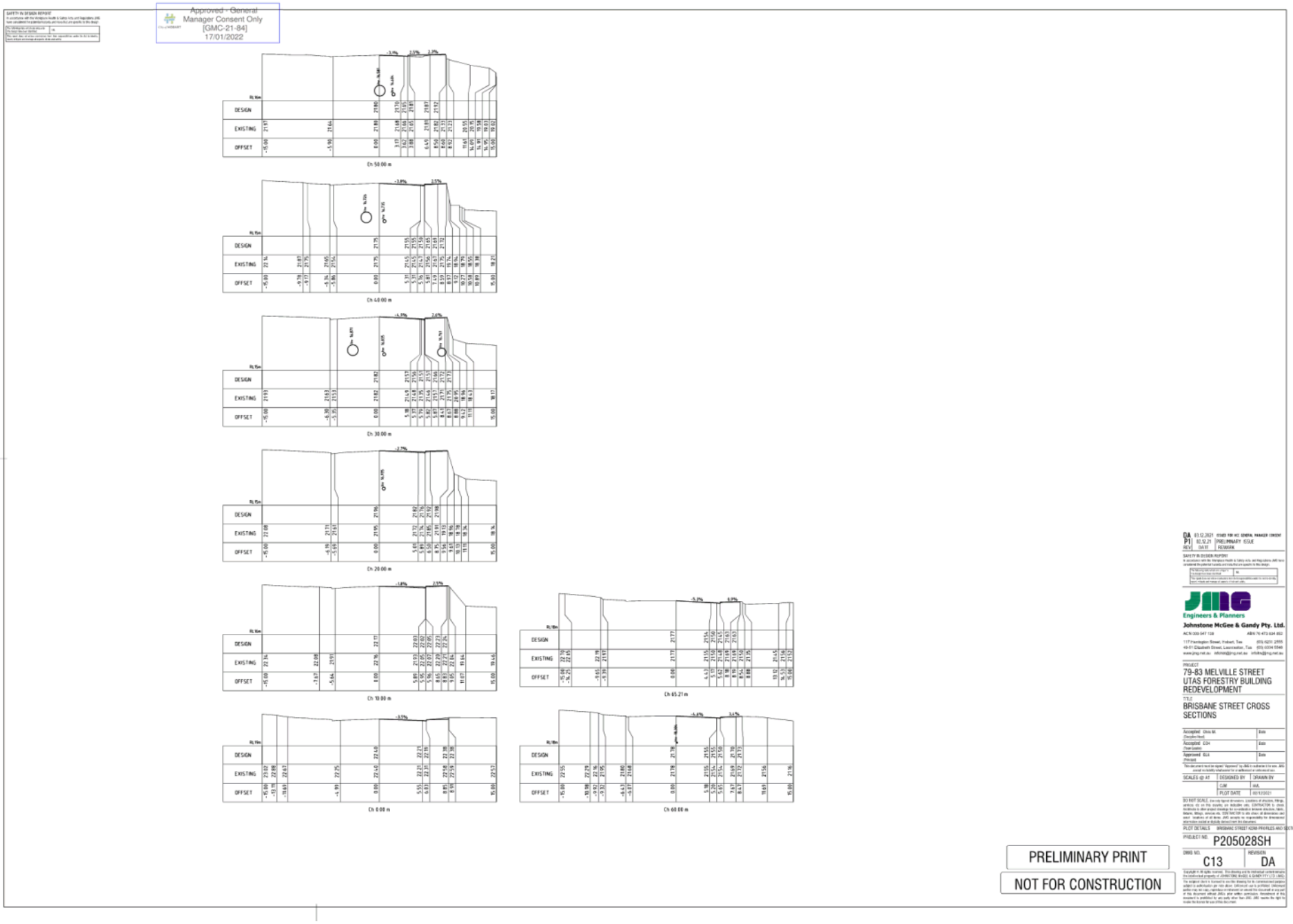
Engineers & Planners
Johnstone McGee & Gandy Pty. Ltd.
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT
BRISBANE STREET
KERB MODIFICATIONS
P205082SH
C11
DA


Approved - General Manager Consent Only
[GMC-21-84]
17/01/2022
BRISBANE STREET SOUTHERN FOOTPATH PROFILE ADJACENT TO EDGE OF BUILDING
BRISBANE STREET SOUTHERN LIP OF KERB PROFILE
PRELIMINARY PRINT
NOT FOR CONSTRUCTION
Engineers & Planners
Johnstone McGee & Gandy Pty. Ltd.
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT
BRISBANE STREET
KERB AND FOOTPATH
LONGITUDINAL PROFILES
P205028SH
C12
DA


Approved - General Manager Consent Only
[GMC-21-84]
17/01/2022
DESIGN
EXISTING
OFFSET
Ch 50.00 m
Ch 40.00 m
Ch 30.00 m
Ch 20.00 m
Ch 10.00 m
Ch 0.00 m
Ch 65.21 m
Ch 60.00 m
Engineers & Planners
Johnstone McGee & Gandy Pty. Ltd.
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT
BRISBANE STREET CROSS SECTIONS
P205028SH
C13
DA
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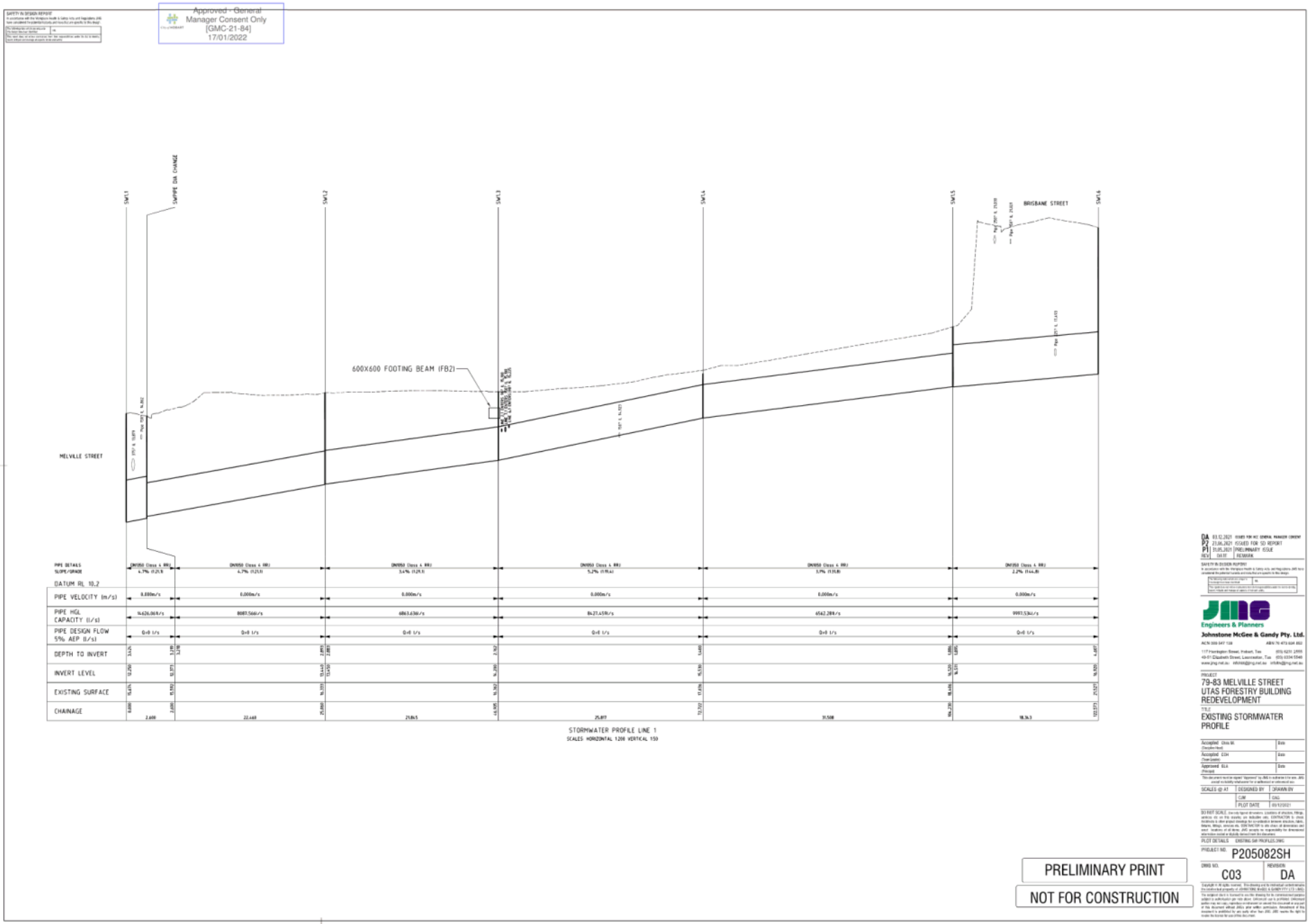
Approved - General Manager Consent Only
[GMC-21-84]
17/01/2022
SAFETY IN DESIGN REPORT
SWP1
SWP2
SWP3
SWP4
SWP5
SWP6
SWPS DIA CHANGE
MELVILLE STREET
BRISBANE STREET
600X600 FOOTING BEAM (FB2)
PIPE DETAILS
SLOPE/GRADE
DN1050 Class 4 RRJ
4.7% (1:21.3)
4.7% (1:21.3)
3.4% (1:29.3)
5.2% (1:19.4)
3.7% (1:35.8)
2.2% (1:44.8)
DATUM RL 10.2
PIPE VELOCITY (m/s)
0.000m/s
PIPE HGL CAPACITY (l/s)
14626.069l/s
8087.566l/s
6863.638l/s
8427.659l/s
6562.289l/s
9997.534l/s
PIPE DESIGN FLOW 5% AEP (l/s)
0+0 l/s
DEPTH TO INVERT
3.426
3.195
3.476
2.895
2.882
2.762
3.601
3.886
3.695
4.697
INVERT LEVEL
12.292
12.073
12.552
13.445
13.432
13.312
14.299
14.301
14.320
14.110
14.920
14.920
EXISTING SURFACE
15.676
15.552
16.331
16.362
17.496
18.416
18.270
21.571
21.571
CHAINAGE
0.000
2.600
3.600
22.468
25.800
21.865
48.665
25.817
72.722
31.508
104.230
18.343
123.573
STORMWATER PROFILE LINE 1
SCALES HORIZONTAL 1:200 VERTICAL 1:50
PRELIMINARY PRINT
NOT FOR CONSTRUCTION
DA 03.12.2021 ISSUED FOR MCC GENERAL MANAGER CONSENT
P2 23.06.2021 ISSUED FOR SD REPORT
P1 31.05.2021 PRELIMINARY ISSUE
REV DATE REMARK
Engineers & Planners
Johnstone McGee & Gandy Pty. Ltd.
ACN 050 047 108 ABN 76 473 634 692
117 Harrington Street, Hobart, Tas (03) 6231 2555
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PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT
TITLE
EXISTING STORMWATER
PROFILE
Accepted Chris W. (Discipline Head) Date
Accepted CDH (Team Leader) Date
Approved GLG (Principal) Date
SCALES @ A1
DESIGNED BY CJW
DRAWN BY CAG
PLOT DATE 03/12/2021
PLOT DETAILS EXISTING SW PROFILES.DWG
PROJECT NO. P205082SH
DWG NO. C03
REVISION DA

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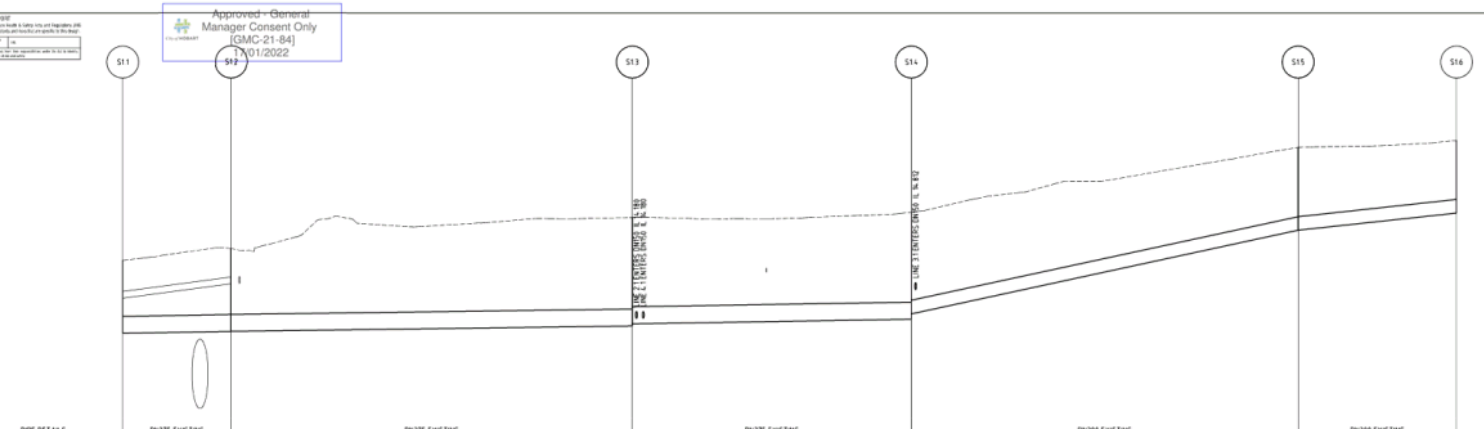
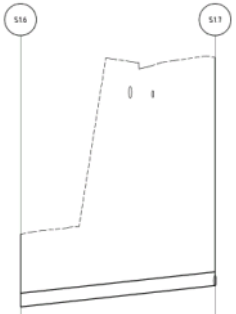


	S1.1	S1.2	S1.3	S1.4	S1.5	S1.6
PIPE DETAILS SLOPE/GRADE	DN375 EXISTING 0.42%	DN375 EXISTING 0.34%	DN375 EXISTING 0.41%	DN300 EXISTING 5.39%	DN300 EXISTING 2.72%	
DATUM RL 11						
DEPTH TO INVERT	1.646	1.828	2.398 / 2.340	2.358 / 2.238	1.827	1.599
INVERT LEVEL	13.890	13.890	14.010 / 14.060	14.160 / 14.280	14.100	14.500
EXISTING SURFACE	15.436	15.718	16.440	16.598	17.963	18.099
CHAINAGE	0.000	9.554	44.965	65.591	103.719	117.694
	9.554	35.411	24.626	34.128	13.975	

LONGITUDINAL SECTION FOR SEWER LINE 1
SCALES HORIZONTAL 1:200 VERTICAL 1:50



	S1.6	S1.7
PIPE DETAILS SLOPE/GRADE	DN300 EXISTING 2.74%	
DATUM RL 14		
DEPTH TO INVERT	1.599	5.823
INVERT LEVEL	16.500	16.970
EXISTING SURFACE	18.099	21.993
CHAINAGE	117.694	134.059
	17.365	

LONGITUDINAL SECTION FOR SEWER LINE 1
SCALES HORIZONTAL 1:200 VERTICAL 1:50

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REV DATE REMARK

SAFETY IN DESIGN REPORT
In accordance with the Workplace Health & Safety Act and Regulations JMG have considered the potential hazards and risks that are specific to this design.

Are there any hazards or risks that are not adequately addressed by the design?	No
This work does not relieve contractors from their responsibilities under the Work Health and Safety Act and Regulations.	

Engineers & Planners
Johnstone McGee & Gandy Pty. Ltd.
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49-51 Elizabeth Street, Launceston, Tas (03) 6334 5548
www.jmg.net.au info@jmg.net.au info@ln@jmg.net.au

PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT

TITLE
EXISTING SEWER PROFILE

Accepted: CHG (Discipline Head)	Date
Accepted: CGH (Team Leader)	Date
Approved: GLG (Principal)	Date

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	CJW	HVL
	PLOT DATE	02/12/2021

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PLOT DETAILS EXISTING SEWER PROFILES.DWG

PROJECT NO. P205028SH

DWG NO. C04 REVISION DA

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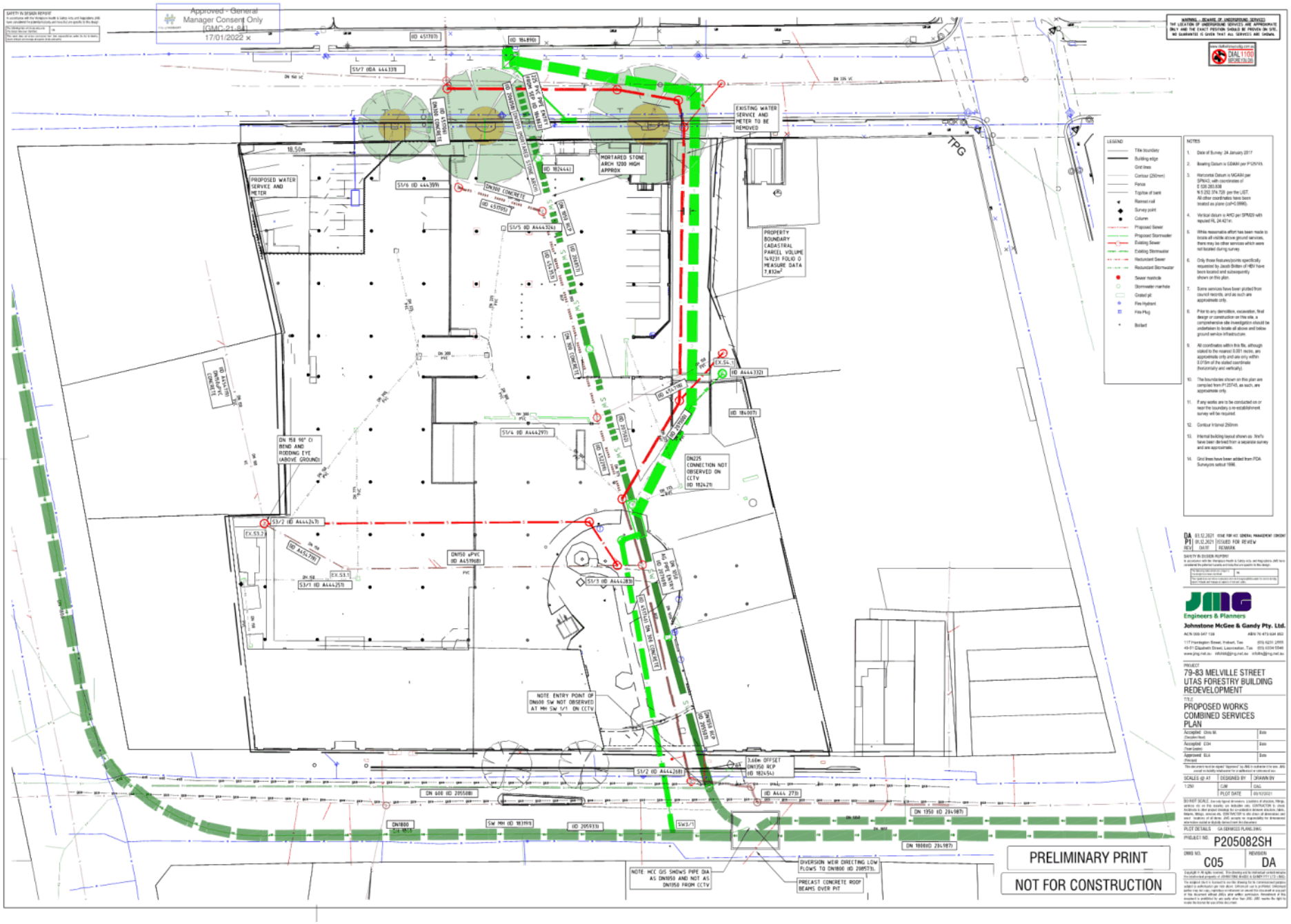
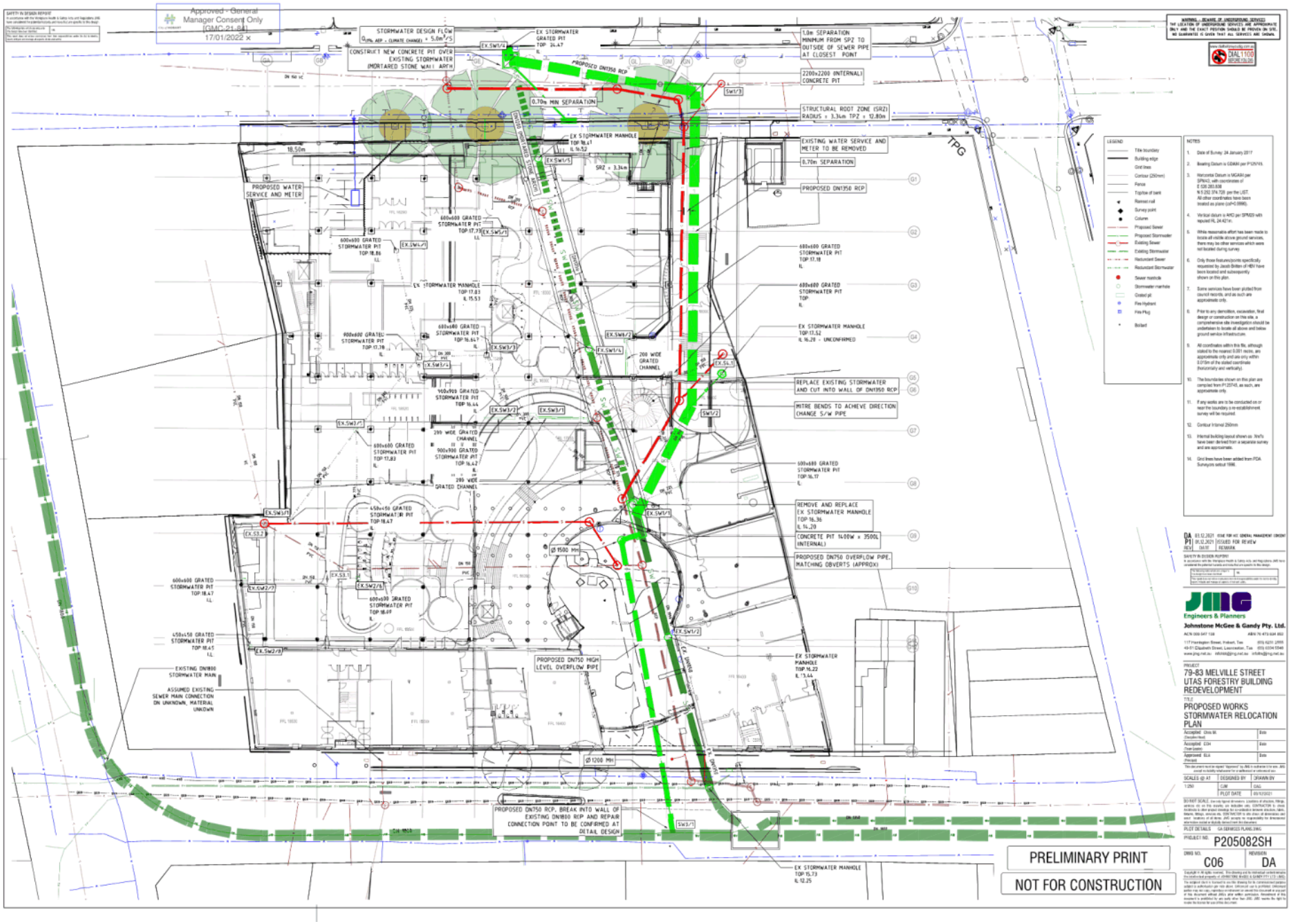
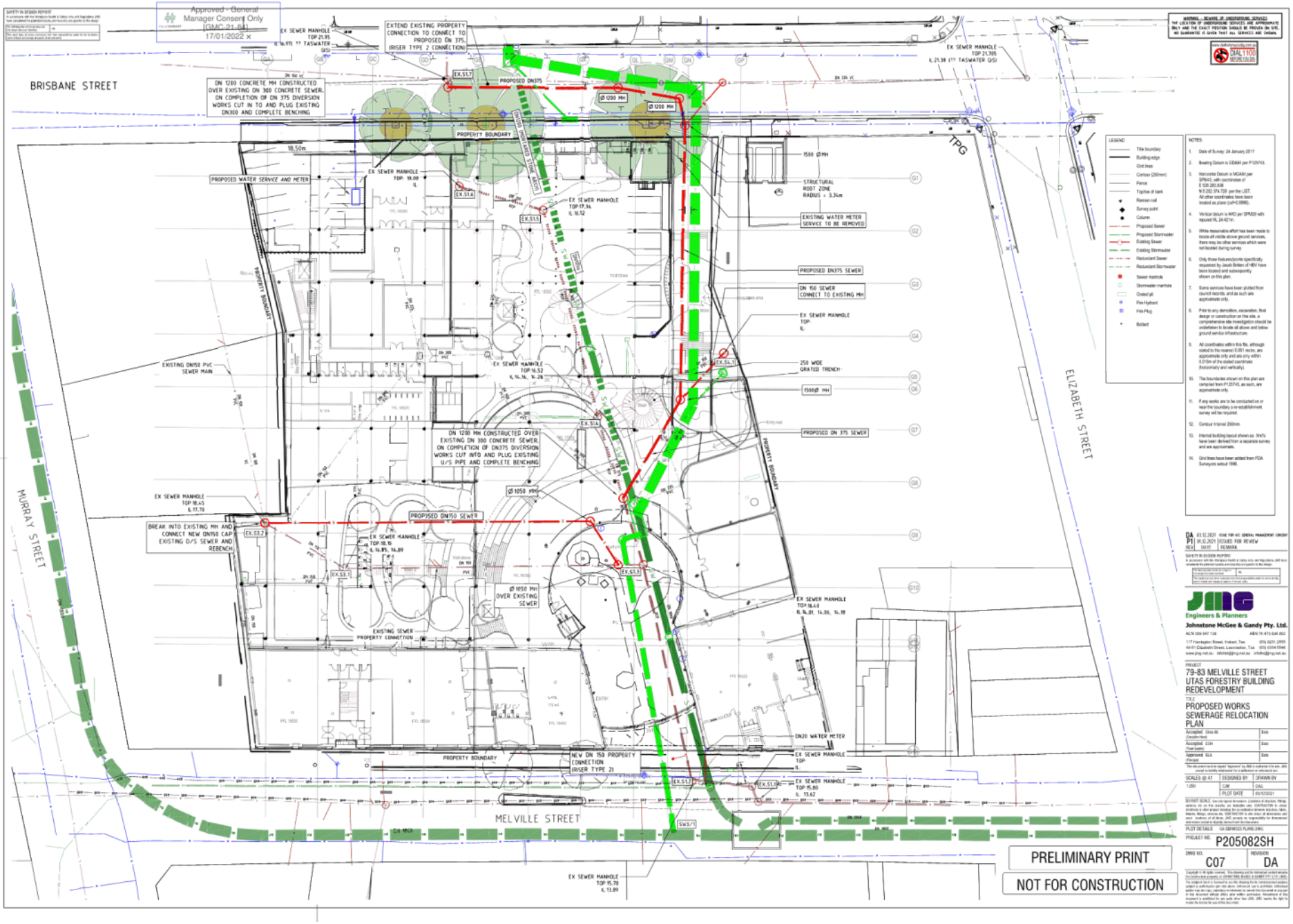

Approved - General Manager Consent Only [GMC-21-84] 17/01/2022
EXISTING WATER SERVICE AND METER TO BE REMOVED
MORTARED STONE ARCH 1200 HIGH APPROX
PROPOSED WATER SERVICE AND METER
PROPERTY BOUNDARY CADASTRAL PARCEL VOLUME 14923 FOLIO 0 MEASURE DATA 7,832m²
DN225 CONNECTION NOT OBSERVED ON CCTV (ID 182421)
DN 150 90° CI BEND AND RODDING EYE (ABOVE GROUND)
NOTE ENTRY POINT OF DN600 SW NOT OBSERVED AT MH SW 1/1 ON CCTV
DIVERSION WEIR DIRECTING LOW FLOWS TO DN1800 (ID 208573)
PRECAST CONCRETE ROOF BEAMS OVER PIT
NOTE HCC GIS SHOWS PIPE DIA AS DN1050 AND NOT AS DN1350 FROM CCTV
TPG
PRELIMINARY PRINT
NOT FOR CONSTRUCTION
Engineers & Planners
Johnstone McGee & Gandy Pty. Ltd.
79-83 MELVILLE STREET UTAS FORESTRY BUILDING REDEVELOPMENT
PROPOSED WORKS COMBINED SERVICES PLAN
P205082SH
C05
DA


Approved - General Manager Consent Only [GMC-21-84] 17/01/2022
STORMWATER DESIGN FLOW
CONSTRUCT NEW CONCRETE PIT OVER EXISTING STORMWATER (MORTARED STONE WALL ARCH
EX STORMWATER GRATED PIT TOP 24.47
PROPOSED DN1350 RCP
1.0m SEPARATION MINIMUM FROM SPZ TO OUTSIDE OF SEWER PIPE AT CLOSEST POINT
2200x2200 (INTERNAL) CONCRETE PIT
0.70m MIN SEPARATION
STRUCTURAL ROOT ZONE (SRZ) RADIUS = 3.34m TPZ = 12.80m
EX STORMWATER MANHOLE TOP 16.61 IL 14.52
EXISTING WATER SERVICE AND METER TO BE REMOVED
0.70m SEPARATION
PROPOSED DN1350 RCP
TPG
PROPOSED WATER SERVICE AND METER
600x600 GRATED STORMWATER PIT TOP 17.77 IL
600x600 GRATED STORMWATER PIT TOP 18.86 IL
EX STORMWATER MANHOLE TOP 17.83 IL 15.53
600x600 GRATED STORMWATER PIT TOP 17.18 IL
600x600 GRATED STORMWATER PIT TOP IL
EX STORMWATER MANHOLE TOP 17.52 IL 16.28 - UNCONFIRMED
900x600 GRATED STORMWATER PIT TOP 17.78 IL
600x600 GRATED STORMWATER PIT TOP 16.67 IL
200 WIDE GRATED CHANNEL
REPLACE EXISTING STORMWATER AND CUT INTO WALL OF DN1350 RCP
MITRE BENDS TO ACHEVE DIRECTION CHANGE S/W PIPE
900x900 GRATED STORMWATER PIT TOP 16.44 IL
200 WIDE GRATED CHANNEL
600x600 GRATED STORMWATER PIT TOP 17.83 IL
900x900 GRATED STORMWATER PIT TOP 16.42 IL
200 WIDE GRATED CHANNEL
600x600 GRATED STORMWATER PIT TOP 16.17 IL
REMOVE AND REPLACE EX STORMWATER MANHOLE TOP 16.36 IL 14.20
CONCRETE PIT 14.00W x 3500L (INTERNAL)
PROPOSED DN750 OVERFLOW PIPE, MATCHING OBVERTS (APPROX)
450x450 GRATED STORMWATER PIT TOP 18.47 IL
Ø 1500 MH
600x600 GRATED STORMWATER PIT TOP 18.47 IL
600x600 GRATED STORMWATER PIT TOP 18.69 IL
450x450 GRATED STORMWATER PIT TOP 18.45 IL
EXISTING DN1800 STORMWATER MAIN
ASSUMED EXISTING SEWER MAIN CONNECTION ON UNKNOWN, MATERIAL UNKOWN
PROPOSED DN750 HIGH LEVEL OVERFLOW PIPE
EX STORMWATER MANHOLE TOP 16.22 IL 13.44
Ø 1200 MH
PROPOSED DN750 RCP, BREAK INTO WALL OF EXISTING DN1800 RCP AND REPAIR CONNECTION POINT TO BE CONFIRMED AT DETAIL DESIGN
EX STORMWATER MANHOLE TOP 15.73 IL 12.25
PRELIMINARY PRINT
NOT FOR CONSTRUCTION
LEGEND
NOTES
Engineers & Planners
Johnstone McGee & Gandy Pty. Ltd.
PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING REDEVELOPMENT
TITLE
PROPOSED WORKS STORMWATER RELOCATION PLAN
PROJECT NO. P205082SH
DWG NO. C06
REVISION DA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[GMC-21-84]
17/01/2022
BRISBANE STREET
MURRAY STREET
ELIZABETH STREET
MELVILLE STREET
TPG
EXTEND EXISTING PROPERTY CONNECTION TO CONNECT TO PROPOSED DN 375. (RISER TYPE 2 CONNECTION)
DN 1200 CONCRETE MH CONSTRUCTED OVER EXISTING DN 300 CONCRETE SEWER. ON COMPLETION OF DN 375 DIVERSION WORKS CUT IN TO AND PLUG EXISTING DN300 AND COMPLETE BENCHING
PROPOSED DN375
PROPERTY BOUNDARY
PROPOSED WATER SERVICE AND METER
EXISTING DN150 PVC SEWER MAIN
STRUCTURAL ROOT ZONE RADIUS = 3.3m
EXISTING WATER METER SERVICE TO BE REMOVED
PROPOSED DN375 SEWER
DN 150 SEWER CONNECT TO EXISTING MH
250 WIDE GRATED TRENCH
PROPOSED DN 375 SEWER
DN 1200 MH CONSTRUCTED OVER EXISTING DN 300 CONCRETE SEWER ON COMPLETION OF DN375 DIVERSION WORKS CUT INTO AND PLUG EXISTING U/S PIPE AND COMPLETE BENCHING
PROPOSED DN150 SEWER
BREAK INTO EXISTING MH AND CONNECT NEW DN150 CAP EXISTING D/S SEWER AND REBENCH
EXISTING SEWER PROPERTY CONNECTION
NEW DN 150 PROPERTY CONNECTION (RISER TYPE 2)
DN20 WATER METER
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Engineers & Planners
Johnstone McGee & Gandy Pty. Ltd.
PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING REDEVELOPMENT
TITLE
PROPOSED WORKS SEWERAGE RELOCATION PLAN
PROJECT NO.
P205082SH
DRWG NO.
C07
REVISION
DA

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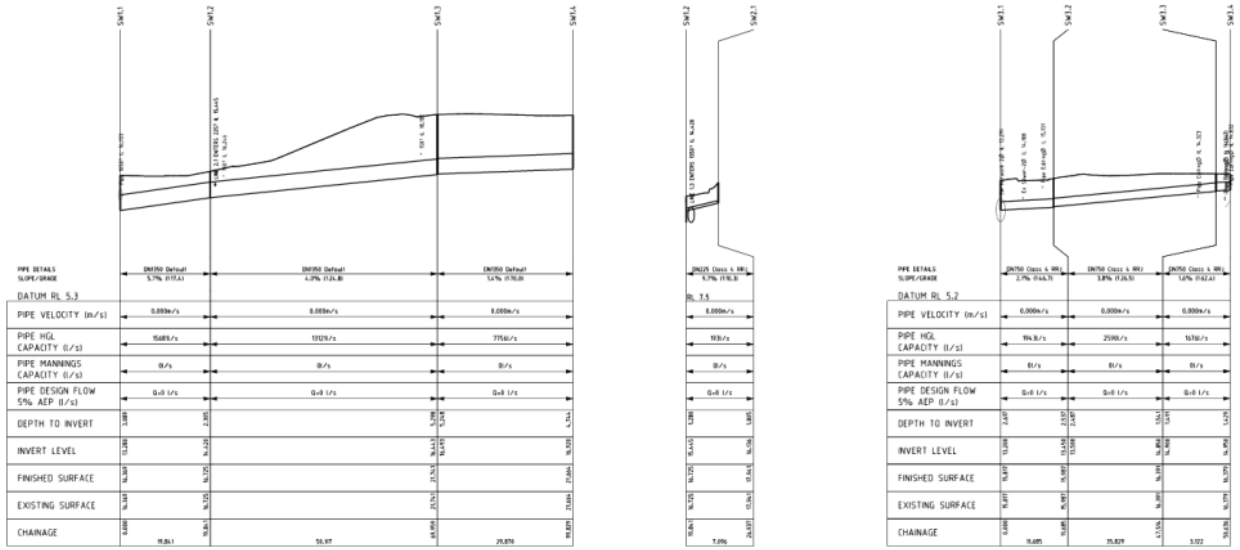
17/01/2022



STORMWATER PROFILE LINE 1
SCALES: HORIZONTAL 1:500 VERTICAL 1:200

STORMWATER PROFILE LINE 2
SCALES: HORIZONTAL 1:500 VERTICAL 1:200

STORMWATER PROFILE LINE 3
SCALES: HORIZONTAL 1:500 VERTICAL 1:200

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NOT FOR CONSTRUCTION

Engineers & Planners
Johnstone McGee & Gandy Pty. Ltd.

PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT

TITLE
PROPOSED STORMWATER
LINE 1,2 & 3 LONGITUDINAL
SECTION

PROJECT NO. P205082SH

DWG NO. C08

REVISION DA

Approved - General Manager Consent Only
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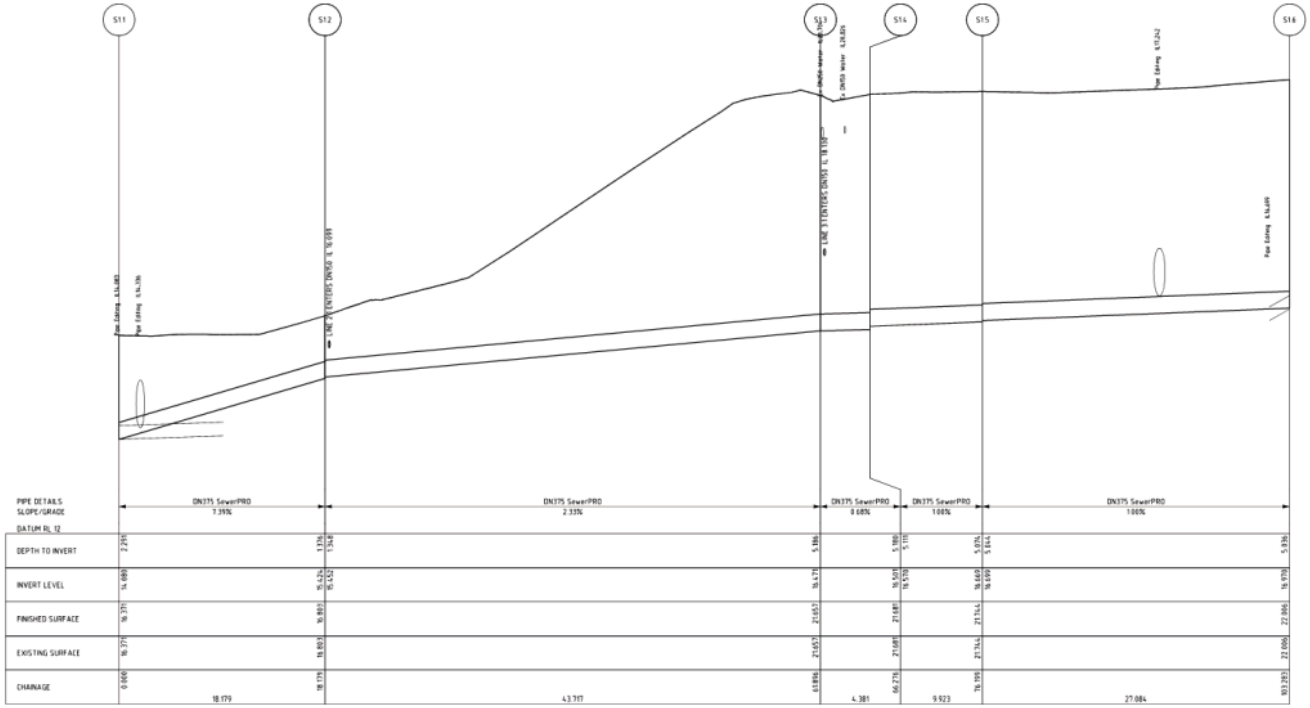

LONGITUDINAL SECTION FOR SEWER LINE 1
SCALES HORIZONTAL 1:200 VERTICAL 1:50

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SAFETY IN DESIGN REPORT
In accordance with the Workplace Health & Safety Act, and Regulations JMG have considered the potential hazards and risks that are specific to this design.

Are there any other hazards or risks that you think should be included in the report?	No
If so, what are these?	
The work does not relate exclusively to or is responsible under law to work safely, maintain and repair or adjust a fixed plant.	

Engineers & Planners
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PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT

TITLE
PROPOSED GRAVITY SEWER
LINE 1 LONGITUDINAL
SECTION

Accepted: Chris Gil (Discipline Lead)	Date
Accepted: CGH (Team Leader)	Date
Approved: GLA (Principal)	Date

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	CJW	HVL
	PLOT DATE	03/12/2021

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PROJECT NO. P205028SH

DWG NO. C09 REVISION DA

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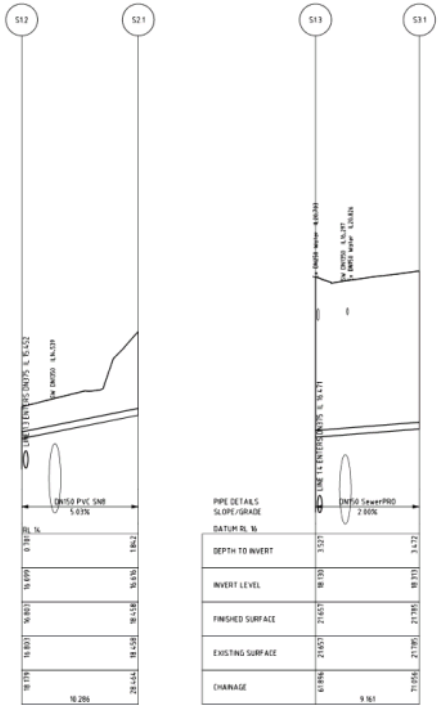
17/01/2022



LONGITUDINAL SECTION FOR SEWER LINE 2
SCALES HORIZONTAL 1:200 VERTICAL 1:50

LONGITUDINAL SECTION FOR SEWER LINE 3
SCALES HORIZONTAL 1:200 VERTICAL 1:50

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REV | DATE | REMARK

SAFETY IN DESIGN REPORT
In accordance with the Workplace Health & Safety Act and Regulations JMG have considered the potential hazards and risks that are specific to this design.

Are there any other hazards or risks in the design that need further consideration?	No
The work does not require a duty holder to accept responsibilities under the Act to eliminate, hazards and manage or control risks arising.	

Engineers & Planners

Johnstone McGee & Gandy Pty. Ltd.
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49-51 Elizabeth Street, Launceston, Tas (03) 6334 5548
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PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT

TITLE
PROPOSED GRAVITY SEWER
LINE 2 & 3 LONGITUDINAL
SECTION

Accepted: Chris Sh. (Discipline Head)	Date
Accepted: EGH (Team Leader)	Date
Approved: GLA (Principal)	Date

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	CJW	HVL
	PLOT DATE	03/12/2021

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PLOT DETAILS PROPOSED SEWER PROFILES.DWG

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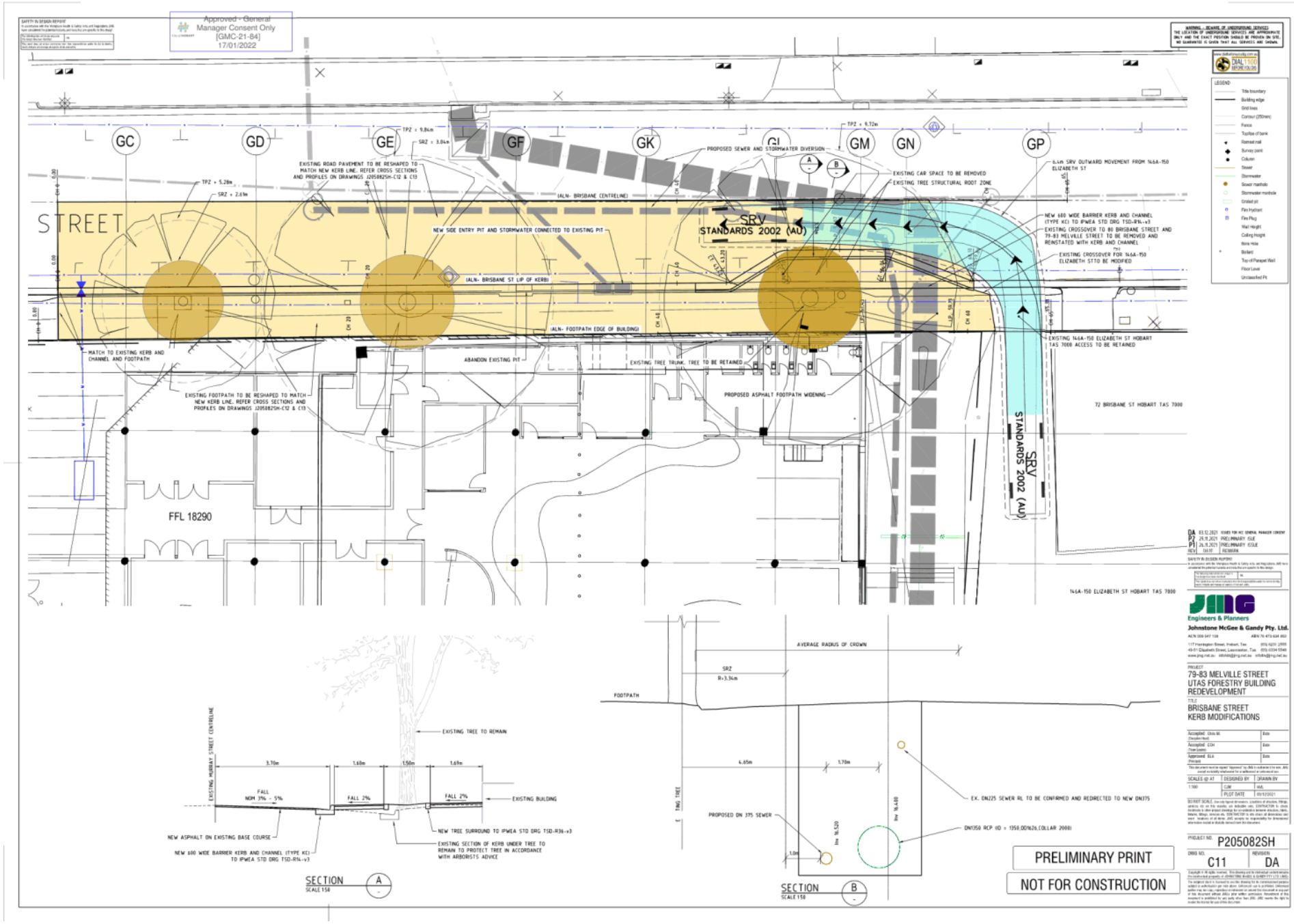
Approved - General Manager Consent Only [GMC-21-84] 17/01/2022
STREET
GC
GD
GE
GF
GK
GM
GN
GP
SRV STANDARDS 2002 (AU)
FFL 18290
PROPOSED SEWER AND STORMWATER DIVERSION
EXISTING CAR SPACE TO BE REMOVED
EXISTING TREE STRUCTURAL ROOT ZONE
NEW SIDE ENTRY PIT AND STORMWATER CONNECTED TO EXISTING PIT
ABANDON EXISTING PIT
EXISTING TREE TRUNK, TREE TO BE RETAINED
PROPOSED ASPHALT FOOTPATH WIDENING
MATCH TO EXISTING KERB AND CHANNEL AND FOOTPATH
72 BRISBANE ST HOBART TAS 7000
146A-150 ELIZABETH ST HOBART TAS 7000
EXISTING TREE TO REMAIN
EXISTING BUILDING
NEW ASPHALT ON EXISTING BASE COURSE
NEW 600 WIDE BARRIER KERB AND CHANNEL (TYPE KC) TO IPWEA STD DRG TSD-R14-v3
NEW TREE SURROUND TO IPWEA STD DRG TSD-R36-v3
EXISTING SECTION OF KERB UNDER TREE TO REMAIN TO PROTECT TREE IN ACCORDANCE WITH ARBORISTS ADVICE
SECTION A
SCALE 1:50
AVERAGE RADIUS OF CROWN
FOOTPATH
PROPOSED DN 375 SEWER
EX. DN225 SEWER RL TO BE CONFIRMED AND REDIRECTED TO NEW DN375
SECTION B
SCALE 1:50
PRELIMINARY PRINT
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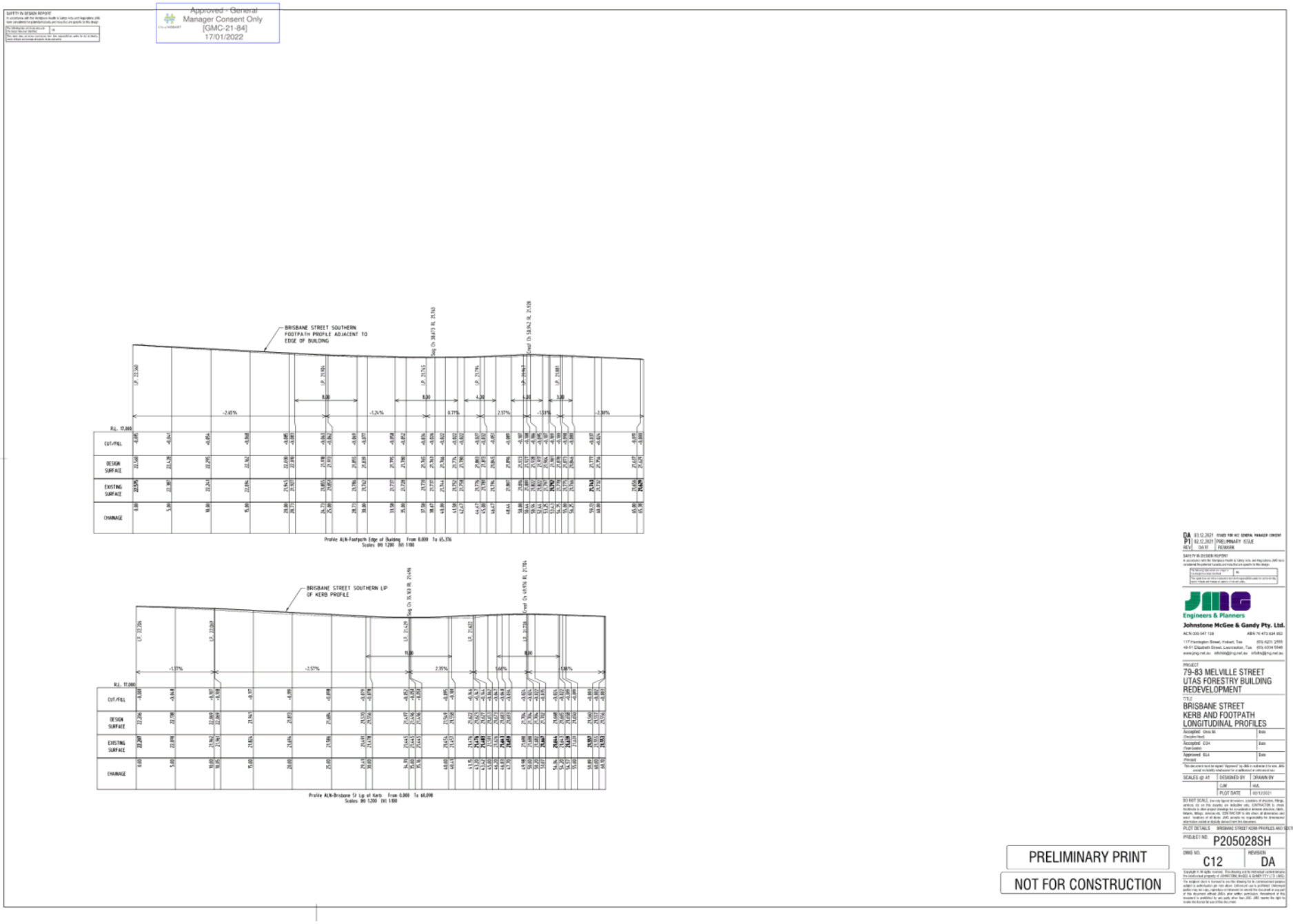
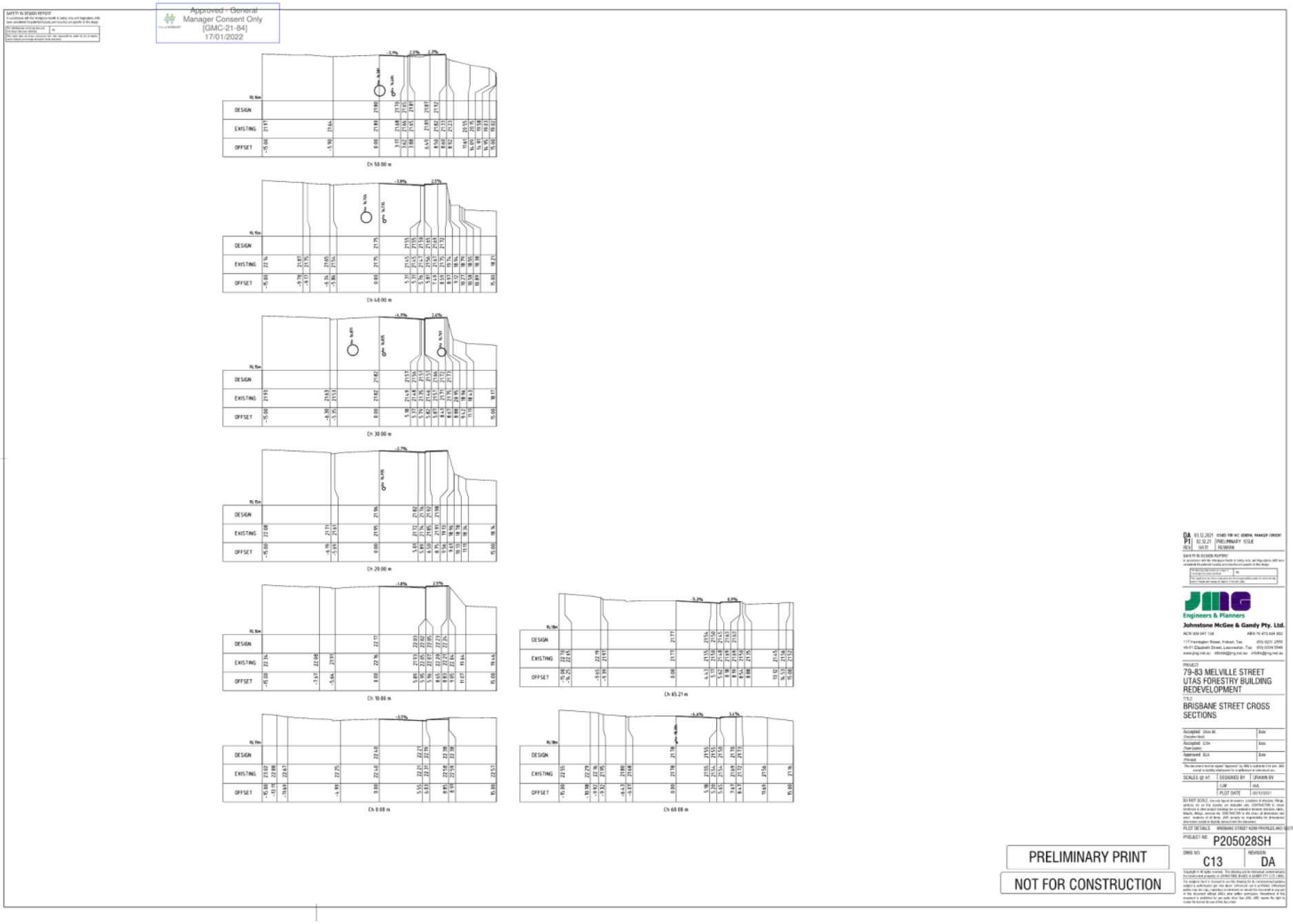
Engineers & Planners
Johnstone McGee & Gandy Pty. Ltd.
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT
BRISBANE STREET
KERB MODIFICATIONS
P205082SH
C11
DA


Approved - General Manager Consent Only
[GMC-21-84]
17/01/2022
BRISBANE STREET SOUTHERN FOOTPATH PROFILE ADJACENT TO EDGE OF BUILDING
BRISBANE STREET SOUTHERN LIP OF KERB PROFILE
PRELIMINARY PRINT
NOT FOR CONSTRUCTION
Engineers & Planners
Johnstone McGee & Gandy Pty. Ltd.
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT
BRISBANE STREET
KERB AND FOOTPATH
LONGITUDINAL PROFILES
P205028SH
C12
DA


Approved - General Manager Consent Only
[GMC-21-84]
17/01/2022
Ch 50.00 m
Ch 40.00 m
Ch 30.00 m
Ch 20.00 m
Ch 10.00 m
Ch 0.00 m
Ch 65.21 m
Ch 60.00 m
DESIGN
EXISTING
OFFSET
PRELIMINARY PRINT
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Engineers & Planners
Johnstone McGee & Gandy Pty. Ltd.
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT
BRISBANE STREET CROSS
SECTIONS
P205028SH
C13
DA

City of HOBART
Approved - General Manager Consent Only
[GMC-21-84]
17/01/2022

APPENDIX B

Element Tree Services Arborist Report

Approved - General Manager Consent Only [GMC-21-84] 17/01/2022

ELEMENT TREE SERVICES

DEVELOPMENT IMPACT ASSESSMENT

79-83 Melville Street, Hobart

1/12/2021

For: ALASTAIR FLYNN
SENIOR ASSOCIATE
WOODS BAGOT
MEZZANINE
498 LITTLE COLLINS STREET
MELBOURNE

Alister Hodgman
Diploma (Hort/Arb)
QTRA Register User: 3743

Element Tree Services

City of HOBART
Approved - General Manager Consent Only
[GMC-21-84]
17/01/2022

Terms of Reference

Alastair Flynn, Senior Associate at Woods Bagot, requested this report to assess the impacts of proposed development at 79-93 Melville Street, Hobart. An assessment of the site was undertaken on the 16th of November 2021. Contained in this report will be an assessment of the proposal on the established trees and recommendations to protect them during the development.

Fig. 1 – an aerial image of the site indicating the trees subject to this report. Image courtesy of listmap.

Site Findings

The current proposal has the potential to impact two trees growing adjacent to 80 Brisbane Street. These two trees, London planes (*Platinus x acerfolia*) are of good vitality and form.

They are located adjacent to the kerb within an asphalt footpath. Due their extensive buttress and root development, displacement of these hard surfaces is occurring.

It is unlikely that these trees are growing in structural soils or contained in tree pits. The assumption is that there will be limited root development within Brisbane Street, with the majority influenced by the kerb and will be growing radially throughout the footpath.

City of HOBART
Approved - General Manager Consent Only [GMC-21-84] 17/01/2022

Development Impacts

As a result of infrastructure upgrades within Brisbane Street, the following table will contain information on tree protection zone (TPZ) and the incursions. The proposal includes a new stormwater and sewer lines to service the buildings. The design has ensured that there are no incursions into the structural root zones (SRZ).

3.1 Impacts Table

TREE	DAB	DBH	SRZ	TPZ	INCURSION m^2	% INCURSION	RETAIN
1	1.02	0.82	3.04	9.84	112.5	37%	YES
2	1	0.81	3.31	9.72	46.9	16%	YES

The incursions into the TPZ are both above minor (<10%), however this does not consider the current limitations imposed on the roots by the built environment. As the assumption is that there will be limited root development within the road, severance for tree 2 will be minimal.

Although root development may be limited in the road from tree 1, there may be severance on the northern side of the tree where the services head towards the forestry building. Disregarding the roots within the road as an incursion, this represents approximately 9%. As this species generally tolerates damage well, this incursion may not be as significant as the standard suggests.

Tree protection

Prior to the commencement of works, all of the TPZ's should be fenced off and signs erected to indicate the purpose of the zone. Where works encroach on the TPZ, the fencing should be erected as close to the edge as possible.

Activities to avoid in this zone are:

- 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).

To reduce the potential impacts on these trees, ideally the work should be completed during dormancy. Additionally, the roots should be pruned with a sharp tool leaving a clean cut and not torn out by machinery. If the trench is to be left exposed for a continued period of time, the cut should be covered with hessian and kept wet.

Conclusion

- The current proposal avoids severing the structural root zones and therefore stability should not be compromised.
- The incursions into the tree protection zones are above minor, but this assessment is made without a clear understanding of the roots' distribution.
- Given the species profile, it is likely that they will tolerate the works if correct tree protection measures are implemented

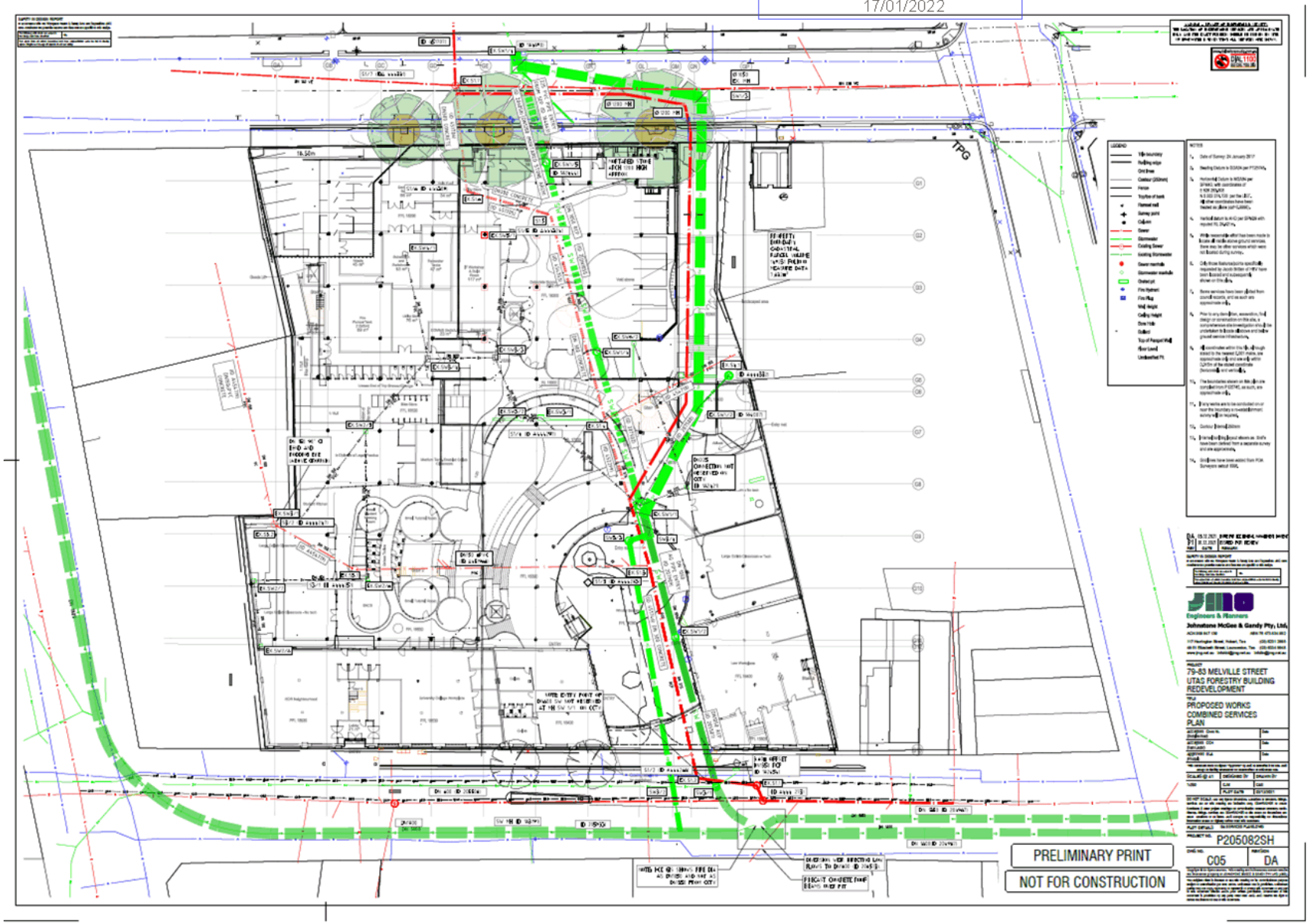
Yours sincerely,

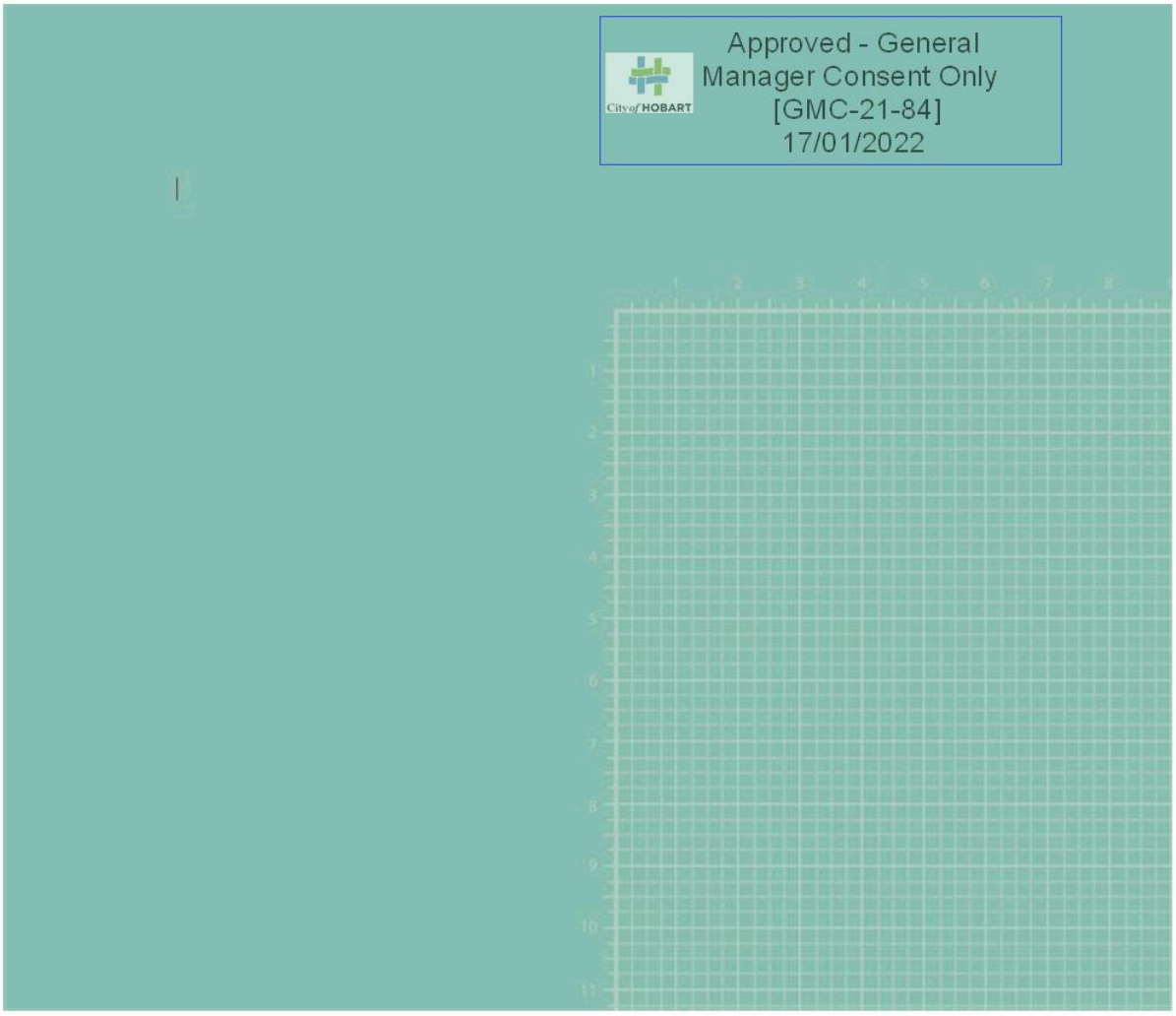
Alister Hodgman

City of HOBART
Approved - General Manager Consent Only
[GMC-21-84]
17/01/2022

Appendix 1 – Referenced design (DWG C05 Rev. DA)

City of HOBART
Approved - General Manager Consent Only [GMC-21-84] 17/01/2022





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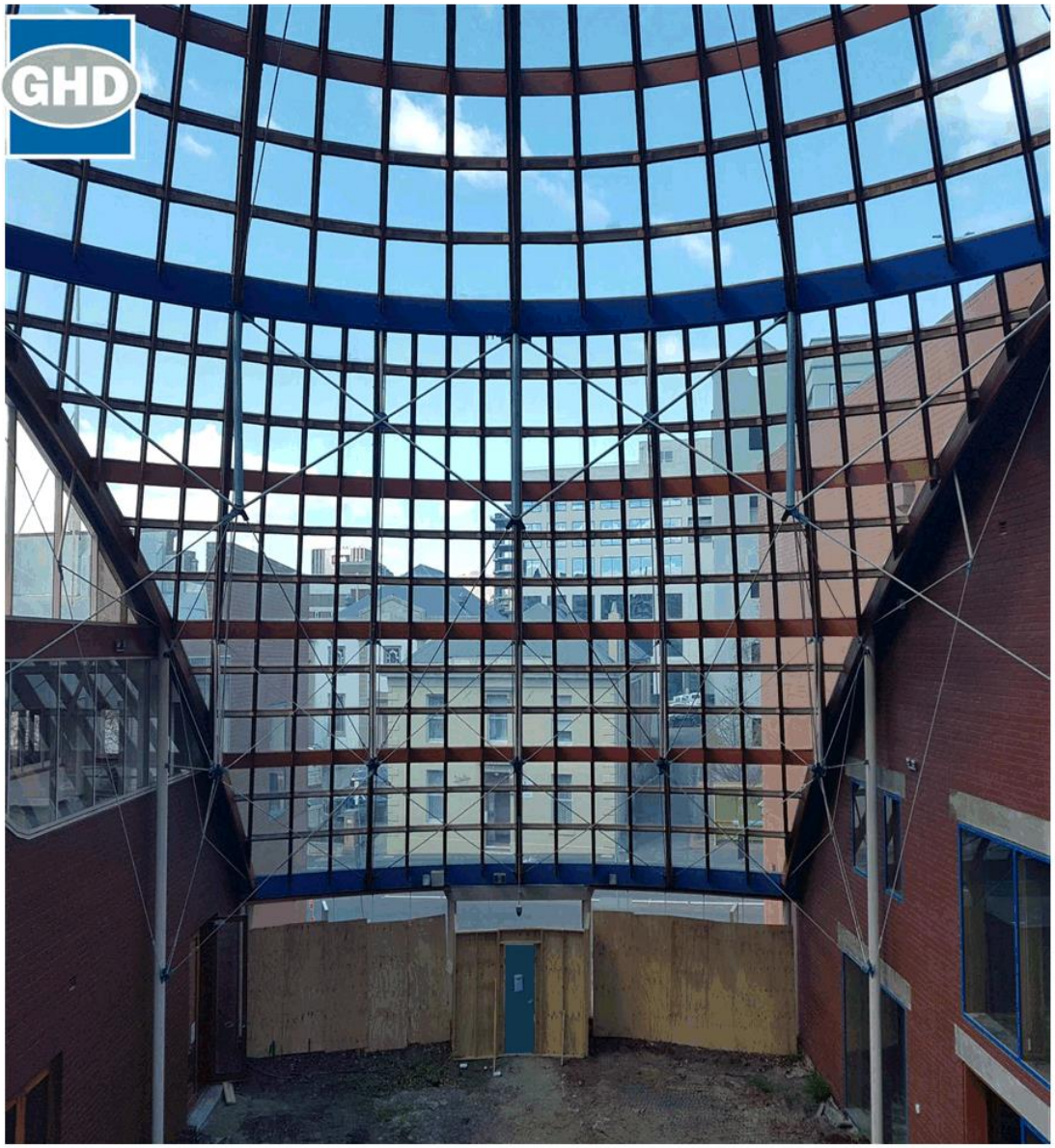
JMG
Engineers & Planners

F

Appendix F:

Site Contamination Report



University of Tasmania

78-83 Melville St, Limited PSI
CONFIDENTIAL

October 2018

WATER | ENERGY & RESOURCES | ENVIRONMENT | PROPERTY & BUILDINGS | TRANSPORTATION

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1. Introduction

1.1 Background

The University of Tasmania (UTAS) commissioned GHD Pty Ltd (GHD) to undertake a limited Preliminary Site Investigation of below ground site contamination to inform due diligence investigations at 79-83 Melville Street, Hobart (the site) (Figure 1 Appendix A).

The site is located on within the Hobart Central Business District (CBD) and is currently being considered for purchase by UTAS. This report has been prepared to assist with decision-making regarding the purchase.

1.2 Objective

The objective is to identify any current or legacy activities that have potential to impact the soil or groundwater below the site and future use, based on a desktop review, and brief site visit and any associated recommendation to address the those risks.

1.3 Scope of work

This contamination assessment has been undertaken in general accordance with the National Environment Protection Council (NEPC) (2013) Schedule B2 *Guideline on Site Characterisation* of the National Environmental Protection (Assessment of Site Contamination) Measure 1999 (as amended April 2013) (the NEPM).

The scope of work completed to inform this report comprised the following tasks:

- Review and interpretation of the following information sources:
  - Local government planning information indicating current and proposed land use zoning and permissible uses
  - Historical aerial photography depicting the site and surrounds
  - Geological, soil and topographical maps depicting the site
  - WorkSafe Tasmania dangerous goods records review (information outstanding)
  - EPA Tasmania Contaminated Site database search (information outstanding)
  - Local government (Hobart City Council) records
- Preparation of this limited PSI report describing the investigation and presenting the findings.

1.4 Assumptions

Two site inspections were undertaken to assess for potentially contaminating land uses at the site. This site visit incorporated only a walk around the site, and GHD has not undertaken any assessment of soil or groundwater quality beneath or down topographical (and hydraulic) gradient from the site, nor were any asbestos investigations undertaken. Consequently, the findings of this report pertains only to a desktop review of available documentation and visual inspection of the site and only relate to potential contamination of soil and groundwater.

1.5 Limitations

This report: has been prepared by GHD for University of Tasmania and may only be used and relied on by University of Tasmania for the purpose agreed between GHD and the University of Tasmania as set out in section 1.3 of this report.

GHD otherwise disclaims responsibility to any person other than University of Tasmania arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD 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.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report (refer section 1.4 of this report). GHD disclaims liability arising from any of the assumptions being incorrect.

GHD has prepared this report on the basis of information provided by University of Tasmania and others who provided information to GHD (including Government authorities)], which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

The opinions, conclusions and any recommendations in this report are based on information obtained from a site inspection and background information review. Investigations undertaken in respect of this report are constrained by the particular site conditions, such as the location of buildings, services and vegetation. As a result, not all relevant site features and conditions may have been identified in this report.
Site conditions (including the presence of hazardous substances and/or site contamination) may change after the date of this Report. GHD does not accept responsibility arising from, or in connection with, any change to the site conditions. GHD is also not responsible for updating this report if the site conditions change.

2. Site description

Site details are presented in Table 1 below.

Table 1 Site details

Item	Details
Site Address	79 – 83 Melville Street, Hobart, Tasmania, 7000
Legal Address	Title Reference Number/s: 149231/2 Property ID Number (PID): 2911798
Site Area	Approximately 7000 m^2 (including car parking under Freedom)
Site Owner/ Operator	Villemel Pty Ltd & Calbourne Nominees Pty Ltd
Current Zoning	22.0 Central Business (Hobart Interim Planning Scheme 2015)
Current Land Use	Not currently in use- previously Forestry Tasmania
Surrounding Land Uses	The site is located approximately 550 m west northwest of the Hobart GPO. Current land uses surrounding the site comprise: North: Brisbane Street -Retail businesses East: Murray Street- Retail, business offices and a mechanics West: Elizabeth Street- retail and lifestyle businesses South: Melville Street- Wesley Centre (Chapel, Hall and Museum), multistorey car parking and retail business.

2.1 Site layout

The site is located on the periphery of Hobarts Central Business District with frontage to Melville Street and vehicle access from Brisbane Street. The layout of the site is shown on Figure 1 in Appendix A. It is essentially an irregular rectangular shape and very little open space, apart from a drive-way located on the north-eastern boundary leading to the service yard. Buildings cover the rest of the extent of the site, with two converted redbrick warehouses joined by a large glass atrium along Melville Street. This building extends back to Brisbane Street with car parking on the lower ground floor, a service yard, workshops and laboratory leading to the offices along Melville Street. All ground is covered with buildings or asphalt.

2.2 Site environmental setting

2.2.1 Elevation and topography

The site slopes gently from the north east to the south west and has an approximate elevation ranging from 15 – 20 m AHD[1] It is considered likely that the rear of the site (northern end) has been excavated into natural ground to facilitate development of the car parking area.

2.2.2 Geology

Geology has been mapped as comprising four units as follows[2].

- Northern section of the site mapped as *alluvial gravel, sand and clay (Qa)*.
- South eastern section is mapped as *undifferentiated quaternary deposits* (Q)

[1] https://maps.thelist.tas.gov.au/listmap/app/list/map, last accessed 25/09/2018
[2] https://maps.thelist.tas.gov.au/listmap/app/list/map, last accessed 25/09/2018

- South western portion of the site is mapped as comprising *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 material* (Tcbd).
- A small area around the service yard is mapped as *dolerite and related rocks (Jd)*.

2.2.3 Surface water and groundwater

The site is located approximately 900 m north east of the Sullivans Cove, River Derwent. Information on depth to groundwater beneath the site has been obtained from bore logs contained in *Screening Level Environmental Site Assessment of 79-83 Melville Street, Hobart*[3] (Stoklosa 1994) and was observed at between 1 and 4 metres below ground level (mbgl).

On the basis of topography in the vicinity of the site and proximity to the Derwent Estuary, it is anticipated that the groundwater flow direction at the site is towards the Derwent Estuary to the south east.

2.2.4 Acid sulphate soils

The majority of the site is mapped as being at low risk of having acid sulphate soils (ASS), with a small section along the western boundary mapped as not being at risk [4].

2.3 Site history research

2.3.1 Site History

Originally a land grant acquired by the Crisp family, the site, which extends through to Brisbane Street, operated as a sawmill and timber and hardware outlet until 1968. Following a fire at the site in 1922 the two redbrick warehouses on Melville Street were constructed, the eastern one was used as a warehouse store for dry and finished timber products and smaller western one housed the hardware emporium business.

The site was sold to the Tasmanian State Government in the late 1960s and was used as stores and offices including the State Emergency Service, and The State Fire Commission. In 1997 the site was redeveloped to be Forestry Tasmania Office and showroom. This redevelopment retained the two redbrick warehouses and incorporated into the design a glazed, domed foyer joining them together. This development comprised the refurbishment of the two warehouse buildings; construction of new office and amenities areas; a retail showroom and the foyer dome.

2.3.2 Historic aerial photography

A review of historical aerial photography was undertaken as part of this assessment, and the findings of the review are presented in Appendix B below.

Historic aerial photographs of the site were ordered at approximately 10-year intervals commencing from the earliest available (1946) to 2000. Figures for this report have been prepared using the most current image of the site available from Google Earth which is from 2018 and the same image has been used to describe the current site layout. The historic aerials are presented in Appendix B

[3] Stoklosa 1994, Screening level------check reference- take from proposal.
[4] https://maps.thelist.tas.gov.au/listmap/app/list/map, last accessed 25/09/2018

2.3.3 WorkSafe Tasmania Dangerous goods records

A search of the WorkSafe Tasmania dangerous goods records was ordered to confirm what dangerous goods the site has historically been licenced to hold. .On 28th September, WorkSafe advised that their database searches had identified

The search revealed documentation that:

- On the 4th July 1955, Crisp and Gunn Co-op Ltd applied to renew registration of storage of 500 gallons of mineral spirit;
- On 5th December 1962, The Shell Company of Australia applied to replace the single manual pump with a single electric pump on an existing 500 gallon tank (not to scale diagram included);
- On 4th January 1963, Crisp and Gunn was inspected by Inspector of Explosives to inspect pump outfit owned by The Shell Company of Australia that was approved on 5th December 1962;
- An application by Crisp and Gunn, to keep one 1,000 gallon petrol tank at 79 Melville Street, was submitted to Department of Mine on 5th June 1967;
- On 17th April 1967, approval of 1,000 gallon tank situated at Crisp and Gunn Co-op Ltd.; and
- On 20th July 1967, Crisp and Gunn was inspected by Inspector of Explosives to inspect the 1,000 gallon tank owned by Shell Co of Australia that was approved on 17th April 1967.

A copy of the WorkSafe Dangerous Goods Documentation and correspondence is presented as Appendix C.

2.3.4 Environmental Protection Authority Tasmania records

A request for a search of the EPA Tasmania database was submitted on the 18th September. On the 25th September, EPA Tasmania contacted GHD to inform them that they will endeavour to respond to GHD's request by the 8th October. As such this report does not contain any information from the EPA. This will be submitted to UTAS as an amendment to this report once we receive the information.

2.3.5 Hobart City Council records

The Hobart City Council (HCC) was contacted for any information they may hold regarding current or historic pollution at the site, including old reports and applications for fuel storage or chemical storage, remediation notices, pollution incidents, and permits. The CCC confirmed that they had records that the site had been historically used for potentially contaminating land-use activities (refer to Appendix D). The only potential sources of contamination at or adjacent to the site, that HCC noted were hydrocarbons. The main use of the site from 1886 until 1967 was classified as wood treatment/sawmill, with various business occupying the site. These businesses comprised of:

- From 1886 -1915, Central Saw and Planing Mills;
- From 1916-1932, Absolom brothers;
- From 1955 -1967, Crisp and Gunn Co-op Ltd;
- Dates unknown, Absolom Garage;
- Dates unknown, Bert Self; and
- Dates unknown, Shell.

The property also lies adjacent three sites that have been identified as potentially contaminated with hydrocarbons. These comprise:

- 131-133 Murray Street, which operated as a fuel supplier in 1916
- 141-143 Murray Street, which operated as a motor car dealers, engineers and garage between 1966 and 1979 by:
  - J.T. Graves & Son Pty. Ltd.
  - H.C. Sleigh/ Golden Fleece
  - John Tasman Graves.
- 132- 146 Elizabeth Street, which operated in 1940 as a body works, motor car dealers, engineers and garages by Trade Motor Body Works.

These three adjacent properties are mapped as being located either side of the site.

The phrase "motor car dealer, engineer and garage" is a category name used to categorise similar businesses which was used when the contaminated sites register was created. These operations are generally considered to fall under the current classification of "commercial engine and machinery workshops or petroleum product or oil storage for service stations

A copy of the correspondence is provided in Appendix D

2.3.6 Dial before you dig

A Dial Before You Dig (DBYD) request was submitted on Monday 1st October. The following information was received about the infrastructure on site from:

- TasNetworks
- TasGas
- nbn Co.
- Optus
- DPIWE (Aboriginal Heritage)
- TasWater
- HCC

The City of Hobart (HCC) response letter highlighted the possibility of "abandoned old town gas (coal gas) pipes potentially emitting harmful gases and Volatile Organic Compounds (VOCs) may be found in many areas of the City[5]" " within the vicinity of the site. There is no information available on exactly where these pipes may be located within Hobart CBD. While these pipes are usually located within road reserves, feeder lines may be present on the site.

TasWaters responses show that sewage lines run through the site.

Appendix E contains all the responses received from the DBYD search.

2.3.7 Previous reports/documentation made available by current owner

The Site has been subject to a number of investigations that are able to inform the potential for site contamination and its associated risk. The following reports were made available for use in this investigation and are included in Appendix F:

[5] City of Hobart 2018, Response letter to DBYD enquiry for 83 Melville Street, Hobart- request number 15023440, Sequence number 76013864, received 1/10/18 (refer to Dial Before You Dig ResultsAppendix E)

- **Richard Stoklosa Engineering Practice Pty Ltd (1994)**. *Screening level Environmental Site Assessment of 79-83 Melville Street, Hobart*. Report prepared for James Douglas & Associates on behalf of Tasmania State Property Services, dated 2 December 1994.
- **Stoklosa Engineering Pty Ltd (1996)**. *Forestry Tasmania Redevelopment Project, 79-83 Melville Street, Hobart*. Letter to Forestry Tasmania, dated 18 September 1996.
- **Department of Environment and Land Management (DELM) (1996)**. *Forestry Tasmania Redevelopment Project 79-83 Melville Street*, Environment Tasmania letter to Forestry Tasmania, dated 23 September 1996.
- **Department of Environment and Land Management (DELM) (1997)**. *Forestry Tasmania Redevelopment Project 79-83 Melville Street*, Environment Tasmania letter to Forestry Tasmania, dated 20 January 1997.
- **WSP Parsons Brinckerhoff (2017).** *Site Location Plan – 79 Melville Street, Hobart*. Email chain with attachment from WSP Parson Brinckerhoff to Abacus Property dated 7th April 2017
- **Nekon (2018)**. *Oil Sump Removal/Treatment*. Email with attachments from Nekon Pty Ltd to UTAS dated 27th September 2018.
- **Collex Waste Management (1996),** *Certificate of Disposal,* dates 28th August 1996

Stoklosa (1994)

Stoklosa (1996) included a detailed site history review and identified early Site use as timber/joinery business, changing to office and stores from the mid-1960s. A tall smoke stack was identified in the northwest section of the site (now within the footprint of the Freedom Furniture store), likely associated with burning of wood waste. While the 1996 site inspection identified various small quantities of hazardous materials on site (i.e. small outdoor flammable liquid store on concrete), the primary aspect identified was a single petrol tank and bowser, abandoned prior to 1965. It's location is identified on the northern corner of the site, adjacent to Brisbane Street (refer Figure 3 in Appendix A). Council records suggested a triple interceptor trap located 'in the storage area'. The exact location is not provided but inferred to be in the northern section of the site (i.e. within the current fenced in car parking area/open area).

Historical geological investigation logs (1979) were included in the appendix. These engineering logs in locations near proposed future soil disturbance areas identified that fill had been used in places across the site to a depth of approximately 1.0 mbgl. The fill was varied with a variety of material recorded including rubble, brick fragments, rocks, clay, and boulders.

No contaminant testing was undertaken as part of this investigation.

Stoklosa (1996)

This report included assessment of soils after removal of a single underground storage tank (UST) from the main entrance area near Melville Street (referred to as the unanticipated UST)(refer Figure 3 in Appendix A). Residual petroleum hydrocarbons were detected in soils in the base of the excavation at concentrations that exceed current commercial/industrial landuse criteria (NEPM 2013 Table 1A(3) Soils HSLs for vapour intrusion) for TRH but not xylene. However they did not exceed direct contact criteria (NEPM 2013 Table 1A(6) 2). Samples from the same area (presumably shallower, but sample depth not specified [FT-1 & FT-8]) did not contain concentration above either criteria. The letter concludes the lateral and vertical extent of contamination is not known, however

"There appears to be no significant risk of exposure to workers or visitors to the site."

No metals concentrations were detected above the commercial/industrial land use criteria at the UST, or in other areas of the Site that were investigated.

There was evidence of planning the removal and assessment of the UST near Brisbane Street, and a note that Stoklosa Engineering must be on site to witness the removal of the UST and to take samples[6].

DELM (1996)

This letter is in response to Stoklosa Engineering letters dated 8th and 18th of September 1996 and a meeting on site on the 10th September. It mentions that UST evacuations and that the results were provided to Environment Tasmania under due diligence. That additional testing is required around the "unanticipated UST" to determine extent of lateral contamination and that bore logs need to be provided with results to determine depth of each sample.

Collex (1996)

This is a one page document confirming that 2,500 litres of hydrocarbon contaminated (slurry?) was removed from 79 Melville Street on the 28th August 1996 (no mention of weather this is from one or both of the USTs).

DELM (1997)

This letter makes reference a subsequent body of work "Environmental Remediation and Validation, December 1996" prepared by Stoklosa Engineering. While the report was not available for this investigation, Environment Tasmania concur with Stoklosa that "…contaminated soil under the UST represents a localised hot spot…" and that "it is unlikely that the contamination has migrated off site, or will do so in the future". The Environment Tasmania considered that the site was suitable for its use as Forestry Tasmania, however if the site use was to change/or be developed for a more sensitive use in future in-situ soil testing may be required.

Parsons Brinckerhoff (2017)

This is an email chain with attachment that outlines the results of an site inspection undertaken on the 7th April 2017 by an Senior Environmental Scientist.

The following observations were made during the inspection:

- Two metal gatic covers were observed located on a square of reinstated bitumen approximately 1x1m in size.
- plastic covers were removed which reviewed two vertical pipes of approximately 3-4 inches in diameter
- No hydrocarbon odours were noted when the covers were removed
- The periodic horizontal flow of water was observed at the base of the standpipes approximately 2.9 m below surface
- the covers aligned with the services indicated on the plan and observed onsite, which are believed to relate to sewer and surface water
- No 'petrol tanks' were able to be located at the site.

Parson Brinckerhoff believed that the vertical pipes were most likely installed to inspect or allow access to the existing services. The periodic flow of water and their location in relation to existing services suggests it may be associated with the sewer or stormwater water drainage services.

[6] GHD has been unable to find any documentation to confirm the tank had either been removed and/or assessed.

Nekon (2018)

This email confirms that the oil sump that was located in the Workshop with the three roller doors (refer Figure 3 in Appendix A), that opens to the undercover car park was cleaned out and capped. This email contained photographs of the sump prior to cleaning and after capping. The invoice for these works was also attached.

Site history of potential contamination

The following have been identified as potential sources of historical contamination at the site:

- Underground Storage Tanks and associated infrastructure including bowers and piping;
- Chemical storage
- Triple interceptor trap
- Historical uncontrolled fill beneath the site and;
- General commercial/industrial land with potential for incidental leaks and spills to ground

Potentially contaminating activities undertaken historically on neighbouring land are generally associated with the automotive industry or fuel storage. Specifically, there has been:

- Rowe, a fuel supplier present on the adjacent site to the south east(131- 133 Murray Street);
- Trade Motor Body Works, an automotive business to the west/north west of the site (132-146 Elizabeth Street); and
- J.T Graves & Son Pty Ltd, an automotive business to the east of the site.

Figure 2 in Appendix A shows the locations of historic and current potentially contaminating activities undertaken in the vicinity of the site, relative to the site layout.

2.4 Site inspection

Two site inspections were undertaken by GHD, on Monday the 24th October and Wednesday the 26th October 2018. While the entire building was inspected, only the ground floor level including car parking area will be discussed in this section as the second and third floors are unlikely to have contributed to any soil or groundwater contamination on site.

Entrance and Atrium

This area is unsealed and has a dirt/soil ground. This area was previously the planted out as a simulated Tasmanian Forest.

Square steel coved manhole located in front of atrium along Melville Street- this is in the vicinity of where the "unanticipated UST" that was removed for the Forestry Development was located.

Plate 1: Manhole cover in vicinity of removed UST in front of Atrium

There was evidence of geo-fabric used in the development of the forest in the atrium coming to the surface (Plate 2). This was observed throughout the right side of the atrium.

Plate 2 Geo-fabric coming to surface in Atrium

There were a few concrete manhole covers observed in the Atrium (Plate 3), these gatics are located above the sewage line. The gatics throughout the site that relate to sewage infrastructure look identical.

Plate 3 An example of the sewage line gatic covers throughout the site

Workshops- Fabrication and Operations

There are two workshops on the ground floor, one on each side of the building. The Fabrication workshop is the one that has a roller door to the Service Yard. The Operations Workshop is located with three roller door access to the undercover garage.

Both of these workshops contained exterior signage saying that they contained flammable gas, non-flammable nontoxic gas and oxidizing gas (see Plate 4 and Plate 5).

Plate 4 Gas signage outside the Fabrication Workshop

Plate 5 Gas and HAZCHEM signage outside of the Operations Workshop

Within the Operations workshop there is a circle of fresh concrete (Plate 6). This is from where the oil sump was cleaned and then capped.

Plate 6 Capped Oil Sump in Operations Workshop

Laboratories

There was HAZCHEM signage on the Laboratory door to the Service Yard. It is likely that agricultural chemicals were used and stored within this area (see plate Plate 7). It is unlikely that these would have contributed to any contamination on site as the floor of the laboratory is sealed with concrete. There is a drain in the corner of the room. There was no evidence of chemical use laboratory (ie signage) but this room had been gutted with partitions between sections removed (Plate 8).

Plate 7 HAZCHEM signage on Laboratory door

Plate 8 Laboratory has been gutted

Service Yard

The service yard is connected to the atrium, Fabrication workshop and the driveway from Brisbane Street. There is a three bay garage down the northern edge (one with a roller door and the other two open), a sink near the gate to the atrium, and the reminder of the area is open to sky and the surface is sealed.

Within the garage area there are three bays, the bay closest to the workshop has a drain with standing water (Plate 11) and a gatic covered sump (Plate 10) and a large metal manhole cover. The adjacent bay contains what was assumed to be the triple interceptor trap (Plate 12) and was likely used as a wash down area. The second bay also contains a steel pipe down the eastern corner (Plate 12) – it is unknown what this was used for. The third bay has a sealed surface without any drains.

There is evidence that an area of the concrete adjacent to the garage area was replaced recently (Plate 10), it is unknown why this occurred.

There are multiple drains (Plate 10 and Plate 14) in this area with visible water under the grate (Plate 11). A spill mat was stored in the service yard (Plate 15).

Plate 9 Open garages/wash down area in Service Yard (there are three bays)

Plate 10 Garage in Service yard showing drain and gatic covered sump

Plate 11 Close up of drain in Garage in Service Yard

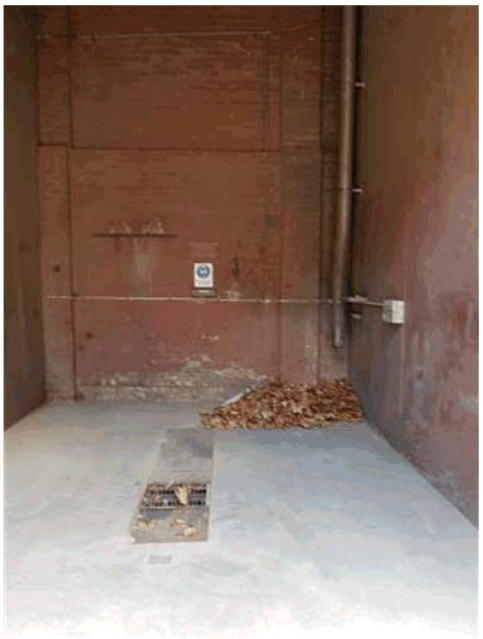

Plate 12 Triple interceptor trap in vehicle wash down bay

Plate 13 Section of concrete surface in Service Yard replaced

Plate 14 Drain in centre of Service Yard

Plate 15 On outside of Operations Workshop within the Service Yard

Eastern Redbrick warehouse (GLA1)

This building was being used as a meeting room and offices and is in good condition (Plate 16). Prior to our site visit sections of the floor boards had been cut to allow access to the underfloor surface. The floor of this building floorboards raised over a dirt floor (refer to Plate 18 and Plate 21). There appears to be no slab in place in this section of the site but raised footings.

Plate 16 An example of the condition of the ground floor of the eastern redbrick warehouse

Plate 17 View through the floorboards in the western redbrick warehouse

Plate 18 View through the floorboards in the western redbrick warehouse (different hole in floor)

Western redbrick warehouse (GLA 3)

This building was used as mainly offices during Forestry's tenancy. The ground floor of this building is at or below street level. Most of this area has been gutted but some sections still contain some partitions (Plate 19).

Plate 19 Office partitions and section of floor removed in western redbrick warehouse.

Plate 20 Section of western redbrick warehouse with wall removed

Prior to the site visit sections of the floor boards were removed to allow access to the subsurface (Plate 19).The floorboards within the building are raised above a concrete slab (refer to Plate 21).

Plate 21 Slab beneath the floorboard in eastern redbrick warehouse.

Underground car parking area

The underground carpark is at the back of the buildings facing Melville Street and underneath Freedom Furniture Store. All surfaces are sealed. There are numerous concrete manholes that are aligned over the TasWater sewage network and HCC stormwater drains. An example of the storm water drains can be seen in below in Plate 23. There were two gatic covers located adjacent to each other observed in this area (**Plate 22**). These are in line with the sewage line and manholes in the area.

Plate 22 Gatic covers in underground car park

Plate 23 Stormwater drain to the Derwent

Driveway from Brisbane Street to Service yard and underground Carpark

Plate 24 below shows where a section of the asphalt has been cut and replaced with three rectangular gatic covers. This is within the vicinity of where the Brisbane Street UST was/is located. There are also numerous cut lines in the asphalt surrounding this gatic.

Plate 24 Coverings of Ground in middle of driveway

Sewage, water and stormwater

Concrete manhole covers located throughout the site- these are consistent with where sewage/wastewater lines (TasWater) and stormwater drainage (HCC). An example of the drains in the underground car parking area is shown in Plate 23. An example of the TasWater's sewage manhole covers can be seen in Plate 1

Surrounding land use

Currently there is a Beaurepaires retail outlet adjacent to the Freedom Furniture shop on Brisbane Street.

Current potential contamination

The following have been identified as potential sources of current contamination at the site:

- Underground Storage Tank and associated infrastructure including bowers and piping(may have been removed);
- Chemical storage in laboratory and workshops
- Triple interceptor trap
- Oil sump in workshop
- Historical uncontrolled fill beneath the site and;
- General commercial/industrial land with potential for incidental leaks and spills to ground

3. Discussion and recommendations

3.1 Discussion

3.1.1 UST (1000 gallon) and metered pump- Brisbane Street

Mentioned in: WorkSafe Dangerous Goods(1967 records), Hobart City Council records(Shell), Stoklosa (1994), Stoklosa (1996), Site visit

Overview

We were unable to confirm that the UST that was located in the northern corn of the site adjacent to Brisbane Street was removed and remediated. The exact location of the tank was unable to de determined, as the diagrams in WorkSafe records have no scale nor the surrounding land use labelled. It is likely that this occurred due to evidence of the planning of this removal and that Stoklosa Engineering noted in their letter (dated 18th September 1996) that they need to be onsite to witness the removal of this UST.

The site visit noted that there was a large rectangular gatic cover (Plate 24) in the vicinity of where the UST was believed to be and the substation located in the carpark, however when the location was compared with the DBYD response (Appendix E) from TasNetworks, no cabling went into the driveway area.

Relative risk

The likelihood of residual contamination (in soil and groundwater) in the area is low to moderate. If the gatic covered could be removed and inspected, this would add some confirmation of the residual risk.

3.1.2 Unanticipated UST (500 gallon) and Bowser – Melville Street

Mentioned in: WorkSafe Dangerous Goods (1962/3 records), Hobart City Council records(Shell), Stoklosa (1996), DELM (1996)

Overview

The UST that was referred to in Stoklosa's reports as the unanticipated UST was removed in 1996 and there is evidence of soil testing being undertaken. While elevated concentrations of short chair hydrocarbon and xylene were detected in some samples, Environment Tasmania concur with Stoklosa that "…contaminated soil under the UST represents a localised hot spot…" and that "it is unlikely that the contamination has migrated off site, or will do so in the future".

Relative risk

The likelihood of residual contamination (in soil and groundwater) in the area is low to moderate. As the source (UST) was removed, and residual impact at that time appeared localised, any residual risk will likely have degraded over time (20 years since assessment). Additionally, the unsealed ground and the large scale of the overlaying building (vented glass atrium) would limit accumulation of any residual vapour risk, which also would likely decrease quickly over time.

3.1.3 Uncontrolled Fill

Mentioned in Stoklosa (1994)

Overview and relative risk

There is evidence from bore logs contained in the above report that fill was used across the site. There is no details of where the fill originated from or if it contained any contaminants. While uncontrolled imported fill retains a level of site contamination risk, this is considered no different to most other urban sites in Tasmania. The risk is likely relatively low as prior investigations did not identify any specific aspects of concern during works (i.e. potential asbestos containing material or stained and odorous material).

3.1.4 Chemical stores

Mention in Stoklosa (1994) and observed during site visit

Overview and relative risk

Stoklosa noted that there was a flammable chemical store that was being removed as part of the redevelopment for Forestry. This store was on a sealed surface and soil testing was undertaken once removed. No contaminants of concern were found.

Both workshops and the laboratory were used to store chemicals within the Forestry Tasmania Building. The floor of both workshops are sealed with concrete, making it unlikely that this storage would have any impact on soil or groundwater. The risk is therefore considered relatively low.

3.1.5 Oil sump

Mentioned in Nekon (2018) and observed during site inspection

Overview and relative risk

There is an oil sump located within the Operations Workshop. This sump was cleaned and capped in April 2018. While it is acknowledged that any in-ground containment has potential to leak, it is uncommon for such sources to contribute to notable ground contamination, and more

likely represent a risk of localised residual impact immediately around the infrastructure. The risk is therefore considered relatively low.

3.1.6 Triple interceptor trap

Mentioned in Stoklosa (1994) and observed during site inspection

Overview and relative risk

There is a triple interception pit located in the middle bay of the open garages. There are also multiple drains within this area, however there was signage for a spill control mat located nearby within the service yard. This would have reduced risks to waterways and groundwater from activities in this area. While it is acknowledged that any in-ground containment has potential to leak, it is uncommon for such sources to contribute to notable ground contamination, and more likely represent a risk of localised residual impact immediately around the infrastructure. The risk is therefore considered relatively low.

3.1.7 General hydrocarbon presence

Mentioned in Hobart City Council records

Overview and relative risk

The site has been utilised in the past by Bert Self (likely to sell motorcycles and sidecars- from Advertisement in Huon Times, dated 26/6/1926[7])and Absolom Garage and Absolom Brothers, while there are no dates or locations within the site. It is likely that these businesses were related to motor vehicles and the resultant hydrocarbon risk. However these business were likely at the site during the early 20th Century.

It is considered that key potential sources of contamination associated with such land use relate to fuel storage and handling which likely been addressed (USTs). While it is acknowledged that such land uses have potential to generate leaks and spills to ground, it is uncommon for such sources to contribute to notable ground contamination, and more likely represent a risk of localised residual impact. The risk is therefore considered relatively low.

3.1.8 Old town gas

Mentioned in Hobart City Council records

Overview and relative risk

There is no information available on exactly where these pipes may be located within Hobart CBD. While these pipes are usually located within road reserves, feeder lines may be present on the site. The residual risk would primarily relate works in adjacent roads, and more specifically vapour risk to workers exposing such infrastructure. The associated risk to the site is considered low.

3.1.9 Surrounding land use (historical and current)

Mentioned in Hobart City Council records and observed during site inspection

Overview

Potentially contaminating activities undertaken historically on neighbouring land are generally associated with the automotive industry or fuel storage. Specifically, there has been:

[7] https://trove.nla.gov.au/newspaper/article/136195918?searchTerm=bert%20self%20huon%20times&searchLimits=l-state=Tasmania|||l-category=Advertising last accessed 5/10/18

- Rowe, a fuel supplier present on the adjacent site to the south east(131- 133 Murray Street);
- Trade Motor Body Works, an automotive business to the west/north west of the site (132-146 Elizabeth Street); and
- J.T Graves & Son Pty Ltd, an automotive business to the east of the site.

Currently there is a Beaurepaires retail outlet adjacent to the Freedom Furniture shop on Brisbane Street

Relative risk

The residual risk to site from potential off-site contamination risk migrating on-site is primarily relating to scenarios where excavation works are conducted into, or in close proximity to the underlying groundwater. No site infrastructure (other than stormwater and sewer systems) are considered to approach the groundwater and therefore the risk is considered low at this time.

3.2 Recommendations

The site has been subject to a number of prior contaminated land assessments, by a number of different parties. This provides increased confidence that key potential aspects of concern have subsequently been identified, and addressed to varying degrees.

The site history and potential contamination risk is typical of most urbans sites in Hobart and based on available information, has not shown any higher risk issues. While there remain lower risk potential contamination aspects, based on continued commercial use (i.e. with limited requirement for ground disturbance), these are unlikely to represent issues requiring notable management controls.

Where there were future development requirements for notable subsurface disturbance (i.e. utility trenching, basement construction), then there would be an increased risk of requirements to manage residual contamination (if present).

It is reasonable to assume that the proposed change in land use currently envisaged by UTAS would trigger Council Development Application assessment of contamination risk. For minor works this assessment could be addressed using the findings of this Limited PSI, but for more significant ground disturbance works, further assessments may be triggered (i.e. where ground disturbance was over or near specific higher risk areas [such as USTs]).

Appendices

Appendix A Figures

0 10 20 30
Metres

Map Projection: Transverse Mercator
Horizontal Datum: Geocentric Datum of Australia
Grid: Map Grid of Australia 1994, Zone 55

N

Legend

- Site Outline
- Automative Industry (Historic)
- Fuel Supplier (Historic)
- Automative Industry (Currently Operating)

University of Tasmania
Limited PSI 79-83 Melville St Hobart

Job Number	32-18994
Revision	A
Date	04 Oct 2018

Potentially Contaminating Activites Undertaken in Vicinity of the Site

Figure 2

G:\32\18994\GIS\Maps\Working\32_18994_02_PotentialContaminants_RevA.mxd

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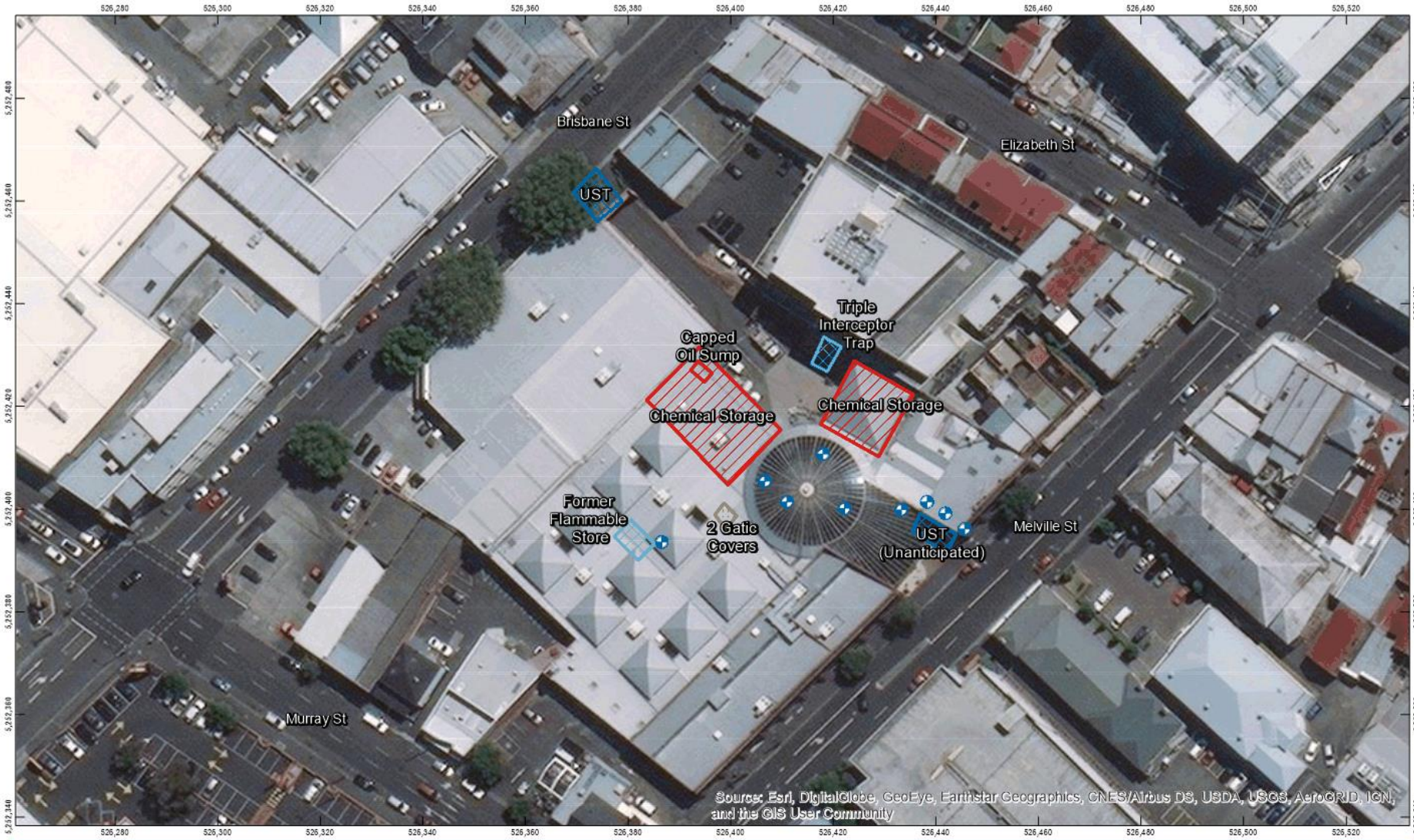
Data source: NearMap, DPIPWE, GHD. Created by: sglimour

Level 15, 133 Castlereagh Street Sydney NSW 2000 T 61 2 9239 7100 F 61 2 9239 7199 E sydmail@ghd.com.au W www.ghd.com.au



0 10 20 30
Metres

Map Projection: Transverse Mercator
Horizontal Datum: Geocentric Datum of Australia
Grid: Map Grid of Australia 1994, Zone 55

N

Legend

- Soil Test Samples
- 2 Gatic Covers

Crisp and Gunn (Prior to 1967)

- Operation Workshop
- Fabrication Workshop
- Capped Oil Sump

From Forestry Tas.

- UST (Unanticipated)
- UST
- Triple Interceptor Trap
- Former Flammable Store

GHD

University of Tasmania
Limited PSI 79-83 Melville St Hobart

Job Number 32-18994
Revision A
Date 04 Oct 2018

Potential Sources of
Contamination Originating Onsite

Figure 3

G:\32\18994\GIS\Maps\Working\32_18994_03_Site_Closeup_RevA.mxd

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Data source: NearMap, DPIPWE, GHD. Created by: sglimour

Level 15, 133 Castlereagh Street Sydney NSW 2000 T 61 2 9239 7100 F 61 2 9239 7199 E sydmail@ghd.com.au W www.ghd.com.au

0 10 20 30
Metres

Map Projection: Transverse Mercator
Horizontal Datum: Geocentric Datum of Australia
Grid: Map Grid of Australia 1994, Zone 55

N

Legend

Site Outline (all levels)

Site Outline (ground level only)

University of Tasmania
Limited PSI 79-83 Melville St Hobart

Job Number 32-18994
Revision A
Date 02 Oct 2018

GHD

Site Location and Surrounding Land Use

Figure 1

G:\32\18994\GIS\Maps\Working\32_18994_01_SiteLocation_RevA.mxd

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Data source: NearMap, DPIPWE, GHD. Created by: sglimour

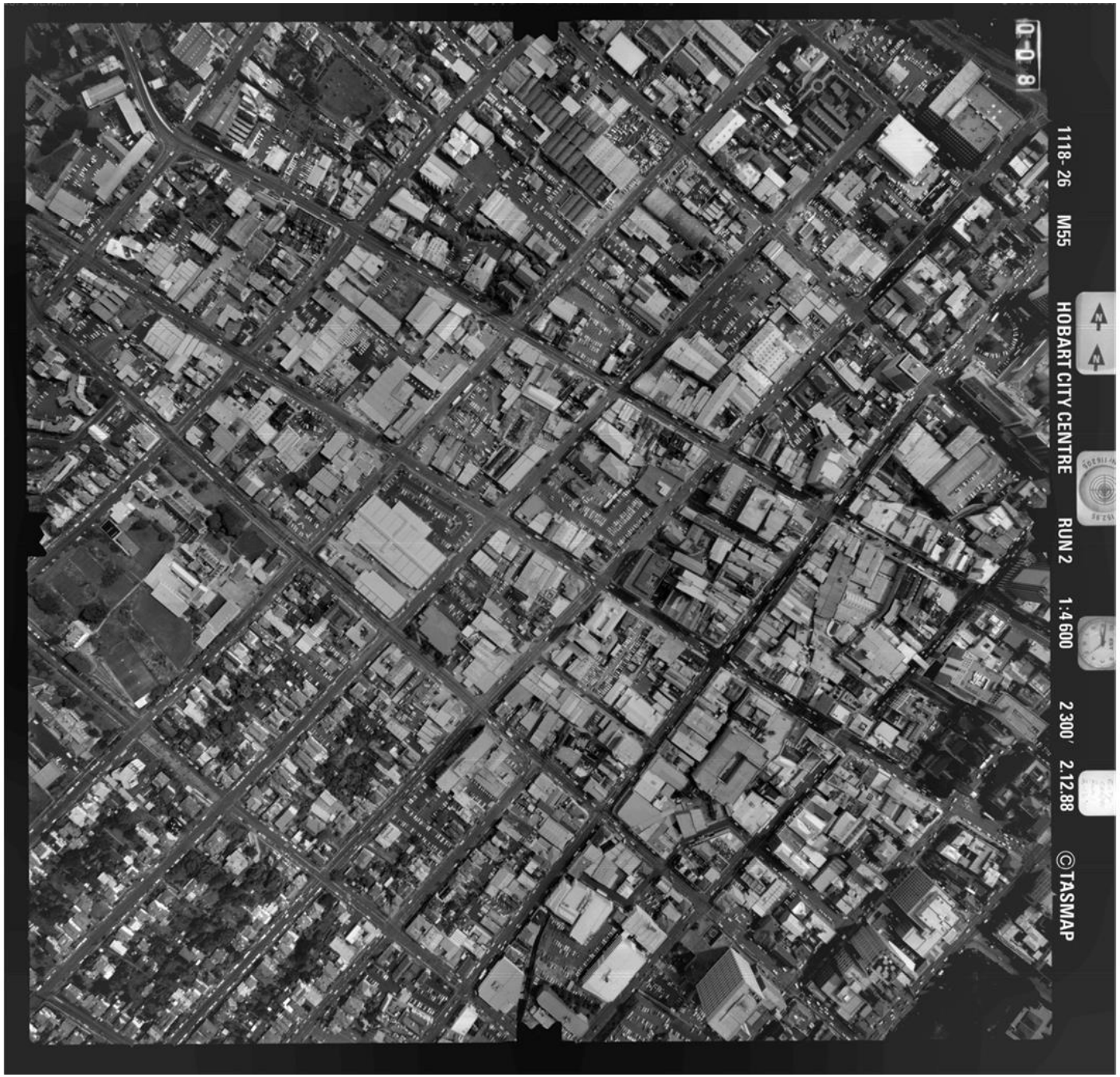
Level 15, 133 Castlereagh Street Sydney NSW 2000 T 61 2 9239 7100 F 61 2 9239 7199 E sydmail@ghd.com.au W www.ghd.com.au

Appendix B Aerial Photographs

7.326 - 123
7BART RUN 9 12.2.57 LENS 9867 15.2.50 M/M 7.036

ATTACHMENT C

801 -053
0-0 3


1118- 26
M55
HOBART CITY CENTRE
RUN 2
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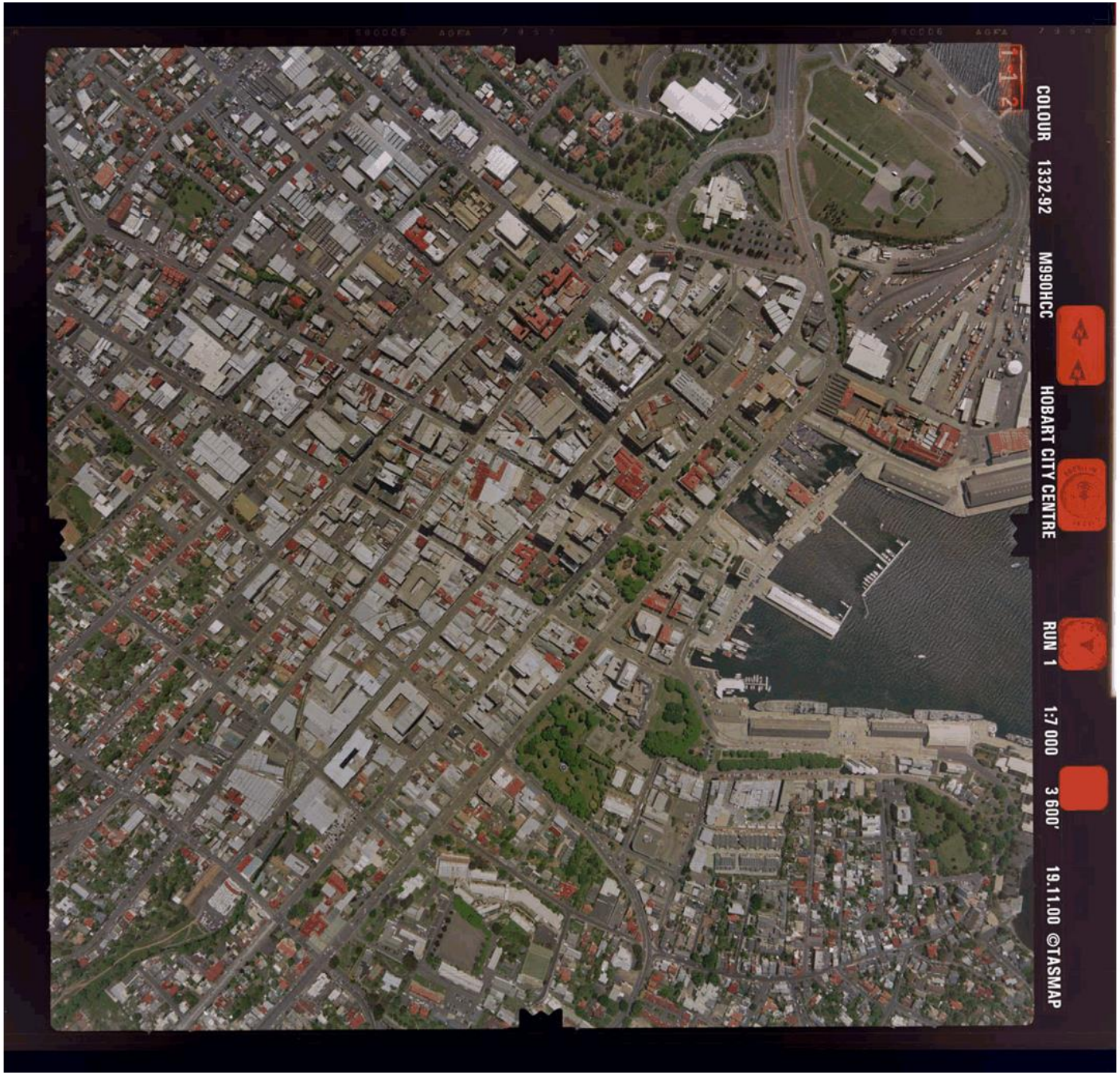
2 300'
2.12.88
©TASMAP
8

031462 AGFA 1850
031462 AGFA 1851
1239-74
A102
HOBART CBD. OPM.
RUN 1
1:14 000
14 000'
16.2.96
© TASMAP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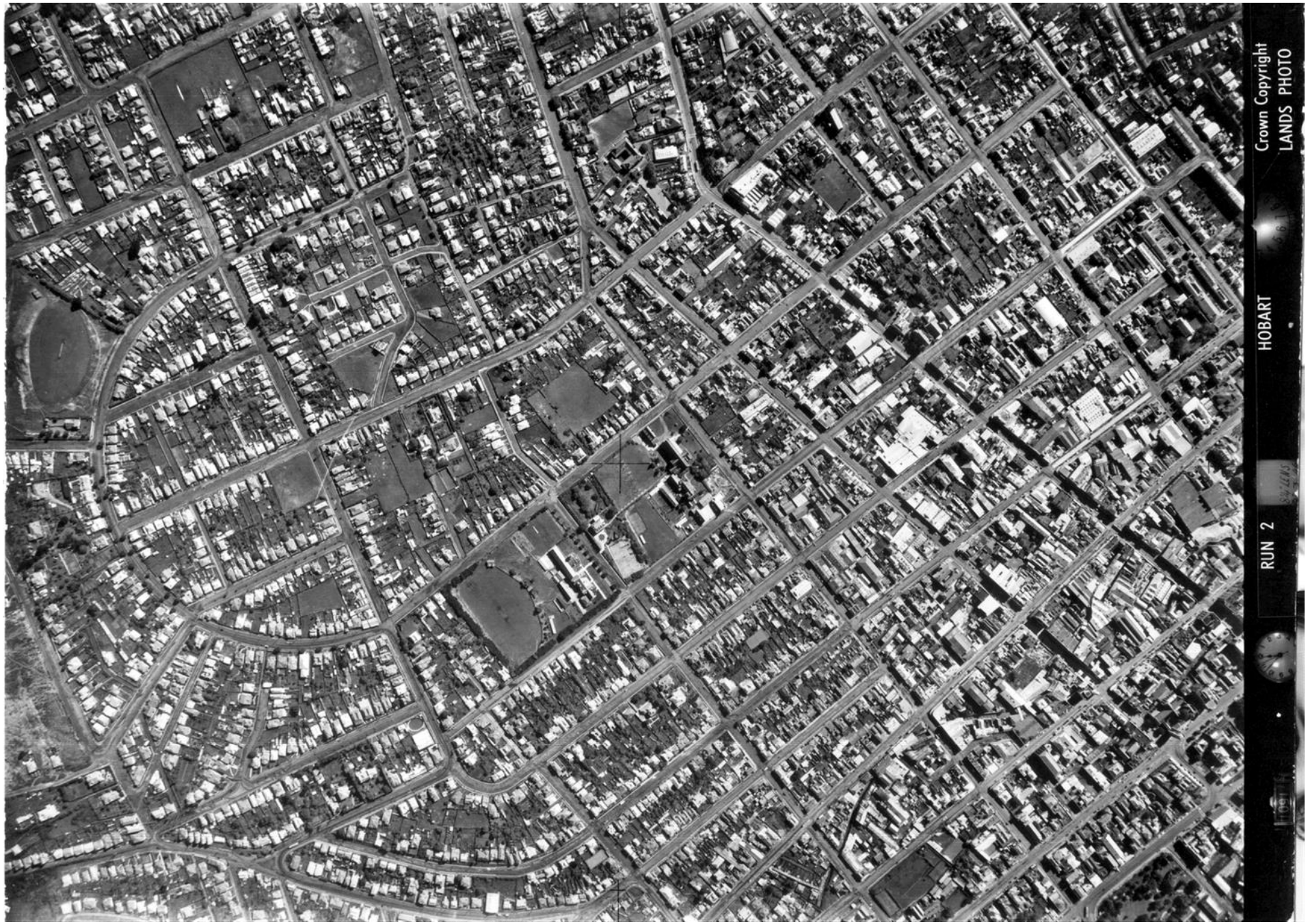
19.11.00 ©TASMAP

ATTACHMENT C



Appendix C Worksafe Correspondence

5693

File No. C2

DEPARTMENT OF MINES, TASMANIA

NAME OR SUBJECT: Crisp & Gunn Co-op Ltd,

ADDRESS: 79 Melville St,

Hobart.

Cancelled 17-7-77

FORM 6

Inflammable Liquids Act 1929

RECEIVED 16 JUN 1967 DEPT. OF MINES REF. NO. 4381/67

APPLICATION FOR LICENCE IN RESPECT OF PREMISES FOR MANUFACTURE OF OR KEEPING INFLAMMABLE LIQUIDS OR DANGEROUS COMMODITIES

1. Applicant's Full Name: CRISP & GUNN CO-OP. LTD.
2. Applicant's Occupation: Timber Merchants.
3. Applicant's Postal Address: 79 Melville St
4. Situation of Premises to be Licensed: 79 Melville St
5. Name of Municipality and Town or Township within which, or within five miles of which, the Premises is situated: Hobart.
6. Name and quantity to be ~~manufactured~~ kept under this Application:—
   - Inflammable Liquid Class A (Petrol, &c.): 1000 Gallons Petrol
   - Inflammable Liquid Class B (Kerosene, &c.):
   - Dangerous Commodity:
7. Number of Tanks and Package Storage Areas under this Application: One.
8. Name and Total Quantity to be kept:—
   - Inflammable Liquid Class A (Petrol, &c.):
   - Inflammable Liquid Class B (Kerosene, &c):
   - Dangerous Commodity:
9. Total Number of Tanks and Package Storage Areas installed: One.

I declare that the above statements and answers are true to the best of my knowledge and belief.

CRISP & GUNN CO-OP. LTD.

(*Signed*) [signature]

Dated this Fifth day of June, 1967

(*This Application, with Licence Fee of £* £4-00, *to be forwarded to—*

Director of Mines, Hobart)

(*Scale of fees is shown on reverse hereof*)

70894

No. 1292
£4.00
16/6/67

Department of Mines,

Tasmania.

Date 20 / 7 /19 67

For the Director of Mines, Hobart
From the Inspector of Explosives .....HOBART.....

RECORD OF INSPECTION OF INSTALLATION

Premises of: CRISP & GUNN.

Known as:

Premises at: BRISBANE ST.

Oil Company: [redacted]

Date of Approval: 17 APRIL 67

Date of Inspection: 20 JULY 67

Finding: ~~Unsuitable~~ / Suitable for Licensing

Pump Outfit package Storage Area: P/O

Variation from Approval: NIL.

Application Form: Left with occupier/~~Forwarded herewith~~.

Amount of Fee advised Yes/~~No~~

.....J Goodrich.....

FORM 5 (Regulation 78)

1174

TASMANIA

Inflammable Liquids Act 1929 **Nº** 145

Granted to [redacted] Fee, $2

Personal Information Redacted

Approval of Site and Construction of Premises for Keeping Inflammable Liquids or Dangerous Commodities or the Alteration thereof.

Approval for the *site and construction/*~~alteration of the site and construction~~ as shown on the approved plans and specifications of a *~~package/storage area~~/*tank for the undermentioned inflammable liquids and dangerous commodities, subject to the provisions of the *Inflammable Liquids Act* 1929, and regulations being observed and subject to the undermentioned special conditions, situate at Crisp and Gunn Co-op Ltd.,

HOBART.

This approval is valid only for one year from the date of issue

Date of issue 17th April, 19 67.

Chief Inspector of Explosives

J. L. Clark.

Inspector of Explosives

Inflammable liquid: Class A 1000 Gallons

Class B Gallons

Dangerous commodities:

SPECIAL CONDITIONS

* *Strike out if inapplicable*

[redacted]

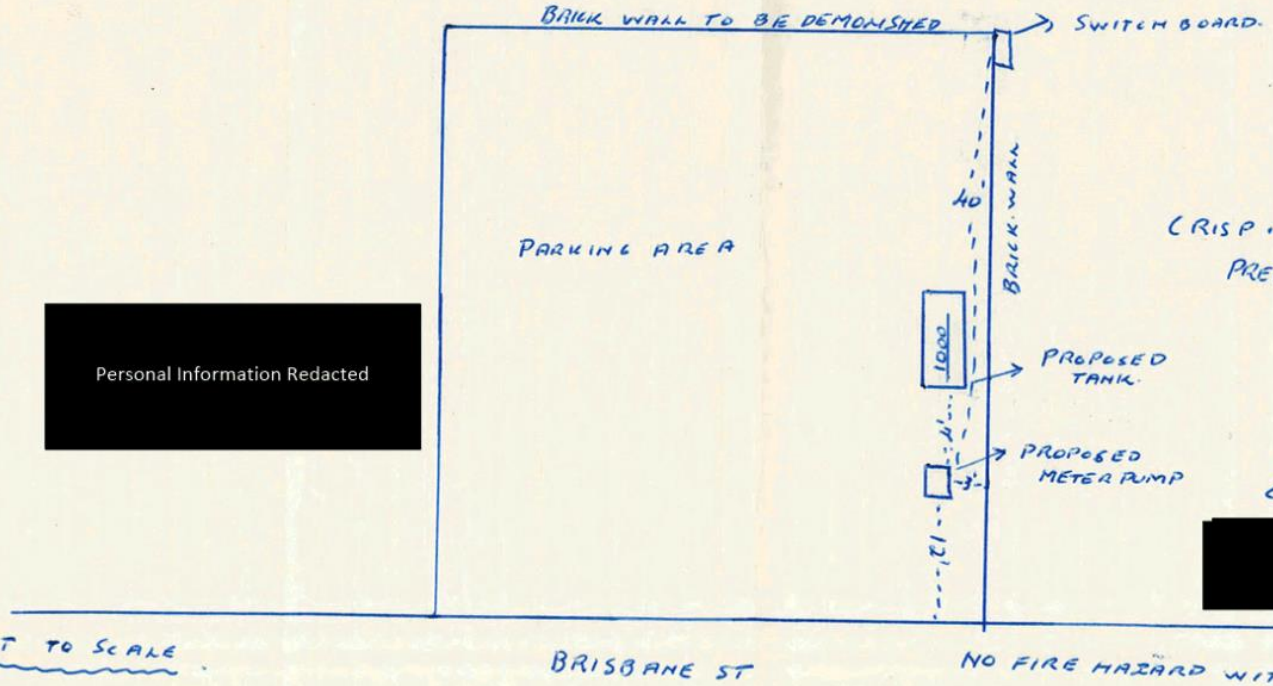
14/4/67

PROPOSED REPOSITIONING OF PUMP & TANK.

CRISP & GUNN CO-OP LTD.

D of M | S & A | CG | CC & M | ACIM
RECEIVED 14 APR 1967
ANSWERED
DEPT. OF MINES
REF. NO. 2131/67

APPROVED
G. Johson.
Senior Inspector of Explosives
17 APR 1967



[redacted]

Rec. 1174
$2.00
14.4.67

CONTACT IF REQUIRED
CRISP & GUNN [redacted]

[redacted]

Department of Mines

Tasmania

Date 4 / 1 /1963

MEMORNANDUM

For the Director of Mines, Hobart.
From the Inspector of Explosives, Hobart.

Record of Inspection of Installation

Premises of: Crisp & Gunn Co. of. P/L.

Known as: 79 Melville St.

Oil Company: [redacted]

Date of Approval: 5/12/62.

Date of inspection: 3/1/63

Finding: ~~Unsuitable~~) Suitable) for licensing

Pump Outfit ~~Package Storage Area~~:

Variation from Approval: Nil

Application Form: ~~Left with occupier/Forwarded herewith~~.

~~Amount of Fee advised~~: ~~Yes/No~~

A R Powell

C ✓

(Regulation 78)

FORM 5

TASMANIA

Inflammable Liquids Act 1929 № 809

Fee, £1

Granted to [redacted]

Personal Information Redacted

Approval of Site and Construction of Premises for Keeping Inflammable Liquids or Dangerous Commodities or the Alteration thereof.

Approval for the * ~~site and construction~~/* alteration of the site and construction as shown on the approved plans and specifications of a * ~~package storage area~~/* tank for the undermentioned inflammable liquids and dangerous commodities, subject to the provisions of the *Inflammable Liquids Act* 1929, and regulations being observed and subject to the undermentioned special conditions, situate at Crisp & Gunn Co - Op Pty Ltd., 79 Melville Street, Hobart.

This approval is valid only for one year from the date of issue.

Date of issue 5th December, 19 62

Chief Inspector of Explosives.

Inspector of Explosives.

Inflammable liquid: Class A 500 existing Gallons.

Class B ..... Gallons.

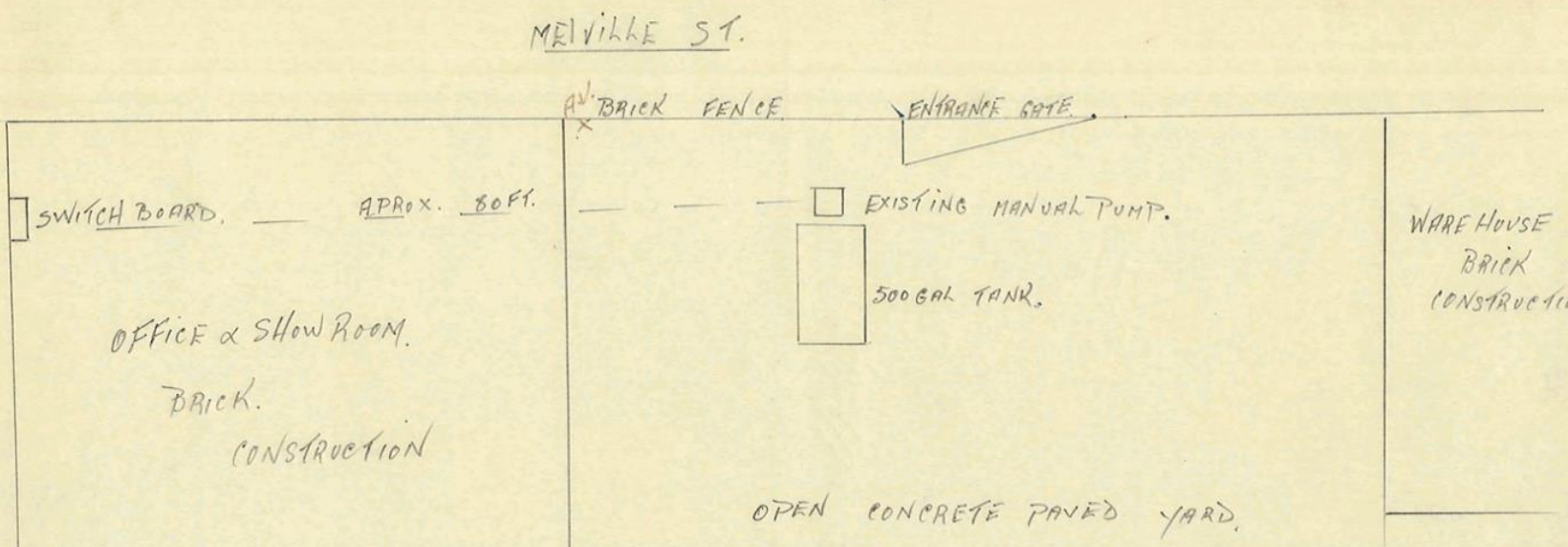
Dangerous commodities: .....

SPECIAL CONDITIONS.

Replace single manual with single electric pump.

* Strike out if inapplicable.

65252



CRISP & GUNN CO.OP.P/L.
79 MELVILLE ST.
HOBART

Proposed Meterization of existing manual Pump

No alteration of existing Pipeline

Switchboard approx 80 ft. from Pump

Wiring to be encased in Conduit

APPROVED
Inspector of Explosives
5 DEC 1962.

Personal Information Redacted

S&A | CG | CC&M | ACIE

3 - DEC 1962

DEPT. OF MINES
REF. NO. 5781/62

KDS

20873
3/12/62

Form H.

FOR OFFICE USE ONLY

			Initials
Correspondence: C2	Licence No.	625 ~~1491~~	
	Certificate of Registration		
	Receipt No.	5186	
	Amount of Cash Received	£1-5-0	
	Date Received	5/7/55	

MEMORANDUM *Department of Mines,*

Hobart, 1st July, 1955

Please note that your Licence / Certificate of Registration, under the provisions of the Inflammable Liquids Act 1929 in respect of the storage of Petrol, Kerosene, or Carbide of Calcium, expired on the 30th June last.

If you desire the registration renewed, please fill in the form of application hereunder, and return it to me with the prescribed fee.

Any person keeping Inflammable Liquid, except in Licensed or Registered Premises, is liable to a penalty of Fifty Pounds (£50).

J. G. SYMONS
~~W. H. WILLIAMS~~,
Director of Mines.

Crisp & Gunn Co-op Ltd.,
79 Melville St.,
Hobart.

D.O.M.	S & A	C G	CC & M	ACIM & E
				REGISTRAR
RECEIVED 5 JUL 1955				E & IL
ANSWERED DEPT. OF MINES				
REF. NO.				

THE INFLAMMABLE LIQUIDS ACT 1929

APPLICATION FOR RENEWAL

I, CRISP & GUNN CO-OP LTD. of 79 MELVILLE ST. HOBART hereby apply to have the registration of my premises, situate at 79 Melville St. renewed under the provisions of the Inflammable Liquids Act 1929 in respect to the storage of MINERAL SPIRIT and forward herewith the fee.

REGISTERED QUANTITIES

Fee Paid £1-5-0
Mineral Spirit 500 gallons
Mineral Oil — gallons
Carbide of Calcium — lbs.

* Strike out which does not apply.

QUANTITIES TO BE REGISTERED
(To be filled in)

Mineral Spirit 500 gallons
Mineral Oil — gallons
Carbide of Calcium — lbs.

For CRISP & GUNN CO-OP. LTD.

Signature: ~~*Mr.~~ ~~*Mrs.~~ ~~*Miss~~ M. J. Crooks SECRETARY

Date of Application 4th July 1955

Mineral Spirit relates to Petrols, &c., with a flash point of 73°F. or less.
Mineral Oil relates to Kerosene, &c., with a flash point of above 73°F. and less than 150°F.
In the case of Petrol Pumps, please furnish particulars of tanks installed and in use.

Total number of underground tanks on premises	Capacity of each tank	Number of tanks in use

District Inspector's recommendation:

Note.—Cheques, postal notes, or money-orders should be made payable to the Director of Mines. If bank notes are forwarded by post, the letter should be registered. Stamps will not be accepted in payment.

96819—M1157—95 (14)

Authority to Release Information to a Third Party
Dangerous Substances Location

I, (full Name)
Calbourne Nominees Pty Ltd

authorise WorkSafe Tasmania to release information relating to Facility Number Not Known

Location of Facility (full address)78-83 Melville Street, Hobart (strata title reference 149231/2 (includes carpark and ground floor of 80 Brisbane St)

to (full Name)
Nicole Kaye Reineker

of (company Name)
GHD Pty Ltd

Signature Date 27/9/18

Address
GPO Box 1406 Hobart Tas

Phone	Mobile Phone	Email
03 62 24 65 11	0408 141 316	leigh@nekon.com.au

- [x] Current manifest
- [x] Current site plan
- [x] All historical information
- [x] Contamination issues
- [x] Decommissioning details
- [ ] Other (please give details below)

Other Information required

For further assistance please contact:

Department of Justice
WorkSafe Tasmania
PO Box 56, Rosny Park, TAS 7018
Phone: (in Tasmania) 1300 366 322; (outside Tasmania) - 03 6166 4600; Fax 03 6173 0206
Email: wstinfo@justice.tas.gov.au Website www.worksafe.tas.gov.au

Tasmanian Government

Appendix D Hobart City Council correspondence

From: Salter, Simone
To: Nicole Reineker
Subject: RE: database search request - follow up
Date: Monday, 1 October 2018 12:22:29 PM
Attachments: image001.png
image002.png
image003.png
image004.png

Hi Nicole

I tried to call and have left a message.

Please find consolidated information below for you.

To consolidate everything for you at 79-83 Melville Street is:

Type	Business	Date	Potential Source of Contamination
Wood Treatment/Sawmill	Absolom brothers	1916 - 1932	
	Absolom Garage	Dates unkown	
	Bert Self	Dates unknown	
	Central Saw and Planing Mills	1886 – 1915	Hydrocarbons
	Shell	Dates unknown	
	Crisp & Gunn Co-op Ltd	1955-1967	

The following are adjacent sites listed as potentially contaminated:

Address	Type	Business	Date	Potential Source of Contamination
132 – 146 Elizabeth Street	Body Works Motor Car Dealers, Engineers & Garages	Trade Motor Body Works	1940	Hydrocarbons
131 – 133 Murray Street	Fuel Supplier	Rowe	1916	Hydrocarbons
141 – 143 Murray Street	Motor Car Dealers, Engineers & Garages	J.T. Graves & Son Pty. Ltd. H.C. Sleigh/Golden Fleece John Tasman Graves	1966 – 1679	Hydrocarbons

Thanks
Simone

Simone Salter □Senior □nvironmental Health □fficer □□nvironmental Health
6238 2738

From: Nicole Reineker [mailto:Nicole.Reineker@ghd.com]
Sent: Monday, 1 October 2018 11:34 AM
To: Salter, Simone <salters@hobartcity.com.au>
Subject: RE: database search request - follow up

Hi Simone,
No worries at all- this potential sale is very hush hush at present.

Can you please give me a call- I have filled out the right to information form- request #5.

Previously we have received information about site use just in an email- I have attached an email from Jessica Dwyer that we received back on another project.

I need the information as soon as possible as I need to submit my desktop review by the middle of this week.

Kind Regards
Nicole

From: Salter, Simone <salters@hobartcity.com.au>
Sent: Monday, 1 October 2018 11:01 AM
To: Nicole Reineker <Nicole.Reineker@ghd.com>
Subject: RE: database search request - follow up

Hi Nicole

Sorry I wasn't aware of the building selling again or going through a different process. I thought it was to do with the initial dealings with the property I had a few months ago.

We have a few letters/reports etc on file for this property that I can provide upon receipt of a request to information - https://www.hobartcity.com.au/Council/Legislation-and-by-laws/Right-to-Information-Act-2009

Kind Regards
Simone

Simone Salter □Senior □nvironmental Health □fficer □□nvironmental Health
6238 2738

From: Nicole Reineker [mailto:Nicole.Reineker@ghd.com]
Sent: Monday, 1 October 2018 10:58 AM
To: Salter, Simone <salters@hobartcity.com.au>
Subject: RE: database search request - follow up

Hi Simone,
Can you please explain what you mean by Frazer Reed is project planner for coordinating all

these reports? He is not included on any of the group emails from the potential purchaser of this property. How recently was he undertaking this role?

Kind Regards
Nicole

From: Salter, Simone <salters@hobartcity.com.au>
Sent: Monday, 1 October 2018 10:22 AM
To: Nicole Reineker <Nicole.Reineker@ghd.com>
Subject: RE: database search request - follow up

Hi Nicole

Our database shows the only information as hydrocarbons and the names as listed by Felicity below. Information shows that there were previous underground petrol storage tanks on the site.

I have previously provided reports to Frazer Reed from All Urban Planning through a request to information request. He would be able to forward you anything as he is the project planner coordinating all of these reports etc.

Kind Regards
Simone

Simone Salter □Senior □nvironmental Health □fficer □□nvironmental Health
6238 2738

From: Nicole Reineker [mailto:Nicole.Reineker@ghd.com]
Sent: Monday, 1 October 2018 9:02 AM
To: Salter, Simone <salters@hobartcity.com.au>
Subject: RE: database search request - follow up

Hi Simone,
Yes it is, I expect you may have a a run on requests- Probably one from each of the consultants doing the due diligence reports.
Thanks for your help.

Kind Regards
Nicole

From: Salter, Simone <salters@hobartcity.com.au>
Sent: Monday, 1 October 2018 8:58 AM
To: Nicole Reineker <Nicole.Reineker@ghd.com>
Subject: RE: database search request - follow up

Hi Nicole

Is this for the old Forestry building?

Kind Regards
Simone

Simone Salter □Senior □nvironmental Health □fficer □□nvironmental Health
6238 2738

From: Nicole Reineker [mailto:Nicole.Reineker@ghd.com]
Sent: Monday, 1 October 2018 8:52 AM
To: Salter, Simone <salters@hobartcity.com.au>
Subject: database search request - follow up

Good Morning Simone,
I emailed Felicity Edwards last Monday morning requesting a search of the Council databases regarding potential contamination at the site 79-83 Melville St (Strat Title 149231/2). I was wondering how this search was going, would it be possible to receive this information this morning, as I am on a very tight timeframe.

Kind Regards
Nicole

From: Edwards, Felicity <edwardsf@hobartcity.com.au>
Sent: Monday, 24 September 2018 9:56 AM
To: Nicole Reineker <Nicole.Reineker@ghd.com>
Cc: Salter, Simone <salters@hobartcity.com.au>
Subject: RE: contamination database search for a site in CBD

Hi Nicole
We should be able to get some info back to you by the end of the week. There is no charge.
At a quick look on the main database, the site does show as potentially contaminated, the associated historical names are;

- Absolom brothers
- Bert Self
- Central Saw and Planing Mills
- Crisp and Gunn Coop
- Shell

I have cc'd Councils Senior EHO Simone Salter who will allocate the request to one of the team to do a detailed file review. Please contact Simone with any further queries.
Kind regards
Felicity

□elicity □dwards □Manager □nvironmental Health □□ity □lanning
6238 28□2

From: Nicole Reineker [mailto:Nicole.Reineker@ghd.com]
Sent: Monday, 24 September 2018 9:31 AM
To: Edwards, Felicity <edwardsf@hobartcity.com.au>

Subject: contamination database search for a site in CBD

Good Morning Felicity,
Rohan Probert suggested that you may be the person I need to contact to get a database base search for a property in the CBD undertaken.
I am undertaking a contamination site investigation on 79-83 Melville St (the site also includes 80 Brisbane St). I submitted the EPA database search request earlier this week and they are very busy and unlikely to be able to ruin the search within the project timeframe.
Deborah at the EPA suggested that I contact the council as they have access to the some of the same databases.
I am particularly interested in finding out if there is any known contamination at this site, including any records of any underground or above ground storage tanks for petroleum products or other chemicals.

Is this something you can help me with? If not can you please point me in the direction of who would be the best person to contact. Also can you please let me know how long a search would take and if there is any charge?

Kind Regards

Nicole K Reineker
Graduate Environmental Scientist

T: 61 3 6210 0626 | V: 320626
GHD
Proudly employee owned
T: +61 6210 0626| M: +61 403 857 681| E: Nicole.reineker@ghd.com
2 Salamanca Square, Hobart Tasmania, Australia | www.ghd.com
Connect

WATER | ENERGY & RESOURCES | ENVIRONMENT | PROPERTY& BUILDINGS | TRANSPORTATION

Please consider our environment before printing this email

From: Alex Brownlie
Sent: Friday, 21 September 2018 10:57 AM
To: Nicole Reineker <Nicole.Reineker@ghd.com>
Subject: FW: contamination database search for HCC

FYI

Alex Brownlie | A GHD Principal
B.Sc. Dip.UP RPIA (Fellow)
Technical Director Planning

GHD
Proudly employee owned
T: +61 3 6210 0600 | M: 0418 133 152 | E: alex.brownlie@ghd.com
2 Salamanca Square Hobart TAS 7000 Australia | www.ghd.com

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Please consider our environment before printing this email

From: Probert, Rohan <probertr@hobartcity.com.au>
Sent: Friday, 21 September 2018 10:21 AM
To: Alex Brownlie <Alex.Brownlie@ghd.com>
Subject: RE: contamination database search for HCC

Hi Alex,

As a starting point, Felicity Edwards – Manager Environmental Health. She's on 6238 2842 or at edwardsf@hobartcity.com.au.

Regards

□ohan □robert □Manager □evelopment Appraisal □□ity □lanning
6238 2179

From: Alex Brownlie [mailto:Alex.Brownlie@ghd.com]
Sent: Friday, 21 September 2018 9:30 AM
To: Probert, Rohan <probertr@hobartcity.com.au>
Subject: FW: contamination database search for HCC

Hi Rohan,
Who is my best contact within Council for contam land information?

Regards

Alex Brownlie | A GHD Principal
B.Sc. Dip.UP RPIA (Fellow)
Technical Director Planning

GHD
Proudly employee owned
T: +61 3 6210 0600 | M: 0418 133 152 | E: alex.brownlie@ghd.com
2 Salamanca Square Hobart TAS 7000 Australia | www.ghd.com
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Please consider our environment before printing this email

From: Nicole Reineker
Sent: Friday, 21 September 2018 9:17 AM
To: Alex Brownlie <Alex.Brownlie@ghd.com>
Subject: contamination database search for HCC

Hello Alex,
I am undertaking a contamination site investigation on 79-83 Melville St (the site also includes 80

Brisbane St). I submitted the EPA database search request earlier this week and they are very busy and unlikely to be able to ruin the search within the project timeframe.
Deborah at the EPA suggested that I contact the council as they have access to the some of the same databases.
I am particularly interested in finding out if there is any known contamination at this site, including any records of any underground or above ground storage tanks for petroleum products or other chemicals.

Thanks for your help in this matter.

Kind Regards
Nicole K Reineker
Graduate Environmental Scientist

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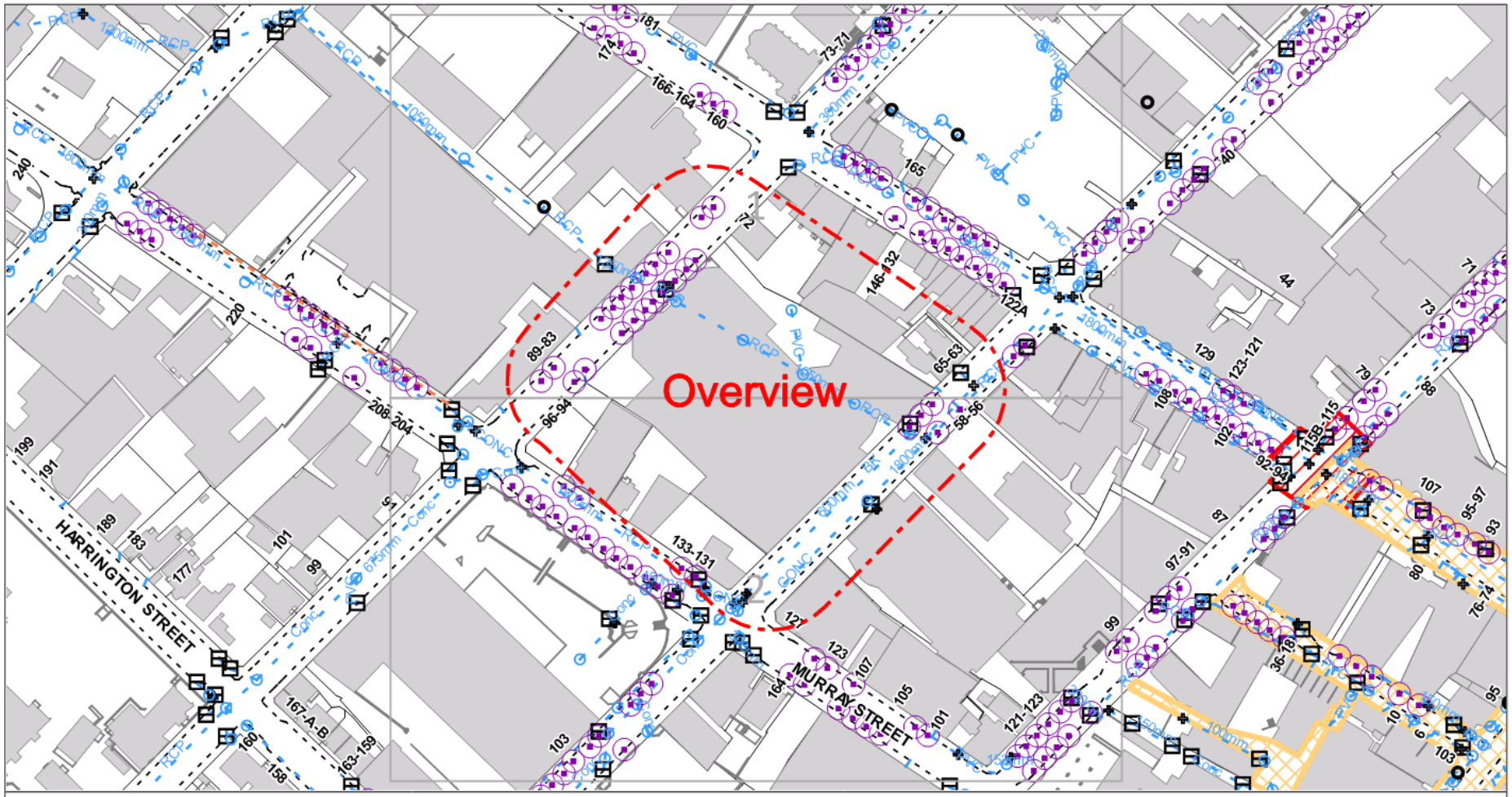
Appendix E Dial Before You Dig Results

City of HOBART

Sequence No: 76013864
Job No: 15023440
Location of Works: 83 Melville Street, Hobart, TAS 7000



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A field survey is to be conducted before information contained in this plan is relied upon.

WARNINGS AND REQUIREMENTS:

Refer to the cover letter and information sheet for all warnings, requirements and contact details.

Abandoned old town gas (coal gas) pipes potentially emitting harmful gases and Volatile Organic Compounds (VOCs) may be found in many areas of the City. Refer to the cover letter and information sheet for more detail.

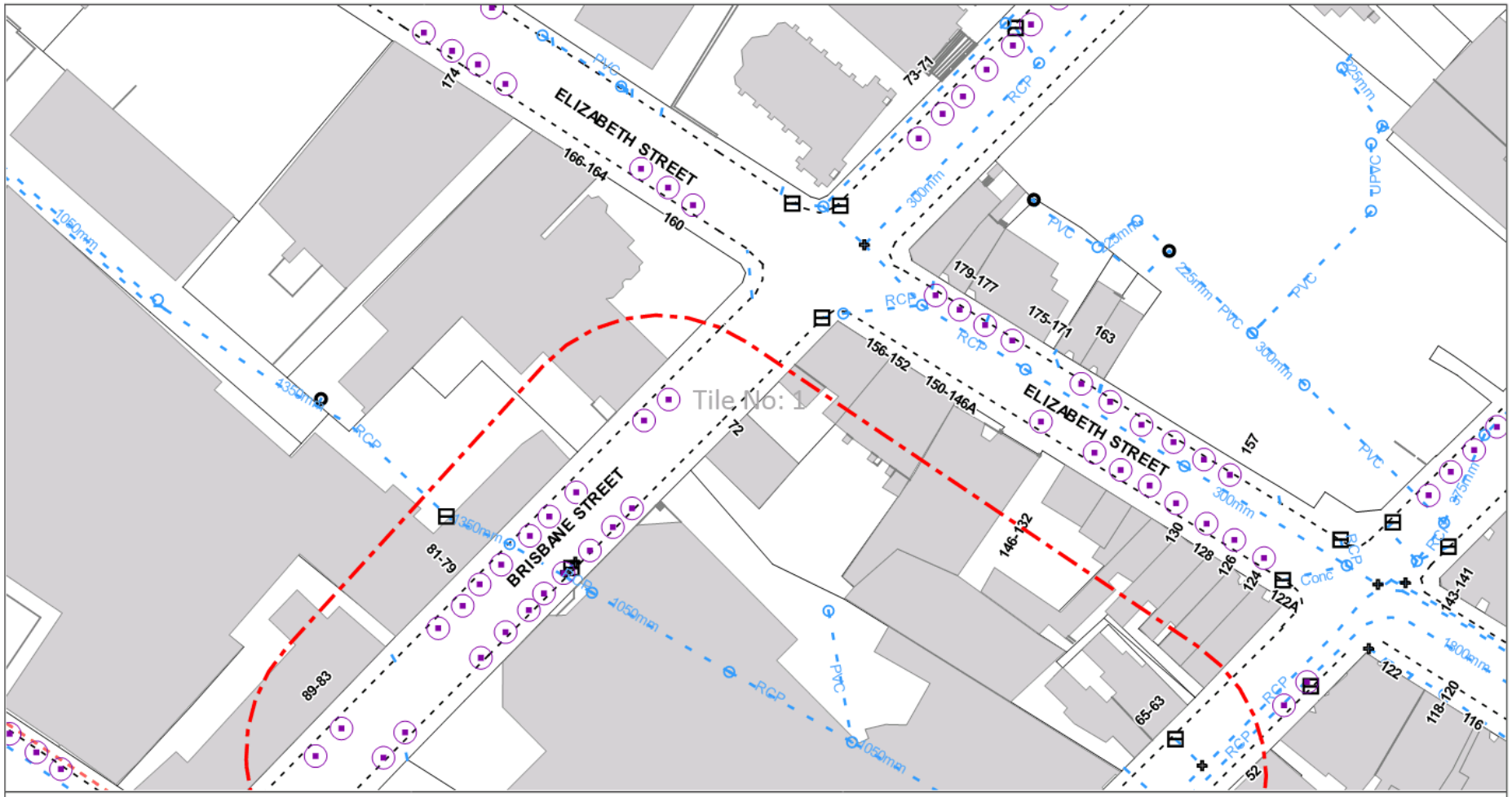
If in-ground parking sensors are located in the enquiry area please call City of Hobart Parking Operations at least 7 days prior to any works on telephone (03) 6238 2439.

- Stormwater Pit
- Intake Point, Junction, Outlet Point
- Maintenance Shaft, Man Hole
- Pollution Control Unit
- Inspection Opening
- Stormwater Pipe
- Electrical and Other
- In-ground Parking Sensor
- Construction Risk Area
- Potential Electrical Underground Assets
- DBYD Enquiry Area

N

City of HOBART

Sequence No: 76013864
Job No: 15023440
Location of Works: 83 Melville Street, Hobart, TAS 7000



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- Construction Risk Area
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- DBYD Enquiry Area

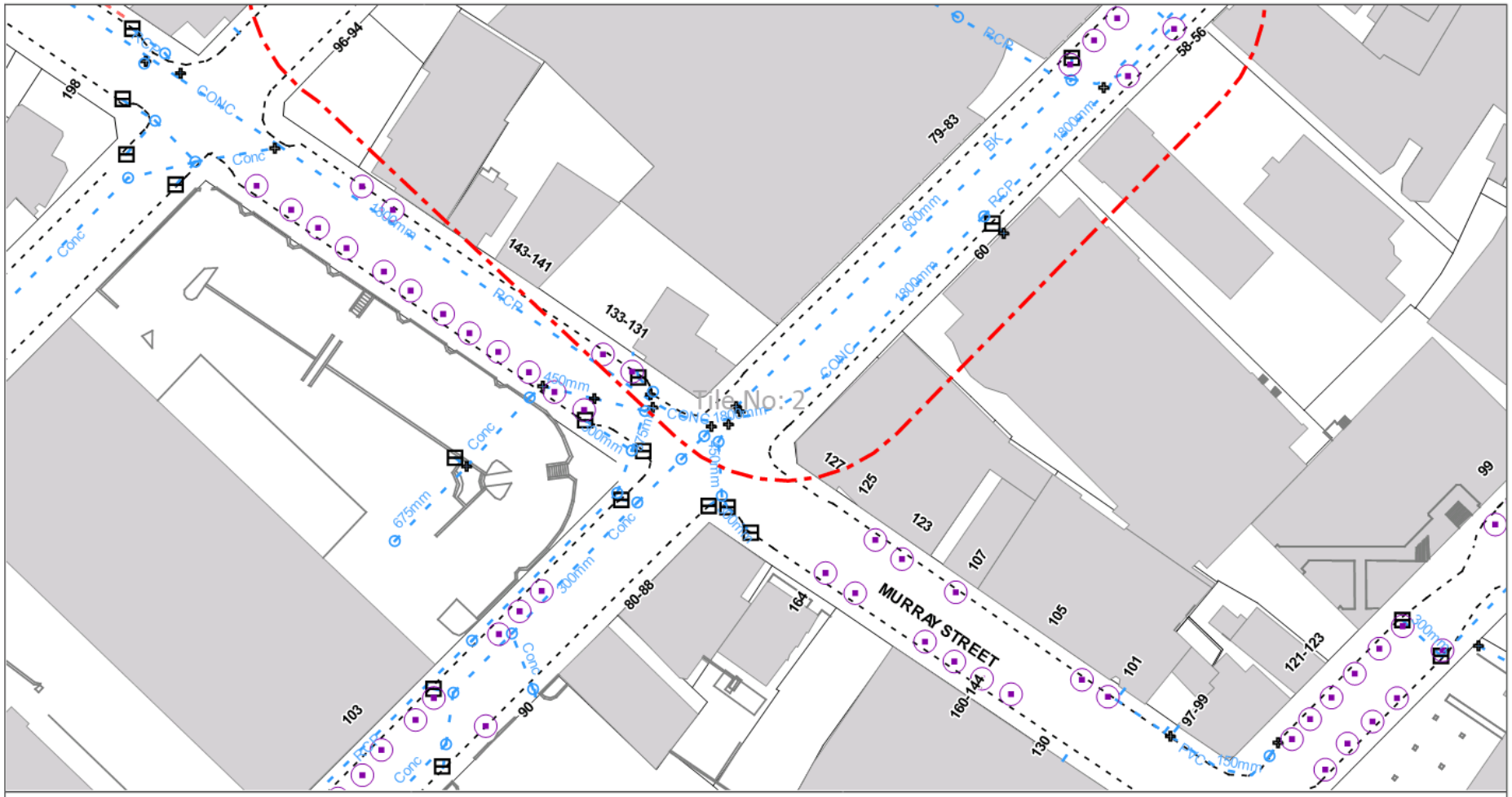
N

Plans generated 01/10/2018 by Pelicancorp TicketAccess Software | www.pelicancorp.com

AU.City of Hobart Response Plan.docx (04 June 2018)

City of HOBART

Sequence No: 76013864
Job No: 15023440
Location of Works: 83 Melville Street, Hobart, TAS 7000



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- Electrical and Other
- In-ground Parking Sensor
- Construction Risk Area
- Potential Electrical Underground Assets
- DBYD Enquiry Area

N

City of HOBART

Enquiries to:
Road & Environmental Engineering Unit

Phone:
(03) 6238 2900

Email:
coh@hobartcity.com.au

01/10/2018

Ms Nicole Reineker
2 Salamanca Square
Battery Point TAS 7004

Dear Ms Nicole Reineker

DIAL BEFORE YOU DIG ENQUIRY
HOBART CITY COUNCIL

I refer to your request through the 1100 Dial Before You Dig service requesting information about City of Hobart (the City) underground assets as per the following details:

Date of Enquiry:	01/10/2018
Sequence Number:	76013864
DBYD Job No:	15023440
Enquiry Location:	83 Melville Street Hobart TAS 7000

Please note
All information is provided as a courtesy. It is indicative only and subject to field verification. The information is not to be copied or distributed in any way without prior approval of the City.

WARNING – Old Town Gas
Abandoned old town gas (coal gas) pipes potentially emitting harmful gases and Volatile Organic Compounds (VOCs) may be found in many areas of the City. Refer to the information sheet for more detail.

Works in Road Reservation
Prior to works in the road reservation a Permit to Open Up and Temporarily Occupy a Highway must be granted. Application forms can be found via the City's website:
www.hobartcity.com.au/City-services/Road-and-footpath-assets/Roads-and-footpaths

In-Ground Parking Sensors
The City must be advised at least 7 business days in advance when works are planned in areas with in-ground parking sensors. More information is available at the City's website:
www.hobartcity.com.au/dialbeforeyoudig/parkingsensors

Works in near Waterways and Rivulets
Approval is required for any works within a waterway or 10 metres from the top of the bank of a waterway. Application forms are available via the City's website:
www.hobartcity.com.au/City-services/Environment/Stormwater-and-waterways/Local-waterways

Please contact the City's Road and Environmental Engineering Unit on telephone (03) 6238 2900 or via coh@hobartcity.com.au should you require any further information.

Yours sincerely

(John Holmes)
MANAGER ROAD AND ENVIRONMENTAL ENGINEERING

Attachment(s) Information Sheet, Plan(s)

INFORMATION SHEET

DUTY OF CARE

- No mechanical plant can be used within 1 metre of indication of an underground City asset unless sighted first by hand digging/potholing. A spotter must be used when using mechanical plant.
- No works to be undertaken within 1 metre of indication of foundations associated with a City asset unless prior approval is obtained from the City.
- Any differences between the locations marked on the City's plan and actual location of assets should immediately be reported to the City's Road and Environmental Engineering Unit on telephone (03) 6238 2900.

ANY DAMAGE TO A COUNCIL ASSET MUST BE REPORTED IMMEDIATELY ON TELEPHONE (03) 6278 0200

The City reserves the right to recover compensation for loss or damage and repair costs to any of its assets irrespective of provision of drawings or undertaking locations on site.

Information and requirements for use in conjunction with the plan

WARNING – Old Town Gas

- Abandoned old town gas (coal gas) pipes potentially emitting harmful gases and Volatile Organic Compounds (VOCs) may be found in many areas of the City.
- The Tasmanian Government lists the following suburbs as having been reticulated with old town gas mains:
  - Central Business District (CBD)
  - Battery Point
  - Dynnyrne
  - Glebe
  - Lenah Valley
  - Mount Stuart
  - New Town
  - North Hobart
  - Ridgeway
  - Sandy Bay including Lower Sandy Bay
  - South Hobart Cascades
  - West Hobart
- For more information please refer to the website provided by the Tasmanian Government at https://www.cbos.tas.gov.au/topics/technical-regulation/gas-standards-safety/practitioners/old-town-gas

Drainage Assets

- City owned stormwater assets must be located before excavation.
- City owned stormwater assets must not be modified, removed or tampered with in any way without express permission from the City.
- Contact the City's Road and Environmental Engineering Unit on telephone (03) 6238 2900 if further information is required.

Electrical and Other Assets

- City owned or approved electrical and other cables or pipes may be present in indicated areas.
- Some private infrastructure (for example a pressurised oxygen line and computer cabling) is also shown.
- Locate conduits before excavation and dig with care, as conduits may not be to standard, such as the depth.
- Contact the City's Road and Environmental Engineering Unit on telephone (03) 6238 2900 if further information is required.

In-Ground Parking Sensors

- Advise the City not less than 7 business days in advance when works are planned so that sensors can be removed and scheduled for subsequent replacement, please telephone (03) 6238 2439 or via email parkingsensors@hobartcity.com.au
- Upon completion of an application form Council will arrange removal and advise you when the sensors have been removed.
- Please be aware that a fee will be levied for the removal and reinstatement of parking meter sensors.

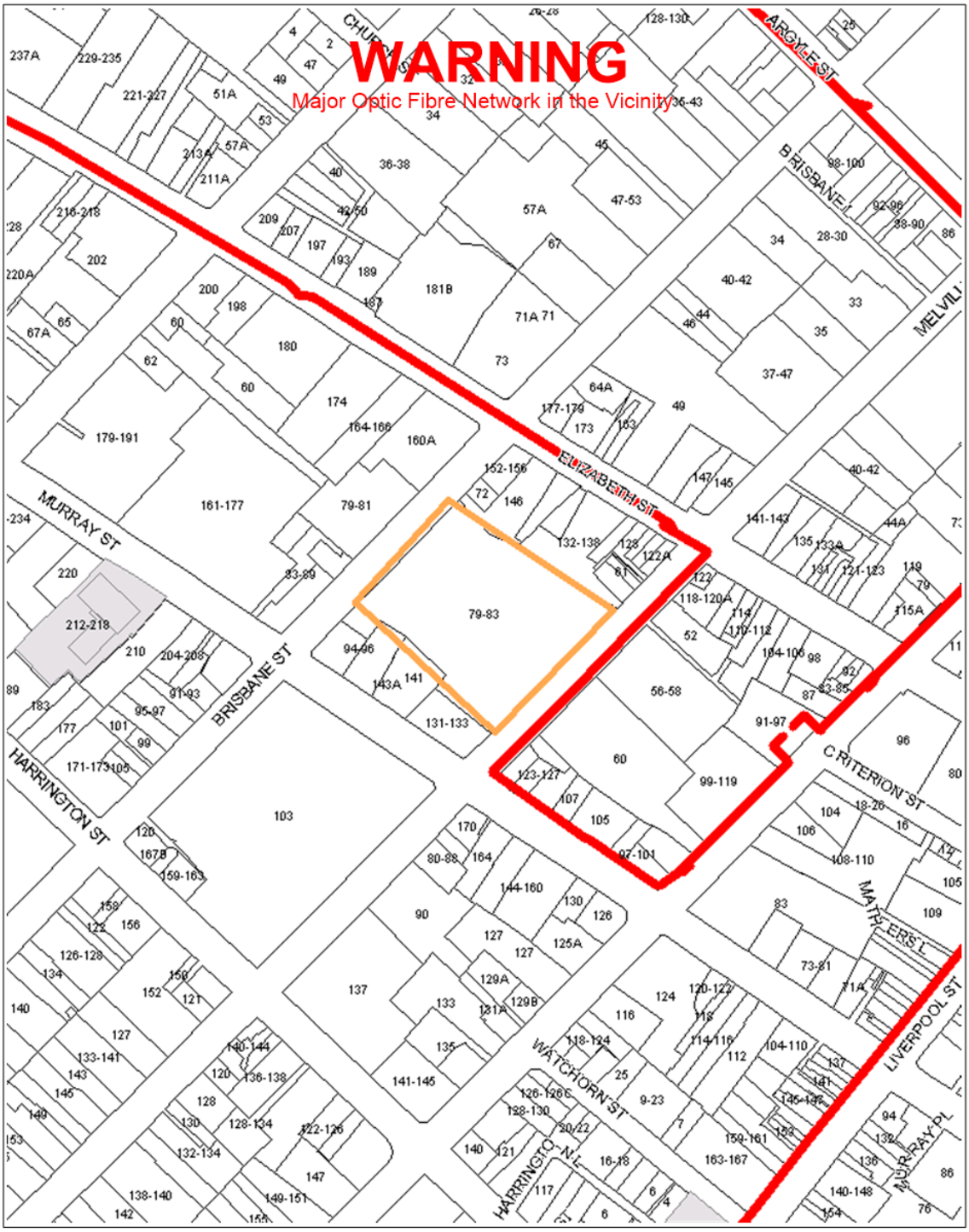
Construction Risk Areas

- These locations include where the City has been notified of or become aware of hazards such as ground contamination, abandoned underground assets (such as old town gas pipes and fuel tanks) and old landfill sites.
- For more information contact the City's Road and Environmental Engineering Unit on telephone (03) 6238 2900 or via coh@hobartcity.com.au

---

Disclaimer:
The City of Hobart does not warrant the information contained on this plan is correct and a field survey is to be conducted before any information in this plan can be relied upon. The information contained in this plan is valid for 28 days from the date of enquiry.

While reasonable measures have been taken to ensure the accuracy of the information contained in this plan response, neither City of Hobart or PelicanCorp shall have any liability whatsoever in relation to any loss, damage, cost or expense arising from the use of this plan response or the information contained in it or the completeness or accuracy of such information. Use of such information is subject to and constitutes acceptance of these terms.



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Optus Plans and information supplied are valid for 30 days from the date of issue. If this timeline has elapsed please raise a new enquiry.

Sequence Number: 76013865

Date Generated: 01/10/2018

OPTUS yes

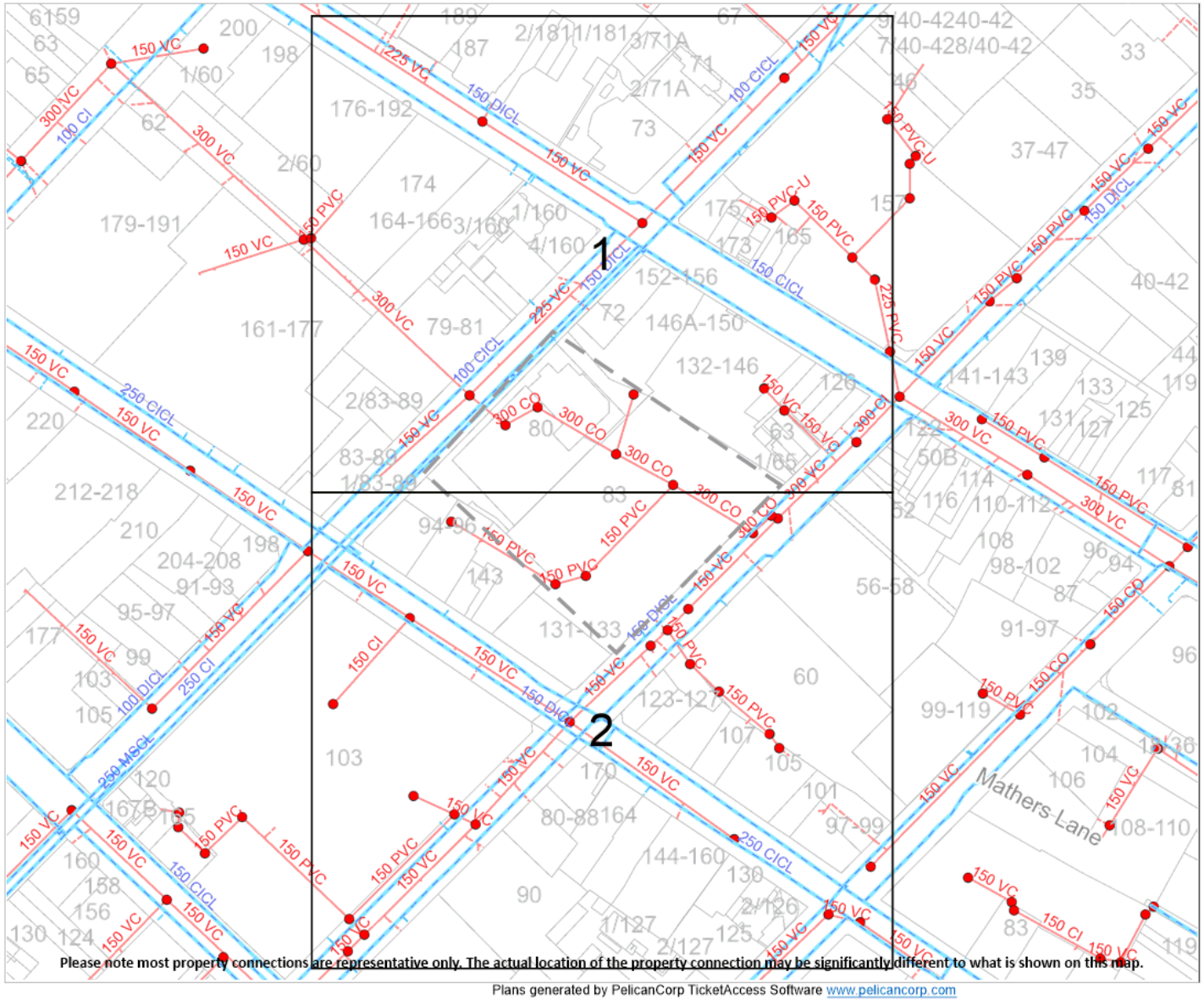
For all Optus DBYD plan enquiries –
Email: Fibre.Locations@optus.net.au
For urgent onsite assistance contact 1800 505 777
Optus Limited ACN 052 833 208

DIAL BEFORE YOU DIG
www.1100.com.au

TasWater

Sequence Number: **76013866**
Location: 83 Melville Street, Hobart, TAS 7000
Date Generated: **01/10/2018 (valid for 30 days)**

DIAL BEFORE YOU DIG
www.1100.com.au
The Essential First Step.



Please note most property connections are representative only. The actual location of the property connection may be significantly different to what is shown on this map.

Legend

- DBYD Enquiry
- Fire Hydrant
- Water Property Connection
- Water Main
- Water Main (Critical)
- Sewer Maintenance Hole
- Sewer Property Connection
- Sewer Pressurised Main (Critical)
- Sewer Gravity Main (Critical)
- Sewer Gravity Main
- Stormwater Maintenance Hole
- Stormwater Property Connection
- Stormwater Gravity Main
- Recycled Water Property Connection
- Recycled Water Main
- A Abandoned Line Sewer

In an emergency contact TasWater
Phone: 13 6992

N

Scale: **1:2050**

Disclaimer: The plan is provided in response to a Dial Before You Dig request. While all reasonable care has been taken to ensure the accuracy of the information on this plan, its purpose is to provide a general indication of the location of TasWater infrastructure. The information provided may contain errors or omissions and the accuracy may not suit all users. A site inspection and investigation is recommended before commencement of any project based on this data.

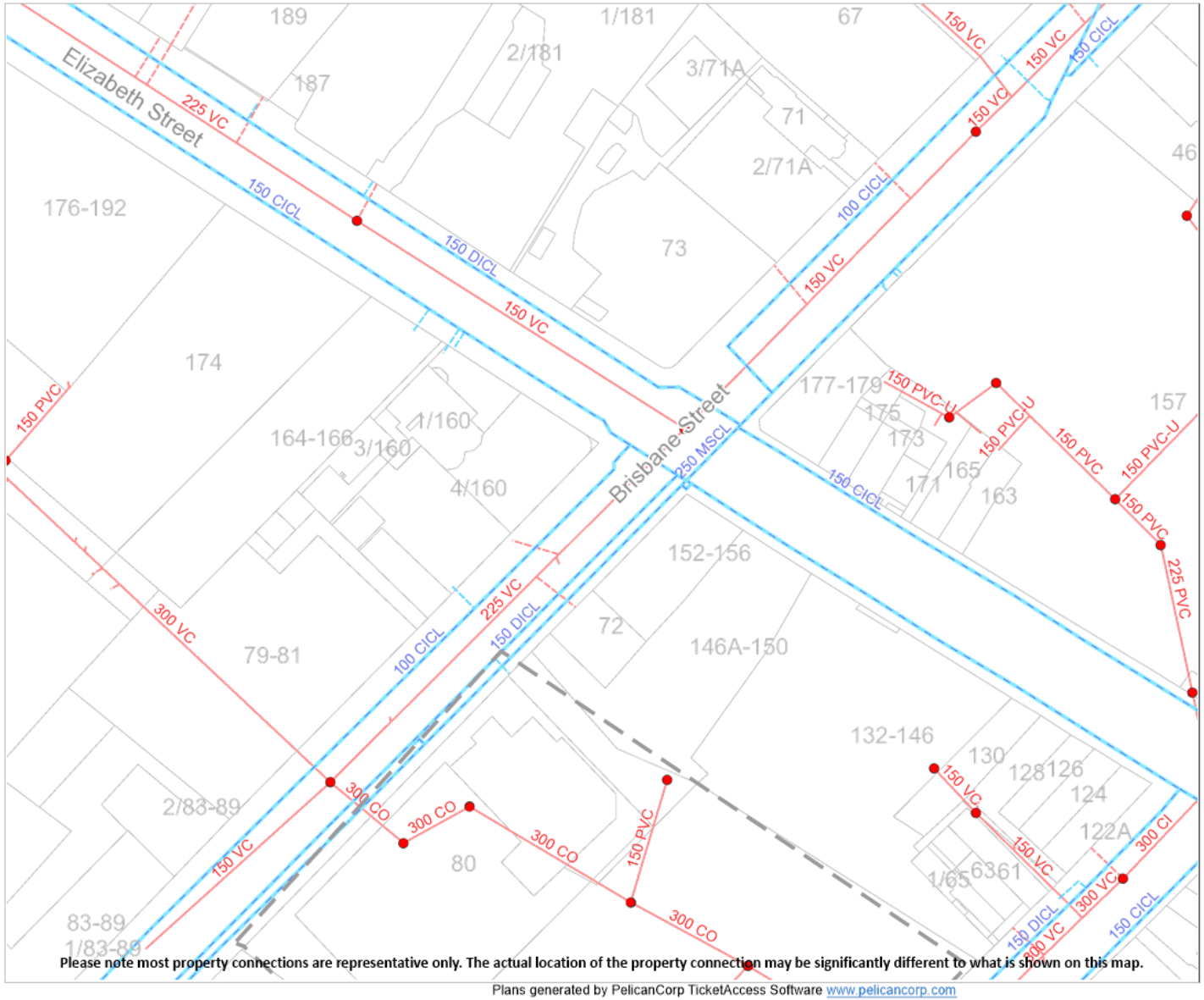
Plans generated by PelicanCorp TicketAccess Software www.pelicancorp.com

TasWater Plan v4.0 (17/10/2017)

TasWater

Sequence Number: **76013866**
Location: 83 Melville Street, Hobart, TAS 7000
Date Generated: **01/10/2018 (valid for 30 days)**

DIAL BEFORE YOU DIG
www.1100.com.au
The Essential First Step.



Please note most property connections are representative only. The actual location of the property connection may be significantly different to what is shown on this map.

Plans generated by PelicanCorp TicketAccess Software www.pelicancorp.com

Legend

- DBYD Enquiry
- Fire Hydrant
- Water Property Connection
- Water Main
- Water Main (Critical)
- Sewer Maintenance Hole
- Sewer Property Connection
- Sewer Pressurised Main (Critical)
- Sewer Gravity Main (Critical)
- Sewer Gravity Main
- Stormwater Maintenance Hole
- Stormwater Property Connection
- Stormwater Gravity Main
- Recycled Water Property Connection
- Recycled Water Main
- A Abandoned Line Sewer

In an emergency contact TasWater
Phone: 13 6992

N

Scale: **1:1000**

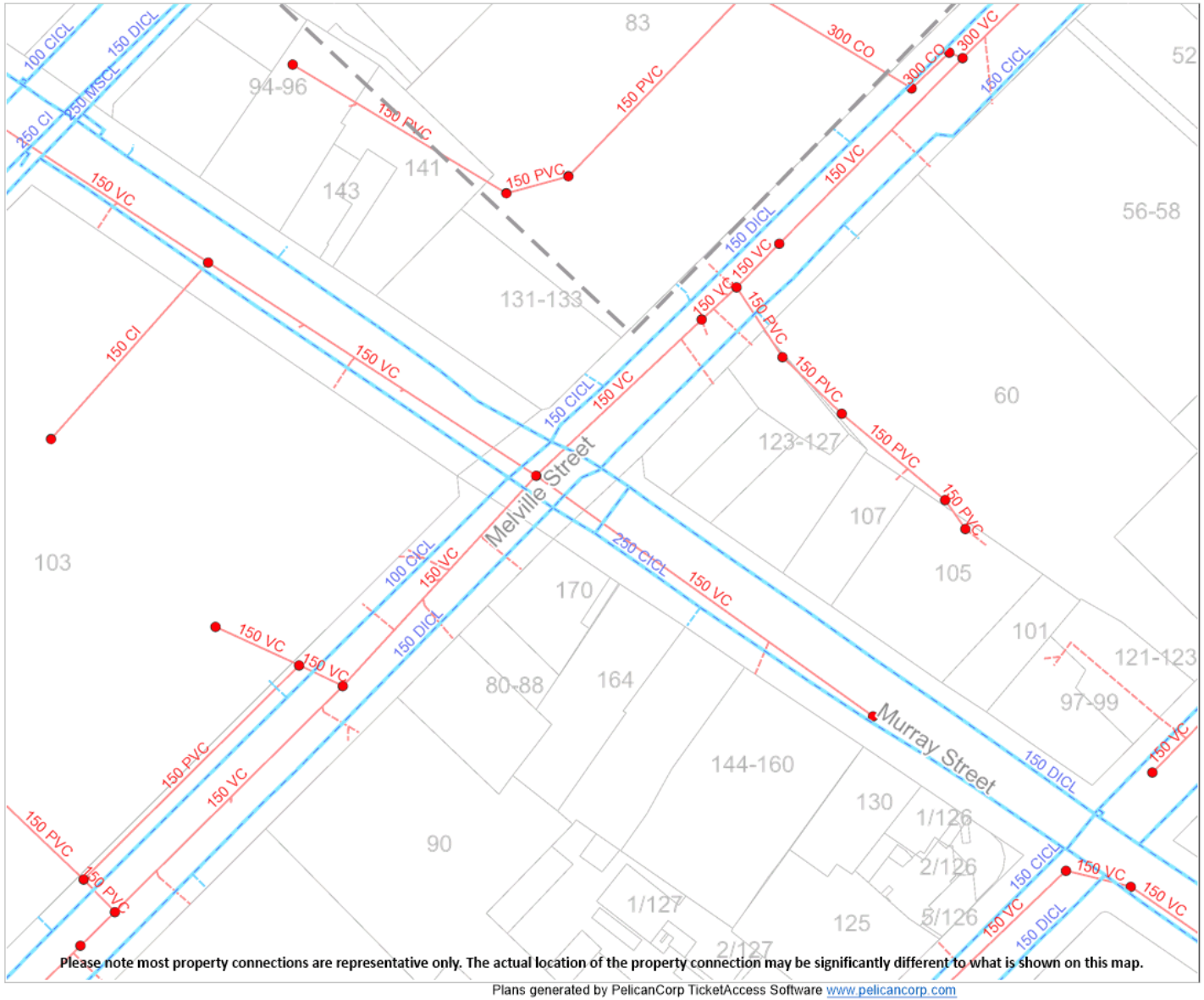
Disclaimer: The plan is provided in response to a Dial Before You Dig request. While all reasonable care has been taken to ensure the accuracy of the information on this plan, its purpose is to provide a general indication of the location of TasWater infrastructure. The information provided may contain errors or omissions and the accuracy may not suit all users. A site inspection and investigation is recommended before commencement of any project based on this data.

TasWater Plan v4.0 (17/10/2017)

TasWater

Sequence Number: **76013866**
Location: 83 Melville Street, Hobart, TAS 7000
Date Generated: **01/10/2018 (valid for 30 days)**

DIAL BEFORE YOU DIG
www.1100.com.au
The Essential First Step.



Please note most property connections are representative only. The actual location of the property connection may be significantly different to what is shown on this map.

Legend

- DBYD Enquiry
- Fire Hydrant
- Water Property Connection
- Water Main
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- Sewer Maintenance Hole
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Plans generated by PelicanCorp TicketAccess Software www.pelicancorp.com

TasWater Plan v4.0 (17/10/2017)

Aboriginal Heritage SEARCH RECORD

This search in response to your DBYD request

Job Number: 15023440 (Sequence Number: 76013871)

has not identified any registered Aboriginal relics or apparent risk of impacting Aboriginal relics.

This Search Record has been requested for Ms Nicole Reineker at 8:40AM on 01 October 2018 and delivered to nicole.reineker@ghd.com.
This Search Record expires on 01 April 2019.
Your personal Search Identification Number is PS0038375.

Please be aware that the absence of records on the Aboriginal Heritage Register for the nominated area of land does not necessarily mean that the area is devoid of Aboriginal relics. If at any time during works you suspect the existence of Aboriginal relics, cease works immediately and contact Aboriginal Heritage Tasmania for advice.

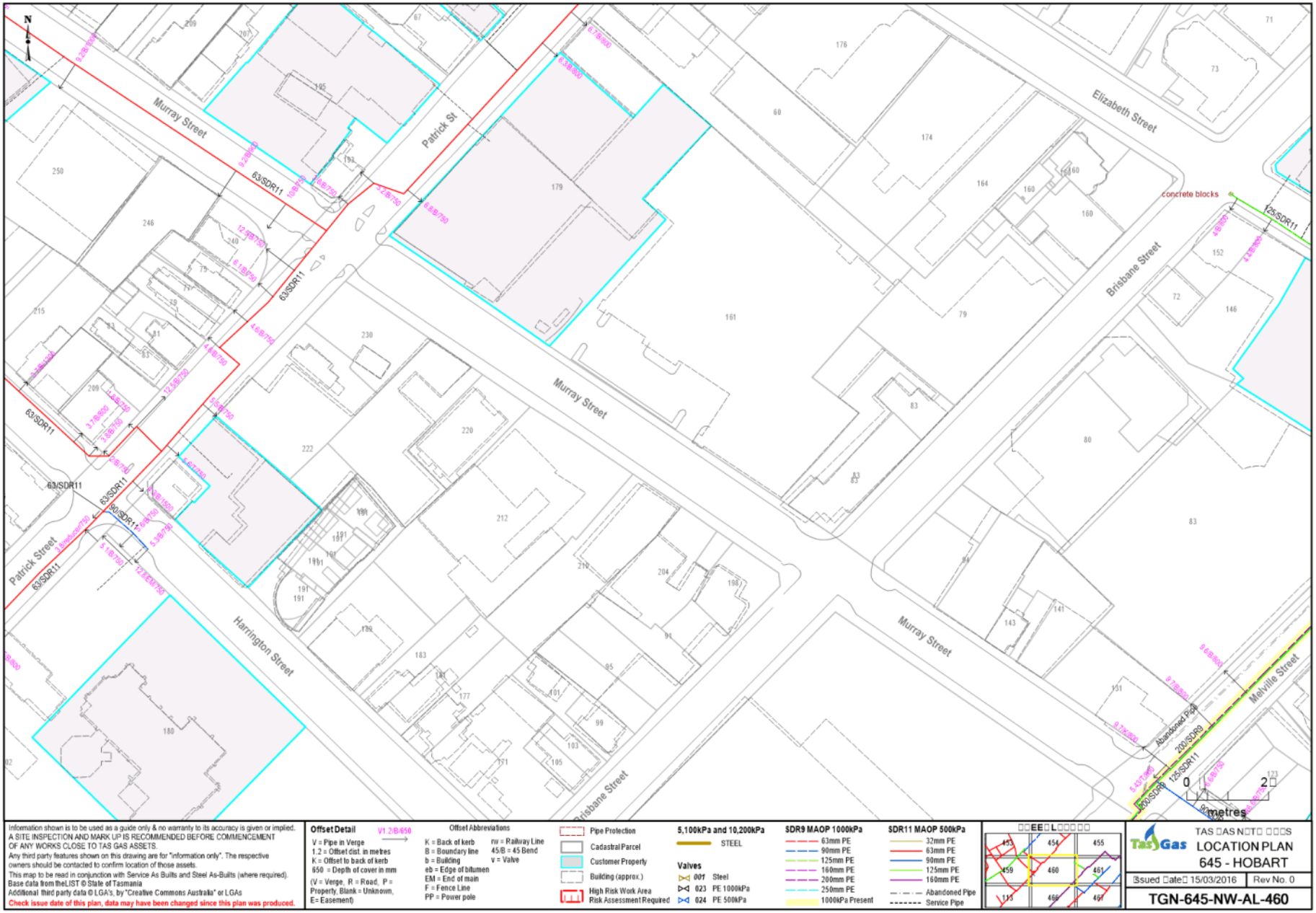
It is also recommended that you have on hand during any ground disturbance or excavation activities the Unanticipated Discovery Plan, to aid you in meeting requirements under the *Aboriginal Heritage Act 1975* should Aboriginal relics be uncovered. There are requirements that apply under the *Aboriginal Heritage Act 1975*. It is an offence to destroy, damage, deface, conceal or otherwise interfere with relics without a permit granted by the Minister. There is an obligation to report findings of relics as soon as practicable.

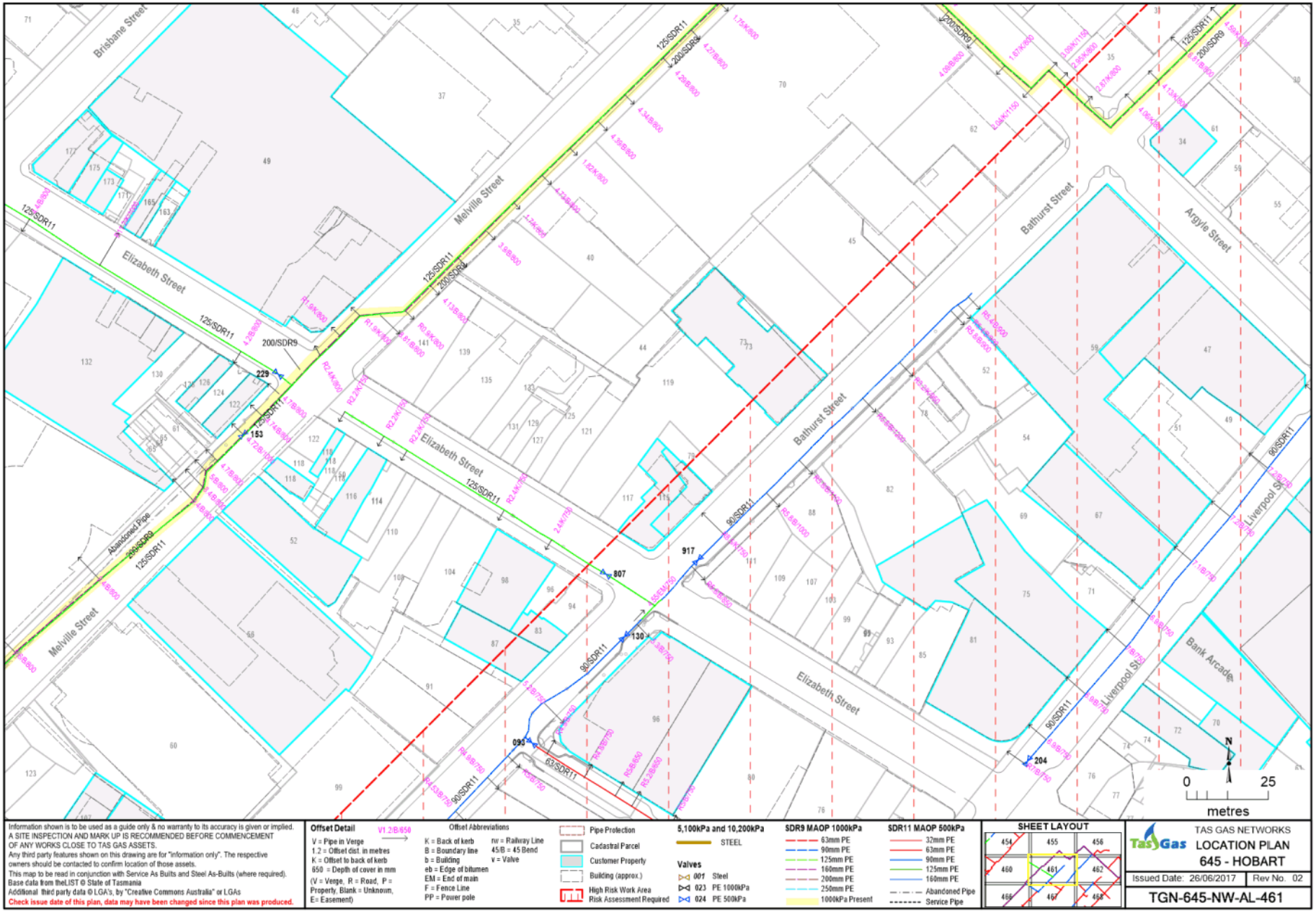
This Search Record is confirmation that you have checked the Aboriginal Heritage Property Search website or the Dial Before You Dig referral service for this search area. This Search Record will expire in six months from the search date.

If you have any queries please do not hesitate to contact Aboriginal Heritage Tasmania on **1300 487 045** or at **aboriginal@heritage.tas.gov.au**.

Aboriginal Heritage Tasmania
Department of Primary Industries, Parks, Water and Environment

Tasmanian Government


Murray Street
Patrick St
Elizabeth Street
Brisbane Street
Harrington Street
Melville Street
concrete blocks
63/SDR11
90/SDR11
125/SDR11
200/SDR9
Abandoned Pipe
0
2
metres
Information shown is to be used as a guide only & no warranty to its accuracy is given or implied.
A SITE INSPECTION AND MARK UP IS RECOMMENDED BEFORE COMMENCEMENT OF ANY WORKS CLOSE TO TAS GAS ASSETS.
Any third party features shown on this drawing are for "information only". The respective owners should be contacted to confirm location of those assets.
This map to be read in conjunction with Service As Builts and Steel As-Builts (where required).
Base data from theLIST © State of Tasmania
Additional third party data © LGA's, by "Creative Commons Australia" or LGAs
Check issue date of this plan, data may have been changed since this plan was produced.
Offset Detail
V1.2/B/650
V = Pipe in Verge
1.2 = Offset dist. in metres
K = Offset to back of kerb
650 = Depth of cover in mm
(V = Verge, R = Road, P = Property, Blank = Unknown, E = Easement)
Offset Abbreviations
K = Back of kerb
B = Boundary line
b = Building
eb = Edge of bitumen
EM = End of main
F = Fence Line
PP = Power pole
nw = Railway Line
45/B = 45 Bend
v = Valve
Pipe Protection
Cadastral Parcel
Customer Property
Building (approx.)
High Risk Work Area
Risk Assessment Required
5,100kPa and 10,200kPa
STEEL
Valves
001 Steel
023 PE 1000kPa
024 PE 500kPa
SDR9 MAOP 1000kPa
63mm PE
90mm PE
125mm PE
160mm PE
200mm PE
250mm PE
1000kPa Present
SDR11 MAOP 500kPa
32mm PE
63mm PE
90mm PE
125mm PE
160mm PE
Abandoned Pipe
Service Pipe
TasGas
LOCATION PLAN
645 - HOBART
Issued Date 15/03/2016
Rev No. 0
TGN-645-NW-AL-460



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EM = End of main
F = Fence Line
PP = Power pole
rw = Railway Line
45/B = 45 Bend
v = Valve

Pipe Protection
Cadastral Parcel
Customer Property
Building (approx.)
High Risk Work Area Risk Assessment Required

5,100kPa and 10,200kPa
STEEL

Valves
001 Steel
023 PE 1000kPa
024 PE 500kPa

SDR9 MAOP 1000kPa
63mm PE
90mm PE
125mm PE
160mm PE
200mm PE
250mm PE
1000kPa Present

SDR11 MAOP 500kPa
32mm PE
63mm PE
90mm PE
125mm PE
160mm PE
Abandoned Pipe
Service Pipe

SHEET LAYOUT
454 455 456
460 461 462
466 467 468

TasGas
TAS GAS NETWORKS
LOCATION PLAN
645 - HOBART
Issued Date: 26/06/2017 | Rev No. 02
TGN-645-NW-AL-461

BMSDOC-18-766
Service Completion Record and As-Built Information Page- (F)

Status - Approved
Current Version - 6.0
Published Date -Aug 2014

□omments / □bservations					
Type of Service □circle relevant type□					
□ong	□ntermediate	Short	Tail □mains sketch□	□yder □mains sketch□	□ther □specify□

Please record As-Built Sketch below

□nclude North arrow in circle	**□ame o□Contractor**	Address of □nstallation Street Number ……□2 ……
	□ame o□□ervice Layer	Street Name ……Melville Street ……
		Suburb ……Hobart……Postcode…7000……

PLE□□E □□□E:

□□ere is a □ervice Connection at t□e □ollo□ing address in t□e area or vicinity o□your D□□D in□uiry:
□□ □elville □treet □obart

DE□C□IP□I□□:

No accurate details are available for this Service.

□lease consult your As-□uilt drawing and contact Tas □as if you need further information,

Tas □as □□S Team

Depth of Main……mm □as Main Diameter…… mm

Comments □e.g. boundary unknown etc.□□……

……

□ □set measurements are to be ta□en □rom t□e □ro□erty boundaries □□ront □ side□not only □rom t□e tee but also at t□e □ront boundary and at least once □it□in t□e □ro□erty□ It is essential to s□o□ t□e de□t□ o□t□e service line at t□e tie in to t□e mains□across t□e □oot□at□
and once or t□ice □it□in t□e □ro□erty□Please indicate on t□e dra□ing □ □ere Polymeric stri□ and or concrete slab is installed□□□o□ isolation valve detail i□installed□□as □as reserves t□e rig□t to re□uest□amend or revise t□is dra□ing and any additional dra□ings □or t□e installation□ □ll dra□ings are to be com□leted to t□e entire satis□action o□□as □as□

□or □as □as use: As-built Approved		□ocuments Scanned / □lectronically □iled	
□y □	□ate □ / /	□y □	□ate □ / /
		□y □	

□□□□□□S □As-□uilt – □riginal H□ to Meter □nstallation □ile □Scan a copy to e-□onnections □ile □Scanned □opy to □□S □ecords for As-□uilts

"Safety by choice - not by chance"

© 2013 Tas Gas

Indicative Plans

Issue Date:	01/10/2018
Location:	83 Melville Street,Hobart,TAS-7000

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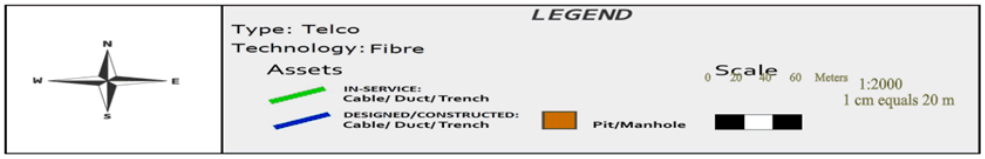
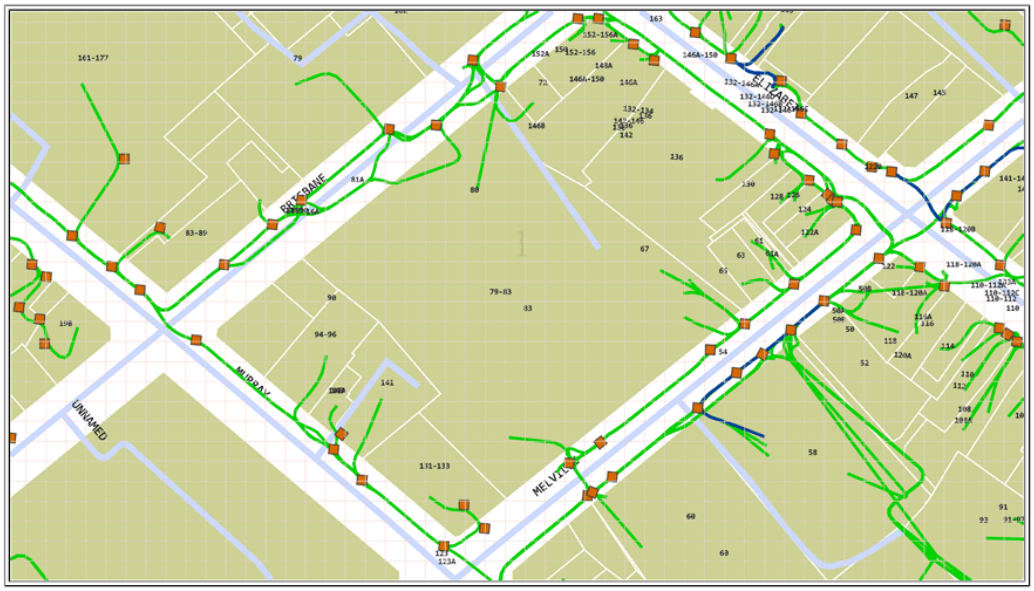
1





Emergency Contacts

You must immediately report any damage to **nbn™** network that you are/become aware of. Notification may be by telephone - 1800 626 329.

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www.1100.com.au

01/10/2018
GHD - Ms Nicole Reineker
GHD
2 Salamanca Square
Battery Point TAS 7004
Job No: 15023440
Sequence No: 76013862
Location Specified in Request (Site):
83 Melville Street Hobart

TASNETWORKS HAS RECORDS OF UNDERGROUND ELECTRICAL AND/OR TELECOMMUNICATIONS ASSETS IN OR AROUND THE SITE. DO NOT PROCEED WITHOUT READING AND UNDERSTANDING THE FOLLOWING REQUIREMENTS

To make your experience easier TasNetworks now has a new look, single response that covers TasNetworks' Electrical (Transmission and Distribution) and Telecommunication underground assets. Note that the text of this response has also changed so please take the time to read our response carefully.

Thank you for your recent Dial Before You Dig (**DBYD**) enquiry. TasNetworks works with DBYD to provide you with:

a) Information regarding our records relating to the general location of any underground assets owned by TasNetworks located in the vicinity of the Site;
b) Information regarding how to arrange on-site location services to assist you with identifying the exact location of TasNetworks' underground assets;
c) General information on how to work safely near TasNetworks' underground and overhead assets; and
d) Your legal obligations:
   i. not to unlawfully interfere with TasNetworks' assets (both underground and overhead); and
   ii. to notify TasNetworks of work that may affect our assets (both underground and overhead). Note that submission of a DBYD request is not sufficient notice for this purpose.

Our assets
TasNetworks owns and maintains both electrical and telecommunications assets. Our Electrical assets cover Transmission Extra High Voltage (EHV) and Distribution High Voltage (HV) and Low Voltage (LV) Networks. Our telecommunications assets may form part of the electrical infrastructure and includes fibre optic cables. Our assets may be located underground or overhead.

Our records
TasNetworks has records that there are underground assets owned by TasNetworks located in or around the Site. The approximate locations of these underground assets are set out in the plans enclosed. Where relevant, detailed plans may also be attached as image files. Please note that the plans and information provided with this letter are a guide only and may not provide an exact location of TasNetworks' underground assets. To ensure that the exact location of TasNetworks' assets has been marked out before you start works please arrange an on-site location by an accredited services locator.

Your obligations

It is important that you understand what your obligations are when it comes to working in the vicinity of TasNetworks' underground assets.

You must:

- Undertake your own searches, investigations, and enquiries to ensure that the information provided in this letter is accurate, reliable and complete and provide this information to anyone engaged to carry out cable location or underground works;
- Obtain updated plans from TasNetworks if you undertake work more than 30 days from the date of this letter by a new DBYD enquiry;
- It is a requirement under s110 of the *Electricity Supply Industry Act 1995* that you notify us in writing if you plan to undertake work that may affect our electrical assets (for example, excavation in the vicinity of our assets). Submission of a DBYD request is not the requisite notice under the Act. You must notify us by email to customer.enquiries@tasnetworks.com.au; please include the Job Number, Sequence Number, Street and Suburb in the subject title. Some more specific guidance around circumstances in which you must provide us with notice are set out below;
- For any work that involves excavation or boring with penetration below **100 mm and within 5 metres** of TasNetworks' underground assets, as well as following the Dial Before You Dig (DBYD) Best Practice Guide for Locating Underground Services the additional minimum requirements must be met:
    - Engage a cable locator to locate and mark the location of the relevant assets showing both alignment and depth.
    - Pothole by hand or use other non-destructive methods to expose the cable and verify location and depth of the assets.
    - If excavations are outside of the table below then excavations may proceed with no further involvement from TasNetworks.
    - If excavations are within the vicinities outlined in the table below then you must give TasNetworks at least **7 days' notice** prior to commencing work and provide detail of the proposed works. TasNetworks may require a copy of your safety management plan, which could be in the form of a Safe Work Method Statement (**SWMS**), which outlines how the risks associated with cables will be managed. **No work shall proceed in this vicinity without prior approval from TasNetworks.**
    - If excavations are within the vicinities outlined in the table below no mechanical excavation is allowed (only hand digging or vacuum truck excavation is permitted), unless specifically approved by TasNetworks.

Cable Type	Depth of Excavation	Proximity to Cable (Horizontal)
Communications or LV	500 mm	2 m
HV	500 mm	2 m
EHV	100 mm	5 m

    - Following any excavation works, the installation (including cable markers, bedding materials and mechanical protection) must be reinstated to TasNetworks' standard. Contact TasNetworks for further information.
- Work safely, exercising reasonable skill, care and diligence so that you do not interfere with any of TasNetworks' assets. We note that it is an offence under section 109 of the *Electricity Supply Industry Act* 1995 (Tas) to interfere with TasNetworks' electrical infrastructure or an electrical installation without TasNetworks' consent; and
- Ensure an emergency plan for contact with energised electric lines is developed and maintained so it is effective for each workplace or site. **IMMEDIATELY REPORT ANY DAMAGE to TasNetworks' infrastructure by telephoning 132 004.**

Working near TasNetworks infrastructure
Electricity infrastructure is inherently dangerous and if damaged or interfered with can cause serious injury (including death) and also disrupt essential supply to customers. As such, it is important that you treat electricity with respect. Our fibre optic assets are fragile; contact with a fibre optic cable may cause internal damage, even when no external damage is present. Any contact with our electricity infrastructure or telecommunications assets must be reported to TasNetworks immediately by telephoning **132 004**.

On-site Location Services
As the location of TasNetworks' assets on the enclosed plans are approximate only, TasNetworks recommends you engage the services of an accredited cable location service provider to ascertain the exact location of such assets. The cable locator must assume that all communications cables are non-conducting. Contact information for cable location and underground service location services can be found in the Yellow Pages at www.yellowpages.com.au under "cable location" or through the National Utility Locating Contractors Association at www.nulca.com.au.

Private assets
TasNetworks does not maintain records for privately owned infrastructure. You will need to make enquiries about the location of any privately owned assets at the Site with the relevant property owner. On occasion, some privately owned infrastructure may show up in our records and in our DBYD response to you. If the TasNetworks DBYD response that you receive contains information on privately owned infrastructure, you will still need to make further enquiries about the location of privately owned assets with the relevant property owner, as TasNetworks' records of privately owned infrastructure are not maintained or updated.

TasNetworks will not be liable to you or any person for any loss or damage (whether direct, indirect, special, consequential or otherwise) suffered or incurred if you (or any other person) act, or fail to act, on any information set out in this letter.

If any doubt exists as to your requirements or obligations when excavating around TasNetworks assets, then contact the Customer Service Centre prior to any work commencing.

Regards,

Customer Service Centre Officer,
TasNetworks Pty Ltd
Phone: 1300 137 008

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Enquiry Details

Enquiry Details	
Utility ID	50300
Job Number	15023440
Sequence Number	76013862
Enquiry Date	01/10/2018 08:31
Address	83 Melville Street Hobart
Location in Road	Not Supplied
Activity	Tendering

Enquirer Details			
Customer ID	1895125		
Contact	Ms Nicole Reineker		
Company	GHD		
Email	nicole.reineker@ghd.com		
Phone	0362100626	Mobile	Not Supplied

Assets	
Affected Assets	Conduit, Fiber Optic Cable, HV Cable, LV Cable

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Plan description

If underground assets owned by TasNetworks exist within our records in the vicinity of the Site, a colour overview map and index map(s) are included. Key to symbols are included on these plans. All maps on the following pages highlight the Site in a **bold red** colour.

Where relevant, detailed underground asset plans for TasNetworks owned assets may also be attached as image files.

Key to symbols used on any attached TasNetworks Underground asset plan image files.

EHV	-	Extra High Voltage
HV	-	High Voltage
LV	-	Low Voltage
UG	-	Underground
OH	-	Overhead
STD	-	Standard

Underground Cable (Black/White plans)

	EHV/HV/LV Cable
	Fibre Optic Cable

	Streetlight cable		Potend Or Joint		Manhole		HV,LV Pole HV/LV Pole
	Service Duct		Cabinet		Service Pit		Steel/concrete Pole
	Sealed end on UG Cable	S%	Turret with Switch		Service Post	H	Std Fuse Base with lamp
			Feeder Pillar	T	Telephone Cabinet		Road Crossing Duct

	Zone Substation		Substation	H L 2-125 PVC	Typical section through crossing

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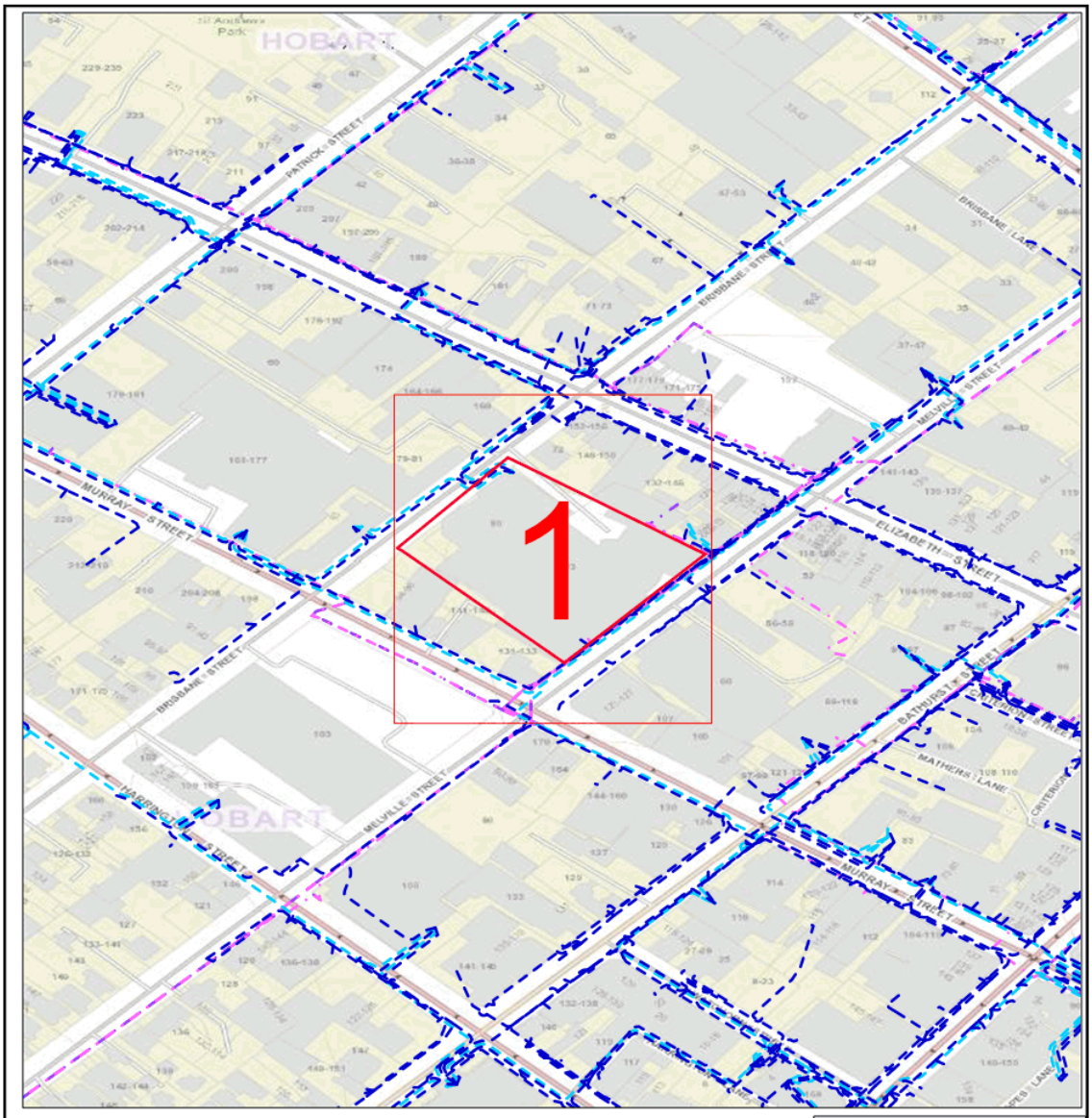
Overview Map

Job No: 15023440

Sequence No: 76013862

83 Melville Street Hobart

TasNetworks contact details: 1300 137 008 (enquiries) or 132 004 (emergency only), email customer.enquiries@tasnetworks.com.au



LEGEND:

- Site - True
- Conduit
- Fiber Optic Cable
- HV Cable
- LV Cable

N

0 0.03km

1 Detail

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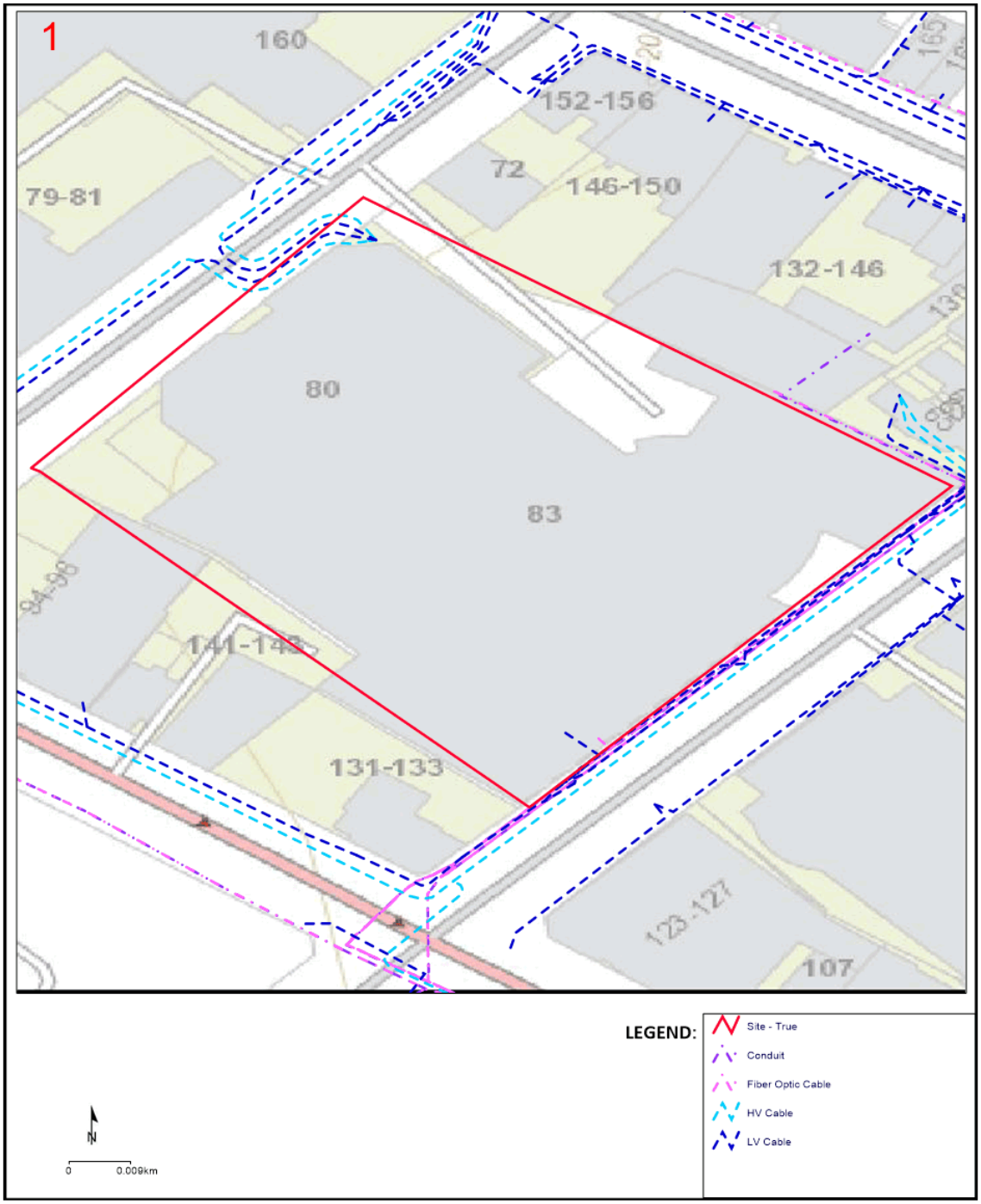
Detail Map 1 **Job No:** 15023440 **Sequence No:** 76013862

83 Melville Street Hobart

TasNetworks contact details: 1300 137 008 (enquiries) or 132 004 (emergency only), email customer.enquiries@tasnetworks.com.au



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Job No 15023440

Phone: 1100
www.1100.com.au

Caller Details

Contact:	Ms Nicole Reineker	**Caller Id:**	1895125	**Phone:**	0362100626
Company:	GHD	**Mobile:**	Not Supplied	**Fax:**	Not Supplied
Address:	2 Salamanca Square Battery Point TAS 7004	**Email:**	nicole.reineker@ghd.com		

Dig Site and Enquiry Details

WARNING: The map below only displays the location of the proposed dig site and does not display any asset owners' pipe or cables. The area highlighted has been used only to identify the participating asset owners, who will send information to you directly.

User Reference: 79 melville
Working on Behalf of: Private

Enquiry Date:	**Start Date:**	**End Date:**
01/10/2018	03/10/2018	03/10/2018

Address:
83 Melville Street
Hobart TAS 7000

Job Purpose:	**Onsite Activity:**
Design	Tendering
Location of Workplace:	**Location in Road:**
Private Property	Not Supplied

- Check the location of the dig site is correct. If not submit a new enquiry.
- If the scope of works change, or plan validity dates expire, resubmit your enquiry.
- Do NOT dig without plans. Safe excavation is your responsibility. If you do not understand the plans or how to proceed safely, please contact the relevant asset owners.

Notes/Description of Works:
Not Supplied

Your Responsibilities and Duty of Care

- If plans are not received within 2 working days, contact the asset owners directly & quote their Sequence No.
- ALWAYS perform an onsite inspection for the presence of assets. Should you require an onsite location, contact the asset owners directly. Please remember, plans do not detail the exact location of assets.
- Pothole to establish the exact location of all underground assets using a hand shovel, before using heavy machinery.
- Ensure you adhere to any State legislative requirements regarding Duty of Care and safe digging requirements.
- If you damage an underground asset you MUST advise the asset owner immediately.
- By using this service, you agree to Privacy Policy and the terms and disclaimers set out at **www.1100.com.au**
- **For more information on safe excavation practices, visit www.1100.com.au**

Asset Owner Details

The assets owners listed below have been requested to contact you with information about their asset locations within 2 working days.
Additional time should be allowed for information issued by post. It is **your responsibility** to identify the presence of any underground assets in and around your proposed dig site. Please be aware, that not all asset owners are registered with the Dial Before You Dig service, so it is **your responsibility** to identify and contact any asset owners not listed here directly.
** Asset owners highlighted by asterisks ** require that you visit their offices to collect plans.
# Asset owners highlighted with a hash require that you call them to discuss your enquiry or to obtain plans.

Seq. No.	Authority Name	Phone	Status
76013871	Department of Primary Industries, Parks, Water and Environment (DPIPWE)	1300487045	NOTIFIED
76013864	Hobart City Council	0362382482	NOTIFIED
76013869	NBN Co, VicTas	1800626762	NOTIFIED
76013865	Optus and/or Uecomm, Tas	1800505777	NOTIFIED
76013868	PIPE Networks, Tas	1800201100	NOTIFIED
76013867	Tas Gas Networks	0363369350	NOTIFIED
76013870	TasmaNet	0404684955	NOTIFIED
76013862	TasNetworks Pty Ltd	1300137008	NOTIFIED
76013866	TasWater	136992	NOTIFIED
76013863	Telstra VICTAS	1800653935	NOTIFIED

END OF UTILITIES LIST

Lodge Your Free Enquiry Online – 24 Hours a Day, Seven Days a Week

Appendix F Reference Documents received from UTAS

Screening Level Environmental Site Assessment of 79-83 Melville Street, Hobart

2 December 1994

Prepared for James Douglas & Associates
on behalf of Tasmania State Property Services

Richard Stoklosa Engineering Practice Pty Ltd
14 Sunvale Avenue
Sandy Bay, Tasmania 7005
(002) 25 4933

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6. Geological Conditions 12
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8. Limitations of Investigation 15
9. References 16

Appendix A ..... Environmental Site Assessment Checklist
Appendix B ..... Geologic Description of Excavations and Bore Holes

1. Executive Summary

Purpose and Scope

This screening level environmental site assessment was undertaken by Richard Stoklosa, of:

Richard Stoklosa Engineering Practice Pty Ltd
14 Sunvale Avenue
Sandy Bay, Tasmania 7005

The work was performed at the request of James Douglas and Associates, on behalf of Tasmania State Property Services, for the property known as:

Crisp and Gunn Buildings
79-83 Melville Street
Hobart, Tasmania

This screening level environmental site assessment involves a review of the site history and land use including examination of aerial photographs and historical review documents), review of available :ate and local records, and site reconnaissance. The purpose of the assessment is to investigate the ɔssibility of site contamination from previous land use.

ɔservations

site contains brick buildings currently used as offices, and large store areas constructed of brick timber, with concrete floors. At the rear of the buildings are outdoor car parking areas on bitumen graded gravel and soils. Some vehicles also park inside the store area immediately off Melville :. The buildings are under consideration for their conservation value, and it is contemplated that operty will be put up for sale in the near term by the State of Tasmania.

and later Crisp and Gunn) owned and operated the premises as a timber milling, joinery, and re merchandising business since 1886. After a fire destroyed the buildings in 1922, the current ;s were constructed and the timber business continued until about 1965. The State of a acquired the property in 1967, and it has since been used for offices and stores. The current ıre the State Emergency Service and the State Fire Commission. Other state government nts also use portions of the stores area for equipment and materials.

ll quantities of hazardous materials are stored and handled at the site. This includes a 1,000 ·ol underground storage tank and bowser on the premises, licensed to Shell Company of :d in 1973 (under the Inflammable Liquids Act 1929) by the State Department of Mines Goods Directorate). The license indicates that the petrol tank and bowser was to be the State Supply and Tender Department. Notes attached to the license further indicate ɔl tank was previously used by Crisp and Gunn and abandoned prior to the license date :a 1965 when operations ceased). It is not known how old the tank is, or what other have been stored in it.

:he underground petrol tank, there is a small outdoor flammable liquid store (enclosed ain link fence) reported to contain 44 gallon drums of chain saw fuel and kerosene. It 'at other materials may have been stored at this site, but it is unlikely that the site was ure from large quantities of other hazardous materials, given the present tenancy and milling and hardware merchandising activities. Small quantities of chemicals etc.) were probably part of the historical merchandising activities.

Insulation was noted above ceiling panels in some of the upstairs office spaces at 79 Melville Street. The type of insulation used at the property is not known.

Some large portions of the store behind the office building at 79 Melville Street was inaccessible during the site reconnaissance visits. Large ground-level access covers were observed in at least two locations, but could not be investigated.

Conclusions and Recommendations

A summary of potential sources of contamination is shown on the following page for reference. No testing of soils or building materials (insulation) for potential contamination and/or identification of hazardous materials has been conducted.

Access to fenced and locked portions of the store area is also necessary to fully investigate the nature and condition of the facility, particularly the ground-level access covers that were observed.

Due to the presence of the underground petrol storage tank and other materials at the site, a sampling programme is indicated to adequately assess the environmental condition of the site.

...aracterization Data

...ons, based upon review of available records, site reconnaissance and testing.

Existence	Test Data Available			Evidence of Oil/Haz Mat'l				Comments
Information	Yes	No	Test Type(F)/Results	REC	OBS	TEST	NONE	
	☐	■		☐	☐	☐	■	
e incidental e of oils/fuel	☐	■		☐	■	☐	☐	Oil film on standing water in parking area drain
	☐	■		☐	☐	☐	■	
	☐	■		☐	☐	☐	■	
	☐	■		☐	☐	☐	■	
	☐	■		☐	☐	☐	■	
gallon petrol tank ed) and bowser	☐	■		☐	☐	☐	■	Soil test required to confirm subsurface conditions
on-OHM AST or pressure testing	☐	■		☐	■	☐	■	
lon drums of ne, chainsaw fuel	☐	■		☐	☐	☐	■	Drums on concrete floor, generator fuel in curbed area
	☐	■		☐	☐	☐	■	

sites
(D) Includes domestic or industrial sewage leach fields/pits
(E) Note: Waste oil is considered a hazardous material
(F) Tested for hydrocarbons, BETX, lead, zinc, cadmium, and mercury

ABBREVIATIONS:
REC – Records
OBS – Observations
OHM – Oil/Haz. Materials

nd the State Fire Comm offices. Concrete access covers observed on floor, but no information on use available to date.
ken to investigate the possibility of contamination (re: the area of the underground storage tank on the premises).
d excavations conducted on the site in 1979. No remaining evidence of site work discovered during reconnaissance.

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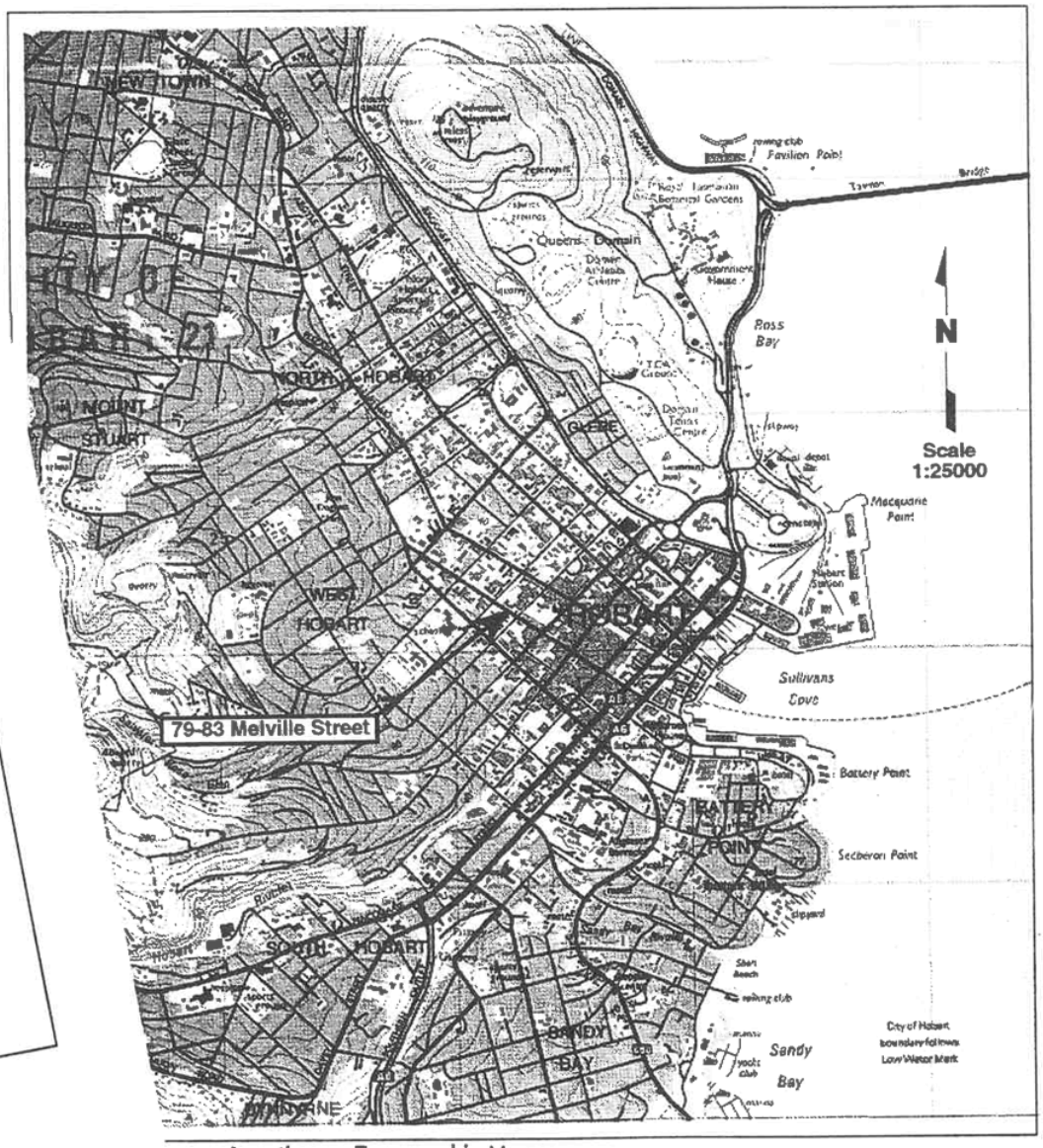
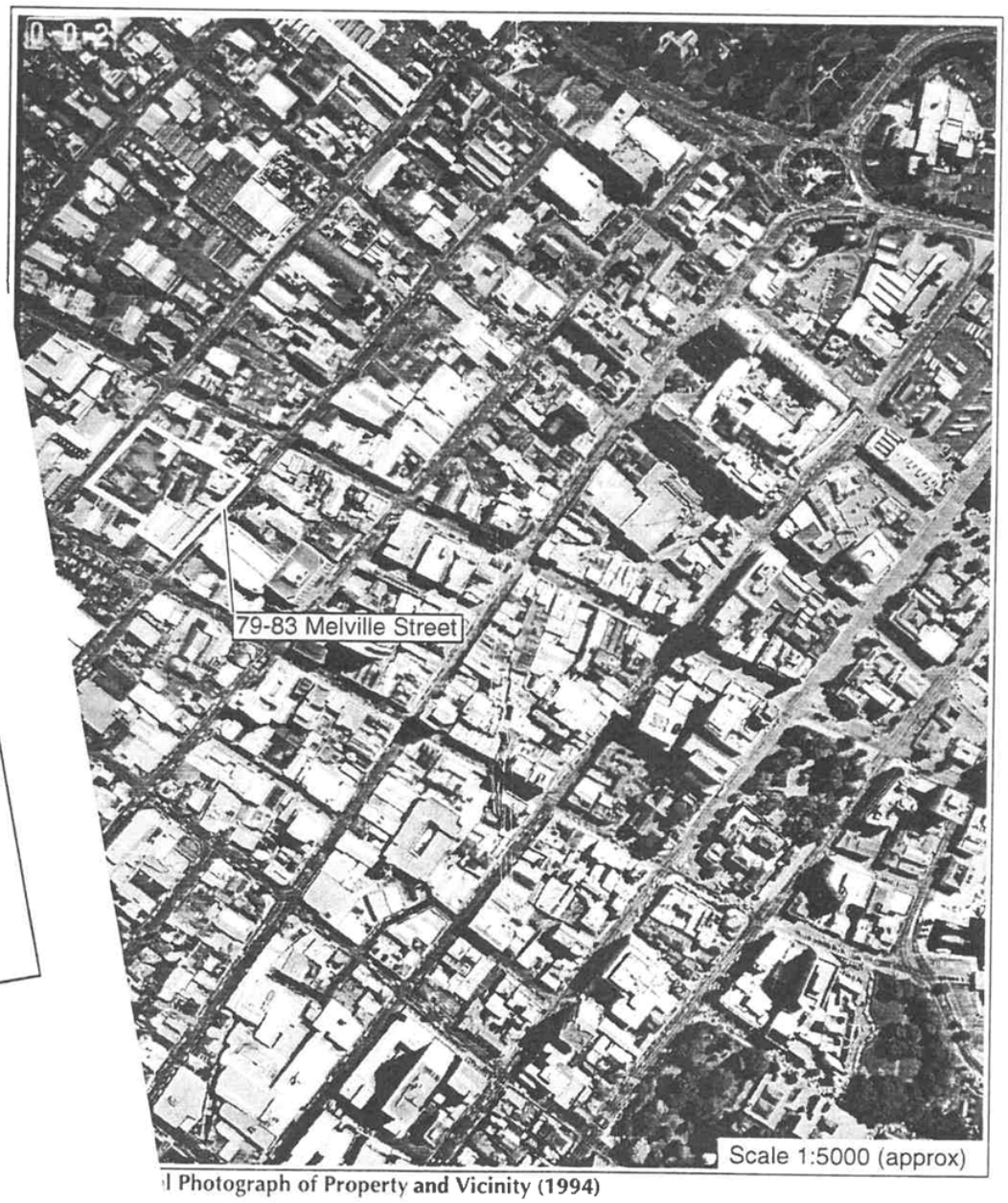
2. Site Description

The property is located at 79-83 Melville Street, Hobart, Tasmania. The location of the property on a regional scale is shown on the topographic map reproduced below.



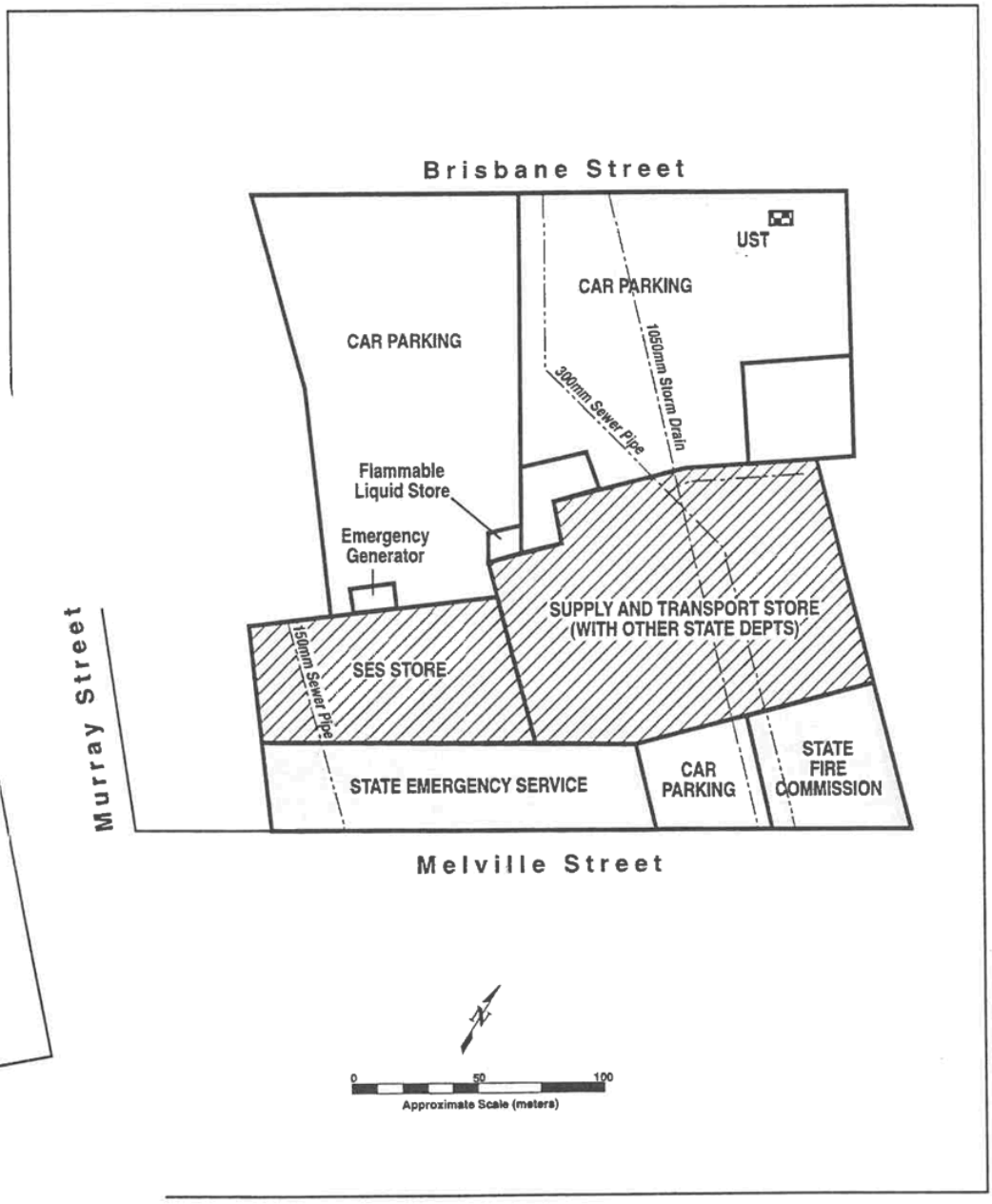
ɔperty Location on Topographic Map

The property is located in an area of commercial and light industrial development in the Hobart "central business district" area. The site contains brick buildings currently used as offices, and large store areas constructed of brick and timber, with concrete floors. At the rear of the buildings are outdoor car parking areas on bitumen and graded gravel and soils. Some vehicles also park inside the store area immediately off Melville Street. Figure 2-2 is an aerial photograph of the site, showing existing development.



l Photograph of Property and Vicinity (1994)

The current use of the property is for state government offices and stores. The current office tenants are the State Emergency Service and the State Fire Commission. Other government departments use portions of the large store areas. A diagram of the site is shown in Figure 2-3 for reference.



Diagram

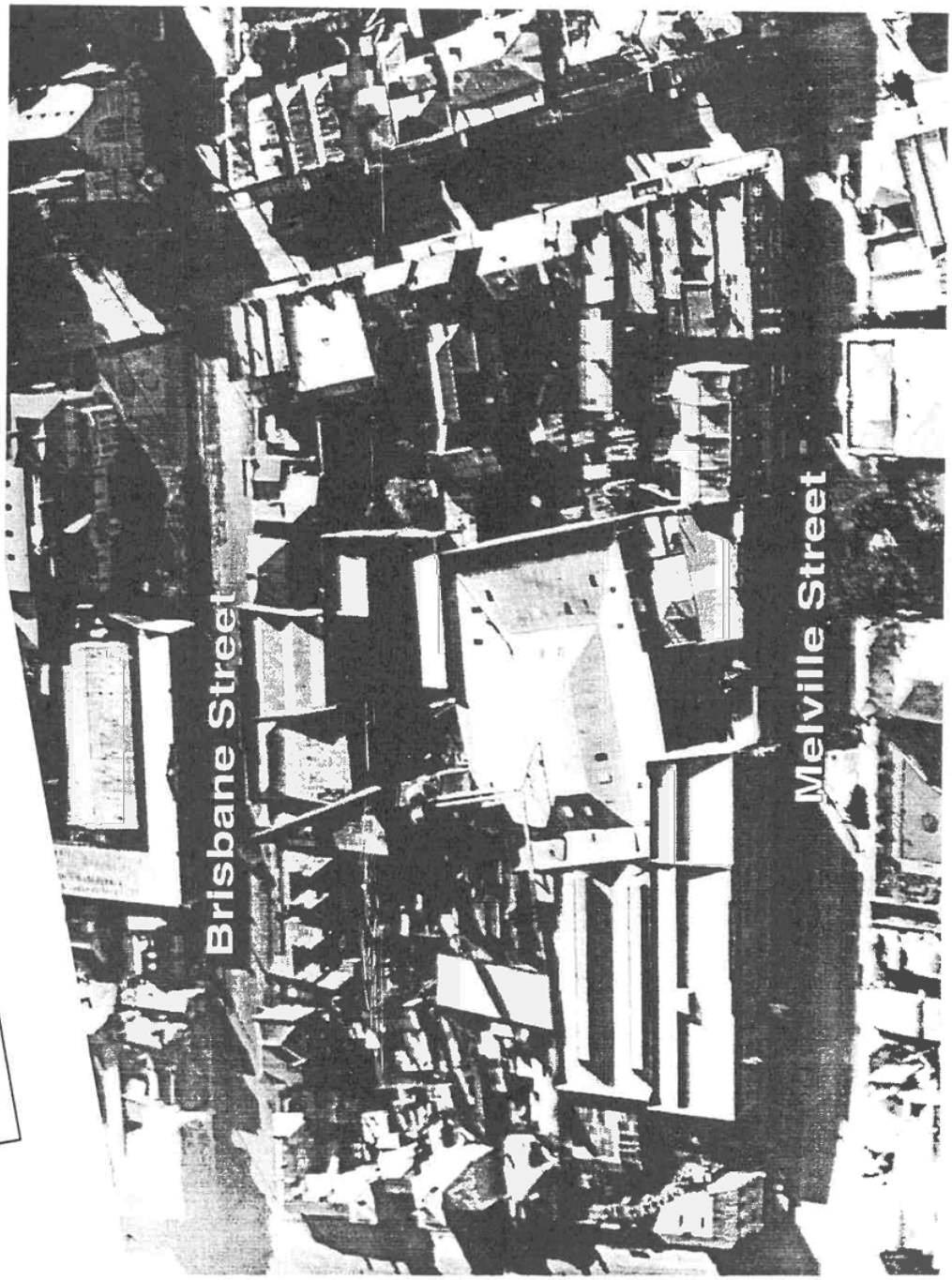
3. Site History

The buildings are under consideration for their conservation value. A thorough description of site history is available separately.[1]

Crisp (and later Crisp and Gunn) owned and operated the premises as a timber milling, joinery, and hardware merchandising business since 1886. After a fire destroyed the buildings in 1922, the current buildings were constructed and the timber business continued until about 1965. The State of Tasmania acquired the property in 1967, and it has since been used for offices and stores. The current tenants are the State Emergency Service and the State Fire Commission. Other state government departments also use portions of the stores area for equipment and materials.

A 1913 oblique photograph of the property is shown in Figure 3-1. The timber milling operation is thought to have been conducted in the buildings nearest Brisbane Street. The large store area was for the milling inventory. The structure at what is now 79 Melville Street was probably the business office, and the larger structure at 83 Melville Street was the joinery shop and hardware merchandising business. A tall smoke stack is evident in the photograph, possibly for burning wood chips and shavings collected in the ductwork seen on the buildings in the photograph.

'incent, Cultural Resource Management, Conservation Assessment, 83 Melville Street (including 79
4.



otograph of the Former Crisp and Gunn Business Facilities

4. Proposed Land Use

The property is to be marketed for sale by the state government in the near term. Some of the existing structures are currently being assessed for their conservation value.

The site is currently a commercial and light industrial property, and it is unknown whether this type of land use will continue in the future.

5. Site Reconnaissance

Site reconnaissance included examination of records and field verification of the location of stormwater services. The property contains buildings and large store areas with concrete floors. At the rear of the property are car parking areas with bitumen and gravel/soil surfaces (refer to site diagram in Figure 2-3).

A search of post-1977 records by the Hobart City Council did not reveal any council orders, licenses, or other information of significance to the environmental condition of the property.[2]

Site reconnaissance was performed on 4 November 1994 and 1 December 1994. Observations are recorded using an Environmental Site Assessment Checklist which is included in Appendix A for reference.

Some small quantities of hazardous materials are stored and handled at the site. This includes a 1,000 gallon petrol underground storage tank and bowser on the premises, licensed to Shell Company of Australia Ltd in 1973 (under the Inflammable Liquids Act 1929) by the State Department of Mines (Dangerous Goods Directorate). The license indicates that the petrol tank and bowser was to be operated by the State Supply and Tender Department. Notes attached to the license further indicate that the petrol tank was previously used by Crisp and Gunn and abandoned prior to the license date 'probably circa 1965 when operations ceased). It is not known how old the tank is, or what other naterials may have been stored in it.

addition to the underground petrol tank, there is a small outdoor flammable liquid store (enclosed a locked, chain link fence) reported to contain 44 gallon drums of chain saw fuel and kerosene. It ocated at the rear of the State Emergency Service (SES) building and store at 83 Melville Street.

not known what other materials may have been stored at this site, but it is unlikely that the site subject to exposure from large quantities of other hazardous materials, given the present tenancy previous timber milling and hardware merchandising activities. Small quantities of chemicals ents, paints, etc.) were probably part of the historical merchandising activities.

ion was noted above ceiling panels in some of the upstairs office spaces at 79 Melville Street. e of insulation used at the property is not known.

was available to the space beneath the building at 79 Melville Street. Examination of this area reveal evidence of past storage of materials, and the soils appeared to be dry. There was no of the soils, or odors indicative of potential contamination.

e portions of the store behind the office building at 79 Melville Street were inaccessible site reconnaissance visits. Large ground-level access covers were observed in at least two out could not be investigated.

dence of a large stormwater conduit beneath the site. A large diameter pipe (in excess of s shown on Hobart City Council drainage plans, which appears to be the same size pipe countered in one of the boreholes drilled in 1979 (refer to Section 6 and Appendix A, mber 4). It has been speculated that the large stormwater pipe drains the area from ege to the northwest of the property.

bart City Council, Records Section, personal communication.

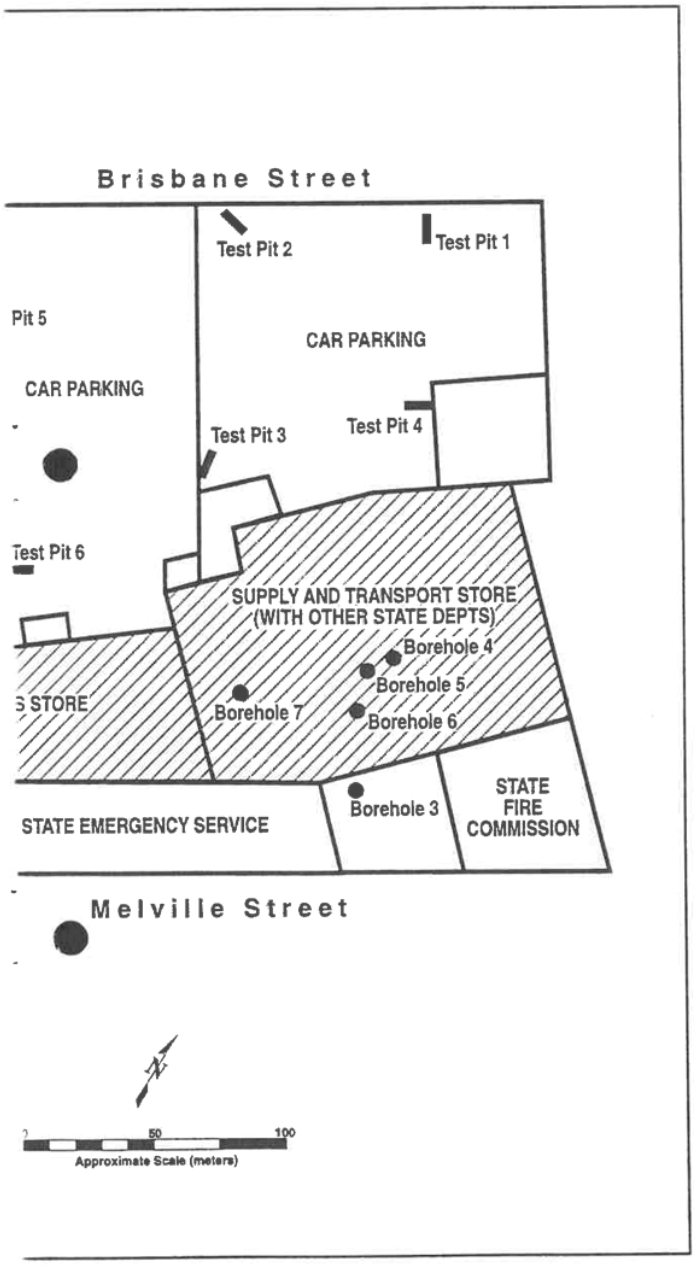
There is a cylindrical brick access structure rising above the embankment at the rear of 79 Melville Street, which is probably associated with the sewer piping at the site. Water was heard flowing through the pipe during the site visits.

One of the floor drains contained an oily film on standing water, observed through the steel cover grate. Discussion with the Hobart City Council also reveals records of a triple interceptor trap in the store area, designed to intercept oil and sediment, which is normally associated with auto mechanic work or car washing activity.[3]

A small shed at the rear of the SES Store contains a skid-mounted 45 kVA (approximate) diesel powered generator. It is on standby for emergency power generation for SES operations. A small diesel tank is attached to the bottom of the skid, and the unit is resting on a curbed concrete bund. No evidence of leakage was noted.

One above ground storage tank is situated in the store area behind 79 Melville Street. It is reportedly used only for pressure testing, using water,[4] and has a pressure gauge and drain fitted for this purpose.

Hobart City Council, personal communication.
osz, State Fire Commission, personal communication.



cavations and Boreholes (1979)

6. Geological Conditions

Mineral Resources, regarding geologic
cription was available on the property,
dolerite and clayey soils.

erformed in 1979 by the Department of
s of the investigation are included in
follows.[7]

indicates that the block bounded by
by Triassic age sediments. The more
ter Hobart Area (Provisional, Map 1,
to the east of the north-south diagonal

1979, on behalf of the Department of
orth-south diagonal noted above. These
oles (refer to locations in Figure 6-1 for
been levelled for car parking. The test
lluvial materials occur above dolerite.
which sub-vertical to vertical joints
situ dolerite occurs at between 0.3 and

Streets were made using auger screws.
ents occur above extremely weathered
to stiff, high plasticity clay, sometimes
l as moist, hard, high plasticity clay. A
trance to the (then) Supply and Tender
nts above extremely weathered in-situ

area. With the exception of one hole
r pipe, these holes were completed as
meters of fill materials over moderately

ite has been filled over to provide level

a depth of about ten meters.

Works, Materials and Research Laboratory
es.

Appendix B

Geologic Description of Excavations and Boreholes

Environmental Site Assessment Checklist

General Circumstances

Project: SITE RECONNAISSANCE OF 79-83 MELVILLE STREET, HOBART

Client: JAMES DOUGLAS & ASSOCIATES Phone: 31 4020 Fax: 31 4020

Owner: Tasmanian Property Services Group Ross Kile Phone: 33 3088 Fax: 33 6655

Site Contact: Arranged by James Douglas Phone: 31 4020 Fax: 31 4020

Site Name: "Crisp & Gunn Buildings" -

Current Site Use: 79 Melville St: State Fire Commission ; 83 Melville St: SES (State Emergency Service) Land Area:

Location / Address: 79-83 Melville St. Hobart, TASMANIA

Site Access Condition: Off Street Access to Buildings, some areas of warehouse fenced & locked - no access

Type of Facility (circle): Industrial Commercial Residential (Other) State Agency Offices / Stores

Data Collection Prior to Site Investigations

Topographic Map: TASMAP - Hobart Sheet Scale: 1:25 000 Date: 1988

Site Map: Included with Geologic Report of Boreholes and Excavations (197 Scale: 1:500 approx? Date: 1979

Prepared By: Dept. Main Roads - Mat'l & Research Dv.

Geologic Map: (Provisional - Map 1) TASMAP Engineering Geology Map - Hobart Scale: 1:25000 Date: 1990

Soil Map: " High Plasticity Clays, Gravel, Cobbles Scale: (from subsurface exploration - see below) Date:

Aerial Photo: TASMAP 1218-204, M990, HOBART CITY Scale: 1:5000 Date: 12.2.94

Well Data: (NOT AVAILABLE - NONE OBSERVED) Driller / Logger:

Details Available? (circle): Yes No Depth: Date:

Type of Lithology (circle): Bedrock Weathered Unconsolidated Mineralised

Ground Water Occurrence and Depth:

Subsurface Exploration: 6 Test Pit Excavations & 7 Boreholes Performed By: Dept. Main Roads - Mat'l & Research Dv.

Details Available? (circle): (Yes) No Depth: Boreholes: 2.5 to 10 meters; Excavations up to 1.5 meters Date: 1979 (Nov)

Type of Lithology (circle): Bedrock (Weathered) Unconsolidated Mineralised
Decomposed Dolerite

Ground Water Occurrence and Depth: estimated to be at least 6 meters below surface. (opinion of Dept. Mines)
(not encountered in Boreholes up to 10 meters)

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Adjacent Properties

Property Name: Commercial Properties Type of Business: Print Shop, Retail Shops

Property Name: Residential Use Type of Business: (evidence of possible incidental use)

Property Name: City Properties Type of Business: Parking Garage (Melville St.)

Property Name: Type of Business:

Use of Contiguous Properties

Wetlands: None, although some evidence points to piping of the Warwick Rivulet beneath the site.

Landfill / Waste Treatment Facility: None.

Storage Facilities: Large warehouse stores on premises, ~~storage assoc. with smaller~~

Petrol Stations: Shell Bowser on premises (petrol), with 1,000 gallon licensed UST

Agriculture / Grazing Lands: None.

Commercial: ~~Commercially-intensive land use - retail shops/services~~ None.

Industrial: Light industrial – welding (gas), equipment maintenance workshops

Other?: Professional offices in brick buildings on premises; car parking/washing

Use of Surrounding Properties

Wetlands: None.

Landfill / Waste Treatment Facility: None.

Storage Facilities: Storage associated with smaller businesses in area (print shop next door).

Petrol Stations: None, possible fuel/oil at auto mechanic shop (incidental quant.?).

Agriculture / Grazing Lands: None.

Commercial: Commercially-intensive land use in surrounding area.

Industrial: Light industrial (auto mechanics, etc.)

Other?: Parking garage (multi-storey) on opposite side of Melville St.

Environmental Concerns due to Adjacent Properties

Print shop and auto mechanic businesses adjacent to subject property may involve storage of hazardous materials — however, no apparent discharges are evident and environmental concern to subject property is probably insignificant.

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7. Conclusions and Recommendations

Testing of soils and possibly some of the building materials (insulation) for potential contamination and/or identification of hazardous materials should be conducted to adequately investigate the possibility of site contamination from previous land use.

Access to fenced and locked portions of the store area is also necessary to fully investigate the nature and condition of the facility. Of interest are the ground-level access covers that were observed, and the reported triple interceptor oil and sediment trap. A more thorough examination of council drainage plans and other site drawings, with field confirmation, is necessary in the inaccessible areas of the property.

Due to the presence of the underground petrol storage tank and other materials at the site, a sampling programme is indicated to adequately assess the environmental condition of the site.

Upon completion of these further investigations, recommendations can be made on the short term and long term environmental management of the property.

8. Limitations of Investigation

It is presumed that the information provided by various sources, both published and by way of personal communication, is substantially accurate and has disclosed all relevant information.

Certain limitations on this assessment should be recognized to keep the conclusions and recommendations in perspective:

- No records were available to describe historical land use at the property (prior to 1977) from the Hobart City Council. No records are available to describe the storage, handling, or discharge of chemicals or hazardous materials that may have been used on the premises.
- Municipal sewer and storm water piping traverse the property. These pipelines were not examined in the field, and no opinion is rendered on their condition. However, there is no apparent evidence of sewer or storm water problems on the soils above these pipelines.

Environmental conditions are dynamic, and the present assessment is only a "snap shot" of the condition of the property at the time of the site investigation.

9. References

South Australian Health Commission, ***Identification and Assessment of Contaminated Land***, 1994.

TASMAP, Aerial Photograph, 1218-204, M990, Hobart City, 1:5000, 2560', 12 February 1994.

TASMAP, Engineering Geology Map – Greater Hobart Area, Map1, Provisional, 1990.

TASMAP, Topographic Map – Hobart Sheet, 1988.

Vincent, Robert, Cultural Resource Management, ***Conservation Assessment, 83 Melville Street (including 79 Melville Street)***, 1994.

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Appendix A

Environmental Site Assessment Checklist

Appendix 4

Land Titles

Department of Main Roads (Tas)
Materials and Research Division

Engineering log – excavation

pit no. 1
sheet 1 of 1

file: 04.053

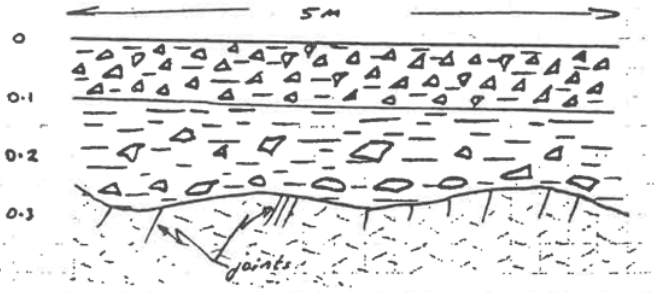
project: POLICE HEADQUARTERS, HOBART
pit location: NE. CORNER MET. ARCHITECTS CAR PARK

pit commenced: 17-9-79
pit completed: 17-9-79
supervised by: W. DOE
log checked by:

equipment type and model: FORD 420
excavation dimensions: 5 m long, 0.5 m wide

A.L. surface: −2.693 m
datum: BRISBANE ST operator: SMITH

method	penetration 1 2 3	support	water	notes samples, tests, etc.	depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency, rel. density	hand penetrometer 100 200 300 400	structure and additional observations
BH					0.3			GRAVEL, fine grained, decomposed dolerite	M	L		
									M	L		
									M	MD		
								CLAY and ROCK FILL				
					0.5			DOLERITE, coarse grained, contains clay pockets				
					1.0			DOLERITE, decomposed, in situ				



N.B. DATUM is SW CORNER OF WATSONS WIRELESS BRISBANE ST FOOTPATH.

key

method
- natural exposure
- E existing excavation
- BH backhoe bucket
- B bulldozer blade
- R ripper

support
- T timbering

penetration
- 1 2 3 no resistance ranging to refusal

water
- 10 Oct, 73 water level on date shown
- water inflow
- water outflow

notes
- samples and tests
- U50 – undisturbed sample 50 mm diameter
- D – disturbed sample
- N – standard penetration test: figure = result
- N* – SPT + sample
- Nc – cone penetrometer

classification symbols and soil description
based on unified classification system

moisture
- D – dry
- M – moist
- W – wet

consistency/relative density
- VS – very soft
- S – soft
- F – firm
- St – stiff
- VSt – very stiff
- H – hard
- Fb – friable
- VL – very loose
- L – loose
- MD – moderately dense
- D – dense
- VD – very dense

Department of Main Roads (Tas)
Materials and Research Division

Engineering log — excavation

pit no. 5
sheet 1 of 1

file: 04·053

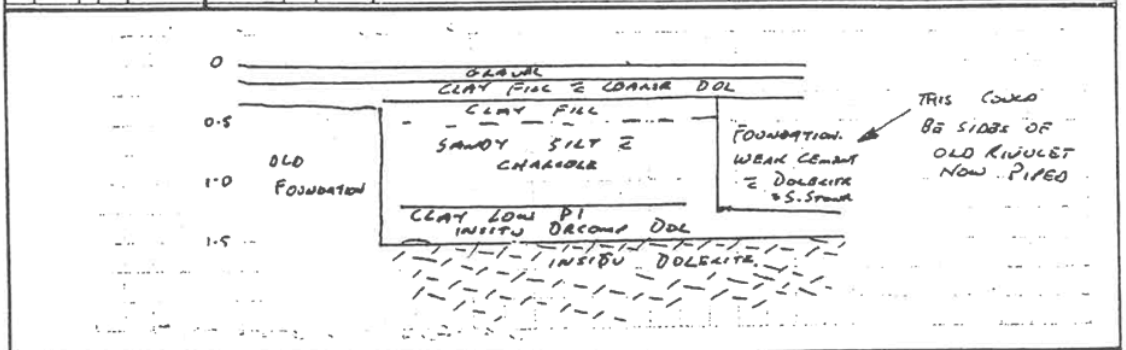
project: POLICE HEADQUARTERS HOBART
pit location: S.W. CORNER MET. ARCH. CAR PARK

pit commenced: 17-9-79
pit completed: 17-9-79
supervised by: W DOE
log checked by:

equipment type and model: FORD 420
excavation dimensions: 2·5 m long, 0·5 m wide

R.L. surface: -4·025 m
datum: BRISBANE ST operator: SMITH

method	penetration 123	support	water	notes samples, tests, etc.	R.L. depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency, rel. density	hand penetrometer 100 200 300 400 kPa	structure and additional observations
							GP	GRAVEL FINE BROWN DOLERITE	M	L		
							CL	CLAY FILL + COARSE DOLERITE	M	L		
					0·5		CH	CLAY FILL HIGH PLASTICITY	M	L		
BH					1		SM	SANDY SILT FINE TOPSOIL WITH CHARCOAL PARTICLES	M	L		
							CL	CLAY LOW PLASTICITY DECOMP DOLERITE	M	S-F		
					1·5			INSITU DECOMP DOL				



key

method
- ↓ natural exposure
- E existing excavation
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support
- T timbering

penetration
- 123 no resistance ranging to refusal

water
- 10 Oct, 73 water level on date shown
- water inflow
- water outflow

notes
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consistency/relative density
- VS — very soft
- S — soft
- F — firm
- St — stiff
- VSt — very stiff
- H — hard
- Fb — friable
- VL — very loose
- L — loose
- MD — moderately dense
- D — dense
- VD — very dense

Department of Main Roads, Test Materials and Research Division

Engineering log – excavation

pit no. 5
sheet 1 of 1

file: 04·053

project: POLICE HEADQUARTERS HOBART

pit location: DLI. CAR PARK ADJACENT DUNLOP WALL

pit commenced: 17-9-79
pit completed: 17-9-79
supervised by: W DOE
log checked by:

equipment type and model: FORD 420

excavation dimensions: 2 m long, 0·5 m wide

R.L. surface: −0·245 m
datum: BRISBANE operator: SMITH

method	penetration 1 2 3	support	water	notes samples, tests, etc.	R.L. depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency, rel. density	hand penetrometer 100 200 300 400 kPa	structure and additional observations
BH							GPGC	RUBBLE FILL + CLAY		D		
					0·5			OLD BUILDING FOUNDATION BRICKS + CEMENT		MD		
					1·3			INSITU DOLERITE		VD		VERTICAL JOINTING 25cm JOINT SPACING
								HOLE DISCONTINUED				

key

method
- natural exposure
- E existing excavation
- BH backhoe bucket
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support
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penetration
- 1 2 3 no resistance ranging to refusal

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classification symbols and soil description
based on unified classification system

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- M — moist
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consistency/relative density
- VS — very soft
- S — soft
- F — firm
- St — stiff
- VSt — very stiff
- H — hard
- Fb — friable
- VL — very loose
- L — loose
- MD — moderately dense
- D — dense
- VD — very dense

Department of Main Roads (Tas)
Materials and Research Division

engineering log – borehole

borehole no: 1
sheet 1 of 2

file:

project: POLICE HEADQUARTERS, HOBART
borehole location: refer site plan

hole commenced: 7-11-79
hole completed: 8-11-79
supervised by: N. D. JOHNSON
log checked by: B. D. WELDON

drill model and mounting: GEITCO (trailer)
hole diameter: 110 mm
slope: Vert deg.
bearing: – deg.
R.L. surface: m
datum:
operator: J. Hammersley

method	penetration 1 2 3	support	water	notes samples, tests, etc.	R.L. depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency, rel. density	hand penetrometer kPa 100 200 300 400	structure and additional observations
							GP	GRAVEL, decomposed dolerite				FILL OR TERTIARY SEDIMENTS
							CH	CLAY + BOULDERS (FILL)				
					1.0							
				N* = 4 (2, 2, 2)			CH	CLAY; high plasticity; moisture content (M.C.) greater than plastic limit (P.L.); brown; minor (<1%) fine grained sand size particles.	M	F		
				N* = 4 (1, 2, 2)	2.0		CH		M	F		
				N* = 6 (7, 3, 3)	3.0		GM	SILT + GRAVEL, coarse grained sandstone (slightly indurated) gravel in yellow silt matrix, sub angular gravel fragments	M	H to Fb		
				9/11/79								
				N* = 36 (9, 16, 20)	4.0		CH	CLAY; high-medium plasticity M.C. < P.L.; speckled and mottled colouring of white, grey, red, brown showing remnant dolerite fabric. Some earthy or powdery lenses and seams of white calcite. (extremely weathered dolerite). Some fine to coarse sand sized grains of fresh to slightly weathered mineral grains.				EXTREMELY WEATHERED IN SITU DOLERITE
				N* = 37 (11, 12, 25)	5.0		CH					
				N* = 40 (12, 16, 24)	6.0		CH					
				N* = 54 (16, 24, 30)	7.0		CH					
					8.0							

key

method
- S auger screwing*
- AD auger drilling*
- R roller/tricone
- W washbore
- CT cable tool

* bit shown by suffix:
- B – blank bit
- V – "V" bit
- T – TC bit

e.g. ADT

support
- C casing
- M mud

penetration
1 2 3 – no resistance ranging to refusal

water
- 10 Oct, 73 water level on date shown
- water inflow
- water outflow

notes
- U50 – undisturbed sample 50 mm diameter
- D – disturbed sample
- N – standard penetration test: figure = result
- N* – SPT + sample
- Nc – cone penetrometer

classification symbols and soil description based on unified classification system

moisture
- D – dry
- M – moist
- W – wet

consistency/relative density
- VS – very soft
- S – soft
- F – firm
- St – stiff
- VSt – very stiff
- H – hard
- Fb – friable
- VL – very loose
- L – loose
- MD – moderately dense
- D – dense
- VD – very dense

Department of Main Roads (Tas)
Materials and Research Division

Engineering log – borehole

borehole no. 2
sheet 1 of 1

file:

project: POLICE HEADQUARTERS, HOBART
borehole location: refer site plan

hole commenced: 8-11-79
hole completed: 8-11-79
supervised by: N.D. JOHNSON
log checked by: B.D. WELDON

drill model and mounting: GEMCO (trailer)
hole diameter: 110 mm
slope: Vert deg.
bearing: — deg.
R.L. surface: m
datum:
operator: T. Hammersley

method	penetration 1 2 3	support	water	notes samples, tests, etc.	R.L. depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency, rel. density	hand penetrometer kPa 100 200 300 400	structure and additional observations
A.S.								GRAVEL, decomposed dolerite				
				$N^d = 4$ (1,2,2)	1.0		CH	CLAY; high plasticity, moisture content (M.C.) greater than plastic limit (P.L.); brown	M	F		FILL OR TERTIARY SEDIMENTS
				$N^d = 8$ (2,2,6)	2.0		CH		M	St		
				9-11-79	3.0		CH	CLAY, high plasticity; M.C. < P.L., speckled and mottled colouring of red-brown - white - grey showing remnant dolerite fabric. Some white powdery calcite leases. Minor (<1%) fine to coarse sand sized mineral grains	M	H		EXTREMELY WEATHERED IN SITU DOLERITE
				$N^d = 31$ (7,13,18)	4.0							
				$N^d = 45$ (11,21,24)	5.0		CH		M	H		
					6.0			END OF BOREHOLE at 5.95 m depth				

key

method
- AS auger screwing*
- AD auger drilling*
- R roller/tricone
- W washbore
- CT cable tool

* bit shown by suffix:
- B — blank bit
- V — "V" bit
- T — TC bit

e.g. ADT

support
- C casing
- M mud

penetration
1 2 3 — no resistance ranging to refusal

water
- 10 Oct, 73 water level on date shown
- water inflow
- water outflow

notes
- U50 — undisturbed sample 50 mm diameter
- D — disturbed sample
- N — standard penetration test: figure = result
- N* — SPT + sample
- Nc — cone penetrometer

classification symbols and soil description based on unified classification system

moisture
- D — dry
- M — moist
- W — wet

consistency/relative density
- VS — very soft
- S — soft
- F — firm
- St — stiff
- VSt — very stiff
- H — hard
- Fb — friable
- VL — very loose
- L — loose
- MD — moderately dense
- D — dense
- VD — very dense

Department of Main Roads (Tas)
Materials and Research Division

engineering log – borehole

borehole no. 5
sheet 1 of 2

file:

project: POLICE HEADQUARTERS, HOBART
borehole location: refer site plan

hole commenced: 14-11-79
hole completed: 14-11-79
supervised by: N. D. JOHNSON
log checked by: B.D. WELDON

drill model and mounting: GEMCO (trailer)
hole diameter: 110 mm
slope: Vert deg.
bearing: deg.
R.L. surface: m
datum:
operator: J. Hammersley

method	penetration 1 2 3	support	water	notes samples, tests, etc.	R.L. depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency, rel. density	hand penetrometer kPa 100 200 300 400	structure and additional observations
A.S.								CONCRETE				
			15-11-79	N* = 2 (1,1,1)	1.0		CH	CLAY, high plasticity, moisture content greater than plastic limit; black to brown colour, contains red-brick fragments (coarse gravel size).	M	F		FILL
				N* > 60	2.0				M	F		7 blows for 150 mm penetration, 18 blows for no further penetration
				N* > 60				Continued on cored borehole sheet				20 blows for zero penetration

key

method
AS auger screwing*
AD auger drilling*
R roller/tricone
W washbore
CT cable tool
* bit shown by suffix:
B – blank bit
V – "V" bit
T – TC bit
e.g. ADT

support
C casing
M mud

penetration
1 2 3
no resistance
ranging to
refusal

water
10 Oct, 73 water level on date shown
water inflow
water outflow

notes – samples and tests
U50 – undisturbed sample 50 mm diameter
D – disturbed sample
N – standard penetration test: figure = result
N* – SPT + sample
Nc – cone penetrometer

classification symbols and soil description
based on unified classification system

moisture
D – dry
M – moist
W – wet

consistency/relative density
VS – very soft
S – soft
F – firm
St – stiff
VSt – very stiff
H – hard
Fb – friable
VL – very loose
L – loose
MD – moderately dense
D – dense
VD – very dense

Department of Main Roads (Tas)
Materials and Research Division

engineering log – borehole

borehole no: 6
sheet 1 of 2

file:

project: POLICE HEADQUARTERS, HOBART
borehole location: refer site plan

hole commenced: 14-11-79
hole completed: 15-11-79
supervised by: N. D. JOHNSON
log checked by: B. D. WELDON

drill model and mounting: GEMCO (trailer)
hole diameter: 110 mm
slope: Vert deg.
bearing: – deg.
R.L. surface: m
datum:
operator: J. Hammersley

method	penetration 1 2 3	support	water	notes samples, tests, etc.	R.L. depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency, rel. density	hand penetrometer kPa 100 200 300 400	structure and additional observations
A.S.								CONCRETE				
								BRICK FRAGMENTS	M	L		
								COBBLES + CLAY	M	L		
				N*=6 (1,3,3)	10			CLAY, high plasticity, moisture content greater than plastic limit, black-brown, gravelly in places (fine to medium gravel).	M	F-St		FILL ?
					20			GRAVEL (possibly weathered in situ dolerite	M	D		
				N* >60	30			Continued on engineering log – cored borehole sheet.				20 blows for zero penetration.

key

method
AS auger screwing*
AD auger drilling*
R roller/tricone
W washbore
CT cable tool
* bit shown by suffix:
B – blank bit
V – "V" bit
T – TC bit
e.g. ADT

support
C casing
M mud

penetration
1 2 3 no resistance ranging to refusal

water
10 Oct, 73 water level on date shown
water inflow
water outflow

notes – samples and tests
U50 – undisturbed sample 50 mm diameter
D – disturbed sample
N – standard penetration test: figure = result
N* – SPT + sample
Nc – cone penetrometer

classification symbols and soil description
based on unified classification system

moisture
D – dry
M – moist
W – wet

consistency/relative density
VS – very soft
S – soft
F – firm
St – stiff
VSt – very stiff
H – hard
Fb – friable
VL – very loose
L – loose
MD – moderately dense
D – dense
VD – very dense

DEPARTMENT OF PUBLIC WORKS (TAS.)
MATERIALS AND RESEARCH DIVISION

M & R F8

borehole no: 7
sheet 1 of 1

engineering log — cored borehole

File No.

project: POLICE HEADQUARTERS, HOBART
borehole location: refer site plan

hole commenced: 16-11-79
hole completed: 16-11-79
supervised by: N.D. JOHNSON
log checked by: B.D. WELDON

drill model and mounting: GEMCO (trailer) slope: Vert deg.
barrel type and length: NMLC 210 fluid H_2O bearing: – deg.

R. L. surface: m
datum:
Driller J. Hammersley

drilling information					rock substance				rock mass defects	
method	case-lift	water		R.L. depth metres	graphic log core loss	substance description rock type: grain characteristics, colour, structure, minor components.	weathering	strength Is (50) EL VL L M H VH EH	defect spacing mm 30 100 300 1000 >3000	defect description thickness, type, inclination, planarity, roughness, coating. particular / general
						CONCRETE				
						CLAY, high plasticity, yellow				FILL
			Nd >60 (220,-)	1.0		DOLERITE, medium to coarse grained, grey-blue some iron staining near joints (brown)	SW -MW Fr			N.B. last 20 blows for only 50 mm penetration.
				2.0						45°, 60° and subhorizontal joints, some iron stained. Minor amounts of calcite and/or zeolite
				3.0			Fr SW Fr MW			
				4.0		END OF BOREHOLE at -8.45m depth				
				5.0						

key

method
AS auger screwing
AD auger drilling
R roller/tricone
W washbore
NMLC NMLC core drilling

case-lift
casing used
barrel withdrawn

water
10 Oct, 73 water level date shown
water inflow
partial drilling water loss
complete drilling water loss

graphic log/core loss
core recovered (hatching indicates material)
no core recovered

weathering
Fr — fresh
SW — slightly weathered
MW — moderately weathered
HW — highly weathered
EW — extremely weathered

strength (indirect tensile strength)
EL — extremely low
VL — very low
L — low
M — medium
H — high
VH — very high
EH — extremely high

DEPARTMENT OF PUBLIC WORKS (TAS.)
MATERIALS AND RESEARCH DIVISION

engineering log — cored borehole

borehole no. 5
sheet 2 of 2

File No.

project: POLICE HEADQUARTERS, HOBART
borehole location: refer site plan

hole commenced: 14-11-79
hole completed: 14-11-79
supervised by: N.D. JOHNSON
log checked by: B.D. WELDON

drill model and mounting: GEMCO (Trailer) slope: vert deg.
barrel type and length: NMLC 2.10m fluid H_2O bearing: — deg.

R. L. surface: m
datum:
Driller J. Hammersky

drilling information					rock substance				rock mass defects	
method	case-lift	water		R.L. depth metres	graphic log core loss	substance description rock type: grain characteristics, colour, structure, minor components.	weathering	strength Is (50) EL VL L M H VH	defect spacing mm 30 100 300 1000 3000	defect description thickness, type, inclination, planarity, roughness, coating. particular / general
		15-11-79		1.0						
				2.0		Continued from engineering log - borehole sheet				
				2.70						
				2.83		CORE LOSS				
NMLC				3.0		DOLERITE, medium to coarse grained, blue-grey, some iron staining (brown)	W Fr			Iron stained subvertical and subhorizontal joints
				4.0		END of BOREHOLE at - 3.90m depth				

method
AS auger screwing
AD auger drilling
R roller/tricone
W washbore

case-lift
casing used
barrel withdrawn

water
10 Oct, 73 water level

graphic log/core loss
core recovered

weathering
Fr — fresh
SW — slightly weathered
MW — moderately weathered

strength (indirect tensile strength)
EL — extremely low
VL — very low
L — low
M — medium

Department of Main Roads (Tas)
Materials and Research Division

engineering log - borehole

borehole no: 4
sheet 1 of 1

file:

project: POLICE HEADQUARTERS, HOBART
borehole location: refer site plan

hole commenced: 13-11-79
hole completed: 13-11-79
supervised by: N. D. JOHNSON
log checked by: B. D. WERDON

drill model and mounting: GEMCO (trailer)
hole diameter: 110 mm
slope: Vert deg.
bearing: — deg.
R.L. surface: m
datum:
operator: J. Hammersley

method	penetration 1 2 3	support	water	notes samples, tests, etc.	R.L. depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency, rel. density	hand penetrometer kPa 100 200 300 400	structure and additional observations
A.S.								CONCRETE				
							CH	CLAY, high plasticity, moisture content greater than plastic limit, black to brown-green colour (FILL)				
				N^d >60 (1,3,20)	1.0			CONCRETE	M	F		N.B. last 20 blows for zero penetration
								STORMWATER PIPE				
				N^d >60 (1,2,10)	2.0			CONCRETE				N.B. last 10 blows for zero penetration
								END OF BOREHOLE at -2.30 m depth after penetrating 42 inch diameter storm-water pipe.				

key

method
AS auger screwing*
AD auger drilling*
R roller/tricone
W washbore
CT cable tool
* bit shown by suffix:
B – blank bit

support
C casing
M mud

penetration
1 2 3
no resistance
ranging to
refusal

water

notes – samples and tests
U50 – undisturbed sample 50 mm diameter
D – disturbed sample
N – standard penetration test: figure = result
N* – SPT + sample
Nc – cone penetrometer

classification symbols and soil description
based on unified classification system

moisture
D – dry
M – moist
W – wet

consistency/relative density
VS – very soft
S – soft
F – firm
St – stiff
VSt – very stiff
H – hard
Fb – friable
VL – very loose
L – loose
MD – moderately dense

Department of Main Roads (Tas)
Materials and Research Division

engineering log – borehole

boreholes no: 3
sheet 1 of 1

file:

project: POLICE HEADQUARTERS, HOBART
borehole location: refer site plan.

hole commenced: 12-11-79
hole completed: 13-11-79
supervised by: N.D. JOHNSON
log checked by: B.D. WELDON

drill model and mounting: GEMCO (trailer)
hole diameter: 110 mm
slope: Vert deg.
bearing: — deg.
R.L. surface: m
datum:
operator: J. Hammersky

method	penetration 1 2 3	support	water	notes samples, tests, etc.	R.L. depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency, rel. density	hand penetrometer kPa 100 200 300 400	structure and additional observations
								CONCRETE				
				N* = 4 (1,2,2)	1.0		CH	CLAY, high plasticity, moisture content (M.C.) greater than plastic limit (P.L.); black to brown colour minor amounts (<2%) of highly weathered dolerite fine grained gravel	M	F		FILL OR TERTIARY SEDIMENTS
				N* = 7 (3,4,3)	2.0				M	F-St		
				N* = 9 (3,3,6)	3.0		CH	CLAY; high plasticity M.C. ≤ P.L.; speckled and mottled colouring of brown-grey-white showing remnant dolerite fabric. Minor amount (up to 5%) of sand size mineral grains; some earthy and powdery calcite veins & masses.	W M	St		EXTREMELY WEATHERED IN SITU DOLERITE
				N* = 23 (5,10,13)	4.0		CH		M	VSt		
				N* = 25 (7,11,14)	5.0		CH		M	VSt-H		
				N* > 60 (23,27,30)	6.0		CH		M	H		N.B. Last 30 blows for only 50 mm penetration.
				N* > 60	7.0				M	H		N.B. 55 blows for only 150 mm penetration.
								END OF BOREHOLE at -7.15 m depth.				

key

method
AS auger screwing*
AD auger drilling*
R roller/tricone
W washbore
CT cable tool
* bit shown by suffix:
B – blank bit

support
C casing
M mud

penetration
1 2 3 no resistance ranging to refusal

water

notes
U50 – undisturbed sample 50 mm diameter
D – disturbed sample
N – standard penetration test:figure = result
N* – SPT + sample

classification symbols and soil description
based on unified classification system

moisture
D – dry
M – moist
W – wet

consistency/relative density
VS – very soft
S – soft
F – firm
St – stiff
VSt – very stiff
H – hard
Fb – friable
VL – very loose
L – loose

Department of Main Roads (Tas)
Materials and Research Division

engineering log – borehole

borehole no: 1
sheet 2 of 2

file:

project: POLICE HEADQUARTERS, HOBART
borehole location: refer site plan

hole commenced: 7-11-79
hole completed: 8-11-79
supervised by: N.D. JOHNSON
log checked by: B.D. WELDON

drill model and mounting: GEMCO (trailer)
hole diameter: 110 mm
slope: Vert deg.
bearing: – deg.
R.L. surface: m
datum:
operator: J. Hammersley

method	penetration 1 2 3	support	water	notes samples, tests, etc.	R.L. depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency, rel. density	hand penetrometer kPa 100 200 300 400	structure and additional observations
A.S.				N* > 60 (20, 29, 35)	5.0		CH	CLAY, as above but with more sand sized mineral grains.	M	H-Fb		
				N* > 60 (23, 31, 52)	8.0		CH					
				N* > 60 (20, 33, 30)	10.0		CH					N.B. lost 30 blows for 100mm penetration
								END OF BOREHOLE at -10.4 m depth				

key

method
- AS auger screwing*
- AD auger drilling*
- R roller/tricone
- W washbore
- CT cable tool

* bit shown by suffix:
- B – blank bit
- V – "V" bit

support
- C casing
- M mud

penetration
1 2 3 no resistance ranging to refusal

water
10 Oct. 73 water level

notes – samples and tests
- U50 – undisturbed sample 50 mm diameter
- D – disturbed sample
- N – standard penetration test:figure = result
- N* – SPT + sample
- Nc – cone penetrometer

classification symbols and soil description
based on unified classification system

moisture
- D – dry
- M – moist
- W – wet

consistency/relative density
- VS – very soft
- S – soft
- F – firm
- St – stiff
- VSt – very stiff
- H – hard
- Fb – friable
- VL – very loose
- L – loose
- MD – moderately dense
- D – dense

Department of Main Roads (Tas)
Materials and Research Division

engineering log – excavation

pit no. 6
sheet 1 of 1

file: 04-053

project: POLICE HEAD QUARTERS HOBART
pit location: S. E.S. CAR PARK

pit commenced: 17-9-79
pit completed: 17-9-79
supervised by: W DOE
log checked by:

equipment type and model: FORD 420
excavation dimensions: 1·5 m long, 0·5 m wide

R.L. surface: -3·145 m
datum: BRISBANE ST operator: SMITH

method	penetration 1 2 3	support	water	notes samples, tests, etc.	depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency, rel. density	hand penetrometer kPa 100 200 300 400	structure and additional observations
								HOTMIX				
BH					0·5 / 0·75		GP	GRAVEL COARSE WITH CLAYEY FINES DECOMPOSED DOLERITE	D ↓ M	L / MD		
								INSITU DOLERITE				NEAR VERTICAL JOINTING

key

method
- N natural exposure
- E existing excavation
- BH backhoe bucket
- B bulldozer blade
- R ripper

support
- T timbering

penetration
- 1 2 3 — no resistance ranging to refusal

water
- 10 Oct, 73 water level on date shown

notes
- samples and tests
- U50 — undisturbed sample 50 mm diameter
- D — disturbed sample
- N — standard penetration test: figure = result
- N* — SPT + sample
- Nc — cone penetrometer

classification symbols and soil description
based on unified classification system

moisture
- D — dry
- M — moist
- W — wet

consistency/relative density
- VS — very soft
- S — soft
- F — firm
- St — stiff
- VSt — very stiff
- H — hard
- Fb — friable
- VL — very loose
- L — loose
- MD — moderately dense

Department of Main Roads (Tas)
Materials and Research Division

engineering log – excavation

pit no. 4
sheet 1 of 1

file: 04-053

project: POLICE HEAD QUARTERS HOBART

pit location: S.E. CORNER MET. ARCH. CAR PARK

pit commenced: 17-9-79
pit completed: 17-9-79
supervised by: W DOE
log checked by:

equipment type and model: FORD 420

excavation dimensions: 2 m long, 0.5 m wide

R.L. surface: -3.670 m

datum: BRISBANE ST operator: SMITH

method	penetration 1 2 3	support	water	notes samples, tests, etc.	depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency, rel. density	hand penetrometer 100 200 300 400 kPa	structure and additional observations
BH							GP	GRAVEL FINE CLAYEY DECOMPOSED DOLERITE	M	L		
				FILL	0.5		CH	CLAY WITH DOLERITE STONE	M	MD		
					1.0			GRAVEL COARSE WITH CLAYEY FINES DECOMPOSED DOLERITE	M	VD		WATER ENTERS AT THIS LEVEL
								1.3 m HOLE DISCONTINUED				LOCAL DRAINAGE ONLY

key

method
- N natural exposure
- E existing excavation
- BH backhoe bucket
- B bulldozer blade
- R ripper

support
- T timbering

penetration
- 1 2 3 no resistance ranging to refusal

water
- 10 Oct, 73 water level

notes
- U50 – undisturbed sample 50 mm diameter
- D – disturbed sample
- N – standard penetration test: figure = result
- N* – SPT + sample

classification symbols and soil description
based on unified classification system

moisture
- D – dry
- M – moist
- W – wet

consistency/relative density
- VS – very soft
- S – soft
- F – firm
- St – stiff
- VSt – very stiff
- H – hard
- Fb – friable
- VL – very loose
- L – loose

Department of Main Roads (Tas)
Materials and Research Division

engineering log – excavation

pit no 2
sheet 1 of 1

file: 04·053

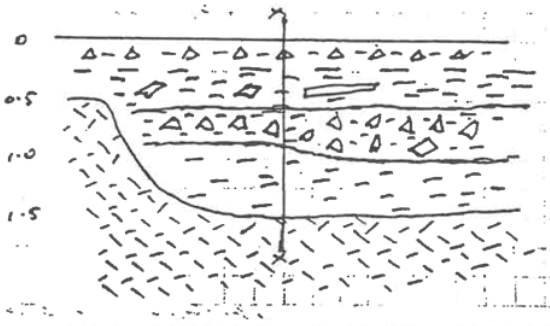
project: POLICE HEAD QUARTERS HOBART
pit location: N W CORNER MET. ARCH. CAR PARK

pit commenced: 17-9-79
pit completed: 17-9-79
supervised by: W DOE
log checked by:

equipment type and model: FORD 420
excavation dimensions: 2·5 m long, 0·5 m wide

R.L. surface: -3·375 m
datum: BALLRANS ST operator: SMITH

method	penetration 1 2 3	support	water	notes samples, tests, etc.	R.L. depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency, rel. density	hand penetrometer 100 200 300 400 kPa	structure and additional observations
							GC	GRAVEL FINE PLASTIC BROWN GC DECOMP. DOLERITE	M	Fa		
					0·5		CH	FILL CLAYEY RUBBLE + LOGS CH.	M	L/MD		
BH							GP	COARSE GRAVEL WITH CLAYEY FINES BROWN DECOMP DOLERITE	M	MD		LOCAL MATERIAL
					1·0		CL	CLAYEY SAND FINE WHITE	M	F/Fb		CRYSTALINE NATURAL INSITU HIGHLY DECOMP DOLERITE
					1·5			INSITU DE COMP. DOL	M	MD		VERTICAL JOINTED 25mm SPACING
										VD		



key

method
N natural exposure
E existing excavation
BH backhoe bucket
B bulldozer blade
R ripper

support
T timbering

penetration
1 2 3
no resistance
ranging to refusal

water
10 Oct, 73 water level

notes – samples and tests
U50 – undisturbed sample 50 mm diameter
D – disturbed sample
N – standard penetration test:figure = result
N* – SPT + sample
Nc – cone penetrometer

classification symbols and soil description
based on unified classification system

moisture
D – dry
M – moist
W – wet

consistency/relative density
VS – very soft
S – soft
F – firm
St – stiff
VSt – very stiff
H – hard
Fb – friable
VL – very loose
L – loose
MD – moderately dense

DEPARTMENT OF PUBLIC WORKS (TAS.)
MATERIALS AND RESEARCH DIVISION

engineering log — cored borehole

borehole no: 6
sheet 2 of 2

File No.

project: POLICE HEADQUARTERS, HOBART
borehole location: refer site plan

hole commenced: 14-11-79
hole completed: 15-11-79
supervised by: N.D. JOHNSON
log checked by: B.D. WELDON

drill model and mounting: GEMCO (trailer) slope: vert deg.
barrel type and length: NMLC 2.40 m fluid H_2O bearing: — deg.
R. L. surface: m
datum:
Driller J. Hammersley

drilling information				rock substance				rock mass defects	
method	case-lift	water	R.L. depth metres	graphic log core loss	substance description rock type: grain characteristics, colour, structure, minor components.	weathering	strength Is (50) EL VL L M H VH EH	defect spacing mm 30 100 300 1000 >3000	defect description thickness, type, inclination, planarity, roughness, coating. particular general
			1.0		Continued from engineering log - borehole sheet				
			2.0						
			2.50						
			2.60		CORE LOSS				
			3.0		DOLERITE, medium to coarse grained; blue-grey colour, some calcite or zeolite veins along joints	SW			subhorizontal and 60-70° joints; some clay lined, most iron stained, some zeolite or calcite infilling
			4.0						
			5.0		END of BOREHOLE at -5.00 m depth				
			6.0						
			7.0						

key

method
AS auger screwing
AD auger drilling
R roller/tricone
W washbore

case-lift
casing used
barrel withdrawn

water
10 Oct, 73 water level

graphic log/core loss
core recovered

weathering
Fr — fresh
SW — slightly weathered
MW — moderately weathered

strength (indirect tensile strength)
EL — extremely low
VL — very low
L — low
M — medium

SURVEY NOTES

SHEET 1 OF 1 SHEETS

Registered Number

CROSS REFERENCE PLAN NUMBERS USED AS PART OF THIS SURVEY

DESCRIBE BY REPORT THE EVIDENCE USED TO DETERMINE BOUNDARIES

Survey commenced : 3/2/94
Survey completed : 17/2/94
Error of close : see calcs
All boundaries are open unless shown otherwise
All walls are 230mm brick unless shown otherwise

SURVEY CERTIFICATE

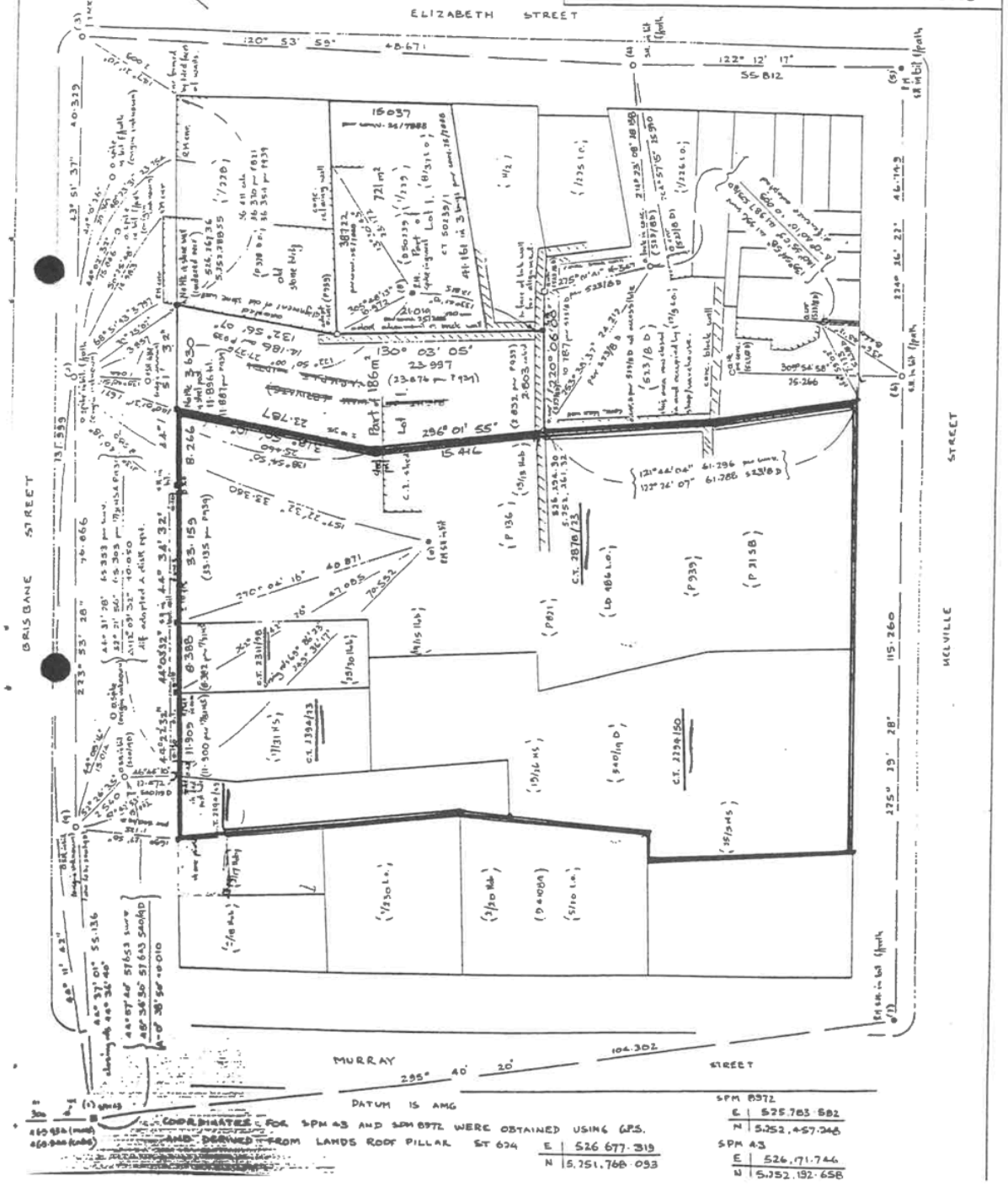
I, GARRY BRUCE COOMBE of BLACKMANS BAY in Tasmania a registered surveyor HEREBY CERTIFY that:

(a) this survey is based upon the best evidence that the nature of the case admits
(b) the survey notes have been truly compiled from surveys made by me or made under my supervision; and
(c) this survey and accompanying survey notes comply with the relevant legislation affecting surveys and are correct for the purpose required.

Garry Coombe
Signature

Date 22 / 2 / 94

Surveyors Reference: SJ. 5763



TASMANIA
REAL PROPERTY ACT, 1862, as amended

CERTIFICATE OF TITLE

Register Book
Vol. Fol.
2878 23

HER MAJESTY THE QUEEN is now seised in demesne by right of Her Imperial Crown subject nevertheless to such encumbrances liens and interests as are notified by Memorial underwritten or endorsed hereon of all that piece of land situated in the CITY OF HOBART containing

ONE ACRE THIRTY PERCHES AND FOUR TENTHS OF A PERCH on the

Plan hereon and comprising whole of OA-1R-6½Ps. granted to WILLIAM LINDSAY, whole of 33 perches granted to HENRY PRIEST, whole of 14 perches granted to WILLIAM PRIEST, whole of 17 perches granted to JOSEPH MOLLOY, whole of 1.4/10 perches granted to CRISP & GUNN CO.OPERATIVE LIMITED, whole of 27.6/10 perches and part of 25.2/10 perches granted t both EMMA CRISP and FREDERICK VERNON CRISP, part of OA-1R-8 perches granted to WILLIAM WILLETT and BRYANT WEBB, part of OA-1R-37 perches granted to LEWIS RILEY, part of 31 perches granted to HENRY WILKS. delineated in the public maps of the State deposited in the Office of the Surveyor-General originally granted to the above and duly surrendered as appears by Transfer No. A348760.

IN WITNESS whereof I have hereunto signed my name and affixed my Seal this 1970

Recorder of Titles

NOTE.—ENTRIES CANCELLED UNDER SIGNATURE OF THE RECORDER OF TITLES ARE NO LONGER SUBSISTING.

COPY ONLY
26 OCT 1994
SP 114102
per

Meas. in ft. & ins. P.821. 14/15Hob. P.939

RST Edition. Registered 19 NOV 1970
erived from C.T. Vol.2294.Fol.51. Transfer A348760 Crisp & Gunn Ltd.

FIRST SCHEDULE (*continued*)

REGISTERED PROPRIETOR	Registered	Signature of Recorder of Titles	Seal

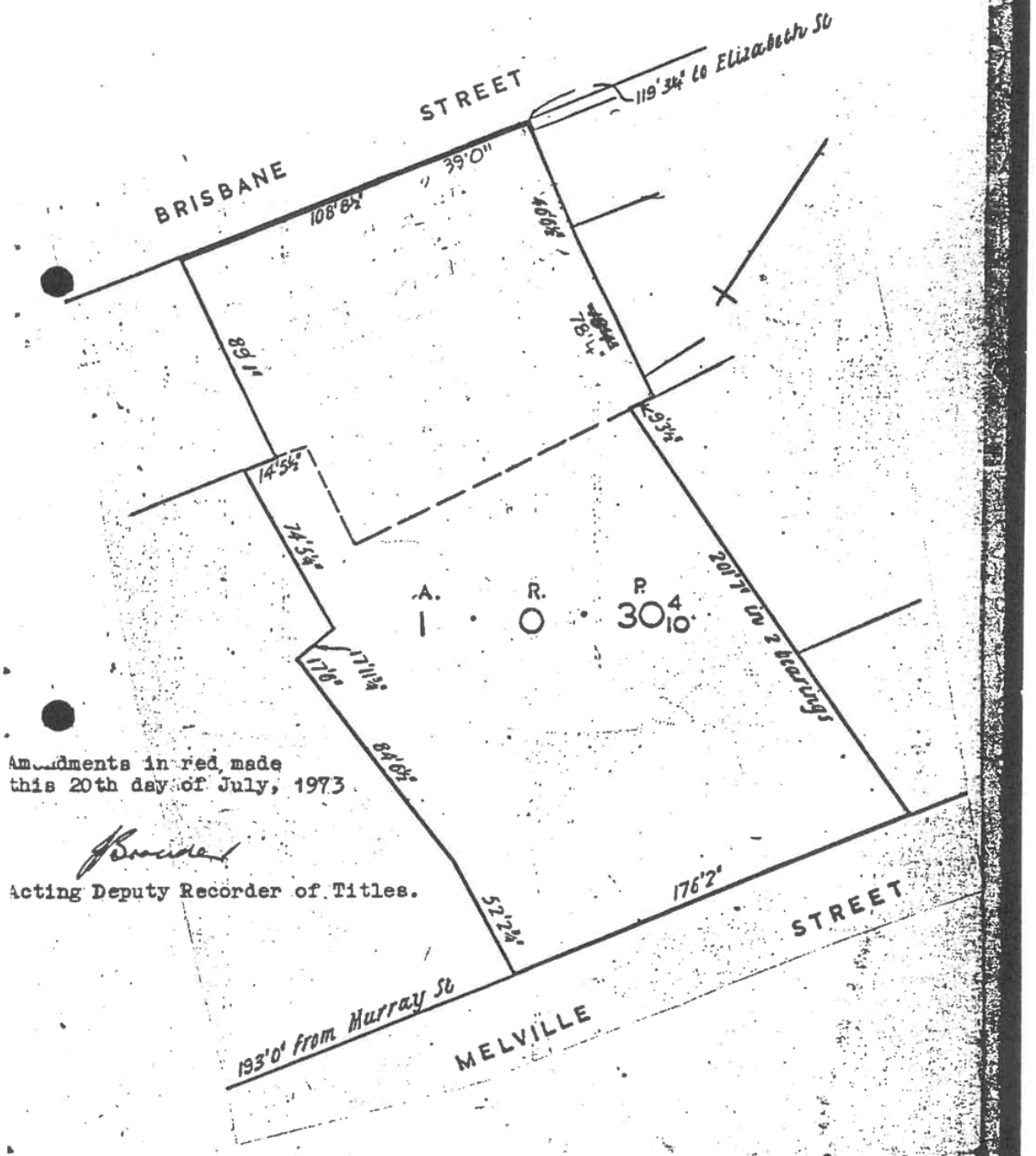
SECOND SCHEDULE (*continued*)

PARTICULARS	Registered	Signature of Recorder of Titles	CANCELLATION	
			Number	Signature of Recorder of Titles

R.P. 612.

ANNEXURE TO CERTIFICATE OF TITLE VOL. 2878 FOL. 23

Recorder of Titles



Amendments in red made
this 20th day of July, 1973

Acting Deputy Recorder of Titles.

FIRST SCHEDULE (*continued*)

REGISTERED PROPRIETOR	Registered	Signature of Recorder of Titles	Seal

SECOND SCHEDULE (*continued*)

PARTICULARS	Registered	Signature of Recorder of Titles	CANCELLATION	
			Number	Signature of Recorder of Titles

2394 23

TASMANIA
REAL PROPERTY ACT, 1862, as amended

CERTIFICATE OF TITLE

Register Book
Vol. Fol.
2294 50

HER MAJESTY THE QUEEN is now seised in demesne by right of Her Imperial Crown subject nevertheless to such encumbrances liens and interests as are notified by Memorial underwritten or endorsed hereon of all that piece of land situated in the City of Hobart containing

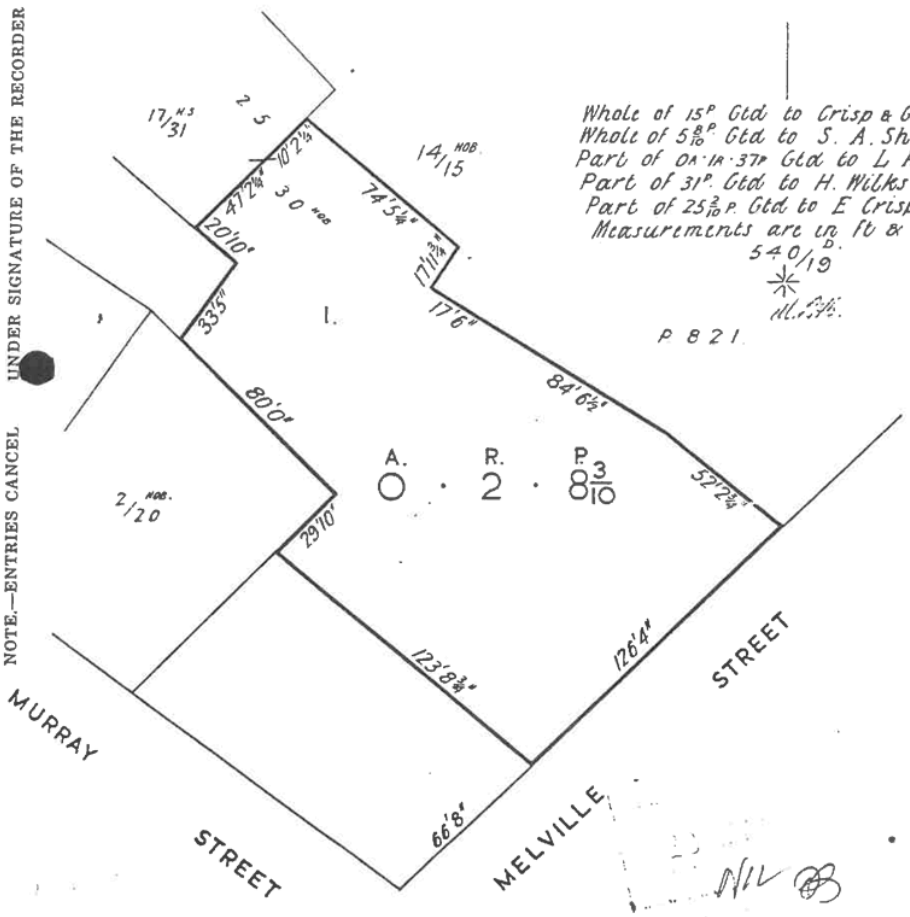
TWO ROODS EIGHT PERCHES AND THREE TENTHS OF A PERCH

delineated in the diagram hereon and in the public maps of the State - deposited in the Office of the Surveyor-General originally granted to Crisp & Gunn Co. Op. Ltd., Sarah Ann Shirley, Lewis Riley, Henry Wilks Emma Crisp and Frederick Vernon Crisp and duly surrendered as - - appears by Transfer No. A264718

IN WITNESS whereof I have hereunto signed my name and affixed my seal this 12 DEC 1967

RECORDER OF TITLES.

NOTE.—ENTRIES CANCEL UNDER SIGNATURE OF THE RECORDER OF TI... RE NO LONGER SUBSISTING.



First Edition. Registered 12 DEC 1967

OWNER THE CROWN & ANTONIO ALFRED LONGO & MARIO AUGUSTO LONGO

FOLIO RFFERENCE
CT 2878/23 & CT 50239/1

GRANTEE
Part of 0-0-17 Granted to JOSEPH MOLLOY & Part of 0-1-8 Granted to WILLIAM WILLET & BRYANT WEBB

PLAN OF SURVEY

BY SURVEYOR Garry Bruce Coombe

LOCATION

CITY OF HOBART

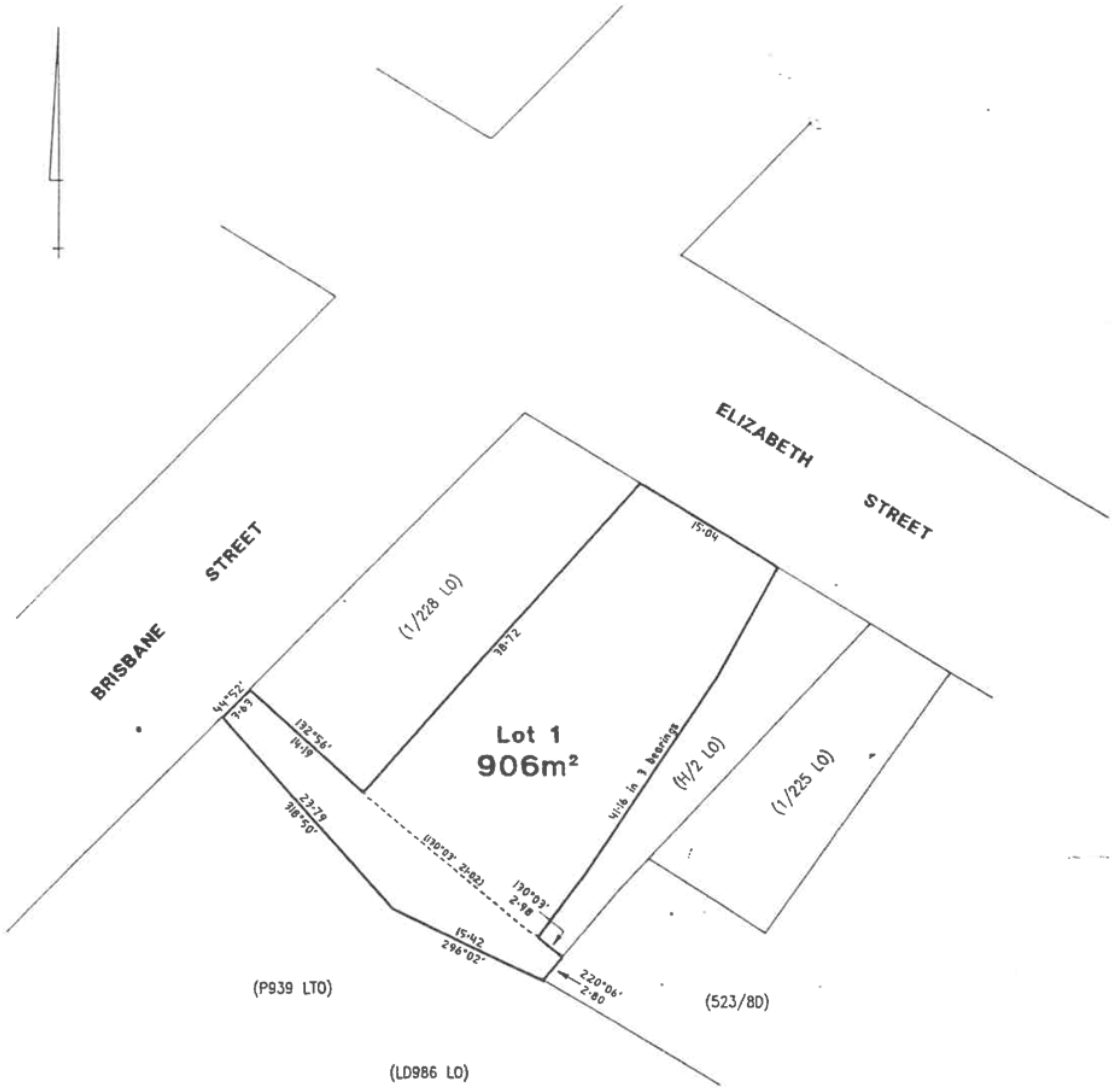
SCALE 1:400 LENGTHS IN METRES

REGISTERED NUMBER
SP114102

APPROVED
EFFECTIVE FROM .....

Recorder of Titles

MAPSHEET MUNICIPAL CODE No.	LAST UPI No.	LAST PLAN No.	ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN



OWNER
THE CROWN

FOLIO REFERENCE
CT 2878/23

GRANTEE
Whole of 0.1.16½ Granted to WILLIAM LINDSAY. Whole of 0.0.33 Granted to HENRY PRIEST. Whole of 0.0.17 Granted to JOSEPH MOLLOY. Whole of 0.0.1¾ Granted to CRISP & GUNN CO-OPERATIVE LTD. Whole of 0.0.27¾ and part of 0.0.25¾ Granted to EMMA CRISP & FREDERICK VERNON CRISP. Part of 0.1.8 Granted to WILLIAM WILLETT & BRYANT WEBB. Part of 0.1.37 Granted to LEWIS RILEY and Part of 0.0.31 Granted to HENRY WILKS

PLAN OF SURVEY

BY SURVEYOR

LOCATION

CITY OF HOBART

SCALE 1:600 LENGTHS IN METRES

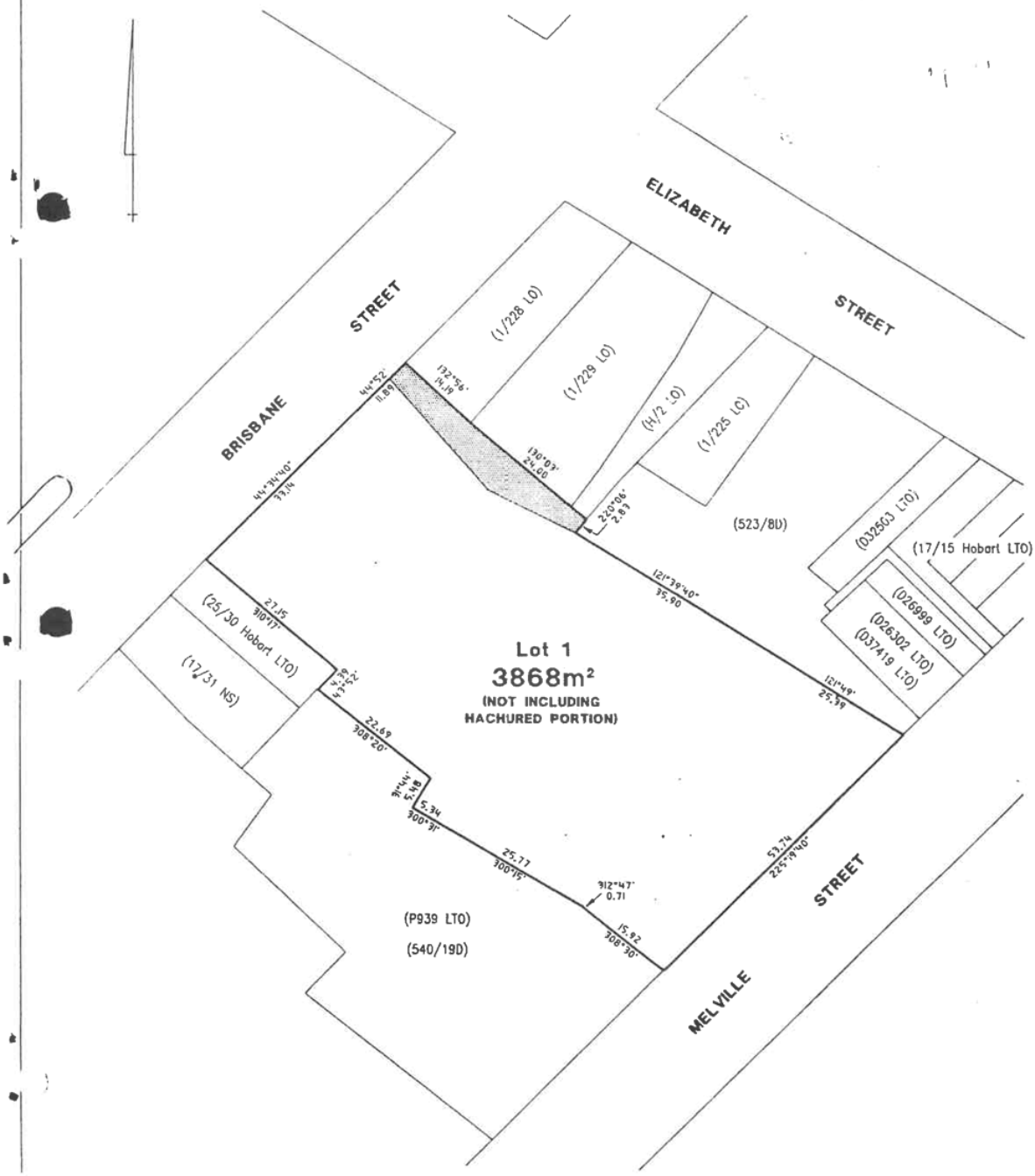
REGISTERED NUMBER
P 114103

APPROVED
EFFECTIVE FROM .....

Recorder of Titles

MAPSHEET MUNICIPAL CODE No>	LAST UPI No> 0536	LAST PLAN No>	ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN

BALANCE PLAN



5669571
P/83/671

Inquiries: Adam Friend/Liz Canning
Phone : (03) 62336176
Fax : (03) 62333800
E-mail : (030662: wc/melv_2) ADF/tm
Our ref :
Your ref : 20 January 1997

Department *of* Environment
and Land Management
134 Macquarie Street
or GPO Box 44A
Hobart Tasmania 7001

COPY

Mr Peter Radovanovic
C/o Forestry Tasmania Construction Site Office
78-83 Melville Street
HOBART TAS 7000

Dear Mr Radovanovic

FORESTRY TASMANIA REDEVELOPMENT PROJECT
79-83 MELVILLE STREET

Environment Tasmania has reviewed the *Environmental Remediation and Validation, December 1996* report for the above mentioned site, prepared for Civil and Civic Laver by Stoklosa Engineering. The Division considers the remediation and validation works undertaken to be satisfactory and is in agreement with the consultants findings and recommendations.

With regards to hydrocarbon contamination associated with the unanticipated underground storage tank, Environment Tasmania concurs with the consultants opinion that contaminated soil identified under the UST represents a localised hot spot and that "it is highly unlikely that the contamination has migrated off site, or that it will do so in the future". Given that the area is to be sealed and used as an access road to the premise, no further remedial action is required.

Thus Environment Tasmania considers the site suitable for its intended use. However, if the site is to be redeveloped for a more sensitive use in the future, further remediation of contaminated soil left *in situ* may be required. As recommended by the consultant, the presence of localised hydrocarbon contamination should be disclosed to future occupants of the site.

Liz Canning may have further comments regarding the site upon her return from leave in early February. If you have any questions please contact Adam Friend on (03) 6233 6176.

Yours sincerely

Ian Woodward
MANAGER - OPERATIONS BRANCH

cc. Mr Jamie Clark
Hobart City Council
GPO Box 503E
HOBART TAS 7001

cc. Richard Stoklosa
Stoklosa Engineering
205 Davey Street
HOBART TAS 7000

Environment Tasmania

Inquiries: Liz Canning
Phone : (03) 62336716
Fax : (03) 62333800
Our ref : (030662:WC/melv_1) EAC/tm
Your ref :

Department of Environment
and Land Management
188 Collins Street
or GPO Box 1396P
Hobart Tasmania 7001

23 September 1996

Mr Peter Radovanovic
C\o Forestry Tasmania Construction Site Office
79-83 Melville Street
HOBART TAS 7000
Fax: 002 315463

Dear Mr Radovanovic

FORESTRY TASMANIA REDEVELOPMENT PROJECT, 79-83 MELVILLE STREET

Environment Tasmania received your letter reports regarding the above mentioned site dated 8 September and 18 September 1996. A meeting was held on 10 September between yourself and Liz Canning of this Division in order to provide the report and briefly discuss the consultants conclusions. It is understood that the reports were provided to satisfy Council conditions regarding the landfill area. Although information on the UST excavations was not required by Environment Tasmania in this situation, the results were provided to satisfy "due diligence".

The meeting held on 10 September resulted in the provision of guidelines relating to health risk (not environmental risk) to yourself and agreement that the consultant would reassess the recommendations regarding the landscaping area in the light of the heavy metal soil guidelines provided. The issue of contamination around the "unanticipated tank" was also discussed. The consultant recommended further testing in this area to determine the lateral extent of contamination. Given the very elevated levels of light hydrocarbons in the sample taken at the base of the excavation Liz Canning agreed with the consultants recommendation to sample further. The potential for "environmental harm" resulting from spread of hydrocarbons into surrounding soil and groundwater was discussed and Environment Tasmania understood that this issue would be investigated. In addition the need for bore logs to be provided was mentioned as it is not possible to assess results without knowledge of the depth that samples were taken at and the geology and hydrogeology of the sample site.

Recycled paper

The following comments are provided on the letter dated 18 September:

Heavy metals at location of UST:
It is unclear whether the area around FT9 is proposed for excavation based on the levels of copper present. A decision regarding the requirement for this could include an assessment of whether this is naturally occurring or in fill material.

The classification of the copper will be based on the concentrations present in the stockpile. Although the *health risk* levels for copper may provide an acceptable level of 1000 mg/kg for residential use (Contaminated Sites Monograph Series no. 5) this does not refer to the potential for leaching and phytotoxic effects. The slightly acidic landfill environment will increase the leachability of heavy metals and thus a level of copper exceeding 60 mg/kg must have a leachate test completed prior to disposal to landfill. In any case the sample containing elevated Cu also contains TPH at levels corresponding to a Hazardous Waste.

As discussed, the levels of Zn reported would not preclude reuse of the material on-site based on health risk.

Heavy metals in landscaping area:
Environment Tasmania concurs with the consultants opinion that the soil may be reused on-site as fill. The elevated Zn is only present in one sample out of four and given the future use of the site would be very unlikely to pose a health or environmental risk.

Unanticipated UST:
It is unclear why the consultants original conclusions recommending further sampling have now changed. A site visit to check for surface odours does not appear to resolve the issue of environmental harm resulting from lateral spread of hydrocarbons. You have suggested in conversations that a sample was taken next to the UST excavation (FT8?) but this is unclear from the information given in the reports. Bore logs would help clarify this.

Yours sincerely

Ian Woodward
MANAGER - OPERATIONS BRANCH

cc. Stokloss Engineering
205 Davey Street
HOBART, TAS 7000

STOKLOSA
ENGINEERING
PTY LTD

A.C.N. 065 135 051

18 September 1996

Civil & Civic
Attention: Mr. Peter Radovanovic
c/- Forestry Tasmania Construction Site Office
79-83 Melville Street
Hobart, Tasmania 7000

Subject: **Forestry Tasmania Redevelopment Project, 79-83 Melville Street, Hobart**

Dear Peter:

Thank you for requesting my firm to investigate the possibility of soil contamination at the location of an unanticipated underground storage tank (UST) near Melville Street, and in the area of planned landscaping improvements. The attached site diagram, chain of custody records, and laboratory reports detail the information that is currently available to interpret the environmental condition of the site.

The following advice is presented to manage evidence of contaminated soils:

Soil contamination near the unanticipated UST:

Soil taken from the base of the UST pit (samples FT-2 and FT-9) exhibit clear evidence of petroleum contamination, presumably from the UST that was discovered last week. We did not witness removal of the tank, and did not have an opportunity to confirm whether the source of this contamination was from the tank or another undiscovered source that may be present in the vicinity of the site works.

At this point, we know that light hydrocarbons (C6-C9 fraction) and xylene are the compounds of concern at the pit location. There is some uncertainty in whether additional UST's are present in the vicinity, and we do not know the depth or the areal extent of contamination.

Prior reconnaissance of the confined foundation area beneath the former State Fire Commission building revealed that the structure is supported on piers over bare ground, adjacent to the site of the UST pit. It should be noted that no petroleum odours were detected at that time. Reinspection of the foundation area was conducted on 17 September, and no evidence of petroleum odours was noted. The detectable odour threshold for xylene, for example, is less than 1 ppm, and the unsatisfactory exposure limit is 100 ppm (data for *ortho*-xylene, for a duration of 60 minutes). This suggests that petroleum contamination is probably limited to the area outside of the building footprint, and does not pose a hazard to building occupants.

We understand that the UST pit has been backfilled with clean material. Under these circumstances, no further work would be required, as this portion of the site is to be sealed. There appears to be no significant risk of exposure to workers or visitors to the site.

205 Davey Street
t, Tasmania 7000

telephone:
(03) 6224 8870

facsimile:
(03) 6224 8871

electronic mail:
r.stoklosa
trumpet.com.au

Detection of heavy metals at the location of the UST:

The stockpiled soil from the base of the UST pit was found to contain a slightly elevated zinc concentration (318 ppm) in the single screening level soil test (sample location FT-8). This soil should not be considered "hazardous waste" under the May 1996 Environment Tasmania guidelines for soil disposal, as it only slightly exceeds the applicable criteria. This soil should be regarded as "fill material" for the purposes of disposal or placement on other areas of the planned development site, as the level of zinc is well below published health-based guidelines for commercial and residential garden settings (7,000 ppm).

Similarly, the soil at the base of the UST pit (FT-9), which we recommend excavating as discussed above, revealed a slightly elevated concentration of copper (117 ppm). This soil should not be considered "hazardous waste" as a result of the copper concentration that was detected. This soil should be regarded as "fill material", as the level of copper is well below published health-based guidelines (1,000 ppm).

Detection of heavy metals in the planned landscaping area:

One of four screening level soil tests in the planned landscaping area (at location FT-5) revealed evidence of slightly elevated zinc levels, and returned levels of lead and copper that nearly exceeded the criteria for "fill material". All of the soils in the landscaping area should be regarded as suitable for the intended use. No remediation of this area of the site is recommended, as the concentrations of zinc, lead and copper are well within the health-based guidelines for residential garden settings. These soils are not expected to pose a risk to workers or persons visiting the property.

We understand that you discussed our findings and recommendations with Ms Liz Canning of Environment Tasmania on 9 September, and we would suggest that you present this advice to her office for review and acknowledgment.

The known UST near the Brisbane Street access ramp to the subject property has been previously assessed for evidence of contamination (refer to Stoklosa Engineering report, dated 19 January 1996). It is recommended that works to remove the tank proceed in accordance with advice given in the previous assessment. A quote was obtained from Gilbarco, dated 19 June 1996, for tank removal (copy attached for reference).

Additional soil sampling is recommended prior to removal of the known UST. Stoklosa Engineering must be present to witness removal of the UST, and to obtain soil samples of the UST pit backfill sand upon removal. It is recommended that additional material is excavated from the UST pit, if evidence of contamination is observed during tank removal activities, prior to backfilling the pit with clean material. Soils removed from the UST pit must be stockpiled on site, pending the results of soil testing.

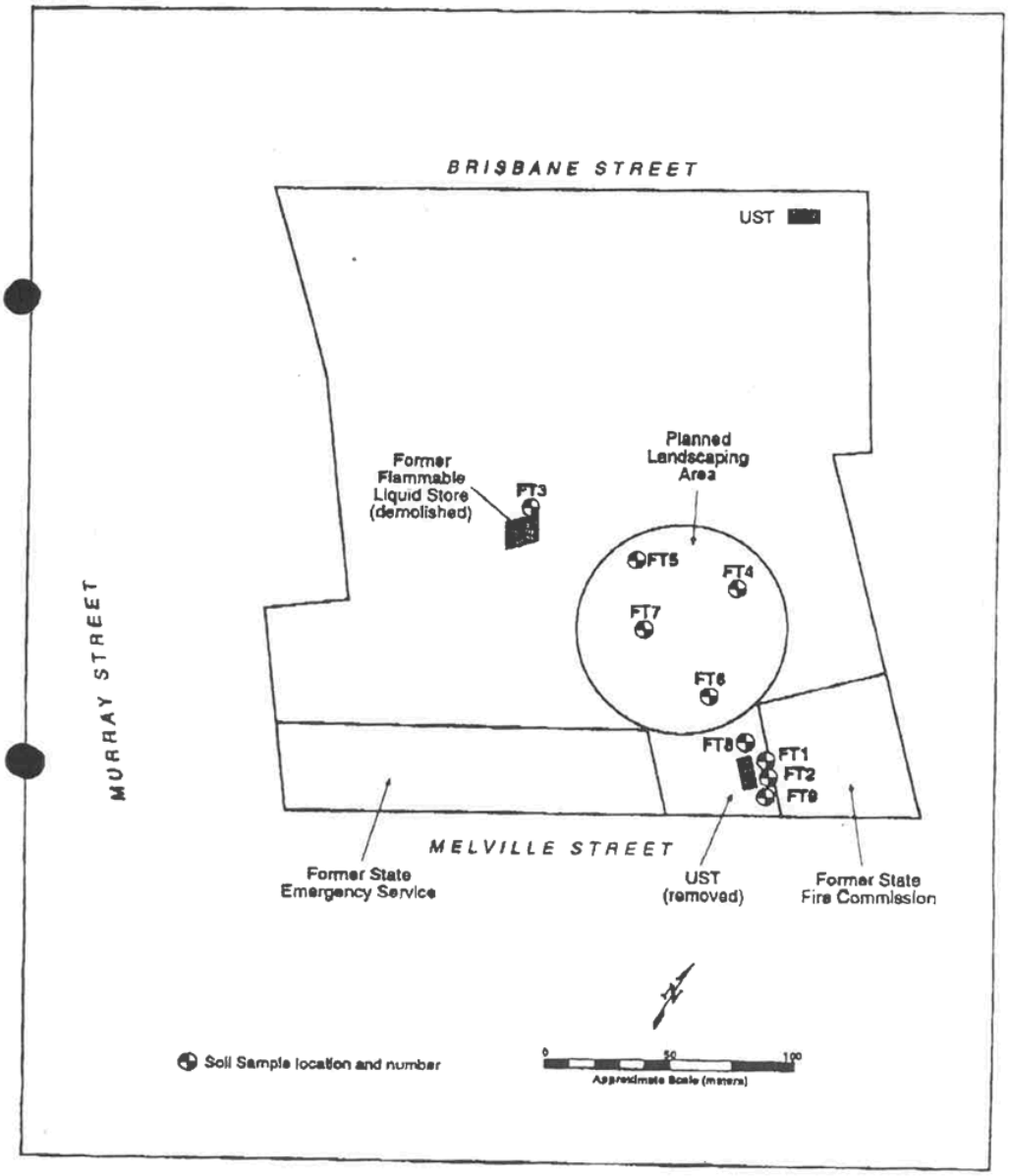
We believe that the foregoing approach will ensure proper short term and long term environmental management of the property, given the evidence of contamination that has been discovered. Please contact us if further information would be helpful.

Regards,

Richard Stoklosa

Richard Stoklosa

Attachments


BRISBANE STREET
UST
Former Flammable Liquid Store (demolished)
FT3
Planned Landscaping Area
FT5
FT4
FT7
FT6
FT8
FT1
FT2
FT9
MURRAY STREET
MELVILLE STREET
Former State Emergency Service
UST (removed)
Former State Fire Commission
Soil Sample location and number
0
50
100
Approximate Scale (meters)

17/02/1996 05:03 002315463 C&C PAGE 03

1996 03:09 FROM STOKLOSA ENGINEERING TO 315463 P.03

CHAIN OF CUSTODY RECORD

Stoklosa Engineering Pty Ltd
A.C.N. 065 135 051
205 Davey Street
Hobart, Tasmania 7000
Telephone: (002) 24 8870
Facsimile: (002) 24 8871

PROJECT NAME:	PROJECT NO.
CIVIL & CIVIC FORESTRY TASMANIA	C155

COLLECTED BY (NAME):	SIGNATURE:
R. STOKLOSA	R. Stoklosa

Site ID	Lab Sample No.	Collector's Sample No.	Collection Date	Collection Time	Sample Type	Analyses to be Performed: TPH	BTEX	LEAD							Number of Containers	Remarks / Special Instructions
FT-1		FT-1	26.8.96	1630	SOIL	✓	✓	✓							2	1000 mm
FT-2		FT-2	26.8.96	1635	SOIL	✓	✓	✓							2	2500 mm

Relinquished By (Signature)	Organisation	Date	Time	Remarks
Richard Stoklosa	STOKLOSA ENGINEERING	26.8.96	1730	
Received By (Signature)	Organisation	Date	Time	Remarks
Relinquished By (Signature)	Organisation	Date	Time	Remarks
Received By (Signature)	Organisation	Date	Time	Remarks
Relinquished By (Signature)	Organisation	Date	Time	Remarks
Received for Laboratory By (Signature)	Laboratory Name	Date	Time	Remarks
[illegible]	DELM LAB	26/8/96	1730	

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002315463 PAGE.00

4 SEP '96 19:16

Department of Environment and Land Management
Environmental Chemistry Laboratory
C/- Chemistry Department, University of Tasmania
Box 252C GPO Hobart 7001, Hobart
Telephone (03) 6228 7175 Fax (03) 6220 7825

:port Number: 7328
:bmitted By: R. Stoklosa
:ported To: R. Stoklosa
:st Method: GC

Lab. No: 963537-963538
Date Sampled: 26/8/96
Date Received: 26/8/96
Date Reported: 27/8/96

SOILS - STOKLOSA ENGINEERING P/L

ab. No.	Sample ID	TPH mg/kg DMB	C6-C9 mg/kg DMB	C10-C14 mg/kg DMB	C15-C28 mg/kg DMB	C29+ mg/kg DMB	Benzene mg/kg DMB	Toluene mg/kg DMB	E. Benzene mg/kg DMB	Xylene mg/kg DMB
63537	FT-1	ND	ND	ND	ND	ND	ND	ND	ND	ND
63538	FT-2	660	530	130	ND	ND	ND	4	7	66
hod Detection Limit		5	5	5	5	5	1	1	1	1

- Dry Matter Basis
Not Detected

Disposal as "Hazardous Waste"
(prior Council approval required)

Department of Environment and Land Management
Environmental Chemistry Laboratory
C/- Chemistry Department, University of Tasmania
Box 252C GPO Hobart 7001, Hobart
Telephone (03) 6230 7175 Fax (03) 6230 7825

Report Number: 7328-1
Submitted By: R. Stoklosa
Reported To: R. Stoklosa
Test Method: DELM Method Metals in Sediments

Lab. No: 963537-963538
Date Sampled: 26/8/96
Date Received: 26/8/96
Date Reported: 28/8/96

SOILS - STOKLOSA ENGINEERING P/L

Lab No.	Sample ID	Pb ~~mg/kg DMB~~
963537	FT-1	243
963538	FT-2	52

DMB - Dry Matter Basis

Disposal as "Fill Material"

This laboratory is registered by the National Testing Authorities, Australia. The tests reported herein have been performed in accordance with its terms of registration.
This document must not be reproduced except in full.
Samples analysed as received.

R.D. Dineen
SENIOR CHEMIST

17/02/1996 05:03 002315463 C&C PAGE 06

-1996 03:11 FROM STOKLOSA ENGINEERING TO 315463 P.06

CHAIN OF CUSTODY RECORD

Stoklosa Engineering Pty Ltd
A.C.N. 065 135 051
205 Davey Street
Hobart, Tasmania 7000
Telephone: (002) 24 8870
Facsimile: (002) 24 8871

PROJECT NAME:	PROJECT NO.
FORESTRY TASMANIA / C&C	C155

COLLECTED BY (NAME):	SIGNATURE:
R STOKLOSA	R Stoklosa

Site ID	Lab Sample No.	Collector's Sample No.	Collection Date	Collection Time	Sample Type	TPH	BTEX	LEAD	CADMIUM	CHROMIUM	COPPER	ZINC				Number of Containers	Remarks / Special Instructions
FT-3		FT-3	28.8.96	1715	SOIL	✓	✓	✓	✓	✓	✓	✓				2	200mm F.L.S.
FT-4		FT-4		1725	SOIL			✓	✓	✓	✓	✓				1	SURFACE 100mm
FT-5		FT-5		1735	SOIL			✓	✓	✓	✓	✓				1	SURFACE 100mm
FT-6		FT-6		1745	SOIL			✓	✓	✓	✓	✓				1	"
FT-7		FT-7		1750	SOIL			✓	✓	✓	✓	✓				1	"
FT-8		FT-8		1755	SOIL	✓	✓	✓	✓	✓	✓	✓				2	UST STOCKPILE (surface)
FT-9		FT-9		1800	SOIL	✓	✓	✓								2	UST PIT 2500 mm

Analyses to be Performed

Relinquished By (Signature)	Organisation	Date	Time	Remarks
R. Stoklosa	STOKLOSA ENGINEERING	28.8.96	1900	
Received By (Signature)	**Organisation**	**Date**	**Time**	**Remarks**
	DELM			
Relinquished By (Signature)	**Organisation**	**Date**	**Time**	**Remarks**
Received By (Signature)	**Organisation**	**Date**	**Time**	**Remarks**
Relinquished By (Signature)	**Organisation**	**Date**	**Time**	**Remarks**
Received for Laboratory By (Signature)	**Laboratory Name**	**Date**	**Time**	**Remarks**

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4 SEP '96 19:17 002315463 PAGE.006

Department of Environment and Land Management
Environmental Chemistry Laboratory
C/- Chemistry Department, University of Tasmania
Box 252C GPO Hobart 7001, Hobart
Telephone (03) 6220 7175 Fax (03) 6220 7825

Report Number: 7333-1
Submitted By: R. Stoklosa
Reported To: R. Stoklosa
Test Method: GC

Lab. No: 963554-963560
Date Sampled: 28/8/96
Date Received: 28/8/96
Date Reported: 30/8/96

SOILS - STOKLOSA ENGINEERING P/L

Lab. No.	Sample ID	TPH mg/kg DMB	C6-C9 mg/kg DMB	C10-C14 mg/kg DMB	C15-C28 mg/kg DMB	C29+ mg/kg DMB	Benzene mg/kg DMB	Toluene mg/kg DMB	E. Benzene mg/kg DMB	Xylene mg/kg DMB
963554	FT-3	8	ND	ND	ND	ND	ND	ND	ND	ND
963559	FT-8	7	ND	ND	ND	ND	ND	ND	ND	ND
963560	FT-9	1 790	1 350	440	ND	ND	2	8	14	176
Method Detection Limit		5	5	5	5	5	1	1	1	1

DMB - Dry Matter Basis
ND - Not Detected

Exceeds "Hazardous Waste" Disposal Criteria
(consultation with Council / DELM will be required)

Also very high result, requires consultation prior to disposal.

This document must not be reproduced except in full.
Samples analysed as received

M. C. Johnson
SENIOR CHEMIST

Department of Environment & Land Management
Environmental Chemistry Laboratory
C/- Chemistry Department, University of Tasmania
Box 252C GPO Hobart 7001, Hobart
Telephone (002) 20 7475 Fax (002) 20 7525

Report Number: 7333
Submitted By: R. Stoklosa
Reported To: R. Stoklosa
Test Method: DELM Method Metals in Sediments

Lab. No: 963554-963560
Date Sampled: 28/8/96
Date Received: 28/8/96
Date Reported: 30/8/96

SOILS - STOKLOSA ENGINEERING

Lab No.	Sample ID	Pb mg/kg DMB	Zn mg/kg DMB	Cu mg/kg DMB	Cd mg/kg DMB	Cr mg/kg DMB
963554	FT-3	138	104	51	<0.5	11
963555	FT-4	71	187	32	<0.5	15
963556	FT-5	288	326	58	<0.5	14
963557	FT-6	60	40	14	<0.5	13
963558	FT-7	43	101	46	<0.5	7
963559	FT-8	48	318	7	<0.5	3
963560	FT-9	26	67	117	<0.5	21

DMB – Dry Matter Basis

This laboratory is registered by the National Testing Authority, Australia. The test reported herein have been performed in accordance with the terms of registration. This document may not be reproduced except in full. Samples analysed as received.

Disposal as "Hazardous Waste"
(prior Council approval required)

M.C. Johnson
SENIOR CHEMIST

Certificate of Disposal

Issued to

Laver Pty. Ltd.,
70 Browns Road,
Kingston, 7050

*Removal and disposal of **2,500 litres** **of contaminated hydrocarbon** on the 28th August, 1996 from;*

79 Melville Street,
Hobart, 7000

Service performed by licensed operator

COLLEX WASTE MANAGEMENT PTY. LTD.
A.C.N. 051 316 584

Dated: Thursday, August 29, 1996

John Brennan
MANAGER - ENVIRONMENT & SAFETY

79 to 85 Melville Street
Site Assessment and Planning Impact Report

Principal Consultant
James Douglas & Associates Planning and Development Consultants

Consultants in Association

James Douglas	Town Planning
Barry Neilsen	Structural Assessment and Building Survey
Robert Vincent	Heritage Assessment
Richard Stoklosa	Environmental Hazards Assessment

Acknowledgment

The consultants wish to acknowledge the existing research undertaken by Michael Court & Kerry Edwards, Historical Consultants with respect to the Statement of Cultural Significance for Number 79 Melville Street. This statement is included as an attachment to this report.

Disclaimer

The information contained in this report and its related appendices has been compiled with all due care. However, the information has been collected for the purposes of, the Tasmanian Property Services Group to facilitate the disposal of the subject site and not as a basis for testing individual project feasibility or for any other purpose. Accordingly, no person should act on the information contained herein without prior verification.

The views expressed herein are those of James Douglas & Associates and do not necessarily represent the views of any other party.

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Appendices

Appendix 1	Heritage and Streetscape Assessments
Appendix 2	Statement of Heritage and Streetscape Significance - Technical advice from Hobart City Council
Appendix 3	Hazard Assessment
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1. Purpose of The Report.

The Crown wishes to sell the subject site. The purpose of this report is to describe the current asset and identify the constraints and opportunities for its marketing and re-development. Specifically, this has involved the following tasks ;

- A description of the site and structures
- An assessment of the structural significance of the buildings and of their capabilities for reuse, particularly the possibility of stratum subdivision
- The identification and assessment of the impact of statutory and strategic planning provisions with emphasis on those relating to demolition
- The assessment of the heritage and streetscape value of the site and structures
- The identification of any relevant legal constraints to disposal of the site
- An audit of the site for possible contamination
- A summary of the constraints and opportunities for re-development

2. Site Description

The subject site is located on the periphery of Hobart's Central Business District with frontage to Melville and Brisbane Streets. A Location Plan identifying the site is shown in Figure 1. The site is presently used as office accommodation for the State Emergency Service and Tasmanian Fire Service and as parking and storage for various government agencies. Surrounding land uses include two major Hobart City Council carparks, retail and offices.

The existing structures on the site are of one to three stories in height and are constructed of pressed clay brick with galvanised roofing and have frontage to Melville Street. To the rear of these frontages there are substantial single storey, timber trussed storage buildings. All these structures date to 1922 and were purpose built for 'Crisp and Gunn' who operated a timber milling and merchandising business from the site. More detailed descriptions of these buildings are contained in the structural analysis and heritage assessments following in this report. Approximately 4,428 square meters of the site is developed with the balance being in gravelled and bitumen hard standing and used for parking. This unenclosed space of approximately ~~2,763~~ 3445 square meters is

accessed from Brisbane Street and is approximately one storey below the level of Brisbane Street.

The site in its entirety has an area of ~~2191~~ 7873 square meters and there are few, if any, such substantial parcels within close proximity to the Cental Business District. As can be seen in the following Site Plan (Figure 2), the subject site is comprised of five lots, which are defined as follows;

- Lot 1 - 79 to 81 Melville Street, Title reference - part of CT 2878 / 23 (see P114103) ~~3868~~ 4615.4 m2 - 175 m² = 4640 m² sq. meters
- Lot 2 - 83 to 85 Melville Street, Title reference - CT 2294 / 50, - ~~2323~~ 2233 m2 sq meters
- Lot 3 - 88 Brisbane Street, Title reference - CT 2311 / 98, - 228 sq meters
- Lot 4 - 90 Brisbane Street, Title reference - CT 2394 / 23, - 347 sq meters
- Lot 5 - 92 Brisbane Street, Title reference - CT 2294 / 49, - 425 sq meters

3. Structural Assessment and Re-development Potential

(refer Figure 3 Building Envelope Plan)

3.1 79 Melville Street (Lot 1).

This is a substantial brick and timber structure with identified heritage and streetscape value. It is two storeys at the front with a floor area of 442 square meters and a single storey at the rear with a floor area of 203 square meters . The floors are timber throughout. There is an original internal stair and an external steel fire escape. Two roof lights provide natural lighting to the rear internal areas and the large ceiling heights would allow for the installation of ducted air conditioning if desired. The building appears in good condition throughout.

It is possible to create a separate title for this building, the possible boundary locations are shown on Figure 3. As shown, the western boundary would need to be located three meters from the western wall to allow retention of the windows on that face (and also to accommodate the external fire escape). The current openings in the rear wall of the main building would also need to be blocked up. Whilst further stratum subdivision of the property is technically feasible under the provisions of the Building

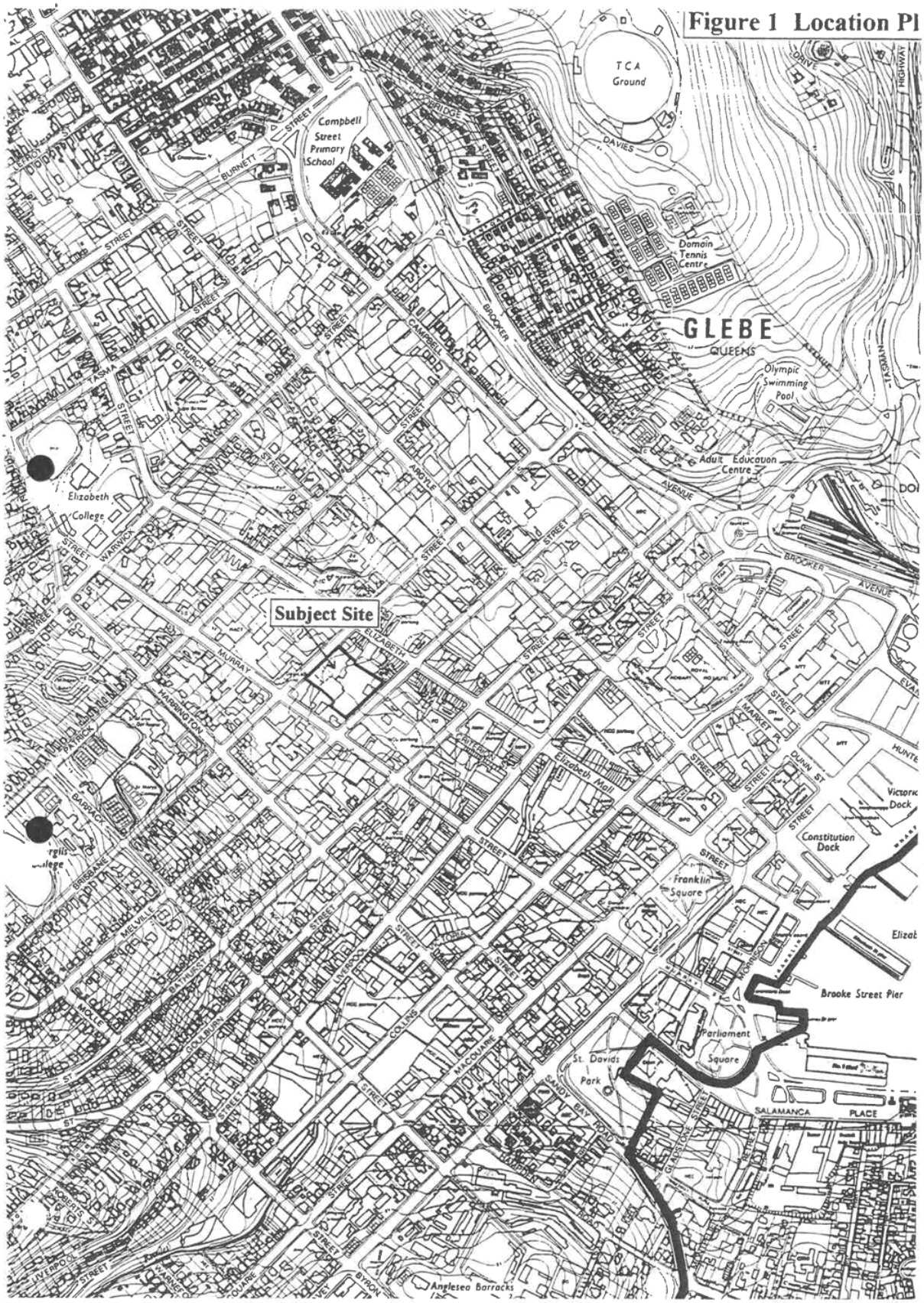


Figure 1 Location Pl
TCA Ground
Campbell Street Primary School
Domain Tennis Centre
GLEBE
Olympic Swimming Pool
Adult Education Centre
Elizabeth College
Subject Site
Elizabeth Mall
Constitution Dock
Franklin Square
Brooke Street Pier
Parliament Square
St. Davids Park
Anglesea Barracks

Code of Australia, the location of the single internal stairway makes such a proposal impractical without major modifications.

3.2 81 Melville Street (Lot 1)

This three storey building, currently used as offices, is of brick construction with timber floors and it totals some 767 square meters in area. It is served by a single fire isolated stair at the front corner and also has access openings through the dividing wall to Number 83 - 85. These openings through the party wall would need to be blocked up if the properties are to be dealt with separately.

The original building structure appears in sound condition although much of the internal partitioning is of varying date and quality and adds little to the buildings worth.

A large proportion of the remainder of the site is covered with timber trussed, single storey storage buildings. These consist of three discreet but conjoined structures comprising floor areas of 1911 square meters, 298 square meters and 88 square meters. From a structural viewpoint, while these buildings provide adequate accommodation for their current use (the informal storage of vehicles, building materials and safety equipment etc.) they provide little realistic potential for upgrading for other uses.

The rearmost of these storage buildings (behind 79 Melville Street and closest to Brisbane Street) has been affected by a recent boundary adjustment and it is apparent that it now straddles the boundary with an adjacent lot (see SP 114102, and SP 114103, Appendix 4). The disposal of the subject property may require the resolution of this situation. If this is necessary, two options are available;

- Demolition of the structure, or
- The installation of a new fire rated masonry wall on the new boundary. This would involve construction of a new footing and re-supporting the roof structure on either side of the new wall which would extend up as a parapet. The wall could be built of double brick cavity or simple skin concrete block. This option would allow the subsequent removal of either "half" of the building at the requirement of either owner.

The rear section of the site, adjacent to Brisbane Street, is considerably below the footpath level, which is supported by very old brick and sandstone retaining walls.

Large diameter sewer and stormwater mains run through the centre of this site. This will most likely require re-alignment in any re-development of the site as usual Hobart City Council policy is not to allow new buildings over mains.

3.3 83 - 85 Melville Street (Lot 2)

The front portion of this lot contains a two-storey office building of similar construction to Number 81 and co-joined to it with a common party wall. The upper floor is at the same level as the upper level of Number 81 but the lower floor is between the two lower levels of the adjacent building. The building has a fire- isolated stair (recent addition) as well as another open internal stair. Vehicular access from Melville Street to the rear of the lot exists through an access way in the building. Depending on future uses, provision of ducted air - conditioning may be required and the floor to floor height would be sufficient to accommodate such an installation.

There is a substantial single storey storage building to the rear (similar to the adjacent property).

3.3 88 and 90 Brisbane Street (Lots 3 and 4 respectively)

These two properties are vacant and unused and both contain some ruins of old buildings (of no current heritage or streetscape value).

The title to Number 88 indicates an old 'roadway' along the western boundary which appears to have been used as a right of way and drainage easement for Number 90. The possibility of expunging this encumbrance should be investigated.

3.4 92 Brisbane Street (Lot 5)

This property is vacant and is currently used for car parking and access to the rear of the 83 - 85 Melville Street buildings.

4. Planning Provisions - Statutory

The principal statutory document controlling development on the site is The City of Hobart Planning Scheme 1982. The scheme area is comprised of Land Use Zones. Each zone is divided into Precincts with an associated 'Statement of Desired Future

Character'. These statements provide a finer definition to the desired form of development within an area and provide guidance in the application of the general principles of development control and the various schedules within the scheme ordinance.

The following is a summary of the principle relevant provisions of the Scheme. It should be noted that only the principle provisions are identified sufficient to assess the development potential of the site, further detailed planning assessment will be required in association with any development proposal.

4.1 Zoning;

The subject site is contained within the Central Commercial and Administrative Zone and is in Precinct 8A. The objective of this zone as identified in Clause 5.3 of the scheme is as follows;

> *" The Objective of the Central Commercial and Administrative Zone is to provide for the administrative, commercial, financial and professional headquarters of the State, for intensive generators of employment, and for cultural and community activities and supporting uses associated with those functions."*

The Statement of Desired Future Character for Precinct 8A within this zone is identified in Section 5.3.5 as,

> *" The Elizabeth Street Precinct should maintain its function as a retail, wholesale and office area, with residential use being an important subsidiary activity.*
>
> *New development should maintain the linear image of Elizabeth Street which is a dominant feature of the overall character of the Precinct."*

The above statements provide for a wide range of land uses and development forms. Whilst not specifically identifying a preferred use or uses, neither to they constrain the possible range of uses that would in practice be considered on the site.

4.2 Land Use;

Schedule A, Table A1 of the Scheme provides further definition of the types of Land Uses that may be considered for the site. These provisions relate to the 'use component' of a development proposal only ie. a development which is a 'permitted use' may still be subject to the exercise of a discretion by Council in respect to it's car parking or boundary setback provisions and accordingly could receive a conditional

approval or refusal based on these grounds. The provisions of Table A1 are summarised as follows;

Permitted Uses - these are uses 'permitted as of right' including :- all types of residential development, consulting rooms, community centre, office, shop, hotel/motel, service industry, show room

Prohibited Uses - these uses are prohibited (except in specific circumstances relating to existing non- conforming uses) :- Transport depot, timber yard, (heavy) industry

Discretional Uses - these uses may be permitted or refused at Council's discretion, they include all other use types not identified above.

As can be seen, most use types can be contemplated for the subject site with the exception of those of a heavy industrial nature which would generate substantial movements of heavy vehicles or be potentially hazardous or noxious.

4.3 Development Density;

Development density is determined by two principle provisions:- plot ratio and lot size. Under Schedule B. of the Scheme the following apply to the subject site;

Plot Ratio - Basic 2.25 Maximum 3.00	Minium lot size - 120m2 Min.
(maximum floor area relative to site area)	Frontage 6m
	(for subdivision)

4.4 Boundary Setbacks;

No specific boundary setbacks are required under the Planning Scheme, building setbacks would be determined by the requirements of the Building Regulations.

4.5 Height;

The maximum permissible height for buildings on the subject site is 12 meters pursuant to Table C1 of the Scheme. 'Height' is defined under the Scheme as the distance measured between the natural surface level and the topmost habitable floor level of a building.

4.6 Car Parking and Access;

Parking and access standards are identified in Schedule E of the Scheme. The Schedule contains parking space requirements for individual land use groups. However there is provision to vary these requirements and it is reasonable to expect that an exercise of discretion in regard to any of these standards could be granted subject to adequate justification being provided within a planning submission for development. Council may require 'cash-in-lieu' for any car spaces not provided on site (currently $9,000 per space). The provisions of Schedule E should therefore be read as a guide rather than an absolute in respect to the subject site.

4.7 Demolition;

The potential for demolition of any existing structure will be determined by the assessment of it's historic and streetscape value (see Section 6 of this report). None of the existing structures are listed on the National Estate or are identified by the National Trust, the Royal Australian Institute of Architects List or the City of Hobart Planning Scheme as having specific merit. Accordingly it may be said that there is no absolute prohibition upon their demolition, it would be a matter to be decided at Council's discretion or on the basis of a possible appeal lodged with The Resource Management and Planning Appeals Tribunal.

Based upon the historic assessment contained in this report, it is considered that, in practical terms, any successful re-development proposal would encompass the retention of the existing structure at 79 Melville Street in it's entirety and make every effort to retain the structure at 81-85 Melville Street by its adaptation and reuse. The demolition of the existing structures at 81-85 Melville Street should only be proposed if it can be satisfactorily demonstrated that their retention would deny the economic and efficient re-development of the site and their replacement structures would enhance the existing streetscape.

There is no apparent restriction to the demolition of the garage/store at the rear of 79 and 81-85 Melville Street based on historic or streetscape values. Any application for it's demolition should include the completion of an historical record of the building prior to demolition and provisions for the future treatment of the affected portion of the subject site either as an interim or permanent measure, in accordance with Principle 5 of the Scheme which states;

" The demolition of any building shall not be permitted until a further or replacement development, which may include temporary landscaping of that land, has been approved unless such demolition is required by statutory order."

5. Planning Provisions - Strategic

The Hobart City Council released the 'Central Area Strategy Plan' (CASP) for public comment in the early part of 1994. This document provides an insight to the existing demand and floor space supply patterns within the C.B.D. and an indication of Council's intention with respect to possible changes to statutory planning provisions in the future.

CASP is the culmination of nearly three years research into the functionality of the C.B.D. of Hobart. It's broad aim is to provide a strategy to guide and manage the development and enhancement of the C.B.D for the next ten years. The following points are extracted from CASP and may assist in the formulation of a purchase and development strategy for the subject site.

- *" The Central Area remains the single largest employment location in Tasmania. So far as the Metropolitan Area is concerned it is the principal place of employment for the resident population....Its significance as a shopper destination has been confirmed by the household survey conducted as part of the Retail Topic Report and more recently through a larger sample of 600 households carried out by the City Heart Business Association. Around two thirds of people from the Hobart Metropolitan Area claim to have visited the city centre within the pervious week. The surveys also found that the city centre fulfils an important role for activities such as paying bills, banking, conducting business, eating out and entertainment."*

- CASP identifies the development opportunities for the subject site as :- *" Major retail store and possibly a City Heart supermarket with car parking."* and states *" Efforts will be made to strengthen the role and function of Elizabeth Street as far as Brisbane Street, and extend the shopping choices available in the City Heart by the promotion of the development opportunities offered by Council's*

Melville Street car park site and former Crisp and Gunn site at 83 Melville Street."

- The principle development controls proposed in CASP that relate to the subject site are:- Plot Ratio : 3.0
  Height : 20 metres
  Car Parking : no requirement

The following Figures 4 and 5 have been extracted from CASP as indicators of demand potential and existing floor space supply in the C.B.D. It should be noted that the Central Area of the City remains the single largest employment location in Tasmania (see Figure 4).

Figure 4

EMPLOYMENT CHANGE IN HOBART AND THE METROPOLITAN AREA 1971-1991

	1971	1976	1981	1986	1991
Greater Hobart	60,038	67,881	69,431	71,895	73,945
Central Area	24,378	24,426	21,611	21,564	21,378[I]

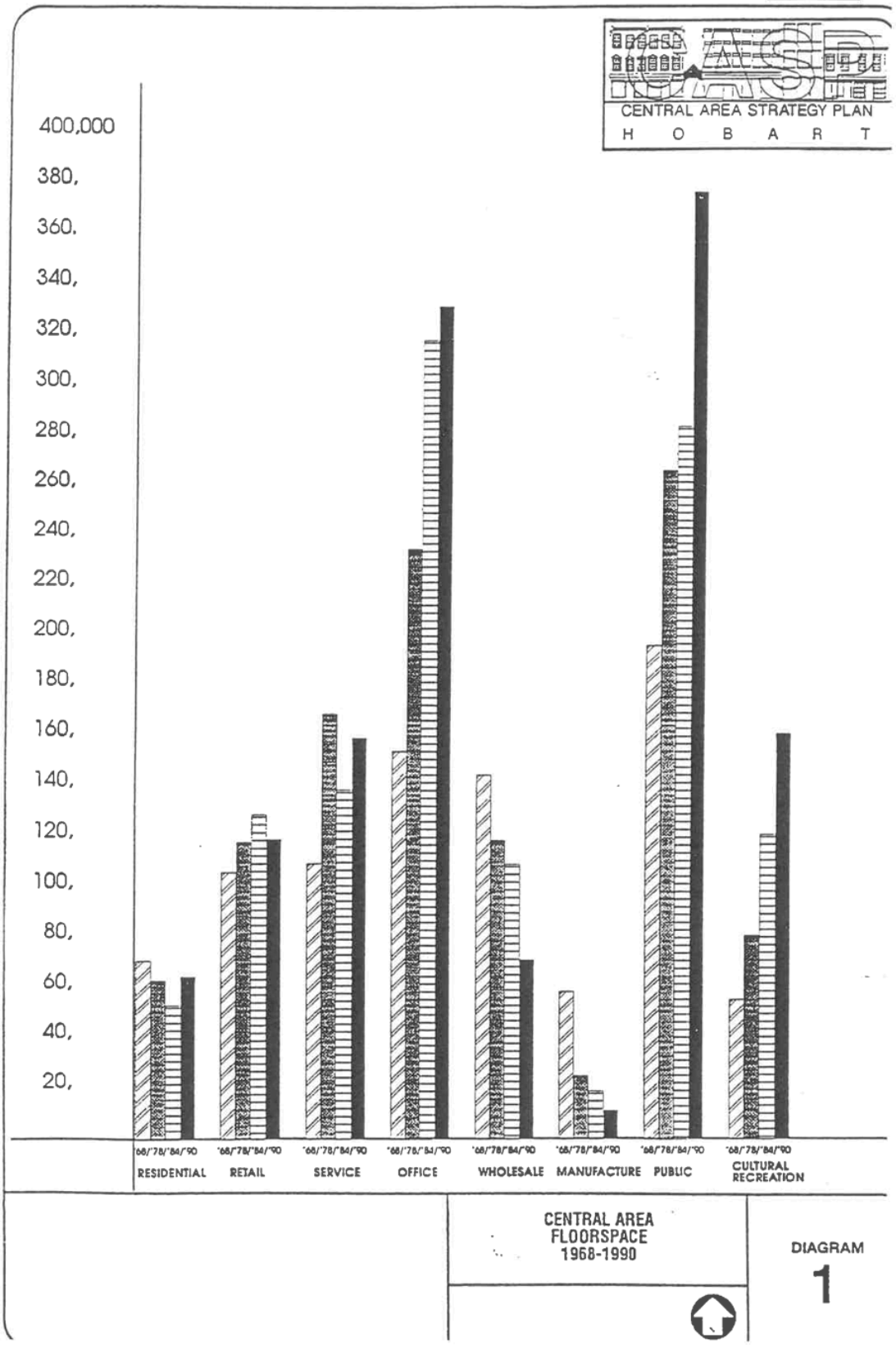
Sources: A.B.S. and Employment & Economic Base Topic Report

Notes: I = 1990 Figure

6. Heritage and Streetscape Impact Assessment

Detailed assessments of the heritage / streetscape values of the existing structures form Appendix 1 to this report. These reports have been prepared by acknowledged experts in the field of conservation and contain detailed descriptions of the site history, building fabric and essential elements to be considered for conservation in any re-development proposal. Additionally, a statement of opinion from officer's of the Hobart City Council relating to the 'Streetscape and Heritage Significance" of the subject site has been obtained and this written advice forms Appendix 2.

Figure 5


CASP
CENTRAL AREA STRATEGY PLAN
H O B A R T
400,000
380,
360,
340,
320,
300,
280,
260,
240,
220,
200,
180,
160,
140,
120,
100,
80,
60,
40,
20,
'68/'78/'84/'90
RESIDENTIAL
RETAIL
SERVICE
OFFICE
WHOLESALE
MANUFACTURE
PUBLIC
CULTURAL RECREATION
CENTRAL AREA FLOORSPACE 1968-1990
DIAGRAM
1

It is on the basis of these heritage assessments that Council will consider any application for demolition and re-development. Accordingly, the recommendations for the retention of essential elements on the site based on heritage and/or streetscape significance are summarised as follows.

79 Melville Street

The whole of the building at 79 Melville Street should be retained and the elements that date from the building construction (1922) should be retained and re-instated where possible. Recent adaptation and alterations to the fabric should be removed where the alterations are reversible.

For example, removal of the false frame under the barrel vault light well & removal of the wall through the middle of the light well at the base of the main stair, caused by the female toilet rest room addition, would be actions which would move towards re-instating the building to the previous known state. The building should be properly surveyed to identify all the internal fittings and items of significance.

81 -85 Melville Street

The building at 81-85 Melville Street originally built as the Joinery Workshop and Hardware Store of Crisp and Gunn in 1922 should be retained. The facade has a strong townscape quality. However, this complex could be adapted and recycled for a new use, if the extension or adaptation respects the 1922 fabric of the building.

Garage / Store

The timber store at the rear of 79 and 81-85 Melville Street is currently used as a garage/store. It has little remaining significance and could be demolished to make way for new uses on the site. It should be photographed and a measured drawing undertaken as part of an historical record prior to demolition. This record should be lodged with the Archives Office of Tasmania.

Open Space

The remainder of the site is defined as Open Space. It is accessible from Brisbane Street and has remnant elements of building fabric. These elements have no known cultural significance.

The sandstone wall to Brisbane Street boundary should not be destroyed. However, its relevance is unclear.

7. Environmental Hazard Assessment

7. 1 Screening Level Environmental Assessment

A screening level environmental assessment of the subject site has been conducted as part of the analysis involved in the preparation of this report, this is contained in Appendix 3.

The purpose of the assessment is to investigate the possibility of site contamination from previous and existing land uses. It has comprised a review of the site history and land use
(including examination of aerial photographs and historical review documents), review of available state and local records, and site reconnaissance. The following points are extracted from the assessment as a brief summary, but reference should be made to the assessment in its entirety.

7. 2 Possible Sources of Contamination

The current and past land uses on the site have involved the storage and handling of potentially hazardous materials. The extent of possible sources of contamination, based on the initial investigation, appear to consist of the following.

- A 1,000 gallon petrol underground storage tank and bowser licensed to the Shell Company of Australia in 1973 (under the Inflammable Liquids Act 1929) by the State Department of Mines. The licence indicates that the petrol tank and bowser was to be operated by the State Supply and Tender Department. Notes attached to the licence further indicate that the petrol tank was previously used by Crisp and Gunn and abandoned prior to the licence date (probably circa 1965 when operations ceased). It is not known how old the tank is, or what other materials may have been stored in it.

- In addition to the underground petrol tank, there is a small outdoor flammable liquid store (enclosed by a locked, chain fence) reported to contain 44 gallon

drums of chain saw fuel and kerosene. It is located at the rear of the State Emergency Service (SES) building and store at 81 -85 Melville Street.

- It is not known what other materials may have been stored on the site, but it is unlikely that the site was subject to exposure from large quantities of other hazardous materials, given the nature of the present and past land uses. Small quantities of chemicals
  (solvents, paints, etc) were probably part of the historical hardware merchandising activities.

- Insulation was noted above ceiling panels in some of the upstairs office spaces at 79 Melville Street. The type of insulation used at the property is not known.

7. 3 Extent of Further Work Required

The assessment should be regarded as a screening level exercise only and further investigative and possible remedial actions may be required in the course of the sites re-development or prior to its disposal, if this was considered desirable. The following are recommended.

- Testing of soils and possibly some of the building materials (insulation) for potential contamination and/or identification of hazardous materials.
- Access to fenced and locked portions of the store area is also necessary to fully investigate the nature and condition of the facility. Of interest are the ground-level access covers that were observed, and the reported triple interceptor oil and sediment trap. A more thorough examination of council drainage plans and other site drawings, with field confirmation, is necessary in the inaccessible areas of the property.
- Due to the presence of the underground petrol storage tank and other materials at the site, a sampling program is indicated to adequately assess the environmental condition of the site.
- Upon completion of these further investigations, recommendations can be made on the short term and long term environmental management of the property.
- Consideration has been given to the order of costs involved in undertaking the identified actions. These indicative costs are:-

Investigation and analysis as outlined above	$ 3,000
Removal of underground storage tank	$ 2,000
Possible remedial actions if required	to be costed

8. Legal Constraints

A title search has been undertaken in the preparation of this report. Copies of the relevant titles are included as Appendix 4 and these are referred to in Section 2 of this report.

There are no apparent legal constraints to the disposal and re-development of the subject site identified by this investigation other than the storage buildings behind 79 Melville Street which have been affected by a recent boundary adjustment (see Section 2). The disposal of the subject property may require the resolution of this situation.

9. Summary of Constraints and Opportunities for Re-development

9.1 It is possible to create a separate title for 79 Melville Street, the possible boundary locations are shown on Figure 3. As shown, the western boundary would need to be located three meters from the western wall to allow retention of the windows on that face (and also to accommodate the external fire escape). The current openings in the rear wall of the main building would also need to be blocked up. Whilst further stratum subdivision of the property is technically feasible under the provisions of the Building Code of Australia, the location of the single internal stairway makes such a proposal impractical without major modifications.*(page 5)*

9.2 The openings through the party wall between 81 and 83-85 Melville Street would need to be blocked up if the properties are to be dealt with separately.

A large proportion of the remainder of the site is covered with timber trussed, single storey storage buildings. These consist of three discreet but conjoined structures comprising floor areas of 1911 square meters, 298 square meters and 88 square meters. From a structural viewpoint, they provide little realistic potential for upgrading for other uses.

The rearmost of these storage buildings (behind 79 Melville Street and closest to Brisbane Street) has been affected by a recent boundary adjustment and it is apparent that it now straddles the boundary with an adjacent lot. The disposal of the subject property may require the resolution of this situation. If this is necessary, two options are available;

- Demolition of the structure, or
- The installation of a new fire rated masonry wall on the new boundary. *(page 6)*

9.3 The title to Number 88 Brisbane Street indicates an old 'roadway' along the western boundary which appears to have been used as a right of way and drainage easement for Number 90. The possibility of expunging this encumbrance should be investigated *(page 7)*

9.4 Under the provisions of the City of Hobart Planning Scheme 1982, most use types can be contemplated for the subject site with the exception of those of a heavy industrial nature which would generate substantial movements of heavy vehicles or be potentially hazardous or noxious.*(page 9)*

9.5 Under Schedule B. of the Scheme the following development density provisions apply to the subject site; *(page 9)*

Plot Ratio - Basic 2.25 Maximum 3.00
(maximum floor area relative to site area)

Minium lot size - 120m2 Min. Frontage 6m
(for subdivision)

9.5 No specific boundary setbacks are required under the Planning Scheme, building setbacks would be determined by the requirements of the Building Regulations.*(page 9)*

9.6 The maximum permissible height for buildings on the subject site is 12 meters. 'Height' is defined under the Scheme as the distance measured between the natural surface level and the topmost habitable floor level of a building. *(page 9)*

9.7 Parking and access standards are identified in Schedule E of the Scheme. The Schedule contains parking space requirements for individual land use groups. However there is provision to vary these requirements and it is reasonable to expect that an exercise of discretion in regard to any of these standards could be granted subject to

adequate justification being provided within a planning submission for development. Council may require 'cash-in-lieu' for any car spaces not provided on site. *(page 10)*

9.8 Based upon the historic assessment contained in this report, it is considered that, in practical terms, any successful re-development proposal would encompass the retention of the existing structure at 79 Melville Street in it's entirety and make every effort to retain the structure at 81-85 Melville Street by its adaptation and reuse. The demolition of the existing structures at 81-85 Melville Street should only be proposed if it can be satisfactorily demonstrated that their retention would deny the economic and efficient re-development of the site and their replacement structures would enhance the existing streetscape.

There is no apparent restriction to the demolition of the garage/store at the rear of 79 and 81-85 Melville Street based on historic or streetscape values. Any application for it's demolition should include the completion of an historical record of the building prior to demolition and provisions for the future treatment of the affected portion of the subject site either as an interim or permanent measure. *(page 10)*

9.9 The extent of possible sources of contamination of the site, based on the initial investigation, appear to consist of the following.

- A 1,000 gallon petrol underground storage tank and bowser
- A small outdoor flammable liquid store (enclosed by a locked, chain fence) reported to contain 44 gallon drums of chain saw fuel and kerosene.
- Insulation above ceiling panels in some of the upstairs office spaces at 79 Melville Street. The type of insulation used at the property is not known. *(page 15)*

9.10 Possible remedial actions may be required in the course of the site's re-development or prior to its disposal, if this was considered desirable. The following are recommended.

- Testing of soils and possibly some of the building materials (insulation) .
- A more thorough examination of council drainage plans and other site drawings, with field confirmation, is necessary in the inaccessible areas of the property.
- Due to the presence of the underground petrol storage tank and other materials at the site, a sampling program is indicated to adequately assess the environmental condition of the site.

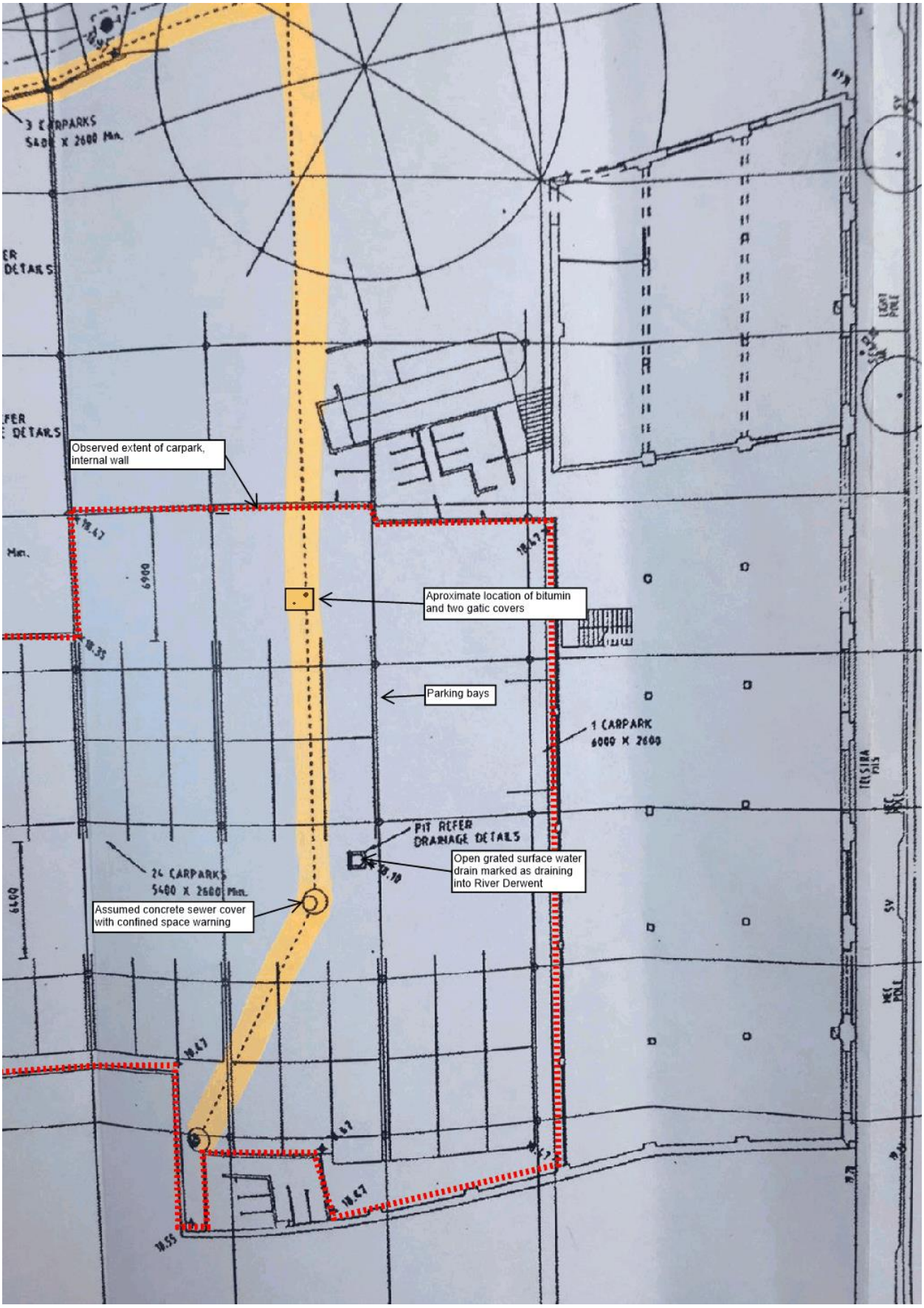
9. 11 Consideration has been given to the order of costs involved in undertaking the identified actions. These indicative costs are:-

Investigation and analysis as outlined above	$ 3,000
Removal of underground storage tank	$ 2,000
Possible remedial actions if required	to be costed *(page 15)*

9. 12 There are no apparent legal constraints to the disposal and re-development of the subject site identified by this investigation other than the storage buildings behind 79 Melville Street which have been affected by a recent boundary adjustment. The disposal of the subject property may require the resolution of this situation.*(page 16)*

Site Location Plan – 79 Melville Street, Hobart

WSP | PARSONS BRINCKERHOFF


Observed extent of carpark, internal wall
Aproximate location of bitumin and two gatic covers
Parking bays
1 CARPARK
6000 X 2600
PIT REFER DRAINAGE DETAILS
Open grated surface water drain marked as draining into River Derwent
24 CARPARKS
5400 X 2600 Min.
Assumed concrete sewer cover with confined space warning
6900
6400

Grated surface water drain
Concrete manhole cover
(assumed sewer)

Site inspection photos – 79 Melville St, Hobart- 07/04/2017

WSP | PARSONS BRINCKERHOFF

WSP | PARSONS BRINCKERHOFF

From: Warren Jordan
To: Peter Topliss; Nicole Reineker
Subject: Fwd: 79-85 Melville Street – 7 April 2017 - Site Inspection
Date: Friday, 28 September 2018 6:52:04 PM
Attachments: 79 Melville St Hobart.pdf
ATT00001.htm
ERLUR.PDF
ATT00002.htm
Photos and plans.pdf
ATT00003.htm

Hi Peter and Nicole
Some further info for you here

Cheers Warren

Sent from my iPhone

Begin forwarded message:

From: "Leigh Roberts" <leigh@nekon.com.au>
To: "Warren Jordan" <warren.jordan@utas.edu.au>
Subject: FW: 79-85 Melville Street – 7 April 2017 - Site Inspection

Hi Warren

Our partners, Abacus, undertook a WorkSafe search in 2017 and the results of that search are attached. WSP were engaged by Abacus to investigate and the results of that investigation are below and attached. They could not locate any petrol tank.

Also, briefcase is being dropped off this afternoon to the ground floor of the original building

Cheers

Leigh Roberts
Nekon Pty ltd
Mobile 0408 141 316

From: Laurie Angeli [mailto:langeli@abacusproperty.com.au]
Sent: Friday, 28 September 2018 10:45 AM
To: Leigh Roberts
Subject: FW: 79-85 Melville Street – 7 April 2017 - Site Inspection

Leigh

This is something that maybe of use

Laurie Angeli | Senior Portfolio Manager
Abacus Property Group | Level 34 Australia Square | 264-278 George Street | Sydney NSW 2000
T 02 9253 8605 | M 0415 565 393 | F 02 9253 8616 | E langeli@abacusproperty.com.au
www.abacusproperty.com.au

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From: Charles Scarafiotti <charles@nekon.com.au>
Sent: Thursday, 27 September 2018 10:22 AM
To: Laurie Angeli <langeli@abacusproperty.com.au>
Cc: Leigh Roberts <leigh@nekon.com.au>
Subject: RE: 79-85 Melville Street – 7 April 2017 - Site Inspection

Hi Laurie, re the below, yes it goes back a wee while !! Do you have a copy of the Workplace Standards Tas application to obtain the search documents ?

Thanks

Charles

Charles Scarafiotti
Nekon Pty. Ltd.

Tel. (03) 6224 6511
Fax. (03) 6224 6522
Mob. 0418 136 397

From: Laurie Angeli [mailto:langeli@abacusproperty.com.au]
Sent: Tuesday, 1 August 2017 2:12 PM
To: Chris Brookwell (chris.brookwell@sttas.com.au)
Cc: Charles Scarafiotti; Robert Rockefeller; Peter Strain
Subject: FW: 79-85 Melville Street – 7 April 2017 - Site Inspection

Gents

Please see attached and comments below from the consultant

Laurie Angeli | Portfolio Manager
Abacus Property Group | Level 34 Australia Square | 264-278 George Street | Sydney NSW 2000
T 02 9253 8605 | M 0415 565 393 | F 02 9253 8616 | E langeli@abacusproperty.com.au
www.abacusproperty.com.au

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From: Moore, Peter [mailto:peter.moore@wspgroup.com]
Sent: Monday, 10 April 2017 8:26 AM
To: Laurie Angeli; Peter Strain
Subject: FW: 79-85 Melville Street – 7 April 2017 - Site Inspection

Laurie,

Please find attached report from Daniel Laver of site inspection and documents sourced for the Dangerous goods search for the Hobart property.

Cheers Peter

Peter Moore
Associate Director

T +61 2 8925 6720
M +61 0 1623 403
peter.moore@wspgroup.com

From: Laver, Daniel
Sent: Friday, 7 April 2017 4:55 PM
To: Moore, Peter
Subject: 79-85 Melville Street – 7 April 2017 - Site Inspection

79-85 Melville Street 7 April 2017 Site Inspection

Hi Peter,

A site inspection was undertaken today at the above property by Daniel Laver Senior Environmental Scientist - WSP During the site inspection Chris Brookwell Executive General Manager - Forestry Tasmania provided an A3 plan of the carpark layout and levels. An annotated photo of the plan is attached along with photos.

The following observations were made during the inspection

- Two metal gatic covers were observed located on a square of reinstated bitumen approximately 1.1m in size
- Two plastic covers were removed which reviewed two vertical pipes of approximately 3-4 inches in diameter

- No hydrocarbon odours were noted when the covers were removed
- The periodic hori□ntal flow of water was observed at the base of the standpipes appro□mately 2.9 m below surface
- the covers aligned with the services indicated on the plan and observed onsite, which are believed to relate to sewer and surface water □efer to annotated plan□

The dangerous goods information re□uested from □ orkSafe Tasmania is attached and reported that a tank was present at 79-83 Melville St between 19□□ to 1967. This was associated with Shell and □risp □ □unn □o-□ □ □td.

Taking the above observations into account and information provided by □ orkSafe is believed that the vertical pipes were most likely installed to inspect or allow access to the e□sting services.

The periodic flow of water and their location in relation to e□sting services suggests it may be associated with the sewer or stormwater water drainage services.

□egards

Daniel Laver
Senior □nvironmental Scientist

□ □□61 8 8□0□-□□10
M□□61 □29 □76303
□□aver□ pb.com.au

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Calbourne Nominees
GPO Box 1406
Hobart Tas 7001

Invoice No.: 00011933
Date: 27/04/2018
Job No.: 1940-02

Construction 3 Pty Ltd

ACN 109 213 336

Tax Invoice

Description	Amount
Attention: Charles Scarafiotti	
Works associated with the cleaning sump at the former Forestry Building, fill with sand after clean and cap	
Labour	$1,152.00
Materials	$357.00
Tip fees	$61.00
Total Exc GST:	$1,570.00
GST:	$157.00
Total Inc GST:	$1,727.00
Less Amount Paid:	$0.00
Balance Due:	$1,727.00

This is a payment claim under the Building and Construction Industry Security of Payment Act 2009.

Terms: 30 days from date of invoice
Interest at the rate of 17% p.a. will be charged on overdue accounts

Direct Deposit Details:

BSB: 017 - 318
Account No.: 4992 - 30963

20 Watchorn Street, Hobart, Tasmania 7000
Phone: 03 6231 1998 Fax: 03 6231 1996
Email: admin@construction3.com.au
ABN 22 109 213 336

From: Warren Jordan
To: Peter Topliss; Nicole Reineker
Subject: FW: Oil Sump Removal/Treatment
Date: Thursday, 27 September 2018 10:44:29 AM
Attachments: Con3 Inv 00011933.pdf
Motor Vehicle Workshop Oil Sump Removal.pdf

Hi Peter and Nicole

Just in from Nekon for Forestry, see attached.

Cheers Warren

□ arren □ordan
Senior Manager, □esign and □evelopment
□nfrastructure Services and □evelopment

T □61 3 6226 73□3 □M 0□39 99□663
□rivate □ag 1□ Hobart TASMAN□A 7001
www.utas.edu.au/csd

UNIVERSITY of TASMANIA
□□□□S 00□86□

From: Leigh Roberts <leigh@nekon.com.au>
Sent: Thursday, 27 September 2018 9:59 AM
To: Warren Jordan <warren.jordan@utas.edu.au>
Subject: FW: Oil Sump Removal/Treatment

Hi Warren, please see email below and attached in regards to the remediation of an oil sump in the workshop

Cheers

Leigh Roberts
Nekon Pty ltd
Mobile 0408 141 316

From: Charles Scarafiotti
Sent: Thursday, 27 September 2018 9:53 AM
To: Leigh Roberts
Subject: Oil Sump Removal/Treatment

Leigh, re the oil sump treatment, please see attached.

Thanks

Charles

Charles Scarafiotti
Nekon Pty. Ltd.

Tel. (03) 6224 6511
Fax. (03) 6224 6522

Mob. 0418 136 397

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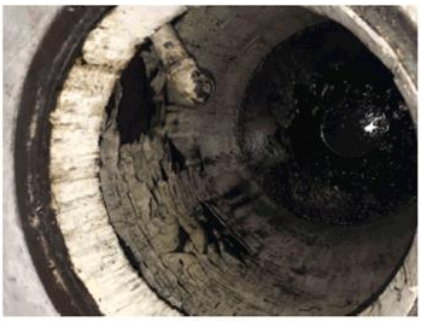
Workshop Motor Inspection and Servicing Sump

File Note: 27 Apr 18



The motor vehicle workshop has an oil sump that was used to collect oil from motor vehicles when serviced. The sump has not been used in 10 years, as advised by Forestry.

The sump has been thoroughly cleaned and washed out.

Then filled with sand and capped with reinforced concrete to the floor of the workshop.

GHD

2 Salamanca Square
T: 61 3 6210 0600 F: 61 3 6210 0601 E: hbamail@ghd.com

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Document Status

Revision	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
REV A	Nicole K Reineker	P.Topliss CEnvP Site Contamination Specialist No.SC41076		P.Topliss CEnvP Site Contamination Specialist No.SC41076		5/10/2018
REV 0	Nicole K Reineker	P.Topliss CEnvP Site Contamination Specialist No.SC41076		P.Topliss CEnvP Site Contamination Specialist No.SC41076		12/10/2018

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GHD
Hobart, TAS 7000
Australia
www.ghd.com

Your ref: [0000]
Our ref: 12574014

15 February 2022

University of Tasmania
C/- Frazer Read (All Urban Planning Pty Ltd)
19 Mawhera Avenue
SANDY BAY TAS 7005

Application No. PLN-21-869 83 - Assessment against the Potentially Contaminated Land Code

Melville Street & 80 Brisbane Street, Hobart & Adjacent Road Reserve - Partial Demolition, Alterations, Extension and Change of Use

Dear Frazer

University of Tasmania (GHD) has engaged GHD Pty Ltd (GHD) to update the existing Contamination Report for development site (83 Melville Street & 80 Brisbane Street), and to include consideration of proposed work in the adjacent road reserve.

This letter is a review of the updated Contamination Assessment report (attached) against the requirements of the Potentially Contaminated Land Code - E2.6.2. of the Hobart Interim Planning Scheme 2015. It considers the proposed UTAS redevelopment activities in the context of existing and proposed contamination assessment works.

This letter and the attached Contamination Assessment report have been developed and reviewed by Peter Topliss (EIANZ Certified Site Contaminated Specialist [CEnvP No.SC41076]), and the associated work conducted in general accordance with the NEPM (2013)[1].

The extent/boundary of the Site and the associated redevelopment activities are modified from the previous submissions in 2018 in the following key areas:

- The site extent has been expanded to include 80 Brisbane Street and associated work in adjacent road reserves;
- Excavation works required to accommodate the redevelopment program include areas of ground levelling, lift pits, and new utility trenches (stormwater and sewer) as shown in Figure 1

[1] National Environment Protection (Assessment of Site Contamination) Measure, as amended 2013.

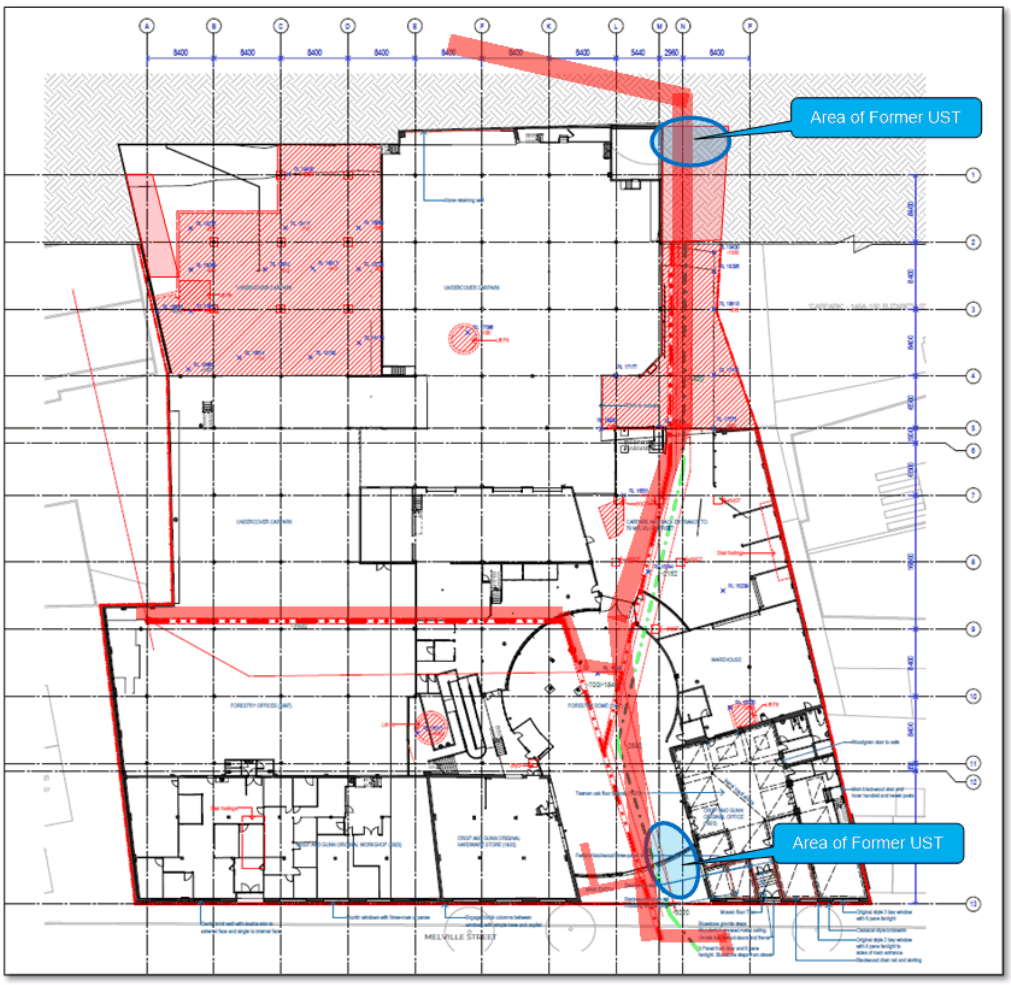


Figure 1 *Site development footprint (red shaded areas = proposed excavation areas and utility trenches)*

Site has been subject to various phases of prior contamination assessment including:

- Richard Stoklosa Engineering Practice Pty Ltd (1994) *Screening level Environmental Site Assessment of 79-83 Melville Street, Hobart*. Report prepared for James Douglas & Associates on behalf of Tasmania State Property Services, dated 2 December 1994.
- Stoklosa Engineering Pty Ltd (1996) *Forestry Tasmania Redevelopment Project, 79-83 Melville Street, Hobart*. Letter to Forestry Tasmania, dated 18 September 1996.
- Stoklosa Engineering Pty Ltd (1996) *Environmental Remediation and Validation, December 1996* (report not available for this review).
- GHD (2018) *78-83 Melville St, Limited Preliminary Site Investigation*. Report prepared for the University of Tasmania.
- GHD (2022) Contamination Assessment 79-83 Melville Street Hobart and 80 Brisbane Street Hobart.

The latter assessment report combines all previous assessment work and expands the area of consideration to include the entire development footprint and provides broad consideration for the proposed work in the adjacent road reserve.

In summary, the development site has been subject to extensive background investigation and targeted assessment and remediation (i.e. removal of underground petroleum storage systems [UPSS]). This provides increased confidence that key potential aspects of concern have subsequently been identified and addressed to varying degrees. The site history and potential contamination risk is typical of most urban sites in Hobart and based on available information, has not shown any higher risk issues.

For areas of proposed excavation for redevelopment (where potential exposure risk is higher) the following key aspects are to be considered:

- Former UPSS near Brisbane Street - While unconfirmed, available evidence suggests it was likely removed and possibly remediated (circa 1996).
- Former UPSS near Melville Street - Removed and residual contaminated soil identified as "localised" and "unlikely that the contamination has migrated off site" (Stoklosa 1996).
- Imported fill used across the site generally (and historical use of hydrocarbons on site), and likely representing a low risk, consistent with other urban sites in Hobart (i.e. a mixture of fill material and typically low level contaminated soil)
- A residual risk remains for many streets in central Hobart associated with the potential for buried old town gas infrastructure (pipework), including both Brisbane Street and Melville Street. There is no information to suggest the associated risk is any higher at this location than in any other areas of the city.
- Potential localised contamination aspects were identified on-site including the capped oil sump, triple interceptor trap and electrical substation. However, as they are not located in proximity to the proposed areas of excavation, and represents relatively low risk profiles, there is no material increased risk to construction workers, futures site users or the environment associated with the proposed development works.
- The residual risk to site from potential off-site contamination risk (i.e. surrounding automotive and fuel storage activities) migrating on-site is primarily relating to scenarios where excavation works are conducted into, or in close proximity to the underlying groundwater.

In summary the site history and potential contamination risk is typical of most urban sites in Hobart and based on the prior contamination assessment programs, has not shown any higher risk aspects. While further quantitative assessment work is recommended to confirm potential contamination risks at specific target areas prior to commencement of work on site (and off-site), it is reasonable to conclude that the overarching risk profile for the site can be effectively managed to avoid adverse impact on human health or the environment.

Informed by previous investigations on the site as outline above and in the attached assessment, it is considered that the following specific actions prior to commencement of excavation on site will appropriately manage the risk to human health and the environment:

- Define the characteristics and extend of residual contamination (if present);
- Determine whether contamination represents a potential unacceptable risk to human health or the environment (including risk to construction workers);
- Specify any associated remediation and/or specify site controls required to protect risk to human health or the environment (acknowledging that in some cases full assessment and remediation may not be practical until site develop has commenced, due to access constraints); and
- Ultimately identify that the site is suitable for its intended future use (subject to any remediation or controls required).

More specifically, the ESA is to address the following target aspects representing potential site contamination that require further assessment:

- Area of proposed utility trenching next to the former UPSS near Brisbane Street;
- Area of proposed utility trenching next to the former UPSS near Melville Street;
- Areas of prosed utility trenching in road reservations on both Brisbane and Melville Streets, and accounting for associated potential risks from old town gas (including safe work protocol during drilling);
- General assessment (grid and/or judgemental sampling patterns) for soil characterisation of proposed excavation areas required for the redevelopment including areas of ground levelling, lift pits, and remaining utility trenches not addressed above.

In context of the broader site footprint outside of proposed areas of excavation, it represents a low risk profile. As the exposure setting and land use do not materially change (commercial setting to commercial setting) there is no material increased risk to construction workers, futures site users or the environment associated with the broader site footprint.

UTAS has already committed to conduct further contamination investigation works to meet the aforementioned identified gaps, and sampling programs have been developed. However, due to difficulties is securing availability of civil contractors due to high demand and access to leased car park areas requiring 24hr access, the work cannot be conducted as part of this submission. The work will be carried out prior to construction related excavation works commencing. UTAS will also commission development of a Construction Environmental Management Plan and Soil & Water Management Plan (including groundwater) to guide site construction activities. The findings of further contamination investigations will be used to build the basis of those plans.

It is important to recognise that UTAS (with GHD) has a proven track record of addressing potential site contamination aspects at very similar development scenarios in central Hobart (i.e. NRAS Melville Street and The Hedberg). These recent programs have been successful in identifying site contamination aspects, remediation and conducting risk assessments to determine suitability for site workers and future users.

Potentially Contaminated Land Code

E2.6 Development Standards
E2.6.2 Excavation

Objective: To ensure that works involving excavation of potentially contaminated land does not adversely impact on human health or the environment.

Performance criteria	***Assessment***
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.*	The proposal is considered to satisfy P1 (b) in that the site history and potential contamination risk is typical of most urban sites in Hobart and based on the prior contamination assessment programs, has not shown any higher risk aspects. Further quantitative assessment work is recommended in the following areas: • the proposed utility trenching next to the former UPSS near Brisbane Street; • the proposed utility trenching next to the former UPSS near Melville Street; • the proposed utility trenching in road reservations on both Brisbane and Melville Streets, and accounting for associated potential risks from old town gas (including safe work protocol during drilling); and • a general assessment (grid and/or judgemental sampling patterns) for soil characterisation of proposed excavation areas

required for the redevelopment including areas of ground levelling, lift pits, and remaining utility trenches not addressed above.

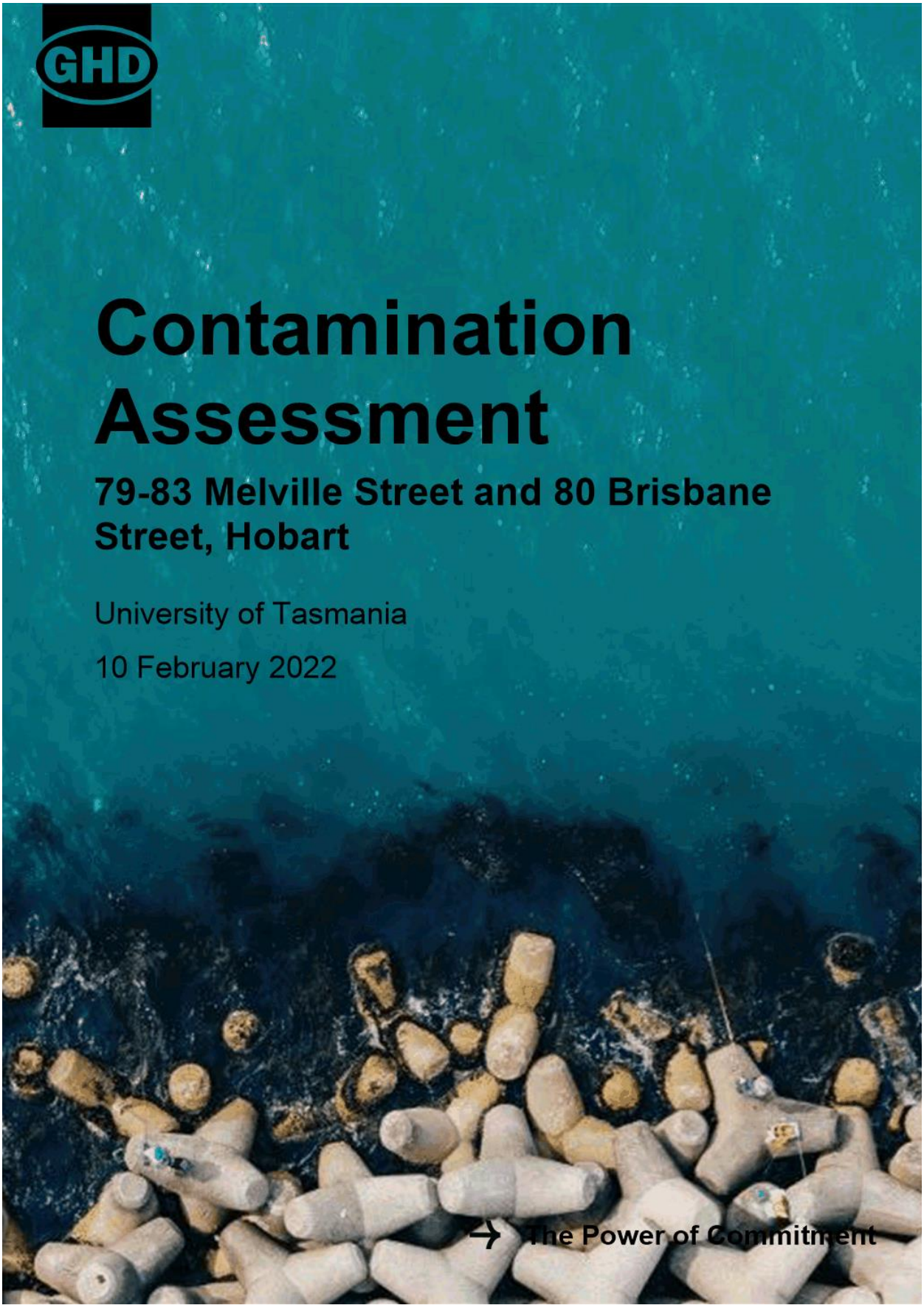
These investigations will confirm any specific remediation measures prior to commencement of any excavation work on site and are an appropriate plan to managed potential contamination and associated risk to human health and the environment and

Subject to this approach it is considered the excavation will be effectively managed to ensure no adverse impact on human health or the environment.

Regards

Peter Topliss
Technical Director - Contamination and Remediation

0457 551 571
Peter.topliss@ghd.com



Contamination Assessment

79-83 Melville Street and 80 Brisbane Street, Hobart

University of Tasmania

10 February 2022

The Power of Commitment

GHD Pty Ltd | ABN 39 008 488 373
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Hobart, Tasmania 7000, Australia
T +61 3 6210 0600 | **F** +61 3 8732 7046 | **E** hbamail@ghd.com | **ghd.com**

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Last saved date	11 February 2022
File name	https://projectsportal.ghd.com/sites/pp16_03/utasoldforestrybuild/ProjectDocs/12574014_RPT_Updated Preliminary Site Investigation 2022.docx
Author	Nicole Reineker
Project manager	Nicole Reineker
Client name	University of Tasmania
Project name	UTAS Old Forestry Building Contamination Assessment
Document title	Contamination Assessment | 79-83 Melville Street and 80 Brisbane Street, Hobart
Revision version	Rev 0
Project number	12574014

Document status

Status Code	Revision	Author	Reviewer		Approved for issue		
			Name	Signature	Name	Signature	Date
	0	Nicole Reineker	Peter Topliss		Peter Topliss		11/2/2022

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The Power of Commitment

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1. Introduction

1.1 Purpose of this report

The objective of this study was to identify any current or legacy activities that have potential to impact the soil or groundwater below the site based on a desktop review, and site visit and any associated recommendation to address those risks.

1.2 Scope of works

This contamination assessment has been undertaken in general accordance with the National Environment Protection Council (NEPC) (2013) Schedule B2 Guideline on Site Characterisation of the National Environmental Protection (Assessment of Site Contamination) Measure 1999 (as amended April 2013) (the NEPM).

The scope of work completed to inform this report comprised the following tasks:

- Review and interpretation of the following information sources
- Local government planning information indicating current and proposed land use zoning and permissible uses
- Historical aerial photography depicting the site and surrounds
- Geological, soil and topographical maps depicting the site
- WorkSafe Tasmania dangerous goods records review (information outstanding)
- EPA Tasmania Contaminated Site database search (information outstanding)
- Local government (Hobart City Council) records
- Preparation of this report describing the investigation and presenting the findings

1.3 Limitations

This report has been prepared by GHD for University of Tasmania and may only be used and relied on by University of Tasmania for the purpose agreed between GHD and University of Tasmania as set out in section 1 of this report.

GHD otherwise disclaims responsibility to any person other than University of Tasmania arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD 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.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report (refer section(s) 1.4 of this report). GHD disclaims liability arising from any of the assumptions being incorrect.

The opinions, conclusions and any recommendations in this report are based on information obtained from, and testing undertaken at or in connection with, specific sample points. Site conditions at other parts of the site may be different from the site conditions found at the specific sample points.

Investigations undertaken in respect of this report are constrained by the particular site conditions, such as the location of buildings, services and vegetation. As a result, not all relevant site features and conditions may have been identified in this report.

Site conditions (including the presence of hazardous substances and/or site contamination) may change after the date of this Report. GHD does not accept responsibility arising from, or in connection with, any change to the site conditions. GHD is also not responsible for updating this report if the site conditions change.

GHD has prepared this report on the basis of information provided by University of Tasmania and others who provided information to GHD (including Government authorities), which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

2. Site setting

2.1 Site identification

Table 1 Site details

Item	Details
Site Address	79 – 83 Melville Street, Hobart, Tasmania, 7000 and 80 Brisbane Street, Hobart, Tasmania, 7000.
Property Identifiers (Melville St)	Title Reference Number/s: 149231/2 Property ID Number (PID): 2911798
Property Identifiers (Brisbane St)	Title Reference Number/s: 149231/1 Property ID Number (PID): 2811771
Site Area	Approximately 7000 m²
Site Owner/ Operator	University of Tasmania
Current Zoning	22.0 Central Business (Hobart Interim Planning Scheme 2015)
Current Land Use Melville St: Brisbane St	 Not currently in use- previously Forestry Tasmania Freedom Furniture- Home wears retail outlet
Surrounding Land Uses	The site is located approximately 550 m west northwest of the Hobart GPO. Current land uses surrounding the site comprise: North: Brisbane Street -Retail businesses East: Murray Street- Retail, business offices and a mechanics West: Elizabeth Street- retail and lifestyle businesses South: Melville Street- Wesley Centre (Chapel, Hall and Museum), multistorey car parking and retail business.

2.2 Site layout

The site is located on the periphery of Hobart's Central Business District with frontage to Melville Street and vehicle access from Brisbane Street. The layout of the site is shown on Figure 1 in Appendix A. It is essentially an irregular rectangular shape with very little open space, apart from a drive-way located on the north-eastern boundary leading to the service yard. Buildings cover the rest of the extent of the site, with two converted redbrick warehouses joined by a large glass atrium along Melville Street. This building extends back to Brisbane Street with car parking on the lower ground floor, a service yard, workshops and laboratory leading to the offices along Melville Street. All ground is covered with buildings or asphalt.

2.3 Site environmental setting

2.3.1 Elevation and topography

The site slopes gently from the north east to the south west and has an approximate elevation ranging from 15 – 20 m AHD. It is considered likely that the rear of the site (northern end) has been excavated into natural ground to facilitate development of the car parking.

2.3.2 Geology

Geology has been mapped as comprising four units as follows and is shown on Figure 2 Appendix A .

- Northern section of the site mapped as alluvial gravel, sand and clay (Qa).
- South eastern section is mapped as undifferentiated quaternary deposits (Q).

- South western portion of the site is mapped as comprising 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 material (Tcbd).
- A small area around the service yard is mapped as dolerite and related rocks (Jd).

2.3.3 Surface water and groundwater

The site is located approximately 900 m north east of the Sullivans Cove, River Derwent. Information on depth to groundwater beneath the site has been obtained from bore logs contained in Screening Level Environmental Site Assessment of 79-83 Melville Street, Hobart (Stoklosa 1994), and was observed at between 1 and 4 metres below ground level (mbgl).

On the basis of topography in the vicinity of the site and proximity to the Derwent Estuary, it is anticipated that the groundwater flow direction at the site is towards the Derwent Estuary to the south east.

2.3.4 Acid sulphate soils

The majority of the site is mapped as being at low risk of having acid sulphate soils (ASS), with a small section along the western boundary mapped as not being at risk.

2.4 Site history search

2.4.1 Site history

Originally a land grant acquired by the Crisp family, the site, which extends through to Brisbane Street, operated as a sawmill and timber and hardware outlet until 1968. Following a fire at the site in 1922 the two redbrick warehouses on Melville Street were constructed, the eastern one was used as a warehouse store for dry and finished timber products and smaller western one housed the hardware emporium business.

The site was sold to the Tasmanian State Government in the late 1960s and was used as stores and offices including the State Emergency Service, and The State Fire Commission. In 1997 the site was redeveloped to be Forestry Tasmania Office and showroom. This redevelopment retained the two redbrick warehouses and incorporated into the design a glazed, domed foyer joining them together. This development comprised the refurbishment of the two warehouse buildings; construction of new office and amenities areas; a retail showroom and the foyer dome.

2.4.2 WorkSafe Tasmania Dangerous Goods records

A search of the WorkSafe Tasmania dangerous goods records was ordered to confirm what dangerous goods the site has historically been licenced to hold. On 28th September, WorkSafe advised that their database searches had identified

The search revealed documentation that:

- On 4 July 1955, Crisp and Gunn Co-op Ltd applied to renew registration of storage of 500 gallons of mineral spirit
- On 5 December 1962, The Shell Company of Australia applied to replace the single manual pump with a single electric pump on an existing 500 gallon tank (not to scale diagram included)
- On 4 January 1963, Crisp and Gunn was inspected by Inspector of Explosives to inspect pump outfit owned by The Shell Company of Australia that was approved on 5 December 1962
- An application by Crisp and Gunn, to keep one 1,000 gallon petrol tank at 79 Melville Street, was submitted to Department of Mine on 5 June 1967
- On 17 April 1967, approval of 1,000 gallon tank situated at Crisp and Gunn Co-op Ltd
- On 20 July 1967, Crisp and Gunn was inspected by Inspector of Explosives to inspect the 1,000 gallon tank owned by Shell Co of Australia that was approved on 17 April 1967

A copy of the WorkSafe Dangerous Goods Documentation and correspondence is presented as Appendix C.A copy of the correspondence is provided in Appendix C

2.4.3 Environmental Protection Authority (EPA) Tasmania records

The Environmental Protection Agency was contacted for any information they may hold regarding the Site. The EPA confirmed that they held several records/reports regarding an Environmental Site Assessments and the letter states:

"*Of particular interest was the decommissioning of an underground storage tank (UST) located on the Brisbane Street side of the Site and another UST located on the Melville Street side of the Site*"

In addition they mention:

- Stoklosa 1996 report and the EPA response that the localised hydrocarbon presence (around Melville street former UST) should be disclosed to future occupants of the Site
- WorkSafe records for the site and neighbouring site (same records provided by WorkSafe)

A copy of the correspondence is provided in Appendix D

2.4.4 City of Hobart Council records

The City of Hobart (CoH) Council was contacted for any information they may hold regarding current or historic pollution at the site, including old reports and applications for fuel storage or chemical storage, remediation notices, pollution incidents, and permits. The CoH confirmed that they had records that the site had been historically used for potentially contaminating land-use activities (refer to Appendix E). The only potential sources of contamination at or adjacent to the site that CoH noted, were hydrocarbons. The main use of the site from 1886 until 1967 was classified as wood treatment/sawmill, with various business occupying the site. These businesses comprised:

- From 1886 -1915, Central Saw and Planing Mills
- From 1916-1932, Absolom brothers
- From 1955 -1967, Crisp and Gunn Co-op Ltd
- Dates unknown, Absolom Garage
- Dates unknown, Bert Self
- Dates unknown, Shell

The property also lies adjacent three sites that have been identified as potentially contaminated with hydrocarbons. These comprise:

- 131-133 Murray Street, which operated as a fuel supplier in 1916
- 141-143 Murray Street, which operated as a motor car dealers, engineers and garage between 1966 and 1979 by:
  - J.T. Graves & Son Pty. Ltd
  - H.C. Sleigh/ Golden Fleece
  - John Tasman Graves
- 132- 146 Elizabeth Street, which operated in 1940 as a body works, motor car dealers, engineers and garages by Trade Motor Body Works

These three adjacent properties are mapped as being located either side of the site.

The phrase "motor car dealer, engineer and garage" is a category name used to categorise similar businesses which was used when the contaminated sites register was created. These operations are generally considered to fall under the current classification of "commercial engine and machinery workshops or petroleum product or oil storage for service stations

A copy of the correspondence is provided in Appendix E

2.4.5 Dial before you dig records

A Dial Before You Dig (DBYD) request was submitted on Monday 1st October. The following information was received about the infrastructure on site from:

- TasNetworks
- TasGas
- nbn Co.
- Optus
- DPIWE (Aboriginal Heritage)
- TasWater
- HCC

The City of Hobart (CoH) response letter highlighted the possibility of "abandoned old town gas (coal gas) pipes potentially emitting harmful gases and Volatile Organic Compounds (VOCs) may be found in many areas of the City" within the vicinity of the site. There is no information available on exactly where these pipes may be located within Hobart CBD. While these pipes are usually located within road reserves, feeder lines may be present on the site.

TasWater's responses show that sewage lines run through the site.

Appendix F contains all the responses received from the DBYD search.

2.5 Historic aerial photography

A review of historical aerial photography was undertaken as part of this assessment, and the findings of the review are presented in Table 2 below.

Historic aerial photographs of the site were ordered at approximately 10-year intervals commencing from the earliest available (1946) to 2000. Figures for this report have been prepared using the most current image of the site available from Google Earth which is from 2022 and the same image has been used to describe the current site layout. The historic aerials are presented in Appendix G.

Table 2 Aerial photograph summary

Photo ID	Date taken	The site	Melville Street	Brisbane Street	Murray Street	Elizabeth Street
10917	1946	The two redbrick warehouse buildings (now joined by atrium). Western building has three roof sections (looking like 3 adjoined warehouses). Eastern building roofline similar. Where atrium is now is a fenced yard. Very large warehouse/structure joins redbrick buildings behind fenced yard - this takes up approximately 1/4 of the current site.	Looks similar to now	Houses/small buildings, some with back yards all along street - no empty blocks.	All cadastral blocks have at least one building on them. Appears to be more commercial than Brisbane St (storage yards at multiple properties - unable to determine what is being stored) storage yard at 131-133 Murray looks like shipping containers.	Street looks similar to now (shop fronts and terraces) but with back yards rather than an office block at back of buildings.
326-123	1957	Looks very similar to 1946 photo- storage yards behind buildings on Melville Street more obvious. Chimney stack visible (where Freedom is now). Piles of timber being stored in a yard. Possible location of petrol bowser visible in fenced yard on Melville St.	Same	Same	Same	Same
442-248	1965	Best historical image of site (all aspects clear). Houses removed from Brisbane St making a large driveway/access to storage yards at back of Melville St warehouses. Storage yards appear to have sealed surface. Two raised tanks near chimney stack (probably water due to shape and height). A new, small structure in fenced yard - surface appears to be sealed (possibly new petrol bowser installed in 1962)on Melville St.	Same	House/building (apart of site) removed to allow access to storage yards at site. 94-98 Brisbane -Building on corner of Murray removed and new building constructed at back of block – there are multiple cars in yard - surface is sealed.	131-133 Murray St has shipping containers stored. 141-143 Murray St multiple vehicles in yard at back, the surface appears to be sealed.- some debris on ground around fences and staining of ground surface (probably operating as garage).	Same- but storage yard at back of 132-146 Elizabeth is clearer and possible oil/ hydrocarbon drums/above ground tanks. Surface is sealed.
801-053	26/10/1979	Back of site cleared - all houses removed, chimney stack removed, raised tanks removed, storage areas/yards removed. Driveway installed from Brisbane St to centre of block (where it is now). At end of driveway new building attached to shed/warehouse. Possible location of petrol bowser and 1000 gallon tank (installed 1967) near driveway. Surface has been sealed and some areas have marked car parks, rest used for unmarked car parking.	Same	All buildings from corner of Murray to 74 Brisbane (now Wagner's Framing) demolished and turned into car parking. Appears to be below street level in sections.	141-143 Murray St- surface resealed and parking bays painted in. Roof replaced on one building. 131-133 Murray St building has been extended – no longer being used as storage yard, surface has been sealed and now being used as car parking.	Backyard at 146a-150 Elizabeth contains multiple cars - not as a car park. Some staining on ground (or could be vegetation).

Photo ID	Date taken	The site	Melville Street	Brisbane Street	Murray Street	Elizabeth Street
		Fence/wall between redbrick warehouses on Melville removed. Small structure seen in 1965 photo removed. Car parking spaces marked in lot.				
1118-026	2/12/1988	New roof on front third of eastern red brick warehouse. New roof on building extended above at end of driveway and small lean-to attached on eastern side. No other changes.	Same	Same	131-133 Murray - car parking marked.	Same
1239-074	16/2/1996	The rest of the roof replaced on eastern redbrick warehouse. No other changes.	Same	Same	141-143 Murray - roof replaced on warehouse/shed.	Same
1332-092	19/11/2000	Forestry Tasmania development of site has occurred. Glass dome constructed between the two redbrick warehouses. Large warehouse in centre of block removed. Along Brisbane St, Freedom Furniture shop and car park built. Driveway off Brisbane St extended and new service yard created (where large warehouse was removed from). New roof on western redbrick warehouse and extended.	Same	Same	Same	Same
theList, Base map State Aerial Photo	2022	Same	Same	Same	Same	132-146 Elizabeth Street – warehouses and back of buildings removed (leaving street facing terrace houses) and large office block developed.

3. Previous reports

The Site has been subject to a number of investigations that are able to inform the potential for site contamination and its associated risk. The following reports were made available for use in this investigation and are included in Appendix H:

- Richard Stoklosa Engineering Practice Pty Ltd (1994). *Screening level Environmental Site Assessment of 79-83 Melville Street, Hobart.* Report prepared for James Douglas & Associates on behalf of Tasmania State Property Services, dated 2 December 1994.
- Stoklosa Engineering Pty Ltd (1996). *Forestry Tasmania Redevelopment Project, 79-83 Melville Street, Hobart.* Letter to Forestry Tasmania, dated 18 September 1996.
- *Department of Environment and Land Management (DELM) (1996). Forestry Tasmania Redevelopment Project 79-83 Melville Street,* Environment Tasmania letter to Forestry Tasmania, dated 23 September 1996.
- Department of Environment and Land Management (DELM) (1997). *Forestry Tasmania Redevelopment Project 79-83 Melville Street,* Environment Tasmania letter to Forestry Tasmania, dated 20 January 1997.
- WSP Parsons Brinckerhoff (2017). *Site Location Plan – 79 Melville Street, Hobart*. Email chain with attachment from WSP Parson Brinckerhoff to Abacus Property dated 7th April 2017.
- Nekon (2018). *Oil Sump Removal/Treatment*. Email with attachments from Nekon Pty Ltd to UTAS dated 27th September 2018.
- Collex Waste Management (1996), *Certificate of Disposal*, dates 28th August 1996

3.1 Stoklosa (1994)

Stoklosa (1996) included a detailed site history review and identified early Site use as timber/joinery business, changing to office and stores from the mid 1960s. A tall smokestack was identified in the northwest section of the site (now within the footprint of the Freedom Furniture store), likely associated with burning of wood waste. While the 1996 site inspection identified various small quantities of hazardous materials on site (i.e. small outdoor flammable liquid store on concrete), the primary aspect identified was a single petrol tank and bowser, abandoned prior to 1965. Its location is identified on the northern corner of the site, adjacent to Brisbane Street (refer Figure 3 in Appendix A). Council records suggested a triple interceptor trap located 'in the storage area'. The exact location is not provided but inferred to be in the northern section of the site (i.e. within the current fenced in car parking area/open area).

Historical geological investigation logs (1979) were included in the appendix. These engineering logs in locations near proposed future soil disturbance areas identified that fill had been used in places across the site to a depth of approximately 1.0 mbgl. The fill was varied with a variety of material recorded including rubble, brick fragments, rocks, clay, and boulders.

No contaminant testing was undertaken as part of this investigation.

3.2 Stoklosa (1996)

This report included assessment of soils after removal of a single underground storage tank (UST) from the main entrance area near Melville Street (Figure 4 in Appendix A). Residual petroleum hydrocarbons were detected in soils in the base of the excavation at concentrations that exceed current commercial/industrial land use criteria (NEPM 2013 Table 1A(3) Soils HSLs for vapour intrusion) for TRH (FT2 and FT9 only), but not xylene. However, they did not exceed either the CRC Care direct contact for intrusive works or HSL for vapour intrusion for intrusive works criteria (CRC Care 2011[1]). Samples from the same area (presumed upgradient, however sample depth not specified [FT-1, FT-3, FT-8]) did not contain concentrations of hydrocarbons or BTEX significantly above the laboratory limit of reporting. The letter concludes the lateral and vertical extent of contamination is not known, however:

"*There appears to be no significant risk of exposure to workers or visitors to the site.*"

[1] CARE, CRC. "Health Screening Levels for Petroleum Hydrocarbons in Soil and Groundwater." (2011).

No metals concentrations were detected above the commercial/industrial land use criteria at the UST, or in other areas of the Site that were investigated.

There was evidence of planning the removal and assessment of the UST near Brisbane Street, and a note that Stoklosa Engineering must be on site to witness the removal of the UST and to take samples, and correspondence from EPA indicating that the tank has been removed.

Table 3 Hydrocarbon and BTEX concentrations detected in Stoklosa 1996 (Melville St UST)

	TPH (mg/kg)	C6-C9 (mg/kg)	C10-C14 (mg/kg)	C15-C28 (mg/kg)	C29+ (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)
FT-1	ND	ND	ND	ND	ND	ND	ND	ND	ND
FT-2	660	530	130	ND	ND	ND	4	7	66
FT-3	8	ND	ND	ND	ND	ND	ND	ND	ND
FT-8	7	ND	ND	ND	ND	ND	ND	ND	ND
FT-9	1790	1330	440	ND	ND	2	8	14	176

ND = non detect above laboratory limit of reporting

3.3 DELM (1996)

This letter is in response to Stoklosa Engineering letters dated 8th and 18th of September 1996 and a meeting on site on 10 September. It mentions that UST evacuations and that the results were provided to Environment Tasmania under due diligence. That additional testing is required around the "unanticipated UST" to determine extent of lateral contamination and that bore logs need to be provided with results to determine depth of each sample.

3.4 Collex (1996)

This is a one page document confirming that 2,500 litres of hydrocarbon contaminated (slurry?) was removed from 79 Melville Street on 28 August 1996 (no mention of whether this is from one or both of the USTs).

3.5 DELM (1997)

This letter makes reference to a subsequent body of work "Environmental Remediation and Validation, December 1996" prepared by Stoklosa Engineering. While the report was not available for this investigation, Environment Tasmania concur with Stoklosa that "…contaminated soil under the UST represents a localised hot spot…" and that "it is unlikely that the contamination has migrated off site, or will do so in the future". Environment Tasmania considered that the site was suitable for its use as Forestry Tasmania, however if the site use was to change/or be developed for a more sensitive use in future, in-situ soil testing may be required.

3.6 Parsons Brinckerhoff (2017)

This is an email chain with attachment that outlines the results of an site inspection undertaken on 7 April 2017 by an Senior Environmental Scientist.

The following observations were made during the inspection:

- Two metal gatic covers were observed located on a square of reinstated bitumen approximately 1x1 m in size.
- Plastic covers were removed which reviewed two vertical pipes of approximately 3-4 inches in diameter.
- No hydrocarbon odours were noted when the covers were removed.
- The periodic horizontal flow of water was observed at the base of the standpipes approximately 2.9 m below surface.
- The covers aligned with the services indicated on the plan and observed onsite, which are believed to relate to sewer and surface water.

– No 'petrol tanks' were able to be located at the site.

Parson Brinckerhoff believed that the vertical pipes were most likely installed to inspect or allow access to the existing services. The periodic flow of water and their location in relation to existing services suggests it may be associated with the sewer or stormwater water drainage services.

3.7 Nekon (2018)

This email confirms that the oil sump that was located in the Workshop with the three roller doors (refer Figure 3 in Appendix A), that opens to the undercover car park was cleaned out and capped. This email contained photographs of the sump prior to cleaning and after capping. The invoice for these works was also attached.

4. Site inspections

Two site inspections were undertaken by GHD, on Monday 24 October and Wednesday 26 October 2018, with a further inspection being undertaken on 28 January 2022. While the entire building was inspected (during the 2018 inspections), only the ground floor level including car parking area will be discussed in this section, as the second and third floors are unlikely to have contributed to any soil or groundwater contamination on site. The inspection in January 2022 was targeted towards the excavations proposed as part of the redevelopment of the Site.

The plates from the three site inspections are included in Appendix B and these comprise part of the description of the Site.

Entrance and Atrium

This area is unsealed and has a dirt/soil ground. This area was previously the planted out as a simulated Tasmanian Forest.

Square steel coved manhole located in front of atrium along Melville Street - this is in the vicinity where the former UST that was removed for the Forestry Development was located (Plate 1).

There was evidence of geo-fabric used in the development of the forest in the atrium coming to the surface (Plate 2). This was observed throughout the right side of the atrium.

There were a few concrete manhole covers observed in the Atrium (Plate 3), these gatics are located above the sewage line. The gatics throughout the site that relate to sewage infrastructure look identical.

Workshops- Fabrication and Operations

There are two workshops on the ground floor, one on each side of the building. The Fabrication workshop is the one that has a roller door to the Service Yard. The Operations Workshop is located with three roller door access to the undercover garage.

Both of these workshops contained exterior signage saying that they contained flammable gas, non-flammable nontoxic gas and oxidizing gas (Plate 4 and Plate 5).

Within the Operations workshop there is a circle of fresh concrete (Plate 6). This is from where the oil sump was cleaned and then capped.

Laboratories

There was HAZCHEM signage on the Laboratory door to the Service Yard. It is likely that agricultural chemicals were used and stored within this area (see plate 7). It is unlikely that these would have contributed to any contamination on site as the floor of the laboratory is sealed with concrete. There is a drain in the corner of the room. There was no evidence of chemical use laboratory (i.e. signage) but this room had been gutted with partitions between sections removed (Plate 8).

Service Yard

The service yard is connected to the atrium, Fabrication workshop and the driveway from Brisbane Street. There is a three bay garage down the northern edge (one with a roller door and the other two open), a sink near the gate to the atrium; the remainder of the area is open to the sky and the surface is sealed.

Within the garage area there are three bays, the bay closest to the workshop has a drain with standing water (Plate 11) and a gatic covered sump (Plate 10) and a large metal manhole cover. The adjacent bay contains what was assumed to be the triple interceptor trap (Plate 12) and was likely used as a wash down area. The second bay also contains a steel pipe down the eastern corner (Plate 12) – it is unknown what this was used for. The third bay has a sealed surface without any drains.

There is evidence that an area of the concrete adjacent to the garage area was replaced recently (Plate 10), it is unknown why this occurred.

There are multiple drains (Plate 10 and Plate 14) in this area with visible water under the grate (Plate 11). A spill mat was stored in the service yard (Plate 15).

Eastern Redbrick warehouse

This building was being used as a meeting room and offices and is in good condition (Plate 16). Prior to our site visit, sections of the floorboards had been cut to allow access to the underfloor surface. The floor of this building comprises floorboards raised over a dirt floor (Plate 18 and Plate 21). There appears to be no slab in place in this section of the site.

Western redbrick warehouse (GLA 3)

This building was used as mainly offices during Forestry's tenancy. The ground floor of this building is at or below street level. Most of this area has been gutted but some sections still contain some partitions (Plate 19).

Prior to the site visit sections of the floorboards were removed to allow access to the subsurface (Plate 19). The floorboards within the building are raised above a concrete slab (Plate 21).

Underground car parking area

The underground car park is at the back of the buildings facing Melville Street and underneath Freedom Furniture Store. All surfaces are sealed. There are numerous concrete manholes that are aligned over the TasWater sewage network and HCC stormwater drains. An example of the stormwater drains can be seen in Plate 23. There were two gatic covers located adjacent to each other observed in this area (Plate 22). These are in line with the sewage line and manholes in the area.

There is a electricity substation in the corner of the car park area adjacent to the driveway (Plate 25).

Driveway from Brisbane Street to Service yard and underground Car park

Plate 24 shows where a section of the asphalt has been cut and replaced with three rectangular gatic covers. This is within the vicinity of where the Brisbane Street UST was/is located. There are also numerous cut lines in the asphalt surrounding this gatic.

Sewage, water and stormwater

Concrete manhole covers located throughout the site - these are consistent with where sewage/wastewater lines (TasWater) and stormwater drainage (HCC) are located. An example of the drains in the underground car parking area is shown in Plate 23. An example of the TasWater's sewage manhole covers can be seen in Plate 1.

Surrounding land use

Currently there is a Beaurepaires retail outlet adjacent to the Freedom Furniture shop on Brisbane Street.

5. Site history of potential contamination

The following have been identified as potential sources of historical contamination at the site:

- Underground Storage Tanks and associated infrastructure including bowers and piping
- Chemical storage
- Triple interceptor trap
- Historical uncontrolled fill beneath the site
- General commercial/industrial land with potential for incidental leaks and spills to ground

Potentially contaminating activities undertaken historically on neighbouring land are generally associated with the automotive industry or fuel storage. Specifically, there has been:

- Rowe, a fuel supplier present on the adjacent site to the southeast (131- 133 Murray Street)
- Trade Motor Body Works, an automotive business to the west/northwest of the site (132-146 Elizabeth Street)
- J.T Graves & Son Pty Ltd, an automotive business to the east of the site

Figure 3 in Appendix A shows the locations of historic and current potentially contaminating activities undertaken in the vicinity of the site, relative to the site layout.

6. Summary of potential contamination and risk assessment

6.1 Former UST (1000 gallon) and metered pump- Brisbane Street

Mentioned in: WorkSafe Dangerous Goods (1967 records), Hobart City Council records (Shell), Stoklosa (1994), Stoklosa (1996), Site visit (gatics covers on driveway where tank was assumed to be).

Overview

We were unable to confirm that the UST that was located in the northern corn of the site adjacent to Brisbane Street was removed and remediated. The exact location of the tank was unable to de determined, as the diagrams in WorkSafe records have no scale nor is the surrounding land use labelled. It is likely that this occurred due to evidence of the planning of this removal and that Stoklosa Engineering noted in their letter (dated 18 September 1996) that they need to be onsite to witness the removal of this UST, and the correspondence from the EPA (12/10/2018) indicated that they had records of its removal.

The site visit noted that there was a large rectangular gatic cover (Plate 24) in the vicinity of where the UST was believed to be and the substation located in the car park, however when the location was compared with the DBYD response (Appendix F) from TasNetworks, no cabling went into the driveway area.

Relative risk

The likelihood of residual contamination (in soil and groundwater) in the area is low to moderate. If the gatic covered could be removed and inspected, this would add some confirmation of the residual risk.

6.2 Former UST (500 gallon) and Bowser – Melville Street

Mentioned in: WorkSafe Dangerous Goods (1962/3 records), Hobart City Council records (Shell), Stoklosa (1996), DELM (1996)

Overview

The UST that was referred to in Stoklosa's reports as the unanticipated UST, was removed in 1996 and there is evidence of soil testing being undertaken. While elevated concentrations of short chair hydrocarbon and xylene were detected in some samples, Environment Tasmania concur with Stoklosa that "…contaminated soil under the UST represents a localised hot spot…" and that "it is unlikely that the contamination has migrated off site or will do so in the future".

Relative risk

The likelihood of residual contamination (in soil and groundwater) in the area is low to moderate. As the source (UST) was removed, and residual impact at that time appeared localised, any residual risk will likely have degraded over time (20 years since assessment). Additionally, the unsealed ground and the large scale of the overlaying building (vented glass atrium) would limit accumulation of any residual vapour risk, which also would likely decrease quickly over time.

6.3 Uncontrolled fill

Mentioned in Stoklosa (1994).

Overview and relative risk

There is evidence from bore logs contained in the above report that fill was used across the site. There are no details of where the fill originated from or if it contained any contaminants. While uncontrolled imported fill retains a level of site contamination risk, this is considered no different to most other urban sites in Tasmania. The risk is likely relatively low as prior investigations did not identify any specific aspects of concern during works (i.e. potential asbestos containing material or stained and odorous material).

6.4 Chemical stores

Mention in Stoklosa (1994) and observed during site visit.

Overview and relative risk

Stoklosa noted that there was a flammable chemical store that was being removed as part of the redevelopment for Forestry. This store was on a sealed surface and soil testing was undertaken once removed. No contaminants of concern were found.

Both workshops and the laboratory were used to store chemicals within the Forestry Tasmania Building. The floor of both workshops are sealed with concrete, making it unlikely that this storage would have any impact on soil or groundwater. The risk is therefore considered relatively low.

6.5 Oil sump

Mentioned in Nekon (2018) and observed during site inspection.

Overview and relative risk

There is an oil sump located within the Operations Workshop. This sump was cleaned and capped in April 2018. While it is acknowledged that any in-ground containment has potential to leak, it is uncommon for such sources to contribute to notable ground contamination, and more likely represent a risk of localised residual impact immediately around the infrastructure. The risk is therefore considered relatively low.

6.6 Triple interceptor trap

Mentioned in Stoklosa (1994) and observed during site inspection.

Overview and relative risk

There is a triple interception pit located in the middle bay of the open garages. There are also multiple drains within this area, however there was signage for a spill control mat located nearby within the service yard. This would have reduced risks to waterways and groundwater from activities in this area. While it is acknowledged that any in-ground containment has potential to leak, it is uncommon for such sources to contribute to notable ground contamination, and more likely represent a risk of localised residual impact immediately around the infrastructure. The risk is therefore considered relatively low.

6.7 General hydrocarbon presence

Mentioned in Hobart City Council records.

Overview and relative risk

The site has been utilised in the past by Bert Self (likely to sell motorcycles and sidecars - from advertisement in Huon Times, dated 26/6/1926) and Absolom Garage and Absolom Brothers, while there are no dates or locations within the site. It is likely that these businesses were related to motor vehicles and the resultant hydrocarbon risk. However, these businesses were likely at the site during the early 20th Century.

It is considered that key potential sources of contamination associated with such land use relate to fuel storage and handling which likely been addressed (USTs). While it is acknowledged that such land uses have potential to generate leaks and spills to ground, it is uncommon for such sources to contribute to notable ground

contamination, and more likely represent a risk of localised residual impact. The risk is therefore considered relatively low.

6.8 Old town gas

Mentioned in Hobart City Council records.

Overview and relative risk

There is no information available on exactly where these pipes may be located within Hobart CBD. While these pipes are usually located within road reserves, feeder lines may be present on the site. The residual risk would primarily relate to works in adjacent roads, and more specifically vapour risk to workers exposing such infrastructure. The associated risk to the site is considered low.

6.9 Electricity sub-station

Observed during site visits.

Overview and relative risk

The substation is located adjacent to the driveway in the underground car park and appears to be relatively new. While it acknowledged that electricity equipment has potential to generate leaks and spills to ground (from oil filled infrastructure), it is uncommon for such sources to contribute to notable ground contamination when located on sealed concrete surfaces. The risk is therefore considered relatively low.

6.10 Surrounding land use (historical and current)

Mentioned in Hobart City Council records and observed during site inspection.

Overview

Potentially contaminating activities undertaken historically on neighbouring land are generally associated with the automotive industry or fuel storage. Specifically, there has been:

- Rowe, a fuel supplier present on the adjacent site to the south east(131- 133 Murray Street)
- Trade Motor Body Works, an automotive business to the west/north west of the site (132-146 Elizabeth Street)
- J.T Graves & Son Pty Ltd, an automotive business to the east of the site

Currently there is a Beaurepaires retail outlet adjacent to the Freedom Furniture shop on Brisbane Street.

Relative risk

The residual risk to site from potential off-site contamination risk migrating on-site is primarily relating to scenarios where excavation works are conducted into, or in close proximity to the underlying groundwater. No site infrastructure (other than stormwater and sewer systems) are considered to approach the groundwater and therefore the risk is considered low at this time.

7. Conclusion

The Site has been subject to extensive background investigation and targeted assessment and remediation (i.e. removal of underground petroleum storage systems [UPSS]). This provides increased confidence that key potential aspects of concern have subsequently been identified and addressed to varying degrees.

The site history and potential contamination risk is typical of most urban sites in Hobart and based on the prior contamination assessment programs, has not shown any higher risk aspects. While there remain lower risk potential contamination aspects, based on continued commercial use (i.e. with limited requirement for ground disturbance), these are unlikely to represent issues requiring notable management controls.

Where there were future development requirements for notable subsurface disturbance (i.e. utility trenching, basement construction), then there would be an increased risk of requirements to manage residual contamination (if present). However the results of the limited soil sampling undertaken by Stoklosa 1996 indicates that there is minimal risk to construction workers in this area from either vapours or direct contact with soils.

While further quantitative assessment work is recommended to confirm potential contamination risks at specific target areas (around both former USTs) prior to commencement of any notable subsurface disturbance work on site (and off-site), the overarching risk profile of the site is relatively low.

Appendices

Appendix A

Figures

1:1,000 @ A3

0 10 20 30 40

Meters

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55

N

LEGEND

- Project Site
- Cadastral parcels
- Transport segments

University of Tasmania
UTAS Old Forestry Building Contamination Assessment

Job Number 12574014
Revision A
Date 11 Feb 2022

Site Location and Surrounding Land Use

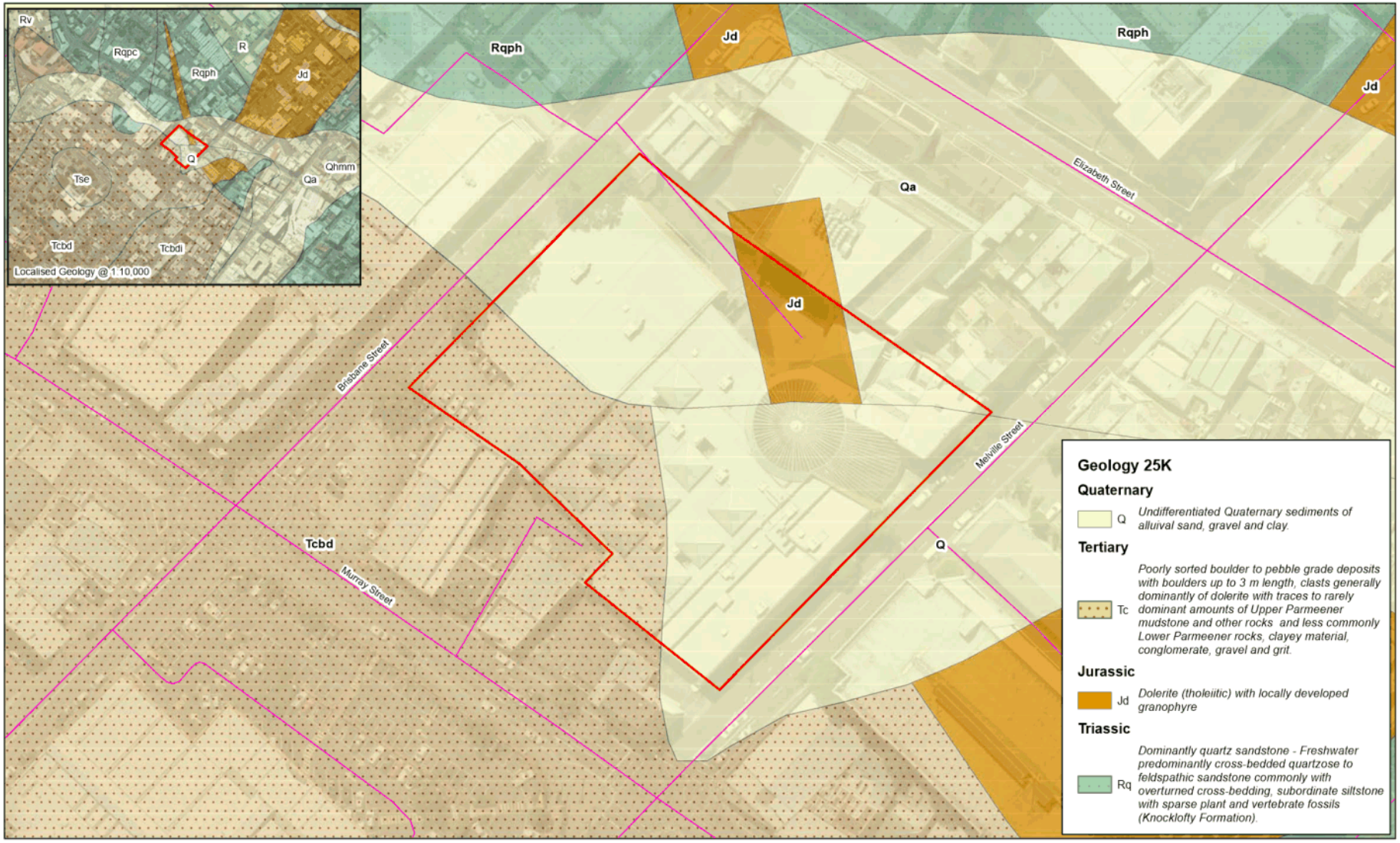
Figure 1

G:\32\12574014\GIS\Maps\Deliverables\12574014_01_SiteLocation_RevB.mxd

© 2022. Whilst every care has been taken to prepare this map, GHD (and DATA CUSTODIAN) make no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and cannot accept liability and responsibility of any kind (whether in contract, tort or otherwise) for any expenses, losses, damages and/or costs (including indirect or consequential damage) which are or may be incurred by any party as a result of the map being inaccurate, incomplete or unsuitable in any way and for any reason.

Data source: TheList, Transport segments, cadastre, 2021. Created by:tzcoates

2 Salamanca Square, Hobart Tasmania 7000 Australia T 61 3 6210 0600 E hbamail@ghd.com W www.ghd.com



1:800 @ A3

0 10 20 30

Meters

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55

N

LEGEND

Project Site

Transport segments

University of Tasmania
UTAS Old Forestry Building Contamination Assessment

Job Number	12574014
Revision	A
Date	11 Feb 2022

Site Geology

Figure 2

G:\32\12574014\GIS\Maps\Deliverables\12574014_03_SiteGeology_RevA.mxd

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Data source: TheList, Transport segments, cadastre, 2022; GHD, Potentially contaminating land uses, 2018; Created by:tccoates

2 Salamanca Square, Hobart Tasmania 7000 Australia T 61 3 6210 0600 E hbamail@ghd.com W www.ghd.com

1:800 @ A3

0 10 20 30

Meters

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55

N

LEGEND

- Site Outline (all levels)
- Automative Industry (Historic)
- Fuel Supplier (Historic)
- Automative Industry (Currently Operating)
- Cadastral parcels
- Transport segments

GHD

University of Tasmania
UTAS Old Forestry Building Contamination Assessment

Job Number	12574014
Revision	A
Date	10 Feb 2022

Potentially Contaminating Activites Undertaken in Vicinity of the Site

Figure 3

G:\32\12574014\GIS\Maps\Deliverables\12574014_02_PotentialContaminants_RevA.mxd

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Data source: TheList, Transport segments, cadastre, 2022; GHD, Potentially contaminating land uses, 2018; Created by:tbcoates

2 Salamanca Square, Hobart Tasmania 7000 Australia T 61 3 6210 0600 E hbamail@ghd.com W www.ghd.com

1:500 @ A3

0 10 20 30

Meters

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55

N

LEGEND

- Project Site
- Transport segments

Infrastructure of Interest

- Operation Workshop/ Fabrication Workshop
- Operational Substation
- Capped Oil Sump
- Former UST Area
- Triple Interceptor Drain
- Former Flammable Goods Store

Hydrocarbon Soil Bores (Skolsa, 1996 Contamination Assessment)

- Below limit of reporting
- Hydrocarbons detected

GHD

University of Tasmania
UTAS Old Forestry Building Contamination Assessment

Job Number 12574014
Revision A
Date 11 Feb 2022

Potential Sources of Contamination Originating On-site

Figure 4

G:\32\12574014\GIS\Maps\Deliverables\12574014_03_DetailedSitePlan_RevA.mxd

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Data source: TheList, Transport segments, cadastre, 2021. Created by:tjcoates

2 Salamanca Square, Hobart Tasmania 7000 Australia T 61 3 6210 0600 E hbamail@ghd.com W www.ghd.com

Appendix B

Plates from site inspections

Plate Number	Image from Site Visit	Description
1		Manhole cover in vicinity of removed UST in front of Atrium
2		Geo-fabric coming to surface in Atrium
3		An example of the sewage line gatic covers throughout the site

Plate Number		Description
4		Gas signage outside the Fabrication Workshop
5		Gas and HAZCHEM signage outside of the Operations Workshop
6		Capped Oil Sump in Operations Workshop
7		HAZCHEM signage on Laboratory door

Plate Number		Description
8		Laboratory has been gutted
9		Open garages/wash down area in Service Yard (there are three bays)
10		Garage in Service yard showing drain and gatic covered sump
11		Close up of drain in Garage in Service Yard

Plate Number		Description
12		Triple interceptor trap in vehicle wash down bay
13		Section of concrete surface in Service Yard replaced
14		Drain in centre of Service Yard

Plate Number		Description
15		On outside of Operations Workshop within the Service Yard
16		An example of the condition of the ground floor of the eastern redbrick warehouse
17		View through the floorboards in the western redbrick warehouse
18		View through the floorboards in the western redbrick warehouse (different hole in floor)
19		Office partitions and section of floor removed in western redbrick warehouse.

Plate Number	Image from Site Visit	Description
20		Section of western redbrick warehouse with wall removed
21		Slab beneath the floorboard in eastern redbrick warehouse.
22		Gatic covers in underground car park
23		Stormwater drain to the Derwent

Plate Number	Image from Site Visit	Description
24		Coverings of Ground in middle of driveway
25		Electricity substation in underground carpark

Appendix C

WorkSafe correspondence and records

5693

File No. C2

DEPARTMENT OF MINES, TASMANIA

NAME OR SUBJECT: Crisp & Gunn Co-op Ltd,

ADDRESS: 79 Melville St,

Hobart.

Cancelled 17-7-72

FORM 6

Inflammable Liquids Act 1929

RECEIVED 16 JUN 1967 DEPT OF MINES REF. NO. 4381/67

APPLICATION FOR LICENCE IN RESPECT OF PREMISES FOR MANUFACTURE OF OR KEEPING INFLAMMABLE LIQUIDS OR DANGEROUS COMMODITIES

1. Applicant's Full Name CRISP & GUNN CO-OP. LTD.
2. Applicant's Occupation Timber Merchants.
3. Applicant's Postal Address 79 Melville St
4. Situation of Premises to be Licensed 79 Melville St
5. Name of Municipality and Town or Township within which, or within five miles of which, the Premises is situated Hobart
6. Name and quantity to be ~~manufactured~~ kept under this Application:—
   Inflammable Liquid Class A (Petrol, &c.) 1000 Gallons Petrol
   Inflammable Liquid Class B (Kerosene, &c.)
   Dangerous Commodity
7. Number of Tanks and Package Storage Areas under this Application One.
8. Name and Total Quantity to be kept:—
   Inflammable Liquid Class A (Petrol, &c.)
   Inflammable Liquid Class B (Kerosene, &c)
   Dangerous Commodity
9. Total Number of Tanks and Package Storage Areas installed One.

I declare that the above statements and answers are true to the best of my knowledge and belief.

CRISP & GUNN CO-OP. LTD.

(*Signed*) [signature]

Dated this Fifth day of June, 1967

(*This Application, with Licence Fee of £* $4-00, *to be forwarded to—*

Director of Mines, Hobart)

(*Scale of fees is shown on reverse hereof*)

70894

Rec. 1242
$4.00
16/6/67

Department of Mines,

Tasmania.

Date 20 / 7 /19 67

For the Director of Mines, Hobart
From the Inspector of Explosives .....HOBART.....

RECORD OF INSPECTION OF INSTALLATION

Premises of: CRISP & GUNN.

Known as:

Premises at: BRISBANE ST.

Oil Company: [redacted]

Date of Approval: 17 APRIL 67

Date of Inspection: 20 JULY 67

Finding: ~~Unsuitable~~ / Suitable for Licensing

Pump Outfit package Storage Area: P/O

Variation from Approval: NIL.

Application Form: Left with occupier/~~Forwarded herewith~~.

Amount of Fee advised Yes/~~No~~

.....J Goodrich.....

FORM 5 (Regulation 78)
1174
TASMANIA

Inflammable Liquids Act 1929 **Nº** 145

Granted to [redacted] Fee, $2

Personal Information Redacted

Approval of Site and Construction of Premises for Keeping Inflammable Liquids or Dangerous Commodities or the Alteration thereof.

Approval for the *site and construction/*~~alteration of the site and construction~~ as shown on the approved plans and specifications of a *~~package/storage area~~/*tank for the undermentioned inflammable liquids and dangerous commodities, subject to the provisions of the *Inflammable Liquids Act* 1929, and regulations being observed and subject to the undermentioned special conditions, situate at Crisp and Gunn Co-op Ltd.,

HOBART.

This approval is valid only for one year from the date of issue

Date of issue 17th April, 19 67.

Chief Inspector of Explosives

J. L. Clark.
Inspector of Explosives

Inflammable liquid: Class A 1000 Gallons

Class B Gallons

Dangerous commodities:

SPECIAL CONDITIONS

* *Strike out if inapplicable*

[redacted]

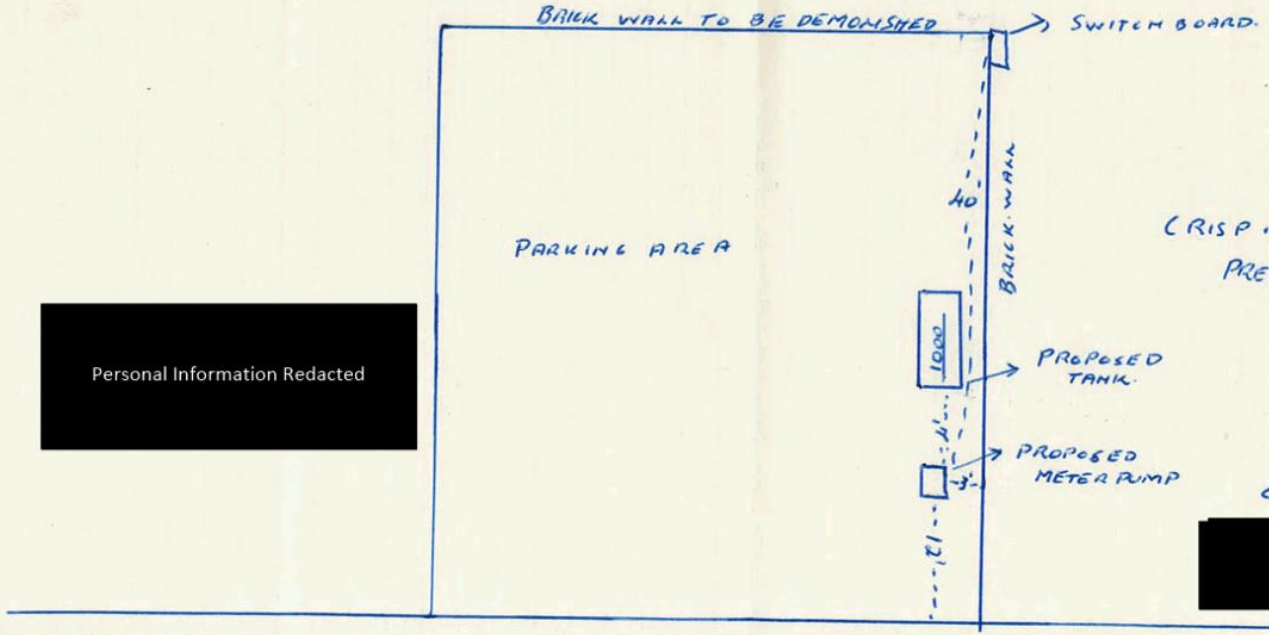
14/4/67

PROPOSED REPOSITIONING OF PUMP & TANK.

CRISP & GUNN CO-OP LTD.

D of M | S & A | CG | CC & M | ACIMB
RECEIVED 14 APR 1967
ANSWERED
DEPT. OF MINES
REF. NO. 2131/67

APPROVED
G. Johson
Senior Inspector of Explosives
17 APR 1967



CRISP & GUNN PREMISES.

Rec. 1174
$2.00
14.4.67

[redacted]

CONTACT IF REQUIRED
CRISP & GUNN [redacted]

[redacted]

Department of Mines

Tasmania

Date 4 / 1 /1963

MEMORNANDUM

For the Director of Mines, Hobart.
From the Inspector of Explosives, Hobart.

Record of Inspection of Installation

Premises of: Crisp & Gunn Co. of P/L.

Known as: 79 Melville St.

Oil Company: [redacted]

Date of Approval: 5/12/62.

Date of inspection: 3/1/63

Finding: ~~Unsuitable~~) Suitable) for licensing

Pump Outfit ~~Package Storage Area~~:

Variation from Approval: Nil

Application Form: ~~Left with occupier/Forwarded herewith~~.

~~Amount of Fee advised~~: ~~Yes/No~~

A R Powell

C ✓

(Regulation 78)

FORM 5

TASMANIA

Inflammable Liquids Act 1929 № 809

Fee, £1

Granted to [redacted]

Personal Information Redacted

Approval of Site and Construction of Premises for Keeping Inflammable Liquids or Dangerous Commodities or the Alteration thereof.

Approval for the * ~~site and construction~~/* alteration of the site and construction as shown on the approved plans and specifications of a * ~~package storage area~~/* tank for the undermentioned inflammable liquids and dangerous commodities, subject to the provisions of the *Inflammable Liquids Act* 1929, and regulations being observed and subject to the undermentioned special conditions, situate at Crisp & Gunn Co - Op Pty Ltd., 79 Melville Street, Hobart.

This approval is valid only for one year from the date of issue.

Date of issue 5th December, 19 62

Chief Inspector of Explosives.

Inspector of Explosives.

Inflammable liquid: Class A 500 existing Gallons.

Class B ..... Gallons.

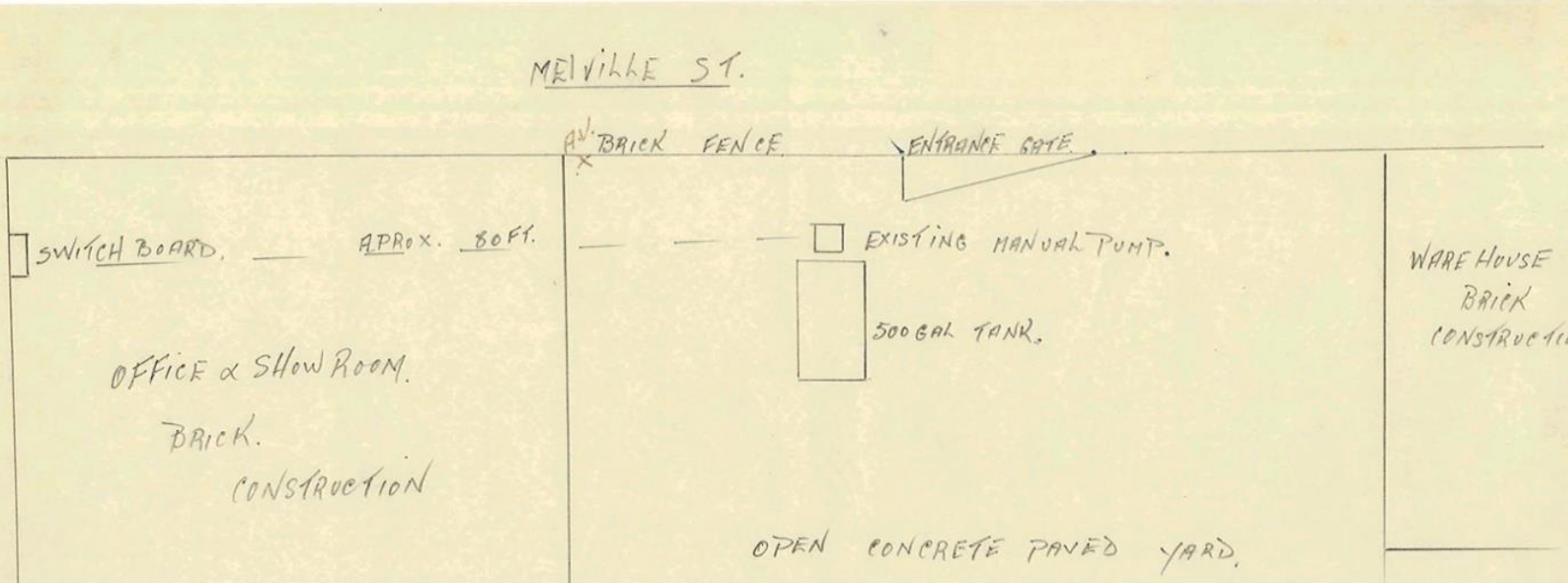
Dangerous commodities: .....

SPECIAL CONDITIONS.

Replace single manual with single electric pump.

* Strike out if inapplicable.

65252



CRISP & GUNN CO.OP.P/L.
79 MELVILLE ST.
HOBART

Proposed Meterization of existing manual Pump

No alteration of existing Pipeline

Switchboard approx 80 ft. from Pump

Wiring to be encased in Conduit

APPROVED
Inspector of Explosives
5 DEC 1962.

Personal Information Redacted

S & A | CG | CC & M | ACTIONS

3 - DEC 1962

DEPT. OF MINES
DEC. NO. 5781/62

KDS

20873
3/12/62

Form H.

FOR OFFICE USE ONLY

			Initials
Correspondence: 62	Licence No.	625 ~~[illegible]~~	
	Certificate of Registration		
	Receipt No.	5186	
	Amount of Cash Received	£1-5-0	
	Date Received	5/7/55	

MEMORANDUM *Department of Mines,*

Hobart, 1st July, 1955

Please note that your Licence / Certificate of Registration, under the provisions of the Inflammable Liquids Act 1929 in respect of the storage of Petrol, Kerosene, or Carbide of Calcium, expired on the 30th June last.

If you desire the registration renewed, please fill in the form of application hereunder, and return it to me with the prescribed fee.

Any person keeping Inflammable Liquid, except in Licensed or Registered Premises, is liable to a penalty of Fifty Pounds (£50).

J. G. SYMONS
~~W. H. WILLIAMS~~,
Director of Mines.

Crisp & Gunn Co-op Ltd.,
79 Melville St.,
Hobart.

D.O.M.	S & A	C G	CC & M	ACIM & E
				REGISTRAR
RECEIVED 5 JUL 1955				E & IL
ANSWERED				
DEPT. OF MINES				
REF. NO.				

THE INFLAMMABLE LIQUIDS ACT 1929

APPLICATION FOR RENEWAL

I, CRISP & GUNN CO-OP LTD. of 79 MELVILLE ST. HOBART hereby apply to have the registration of my premises, situate at 79 Melville St. renewed under the provisions of the Inflammable Liquids Act 1929 in respect to the storage of MINERAL SPIRIT and forward herewith the fee.

REGISTERED QUANTITIES

Fee Paid £1-5-0
Mineral Spirit 500 gallons
Mineral Oil — gallons
Carbide of Calcium — lbs.

* Strike out which does not apply.

QUANTITIES TO BE REGISTERED
(To be filled in)

Mineral Spirit 500 gallons
Mineral Oil — gallons
Carbide of Calcium — lbs.

For CRISP & GUNN CO-OP. LTD.

Signature: ~~*Mr.~~ ~~*Mrs.~~ ~~*Miss~~ M. J. Crooks SECRETARY

Date of Application 4th July 1955

Mineral Spirit relates to Petrols, &c., with a flash point of 73°F. or less.
Mineral Oil relates to Kerosene, &c., with a flash point of above 73°F. and less than 150°F.
In the case of Petrol Pumps, please furnish particulars of tanks installed and in use.

Total number of underground tanks on premises	Capacity of each tank	Number of tanks in use

District Inspector's recommendation:

Note.—Cheques, postal notes, or money-orders should be made payable to the Director of Mines. If bank notes are forwarded by post, the letter should be registered. Stamps will not be accepted in payment.

96819—M1157—95 (14)

Authority to Release Information to a Third Party
Dangerous Substances Location

I, (full Name)
Calbourne Nominees Pty Ltd

authorise WorkSafe Tasmania to release information relating to Facility Number Not Known

Location of Facility (full address)78-83 Melville Street, Hobart (strata title reference 149231/2 (includes carpark and ground floor of 80 Brisbane St)

to (full Name)
Nicole Kaye Reineker

of (company Name)
GHD Pty Ltd

Signature Date 27/9/18

Address
GPO Box 1406 Hobart Tas

Phone	Mobile Phone	Email
03 62 24 65 11	0408 141 316	leigh@nekon.com.au

- [x] Current manifest
- [x] Current site plan
- [x] All historical information
- [x] Contamination issues
- [x] Decommissioning details
- [ ] Other (please give details below)

Other Information required

For further assistance please contact:

Department of Justice
WorkSafe Tasmania
PO Box 56, Rosny Park, TAS 7018
Phone: (in Tasmania) 1300 366 322; (outside Tasmania) - 03 6166 4600; Fax 03 6173 0206
Email: wstinfo@justice.tas.gov.au Website www.worksafe.tas.gov.au

Tasmanian Government

Appendix D

EPA correspondence

Level 7, 134 Macquarie Street, Hobart TAS
GPO Box 1550, Hobart, TAS 7001 Australia

Enquiries: Contaminated Sites Unit
Phone: (03) 6165 4599
Email: contaminatedsites@epa.tas.gov.au
Web: www.epa.tas.gov.au
Our Ref: (EN-EM-AV-100706_38: H968275) sma

ENVIRONMENT PROTECTION AUTHORITY

12 October 2018

Ms Nicole Reineker
GHD
2 Salamanca Square
HOBART TAS 7000

Dear Ms Reineker

PROPERTY INFORMATION REQUEST
80 Brisbane Street, Hobart, PID: 2811771
79-83 Melville Street, Hobart, PID: 2811798

On 18 September 2018, the Contaminated Sites Unit received your Property Information Request relating to the land referred to above ('the Site'). A search of relevant databases and records has been undertaken.

During the mid-1990's several properties were redeveloped into a building complex that included Forestry Tasmania's head office and Freedom Furniture retail space. One of the original properties was the State Emergency Service and Tasmanian Fire Service Melville Street station.

During the redevelopment, EPA Tasmania received several reports regarding an Environmental Site Assessment. Of particular interest was the decommissioning of an underground storage tank (UST) located on the Brisbane Street side of the Site and another UST located on the Melville Street side of the Site.

The last report received was, *Forestry Tasmania Redevelopment Site: 79-83 Melville Street: Hobart Environmental Remediation and Validation*, prepared for Civil & Civic and Laver, dated December 1996, and prepared by Stoklosa Engineering Pty Ltd.

In response to this report, EPA Tasmania advised the proponent in a letter dated 20 January 1997:

> "*...Environment Tasmania considers the site suitable for its intended use. However, if the site is to be developed for a more sensitive use in the future, further remediation of contaminated soil left in situ may be required. As recommended by the consultant, the presence of localised hydrocarbon contamination should be disclosed to future occupants of the site.*"

WorkSafe Tasmania (WST) file C2 refers to dangerous goods being stored in underground storage tanks (UST) on the Melville St side of the Site during the period 1955-1967.

While no further records relating to contamination or potentially contaminating activities at the Site were located, several records regarding neighbouring properties were found -

161-177 Murray St (50m North West of the Site) was redeveloped in 1999 from an automotive workshop to a Harvey Norman Retail outlet:

- WST file P74 refers to the historical storage of dangerous goods in UST.(1949-1965)

- In June 1999, EPA Tasmania received the report - *Land Contamination investigation and remediation Harvey Norman Construction Site Murray Street Hobart*, dated May 1999, prepared by Environmental & Technical Services Pty Ltd (ETS). This report outlines the investigation and remediation associated with the removal of eight USTs from the building site. After several discussions with the consultant, The Director, EPA, advised the Hobart City Council in a letter dated 5 April 2000:

  > *"I agree with ETS that the site was remediated to a level appropriate for the current use. However, if the use of the site is changed to a more sensitive use, further soil and groundwater analyse will be required to ensure that no risk is posed to the proposed occupiers."*

Neighbouring properties that also have historical WST records regarding the storage of dangerous goods in USTs include:

- 79-81 Brisbane Street, WST File W435 (1966-1989)
- 141 Murray Street, WST File G227 (1966-1979)
- 198-202 Murray Street, WST File F188 (1955-1967), now an animal hospital
- 103 Melville Street WST File K8 (1938-1984), now Mitre 10 Hardware
- 144-160 Murray Street WST File W329 (1969-1985) and IS67155-15 (1936)

No other records relating to contamination or potentially contaminating activities at the Site or adjacent properties were found.

The search of records is restricted to those held by EPA Tasmania and includes records relating to: The *Environmental Management and Pollution Control (Underground Petroleum Storage Systems) Regulations 2010;* Industrial Sites (which are or have been regulated by EPA Tasmania); historical landfills; and contamination issues reported to the Contaminated Sites Unit. In addition, the Incidents and Complaints database and records relating to the historical storage of dangerous goods (as detailed below) are searched.

WorkSafe Tasmania (1300 366 322 or wstinfo@justice.tas.gov.au) may have issued dangerous goods licences and/or may hold relevant records for the Site and adjoining properties. As the storage of dangerous goods/fuels is an environmentally relevant activity, you may wish to contact them for further information.

Please note that the dangerous goods licensing records referred to by EPA Tasmania are for sites with underground storage tanks that ceased holding Dangerous Goods Licences prior to 1993. WorkSafe Tasmania hold the records for these Licences after 1993.

EPA Tasmania does not hold records on all sites that are or may be contaminated. You should consider obtaining a site history to determine the likelihood of contamination. If contamination on the Site or an adjacent property is considered likely, further assessment by a competent environmental assessment practitioner is recommended. Site assessments should be conducted in accordance with the *National Environment Protection (Assessment of Site Contamination) Measure 1999*, National Environment Protection Council (or as varied). http://epa.tas.gov.au/regulation/contaminated-sites/identification-and-assessment-of-contaminated-land/contaminated-site-assessment

Please note since 1 July 2015, the Director has required all environmental site assessments and reports submitted to the Contaminated Sites Unit for consideration to be prepared by a person certified as a specialist contaminated sites consultant under a scheme approved by the Director. Effective 30 June 2018, the endorsed scheme is operated by Certified Environmental Practitioners (CEnvP): Consultants certified under this scheme are approved to use the seal **CEnvP Site Contamination**. https://www.cenvp.org.

Further details are available at: http://epa.tas.gov.au/regulation/contaminated-sites/identification-and-assessment-of-contaminated-land/engaging-a-contaminated-site-assessment-consultant.

As local councils are able to issue Environment Protection Notices, Environmental Infringement Notices and record complaints, you may wish to contact them for additional information that may be relevant to the site. Further, if the Site has historically been subject to a permit under the *Land Use Planning and Approvals Act 1993*, the Council would have issued the permit.

Under the *Right to Information Act 2009* (RTI Act), you are entitled to apply for any records mentioned within this letter such as reports, letters, or other relevant documents. For further information on how the RTI process works and how to request information under the RTI Act please visit the Department of Primary Industries, Parks, Water and Environment website.

If you are purchasing a property, you should consider Part 5A of the *Environmental Management and Pollution Control Act 1994* (EMPCA) which defines and specifies requirements for managing contaminated sites. If there is reason to believe the site is, or is likely to be, contaminated there are certain requirements that you must meet (e.g. notification of a likely contaminated site to the Director, EPA as outlined in section 74B of the EMPCA).

Although all due care has been taken in the preparation of this letter, the Crown gives no warranty, express or implied, as to the accuracy or completeness of the information provided. The Crown and its servants or agents accept no responsibility for any loss or damage arising from reliance upon this letter, and any person relying on the letter does so at their own risk absolutely.

As you are aware, property searches incur a charge of $237.00. An invoice is enclosed.

If you have any queries in relation to the matters above, please contact the Contaminated Sites Unit using the details at the head of this correspondence or refer to the EPA website at www.epa.tas.gov.au and click on 'Regulation to locate information on Underground Fuel Tanks and Contaminated Sites.

Yours sincerely

Bruce Napier
ENVIRONMENTAL OFFICER - CONTAMINATED SITES

Email: nicole.reineker@ghd.com

Attachment: Invoice

Appendix E

Hobart City Council records

From: Salter, Simone
To: Nicole Reineker
Subject: RE: database search request - follow up
Date: Monday, 1 October 2018 12:22:29 PM
Attachments: image001.png
image002.png
image003.png
image004.png

Hi Nicole

I tried to call and have left a message.

Please find consolidated information below for you.

To consolidate everything for you at 79-83 Melville Street is:

Type	Business	Date	Potential Source of Contamination
Wood Treatment/Sawmill	Absolom brothers	1916 - 1932	
	Absolom Garage	Dates unkown	
	Bert Self	Dates unknown	
	Central Saw and Planing Mills	1886 – 1915	Hydrocarbons
	Shell	Dates unknown	
	Crisp & Gunn Co-op Ltd	1955-1967	

The following are adjacent sites listed as potentially contaminated:

Address	Type	Business	Date	Potential Source of Contamination
132 – 146 Elizabeth Street	Body Works Motor Car Dealers, Engineers & Garages	Trade Motor Body Works	1940	Hydrocarbons
131 – 133 Murray Street	Fuel Supplier	Rowe	1916	Hydrocarbons
141 – 143 Murray Street	Motor Car Dealers, Engineers & Garages	J.T. Graves & Son Pty. Ltd. H.C. Sleigh/Golden Fleece John Tasman Graves	1966 – 1679	Hydrocarbons

Thanks
Simone

Simone Salter | Senior Environmental Health Officer | Environmental Health
6238 2738

From: Nicole Reineker [mailto:Nicole.Reineker@ghd.com]
Sent: Monday, 1 October 2018 11:34 AM
To: Salter, Simone <salters@hobartcity.com.au>
Subject: RE: database search request - follow up

Hi Simone,
No worries at all- this potential sale is very hush hush at present.

Can you please give me a call- I have filled out the right to information form- request #5.

Previously we have received information about site use just in an email- I have attached an email from Jessica Dwyer that we received back on another project.

I need the information as soon as possible as I need to submit my desktop review by the middle of this week.

Kind Regards
Nicole

From: Salter, Simone <salters@hobartcity.com.au>
Sent: Monday, 1 October 2018 11:01 AM
To: Nicole Reineker <Nicole.Reineker@ghd.com>
Subject: RE: database search request - follow up

Hi Nicole

Sorry I wasn't aware of the building selling again or going through a different process. I thought it was to do with the initial dealings with the property I had a few months ago.

We have a few letters/reports etc on file for this property that I can provide upon receipt of a request to information - https://www.hobartcity.com.au/Council/Legislation-and-by-laws/Right-to-Information-Act-2009

Kind Regards
Simone

Simone Salter | Senior Environmental Health Officer | Environmental Health
6238 2738

From: Nicole Reineker [mailto:Nicole.Reineker@ghd.com]
Sent: Monday, 1 October 2018 10:58 AM
To: Salter, Simone <salters@hobartcity.com.au>
Subject: RE: database search request - follow up

Hi Simone,
Can you please explain what you mean by Frazer Reed is project planner for coordinating all

these reports? He is not included on any of the group emails from the potential purchaser of this property. How recently was he undertaking this role?

Kind Regards
Nicole

From: Salter, Simone <salters@hobartcity.com.au>
Sent: Monday, 1 October 2018 10:22 AM
To: Nicole Reineker <Nicole.Reineker@ghd.com>
Subject: RE: database search request - follow up

Hi Nicole

Our database shows the only information as hydrocarbons and the names as listed by Felicity below. Information shows that there were previous underground petrol storage tanks on the site.

I have previously provided reports to Frazer Reed from All Urban Planning through a request to information request. He would be able to forward you anything as he is the project planner coordinating all of these reports etc.

Kind Regards
Simone

Simone Salter | Senior Environmental Health Officer | Environmental Health
6238 2738

From: Nicole Reineker [mailto:Nicole.Reineker@ghd.com]
Sent: Monday, 1 October 2018 9:02 AM
To: Salter, Simone <salters@hobartcity.com.au>
Subject: RE: database search request - follow up

Hi Simone,
Yes it is, I expect you may have a a run on requests- Probably one from each of the consultants doing the due diligence reports.
Thanks for your help.

Kind Regards
Nicole

From: Salter, Simone <salters@hobartcity.com.au>
Sent: Monday, 1 October 2018 8:58 AM
To: Nicole Reineker <Nicole.Reineker@ghd.com>
Subject: RE: database search request - follow up

Hi Nicole

Is this for the old Forestry building?

Kind Regards
Simone

Simone Salter | Senior Environmental Health Officer | Environmental Health
6238 2738

From: Nicole Reineker [mailto:Nicole.Reineker@ghd.com]
Sent: Monday, 1 October 2018 8:52 AM
To: Salter, Simone <salters@hobartcity.com.au>
Subject: database search request - follow up

Good Morning Simone,
I emailed Felicity Edwards last Monday morning requesting a search of the Council databases regarding potential contamination at the site 79-83 Melville St (Strat Title 149231/2). I was wondering how this search was going, would it be possible to receive this information this morning, as I am on a very tight timeframe.

Kind Regards
Nicole

From: Edwards, Felicity <edwardsf@hobartcity.com.au>
Sent: Monday, 24 September 2018 9:56 AM
To: Nicole Reineker <Nicole.Reineker@ghd.com>
Cc: Salter, Simone <salters@hobartcity.com.au>
Subject: RE: contamination database search for a site in CBD

Hi Nicole
We should be able to get some info back to you by the end of the week. There is no charge.
At a quick look on the main database, the site does show as potentially contaminated, the associated historical names are;

- Absolom brothers
- Bert Self
- Central Saw and Planing Mills
- Crisp and Gunn Coop
- Shell

I have cc'd Councils Senior EHO Simone Salter who will allocate the request to one of the team to do a detailed file review. Please contact Simone with any further queries.
Kind regards
Felicity

Felicity Edwards | Manager Environmental Health | City Planning
6238 2842

From: Nicole Reineker [mailto:Nicole.Reineker@ghd.com]
Sent: Monday, 24 September 2018 9:31 AM
To: Edwards, Felicity <edwardsf@hobartcity.com.au>

Subject: contamination database search for a site in CBD

Good Morning Felicity,
Rohan Probert suggested that you may be the person I need to contact to get a database base search for a property in the CBD undertaken.
I am undertaking a contamination site investigation on 79-83 Melville St (the site also includes 80 Brisbane St). I submitted the EPA database search request earlier this week and they are very busy and unlikely to be able to ruin the search within the project timeframe.
Deborah at the EPA suggested that I contact the council as they have access to the some of the same databases.
I am particularly interested in finding out if there is any known contamination at this site, including any records of any underground or above ground storage tanks for petroleum products or other chemicals.

Is this something you can help me with? If not can you please point me in the direction of who would be the best person to contact. Also can you please let me know how long a search would take and if there is any charge?

Kind Regards

Nicole K Reineker
Graduate Environmental Scientist

T: 61 3 6210 0626 | V: 320626
GHD
Proudly employee owned
T: +61 6210 0626| M: +61 403 857 681| E: Nicole.reineker@ghd.com
2 Salamanca Square, Hobart Tasmania, Australia | www.ghd.com
Connect

WATER | ENERGY & RESOURCES | ENVIRONMENT | PROPERTY& BUILDINGS | TRANSPORTATION

Please consider our environment before printing this email

From: Alex Brownlie
Sent: Friday, 21 September 2018 10:57 AM
To: Nicole Reineker <Nicole.Reineker@ghd.com>
Subject: FW: contamination database search for HCC

FYI

Alex Brownlie | A GHD Principal
B.Sc. Dip.UP RPIA (Fellow)
Technical Director Planning

GHD
Proudly employee owned
T: +61 3 6210 0600 | M: 0418 133 152 | E: alex.brownlie@ghd.com
2 Salamanca Square Hobart TAS 7000 Australia | www.ghd.com

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From: Probert, Rohan <probertr@hobartcity.com.au>
Sent: Friday, 21 September 2018 10:21 AM
To: Alex Brownlie <Alex.Brownlie@ghd.com>
Subject: RE: contamination database search for HCC

Hi Alex,

As a starting point, Felicity Edwards – Manager Environmental Health. She's on 6238 2842 or at edwardsf@hobartcity.com.au.

Regards

Rohan Probert | Manager Development Appraisal | City Planning
6238 2179

From: Alex Brownlie [mailto:Alex.Brownlie@ghd.com]
Sent: Friday, 21 September 2018 9:30 AM
To: Probert, Rohan <probertr@hobartcity.com.au>
Subject: FW: contamination database search for HCC

Hi Rohan,
Who is my best contact within Council for contam land information?

Regards

Alex Brownlie | A GHD Principal
B.Sc. Dip.UP RPIA (Fellow)
Technical Director Planning

GHD
Proudly employee owned
T: +61 3 6210 0600 | M: 0418 133 152 | E: alex.brownlie@ghd.com
2 Salamanca Square Hobart TAS 7000 Australia | www.ghd.com
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Please consider our environment before printing this email

From: Nicole Reineker
Sent: Friday, 21 September 2018 9:17 AM
To: Alex Brownlie <Alex.Brownlie@ghd.com>
Subject: contamination database search for HCC

Hello Alex,
I am undertaking a contamination site investigation on 79-83 Melville St (the site also includes 80

Brisbane St). I submitted the EPA database search request earlier this week and they are very busy and unlikely to be able to ruin the search within the project timeframe.
Deborah at the EPA suggested that I contact the council as they have access to the some of the same databases.
I am particularly interested in finding out if there is any known contamination at this site, including any records of any underground or above ground storage tanks for petroleum products or other chemicals.

Thanks for your help in this matter.

Kind Regards
Nicole K Reineker
Graduate Environmental Scientist

T: 61 3 6210 0626 | V: 320626
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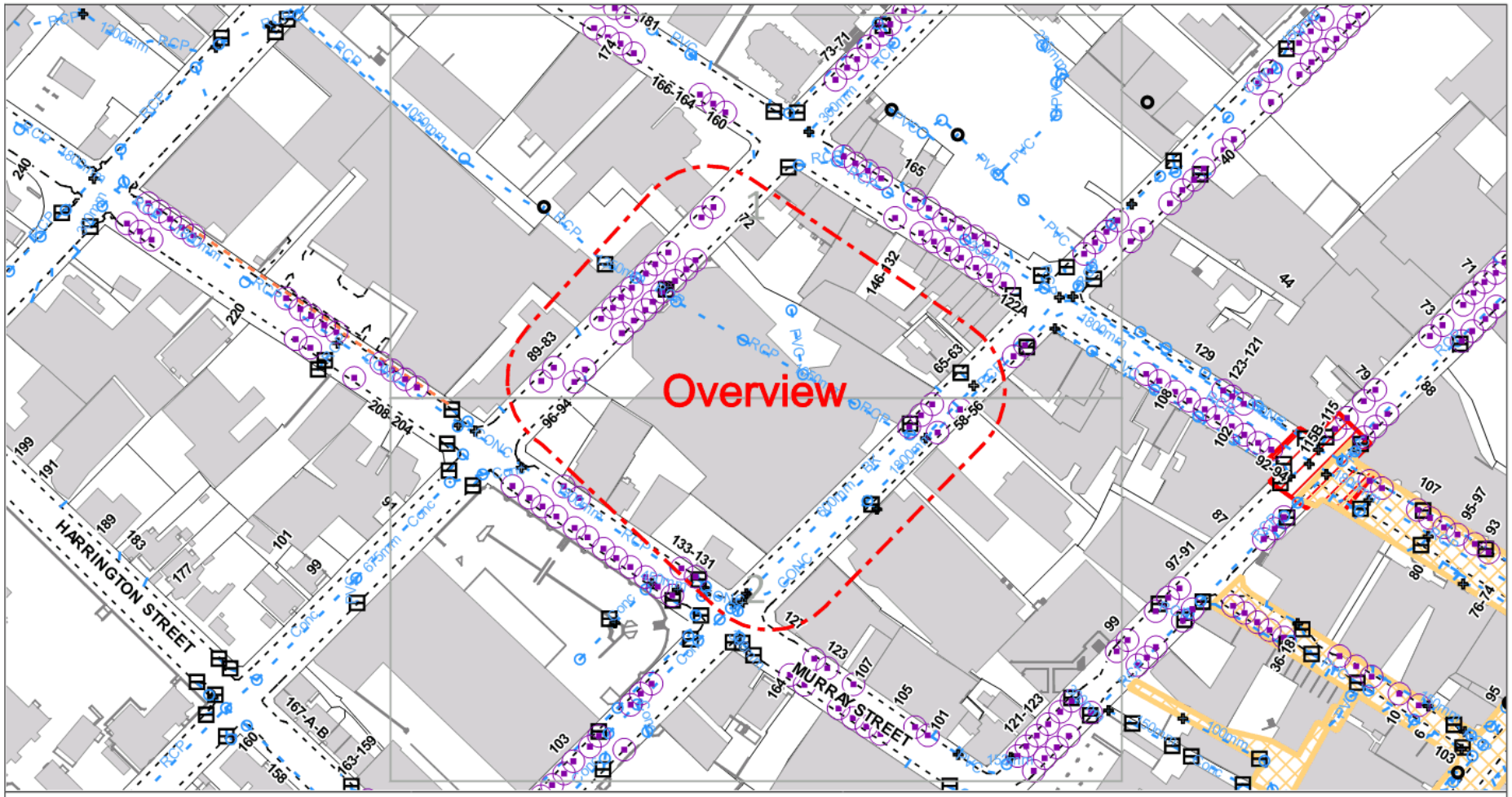
Appendix F

Dial before you dig records

City of HOBART

Sequence No: 76013864
Job No: 15023440
Location of Works: 83 Melville Street, Hobart, TAS 7000



DISCLAIMER:

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A field survey is to be conducted before information contained in this plan is relied upon.

WARNINGS AND REQUIREMENTS:

Refer to the cover letter and information sheet for all warnings, requirements and contact details.

Abandoned old town gas (coal gas) pipes potentially emitting harmful gases and Volatile Organic Compounds (VOCs) may be found in many areas of the City. Refer to the cover letter and information sheet for more detail.

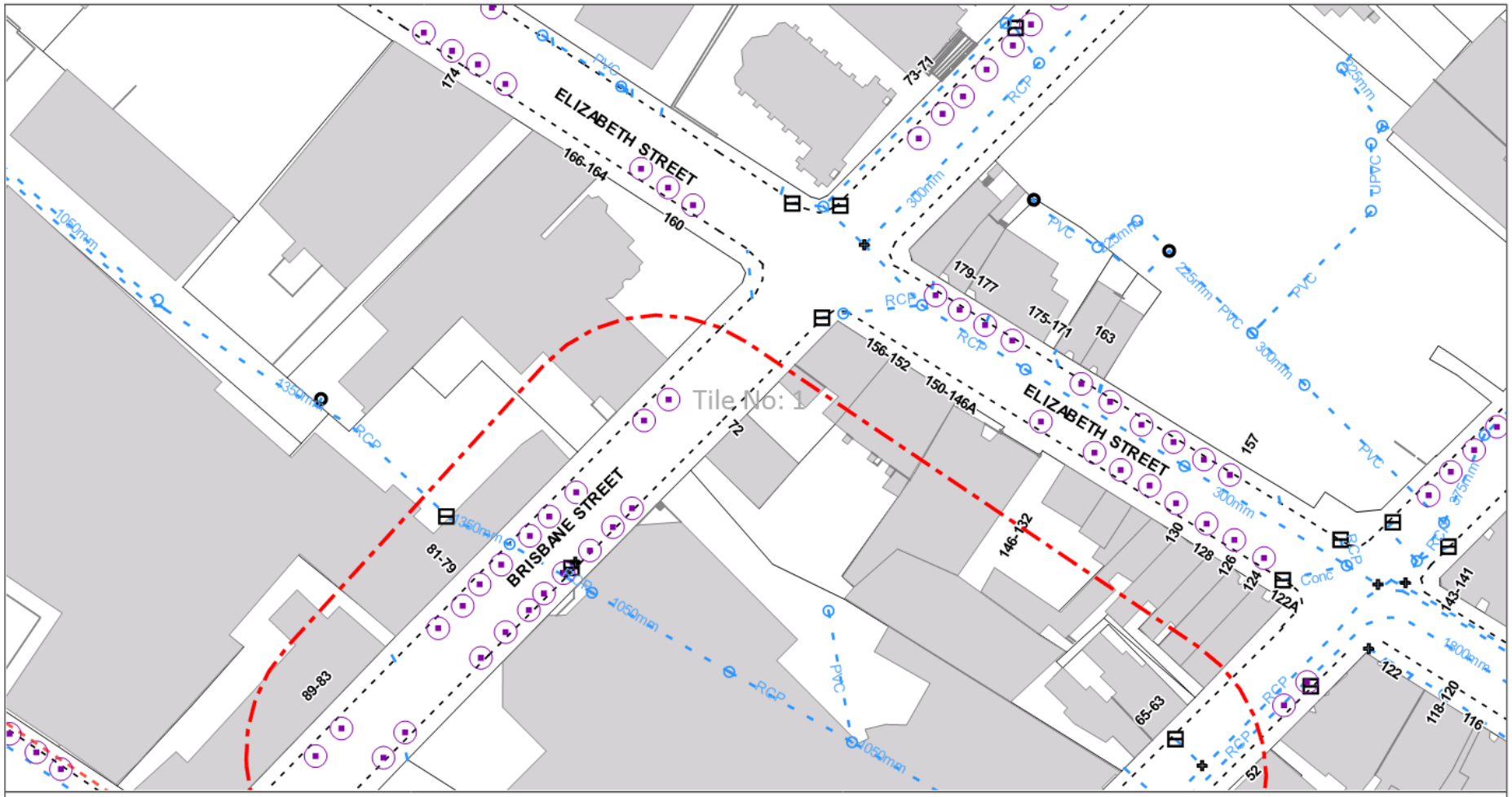
If in-ground parking sensors are located in the enquiry area please call City of Hobart Parking Operations at least 7 days prior to any works on telephone (03) 6238 2439.

- Stormwater Pit
- Intake Point, Junction, Outlet Point
- Maintenance Shaft, Man Hole
- Pollution Control Unit
- Inspection Opening
- Stormwater Pipe
- Electrical and Other
- In-ground Parking Sensor
- Construction Risk Area
- Potential Electrical Underground Assets
- DBYD Enquiry Area

N

City of HOBART

Sequence No: 76013864
Job No: 15023440
Location of Works: 83 Melville Street, Hobart, TAS 7000



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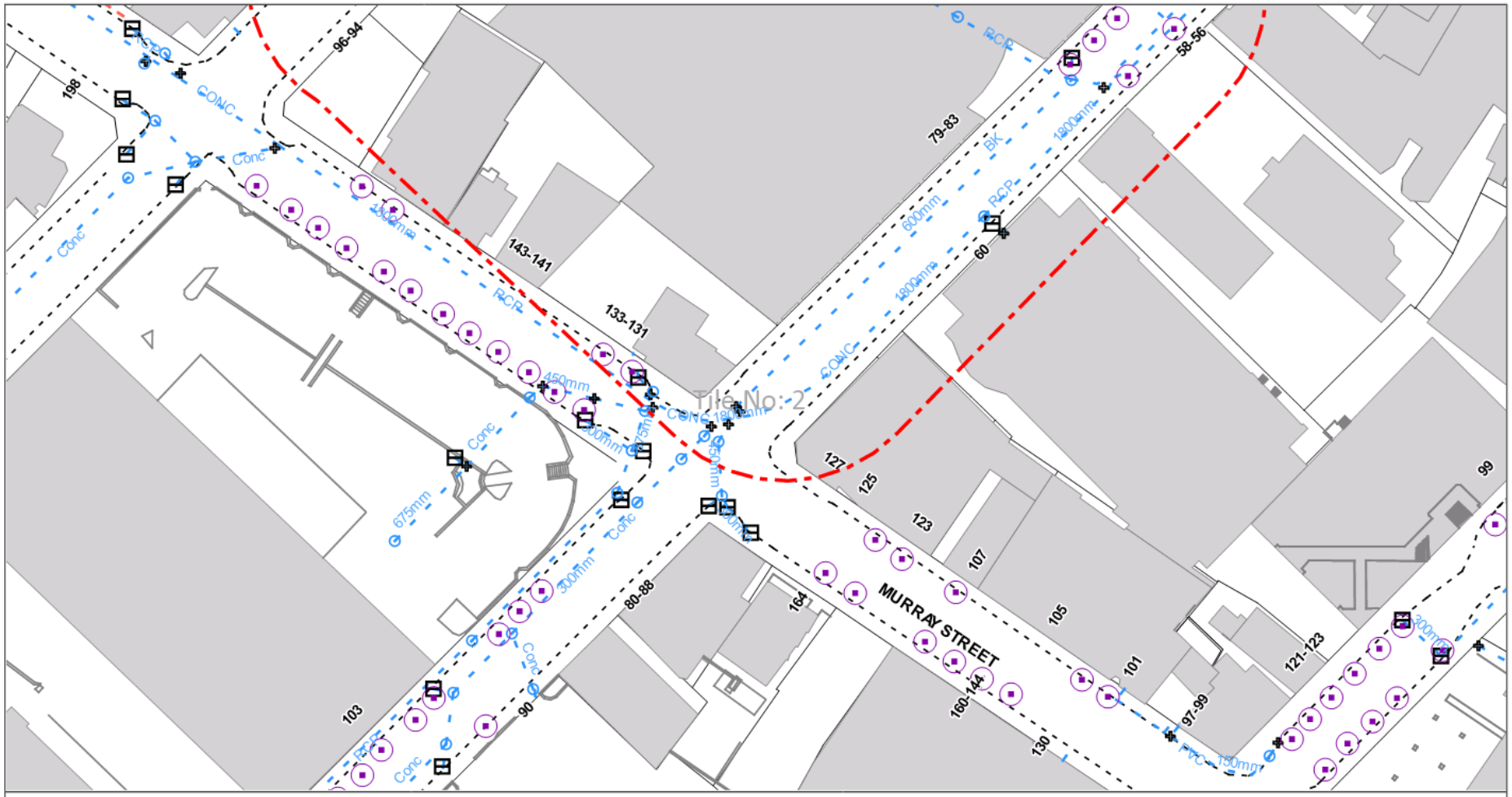
N

City of HOBART

Sequence No: 76013864
Job No: 15023440
Location of Works: 83 Melville Street, Hobart, TAS 7000



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Refer to the cover letter and information sheet for all warnings, requirements and contact details.

Abandoned old town gas (coal gas) pipes potentially emitting harmful gases and Volatile Organic Compounds (VOCs) may be found in many areas of the City. Refer to the cover letter and information sheet for more detail.

If in-ground parking sensors are located in the enquiry area please call City of Hobart Parking Operations at least 7 days prior to any works on telephone (03) 6238 2439.

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- Intake Point, Junction, Outlet Point
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- Stormwater Pipe
- Electrical and Other
- In-ground Parking Sensor
- Construction Risk Area
- Potential Electrical Underground Assets
- DBYD Enquiry Area

N

Plans generated 01/10/2018 by Pelicancorp TicketAccess Software | www.pelicancorp.com

AU.City of Hobart Response Plan.docx (04 June 2018)

City of HOBART

Enquiries to:
Road & Environmental Engineering Unit

Phone:
(03) 6238 2900

Email:
coh@hobartcity.com.au

01/10/2018

Ms Nicole Reineker
2 Salamanca Square
Battery Point TAS 7004

Dear Ms Nicole Reineker

DIAL BEFORE YOU DIG ENQUIRY
HOBART CITY COUNCIL

I refer to your request through the 1100 Dial Before You Dig service requesting information about City of Hobart (the City) underground assets as per the following details:

Date of Enquiry:	01/10/2018
Sequence Number:	76013864
DBYD Job No:	15023440
Enquiry Location:	83 Melville Street Hobart TAS 7000

Please note
All information is provided as a courtesy. It is indicative only and subject to field verification. The information is not to be copied or distributed in any way without prior approval of the City.

WARNING – Old Town Gas
Abandoned old town gas (coal gas) pipes potentially emitting harmful gases and Volatile Organic Compounds (VOCs) may be found in many areas of the City. Refer to the information sheet for more detail.

Works in Road Reservation
Prior to works in the road reservation a Permit to Open Up and Temporarily Occupy a Highway must be granted. Application forms can be found via the City's website:
www.hobartcity.com.au/City-services/Road-and-footpath-assets/Roads-and-footpaths

In-Ground Parking Sensors
The City must be advised at least 7 business days in advance when works are planned in areas with in-ground parking sensors. More information is available at the City's website:
www.hobartcity.com.au/dialbeforeyoudig/parkingsensors

Works in near Waterways and Rivulets
Approval is required for any works within a waterway or 10 metres from the top of the bank of a waterway. Application forms are available via the City's website: www.hobartcity.com.au/City-services/Environment/Stormwater-and-waterways/Local-waterways

Please contact the City's Road and Environmental Engineering Unit on telephone (03) 6238 2900 or via coh@hobartcity.com.au should you require any further information.

Yours sincerely

(John Holmes)
MANAGER ROAD AND ENVIRONMENTAL ENGINEERING

Attachment(s) Information Sheet, Plan(s)

INFORMATION SHEET

DUTY OF CARE

- No mechanical plant can be used within 1 metre of indication of an underground City asset unless sighted first by hand digging/potholing. A spotter must be used when using mechanical plant.
- No works to be undertaken within 1 metre of indication of foundations associated with a City asset unless prior approval is obtained from the City.
- Any differences between the locations marked on the City's plan and actual location of assets should immediately be reported to the City's Road and Environmental Engineering Unit on telephone (03) 6238 2900.

ANY DAMAGE TO A COUNCIL ASSET MUST BE REPORTED IMMEDIATELY ON TELEPHONE (03) 6278 0200

The City reserves the right to recover compensation for loss or damage and repair costs to any of its assets irrespective of provision of drawings or undertaking locations on site.

Information and requirements for use in conjunction with the plan

WARNING – Old Town Gas

- Abandoned old town gas (coal gas) pipes potentially emitting harmful gases and Volatile Organic Compounds (VOCs) may be found in many areas of the City.
- The Tasmanian Government lists the following suburbs as having been reticulated with old town gas mains:
  - Central Business District (CBD)
  - Battery Point
  - Dynnyrne
  - Glebe
  - Lenah Valley
  - Mount Stuart
  - New Town
  - North Hobart
  - Ridgeway
  - Sandy Bay including Lower Sandy Bay
  - South Hobart Cascades
  - West Hobart
- For more information please refer to the website provided by the Tasmanian Government at https://www.cbos.tas.gov.au/topics/technical-regulation/gas-standards-safety/practitioners/old-town-gas

Drainage Assets

- City owned stormwater assets must be located before excavation.
- City owned stormwater assets must not be modified, removed or tampered with in any way without express permission from the City.
- Contact the City's Road and Environmental Engineering Unit on telephone (03) 6238 2900 if further information is required.

Electrical and Other Assets

- City owned or approved electrical and other cables or pipes may be present in indicated areas.
- Some private infrastructure (for example a pressurised oxygen line and computer cabling) is also shown.
- Locate conduits before excavation and dig with care, as conduits may not be to standard, such as the depth.
- Contact the City's Road and Environmental Engineering Unit on telephone (03) 6238 2900 if further information is required.

In-Ground Parking Sensors

- Advise the City not less than 7 business days in advance when works are planned so that sensors can be removed and scheduled for subsequent replacement, please telephone (03) 6238 2439 or via email parkingsensors@hobartcity.com.au
- Upon completion of an application form Council will arrange removal and advise you when the sensors have been removed.
- Please be aware that a fee will be levied for the removal and reinstatement of parking meter sensors.

Construction Risk Areas

- These locations include where the City has been notified of or become aware of hazards such as ground contamination, abandoned underground assets (such as old town gas pipes and fuel tanks) and old landfill sites.
- For more information contact the City's Road and Environmental Engineering Unit on telephone (03) 6238 2900 or via coh@hobartcity.com.au

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Disclaimer:
The City of Hobart does not warrant the information contained on this plan is correct and a field survey is to be conducted before any information in this plan can be relied upon. The information contained in this plan is valid for 28 days from the date of enquiry.

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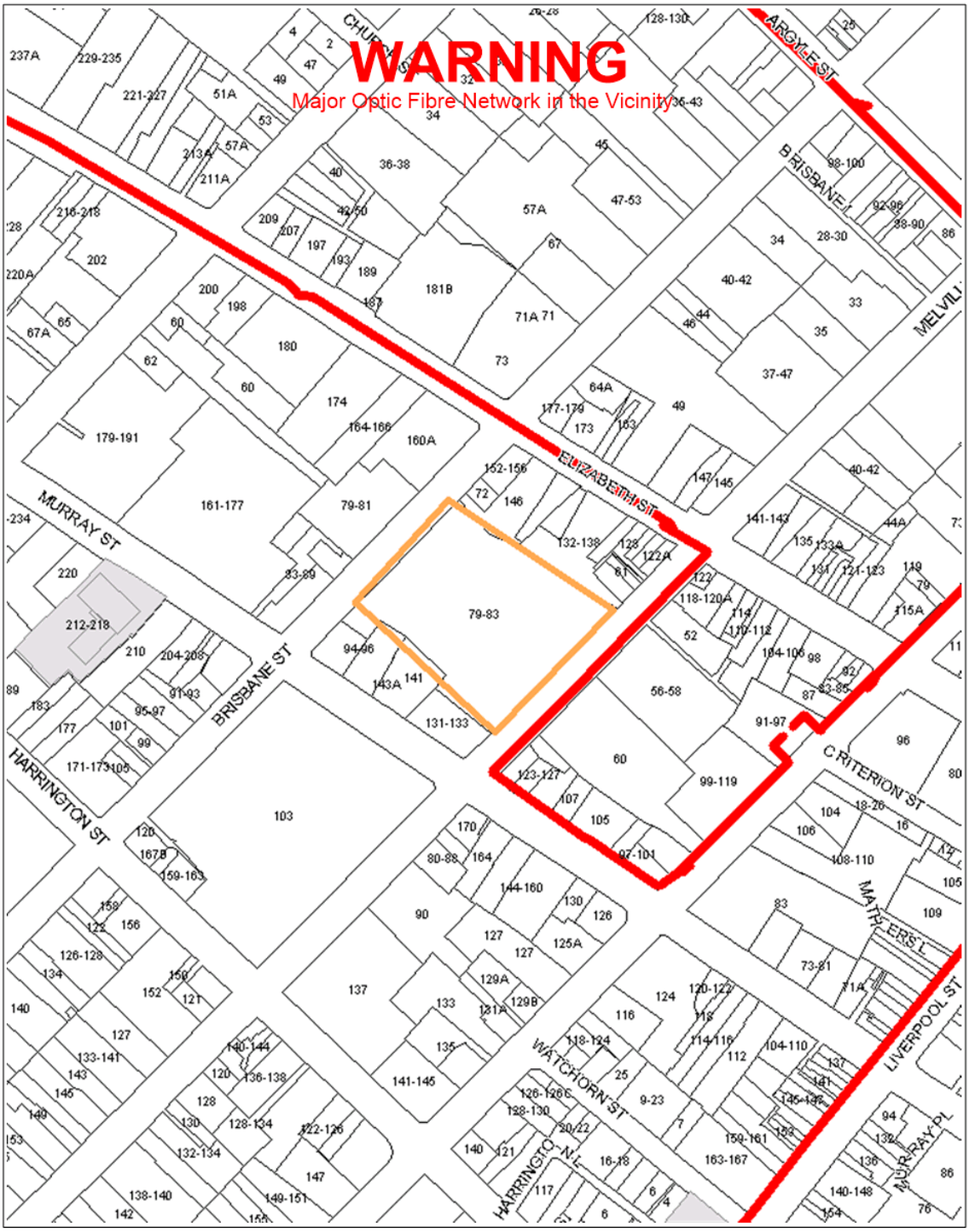

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Optus Plans and information supplied are valid for 30 days from the date of issue. If this timeline has elapsed please raise a new enquiry.

Sequence Number: 76013865

Date Generated: 01/10/2018

OPTUS yes

For all Optus DBYD plan enquiries –
Email: Fibre.Locations@optus.net.au
For urgent onsite assistance contact 1800 505 777
Optus Limited ACN 052 833 208

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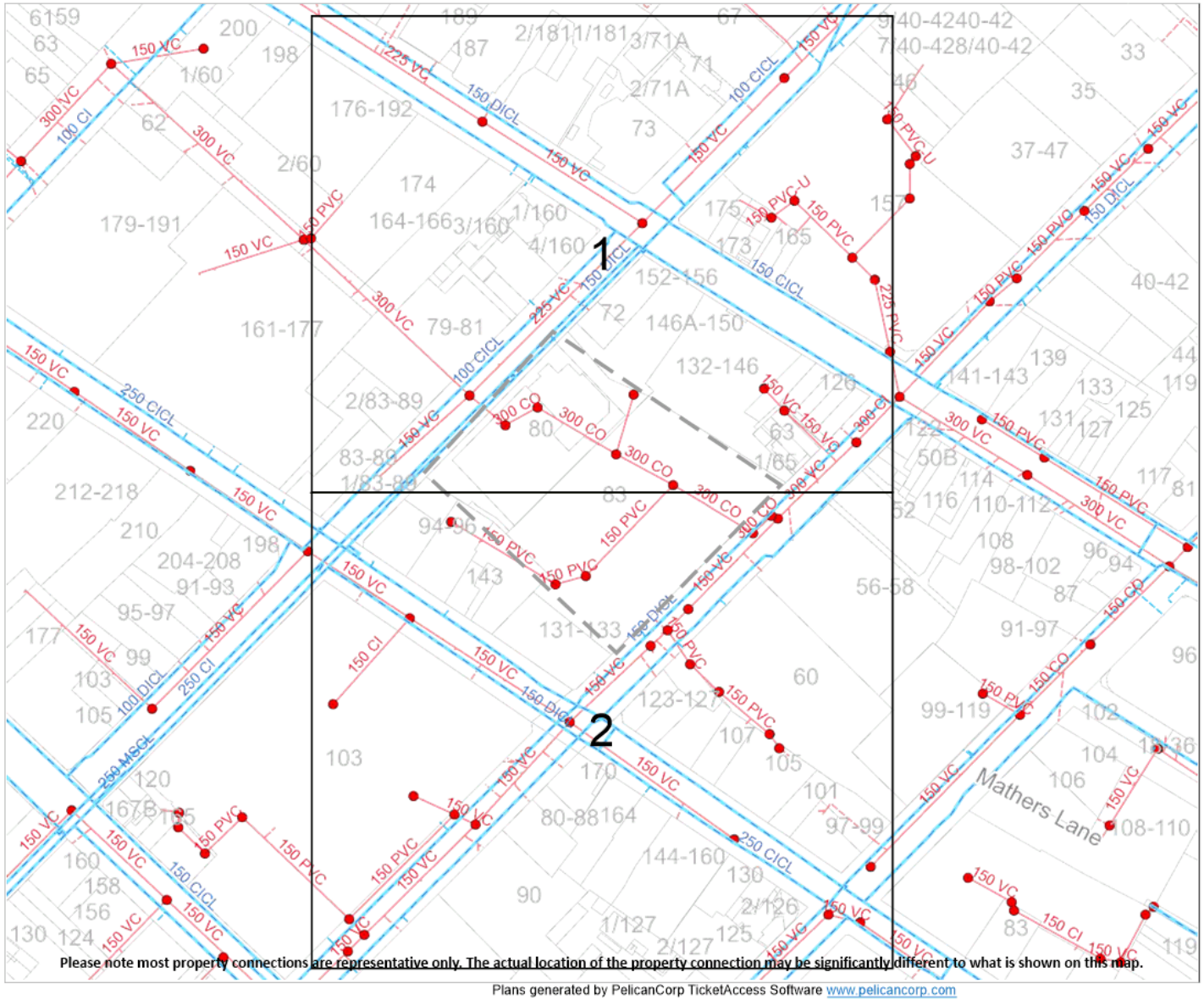
www.1100.com.au

TasWater

Sequence Number: **76013866**
Location: 83 Melville Street, Hobart, TAS 7000
Date Generated: **01/10/2018 (valid for 30 days)**

DIAL BEFORE YOU DIG
www.1100.com.au
The Essential First Step.



Please note most property connections are representative only. The actual location of the property connection may be significantly different to what is shown on this map.

Plans generated by PelicanCorp TicketAccess Software www.pelicancorp.com

Legend

- DBYD Enquiry
- Fire Hydrant
- Water Property Connection
- Water Main
- Water Main (Critical)
- Sewer Maintenance Hole
- Sewer Property Connection
- Sewer Pressurised Main (Critical)
- Sewer Gravity Main (Critical)
- Sewer Gravity Main
- Stormwater Maintenance Hole
- Stormwater Property Connection
- Stormwater Gravity Main
- Recycled Water Property Connection
- Recycled Water Main
- A Abandoned Line Sewer

In an emergency contact TasWater
Phone: 13 6992

N

Scale: **1:2050**

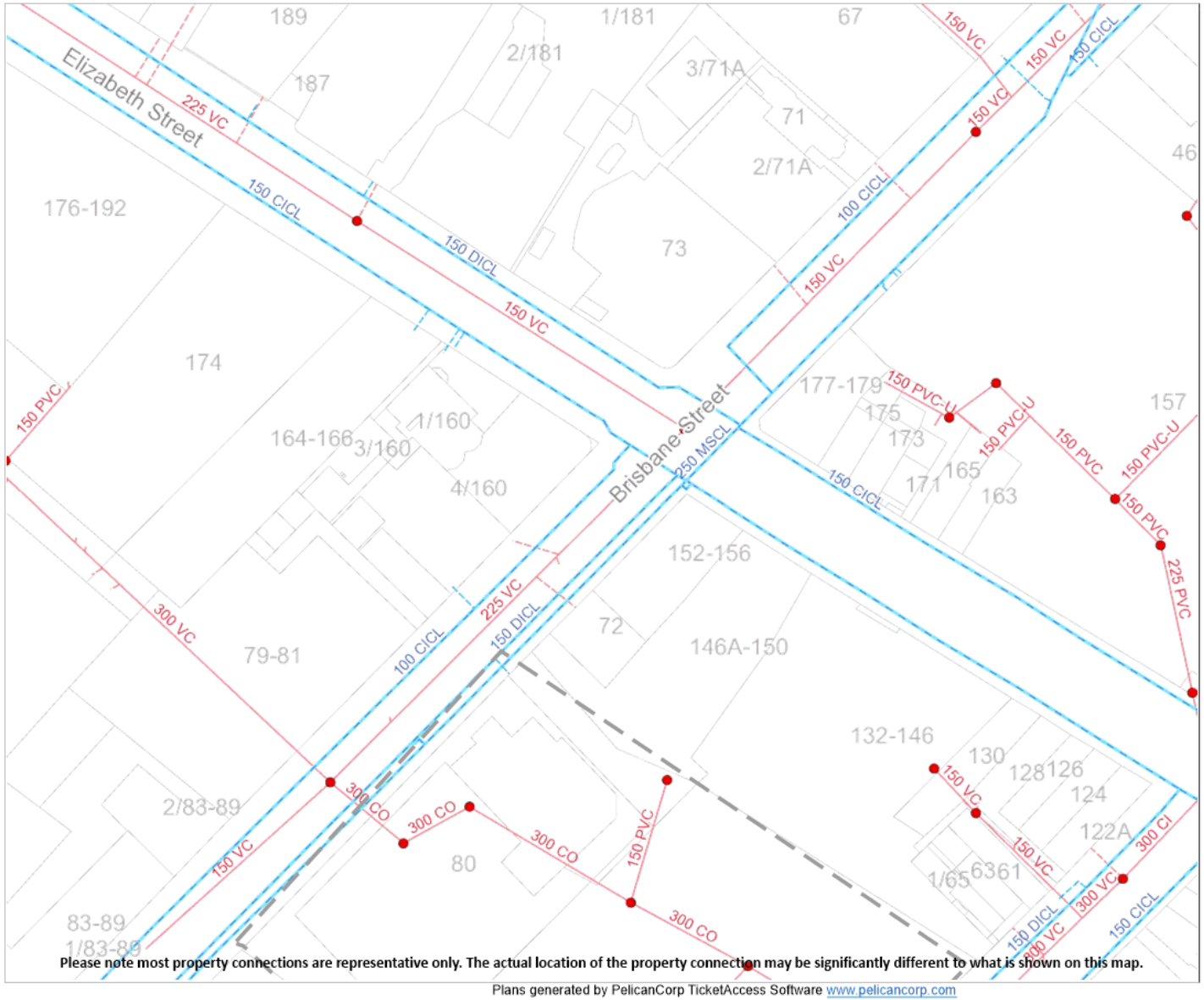
Disclaimer: The plan is provided in response to a Dial Before You Dig request. While all reasonable care has been taken to ensure the accuracy of the information on this plan, its purpose is to provide a general indication of the location of TasWater infrastructure. The information provided may contain errors or omissions and the accuracy may not suit all users. A site inspection and investigation is recommended before commencement of any project based on this data.

TasWater Plan v4.0 (17/10/2017)

TasWater

Sequence Number: **76013866**
Location: 83 Melville Street, Hobart, TAS 7000
Date Generated: **01/10/2018 (valid for 30 days)**

DIAL BEFORE YOU DIG
www.1100.com.au
The Essential First Step.



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Plans generated by PelicanCorp TicketAccess Software www.pelicancorp.com

Legend

- DBYD Enquiry
- Fire Hydrant
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In an emergency contact TasWater
Phone: 13 6992

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Scale: **1:1000**

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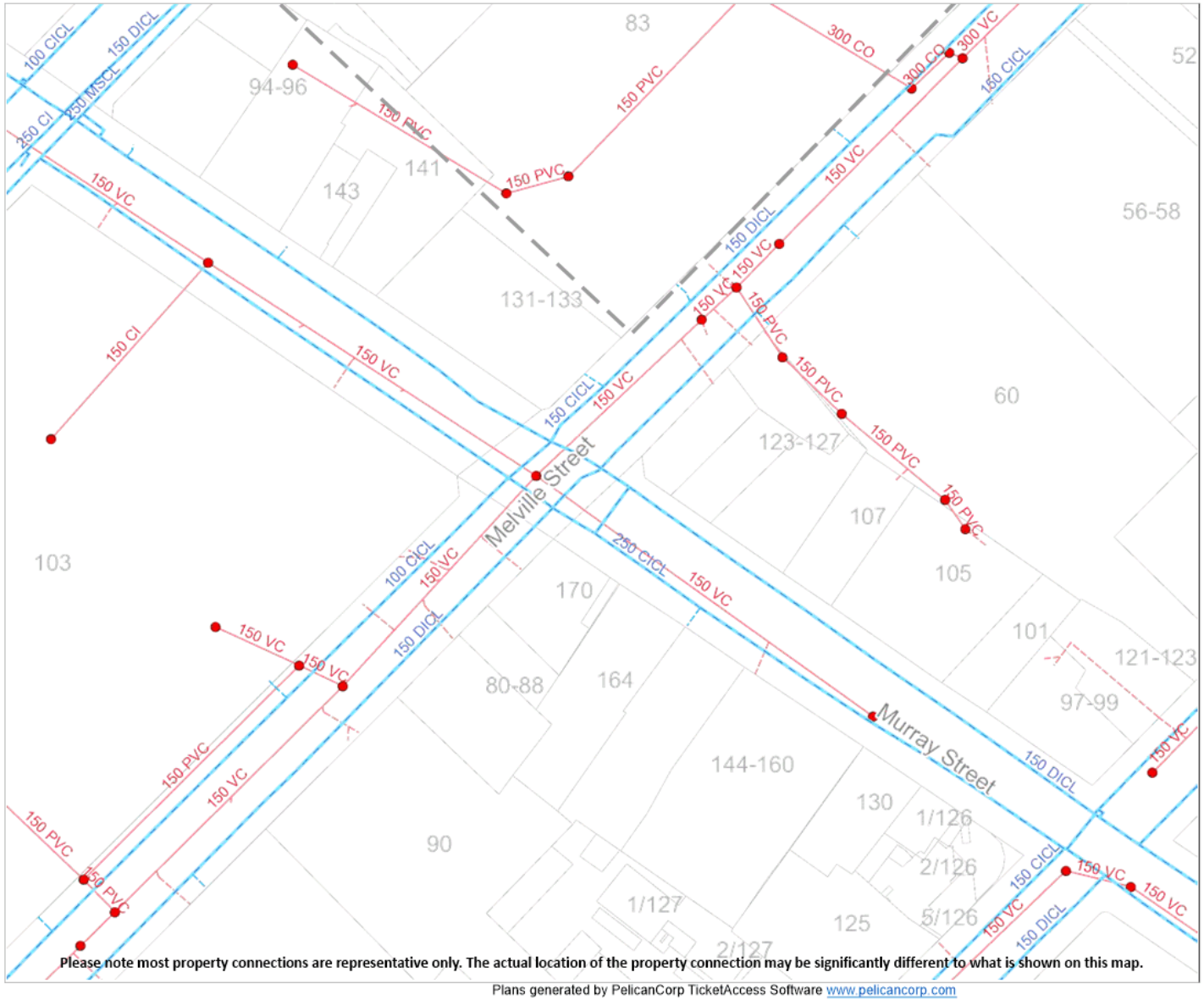
TasWater Plan v4.0 (17/10/2017)

TasWater

Sequence Number: **76013866**
Location: 83 Melville Street, Hobart, TAS 7000
Date Generated: **01/10/2018 (valid for 30 days)**

DIAL BEFORE YOU DIG
www.1100.com.au
The Essential First Step.



Please note most property connections are representative only. The actual location of the property connection may be significantly different to what is shown on this map.

Legend

- DBYD Enquiry
- Fire Hydrant
- Water Property Connection
- Water Main
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In an emergency contact TasWater
Phone: 13 6992

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Scale: **1:1000**

Disclaimer: The plan is provided in response to a Dial Before You Dig request. While all reasonable care has been taken to ensure the accuracy of the information on this plan, its purpose is to provide a general indication of the location of TasWater infrastructure. The information provided may contain errors or omissions and the accuracy may not suit all users. A site inspection and investigation is recommended before commencement of any project based on this data.

Plans generated by PelicanCorp TicketAccess Software www.pelicancorp.com

TasWater Plan v4.0 (17/10/2017)

Aboriginal Heritage SEARCH RECORD

This search in response to your DBYD request

Job Number: 15023440 (Sequence Number: 76013871)

has not identified any registered Aboriginal relics or apparent risk of impacting Aboriginal relics.

This Search Record has been requested for Ms Nicole Reineker at 8:40AM on 01 October 2018 and delivered to nicole.reineker@ghd.com.
This Search Record expires on 01 April 2019.
Your personal Search Identification Number is PS0038375.

Please be aware that the absence of records on the Aboriginal Heritage Register for the nominated area of land does not necessarily mean that the area is devoid of Aboriginal relics. If at any time during works you suspect the existence of Aboriginal relics, cease works immediately and contact Aboriginal Heritage Tasmania for advice.

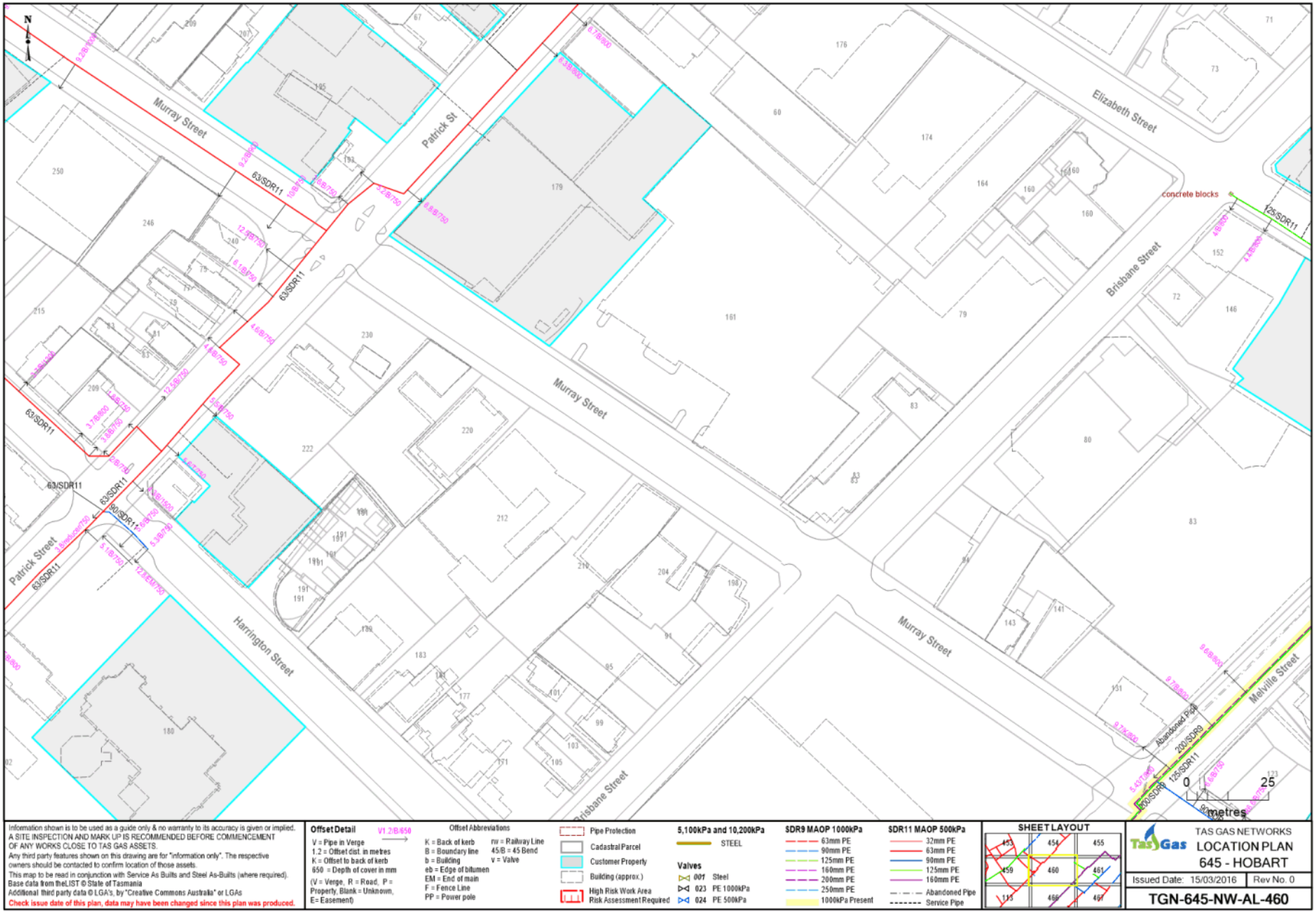
It is also recommended that you have on hand during any ground disturbance or excavation activities the Unanticipated Discovery Plan, to aid you in meeting requirements under the *Aboriginal Heritage Act 1975* should Aboriginal relics be uncovered. There are requirements that apply under the *Aboriginal Heritage Act 1975*. It is an offence to destroy, damage, deface, conceal or otherwise interfere with relics without a permit granted by the Minister. There is an obligation to report findings of relics as soon as practicable.

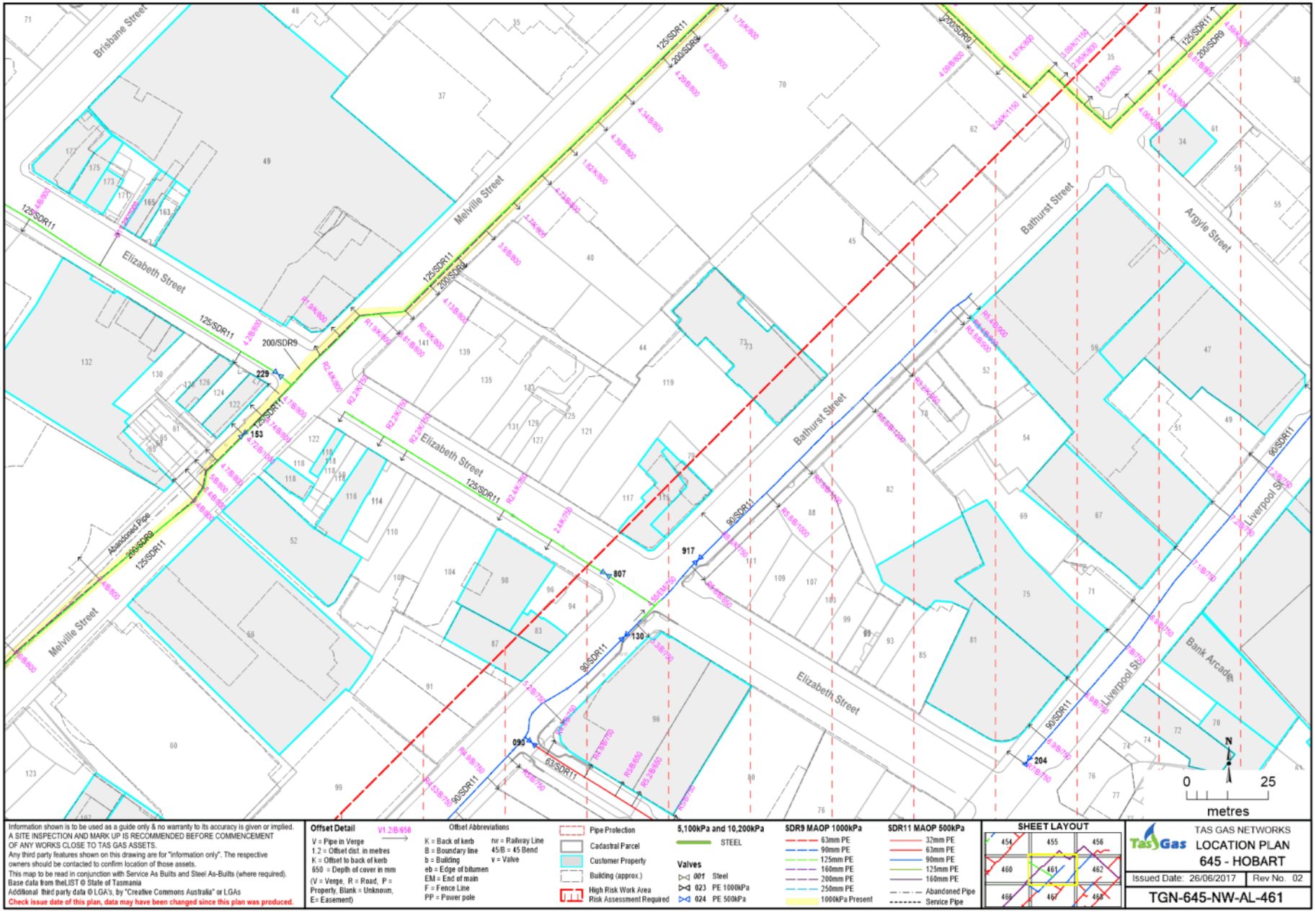
This Search Record is confirmation that you have checked the Aboriginal Heritage Property Search website or the Dial Before You Dig referral service for this search area. This Search Record will expire in six months from the search date.

If you have any queries please do not hesitate to contact Aboriginal Heritage Tasmania on **1300 487 045** or at **aboriginal@heritage.tas.gov.au**.

Aboriginal Heritage Tasmania
Department of Primary Industries, Parks, Water and Environment

Tasmanian Government


Murray Street
Patrick St
Elizabeth Street
Brisbane Street
Harrington Street
Melville Street
concrete blocks
63/SDR11
125/SDR11
200/SDR9
Abandoned Pipe
0
25
metres
Information shown is to be used as a guide only & no warranty to its accuracy is given or implied.
A SITE INSPECTION AND MARK UP IS RECOMMENDED BEFORE COMMENCEMENT OF ANY WORKS CLOSE TO TAS GAS ASSETS.
Any third party features shown on this drawing are for "information only". The respective owners should be contacted to confirm location of those assets.
This map to be read in conjunction with Service As Builts and Steel As-Builts (where required).
Base data from theLIST © State of Tasmania
Additional third party data © LGA's, by "Creative Commons Australia" or LGAs
Check issue date of this plan, data may have been changed since this plan was produced.
Offset Detail
V1.2/B/650
V = Pipe in Verge
1.2 = Offset dist. in metres
K = Offset to back of kerb
650 = Depth of cover in mm
(V = Verge, R = Road, P = Property, Blank = Unknown, E = Easement)
Offset Abbreviations
K = Back of kerb
B = Boundary line
b = Building
eb = Edge of bitumen
EM = End of main
F = Fence Line
PP = Power pole
nw = Railway Line
45/B = 45 Bend
v = Valve
Pipe Protection
Cadastral Parcel
Customer Property
Building (approx.)
High Risk Work Area
Risk Assessment Required
5,100kPa and 10,200kPa
STEEL
Valves
001 Steel
023 PE 1000kPa
024 PE 500kPa
SDR9 MAOP 1000kPa
63mm PE
90mm PE
125mm PE
160mm PE
200mm PE
250mm PE
1000kPa Present
SDR11 MAOP 500kPa
32mm PE
63mm PE
90mm PE
125mm PE
160mm PE
Abandoned Pipe
Service Pipe
SHEET LAYOUT
453
454
455
459
460
461
115
466
467
TasGas
TAS GAS NETWORKS
LOCATION PLAN
645 - HOBART
Issued Date: 15/03/2016
Rev No. 0
TGN-645-NW-AL-460


Brisbane Street
Melville Street
Elizabeth Street
Bathurst Street
Argyle Street
Liverpool St
Bank Arcade
125/SDR11
200/SDR9
90/SDR11
63/SDR11
60/SDR11
Abandoned Pipe
229
153
807
917
130
093
204
N
0
25
metres
Information shown is to be used as a guide only & no warranty to its accuracy is given or implied.
A SITE INSPECTION AND MARK UP IS RECOMMENDED BEFORE COMMENCEMENT OF ANY WORKS CLOSE TO TAS GAS ASSETS.
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Pipe Protection
Cadastral Parcel
Customer Property
Building (approx.)
High Risk Work Area
Risk Assessment Required
5,100kPa and 10,200kPa
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Valves
001 Steel
023 PE 1000kPa
024 PE 500kPa
SDR9 MAOP 1000kPa
63mm PE
90mm PE
125mm PE
160mm PE
200mm PE
250mm PE
1000kPa Present
SDR11 MAOP 500kPa
32mm PE
63mm PE
90mm PE
125mm PE
160mm PE
Abandoned Pipe
Service Pipe
SHEET LAYOUT
454
455
456
460
461
462
466
467
468
TasGas
TAS GAS NETWORKS
LOCATION PLAN
645 - HOBART
Issued Date: 26/06/2017
Rev No. 02
TGN-645-NW-AL-461

BMSDOC-18-766
Service Completion Record and As-Built Information Page- (F)

Status - Approved
Current Version - 6.0
Published Date -Aug 2014

Comments / Observations					
Type of Service (circle relevant type)					
Long	Intermediate	Short	Tail (mains sketch)	Ryder (mains sketch)	Other (specify)

Please record As-Built Sketch below

Include North arrow in circle	**Name of Contractor**	Address of Installation Street Number .....52 .....
	Name of Service Layer	Street Name .....Melville Street .....
		Suburb .....Hobart.....Postcode...7000.....

PLEASE NOTE:

There is a Service Connection at the following address in the area or vicinity of your DBYD inquiry:
52 Melville Street Hobart

DESCRIPTION:

No accurate details are available for this Service.

Please consult your As-Built drawing and contact Tas Gas if you need further information,

Tas Gas GIS Team

Depth of Main.....mm Gas Main Diameter..... mm

Comments (e.g. boundary unknown etc.):.....

.....

Offset measurements are to be taken from the property boundaries (front & side) not only from the tee but also at the front boundary and at least once within the property. It is essential to show the depth of the service line at the tie in to the mains, across the footpath
and once or twice within the property. Please indicate on the drawing where Polymeric strip and or concrete slab is installed. Show isolation valve detail if installed. Tas Gas reserves the right to request, amend or revise this drawing and any additional drawings for the installation. All drawings are to be completed to the entire satisfaction of Tas Gas.

For Tas Gas use: As-built Approved		Documents Scanned / Electronically Filed	
By :	Date : / /	By :	Date : / /
		By :	

RECORDS : As-Built – Original HC to Meter Installation File ; Scan a copy to e-Connections File ; Scanned Copy to GIS Records for As-Builts

"Safety by choice - not by chance"

© 2013 Tas Gas

Indicative Plans

Issue Date:	01/10/2018
Location:	83 Melville Street,Hobart,TAS-7000

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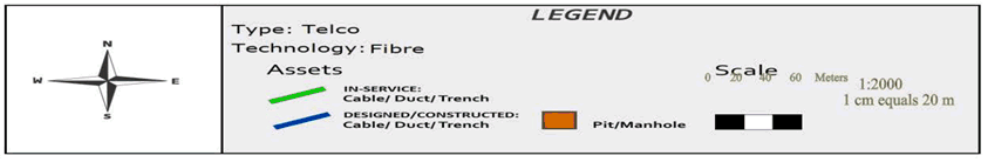
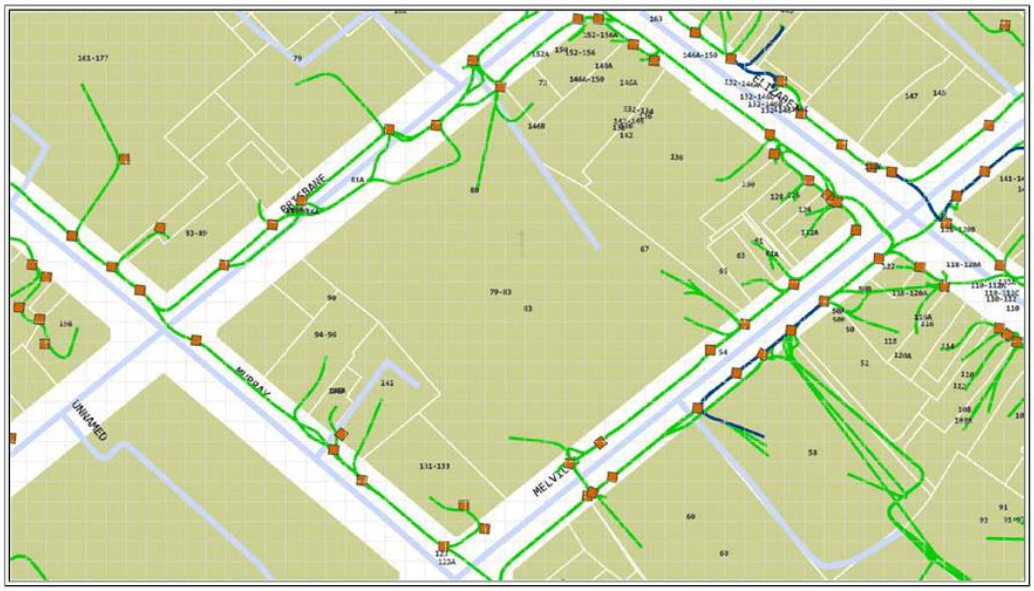
1





Emergency Contacts

You must immediately report any damage to **nbn™** network that you are/become aware of. Notification may be by telephone - 1800 626 329.

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01/10/2018
GHD - Ms Nicole Reineker
GHD
2 Salamanca Square
Battery Point TAS 7004
Job No: 15023440
Sequence No: 76013862
Location Specified in Request (Site):
83 Melville Street Hobart

TASNETWORKS HAS RECORDS OF UNDERGROUND ELECTRICAL AND/OR TELECOMMUNICATIONS ASSETS IN OR AROUND THE SITE. DO NOT PROCEED WITHOUT READING AND UNDERSTANDING THE FOLLOWING REQUIREMENTS

To make your experience easier TasNetworks now has a new look, single response that covers TasNetworks' Electrical (Transmission and Distribution) and Telecommunication underground assets. Note that the text of this response has also changed so please take the time to read our response carefully.

Thank you for your recent Dial Before You Dig (**DBYD**) enquiry. TasNetworks works with DBYD to provide you with:

a) Information regarding our records relating to the general location of any underground assets owned by TasNetworks located in the vicinity of the Site;
b) Information regarding how to arrange on-site location services to assist you with identifying the exact location of TasNetworks' underground assets;
c) General information on how to work safely near TasNetworks' underground and overhead assets; and
d) Your legal obligations:
   i. not to unlawfully interfere with TasNetworks' assets (both underground and overhead); and
   ii. to notify TasNetworks of work that may affect our assets (both underground and overhead). Note that submission of a DBYD request is not sufficient notice for this purpose.

Our assets
TasNetworks owns and maintains both electrical and telecommunications assets. Our Electrical assets cover Transmission Extra High Voltage (EHV) and Distribution High Voltage (HV) and Low Voltage (LV) Networks. Our telecommunications assets may form part of the electrical infrastructure and includes fibre optic cables. Our assets may be located underground or overhead.

Our records
TasNetworks has records that there are underground assets owned by TasNetworks located in or around the Site. The approximate locations of these underground assets are set out in the plans enclosed. Where relevant, detailed plans may also be attached as image files. Please note that the plans and information provided with this letter are a guide only and may not provide an exact location of TasNetworks' underground assets. To ensure that the exact location of TasNetworks' assets has been marked out before you start works please arrange an on-site location by an accredited services locator.

Your obligations

It is important that you understand what your obligations are when it comes to working in the vicinity of TasNetworks' underground assets.

You must:

- Undertake your own searches, investigations, and enquiries to ensure that the information provided in this letter is accurate, reliable and complete and provide this information to anyone engaged to carry out cable location or underground works;
- Obtain updated plans from TasNetworks if you undertake work more than 30 days from the date of this letter by a new DBYD enquiry;
- It is a requirement under s110 of the *Electricity Supply Industry Act 1995* that you notify us in writing if you plan to undertake work that may affect our electrical assets (for example, excavation in the vicinity of our assets). Submission of a DBYD request is not the requisite notice under the Act. You must notify us by email to customer.enquiries@tasnetworks.com.au; please include the Job Number, Sequence Number, Street and Suburb in the subject title. Some more specific guidance around circumstances in which you must provide us with notice are set out below;
- For any work that involves excavation or boring with penetration below **100 mm and within 5 metres** of TasNetworks' underground assets, as well as following the Dial Before You Dig (DBYD) Best Practice Guide for Locating Underground Services the additional minimum requirements must be met:
    - Engage a cable locator to locate and mark the location of the relevant assets showing both alignment and depth.
    - Pothole by hand or use other non-destructive methods to expose the cable and verify location and depth of the assets.
    - If excavations are outside of the table below then excavations may proceed with no further involvement from TasNetworks.
    - If excavations are within the vicinities outlined in the table below then you must give TasNetworks at least **7 days' notice** prior to commencing work and provide detail of the proposed works. TasNetworks may require a copy of your safety management plan, which could be in the form of a Safe Work Method Statement (**SWMS**), which outlines how the risks associated with cables will be managed. **No work shall proceed in this vicinity without prior approval from TasNetworks.**
    - If excavations are within the vicinities outlined in the table below no mechanical excavation is allowed (only hand digging or vacuum truck excavation is permitted), unless specifically approved by TasNetworks.

Cable Type	Depth of Excavation	Proximity to Cable (Horizontal)
Communications or LV	500 mm	2 m
HV	500 mm	2 m
EHV	100 mm	5 m

    - Following any excavation works, the installation (including cable markers, bedding materials and mechanical protection) must be reinstated to TasNetworks' standard. Contact TasNetworks for further information.
- Work safely, exercising reasonable skill, care and diligence so that you do not interfere with any of TasNetworks' assets. We note that it is an offence under section 109 of the *Electricity Supply Industry Act* 1995 (Tas) to interfere with TasNetworks' electrical infrastructure or an electrical installation without TasNetworks' consent; and
- Ensure an emergency plan for contact with energised electric lines is developed and maintained so it is effective for each workplace or site. **IMMEDIATELY REPORT ANY DAMAGE to TasNetworks' infrastructure by telephoning 132 004.**

Working near TasNetworks infrastructure
Electricity infrastructure is inherently dangerous and if damaged or interfered with can cause serious injury (including death) and also disrupt essential supply to customers. As such, it is important that you treat electricity with respect. Our fibre optic assets are fragile; contact with a fibre optic cable may cause internal damage, even when no external damage is present. Any contact with our electricity infrastructure or telecommunications assets must be reported to TasNetworks immediately by telephoning **132 004**.

On-site Location Services
As the location of TasNetworks' assets on the enclosed plans are approximate only, TasNetworks recommends you engage the services of an accredited cable location service provider to ascertain the exact location of such assets. The cable locator must assume that all communications cables are non-conducting. Contact information for cable location and underground service location services can be found in the Yellow Pages at www.yellowpages.com.au under "cable location" or through the National Utility Locating Contractors Association at www.nulca.com.au.

Private assets
TasNetworks does not maintain records for privately owned infrastructure. You will need to make enquiries about the location of any privately owned assets at the Site with the relevant property owner. On occasion, some privately owned infrastructure may show up in our records and in our DBYD response to you. If the TasNetworks DBYD response that you receive contains information on privately owned infrastructure, you will still need to make further enquiries about the location of privately owned assets with the relevant property owner, as TasNetworks' records of privately owned infrastructure are not maintained or updated.

TasNetworks will not be liable to you or any person for any loss or damage (whether direct, indirect, special, consequential or otherwise) suffered or incurred if you (or any other person) act, or fail to act, on any information set out in this letter.

If any doubt exists as to your requirements or obligations when excavating around TasNetworks assets, then contact the Customer Service Centre prior to any work commencing.

Regards,

Customer Service Centre Officer,
TasNetworks Pty Ltd
Phone: 1300 137 008

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Enquiry Details

Enquiry Details	
Utility ID	50300
Job Number	15023440
Sequence Number	76013862
Enquiry Date	01/10/2018 08:31
Address	83 Melville Street Hobart
Location in Road	Not Supplied
Activity	Tendering

Enquirer Details			
Customer ID	1895125		
Contact	Ms Nicole Reineker		
Company	GHD		
Email	nicole.reineker@ghd.com		
Phone	0362100626	**Mobile**	Not Supplied

Assets	
Affected Assets	Conduit, Fiber Optic Cable, HV Cable, LV Cable

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Plan description

If underground assets owned by TasNetworks exist within our records in the vicinity of the Site, a colour overview map and index map(s) are included. Key to symbols are included on these plans. All maps on the following pages highlight the Site in a **bold red** colour.

Where relevant, detailed underground asset plans for TasNetworks owned assets may also be attached as image files.

Key to symbols used on any attached TasNetworks Underground asset plan image files.

EHV	-	Extra High Voltage
HV	-	High Voltage
LV	-	Low Voltage
UG	-	Underground
OH	-	Overhead
STD	-	Standard

Underground Cable (Black/White plans)

	EHV/HV/LV Cable
	Fibre Optic Cable

	Streetlight cable		Potend Or Joint		Manhole		HV,LV Pole HV/LV Pole
	Service Duct		Cabinet		Service Pit		Steel/concrete Pole
	Sealed end on UG Cable	S%	Turret with Switch		Service Post	H	Std Fuse Base with lamp
			Feeder Pillar	T	Telephone Cabinet		Road Crossing Duct

	Zone Substation		Substation	H L 2-125 PVC	Typical section through crossing

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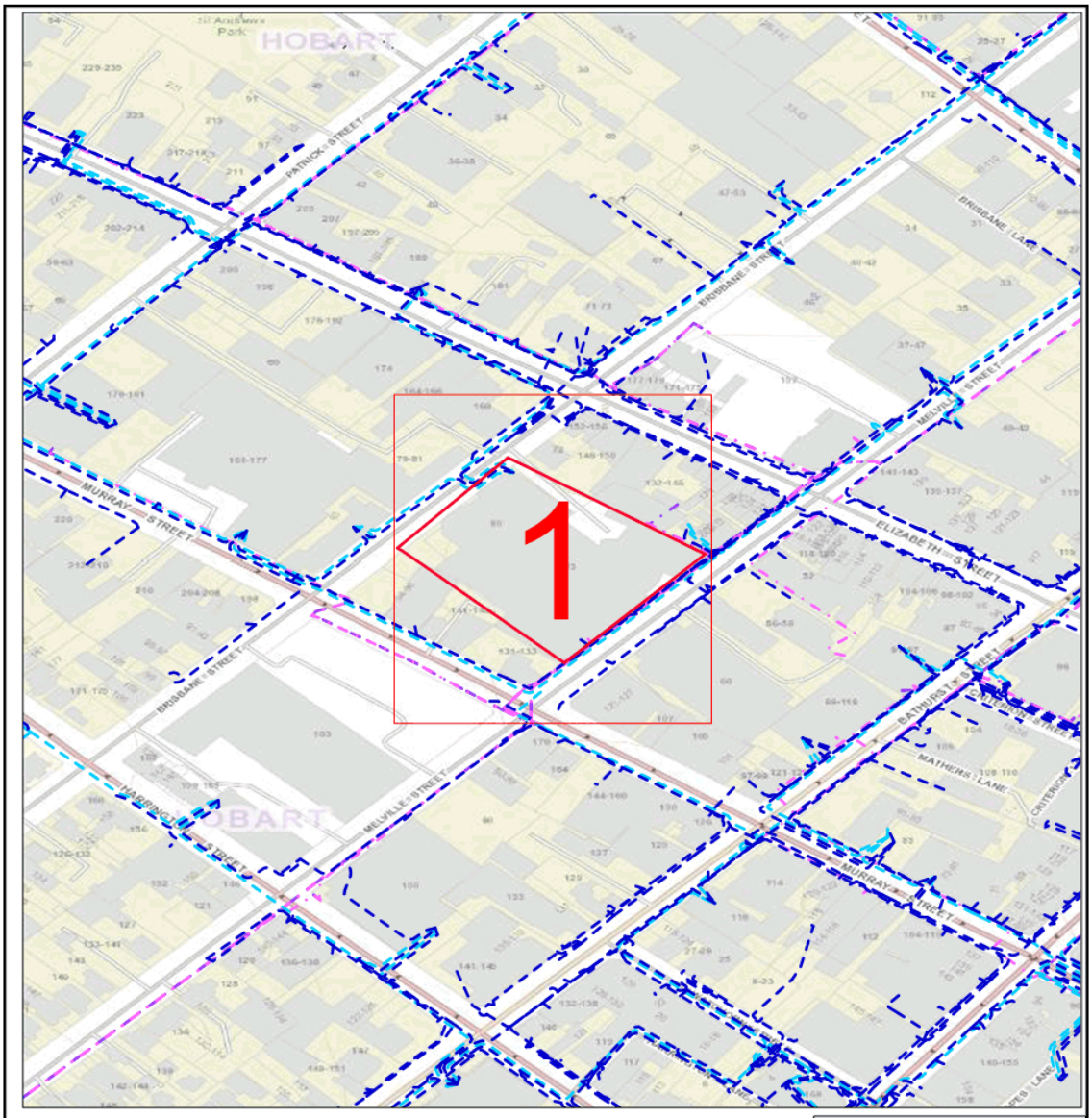
Overview Map

Job No: 15023440

Sequence No: 76013862

83 Melville Street Hobart

TasNetworks contact details: 1300 137 008 (enquiries) or 132 004 (emergency only), email customer.enquiries@tasnetworks.com.au



LEGEND:

- Site - True
- Conduit
- Fiber Optic Cable
- HV Cable
- LV Cable

N

0 0.03km

1 Detail

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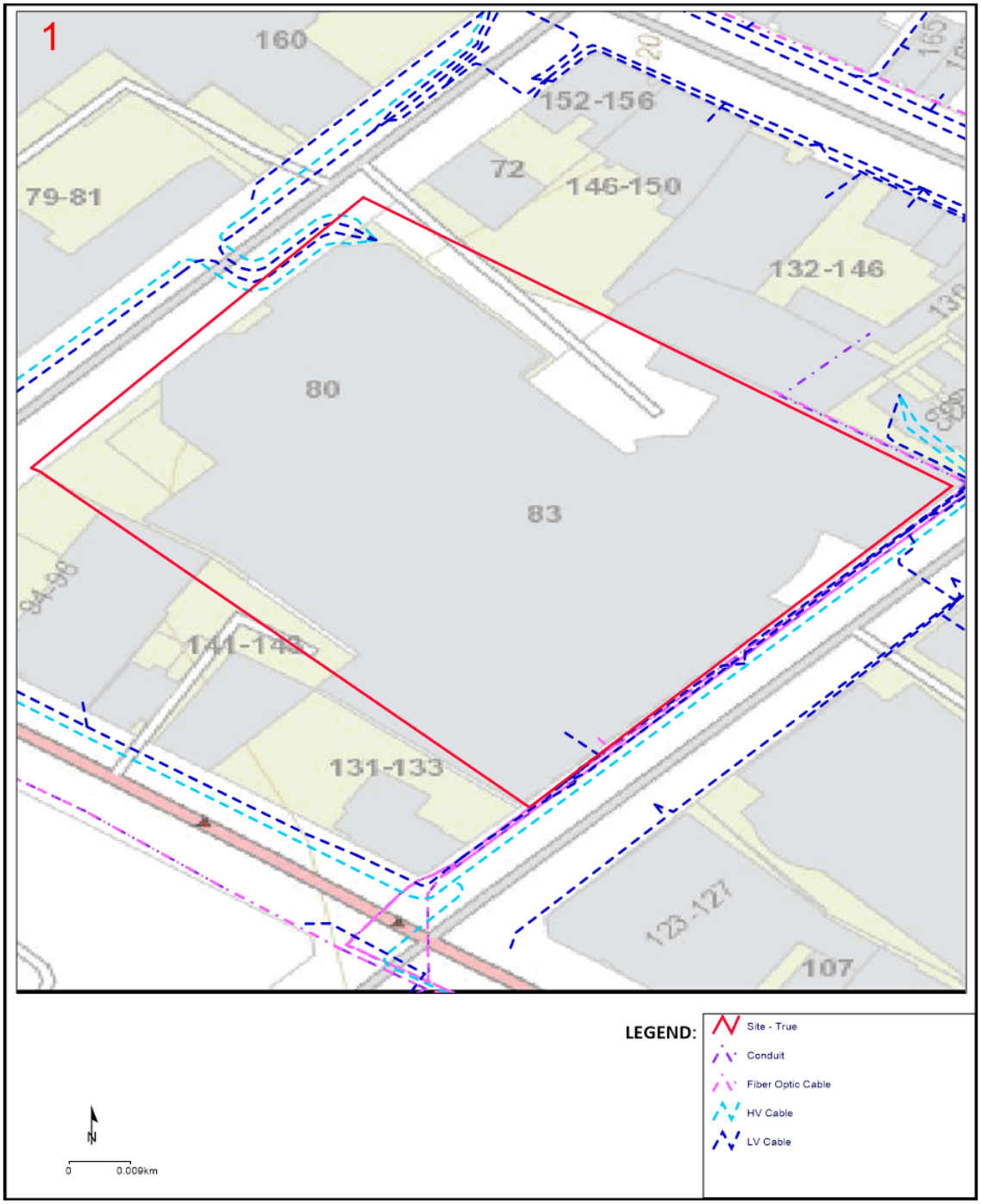
Detail Map 1 **Job No:** 15023440 **Sequence No:** 76013862

83 Melville Street Hobart

TasNetworks contact details: 1300 137 008 (enquiries) or 132 004 (emergency only), email customer.enquiries@tasnetworks.com.au



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Job No 15023440

Phone: 1100
www.1100.com.au

Caller Details

Contact:	Ms Nicole Reineker	**Caller Id:**	1895125	**Phone:**	0362100626
Company:	GHD	**Mobile:**	Not Supplied	**Fax:**	Not Supplied
Address:	2 Salamanca Square Battery Point TAS 7004	**Email:**	nicole.reineker@ghd.com		

Dig Site and Enquiry Details

WARNING: The map below only displays the location of the proposed dig site and does not display any asset owners' pipe or cables. The area highlighted has been used only to identify the participating asset owners, who will send information to you directly.

User Reference: 79 melville
Working on Behalf of: Private

Enquiry Date:	Start Date:	End Date:
01/10/2018	03/10/2018	03/10/2018

Address:
83 Melville Street
Hobart TAS 7000

Job Purpose:	Onsite Activity:
Design	Tendering
Location of Workplace:	**Location in Road:**
Private Property	Not Supplied

- Check the location of the dig site is correct. If not submit a new enquiry.
- If the scope of works change, or plan validity dates expire, resubmit your enquiry.
- Do NOT dig without plans. Safe excavation is your responsibility. If you do not understand the plans or how to proceed safely, please contact the relevant asset owners.

Notes/Description of Works:
Not Supplied

Your Responsibilities and Duty of Care

- If plans are not received within 2 working days, contact the asset owners directly & quote their Sequence No.
- ALWAYS perform an onsite inspection for the presence of assets. Should you require an onsite location, contact the asset owners directly. Please remember, plans do not detail the exact location of assets.
- Pothole to establish the exact location of all underground assets using a hand shovel, before using heavy machinery.
- Ensure you adhere to any State legislative requirements regarding Duty of Care and safe digging requirements.
- If you damage an underground asset you MUST advise the asset owner immediately.
- By using this service, you agree to Privacy Policy and the terms and disclaimers set out at **www.1100.com.au**
- **For more information on safe excavation practices, visit www.1100.com.au**

Asset Owner Details

The assets owners listed below have been requested to contact you with information about their asset locations within 2 working days.
Additional time should be allowed for information issued by post. It is **your responsibility** to identify the presence of any underground assets in and around your proposed dig site. Please be aware, that not all asset owners are registered with the Dial Before You Dig service, so it is **your responsibility** to identify and contact any asset owners not listed here directly.
** Asset owners highlighted by asterisks ** require that you visit their offices to collect plans.
# Asset owners highlighted with a hash require that you call them to discuss your enquiry or to obtain plans.

Seq. No.	Authority Name	Phone	Status
76013871	Department of Primary Industries, Parks, Water and Environment (DPIPWE)	1300487045	NOTIFIED
76013864	Hobart City Council	0362382482	NOTIFIED
76013869	NBN Co, VicTas	1800626762	NOTIFIED
76013865	Optus and/or Uecomm, Tas	1800505777	NOTIFIED
76013868	PIPE Networks, Tas	1800201100	NOTIFIED
76013867	Tas Gas Networks	0363369350	NOTIFIED
76013870	TasmaNet	0404684955	NOTIFIED
76013862	TasNetworks Pty Ltd	1300137008	NOTIFIED
76013866	TasWater	136992	NOTIFIED
76013863	Telstra VICTAS	1800653935	NOTIFIED

END OF UTILITIES LIST

Lodge Your Free Enquiry Online – 24 Hours a Day, Seven Days a Week

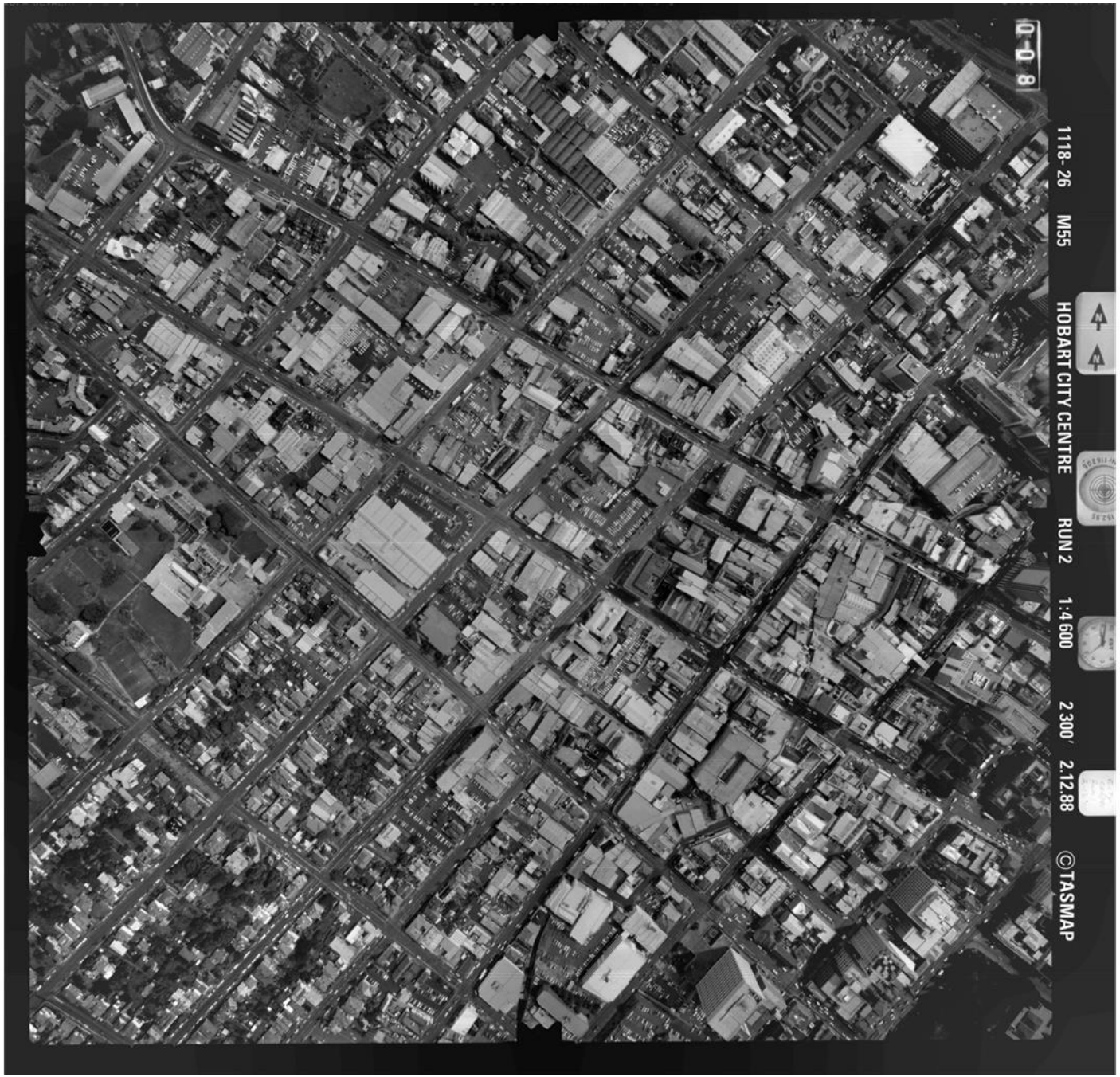
Appendix G

Aerial photographs

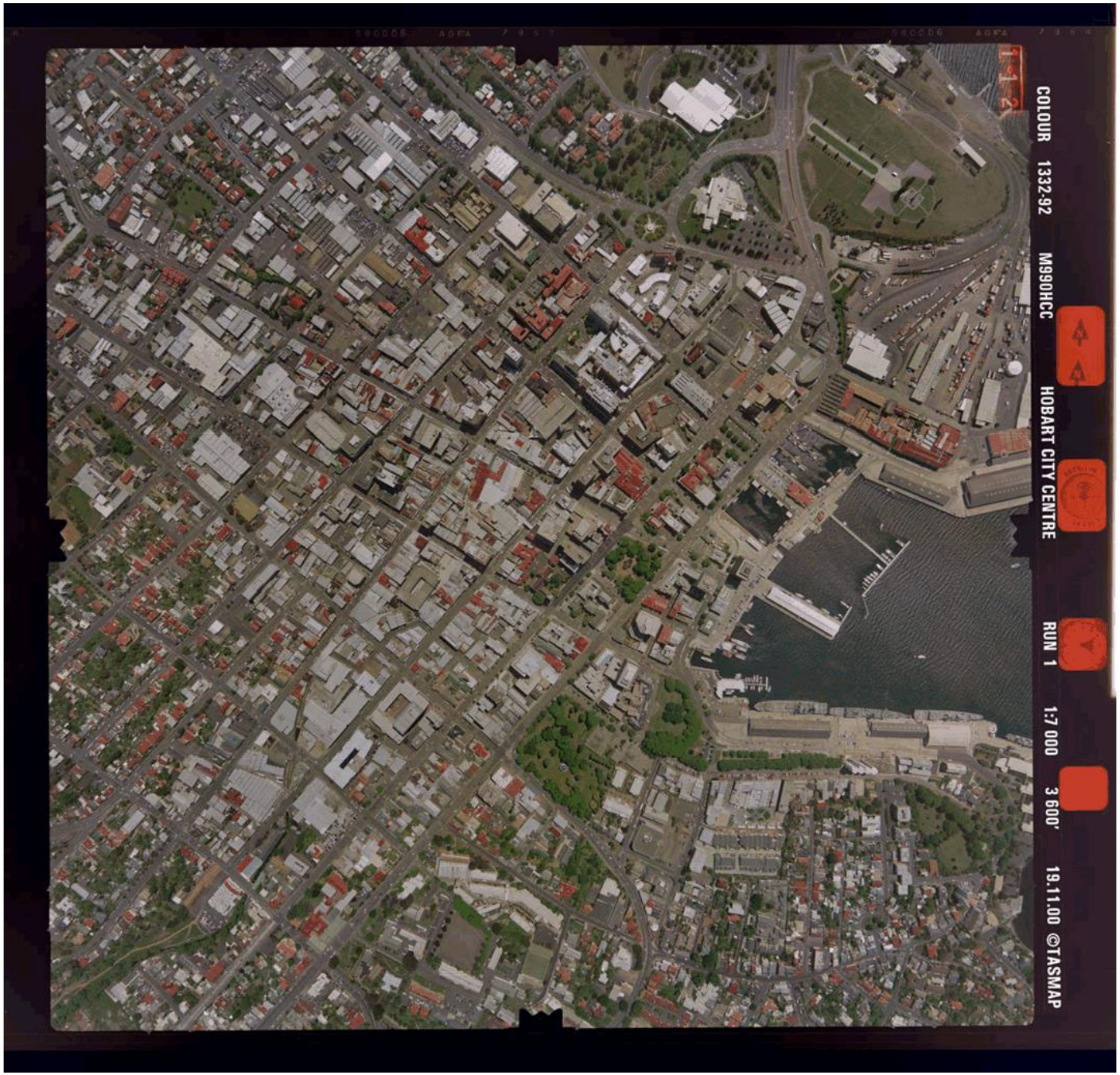
7.326 - 123
7BART RUN 9 12.2.57 LENS 9867 15.2.50 M/M 7.036

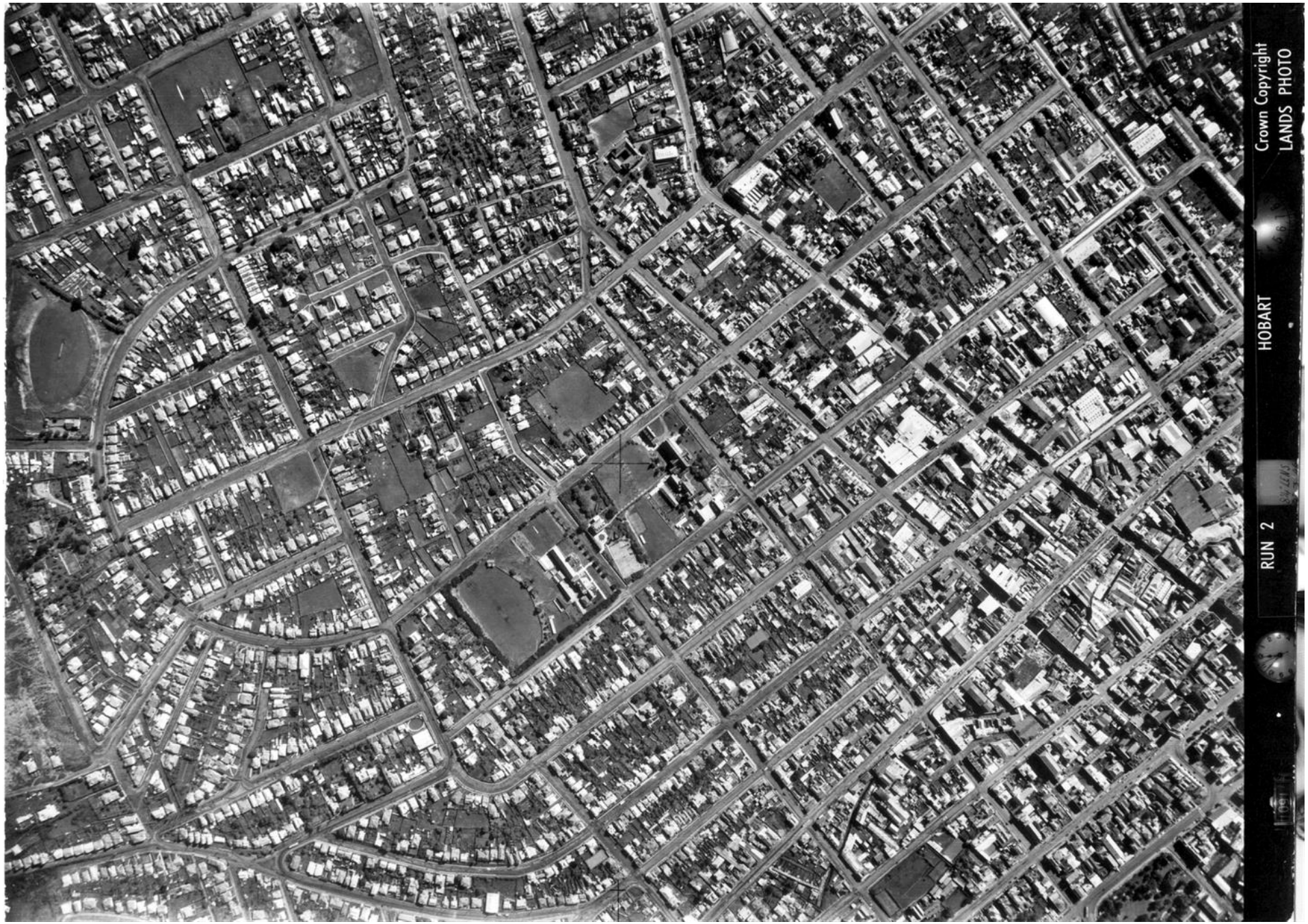
ATTACHMENT C

801 -053
0-0 3


1118- 26
M55
HOBART CITY CENTRE
RUN 2
1:4 600
2 300'
2.12.88
©TASMAP
8 0-0

031462 AGFA 1 8 5 1
1239-74
A102
HOBART CBD. OPM.
RUN 1
1:14 000
14 000'
16.2.96
© TASMAP


COLOUR 1332-92
M990HCC
HOBART CITY CENTRE
RUN 1
1:7 000
3 600'
19.11.00 ©TASMAP


Crown Copyright
LANDS PHOTO
HOBART
RUN 2

Appendix H

Historic reports

Screening Level Environmental Site Assessment of 79-83 Melville Street, Hobart

2 December 1994

Prepared for James Douglas & Associates
on behalf of Tasmania State Property Services

Richard Stoklosa Engineering Practice Pty Ltd
14 Sunvale Avenue
Sandy Bay, Tasmania 7005
(002) 25 4933

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1. Executive Summary 1
2. Site Description 4
3. Site History 7
4. Proposed Land Use 9
5. Site Reconnaissance 10
6. Geological Conditions 12
7. Conclusions and Recommendations 14
8. Limitations of Investigation 15
9. References 16

Appendix A ..... Environmental Site Assessment Checklist
Appendix B ..... Geologic Description of Excavations and Bore Holes

1. Executive Summary

Purpose and Scope

This screening level environmental site assessment was undertaken by Richard Stoklosa, of:

Richard Stoklosa Engineering Practice Pty Ltd
14 Sunvale Avenue
Sandy Bay, Tasmania 7005

The work was performed at the request of James Douglas and Associates, on behalf of Tasmania State Property Services, for the property known as:

Crisp and Gunn Buildings
79-83 Melville Street
Hobart, Tasmania

This screening level environmental site assessment involves a review of the site history and land use including examination of aerial photographs and historical review documents), review of available :ate and local records, and site reconnaissance. The purpose of the assessment is to investigate the ɔssibility of site contamination from previous land use.

ɔservations

site contains brick buildings currently used as offices, and large store areas constructed of brick timber, with concrete floors. At the rear of the buildings are outdoor car parking areas on bitumen graded gravel and soils. Some vehicles also park inside the store area immediately off Melville :. The buildings are under consideration for their conservation value, and it is contemplated that operty will be put up for sale in the near term by the State of Tasmania.

and later Crisp and Gunn) owned and operated the premises as a timber milling, joinery, and re merchandising business since 1886. After a fire destroyed the buildings in 1922, the current ;s were constructed and the timber business continued until about 1965. The State of a acquired the property in 1967, and it has since been used for offices and stores. The current ıre the State Emergency Service and the State Fire Commission. Other state government nts also use portions of the stores area for equipment and materials.

ll quantities of hazardous materials are stored and handled at the site. This includes a 1,000 ·ol underground storage tank and bowser on the premises, licensed to Shell Company of :d in 1973 (under the Inflammable Liquids Act 1929) by the State Department of Mines Goods Directorate). The license indicates that the petrol tank and bowser was to be the State Supply and Tender Department. Notes attached to the license further indicate ɔl tank was previously used by Crisp and Gunn and abandoned prior to the license date :a 1965 when operations ceased). It is not known how old the tank is, or what other have been stored in it.

:he underground petrol tank, there is a small outdoor flammable liquid store (enclosed ain link fence) reported to contain 44 gallon drums of chain saw fuel and kerosene. It 'at other materials may have been stored at this site, but it is unlikely that the site was ure from large quantities of other hazardous materials, given the present tenancy and milling and hardware merchandising activities. Small quantities of chemicals etc.) were probably part of the historical merchandising activities.

Insulation was noted above ceiling panels in some of the upstairs office spaces at 79 Melville Street. The type of insulation used at the property is not known.

Some large portions of the store behind the office building at 79 Melville Street was inaccessible during the site reconnaissance visits. Large ground-level access covers were observed in at least two locations, but could not be investigated.

Conclusions and Recommendations

A summary of potential sources of contamination is shown on the following page for reference. No testing of soils or building materials (insulation) for potential contamination and/or identification of hazardous materials has been conducted.

Access to fenced and locked portions of the store area is also necessary to fully investigate the nature and condition of the facility, particularly the ground-level access covers that were observed.

Due to the presence of the underground petrol storage tank and other materials at the site, a sampling programme is indicated to adequately assess the environmental condition of the site.

...aracterization Data

...ons, based upon review of available records, site reconnaissance and testing.

Existence	Test Data Available			Evidence of Oil/Haz Mat'l				Comments
Information	Yes	No	Test Type(F)/Results	REC	OBS	TEST	NONE	
	☐	■		☐	☐	☐	■	
e incidental e of oils/fuel	☐	■		☐	■	☐	☐	Oil film on standing water in parking area drain
	☐	■		☐	☐	☐	■	
	☐	■		☐	☐	☐	■	
	☐	■		☐	☐	☐	■	
	☐	■		☐	☐	☐	■	
gallon petrol tank ed) and bowser	☐	■		☐	☐	☐	■	Soil test required to confirm subsurface conditions
on-OHM AST or pressure testing	☐	■		☐	■	☐	■	
lon drums of ne, chainsaw fuel	☐	■		☐	☐	☐	■	Drums on concrete floor, generator fuel in curbed area
	☐	■		☐	☐	☐	■	

sites
(D) Includes domestic or industrial sewage leach fields/pits
(E) Note: Waste oil is considered a hazardous material
(F) Tested for hydrocarbons, BETX, lead, zinc, cadmium, and mercury

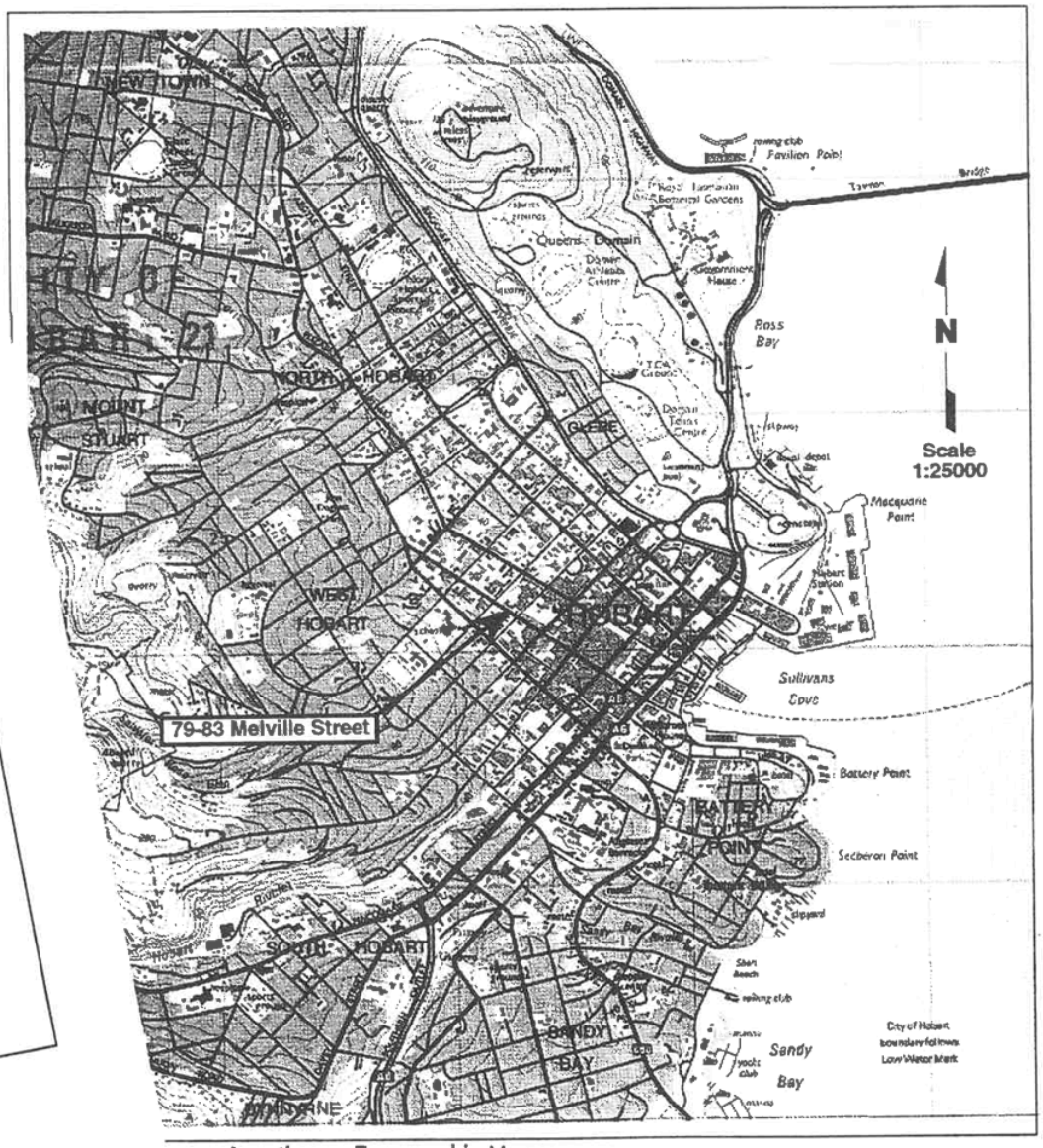
ABBREVIATIONS:
REC – Records
OBS – Observations
OHM – Oil/Haz. Materials

nd the State Fire Comm offices. Concrete access covers observed on floor, but no information on use available to date.
ken to investigate the possibility of contamination (re: the area of the underground storage tank on the premises).
d excavations conducted on the site in 1979. No remaining evidence of site work discovered during reconnaissance.

RICHARD STOKLOSA ENGINEERING PRACTICE PTY LTD

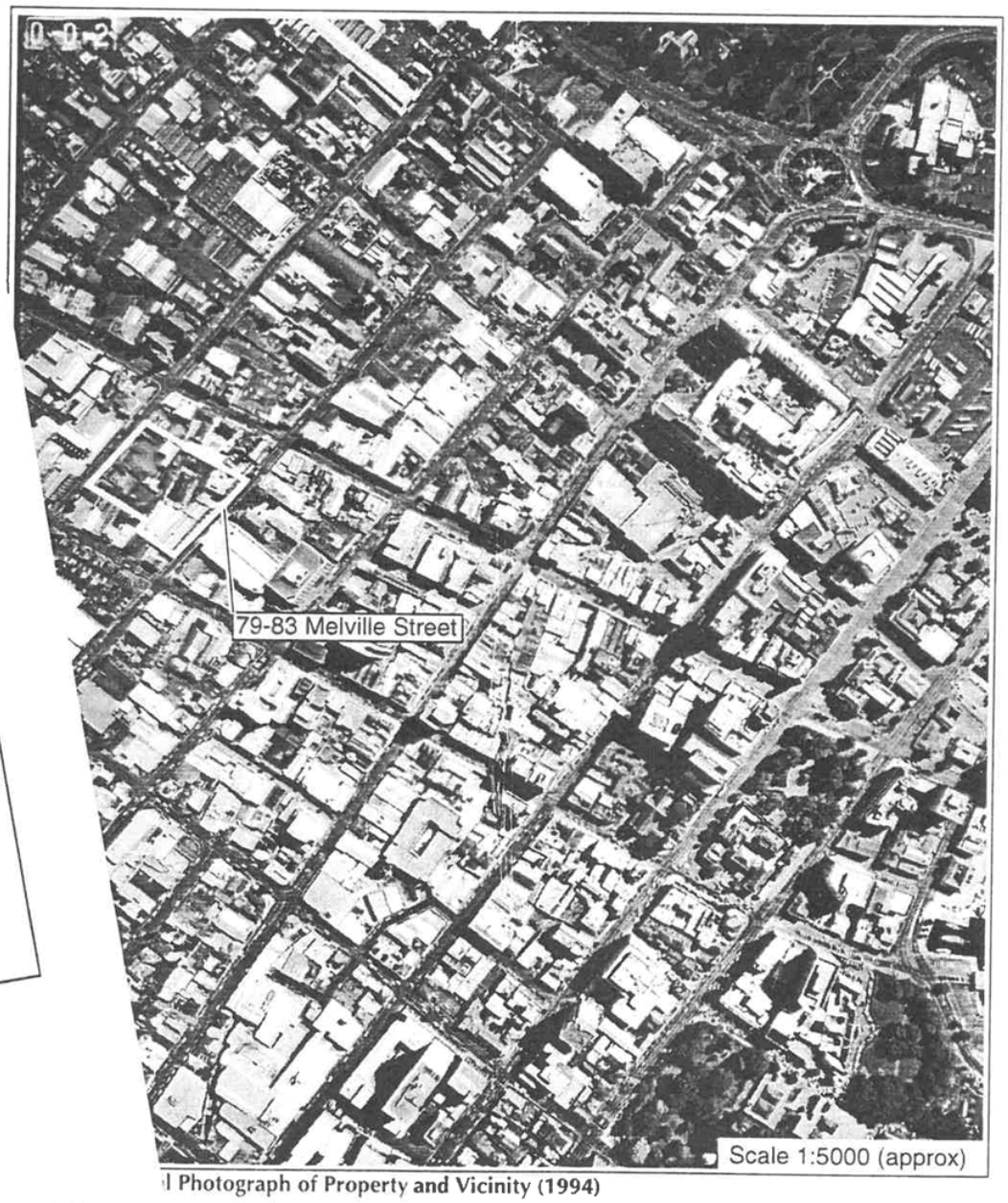
2. Site Description

The property is located at 79-83 Melville Street, Hobart, Tasmania. The location of the property on a regional scale is shown on the topographic map reproduced below.



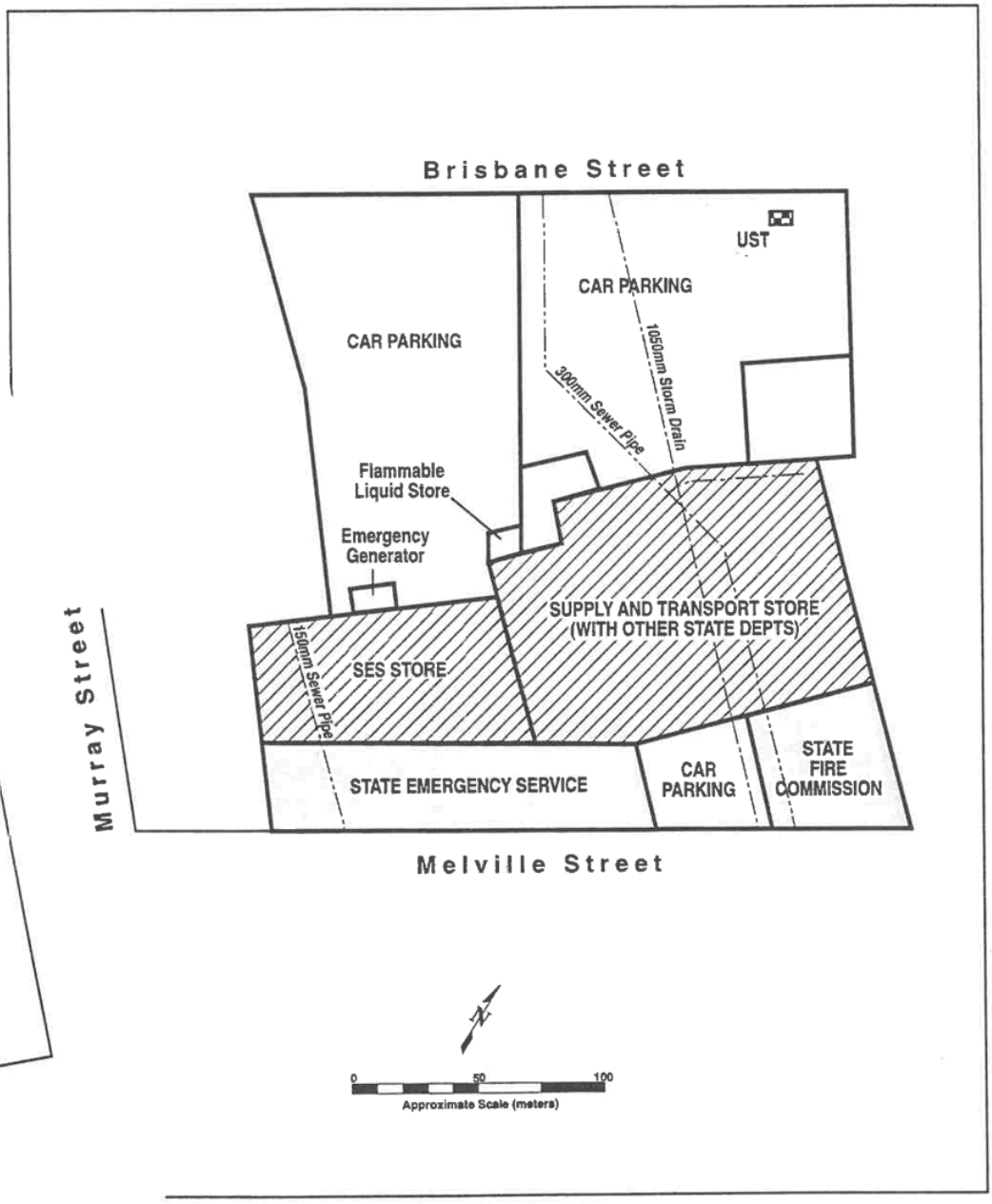
ɔperty Location on Topographic Map

The property is located in an area of commercial and light industrial development in the Hobart "central business district" area. The site contains brick buildings currently used as offices, and large store areas constructed of brick and timber, with concrete floors. At the rear of the buildings are outdoor car parking areas on bitumen and graded gravel and soils. Some vehicles also park inside the store area immediately off Melville Street. Figure 2-2 is an aerial photograph of the site, showing existing development.



l Photograph of Property and Vicinity (1994)

The current use of the property is for state government offices and stores. The current office tenants are the State Emergency Service and the State Fire Commission. Other government departments use portions of the large store areas. A diagram of the site is shown in Figure 2-3 for reference.



Diagram

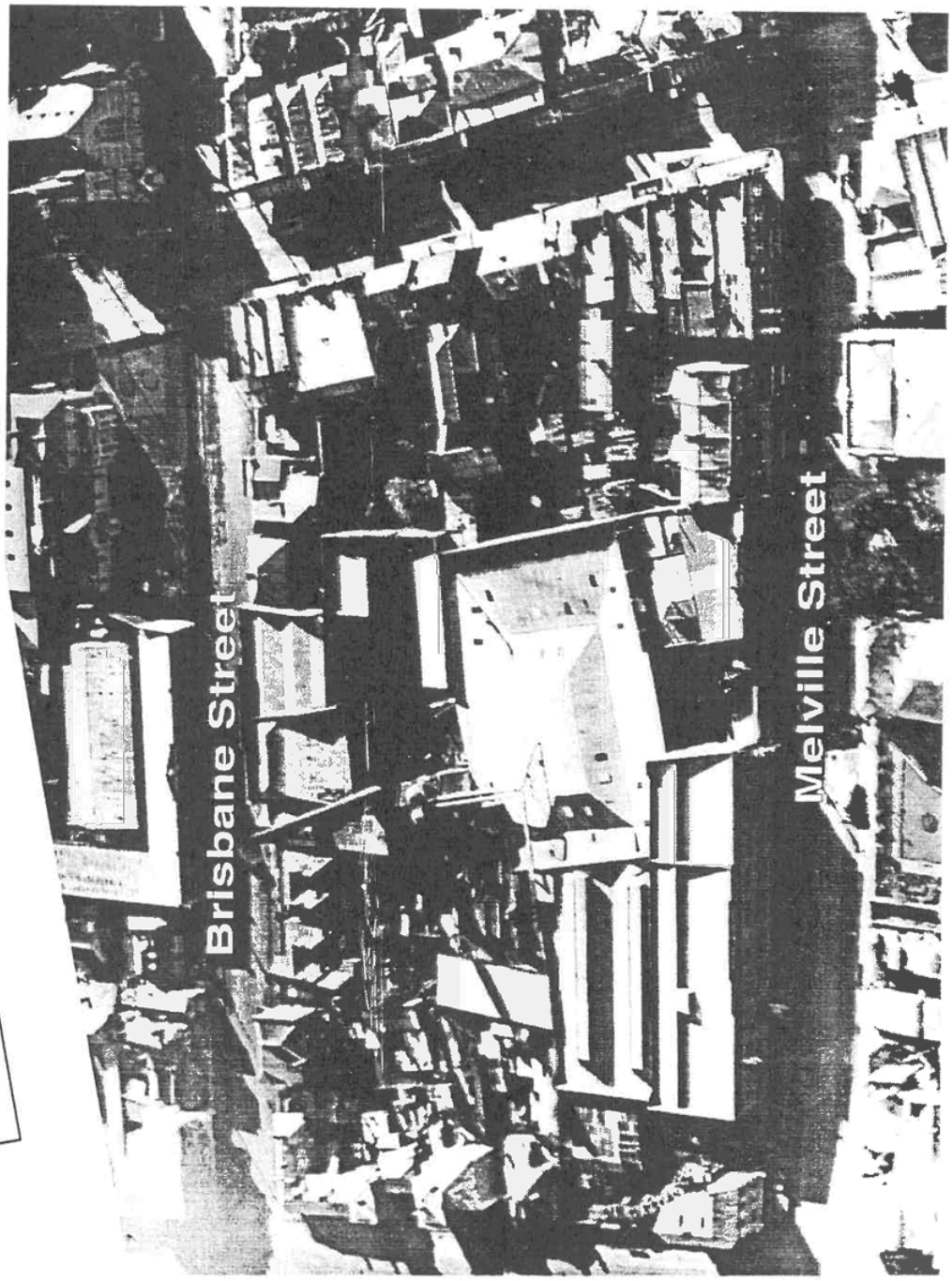
3. Site History

The buildings are under consideration for their conservation value. A thorough description of site history is available separately.[1]

Crisp (and later Crisp and Gunn) owned and operated the premises as a timber milling, joinery, and hardware merchandising business since 1886. After a fire destroyed the buildings in 1922, the current buildings were constructed and the timber business continued until about 1965. The State of Tasmania acquired the property in 1967, and it has since been used for offices and stores. The current tenants are the State Emergency Service and the State Fire Commission. Other state government departments also use portions of the stores area for equipment and materials.

A 1913 oblique photograph of the property is shown in Figure 3-1. The timber milling operation is thought to have been conducted in the buildings nearest Brisbane Street. The large store area was for the milling inventory. The structure at what is now 79 Melville Street was probably the business office, and the larger structure at 83 Melville Street was the joinery shop and hardware merchandising business. A tall smoke stack is evident in the photograph, possibly for burning wood chips and shavings collected in the ductwork seen on the buildings in the photograph.

'incent, Cultural Resource Management, Conservation Assessment, 83 Melville Street (including 79
4.



otograph of the Former Crisp and Gunn Business Facilities

4. Proposed Land Use

The property is to be marketed for sale by the state government in the near term. Some of the existing structures are currently being assessed for their conservation value.

The site is currently a commercial and light industrial property, and it is unknown whether this type of land use will continue in the future.

5. Site Reconnaissance

Site reconnaissance included examination of records and field verification of the location of stormwater services. The property contains buildings and large store areas with concrete floors. At the rear of the property are car parking areas with bitumen and gravel/soil surfaces (refer to site diagram in Figure 2-3).

A search of post-1977 records by the Hobart City Council did not reveal any council orders, licenses, or other information of significance to the environmental condition of the property.[2]

Site reconnaissance was performed on 4 November 1994 and 1 December 1994. Observations are recorded using an Environmental Site Assessment Checklist which is included in Appendix A for reference.

Some small quantities of hazardous materials are stored and handled at the site. This includes a 1,000 gallon petrol underground storage tank and bowser on the premises, licensed to Shell Company of Australia Ltd in 1973 (under the Inflammable Liquids Act 1929) by the State Department of Mines (Dangerous Goods Directorate). The license indicates that the petrol tank and bowser was to be operated by the State Supply and Tender Department. Notes attached to the license further indicate that the petrol tank was previously used by Crisp and Gunn and abandoned prior to the license date probably circa 1965 when operations ceased). It is not known how old the tank is, or what other naterials may have been stored in it.

addition to the underground petrol tank, there is a small outdoor flammable liquid store (enclosed a locked, chain link fence) reported to contain 44 gallon drums of chain saw fuel and kerosene. It ocated at the rear of the State Emergency Service (SES) building and store at 83 Melville Street.

not known what other materials may have been stored at this site, but it is unlikely that the site subject to exposure from large quantities of other hazardous materials, given the present tenancy previous timber milling and hardware merchandising activities. Small quantities of chemicals ents, paints, etc.) were probably part of the historical merchandising activities.

ion was noted above ceiling panels in some of the upstairs office spaces at 79 Melville Street. e of insulation used at the property is not known.

was available to the space beneath the building at 79 Melville Street. Examination of this area reveal evidence of past storage of materials, and the soils appeared to be dry. There was no of the soils, or odors indicative of potential contamination.

e portions of the store behind the office building at 79 Melville Street were inaccessible site reconnaissance visits. Large ground-level access covers were observed in at least two out could not be investigated.

dence of a large stormwater conduit beneath the site. A large diameter pipe (in excess of s shown on Hobart City Council drainage plans, which appears to be the same size pipe countered in one of the boreholes drilled in 1979 (refer to Section 6 and Appendix A, mber 4). It has been speculated that the large stormwater pipe drains the area from ege to the northwest of the property.

bart City Council, Records Section, personal communication.

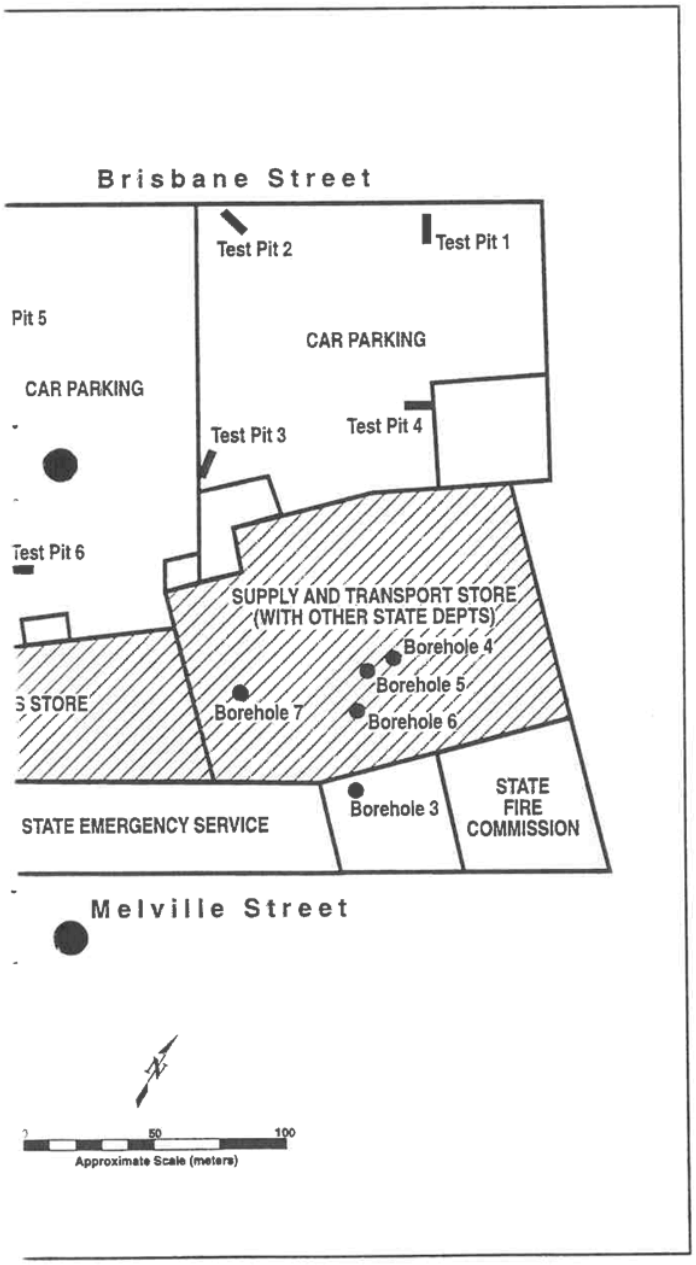
There is a cylindrical brick access structure rising above the embankment at the rear of 79 Melville Street, which is probably associated with the sewer piping at the site. Water was heard flowing through the pipe during the site visits.

One of the floor drains contained an oily film on standing water, observed through the steel cover grate. Discussion with the Hobart City Council also reveals records of a triple interceptor trap in the store area, designed to intercept oil and sediment, which is normally associated with auto mechanic work or car washing activity.[3]

A small shed at the rear of the SES Store contains a skid-mounted 45 kVA (approximate) diesel powered generator. It is on standby for emergency power generation for SES operations. A small diesel tank is attached to the bottom of the skid, and the unit is resting on a curbed concrete bund. No evidence of leakage was noted.

One above ground storage tank is situated in the store area behind 79 Melville Street. It is reportedly used only for pressure testing, using water,[4] and has a pressure gauge and drain fitted for this purpose.

Hobart City Council, personal communication.
osz, State Fire Commission, personal communication.



cavations and Boreholes (1979)

6. Geological Conditions

Mineral Resources, regarding geologic
cription was available on the property,
dolerite and clayey soils.

erformed in 1979 by the Department of
s of the investigation are included in
follows.[7]

indicates that the block bounded by
by Triassic age sediments. The more
ter Hobart Area (Provisional, Map 1,
to the east of the north-south diagonal

1979, on behalf of the Department of
orth-south diagonal noted above. These
oles (refer to locations in Figure 6-1 for
been levelled for car parking. The test
lluvial materials occur above dolerite.
which sub-vertical to vertical joints
situ dolerite occurs at between 0.3 and

Streets were made using auger screws.
ents occur above extremely weathered
to stiff, high plasticity clay, sometimes
l as moist, hard, high plasticity clay. A
trance to the (then) Supply and Tender
nts above extremely weathered in-situ

area. With the exception of one hole
r pipe, these holes were completed as
meters of fill materials over moderately

ite has been filled over to provide level

a depth of about ten meters.

Works, Materials and Research Laboratory
es.

Appendix B

Geologic Description of Excavations and Boreholes

Environmental Site Assessment Checklist

General Circumstances

Project: SITE RECONNAISSANCE OF 79-83 MELVILLE STREET, HOBART

Client: JAMES DOUGLAS & ASSOCIATES Phone: 31 4020 Fax: 31 4020

Owner: Tasmanian Property Services Group Phone: Ross Kile 33 3088 Fax: 33 6655

Site Contact: Arranged by James Douglas Phone: 31 4020 Fax: 31 4020

Site Name: "Crisp & Gunn Buildings" -

Current Site Use: 79 Melville St: State Fire Commission ; 83 Melville St: SES (State Emergency Service) Land Area:

Location / Address: 79-83 Melville St. Hobart, TASMANIA

Site Access Condition: Off Street Access to Buildings, some areas of warehouse fenced & locked - no access

Type of Facility (circle): Industrial Commercial Residential (Other) State Agency Offices / Stores

Data Collection Prior to Site Investigations

Topographic Map: TASMAP - Hobart Sheet Scale: 1:25 000 Date: 1988

Site Map: Included with Geologic Report of Boreholes and Excavations (197 Scale: 1:500 approx? Date: 1979

Prepared By: Dept. Main Roads - Mat'l & Research Dv.

Geologic Map: (Provisional - Map 1) TASMAP Engineering Geology Map - Hobart Scale: 1:25000 Date: 1990

Soil Map: " High Plasticity Clays, Gravel, Cobbles Scale: (from subsurface exploration - see below) Date:

Aerial Photo: TASMAP 1218-204, M990, HOBART CITY Scale: 1:5000 Date: 12.2.94

Well Data: (NOT AVAILABLE - NONE OBSERVED) Driller / Logger:

Details Available? (circle): Yes No Depth: Date:

Type of Lithology (circle): Bedrock Weathered Unconsolidated Mineralised

Ground Water Occurrence and Depth:

Subsurface Exploration: 6 Test Pit Excavations & 7 Boreholes Performed By: Dept. Main Roads - Mat'l & Research Dv.

Details Available? (circle): (Yes) No Depth: Boreholes: 2.5 to 10 meters; Excavations up to 1.5 meters Date: 1979 (Nov)

Type of Lithology (circle): Bedrock (Weathered) Unconsolidated Mineralised
Decomposed Dolerite

Ground Water Occurrence and Depth: estimated to be at least 6 meters below surface. (opinion of Dept. Mines)
(not encountered in Boreholes up to 10 meters)

© 1994, Richard Stoklosa Engineering Practice Pty Ltd

Adjacent Properties

Property Name: Commercial Properties Type of Business: Print Shop, Retail Shops

Property Name: Residential Use Type of Business: (evidence of possible incidental use)

Property Name: City Properties Type of Business: Parking Garage (Melville St.)

Property Name: Type of Business:

Use of Contiguous Properties

Wetlands: None, although some evidence points to piping of the Warwick Rivulet beneath the site.

Landfill / Waste Treatment Facility: None.

Storage Facilities: Large warehouse stores on premises, ~~storage assoc. with smaller~~

Petrol Stations: Shell Bowser on premises (petrol), with 1,000 gallon licensed UST

Agriculture / Grazing Lands: None.

Commercial: ~~Commercially-intensive land use - retail shops/services~~ None.

Industrial: Light industrial – welding (gas), equipment maintenance workshops

Other?: Professional offices in brick buildings on premises; car parking/washing

Use of Surrounding Properties

Wetlands: None.

Landfill / Waste Treatment Facility: None.

Storage Facilities: Storage associated with smaller businesses in area (print shop next door).

Petrol Stations: None, possible fuel/oil at auto mechanic shop (incidental quant.?).

Agriculture / Grazing Lands: None.

Commercial: Commercially-intensive land use in surrounding area.

Industrial: Light industrial (auto mechanics, etc.)

Other?: Parking garage (multi-storey) on opposite side of Melville St.

Environmental Concerns due to Adjacent Properties

Print shop and auto mechanic businesses adjacent to subject property may involve storage of hazardous materials — however, no apparent discharges are evident and environmental concern to subject property is probably insignificant.

© 1994, Richard Stoklosa Engineering Practice Pty Ltd

7. Conclusions and Recommendations

Testing of soils and possibly some of the building materials (insulation) for potential contamination and/or identification of hazardous materials should be conducted to adequately investigate the possibility of site contamination from previous land use.

Access to fenced and locked portions of the store area is also necessary to fully investigate the nature and condition of the facility. Of interest are the ground-level access covers that were observed, and the reported triple interceptor oil and sediment trap. A more thorough examination of council drainage plans and other site drawings, with field confirmation, is necessary in the inaccessible areas of the property.

Due to the presence of the underground petrol storage tank and other materials at the site, a sampling programme is indicated to adequately assess the environmental condition of the site.

Upon completion of these further investigations, recommendations can be made on the short term and long term environmental management of the property.

8. Limitations of Investigation

It is presumed that the information provided by various sources, both published and by way of personal communication, is substantially accurate and has disclosed all relevant information.

Certain limitations on this assessment should be recognized to keep the conclusions and recommendations in perspective:

- No records were available to describe historical land use at the property (prior to 1977) from the Hobart City Council. No records are available to describe the storage, handling, or discharge of chemicals or hazardous materials that may have been used on the premises.
- Municipal sewer and storm water piping traverse the property. These pipelines were not examined in the field, and no opinion is rendered on their condition. However, there is no apparent evidence of sewer or storm water problems on the soils above these pipelines.

Environmental conditions are dynamic, and the present assessment is only a "snap shot" of the condition of the property at the time of the site investigation.

9. References

South Australian Health Commission, ***Identification and Assessment of Contaminated Land***, 1994.

TASMAP, Aerial Photograph, 1218-204, M990, Hobart City, 1:5000, 2560', 12 February 1994.

TASMAP, Engineering Geology Map – Greater Hobart Area, Map1, Provisional, 1990.

TASMAP, Topographic Map – Hobart Sheet, 1988.

Vincent, Robert, Cultural Resource Management, ***Conservation Assessment, 83 Melville Street (including 79 Melville Street)***, 1994.

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Appendix A

Environmental Site Assessment Checklist

Appendix 4

Land Titles

Department of Main Roads (Tas)
Materials and Research Division

Engineering log – excavation

pit no. 1
sheet 1 of 1

file: 04.053

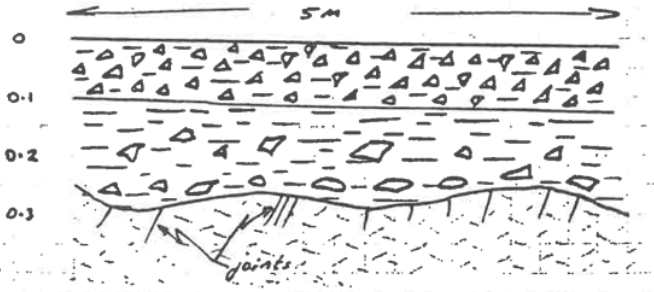
project: POLICE HEADQUARTERS, HOBART
pit location: NE. CORNER MET. ARCHITECTS CAR PARK

pit commenced: 17-9-79
pit completed: 17-9-79
supervised by: W. DOE
log checked by:

equipment type and model: FORD 420
excavation dimensions: 5 m long, 0.5 m wide

A.L. surface: −2.693 m
datum: BRISBANE ST operator: SMITH

method	penetration 1 2 3	support	water	notes samples, tests, etc.	depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency, rel. density	hand penetrometer 100 200 300 400	structure and additional observations
BH					0.3			GRAVEL, fine grained, decomposed dolerite	M	L		
									M	L		
									M	MD		
								CLAY and ROCK FILL				
					0.5			DOLERITE, coarse grained, contains clay pockets				
					1.0			DOLERITE, decomposed, in situ				



N.B. DATUM is SW CORNER OF WATSONS WIRELESS BRISBANE ST FOOTPATH.

key

method
- natural exposure
- E existing excavation
- BH backhoe bucket
- B bulldozer blade
- R ripper

support
- T timbering

penetration
- 1 2 3 no resistance ranging to refusal

water
- 10 Oct, 73 water level on date shown
- water inflow
- water outflow

notes
- samples and tests
- U50 – undisturbed sample 50 mm diameter
- D – disturbed sample
- N – standard penetration test: figure = result
- N* – SPT + sample
- Nc – cone penetrometer

classification symbols and soil description
based on unified classification system

moisture
- D – dry
- M – moist
- W – wet

consistency/relative density
- VS – very soft
- S – soft
- F – firm
- St – stiff
- VSt – very stiff
- H – hard
- Fb – friable
- VL – very loose
- L – loose
- MD – moderately dense
- D – dense
- VD – very dense

Department of Main Roads (Tas)
Materials and Research Division

Engineering log — excavation

pit no. 5
sheet 1 of 1

file: 04·053

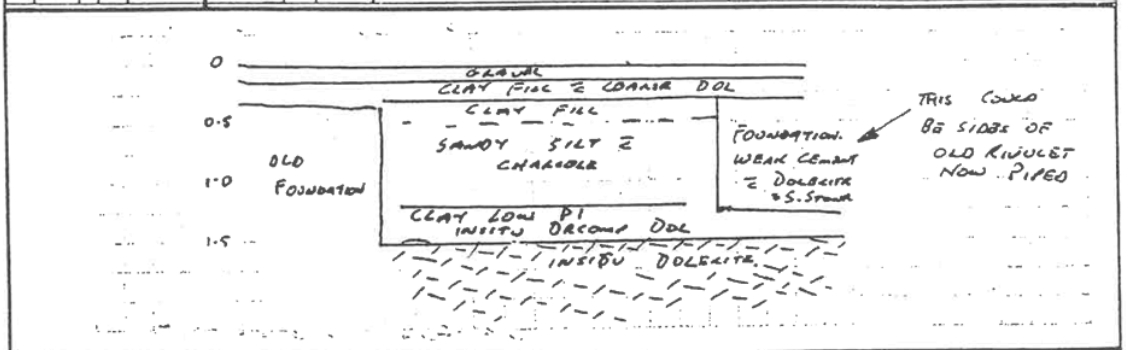
project: POLICE HEADQUARTERS HOBART
pit location: S.W. CORNER MET. ARCH. CAR PARK

pit commenced: 17-9-79
pit completed: 17-9-79
supervised by: W DOE
log checked by:

equipment type and model: FORD 420
excavation dimensions: 2·5 m long, 0·5 m wide

R.L. surface: -4·025 m
datum: BRISBANE ST operator: SMITH

method	penetration 123	support	water	notes samples, tests, etc.	R.L. depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency, rel. density	hand penetrometer 100 200 300 400 kPa	structure and additional observations
BH							GP	GRAVEL FINE BROWN DOLERITE	M	L		
							CL	CLAY FILL + COARSE DOLERITE	M	L		
					0·5		CH	CLAY FILL HIGH PLASTICITY	M	L		
					1		SM	SANDY SILT FINE TOPSOIL WITH CHARCOAL PARTICLES	M	L		
							CL	CLAY LOW PLASTICITY DECOMP DOLERITE	M	S-F$_B$		
					1·5			INSITU DECOMP DOL				



key

method
- ↓ natural exposure
- E existing excavation
- BH backhoe bucket
- B bulldozer blade
- R ripper

support
- T timbering

penetration
- 1 2 3 — no resistance ranging to refusal

water
- 10 Oct, 73 water level on date shown
- water inflow
- water outflow

notes
- samples and tests
- U50 — undisturbed sample 50 mm diameter
- D — disturbed sample
- N — standard penetration test: figure = result
- N* — SPT + sample
- Nc — cone penetrometer

classification symbols and soil description
based on unified classification system

moisture
- D — dry
- M — moist
- W — wet

consistency/relative density
- VS — very soft
- S — soft
- F — firm
- St — stiff
- VSt — very stiff
- H — hard
- Fb — friable
- VL — very loose
- L — loose
- MD — moderately dense
- D — dense
- VD — very dense

Department of Main Roads, Tas
Materials and Research Division

..ngineering log — excavation

pit no. 5
sheet 1 of 1

file: 04·053

project: POLICE HEADQUARTERS HOBART
pit location: DLI. CAR PARK ADJACENT DUNLOP WALL

pit commenced: 17-9-79
pit completed: 17-9-79
supervised by: W DOE
log checked by:

equipment type and model: FORD 420
excavation dimensions: 2 m long, 0·5 m wide

R.L. surface: -0·245 m
datum: BRISBANE operator: SMITH

method	penetration 1 2 3	support	water	notes samples, tests, etc.	R.L. depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency, rel. density	hand penetrometer 100 kPa 200 300 400	structure and additional observations
BH							GPGC	RUBBLE FILL + CLAY		D		
					0·5			OLD BUILDING FOUNDATION BRICKS + CEMENT		MD		
					1·3			INSITU DOLERITE		VD		VERTICAL JOINTING 25mm JOINT SPACING
								HOLE DISCONTINUED				

key

method
- natural exposure
- E existing excavation
- BH backhoe bucket
- B bulldozer blade
- R ripper

support
- T timbering

penetration
- 1 2 3 no resistance ranging to refusal

water
- 10 Oct, 73 water level on date shown
- water inflow
- water outflow

notes — samples and tests
- U50 — undisturbed sample 50 mm diameter
- D — disturbed sample
- N — standard penetration test:figure = result
- N* — SPT + sample
- Nc — cone penetrometer

classification symbols and soil description
based on unified classification system

moisture
- D — dry
- M — moist
- W — wet

consistency/relative density
- VS — very soft
- S — soft
- F — firm
- St — stiff
- VSt — very stiff
- H — hard
- Fb — friable
- VL — very loose
- L — loose
- MD — moderately dense
- D — dense
- VD — very dense

Department of Main Roads (Tas)
Materials and Research Division

engineering log – borehole

borehole no: 1
sheet 1 of 2

file:

project: POLICE HEADQUARTERS, HOBART
borehole location: refer site plan

hole commenced: 7-11-79
hole completed: 8-11-79
supervised by: N. D. JOHNSON
log checked by: B. D. WELDON

drill model and mounting: GEMCO (trailer)
hole diameter: 110 mm
slope: Vert deg.
bearing: – deg.
R.L. surface: m
datum:
operator: J. Hammersley

method	penetration 1 2 3	support	water	notes samples, tests, etc.	R.L. depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency, rel. density	hand penetrometer kPa 100 200 300 400	structure and additional observations
							GP	GRAVEL, decomposed dolerite				FILL OR TERTIARY SEDIMENTS
							CH	CLAY + BOULDERS (FILL)				
					1.0							
				N* = 4 (2, 2, 2)			CH	CLAY; high plasticity; moisture content (M.C.) greater than plastic limit (P.L); brown; minor (<1%) fine grained sand size particles.	M	F		
				N* = 4 (1, 2, 2)	2.0		CH		M	F		
				N* = 6 (7, 3, 3)	3.0		GM	SILT + GRAVEL, coarse grained sandstone (slightly indurated) gravel in yellow silt matrix, sub angular gravel fragments	M	H to Fb		
				9/11/79								
				N* = 36 (9, 16, 20)	4.0		CH	CLAY; high-medium plasticity M.C. < P.L.; speckled and mottled colouring of white, grey, red, brown showing remnant dolerite fabric. Some earthy or powdery lenses and seams of white calcite. (extremely weathered dolerite). Some fine to coarse sand sized grains of fresh to slightly weathered mineral grains.				EXTREMELY WEATHERED IN SITU DOLERITE
				N* = 37 (11, 12, 25)	5.0		CH					
				N* = 40 (12, 16, 24)	6.0		CH					
				N* = 54 (16, 24, 30)	7.0		CH					
					8.0							

key

method
S auger screwing*
AD auger drilling*
R roller/tricone
W washbore
CT cable tool

* bit shown by suffix:
B – blank bit
V – "V" bit
T – TC bit
e.g. ADT

support
C casing
M mud

penetration
1 2 3
no resistance ranging to refusal

water
10 Oct, 73 water level on date shown
water inflow
water outflow

notes
– samples and tests
U50 – undisturbed sample 50 mm diameter
D – disturbed sample
N – standard penetration test: figure = result
N* – SPT + sample
Nc – cone penetrometer

classification symbols and soil description
based on unified classification system

moisture
D – dry
M – moist
W – wet

consistency/relative density
VS – very soft
S – soft
F – firm
St – stiff
VSt – very stiff
H – hard
Fb – friable
VL – very loose
L – loose
MD – moderately dense
D – dense
VD – very dense

Department of Main Roads (Tas)
Materials and Research Division

Engineering log – borehole

borehole no. 2
sheet 1 of 1

file:

project: POLICE HEADQUARTERS, HOBART
borehole location: refer site plan

hole commenced: 8-11-79
hole completed: 8-11-79
supervised by: N.D. JOHNSON
log checked by: B.D. WELDON

drill model and mounting: GEMCO (trailer)
hole diameter: 110 mm
slope: Vert deg.
bearing: — deg.
R.L. surface: m
datum:
operator: T. Hammersley

method	penetration 1 2 3	support	water	notes samples, tests, etc.	R.L. depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency, rel. density	hand penetrometer kPa 100 200 300 400	structure and additional observations
A.S.								GRAVEL, decomposed dolerite				
				$N^d = 4$ (1,2,2)	1.0		CH	CLAY; high plasticity, moisture content (M.C.) greater than plastic limit (P.L.); brown	M	F		FILL OR TERTIARY SEDIMENTS
				$N^d = 8$ (2,2,6)	2.0		CH		M	St		
				9-11-79	3.0		CH	CLAY, high plasticity; M.C. < P.L., speckled and mottled colouring of red-brown - white - grey showing remnant dolerite fabric. Some white powdery calcite leases. Minor (<1%) fine to coarse sand sized mineral grains	M	H		EXTREMELY WEATHERED IN SITU DOLERITE
				$N^d = 31$ (7,13,18)	4.0							
				$N^d = 45$ (11,21,24)	5.0		CH		M	H		
					6.0			END OF BOREHOLE at 5.95 m depth				

key

method
- AS auger screwing*
- AD auger drilling*
- R roller/tricone
- W washbore
- CT cable tool

* bit shown by suffix:
- B — blank bit
- V — "V" bit
- T — TC bit

e.g. ADT

support
- C casing
- M mud

penetration
1 2 3 — no resistance ranging to refusal

water
- 10 Oct, 73 water level on date shown
- water inflow
- water outflow

notes
- U50 — undisturbed sample 50 mm diameter
- D — disturbed sample
- N — standard penetration test: figure = result
- N* — SPT + sample
- Nc — cone penetrometer

classification symbols and soil description based on unified classification system

moisture
- D — dry
- M — moist
- W — wet

consistency/relative density
- VS — very soft
- S — soft
- F — firm
- St — stiff
- VSt — very stiff
- H — hard
- Fb — friable
- VL — very loose
- L — loose
- MD — moderately dense
- D — dense
- VD — very dense

Department of Main Roads (Tas)
Materials and Research Division

engineering log – borehole

borehole no. 5
sheet 1 of 2

file:

project: POLICE HEADQUARTERS, HOBART
borehole location: refer site plan

hole commenced: 14-11-79
hole completed: 14-11-79
supervised by: N. D. JOHNSON
log checked by: B.D. WELDON

drill model and mounting: GEMCO (trailer)
hole diameter: 110 mm
slope: Vert deg.
bearing: deg.
R.L. surface: m
datum:
operator: J. Hammersley

method	penetration 1 2 3	support	water	notes samples, tests, etc.	R.L. depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency, rel. density	hand penetrometer kPa 100 200 300 400	structure and additional observations
A.S.								CONCRETE				
			15-11-79	N* = 2 (1,1,1)	1.0		CH	CLAY, high plasticity, moisture content greater than plastic limit; black to brown colour, contains red-brick fragments (coarse gravel size).	M	F		FILL
				N* > 60	2.0				M	F		7 blows for 150 mm penetration, 18 blows for no further penetration
				N* > 60				Continued on cored borehole sheet				20 blows for zero penetration

key

method
AS auger screwing*
AD auger drilling*
R roller/tricone
W washbore
CT cable tool
* bit shown by suffix:
B – blank bit
V – "V" bit
T – TC bit
e.g. ADT

support
C casing
M mud

penetration
1 2 3
no resistance
ranging to
refusal

water
10 Oct, 73 water level on date shown
water inflow
water outflow

notes – samples and tests
U50 – undisturbed sample 50 mm diameter
D – disturbed sample
N – standard penetration test: figure = result
N* – SPT + sample
Nc – cone penetrometer

classification symbols and soil description
based on unified classification system

moisture
D – dry
M – moist
W – wet

consistency/relative density
VS – very soft
S – soft
F – firm
St – stiff
VSt – very stiff
H – hard
Fb – friable
VL – very loose
L – loose
MD – moderately dense
D – dense
VD – very dense

Department of Main Roads (Tas)
Materials and Research Division

engineering log – borehole

borehole no: 6
sheet 1 of 2

file:

project: POLICE HEADQUARTERS, HOBART
borehole location: refer site plan

hole commenced: 14-11-79
hole completed: 15-11-79
supervised by: N. D. JOHNSON
log checked by: B. D. WELDON

drill model and mounting: GEMCO (trailer)
hole diameter: 110 mm
slope: Vert deg.
bearing: – deg.
R.L. surface: m
datum:
operator: J. Hammersley

method	penetration 1 2 3	support	water	notes samples, tests, etc.	R.L. depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency, rel. density	hand penetrometer kPa 100 200 300 400	structure and additional observations
A.S.								CONCRETE				
								BRICK FRAGMENTS	M	L		
								COBBLES + CLAY	M	L		
				N*=6 (1,3,3)	10			CLAY, high plasticity, moisture content greater than plastic limit, black-brown, gravelly in places (fine to medium gravel).	M	F-St		FILL ?
					20			GRAVEL (possibly weathered in situ dolerite	M	D		
				N*>60	30			Continued on engineering log – cored borehole sheet.				20 blows for zero penetration.

key

method
AS auger screwing*
AD auger drilling*
R roller/tricone
W washbore
CT cable tool

* bit shown by suffix:
B – blank bit
V – "V" bit
T – TC bit
e.g. ADT

support
C casing
M mud

penetration
1 2 3
no resistance ranging to refusal

water
10 Oct, 73 water level on date shown
water inflow
water outflow

notes – samples and tests
U50 – undisturbed sample 50 mm diameter
D – disturbed sample
N – standard penetration test: figure = result
N* – SPT + sample
Nc – cone penetrometer

classification symbols and soil description
based on unified classification system

moisture
D – dry
M – moist
W – wet

consistency/relative density
VS – very soft
S – soft
F – firm
St – stiff
VSt – very stiff
H – hard
Fb – friable
VL – very loose
L – loose
MD – moderately dense
D – dense
VD – very dense

DEPARTMENT OF PUBLIC WORKS (TAS.)
MATERIALS AND RESEARCH DIVISION

M & R F8

borehole no: 7
sheet 1 of 1

engineering log — cored borehole

File No.

project: POLICE HEADQUARTERS, HOBART
borehole location: refer site plan

hole commenced: 16-11-79
hole completed: 16-11-79
supervised by: N.D. JOHNSON
log checked by: B.D. WELDON

drill model and mounting: GEMCO (trailer) slope: Vert deg.
barrel type and length: NMLC 210 fluid H_2O bearing: – deg.

R. L. surface: m
datum:
Driller J. Hammersley

drilling information				rock substance				rock mass defects	
method	case-lift	water		R.L. depth metres	graphic log core loss	substance description rock type: grain characteristics, colour, structure, minor components.	weathering	strength Is (50) EL VL L M H VH EH	defect spacing mm 30 100 300 1000 >3000	defect description thickness, type, inclination, planarity, roughness, coating. particular / general
						CONCRETE				
						CLAY, high plasticity, yellow				FILL
			Nd >60 (220,-)	1.0		DOLERITE, medium to coarse grained, grey-blue some iron staining near joints (brown)	SW -MW Fr			N.B. last 20 blows for only 50 mm penetration.
				2.0						45°, 60° and subhorizontal joints, some iron stained. Minor amounts of calcite and/or zeolite
				3.0			Fr SW Fr MW			
				4.0		END OF BOREHOLE at -8.45m depth				
				5.0						

key

method
AS auger screwing
AD auger drilling
R roller/tricone
W washbore
NMLC NMLC core drilling

case-lift
casing used
barrel withdrawn

water
10 Oct, 73 water level date shown
water inflow
partial drilling water loss
complete drilling water loss

graphic log/core loss
core recovered (hatching indicates material)
no core recovered

weathering
Fr — fresh
SW — slightly weathered
MW — moderately weathered
HW — highly weathered
EW — extremely weathered

strength (indirect tensile strength)
EL — extremely low
VL — very low
L — low
M — medium
H — high
VH — very high
EH — extremely high

DEPARTMENT OF PUBLIC WORKS (TAS.)
MATERIALS AND RESEARCH DIVISION

engineering log — cored borehole

borehole no. 5
sheet 2 of 2

File No.

project: POLICE HEADQUARTERS, HOBART
borehole location: refer site plan

hole commenced: 14-11-79
hole completed: 14-11-79
supervised by: N.D. JOHNSON
log checked by: B.D. WELDON

drill model and mounting: GEMCO (Trailer) slope: vert deg.
barrel type and length: NMLC 2.10m fluid H_2O bearing: — deg.

R. L. surface: m
datum:
Driller J. Hammersky

drilling information					rock substance			rock mass defects	
method	case-lift	water		R.L. depth metres	graphic log core loss	substance description rock type: grain characteristics, colour, structure, minor components.	weathering	strength Is (50) EL VL L M H VH EH	defect spacing mm 30 100 300 1000 3000	defect description thickness, type, inclination, planarity, roughness, coating. particular / general
		15-11-79		1.0						
				2.0		Continued from engineering log - borehole sheet				
				2.70						
				2.83		CORE LOSS				
NMLC				3.0		DOLERITE, medium to coarse grained, blue-grey, some iron staining (brown)	W Fr			Iron stained subvertical and subhorizontal joints
				4.0		END of BOREHOLE at - 3.90m depth				

method
AS auger screwing
AD auger drilling
R roller/tricone
W washbore

case-lift
casing used
barrel withdrawn

water
10 Oct, 73 water level

graphic log/core loss
core recovered

weathering
Fr — fresh
SW — slightly weathered
MW — moderately weathered

strength (indirect tensile strength)
EL — extremely low
VL — very low
L — low
M — medium

Department of Main Roads (Tas)
Materials and Research Division

engineering log - borehole

borehole no: 4
sheet 1 of 1

file:

project: POLICE HEADQUARTERS, HOBART
borehole location: refer site plan

hole commenced: 13-11-79
hole completed: 13-11-79
supervised by: N. D. JOHNSON
log checked by: B. D. WERDON

drill model and mounting: GEMCO (trailer)
hole diameter: 110 mm
slope: Vert deg.
bearing: — deg.
R.L. surface: m
datum:
operator: J. Hammersley

method	penetration 1 2 3	support	water	notes samples, tests, etc.	R.L. depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency, rel. density	hand penetrometer kPa 100 200 300 400	structure and additional observations
A.S.								CONCRETE				
							CH	CLAY, high plasticity, moisture content greater than plastic limit, black to brown-green colour (FILL)				
				N^d >60 (1,3,20)	1.0				M	F		N.B. last 20 blows for zero penetration
								CONCRETE				
								STORMWATER PIPE				
				N^d >60 (1,2,10)	2.0							N.B. last 10 blows for zero penetration
								CONCRETE				
								END OF BOREHOLE at -2.30 m depth after penetrating 42 inch diameter storm-water pipe.				

key

method
AS auger screwing*
AD auger drilling*
R roller/tricone
W washbore
CT cable tool
* bit shown by suffix:
B – blank bit

support
C casing
M mud

penetration
1 2 3
no resistance
ranging to
refusal

water

notes – samples and tests
U50 – undisturbed sample 50 mm diameter
D – disturbed sample
N – standard penetration test: figure = result
N* – SPT + sample
Nc – cone penetrometer

classification symbols and soil description
based on unified classification system

moisture
D – dry
M – moist
W – wet

consistency/relative density
VS – very soft
S – soft
F – firm
St – stiff
VSt – very stiff
H – hard
Fb – friable
VL – very loose
L – loose
MD – moderately dense

Department of Main Roads (Tas)
Materials and Research Division

engineering log – borehole

boreholes no: 3
sheet 1 of 1

file:

project: POLICE HEADQUARTERS, HOBART
borehole location: refer site plan.

hole commenced: 12-11-79
hole completed: 13-11-79
supervised by: N.D. JOHNSON
log checked by: B.D. WELDON

drill model and mounting: GEMCO (trailer)
hole diameter: 110 mm
slope: Vert deg.
bearing: — deg.
R.L. surface: m
datum:
operator: J. Hammersky

method	penetration 1 2 3	support	water	notes samples, tests, etc.	R.L. depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency, rel. density	hand penetrometer kPa 100 200 300 400	structure and additional observations
								CONCRETE				
				N* = 4 (1,2,2)	1.0		CH	CLAY, high plasticity, moisture content (M.C.) greater than plastic limit (P.L.); black to brown colour minor amounts (<2%) of highly weathered dolerite fine grained gravel	M	F		FILL OR TERTIARY SEDIMENTS
				N* = 7 (3,4,3)	2.0				M	F-St		
				N* = 9 (3,3,6)	3.0		CH	CLAY; high plasticity M.C. ≤ P.L.; speckled and mottled colouring of brown-grey-white showing remnant dolerite fabric. Minor amount (up to 5%) of sand size mineral grains; some earthy and powdery calcite veins & masses.	W M	St		EXTREMELY WEATHERED IN SITU DOLERITE
				N* = 23 (5,10,13)	4.0		CH		M	VSt		
				N* = 25 (7,11,14)	5.0		CH		M	VSt-H		
				N* > 60 (23,27,30)	6.0		CH		M	H		N.B. Last 30 blows for only 50 mm penetration.
				N* > 60	7.0				M	H		N.B. 55 blows for only 150 mm penetration.
								END OF BOREHOLE at -7.15 m depth.				

key

method
- AS auger screwing*
- AD auger drilling*
- R roller/tricone
- W washbore
- CT cable tool

* bit shown by suffix:
- B – blank bit

support
- C casing
- M mud

penetration
- 1 2 3 no resistance ranging to refusal

water

notes
- U50 – undisturbed sample 50 mm diameter
- D – disturbed sample
- N – standard penetration test:figure = result
- N* – SPT + sample
- No – cone penetrometer

classification symbols and soil description
based on unified classification system

moisture
- D – dry
- M – moist
- W – wet

consistency/relative density
- VS – very soft
- S – soft
- F – firm
- St – stiff
- VSt – very stiff
- H – hard
- Fb – friable
- VL – very loose
- L – loose
- MD – moderately dense

Department of Main Roads (Tas)
Materials and Research Division

engineering log – borehole

borehole no: 1
sheet 2 of 2

file:

project: POLICE HEADQUARTERS, HOBART
borehole location: refer site plan

hole commenced: 7-11-79
hole completed: 8-11-79
supervised by: N.D. JOHNSON
log checked by: B.D. WELDON

drill model and mounting: GEMCO (trailer)
hole diameter: 110 mm
slope: Vert deg.
bearing: – deg.
R.L. surface: m
datum:
operator: J. Hammersley

method	penetration 1 2 3	support	water	notes samples, tests, etc.	R.L. depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency, rel. density	hand penetrometer kPa 100 200 300 400	structure and additional observations
A.S.				N* > 60 (20, 29, 35)	5.0		CH	CLAY, as above but with more sand sized mineral grains.	M	H-Fb		
				N* > 60 (23, 31, 52)	8.0		CH					
				N* > 60 (20, 33, 30)	10.0		CH					N.B. lost 30 blows for 100mm penetration
								END OF BOREHOLE at -10.4 m depth				

key

method
AS auger screwing*
AD auger drilling*
R roller/tricone
W washbore
CT cable tool
* bit shown by suffix:
B – blank bit
V – "V" bit

support
C casing
M mud

penetration
1 2 3
no resistance ranging to refusal

water
10 Oct. 73 water level

notes – samples and tests
U50 – undisturbed sample 50 mm diameter
D – disturbed sample
N – standard penetration test:figure = result
N* – SPT + sample
Nc – cone penetrometer

classification symbols and soil description
based on unified classification system

moisture
D – dry
M – moist
W – wet

consistency/relative density
VS – very soft
S – soft
F – firm
St – stiff
VSt – very stiff
H – hard
Fb – friable
VL – very loose
L – loose
MD – moderately dense
D – dense

Department of Main Roads (Tas)
Materials and Research Division

engineering log – excavation

pit no. 6
sheet 1 of 1

file: 04-053

project: POLICE HEAD QUARTERS HOBART
pit location: S. E. S. CAR PARK

pit commenced: 17-9-79
pit completed: 17-9-79
supervised by: W DOE
log checked by:

equipment type and model: FORD 420
excavation dimensions: 1·5 m long, 0·5 m wide

R.L. surface: -3·145 m
datum: BRISBANE ST operator: SMITH

method	penetration 123	support	water	notes samples, tests, etc.	depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency, rel. density	hand penetrometer kPa 100 200 300 400	structure and additional observations
								HOTMIX				
B/H					0·5		GP	GRAVEL COARSE WITH CLAYEY FINES DECOMPOSED DOLERITE	D ↓ M	L MD		
					0·75			INSITU DOLERITE				NEAR VERTICAL JOINTING

key

method
- N natural exposure
- E existing excavation
- BH backhoe bucket
- B bulldozer blade
- R ripper

support
- T timbering

penetration
- 1 2 3 — no resistance ranging to refusal

water
- 10 Oct, 73 water level on date shown

notes
- samples and tests
- U50 — undisturbed sample 50 mm diameter
- D — disturbed sample
- N — standard penetration test: figure = result
- N* — SPT + sample
- Nc — cone penetrometer

classification symbols and soil description
based on unified classification system

moisture
- D — dry
- M — moist
- W — wet

consistency/relative density
- VS — very soft
- S — soft
- F — firm
- St — stiff
- VSt — very stiff
- H — hard
- Fb — friable
- VL — very loose
- L — loose
- MD — moderately dense

Department of Main Roads (Tas)
Materials and Research Division

engineering log – excavation

pit no. 4
sheet 1 of 1

file: 04-053

project: POLICE HEAD QUARTERS HOBART

pit location: S.E. CORNER MET. ARCH. CAR PARK

pit commenced: 17-9-79
pit completed: 17-9-79
supervised by: W DOE
log checked by:

equipment type and model: FORD 420

excavation dimensions: 2 m long, 0.5 m wide

R.L. surface: -3.670 m

datum: BRISBANE ST operator: SMITH

method	penetration 1 2 3	support	water	notes samples, tests, etc.	depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency, rel. density	hand penetrometer 100 200 300 400 kPa	structure and additional observations
BH							GP	GRAVEL FINE CLAYEY DECOMPOSED DOLERITE	M	L		
				FILL	0.5		CH	CLAY WITH DOLERITE STONE	M	MD		
					1.0			GRAVEL COARSE WITH CLAYEY FINES DECOMPOSED DOLERITE	M	VD		WATER ENTERS AT THIS LEVEL
								1.3 m HOLE DISCONTINUED				LOCAL DRAINAGE ONLY

key

method
- N natural exposure
- E existing excavation
- BH backhoe bucket
- B bulldozer blade
- R ripper

support
- T timbering

penetration
- 1 2 3 no resistance ranging to refusal

water
- 10 Oct, 73 water level

notes
- U50 – undisturbed sample 50 mm diameter
- D – disturbed sample
- N – standard penetration test: figure = result
- N* – SPT + sample

classification symbols and soil description
based on unified classification system

moisture
- D – dry
- M – moist
- W – wet

consistency/relative density
- VS – very soft
- S – soft
- F – firm
- St – stiff
- VSt – very stiff
- H – hard
- Fb – friable
- VL – very loose
- L – loose

Department of Main Roads (Tas)
Materials and Research Division

engineering log – excavation

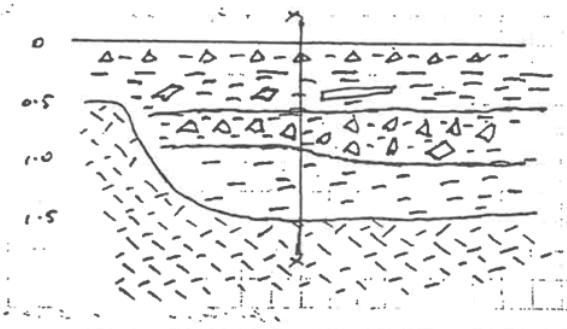
pit no 2
sheet 1 of 1

file: 04·053

project: POLICE HEAD QUARTERS HOBART
pit location: N W CORNER MET. ARCH. CAR PARK
pit commenced: 17-9-79
pit completed: 17-9-79
supervised by: W DOE
log checked by:

equipment type and model: FORD 420
excavation dimensions: 2·5 m long, 0·5 m wide
R.L. surface: -3·375 m
datum: BALLRANS ST operator: SMITH

method	penetration 1 2 3	support	water	notes samples, tests, etc.	R.L. depth metres	graphic log	classification symbol	material soil type: plasticity or particle characteristics, colour, secondary and minor components.	moisture condition	consistency, rel. density	hand penetrometer 100 200 300 400 kPa	structure and additional observations
BH							GC	GRAVEL FINE PLASTIC BROWN GC DECOMP. DOLERITE	M	Fa		
					0·5		CH	FILL CLAYEY RUBBLE + LOGS CH.	M	L/MD		
							GP	COARSE GRAVEL WITH CLAYEY FINES BROWN DECOMP DOLERITE	M	MD		LOCAL MATERIAL
					1·0		CL	CLAYEY SAND FINE WHITE	M	F/Fb		CRYSTALINE NATURAL INSITU HIGHLY DECOMP DOLERITE
					1·5			INSITU DE COMP. DOL	M	MD		VERTICAL JOINTED 25mm SPACING
										VD		



key

method
N natural exposure
E existing excavation
BH backhoe bucket
B bulldozer blade
R ripper

support
T timbering

penetration
1 2 3
no resistance
ranging to refusal

water
10 Oct, 73 water level

notes – samples and tests
U50 – undisturbed sample 50 mm diameter
D – disturbed sample
N – standard penetration test:figure = result
N* – SPT + sample
Nc – cone penetrometer

classification symbols and soil description
based on unified classification system

moisture
D – dry
M – moist
W – wet

consistency/relative density
VS – very soft
S – soft
F – firm
St – stiff
VSt – very stiff
H – hard
Fb – friable
VL – very loose
L – loose
MD – moderately dense

DEPARTMENT OF PUBLIC WORKS (TAS.)
MATERIALS AND RESEARCH DIVISION

M&R 78

borehole no: 6
sheet 2 of 2

engineering log — cored borehole

File No.

project: POLICE HEADQUARTERS, HOBART
borehole location: refer site plan

hole commenced: 14-11-79
hole completed: 15-11-79
supervised by: N.D. JOHNSON
log checked by: B.D. WELDON

drill model and mounting: GEMCO (trailer) slope: vert deg.
barrel type and length: NMLC 2.40 m fluid H_2O bearing: — deg.
R. L. surface: m
datum:
Driller J. Hammersley

drilling information					rock substance				rock mass defects	
method	case-lift	water		R.L. depth metres	graphic log core loss	substance description rock type: grain characteristics, colour, structure, minor components.	weathering	strength Is (50) EL VL L M H VH EH	defect spacing mm 30 100 300 1000 >3000	defect description thickness, type, inclination, planarity, roughness, coating. particular / general
				1.0		Continued from engineering log - borehole sheet				
				2.0						
				2.50						
				2.60		CORE LOSS				
				3.0		DOLERITE, medium to coarse grained; blue-grey colour, some calcite or zeolite veins along joints	SW			subhorizontal and 60-70° joints; some clay lined, most iron stained, some zeolite or calcite infilling
				4.0						
				5.0		END of BOREHOLE at -5.00 m depth				
				6.0						
				7.0						

key

method
AS auger screwing
AD auger drilling
R roller/tricone
W washbore

case-lift
casing used
barrel withdrawn

water
10 Oct, 73 water level

graphic log/core loss
core recovered

weathering
Fr — fresh
SW — slightly weathered
MW — moderately weathered

strength (indirect tensile strength)
EL — extremely low
VL — very low
L — low
M — medium

SURVEY NOTES

SHEET 1 OF 1 SHEETS

Registered Number

CROSS REFERENCE PLAN NUMBERS USED AS PART OF THIS SURVEY

DESCRIBE BY REPORT THE EVIDENCE USED TO DETERMINE BOUNDARIES

Survey commenced : 3/2/94
Survey completed : 17/2/94
Error of close : see calcs

All boundaries are open unless shown otherwise
All walls are 230mm brick unless shown otherwise

SURVEY CERTIFICATE

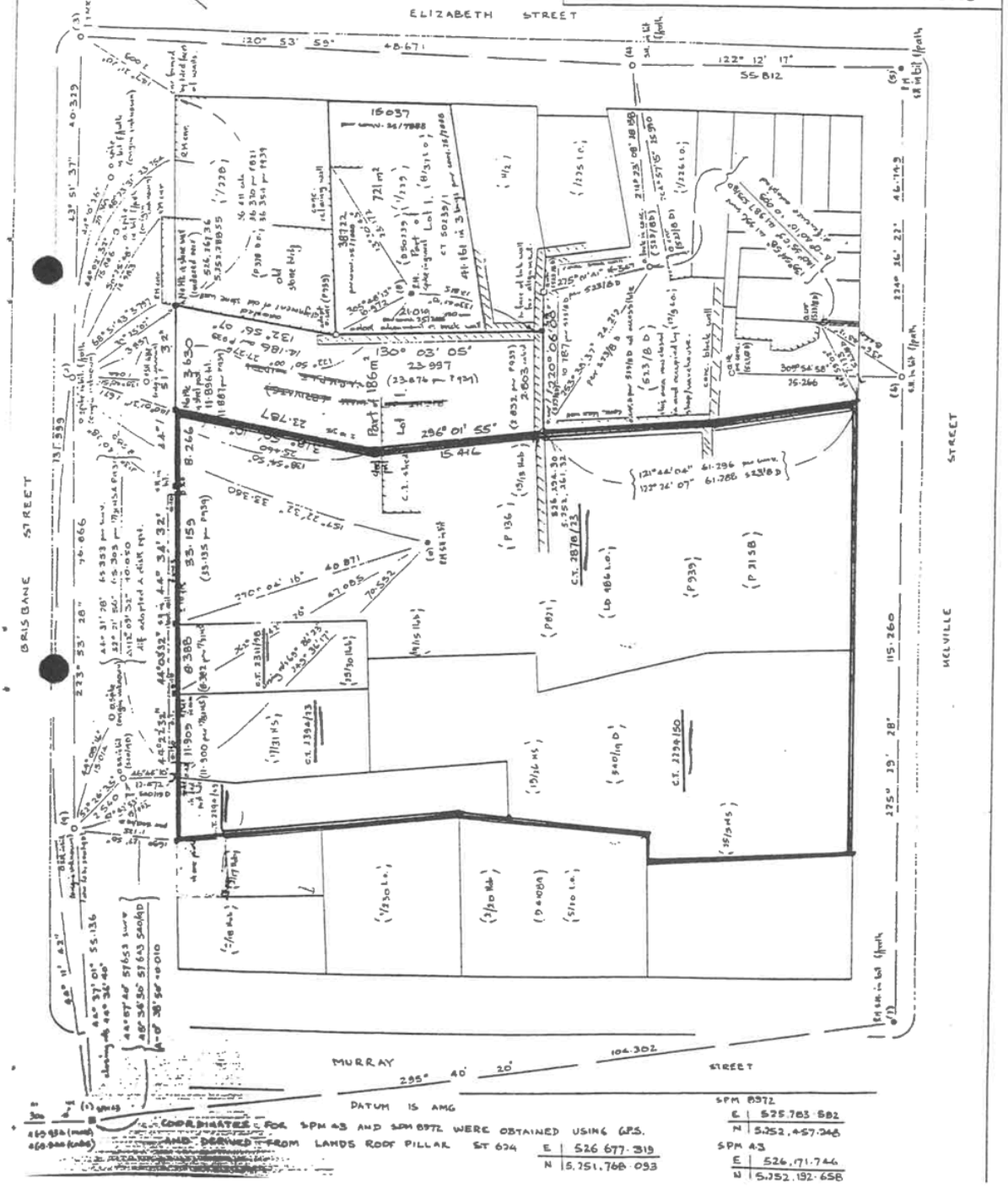
I, GARRY BRUCE COOMBE of BLACKMANS BAY in Tasmania a registered surveyor HEREBY CERTIFY that:

(a) this survey is based upon the best evidence that the nature of the case admits
(b) the survey notes have been truly compiled from surveys made by me or made under my supervision; and
(c) this survey and accompanying survey notes comply with the relevant legislation affecting surveys and are correct for the purpose required.

Garry Coombe
Signature

Date 22 / 2 / 94

Surveyors Reference: SJ. 5763



TASMANIA
REAL PROPERTY ACT, 1862, as amended

CERTIFICATE OF TITLE

Register Book
Vol. Fol.
2878 23

HER MAJESTY THE QUEEN is now seised in demesne by right of Her Imperial Crown subject nevertheless to such encumbrances liens and interests as are notified by Memorial underwritten or endorsed hereon of all that piece of land situated in the CITY OF HOBART containing

ONE ACRE THIRTY PERCHES AND FOUR TENTHS OF A PERCH on the

Plan hereon and comprising whole of OA-1R-6½Ps. granted to WILLIAM LINDSAY, whole of 33 perches granted to HENRY PRIEST, whole of 14 perches granted to WILLIAM PRIEST, whole of 17 perches granted to JOSEPH MOLLOY, whole of 1.4/10 perches granted to CRISP & GUNN CO.OPERATIVE LIMITED, whole of 27.6/10 perches and part of 25.2/10 perches granted t both EMMA CRISP and FREDERICK VERNON CRISP, part of OA-1R-8 perches granted to WILLIAM WILLETT and BRYANT WEBB, part of OA-1R-37 perches granted to LEWIS RILEY, part of 31 perches granted to HENRY WILKS. delineated in the public maps of the State deposited in the Office of the Surveyor-General originally granted to the above and duly surrendered as appears by Transfer No. A348760.

IN WITNESS whereof I have hereunto signed my name and affixed my Seal this 1970

Recorder of Titles

NOTE.—ENTRIES CANCELLED UNDER SIGNATURE OF THE RECORDER OF TITLES ARE NO LONGER SUBSISTING.

COPY ONLY
26 OCT 1994
SP 114102
per

Meas. in ft. & ins. P.821. 14/15Hob. P.939

RST Edition. Registered 19 NOV 1970
erived from C.T. Vol.2294.Fol.51. Transfer A348760 Crisp & Gunn Ltd.

FIRST SCHEDULE (*continued*)

REGISTERED PROPRIETOR	Registered	Signature of Recorder of Titles	Seal

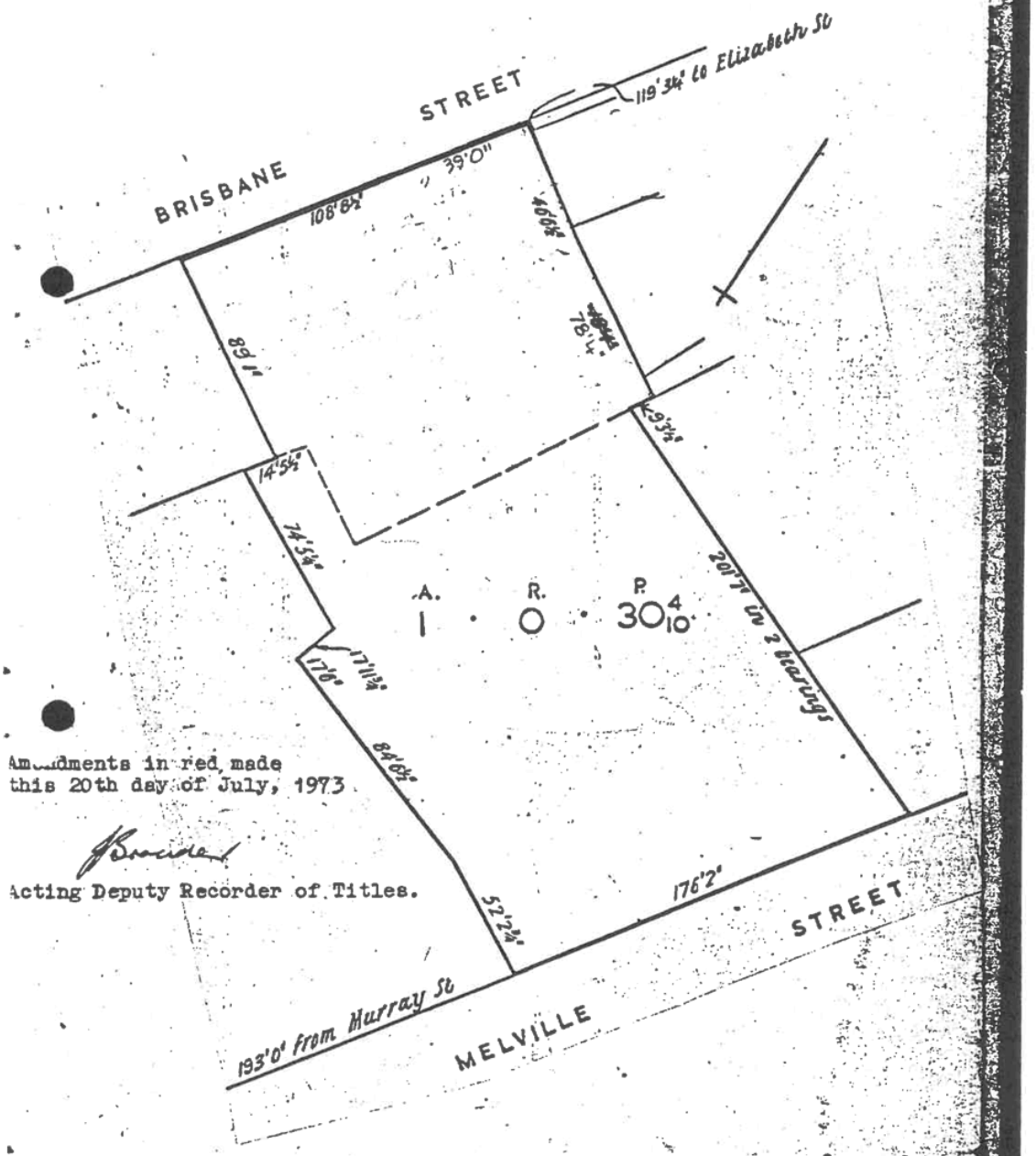
SECOND SCHEDULE (*continued*)

PARTICULARS	Registered	Signature of Recorder of Titles	CANCELLATION	
			Number	Signature of Recorder of Titles

R.P. 612.

ANNEXURE TO CERTIFICATE OF TITLE VOL. 2878 FOL. 23

Recorder of Titles



Amendments in red made
this 20th day of July, 1973

Acting Deputy Recorder of Titles.

FIRST SCHEDULE (*continued*)

REGISTERED PROPRIETOR	Registered	Signature of Recorder of Titles	Seal

SECOND SCHEDULE (*continued*)

PARTICULARS	Registered	Signature of Recorder of Titles	CANCELLATION	
			Number	Signature of Recorder of Titles

2394 23

TASMANIA
REAL PROPERTY ACT, 1862, as amended

CERTIFICATE OF TITLE

Register Book
Vol. Fol.
2294 50

HER MAJESTY THE QUEEN is now seised in demesne by right of Her Imperial Crown subject nevertheless to such encumbrances liens and interests as are notified by Memorial underwritten or endorsed hereon of all that piece of land situated in the City of Hobart containing

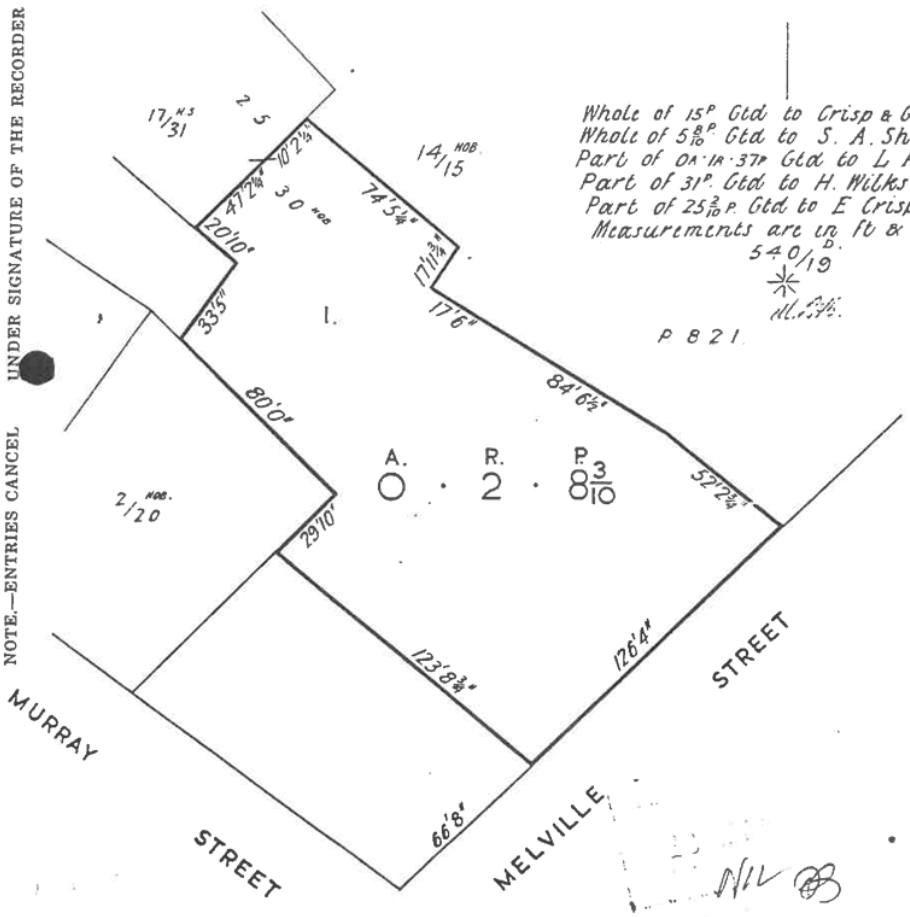
TWO ROODS EIGHT PERCHES AND THREE TENTHS OF A PERCH

delineated in the diagram hereon and in the public maps of the State - deposited in the Office of the Surveyor-General originally granted to Crisp & Gunn Co. Op. Ltd., Sarah Ann Shirley, Lewis Riley, Henry Wilks Emma Crisp and Frederick Vernon Crisp and duly surrendered as - - appears by Transfer No. A264718

IN WITNESS whereof I have hereunto signed my name and affixed my seal this 12 DEC 1967

RECORDER OF TITLES.

NOTE.—ENTRIES CANCEL UNDER SIGNATURE OF THE RECORDER OF TI... RE NO LONGER SUBSISTING.



First Edition. Registered 12 DEC 1967

OWNER THE CROWN & ANTONIO ALFRED LONGO & MARIO AUGUSTO LONGO

FOLIO REFERENCE
CT 2878/23 & CT 50239/1

GRANTEE
Part of 0-0-17 Granted to JOSEPH MOLLOY & Part of 0-1-8 Granted to WILLIAM WILLET & BRYANT WEBB

PLAN OF SURVEY

BY SURVEYOR Garry Bruce Coombe

LOCATION

CITY OF HOBART

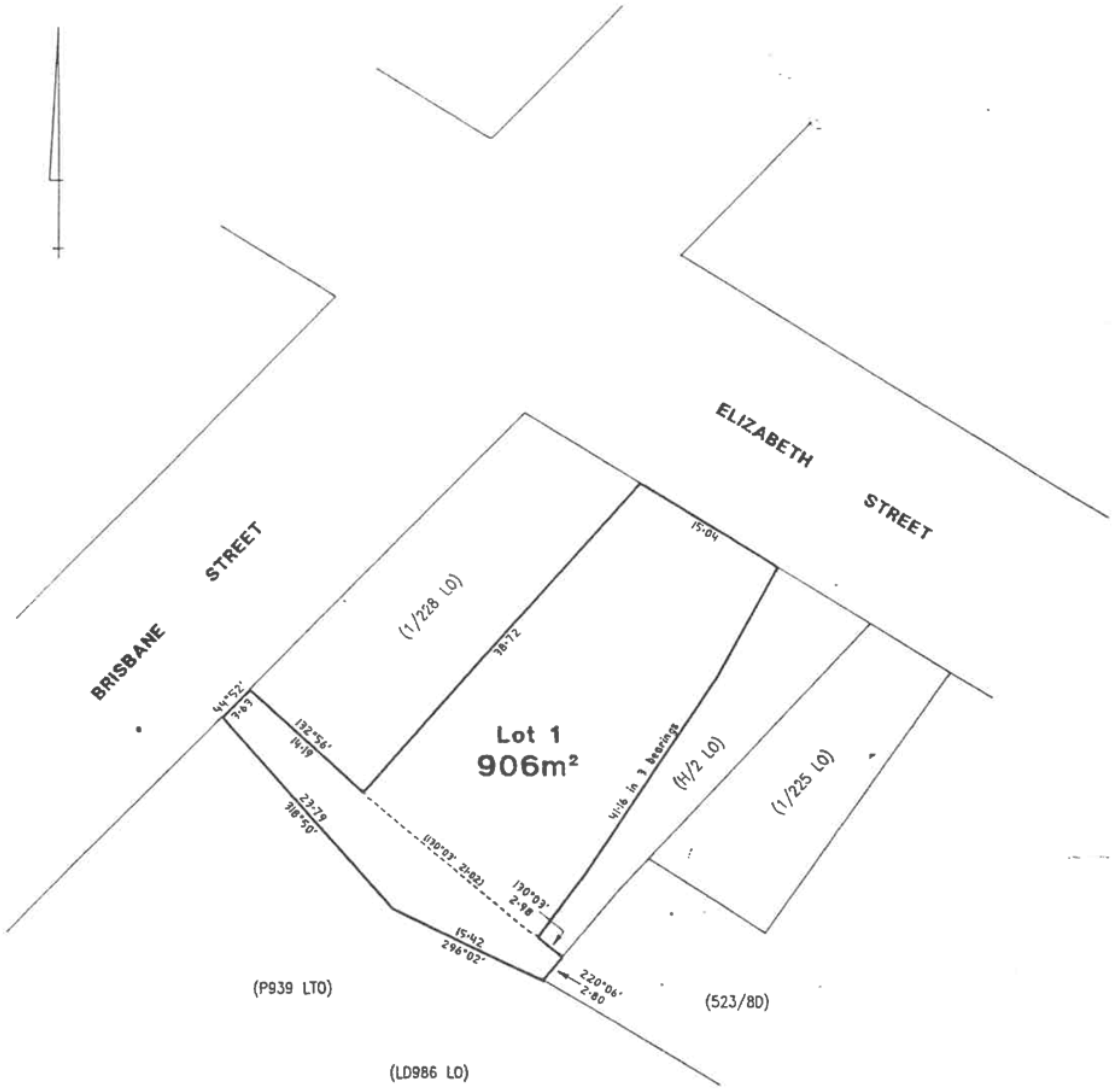
SCALE 1:400 LENGTHS IN METRES

REGISTERED NUMBER
SP114102

APPROVED
EFFECTIVE FROM .....

Recorder of Titles

MAPSHEET MUNICIPAL CODE No.	LAST UPI No.	LAST PLAN No.	ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN



OWNER
THE CROWN

FOLIO REFERENCE
CT 2878/23

GRANTEE
Whole of 0.1.16½ Granted to WILLIAM LINDSAY, Whole of 0.0.33 Granted to HENRY PRIEST, Whole of 0.0.17 Granted to JOSEPH MOLLOY, Whole of 0.0.1¾ Granted to CRISP & GUNN CO-OPERATIVE LTD, Whole of 0.0.27¾ and part of 0.0.25¾ Granted to EMMA CRISP & FREDERICK VERNON CRISP, Part of 0.1.8 Granted to WILLIAM WILLETT & BRYANT WEBB, Part of 0.1.37 Granted to LEWIS RILEY and Part of 0.0.31 Granted to HENRY WILKS

PLAN OF SURVEY

BY SURVEYOR

LOCATION

CITY OF HOBART

SCALE 1:600 LENGTHS IN METRES

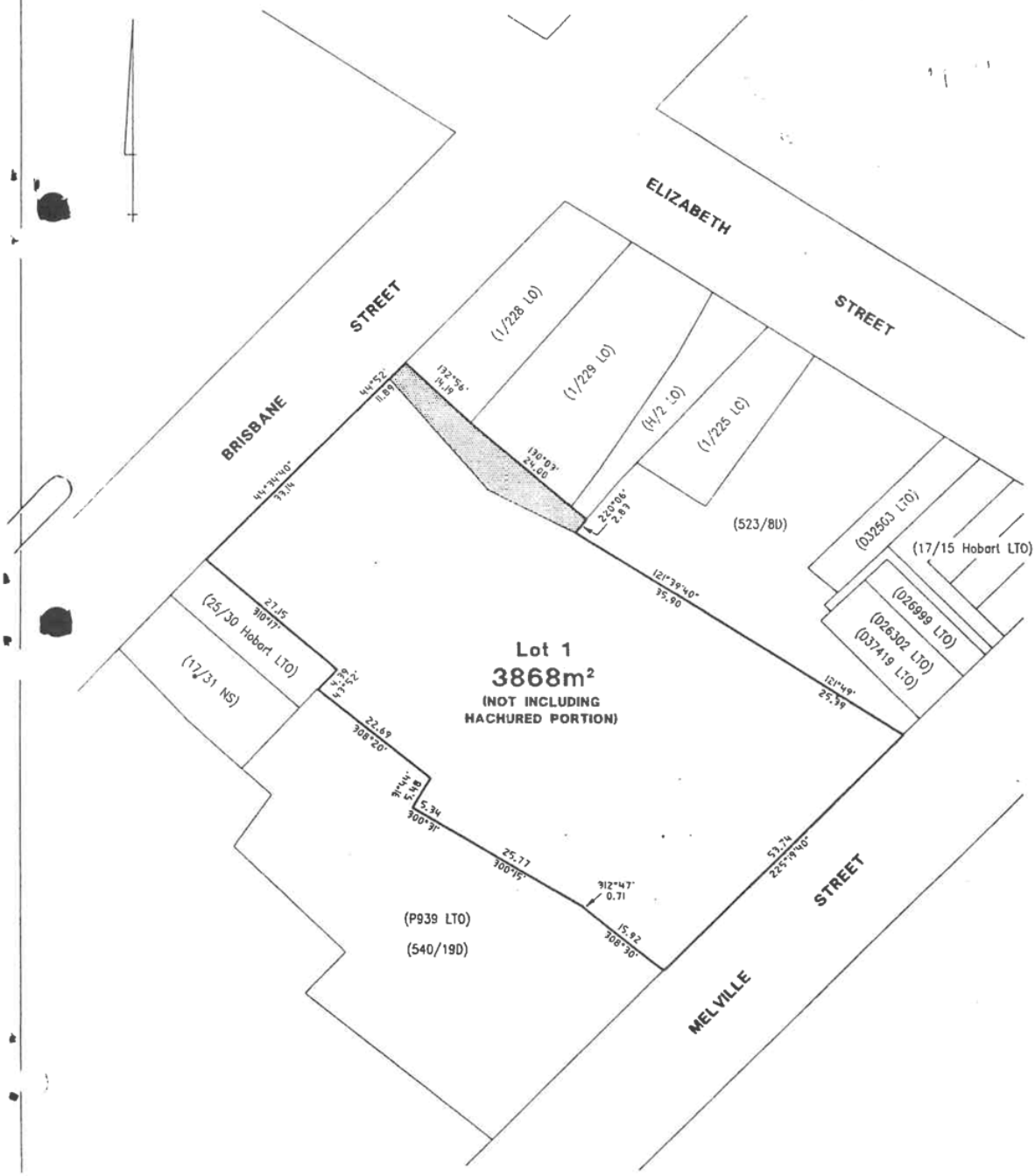
REGISTERED NUMBER
P 114103

APPROVED
EFFECTIVE FROM .....

Recorder of Titles

MAPSHEET MUNICIPAL CODE No>	LAST UPI No> 0536	LAST PLAN No>	ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN

BALANCE PLAN



5669571
P/83/671

Inquiries: Adam Friend/Liz Canning
Phone : (03) 62336176
Fax : (03) 62333800
E-mail : (030662: wc/melv_2) ADF/tm
Our ref :
Your ref :

Department *of* Environment
and Land Management
134 Macquarie Street
or GPO Box 44A
Hobart Tasmania 7001

20 January 1997

Mr Peter Radovanovic
C/o Forestry Tasmania Construction Site Office
78-83 Melville Street
HOBART TAS 7000

COPY

Dear Mr Radovanovic

FORESTRY TASMANIA REDEVELOPMENT PROJECT
79-83 MELVILLE STREET

Environment Tasmania has reviewed the *Environmental Remediation and Validation, December 1996* report for the above mentioned site, prepared for Civil and Civic Laver by Stoklosa Engineering. The Division considers the remediation and validation works undertaken to be satisfactory and is in agreement with the consultants findings and recommendations.

With regards to hydrocarbon contamination associated with the unanticipated underground storage tank, Environment Tasmania concurs with the consultants opinion that contaminated soil identified under the UST represents a localised hot spot and that "it is highly unlikely that the contamination has migrated off site, or that it will do so in the future". Given that the area is to be sealed and used as an access road to the premise, no further remedial action is required.

Thus Environment Tasmania considers the site suitable for its intended use. However, if the site is to be redeveloped for a more sensitive use in the future, further remediation of contaminated soil left *in situ* may be required. As recommended by the consultant, the presence of localised hydrocarbon contamination should be disclosed to future occupants of the site.

Liz Canning may have further comments regarding the site upon her return from leave in early February. If you have any questions please contact Adam Friend on (03) 6233 6176.

Yours sincerely

Ian Woodward
MANAGER - OPERATIONS BRANCH

cc. Mr Jamie Clark
Hobart City Council
GPO Box 503E
HOBART TAS 7001

cc. Richard Stoklosa
Stoklosa Engineering
205 Davey Street
HOBART TAS 7000

ATTACHMENT C

Environment Tasmania

Inquiries: Liz Canning
Phone : (03) 62336716
Fax : (03) 62333800
Our ref : (030662:WC/melv_1) EAC/tm
Your ref :

Department of Environment and Land Management
188 Collins Street
or GPO Box 1396P
Hobart Tasmania 7001

23 September 1996

Mr Peter Radovanovic
C\o Forestry Tasmania Construction Site Office
79-83 Melville Street
HOBART TAS 7000
Fax: 002 315463

Dear Mr Radovanovic

FORESTRY TASMANIA REDEVELOPMENT PROJECT, 79-83 MELVILLE STREET

Environment Tasmania received your letter reports regarding the above mentioned site dated 8 September and 18 September 1996. A meeting was held on 10 September between yourself and Liz Canning of this Division in order to provide the report and briefly discuss the consultants conclusions. It is understood that the reports were provided to satisfy Council conditions regarding the landfill area. Although information on the UST excavations was not required by Environment Tasmania in this situation, the results were provided to satisfy "due diligence".

The meeting held on 10 September resulted in the provision of guidelines relating to health risk (not environmental risk) to yourself and agreement that the consultant would reassess the recommendations regarding the landscaping area in the light of the heavy metal soil guidelines provided. The issue of contamination around the "unanticipated tank" was also discussed. The consultant recommended further testing in this area to determine the lateral extent of contamination. Given the very elevated levels of light hydrocarbons in the sample taken at the base of the excavation Liz Canning agreed with the consultants recommendation to sample further. The potential for "environmental harm" resulting from spread of hydrocarbons into surrounding soil and groundwater was discussed and Environment Tasmania understood that this issue would be investigated. In addition the need for bore logs to be provided was mentioned as it is not possible to assess results without knowledge of the depth that samples were taken at and the geology and hydrogeology of the sample site.

Recycled paper

The following comments are provided on the letter dated 18 September:

Heavy metals at location of UST:
It is unclear whether the area around FT9 is proposed for excavation based on the levels of copper present. A decision regarding the requirement for this could include an assessment of whether this is naturally occurring or in fill material.

The classification of the copper will be based on the concentrations present in the stockpile. Although the *health risk* levels for copper may provide an acceptable level of 1000 mg/kg for residential use (Contaminated Sites Monograph Series no. 5) this does not refer to the potential for leaching and phytotoxic effects. The slightly acidic landfill environment will increase the leachability of heavy metals and thus a level of copper exceeding 60 mg/kg must have a leachate test completed prior to disposal to landfill. In any case the sample containing elevated Cu also contains TPH at levels corresponding to a Hazardous Waste.

As discussed, the levels of Zn reported would not preclude reuse of the material on-site based on health risk.

Heavy metals in landscaping area:
Environment Tasmania concurs with the consultants opinion that the soil may be reused on-site as fill. The elevated Zn is only present in one sample out of four and given the future use of the site would be very unlikely to pose a health or environmental risk.

Unanticipated UST:
It is unclear why the consultants original conclusions recommending further sampling have now changed. A site visit to check for surface odours does not appear to resolve the issue of environmental harm resulting from lateral spread of hydrocarbons. You have suggested in conversations that a sample was taken next to the UST excavation (FT8?) but this is unclear from the information given in the reports. Bore logs would help clarify this.

Yours sincerely

Ian Woodward
MANAGER - OPERATIONS BRANCH

cc. Stokloss Engineering
205 Davey Street
HOBART, TAS 7000

STOKLOSA
ENGINEERING
PTY LTD

A.C.N. 065 135 051

18 September 1996

Civil & Civic
Attention: Mr. Peter Radovanovic
c/- Forestry Tasmania Construction Site Office
79-83 Melville Street
Hobart, Tasmania 7000

Subject: **Forestry Tasmania Redevelopment Project, 79-83 Melville Street, Hobart**

Dear Peter:

Thank you for requesting my firm to investigate the possibility of soil contamination at the location of an unanticipated underground storage tank (UST) near Melville Street, and in the area of planned landscaping improvements. The attached site diagram, chain of custody records, and laboratory reports detail the information that is currently available to interpret the environmental condition of the site.

The following advice is presented to manage evidence of contaminated soils:

Soil contamination near the unanticipated UST:

Soil taken from the base of the UST pit (samples FT-2 and FT-9) exhibit clear evidence of petroleum contamination, presumably from the UST that was discovered last week. We did not witness removal of the tank, and did not have an opportunity to confirm whether the source of this contamination was from the tank or another undiscovered source that may be present in the vicinity of the site works.

At this point, we know that light hydrocarbons (C6-C9 fraction) and xylene are the compounds of concern at the pit location. There is some uncertainty in whether additional UST's are present in the vicinity, and we do not know the depth or the areal extent of contamination.

Prior reconnaissance of the confined foundation area beneath the former State Fire Commission building revealed that the structure is supported on piers over bare ground, adjacent to the site of the UST pit. It should be noted that no petroleum odours were detected at that time. Reinspection of the foundation area was conducted on 17 September, and no evidence of petroleum odours was noted. The detectable odour threshold for xylene, for example, is less than 1 ppm, and the unsatisfactory exposure limit is 100 ppm (data for *ortho*-xylene, for a duration of 60 minutes). This suggests that petroleum contamination is probably limited to the area outside of the building footprint, and does not pose a hazard to building occupants.

We understand that the UST pit has been backfilled with clean material. Under these circumstances, no further work would be required, as this portion of the site is to be sealed. There appears to be no significant risk of exposure to workers or visitors to the site.

205 Davey Street
t, Tasmania 7000

telephone:
(03) 6224 8870

facsimile:
(03) 6224 8871

electronic mail:
r.stoklosa
trumpet.com.au

Detection of heavy metals at the location of the UST:

The stockpiled soil from the base of the UST pit was found to contain a slightly elevated zinc concentration (318 ppm) in the single screening level soil test (sample location FT-8). This soil should not be considered "hazardous waste" under the May 1996 Environment Tasmania guidelines for soil disposal, as it only slightly exceeds the applicable criteria. This soil should be regarded as "fill material" for the purposes of disposal or placement on other areas of the planned development site, as the level of zinc is well below published health-based guidelines for commercial and residential garden settings (7,000 ppm).

Similarly, the soil at the base of the UST pit (FT-9), which we recommend excavating as discussed above, revealed a slightly elevated concentration of copper (117 ppm). This soil should not be considered "hazardous waste" as a result of the copper concentration that was detected. This soil should be regarded as "fill material", as the level of copper is well below published health-based guidelines (1,000 ppm).

Detection of heavy metals in the planned landscaping area:

One of four screening level soil tests in the planned landscaping area (at location FT-5) revealed evidence of slightly elevated zinc levels, and returned levels of lead and copper that nearly exceeded the criteria for "fill material". All of the soils in the landscaping area should be regarded as suitable for the intended use. No remediation of this area of the site is recommended, as the concentrations of zinc, lead and copper are well within the health-based guidelines for residential garden settings. These soils are not expected to pose a risk to workers or persons visiting the property.

We understand that you discussed our findings and recommendations with Ms Liz Canning of Environment Tasmania on 9 September, and we would suggest that you present this advice to her office for review and acknowledgment.

The known UST near the Brisbane Street access ramp to the subject property has been previously assessed for evidence of contamination (refer to Stoklosa Engineering report, dated 19 January 1996). It is recommended that works to remove the tank proceed in accordance with advice given in the previous assessment. A quote was obtained from Gilbarco, dated 19 June 1996, for tank removal (copy attached for reference).

Additional soil sampling is recommended prior to removal of the known UST. Stoklosa Engineering must be present to witness removal of the UST, and to obtain soil samples of the UST pit backfill sand upon removal. It is recommended that additional material is excavated from the UST pit, if evidence of contamination is observed during tank removal activities, prior to backfilling the pit with clean material. Soils removed from the UST pit must be stockpiled on site, pending the results of soil testing.

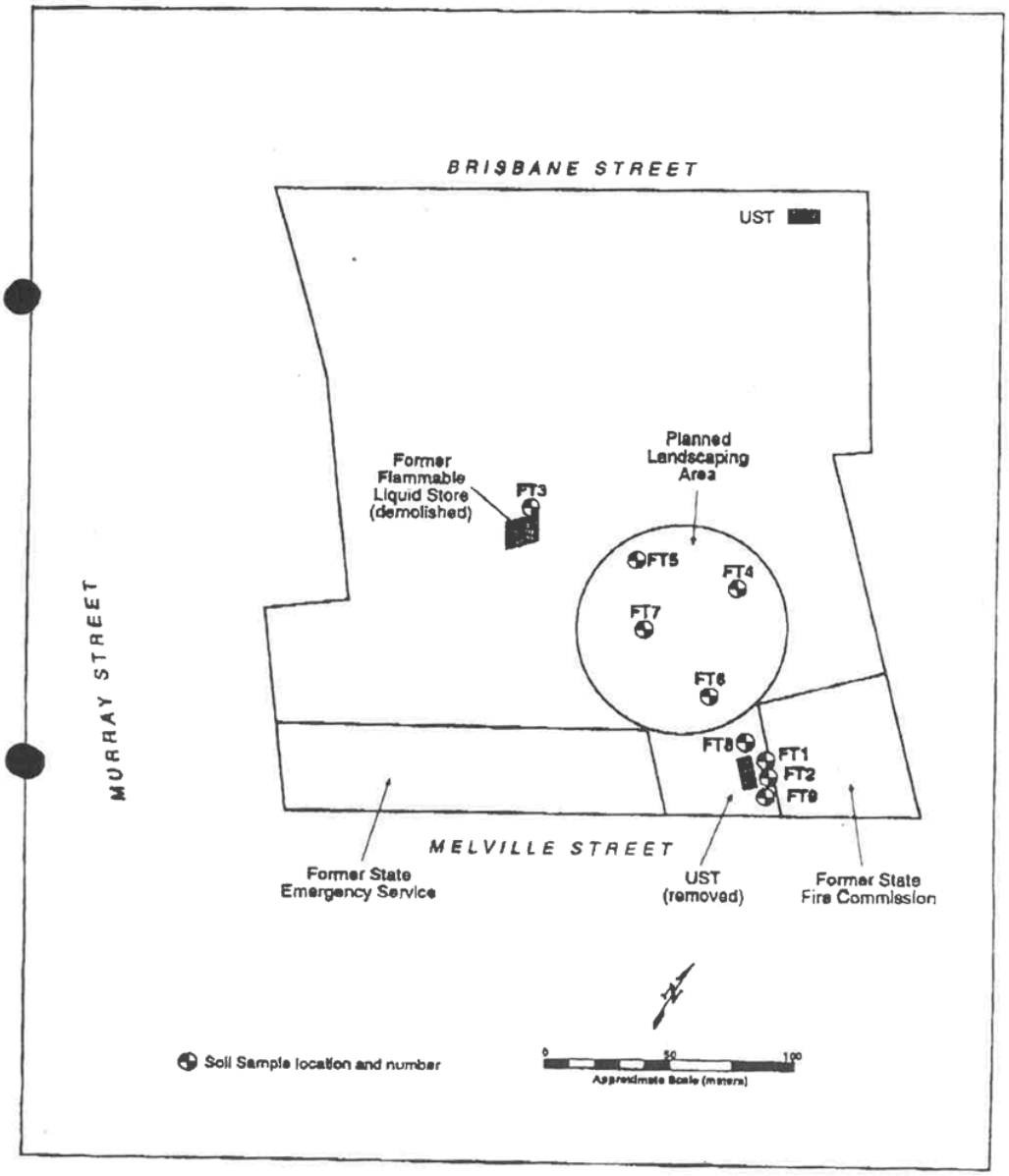
We believe that the foregoing approach will ensure proper short term and long term environmental management of the property, given the evidence of contamination that has been discovered. Please contact us if further information would be helpful.

Regards,

Richard Stoklosa

Richard Stoklosa

Attachments


BRISBANE STREET
UST
Former Flammable Liquid Store (demolished)
FT3
Planned Landscaping Area
FT5
FT4
FT7
FT6
FT8
FT1
FT2
FT9
MURRAY STREET
MELVILLE STREET
Former State Emergency Service
UST (removed)
Former State Fire Commission
Soil Sample location and number
0
50
100
Approximate Scale (meters)

17/02/1996 05:03 002315463 C&C PAGE 03

1996 03:09 FROM STOKLOSA ENGINEERING TO 315463 P.03

CHAIN OF CUSTODY RECORD

Stoklosa Engineering Pty Ltd
A.C.N. 065 135 051
205 Davey Street
Hobart, Tasmania 7000
Telephone: (002) 24 8870
Facsimile: (002) 24 8871

PROJECT NAME:	PROJECT NO.
CIVIL & CIVIC FORESTRY TASMANIA	C155

COLLECTED BY (NAME):	SIGNATURE:
R. STOKLOSA	R. Stoklosa

Site ID	Lab Sample No.	Collector's Sample No.	Collection Date	Collection Time	Sample Type	Analyses to be Performed: TPH	BTEX	LEAD							Number of Containers	Remarks / Special Instructions
FT-1		FT-1	26.8.96	1630	SOIL	✓	✓	✓							2	1000 mm
FT-2		FT-2	26.8.96	1635	SOIL	✓	✓	✓							2	2500 mm

Relinquished By (Signature)	Organisation	Date	Time	Remarks
Richard Stoklosa	STOKLOSA ENGINEERING	26.8.96	1730	
Received By (Signature)	Organisation	Date	Time	Remarks
Relinquished By (Signature)	Organisation	Date	Time	Remarks
Received By (Signature)	Organisation	Date	Time	Remarks
Relinquished By (Signature)	Organisation	Date	Time	Remarks
Received for Laboratory By (Signature)	Laboratory Name	Date	Time	Remarks
[illegible]	D Elm LAB	26/8/96	1730	

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002315463 PAGE.00

4 SEP '96 19:16

Department of Environment and Land Management
Environmental Chemistry Laboratory
C/- Chemistry Department, University of Tasmania
Box 252C GPO Hobart 7001, Hobart
Telephone (03) 6228 7175 Fax (03) 6220 7825

port Number: 7328
bmitted By: R. Stoklosa
ported To: R. Stoklosa
st Method: GC

Lab. No: 963537-963538
Date Sampled: 26/8/96
Date Received: 26/8/96
Date Reported: 27/8/96

SOILS - STOKLOSA ENGINEERING P/L

ab. No.	Sample ID	TPH mg/kg DMB	C6-C9 mg/kg DMB	C10-C14 mg/kg DMB	C15-C28 mg/kg DMB	C29+ mg/kg DMB	Benzene mg/kg DMB	Toluene mg/kg DMB	E. Benzene mg/kg DMB	Xylene mg/kg DMB
63537	FT-1	ND	ND	ND	ND	ND	ND	ND	ND	ND
63538	FT-2	660	530	130	ND	ND	ND	4	7	66
hod Detection Limit		5	5	5	5	5	1	1	1	1

- Dry Matter Basis
Not Detected

Disposal as "Hazardous Waste"
(prior Council approval required)

Department of Environment and Land Management
Environmental Chemistry Laboratory
C/- Chemistry Department, University of Tasmania
Box 252C GPO Hobart 7001, Hobart
Telephone (03) 6230 7175 Fax (03) 6230 7825

Report Number: 7328-1
Submitted By: R. Stoklosa
Reported To: R. Stoklosa
Test Method: DELM Method Metals in Sediments

Lab. No: 963537-963538
Date Sampled: 26/8/96
Date Received: 26/8/96
Date Reported: 28/8/96

SOILS - STOKLOSA ENGINEERING P/L

Lab No.	Sample ID	Pb ~~mg/kg DMB~~
963537	FT-1	243
963538	FT-2	52

DMB - Dry Matter Basis

Disposal as "Fill Material"

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Samples analysed as received.

R.D. Dineen
SENIOR CHEMIST

17/02/1996 05:03 002315463 C&C PAGE 06

-1996 03:11 FROM STOKLOSA ENGINEERING TO 315463 P.06

CHAIN OF CUSTODY RECORD

Stoklosa Engineering Pty Ltd
A.C.N. 065 135 051
205 Davey Street
Hobart, Tasmania 7000
Telephone: (002) 24 8870
Facsimile: (002) 24 8871

PROJECT NAME:	PROJECT NO.
FORESTRY TASMANIA / C&C	C155

COLLECTED BY (NAME):	SIGNATURE:
R STOKLOSA	R Stoklosa

Site ID	Lab Sample No.	Collector's Sample No.	Collection Date	Collection Time	Sample Type	TPH	BTEX	LEAD	CADMIUM	CHROMIUM	COPPER	ZINC				Number of Containers	Remarks / Special Instructions
FT-3		FT-3	28.8.96	1715	SOIL	✓	✓	✓	✓	✓	✓	✓				2	200mm F.L.S.
FT-4		FT-4		1725	SOIL			✓	✓	✓	✓	✓				1	SURFACE 100mm
FT-5		FT-5		1735	SOIL			✓	✓	✓	✓	✓				1	SURFACE 100mm
FT-6		FT-6		1745	SOIL			✓	✓	✓	✓	✓				1	"
FT-7		FT-7		1750	SOIL			✓	✓	✓	✓	✓				1	"
FT-8		FT-8		1755	SOIL	✓	✓	✓	✓	✓	✓	✓				2	UST STOCKPILE (surface)
FT-9		FT-9		1800	SOIL	✓	✓	✓								2	UST PIT 2500 mm

Analyses to be Performed

Relinquished By (Signature)	Organisation	Date	Time	Remarks
R. Stoklosa	STOKLOSA ENGINEERING	28.8.96	1900	
Received By (Signature)	**Organisation**	**Date**	**Time**	**Remarks**
	DELM			
Relinquished By (Signature)	**Organisation**	**Date**	**Time**	**Remarks**
Received By (Signature)	**Organisation**	**Date**	**Time**	**Remarks**
Relinquished By (Signature)	**Organisation**	**Date**	**Time**	**Remarks**
Received for Laboratory By (Signature)	**Laboratory Name**	**Date**	**Time**	**Remarks**

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4 SEP '96 19:17 002315463 PAGE.006

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Telephone (03) 6220 7175 Fax (03) 6220 7825

Report Number: 7333-1
Submitted By: R. Stoklosa
Reported To: R. Stoklosa
Test Method: GC

Lab. No: 963554-963560
Date Sampled: 28/8/96
Date Received: 28/8/96
Date Reported: 30/8/96

SOILS - STOKLOSA ENGINEERING P/L

Lab. No.	Sample ID	TPH mg/kg DMB	C6-C9 mg/kg DMB	C10-C14 mg/kg DMB	C15-C28 mg/kg DMB	C29+ mg/kg DMB	Benzene mg/kg DMB	Toluene mg/kg DMB	E. Benzene mg/kg DMB	Xylene mg/kg DMB
963554	FT-3	8	ND	ND	ND	ND	ND	ND	ND	ND
963559	FT-8	7	ND	ND	ND	ND	ND	ND	ND	ND
963560	FT-9	1 790	1 350	440	ND	ND	2	8	14	176
Method Detection Limit		5	5	5	5	5	1	1	1	1

DMB - Dry Matter Basis
ND - Not Detected

Exceeds "Hazardous Waste" Disposal Criteria
(consultation with Council / DELM will be required)

Also very high result, requires consultation prior to disposal.

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Samples analysed as received

M. C. Johnson
SENIOR CHEMIST

Department of Environment & Land Management
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Telephone (002) 20 7475 Fax (002) 20 7525

Report Number: 7333
Submitted By: R. Stoklosa
Reported To: R. Stoklosa
Test Method: DELM Method Metals in Sediments

Lab. No: 963554-963560
Date Sampled: 28/8/96
Date Received: 28/8/96
Date Reported: 30/8/96

SOILS - STOKLOSA ENGINEERING

Lab No.	Sample ID	Pb mg/kg DMB	Zn mg/kg DMB	Cu mg/kg DMB	Cd mg/kg DMB	Cr mg/kg DMB
963554	FT-3	138	104	51	<0.5	11
963555	FT-4	71	187	32	<0.5	15
963556	FT-5	288	326	58	<0.5	14
963557	FT-6	60	40	14	<0.5	13
963558	FT-7	43	101	46	<0.5	7
963559	FT-8	48	318	7	<0.5	3
963560	FT-9	26	67	117	<0.5	21

DMB – Dry Matter Basis

This laboratory is registered by the National Testing Authority, Australia. The test reported herein have been performed in accordance with the terms of registration. This document may not be reproduced except in full. Samples analysed as received.

Disposal as "Hazardous Waste"
(prior Council approval required)

M.C. Johnson
SENIOR CHEMIST

Certificate of Disposal

Issued to

Laver Pty. Ltd.,
70 Browns Road,
Kingston, 7050

*Removal and disposal of **2,500 litres** **of contaminated hydrocarbon** on the 28th August, 1996 from;*

79 Melville Street,
Hobart, 7000

Service performed by licensed operator

COLLEX WASTE MANAGEMENT PTY. LTD.
A.C.N. 051 316 584

Dated: Thursday, August 29, 1996

John Brennan
MANAGER - ENVIRONMENT & SAFETY

79 to 85 Melville Street
Site Assessment and Planning Impact Report

Principal Consultant
James Douglas & Associates Planning and Development Consultants

Consultants in Association

James Douglas	Town Planning
Barry Neilsen	Structural Assessment and Building Survey
Robert Vincent	Heritage Assessment
Richard Stoklosa	Environmental Hazards Assessment

Acknowledgment

The consultants wish to acknowledge the existing research undertaken by Michael Court & Kerry Edwards, Historical Consultants with respect to the Statement of Cultural Significance for Number 79 Melville Street. This statement is included as an attachment to this report.

Disclaimer

The information contained in this report and its related appendices has been compiled with all due care. However, the information has been collected for the purposes of, the Tasmanian Property Services Group to facilitate the disposal of the subject site and not as a basis for testing individual project feasibility or for any other purpose. Accordingly, no person should act on the information contained herein without prior verification.

The views expressed herein are those of James Douglas & Associates and do not necessarily represent the views of any other party.

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Appendices

Appendix 1	Heritage and Streetscape Assessments
Appendix 2	Statement of Heritage and Streetscape Significance - Technical advice from Hobart City Council
Appendix 3	Hazard Assessment
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1. Purpose of The Report.

The Crown wishes to sell the subject site. The purpose of this report is to describe the current asset and identify the constraints and opportunities for its marketing and re-development. Specifically, this has involved the following tasks ;

- A description of the site and structures
- An assessment of the structural significance of the buildings and of their capabilities for reuse, particularly the possibility of stratum subdivision
- The identification and assessment of the impact of statutory and strategic planning provisions with emphasis on those relating to demolition
- The assessment of the heritage and streetscape value of the site and structures
- The identification of any relevant legal constraints to disposal of the site
- An audit of the site for possible contamination
- A summary of the constraints and opportunities for re-development

2. Site Description

The subject site is located on the periphery of Hobart's Central Business District with frontage to Melville and Brisbane Streets. A Location Plan identifying the site is shown in Figure 1. The site is presently used as office accommodation for the State Emergency Service and Tasmanian Fire Service and as parking and storage for various government agencies. Surrounding land uses include two major Hobart City Council carparks, retail and offices.

The existing structures on the site are of one to three stories in height and are constructed of pressed clay brick with galvanised roofing and have frontage to Melville Street. To the rear of these frontages there are substantial single storey, timber trussed storage buildings. All these structures date to 1922 and were purpose built for 'Crisp and Gunn' who operated a timber milling and merchandising business from the site. More detailed descriptions of these buildings are contained in the structural analysis and heritage assessments following in this report. Approximately 4,428 square meters of the site is developed with the balance being in gravelled and bitumen hard standing and used for parking. This unenclosed space of approximately ~~2,763~~ 3445 square meters is

accessed from Brisbane Street and is approximately one storey below the level of Brisbane Street.

The site in its entirety has an area of ~~2191~~ 7873 square meters and there are few, if any, such substantial parcels within close proximity to the Cental Business District. As can be seen in the following Site Plan (Figure 2), the subject site is comprised of five lots, which are defined as follows;

- Lot 1 - 79 to 81 Melville Street, Title reference - part of CT 2878 / 23 (see P114103) ~~3868~~ 4615.9 m2 - 175 m² = 4640 m² sq. meters
- Lot 2 - 83 to 85 Melville Street, Title reference - CT 2294 / 50, - ~~2323~~ 2233 m2 sq meters
- Lot 3 - 88 Brisbane Street, Title reference - CT 2311 / 98, - 228 sq meters
- Lot 4 - 90 Brisbane Street, Title reference - CT 2394 / 23, - 347 sq meters
- Lot 5 - 92 Brisbane Street, Title reference - CT 2294 / 49, - 425 sq meters

3. Structural Assessment and Re-development Potential

(refer Figure 3 Building Envelope Plan)

3.1 79 Melville Street (Lot 1).

This is a substantial brick and timber structure with identified heritage and streetscape value. It is two storeys at the front with a floor area of 442 square meters and a single storey at the rear with a floor area of 203 square meters . The floors are timber throughout. There is an original internal stair and an external steel fire escape. Two roof lights provide natural lighting to the rear internal areas and the large ceiling heights would allow for the installation of ducted air conditioning if desired. The building appears in good condition throughout.

It is possible to create a separate title for this building, the possible boundary locations are shown on Figure 3. As shown, the western boundary would need to be located three meters from the western wall to allow retention of the windows on that face (and also to accommodate the external fire escape). The current openings in the rear wall of the main building would also need to be blocked up. Whilst further stratum subdivision of the property is technically feasible under the provisions of the Building

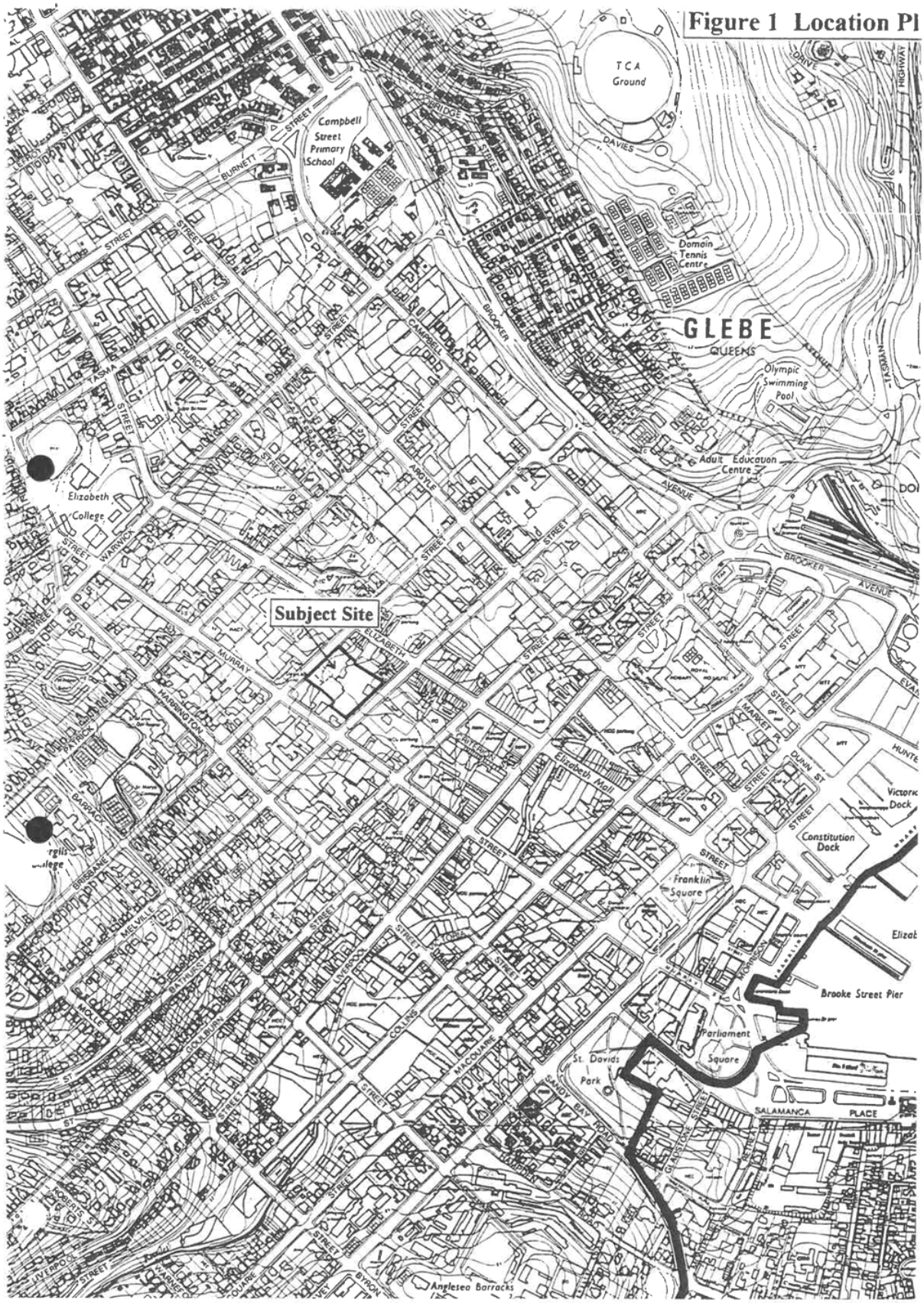


Figure 1 Location Pl
TCA Ground
Campbell Street Primary School
Domain Tennis Centre
GLEBE
Olympic Swimming Pool
Adult Education Centre
Elizabeth College
Subject Site
Constitution Dock
Franklin Square
Brooke Street Pier
Parliament Square
St. Davids Park
Anglesea Barracks

Code of Australia, the location of the single internal stairway makes such a proposal impractical without major modifications.

3.2 81 Melville Street (Lot 1)

This three storey building, currently used as offices, is of brick construction with timber floors and it totals some 767 square meters in area. It is served by a single fire isolated stair at the front corner and also has access openings through the dividing wall to Number 83 - 85. These openings through the party wall would need to be blocked up if the properties are to be dealt with separately.

The original building structure appears in sound condition although much of the internal partitioning is of varying date and quality and adds little to the buildings worth.

A large proportion of the remainder of the site is covered with timber trussed, single storey storage buildings. These consist of three discreet but conjoined structures comprising floor areas of 1911 square meters, 298 square meters and 88 square meters. From a structural viewpoint, while these buildings provide adequate accommodation for their current use (the informal storage of vehicles, building materials and safety equipment etc.) they provide little realistic potential for upgrading for other uses.

The rearmost of these storage buildings (behind 79 Melville Street and closest to Brisbane Street) has been affected by a recent boundary adjustment and it is apparent that it now straddles the boundary with an adjacent lot (see SP 114102, and SP 114103, Appendix 4). The disposal of the subject property may require the resolution of this situation. If this is necessary, two options are available;

- Demolition of the structure, or
- The installation of a new fire rated masonry wall on the new boundary. This would involve construction of a new footing and re-supporting the roof structure on either side of the new wall which would extend up as a parapet. The wall could be built of double brick cavity or simple skin concrete block. This option would allow the subsequent removal of either "half" of the building at the requirement of either owner.

The rear section of the site, adjacent to Brisbane Street, is considerably below the footpath level, which is supported by very old brick and sandstone retaining walls.

Large diameter sewer and stormwater mains run through the centre of this site. This will most likely require re-alignment in any re-development of the site as usual Hobart City Council policy is not to allow new buildings over mains.

3.3 83 - 85 Melville Street (Lot 2)

The front portion of this lot contains a two-storey office building of similar construction to Number 81 and co-joined to it with a common party wall. The upper floor is at the same level as the upper level of Number 81 but the lower floor is between the two lower levels of the adjacent building. The building has a fire- isolated stair (recent addition) as well as another open internal stair. Vehicular access from Melville Street to the rear of the lot exists through an access way in the building. Depending on future uses, provision of ducted air - conditioning may be required and the floor to floor height would be sufficient to accommodate such an installation.

There is a substantial single storey storage building to the rear (similar to the adjacent property).

3.3 88 and 90 Brisbane Street (Lots 3 and 4 respectively)

These two properties are vacant and unused and both contain some ruins of old buildings (of no current heritage or streetscape value).

The title to Number 88 indicates an old 'roadway' along the western boundary which appears to have been used as a right of way and drainage easement for Number 90. The possibility of expunging this encumbrance should be investigated.

3.4 92 Brisbane Street (Lot 5)

This property is vacant and is currently used for car parking and access to the rear of the 83 - 85 Melville Street buildings.

4. Planning Provisions - Statutory

The principal statutory document controlling development on the site is The City of Hobart Planning Scheme 1982. The scheme area is comprised of Land Use Zones. Each zone is divided into Precincts with an associated 'Statement of Desired Future

Character'. These statements provide a finer definition to the desired form of development within an area and provide guidance in the application of the general principles of development control and the various schedules within the scheme ordinance.

The following is a summary of the principle relevant provisions of the Scheme. It should be noted that only the principle provisions are identified sufficient to assess the development potential of the site, further detailed planning assessment will be required in association with any development proposal.

4.1 Zoning;

The subject site is contained within the Central Commercial and Administrative Zone and is in Precinct 8A. The objective of this zone as identified in Clause 5.3 of the scheme is as follows;

> *" The Objective of the Central Commercial and Administrative Zone is to provide for the administrative, commercial, financial and professional headquarters of the State, for intensive generators of employment, and for cultural and community activities and supporting uses associated with those functions."*

The Statement of Desired Future Character for Precinct 8A within this zone is identified in Section 5.3.5 as,

> *" The Elizabeth Street Precinct should maintain its function as a retail, wholesale and office area, with residential use being an important subsidiary activity.*
>
> *New development should maintain the linear image of Elizabeth Street which is a dominant feature of the overall character of the Precinct."*

The above statements provide for a wide range of land uses and development forms. Whilst not specifically identifying a preferred use or uses, neither to they constrain the possible range of uses that would in practice be considered on the site.

4.2 Land Use;

Schedule A, Table A1 of the Scheme provides further definition of the types of Land Uses that may be considered for the site. These provisions relate to the 'use component' of a development proposal only ie. a development which is a 'permitted use' may still be subject to the exercise of a discretion by Council in respect to it's car parking or boundary setback provisions and accordingly could receive a conditional

approval or refusal based on these grounds. The provisions of Table A1 are summarised as follows;

Permitted Uses - these are uses 'permitted as of right' including :- all types of residential development, consulting rooms, community centre, office, shop, hotel/motel, service industry, show room

Prohibited Uses - these uses are prohibited (except in specific circumstances relating to existing non- conforming uses) :- Transport depot, timber yard, (heavy) industry

Discretional Uses - these uses may be permitted or refused at Council's discretion, they include all other use types not identified above.

As can be seen, most use types can be contemplated for the subject site with the exception of those of a heavy industrial nature which would generate substantial movements of heavy vehicles or be potentially hazardous or noxious.

4.3 Development Density;

Development density is determined by two principle provisions:- plot ratio and lot size. Under Schedule B. of the Scheme the following apply to the subject site;

Plot Ratio - Basic 2.25 Maximum 3.00
(maximum floor area relative to site area)

Minium lot size - 120m2 Min.
Frontage 6m
(for subdivision)

4.4 Boundary Setbacks;

No specific boundary setbacks are required under the Planning Scheme, building setbacks would be determined by the requirements of the Building Regulations.

4.5 Height;

The maximum permissible height for buildings on the subject site is 12 meters pursuant to Table C1 of the Scheme. 'Height' is defined under the Scheme as the distance measured between the natural surface level and the topmost habitable floor level of a building.

4.6 Car Parking and Access;

Parking and access standards are identified in Schedule E of the Scheme. The Schedule contains parking space requirements for individual land use groups. However there is provision to vary these requirements and it is reasonable to expect that an exercise of discretion in regard to any of these standards could be granted subject to adequate justification being provided within a planning submission for development. Council may require 'cash-in-lieu' for any car spaces not provided on site (currently $9,000 per space). The provisions of Schedule E should therefore be read as a guide rather than an absolute in respect to the subject site.

4.7 Demolition;

The potential for demolition of any existing structure will be determined by the assessment of it's historic and streetscape value (see Section 6 of this report). None of the existing structures are listed on the National Estate or are identified by the National Trust, the Royal Australian Institute of Architects List or the City of Hobart Planning Scheme as having specific merit. Accordingly it may be said that there is no absolute prohibition upon their demolition, it would be a matter to be decided at Council's discretion or on the basis of a possible appeal lodged with The Resource Management and Planning Appeals Tribunal.

Based upon the historic assessment contained in this report, it is considered that, in practical terms, any successful re-development proposal would encompass the retention of the existing structure at 79 Melville Street in it's entirety and make every effort to retain the structure at 81-85 Melville Street by its adaptation and reuse. The demolition of the existing structures at 81-85 Melville Street should only be proposed if it can be satisfactorily demonstrated that their retention would deny the economic and efficient re-development of the site and their replacement structures would enhance the existing streetscape.

There is no apparent restriction to the demolition of the garage/store at the rear of 79 and 81-85 Melville Street based on historic or streetscape values. Any application for it's demolition should include the completion of an historical record of the building prior to demolition and provisions for the future treatment of the affected portion of the subject site either as an interim or permanent measure, in accordance with Principle 5 of the Scheme which states;

" The demolition of any building shall not be permitted until a further or replacement development, which may include temporary landscaping of that land, has been approved unless such demolition is required by statutory order."

5. Planning Provisions - Strategic

The Hobart City Council released the 'Central Area Strategy Plan' (CASP) for public comment in the early part of 1994. This document provides an insight to the existing demand and floor space supply patterns within the C.B.D. and an indication of Council's intention with respect to possible changes to statutory planning provisions in the future.

CASP is the culmination of nearly three years research into the functionality of the C.B.D. of Hobart. It's broad aim is to provide a strategy to guide and manage the development and enhancement of the C.B.D for the next ten years. The following points are extracted from CASP and may assist in the formulation of a purchase and development strategy for the subject site.

- *" The Central Area remains the single largest employment location in Tasmania. So far as the Metropolitan Area is concerned it is the principal place of employment for the resident population....Its significance as a shopper destination has been confirmed by the household survey conducted as part of the Retail Topic Report and more recently through a larger sample of 600 households carried out by the City Heart Business Association. Around two thirds of people from the Hobart Metropolitan Area claim to have visited the city centre within the pervious week. The surveys also found that the city centre fulfils an important role for activities such as paying bills, banking, conducting business, eating out and entertainment."*

- CASP identifies the development opportunities for the subject site as :- *" Major retail store and possibly a City Heart supermarket with car parking."* and states *" Efforts will be made to strengthen the role and function of Elizabeth Street as far as Brisbane Street, and extend the shopping choices available in the City Heart by the promotion of the development opportunities offered by Council's*

Melville Street car park site and former Crisp and Gunn site at 83 Melville Street."

- The principle development controls proposed in CASP that relate to the subject site are:- Plot Ratio : 3.0
  Height : 20 metres
  Car Parking : no requirement

The following Figures 4 and 5 have been extracted from CASP as indicators of demand potential and existing floor space supply in the C.B.D. It should be noted that the Central Area of the City remains the single largest employment location in Tasmania (see Figure 4).

Figure 4

EMPLOYMENT CHANGE IN HOBART AND THE METROPOLITAN AREA 1971-1991

	1971	1976	1981	1986	1991
Greater Hobart	60,038	67,881	69,431	71,895	73,945
Central Area	24,378	24,426	21,611	21,564	21,378[I]

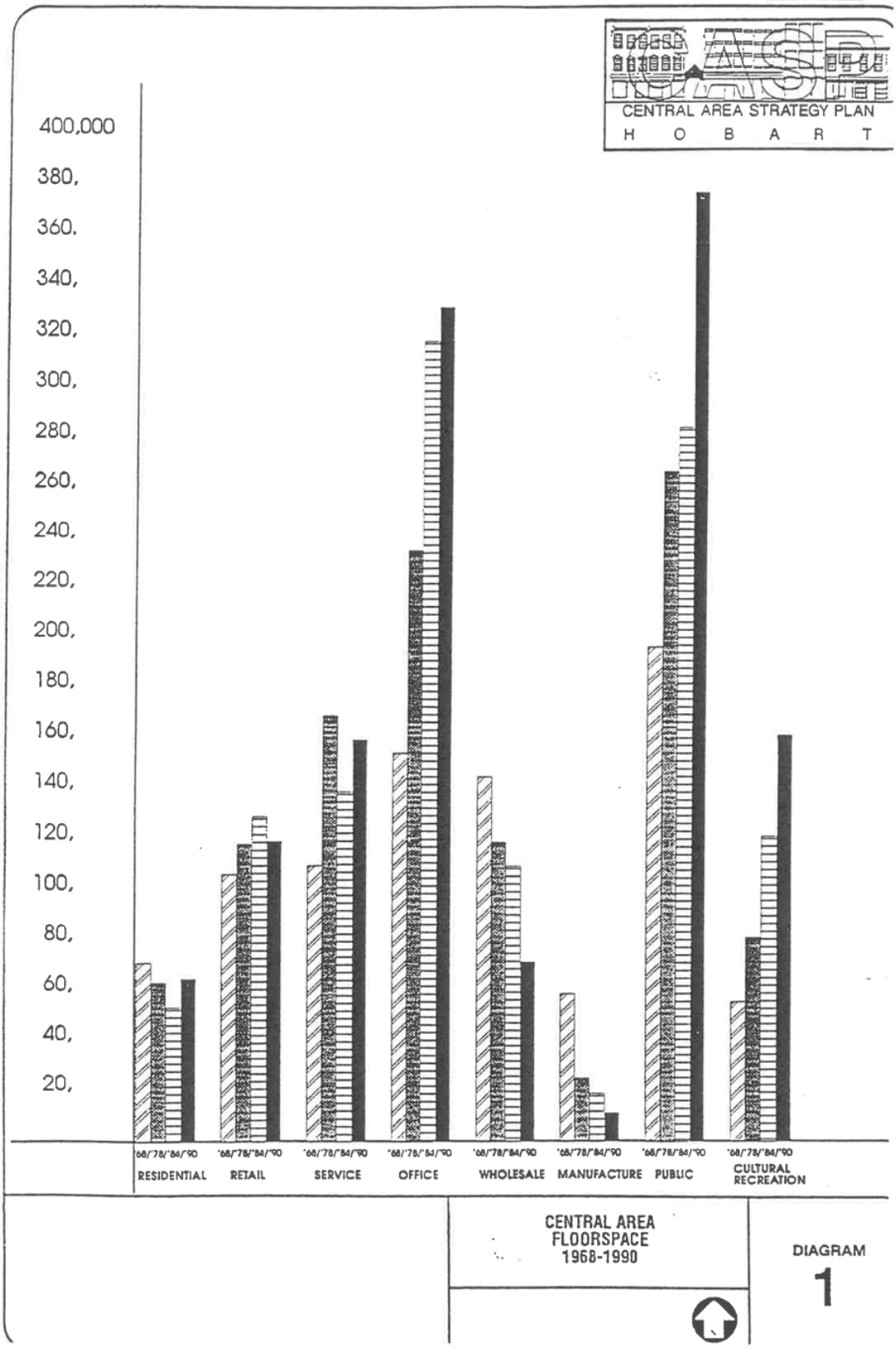
Sources: A.B.S. and Employment & Economic Base Topic Report

Notes: I = 1990 Figure

6. Heritage and Streetscape Impact Assessment

Detailed assessments of the heritage / streetscape values of the existing structures form Appendix 1 to this report. These reports have been prepared by acknowledged experts in the field of conservation and contain detailed descriptions of the site history, building fabric and essential elements to be considered for conservation in any re-development proposal. Additionally, a statement of opinion from officer's of the Hobart City Council relating to the 'Streetscape and Heritage Significance" of the subject site has been obtained and this written advice forms Appendix 2.

Figure 5


CASP
CENTRAL AREA STRATEGY PLAN
H O B A R T
400,000
380,
360,
340,
320,
300,
280,
260,
240,
220,
200,
180,
160,
140,
120,
100,
80,
60,
40,
20,
'68/'78/'84/'90
RESIDENTIAL
RETAIL
SERVICE
OFFICE
WHOLESALE
MANUFACTURE
PUBLIC
CULTURAL RECREATION
CENTRAL AREA FLOORSPACE 1968-1990
DIAGRAM
1

It is on the basis of these heritage assessments that Council will consider any application for demolition and re-development. Accordingly, the recommendations for the retention of essential elements on the site based on heritage and/or streetscape significance are summarised as follows.

79 Melville Street

The whole of the building at 79 Melville Street should be retained and the elements that date from the building construction (1922) should be retained and re-instated where possible. Recent adaptation and alterations to the fabric should be removed where the alterations are reversible.

For example, removal of the false frame under the barrel vault light well & removal of the wall through the middle of the light well at the base of the main stair, caused by the female toilet rest room addition, would be actions which would move towards re-instating the building to the previous known state. The building should be properly surveyed to identify all the internal fittings and items of significance.

81 -85 Melville Street

The building at 81-85 Melville Street originally built as the Joinery Workshop and Hardware Store of Crisp and Gunn in 1922 should be retained. The facade has a strong townscape quality. However, this complex could be adapted and recycled for a new use, if the extension or adaptation respects the 1922 fabric of the building.

Garage / Store

The timber store at the rear of 79 and 81-85 Melville Street is currently used as a garage/store. It has little remaining significance and could be demolished to make way for new uses on the site. It should be photographed and a measured drawing undertaken as part of an historical record prior to demolition. This record should be lodged with the Archives Office of Tasmania.

Open Space

The remainder of the site is defined as Open Space. It is accessible from Brisbane Street and has remnant elements of building fabric. These elements have no known cultural significance.

The sandstone wall to Brisbane Street boundary should not be destroyed. However, its relevance is unclear.

7. Environmental Hazard Assessment

7. 1 Screening Level Environmental Assessment

A screening level environmental assessment of the subject site has been conducted as part of the analysis involved in the preparation of this report, this is contained in Appendix 3.

The purpose of the assessment is to investigate the possibility of site contamination from previous and existing land uses. It has comprised a review of the site history and land use
(including examination of aerial photographs and historical review documents), review of available state and local records, and site reconnaissance. The following points are extracted from the assessment as a brief summary, but reference should be made to the assessment in its entirety.

7. 2 Possible Sources of Contamination

The current and past land uses on the site have involved the storage and handling of potentially hazardous materials. The extent of possible sources of contamination, based on the initial investigation, appear to consist of the following.

- A 1,000 gallon petrol underground storage tank and bowser licensed to the Shell Company of Australia in 1973 (under the Inflammable Liquids Act 1929) by the State Department of Mines. The licence indicates that the petrol tank and bowser was to be operated by the State Supply and Tender Department. Notes attached to the licence further indicate that the petrol tank was previously used by Crisp and Gunn and abandoned prior to the licence date (probably circa 1965 when operations ceased). It is not known how old the tank is, or what other materials may have been stored in it.

- In addition to the underground petrol tank, there is a small outdoor flammable liquid store (enclosed by a locked, chain fence) reported to contain 44 gallon

drums of chain saw fuel and kerosene. It is located at the rear of the State Emergency Service (SES) building and store at 81 -85 Melville Street.

- It is not known what other materials may have been stored on the site, but it is unlikely that the site was subject to exposure from large quantities of other hazardous materials, given the nature of the present and past land uses. Small quantities of chemicals
  (solvents, paints, etc) were probably part of the historical hardware merchandising activities.

- Insulation was noted above ceiling panels in some of the upstairs office spaces at 79 Melville Street. The type of insulation used at the property is not known.

7. 3 Extent of Further Work Required

The assessment should be regarded as a screening level exercise only and further investigative and possible remedial actions may be required in the course of the sites re-development or prior to its disposal, if this was considered desirable. The following are recommended.

- Testing of soils and possibly some of the building materials (insulation) for potential contamination and/or identification of hazardous materials.
- Access to fenced and locked portions of the store area is also necessary to fully investigate the nature and condition of the facility. Of interest are the ground-level access covers that were observed, and the reported triple interceptor oil and sediment trap. A more thorough examination of council drainage plans and other site drawings, with field confirmation, is necessary in the inaccessible areas of the property.
- Due to the presence of the underground petrol storage tank and other materials at the site, a sampling program is indicated to adequately assess the environmental condition of the site.
- Upon completion of these further investigations, recommendations can be made on the short term and long term environmental management of the property.
- Consideration has been given to the order of costs involved in undertaking the identified actions. These indicative costs are:-

Investigation and analysis as outlined above	$ 3,000
Removal of underground storage tank	$ 2,000
Possible remedial actions if required	to be costed

8. Legal Constraints

A title search has been undertaken in the preparation of this report. Copies of the relevant titles are included as Appendix 4 and these are referred to in Section 2 of this report.

There are no apparent legal constraints to the disposal and re-development of the subject site identified by this investigation other than the storage buildings behind 79 Melville Street which have been affected by a recent boundary adjustment (see Section 2). The disposal of the subject property may require the resolution of this situation.

9. Summary of Constraints and Opportunities for Re-development

9.1 It is possible to create a separate title for 79 Melville Street, the possible boundary locations are shown on Figure 3. As shown, the western boundary would need to be located three meters from the western wall to allow retention of the windows on that face (and also to accommodate the external fire escape). The current openings in the rear wall of the main building would also need to be blocked up. Whilst further stratum subdivision of the property is technically feasible under the provisions of the Building Code of Australia, the location of the single internal stairway makes such a proposal impractical without major modifications.*(page 5)*

9.2 The openings through the party wall between 81 and 83-85 Melville Street would need to be blocked up if the properties are to be dealt with separately.

A large proportion of the remainder of the site is covered with timber trussed, single storey storage buildings. These consist of three discreet but conjoined structures comprising floor areas of 1911 square meters, 298 square meters and 88 square meters. From a structural viewpoint, they provide little realistic potential for upgrading for other uses.

The rearmost of these storage buildings (behind 79 Melville Street and closest to Brisbane Street) has been affected by a recent boundary adjustment and it is apparent that it now straddles the boundary with an adjacent lot. The disposal of the subject property may require the resolution of this situation. If this is necessary, two options are available;

- Demolition of the structure, or
- The installation of a new fire rated masonry wall on the new boundary. *(page 6)*

9.3 The title to Number 88 Brisbane Street indicates an old 'roadway' along the western boundary which appears to have been used as a right of way and drainage easement for Number 90. The possibility of expunging this encumbrance should be investigated *(page 7)*

9.4 Under the provisions of the City of Hobart Planning Scheme 1982, most use types can be contemplated for the subject site with the exception of those of a heavy industrial nature which would generate substantial movements of heavy vehicles or be potentially hazardous or noxious.*(page 9)*

9.5 Under Schedule B. of the Scheme the following development density provisions apply to the subject site; *(page 9)*

Plot Ratio - Basic 2.25 Maximum 3.00
(maximum floor area relative to site area)

Minium lot size - 120m2 Min. Frontage 6m
(for subdivision)

9.5 No specific boundary setbacks are required under the Planning Scheme, building setbacks would be determined by the requirements of the Building Regulations.*(page 9)*

9.6 The maximum permissible height for buildings on the subject site is 12 meters. 'Height' is defined under the Scheme as the distance measured between the natural surface level and the topmost habitable floor level of a building. *(page 9)*

9.7 Parking and access standards are identified in Schedule E of the Scheme. The Schedule contains parking space requirements for individual land use groups. However there is provision to vary these requirements and it is reasonable to expect that an exercise of discretion in regard to any of these standards could be granted subject to

adequate justification being provided within a planning submission for development. Council may require 'cash-in-lieu' for any car spaces not provided on site. *(page 10)*

9.8 Based upon the historic assessment contained in this report, it is considered that, in practical terms, any successful re-development proposal would encompass the retention of the existing structure at 79 Melville Street in it's entirety and make every effort to retain the structure at 81-85 Melville Street by its adaptation and reuse. The demolition of the existing structures at 81-85 Melville Street should only be proposed if it can be satisfactorily demonstrated that their retention would deny the economic and efficient re-development of the site and their replacement structures would enhance the existing streetscape.

There is no apparent restriction to the demolition of the garage/store at the rear of 79 and 81-85 Melville Street based on historic or streetscape values. Any application for it's demolition should include the completion of an historical record of the building prior to demolition and provisions for the future treatment of the affected portion of the subject site either as an interim or permanent measure. *(page 10)*

9.9 The extent of possible sources of contamination of the site, based on the initial investigation, appear to consist of the following.

- A 1,000 gallon petrol underground storage tank and bowser
- A small outdoor flammable liquid store (enclosed by a locked, chain fence) reported to contain 44 gallon drums of chain saw fuel and kerosene.
- Insulation above ceiling panels in some of the upstairs office spaces at 79 Melville Street. The type of insulation used at the property is not known. *(page 15)*

9.10 Possible remedial actions may be required in the course of the site's re-development or prior to its disposal, if this was considered desirable. The following are recommended.

- Testing of soils and possibly some of the building materials (insulation) .
- A more thorough examination of council drainage plans and other site drawings, with field confirmation, is necessary in the inaccessible areas of the property.
- Due to the presence of the underground petrol storage tank and other materials at the site, a sampling program is indicated to adequately assess the environmental condition of the site.

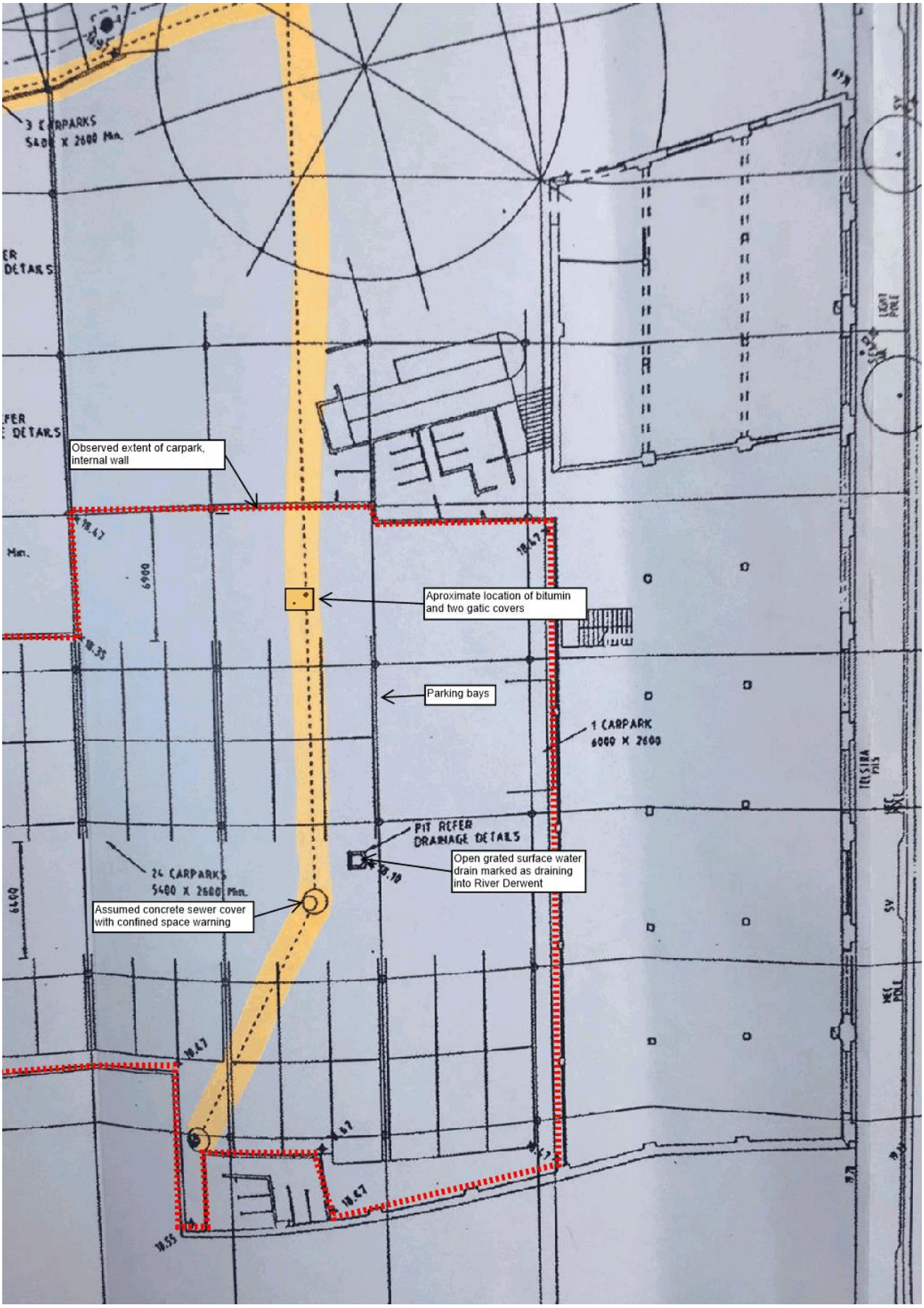
9. 11 Consideration has been given to the order of costs involved in undertaking the identified actions. These indicative costs are:-

Investigation and analysis as outlined above	$ 3,000
Removal of underground storage tank	$ 2,000
Possible remedial actions if required	to be costed *(page 15)*

9. 12 There are no apparent legal constraints to the disposal and re-development of the subject site identified by this investigation other than the storage buildings behind 79 Melville Street which have been affected by a recent boundary adjustment. The disposal of the subject property may require the resolution of this situation.*(page 16)*

Site Location Plan – 79 Melville Street, Hobart

WSP | PARSONS BRINCKERHOFF


Observed extent of carpark, internal wall
Aproximate location of bitumin and two gatic covers
Parking bays
1 CARPARK
6000 X 2600
PIT REFER DRAINAGE DETAILS
Open grated surface water drain marked as draining into River Derwent
24 CARPARKS
5400 X 2600 Min.
Assumed concrete sewer cover with confined space warning

Grated surface water drain
Concrete manhole cover
(assumed sewer)

Site inspection photos – 79 Melville St, Hobart- 07/04/2017

WSP | PARSONS BRINCKERHOFF

WSP | PARSONS BRINCKERHOFF

From: Warren Jordan
To: Peter Topliss; Nicole Reineker
Subject: Fwd: 79-85 Melville Street – 7 April 2017 - Site Inspection
Date: Friday, 28 September 2018 6:52:04 PM
Attachments: 79 Melville St Hobart.pdf
ATT00001.htm
ERLUR.PDF
ATT00002.htm
Photos and plans.pdf
ATT00003.htm

Hi Peter and Nicole
Some further info for you here

Cheers Warren

Sent from my iPhone

Begin forwarded message:

From: "Leigh Roberts" <leigh@nekon.com.au>
To: "Warren Jordan" <warren.jordan@utas.edu.au>
Subject: FW: 79-85 Melville Street – 7 April 2017 - Site Inspection

Hi Warren

Our partners, Abacus, undertook a WorkSafe search in 2017 and the results of that search are attached. WSP were engaged by Abacus to investigate and the results of that investigation are below and attached. They could not locate any petrol tank.

Also, briefcase is being dropped off this afternoon to the ground floor of the original building

Cheers

Leigh Roberts
Nekon Pty ltd
Mobile 0408 141 316

From: Laurie Angeli [mailto:langeli@abacusproperty.com.au]
Sent: Friday, 28 September 2018 10:45 AM
To: Leigh Roberts
Subject: FW: 79-85 Melville Street – 7 April 2017 - Site Inspection

Leigh

This is something that maybe of use

Laurie Angeli | Senior Portfolio Manager
Abacus Property Group | Level 34 Australia Square | 264-278 George Street | Sydney NSW 2000
T 02 9253 8605 | M 0415 565 393 | F 02 9253 8616 | E langeli@abacusproperty.com.au
www.abacusproperty.com.au

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From: Charles Scarafiotti <charles@nekon.com.au>
Sent: Thursday, 27 September 2018 10:22 AM
To: Laurie Angeli <langeli@abacusproperty.com.au>
Cc: Leigh Roberts <leigh@nekon.com.au>
Subject: RE: 79-85 Melville Street – 7 April 2017 - Site Inspection

Hi Laurie, re the below, yes it goes back a wee while !! Do you have a copy of the Workplace Standards Tas application to obtain the search documents ?

Thanks

Charles

Charles Scarafiotti
Nekon Pty. Ltd.

Tel. (03) 6224 6511
Fax. (03) 6224 6522
Mob. 0418 136 397

From: Laurie Angeli [mailto:langeli@abacusproperty.com.au]
Sent: Tuesday, 1 August 2017 2:12 PM
To: Chris Brookwell (chris.brookwell@sttas.com.au)
Cc: Charles Scarafiotti; Robert Rockefeller; Peter Strain
Subject: FW: 79-85 Melville Street – 7 April 2017 - Site Inspection

Gents

Please see attached and comments below from the consultant

Laurie Angeli | Portfolio Manager
Abacus Property Group | Level 34 Australia Square | 264-278 George Street | Sydney NSW 2000
T 02 9253 8605 | M 0415 565 393 | F 02 9253 8616 | E langeli@abacusproperty.com.au
www.abacusproperty.com.au

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From: Moore, Peter [mailto:peter.moore@wspgroup.com]
Sent: Monday, 10 April 2017 8:26 AM
To: Laurie Angeli; Peter Strain
Subject: FW: 79-85 Melville Street – 7 April 2017 - Site Inspection

Laurie,

Please find attached report from Daniel Laver of site inspection and documents sourced for the Dangerous goods search for the Hobart property.

Cheers Peter

Peter Moore
Associate Director

D: +61 2 8925 6720
M: +61 4 1623 5034
peter.moore@wspgroup.com

From: Laver, Daniel
Sent: Friday, 7 April 2017 4:55 PM
To: Moore, Peter
Subject: 79-85 Melville Street – 7 April 2017 - Site Inspection

79-85 Melville Street – 7 April 2017 - Site Inspection

Hi Peter,

A site inspection was undertaken today at the above property by Daniel Laver (Senior Environmental Scientist - WSP). During the site inspection Chris Brookwell (Executive General Manager - Forestry Tasmania) provided an A3 plan of the carpark layout and levels. An annotated photo of the plan is attached along with photos.

The following observations were made during the inspection:

- Two metal gatic covers were observed located on a square of reinstated bitumen approximately 1x1m in size
- Two plastic covers were removed which reviewed two vertical pipes of approximately 3-4 inches in diameter

- No hydrocarbon odours were noted when the covers were removed
- The periodic horizontal flow of water was observed at the base of the standpipes approximately 2.9 m below surface
- the covers aligned with the services indicated on the plan and observed onsite, which are believed to relate to sewer and surface water (refer to annotated plan).

The dangerous goods information requested from WorkSafe Tasmania is attached and reported that a tank was present at 79-83 Melville St between 1955 to 1967. This was associated with Shell and Crisp & Gunn Co-OP Ltd.

Taking the above observations into account and information provided by WorkSafe is believed that the vertical pipes were most likely installed to inspect or allow access to the existing services.

The periodic flow of water and their location in relation to existing services suggests it may be associated with the sewer or stormwater water drainage services.

Regards

Daniel Laver
Senior Environmental Scientist

D: +61 8 8405-4410
M: +61 429 476303
DLaver@pb.com.au

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Calbourne Nominees
GPO Box 1406
Hobart Tas 7001

Invoice No.: 00011933
Date: 27/04/2018
Job No.: 1940-02

Construction 3 Pty Ltd

ACN 109 213 336

Tax Invoice

Description	Amount
Attention: Charles Scarafiotti	
Works associated with the cleaning sump at the former Forestry Building, fill with sand after clean and cap	
Labour	$1,152.00
Materials	$357.00
Tip fees	$61.00
Total Exc GST:	$1,570.00
GST:	$157.00
Total Inc GST:	$1,727.00
Less Amount Paid:	$0.00
Balance Due:	$1,727.00

This is a payment claim under the Building and Construction Industry Security of Payment Act 2009.

Terms: 30 days from date of invoice
Interest at the rate of 17% p.a. will be charged on overdue accounts

Direct Deposit Details:

BSB: 017 - 318
Account No.: 4992 - 30963

20 Watchorn Street, Hobart, Tasmania 7000
Phone: 03 6231 1998 Fax: 03 6231 1996
Email: admin@construction3.com.au
ABN 22 109 213 336

From: Warren Jordan
To: Peter Topliss; Nicole Reineker
Subject: FW: Oil Sump Removal/Treatment
Date: Thursday, 27 September 2018 10:44:29 AM
Attachments: Con3 Inv 00011933.pdf
Motor Vehicle Workshop Oil Sump Removal.pdf

Hi Peter and Nicole

Just in from Nekon for Forestry, see attached.

Cheers Warren

Warren Jordan
Senior Manager, Design and Development
Infrastructure Services and Development

T +61 3 6226 7353 | M 0439 995 663
Private Bag 15 Hobart TASMANIA 7001
www.utas.edu.au/csd

UNIVERSITY of TASMANIA
CRICOS 00586B

From: Leigh Roberts <leigh@nekon.com.au>
Sent: Thursday, 27 September 2018 9:59 AM
To: Warren Jordan <warren.jordan@utas.edu.au>
Subject: FW: Oil Sump Removal/Treatment

Hi Warren, please see email below and attached in regards to the remediation of an oil sump in the workshop

Cheers

Leigh Roberts
Nekon Pty ltd
Mobile 0408 141 316

From: Charles Scarafiotti
Sent: Thursday, 27 September 2018 9:53 AM
To: Leigh Roberts
Subject: Oil Sump Removal/Treatment

Leigh, re the oil sump treatment, please see attached.

Thanks
Charles

Charles Scarafiotti
Nekon Pty. Ltd.

Tel. (03) 6224 6511
Fax. (03) 6224 6522

Mob. 0418 136 397

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GHD

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The Power of Commitment

E

Appendix E:

Traffic Report

Forestry Building Revitalisation

Traffic Impact Statement

University of Tasmania

16 December 2021

→ The Power of Commitment

GHD Pty Ltd
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Author	Yishin Chen
Project manager	James Fitzpatrick
Client name	University of Tasmania
Project name	Forestry Building – Carpark Ramp Review
Document title	Forestry Building Revitalisation | Traffic Impact Statement
Revision version	Rev 0
Project number	12547815

Document status

Status Code	Revision	Author	Reviewer		Approved for issue		
			Name	Signature	Name	Signature	Date
S4	0	Y. Chen	M. Petrusma	On file	M. Petrusma	On file	16/12/21

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The Power of Commitment

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Appendix A Plan drawings
Appendix B Swept Path Assessments

1. Introduction

GHD Pty Ltd (GHD) was engaged by the University of Tasmania (UTas) to prepare a Transport Impact Statement for the revitalisation of the university's existing Forestry Building on Melville Street, Hobart.

1.1 Purpose of this report

The purpose of this report is to address the Road and Railway Assets Code and the Parking and Access Code of the *Hobart Interim Planning Scheme 2015*.

1.2 Scope and limitations

This report: has been prepared by GHD for University of Tasmania and may only be used and relied on by University of Tasmania for the purpose agreed between GHD and University of Tasmania as set out in this report.

GHD otherwise disclaims responsibility to any person other than University of Tasmania arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD 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.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.

GHD has prepared this report on the basis of information provided by University of Tasmania and others who provided information to GHD (including Government authorities), which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

1.3 Assumptions

This report relies on the following assumption(s) as well as any other assumptions listed within the body of the report itself:

- Vehicle access to the site is limited to courier vans and contractor vehicles via an existing vehicle access point on Brisbane Street. Heavy vehicle access to the site is not proposed.

1.4 References

The following references have been used in the development of this report:

- *Hobart Interim Planning Scheme 2015*.
- SCATS data at Murray Street and Brisbane Street intersection, November 2020.
- Five-year crash data from Department of State Growth Open Data.
- AS/NZS 2890.6:2009 *Parking facilities, Part 6: Off-street parking for people with disabilities*.
- AS 2890.3: 2015 *Parking facilities, Part 3: Bicycle parking*.
- AS/NZS 2890.1:2004 Parking facilities, *Parking 1: Off-street car parking*.

2. Existing Conditions

2.1 Subject site

The subject site, shown in Figure 1, consists of 80 Brisbane Street and 83 Melville Street in Hobart CBD. This is the existing site of the University of Tasmania's Forestry Building and a Freedom Furniture and Homeware store. The subject site is located within the Central Business Zone as specified in the *Hobart Interim Planning Scheme 2015*.

Figure 1 Subject site

Source: theLIST (www.thelist.tas.gov.au), Tasmanian Government (2021)

Existing vehicle access to the subject site is permitted via Brisbane Street to two Freedom Furniture and Homeware parking areas. The southern access provides street-level parking for delivery and customer pick-up vehicles. The northern access provides access to an underground car park for Freedom Furniture and Homeware customers.

2.2 Transport network

The subject site has frontage onto Brisbane Street to the west and Melville Street to the east. These roads will be discussed in more detail in the below sections.

2.2.1 Brisbane Street

Brisbane Street is a local road managed by Hobart City Council with a two-way daily traffic count of approximately 5800 vehicles per day according to a recorded 2020 SCATS dataset at the intersection of Murray Street and Brisbane Street. Brisbane Street travels in north and south directions connecting Elizabeth Street to the north and Murray Street to the south in the vicinity of the subject site. Brisbane Street is configured as a two-way, two-lane road with additional turn lanes on approach to Elizabeth Street and Murray Street. On-street parking is provided in sections on either side of the road, consisting of a mix of short-term metered/non-metered parking spaces and loading zones.

The speed limit on Brisbane Street is 50 km/h.

2.2.2 Melville Street

Melville Street is a local road managed by Hobart City Council. It travels in north and south directions connecting Elizabeth Street to the north and Murray Street to the south in the vicinity of the subject site. Melville Street is configured as a two-way, two-lane road with additional turn lanes on approach to Elizabeth Street, Murray Street and Hobart Central Car Park. On-street parking is provided on either side of Melville Street, consisting of a mix of short-term metered/non-metered parking spaces and loading zones. A bus zone is located on the southbound side of Melville Street at the Salamanca Market bus stop.

The speed limit on Melville Street within the vicinity of the subject site is 40 km/h.

2.2.3 Active transport network

Footpaths are provided along either side of Melville Street and Brisbane Street, and there are signalised crossings providing pedestrian priority movements at each of the four adjacent intersections along Elizabeth Street and Murray Street.

There are no dedicated cycling provisions along Melville Street or Brisbane Street, therefore cyclists must travel within general traffic or empty on-street parking bays. Melville Street is located within the new CBD 40 km/h zone (as of February 2021) – the reduced speed limit provides a safer road environment for cyclists.

2.2.4 Public transport network

The public transport network in the vicinity of the subject site, shown in Figure 2 is serviced primarily by Metro Tasmania and Tassielink buses. Buses operate along Melville Street north of Murray Street, and along Elizabeth Street and Murray Street.

The closest bus stops to the subject site are located on Elizabeth Street just south of the Melville Street intersection, and on Elizabeth Street just north of the Brisbane Street intersection. An additional bus stop as part of the Salamanca Market bus circuit is located opposite the UTas Forestry Building along Melville Street southbound.

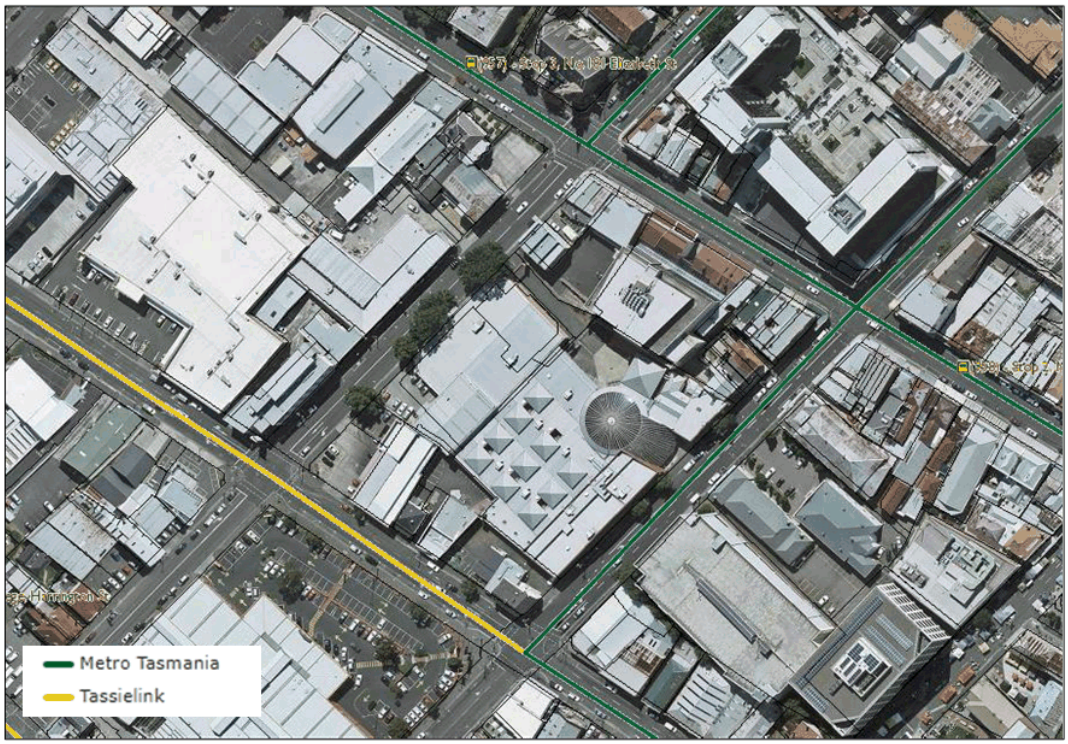


Figure 2 Bus network

Source: theLIST (www.thelist.tas.gov.au), Tasmanian Government (2021)

2.3 Crash history

Crash data was obtained from the Department of State Growth for the five-year period between December 2014 and December 2019 for Melville Street and Brisbane Street between Elizabeth Street and Murray Street. The results are presented in Table 1 and Figure 3.

In total, eight crashes were recorded, and none resulted in serious or fatal injuries. All crashes were recorded during the daytime. No pedestrian or cyclist related crashes were recorded in the vicinity of the subject site.

There is a trend in parking related crashes along Melville Street and Brisbane Street which could be attributed to frequent turnover of on-street parking spaces due to metered and time-restricted parking restrictions.

There was one crash recorded within the existing Freedom Furniture and Homeware delivery and customer pick-up car park. It involved reversing into a fixed object or parked vehicle.

Table 1 Latest five-year crash history

Location	No. of crashes		Type(s) of crashes
	Total	Casualties	
Melville Street	6	0	Other same direction (2), leaving parking (1), parked (1), U-turn (1), other manoeuvring (1)
Brisbane Street	1	0	Parked (1)
Off-street	1	0	Reversing into fixed object/parked vehicle (1)
Total	**8**	**0**	

Figure 3 Map of the latest five-year crash history

Source: Department of State Growth Open data, accessed October 2021.

3. Proposed Developments

3.1 Overview

UTas' existing Forestry Building is to be revitalised and expanded as part of works for the university's CBD campus. The expansion will take over the existing Freedom Furniture and Homeware site located adjacent to the existing Forestry Building. For the purposes of this report, proposed developments consist of the following:

- Expansion of on-site open space and landscaping, providing an attractive environment for pedestrians to move and dwell within.
- New bicycle ramp (1:10) from Brisbane Street, providing access to an on-site bike store and end-of trip facilities.
- Consolidation of vehicle accesses. The existing southern access on Brisbane Street is to be retained as the sole vehicle access to the site. The existing northern access on Brisbane Street (to underground car park) is proposed for removal.
- Net decrease in on-site parking with the removal of the existing Freedom Furniture and Homeware underground customer car park. All on-site parking will be accumulated within the existing Freedom Furniture and Homeware delivery and customer pick-up car park. This car park will only be used by courier vans and contractor vehicles – all light vehicles. The parking spaces proposed in this car park are four general parking spaces and one accessible parking space.
- Removal of heavy vehicle access. The existing carpark was also used for loading and unloading associated with the Freedom Furniture and Homeware store. The existing arrangements required trucks to reverse off the street into the loading dock. The proposed development removes the loading dock at this location.
- Minor kerb modifications on Brisbane Street at the eastern end of the site to provide additional landscaping.
- No net change in on-street parking supply.

Plans for the proposed development can be found in Appendix A.

3.2 Trip generation and distribution

The revitalisation of the development site will result in a net decrease in on-site parking spaces to four general parking spaces and one accessible parking space. A reduction in on-site car parking provision reduces the vehicle trip generating potential of the site. The number of vehicle trips under proposed conditions will therefore be less than the number under existing conditions.

As the only proposed vehicle access to the development site is retained from existing conditions, the existing trip distribution to the site is per existing conditions. Overall impacts distributed throughout the surrounding road network are however reduced due to the decrease in vehicle trips under proposed conditions.

The change in vehicle trips is expected to be offset by additional people and bicycle trips that can be readily serviced within the CBD area.

4. Planning Scheme Assessment

A summary of responses to the relevant clauses of the *Hobart Interim Planning Scheme 2015* is provided in Table 2 and Table 3.

Table 2 E5.0 Road and Railway Assets Code

Clause	Heading	Response
E5.5.1	Existing road accesses and junctions	Complies with A3. The proposal reduces the total number of on-site car parking spaces, accessed from Brisbane Street, to five spaces for occasional access only associated with couriers and contractors. Therefore there will be no increase in the number of vehicle movements per day.
E5.5.2	Existing level crossings	Not applicable.
E5.6.1	Development adjacent to roads and railways	Not applicable.
E5.6.2	Road accesses and junctions	Complies with A2. No new vehicle access points are proposed. The development relies on one existing vehicle access point on Brisbane Street.
E5.6.3	New level crossings	Not applicable.
E5.6.4	Sight distance at accesses, junctions and level crossings	Complies with A1. Existing access is retained.

Table 3 E6.0 Parking and Access Code

Clause	Heading	Response
E6.6.1	Number of Car Parking Spaces	Not applicable as the site is subject to Clause E6.6.5.
E6.6.2	Number of Accessible Car Parking Spaces for People with a Disability	Complies with A1 (subject to recommendation). One accessible parking space provided in the closest location to the building within the car park. Bollard required in shared space per AS/NZS 2890.6:2009 *Parking facilities, Part 6: Off-street parking for people with disabilities.*
E6.6.3	Number of Motorcycle Parking Spaces	Complies with A1. Less than 20 car parking spaces are proposed; therefore, no motorcycle parking spaces are required.
E6.6.4	Number of Bicycle Parking Spaces	Complies with A1 (subject to design). A large bike store is provided on site. The bike store is required to provide one bicycle parking space for every 20 employees (Class 1 or 2) or full-time students (Class 3).
E6.6.5	Number of Car Parking Spaces – Central Business Zone	Complies with A1. Five car parking spaces are provided to meet accessible parking space requirements, and operational requirements for delivery and contractor services. The supply of parking does not exceed a maximum of 1 space per 200m².
E6.6.6	Number of Car Parking Spaces – General and Local Business Zones	Not applicable.
E6.6.7	Number of Car Parking Spaces - Particular Purpose Zone 4	Not applicable.
E6.6.8	Number of Car Parking Spaces - Particular Purpose Zone 8	Not applicable.
E6.6.9	Number of Car Parking Spaces - Particular Purpose Zone 10	Not applicable.
E6.6.10	Number of Car Parking Spaces - Residential Zones	Not applicable.

Clause	Heading	Response
E6.7.1	Number of Vehicular Accesses	Complies with A2. No new vehicle access points are proposed. The development relies on one existing vehicle access point off Brisbane Street.
E6.7.2	Design of Vehicular Access	Complies with A1. Existing vehicle access with satisfactory sight distance, width, location and gradient to meet the requirements of AS/NZS 2890.1.
E6.7.3	Vehicular Passing Areas Along an Access	Complies with A1. No passing area required as proposed access serves five parking spaces, is less than 30 metres long, and connects to Brisbane Street which serves less than 6000 vehicles per day. Notwithstanding, sufficient width is provided for passing.
E6.7.4	On-Site Turning	Complies with A1. On site-turning not required as site meets Brisbane Street which serves less than 6000 vehicles per day. Notwithstanding, the proposed vehicle access is designed as a parking aisle with 90-degree parking spaces and allows light vehicles to enter and exit in a forward direction.
E6.7.5	Layout of Parking Areas	Complies with A1. Car parking space and access aisle dimension requirements as set out in AS/NZS 2890.1 have been met. Gradient of parking area is approximately level. Car park is located outdoors so there are no headroom requirements. It is noted that sufficient overhang will be required to allow vehicles reversing out of parking spaces space to turn and exit in a forward direction as demonstrated in Appendix B.
E6.7.6	Surface Treatment of Parking Areas	Not assessed.
E6.7.7	Lighting of Parking Areas	Not assessed.
E6.7.8	Landscaping of Parking Areas	Not assessed.
E6.7.9	Design of Motorcycle Parking Areas	Not applicable.
E6.7.10	Design of Bicycle Parking Facilities	Complies with A1 (subject to design). Complies with A2 (subject to design). It is understood that a product for bicycle parking has yet to be confirmed, however bicycle parking facilities (including parking racks and aisle ways) would be designed in accordance with AS 2890.3: 2015 *Parking facilities, Part 3: Bicycle parking*. [Note: this is an updated version of the Standard] It is noted that Clause 2.6.4 of AS 2890.3 (Ramp access) recommends that "where possible ramp gradient should be limited to 1:12 for ease of bicycle accessibility". In this case, the bicycle access ramp may be up to 1:10 due to site constraints. Based on Austroads Guide to Road Design Part 6A: Paths for Walking and Cycling, bicycle gradients have regard to two main factors: – Ease of uphill travel • The Guide suggests an acceptable length of around 25-30 metres for a gradient of 10% – Safety and downhill travel • The guide suggests for safety, a gradient of 10% for a length of no more than 50 metres is generally acceptable In order to ensure a safe environment for cyclists, and pedestrians, the following mitigation measures are recommended: – Pavement markings on the ramp including "SLOW" and centre-line separating inbound and outbound cyclists – Some warning signage or pavement markings at the interface with the footpath – Tactile treatment at the base of the ramp to provide feedback to cyclists approaching the bike store.
E6.7.11	Bicycle End of Trip Facilities	Complies with A1 (subject to design). End-of-trip facilities are provided. One shower and change room facility should be

Clause	Heading	Response
		provided for more than five bicycle parking spaces, plus one additional shower for each 10 additional employee bicycle spaces after.
E6.7.12	Siting of Car Parking	Consistent with P2. The proposed development utilises an existing car parking area, however the size of the parking area and the number of spaces, is reduced, thereby reducing impacts to street frontage.
E6.7.13	Facilities for Commercial Vehicles	Complies with A1. Commercial vehicle access to the site is limited to light vehicles. The use is not dependent on outward delivery of goods from the site.
E6.7.14	Access to a Road	Complies with A1. Existing access is retained.
E6.7.15	Access to Niree Lane Sandy Bay	Not applicable.

5. Traffic Impact Statement

This Traffic Impact Statement report has assessed a proposed development, at 80 Brisbane Street and 83 Melville Street within Hobart CBD, involving the revitalisation of the University of Tasmania's Forestry Building. The development proposes the removal of on-site parking spaces to make way for improved pedestrian/cyclist amenities and facilities, as well as improvements to campus infrastructure and facilities. The reduction in on-site parking spaces decreases the overall trip generating potential of the site. Moreover, it reduces traffic impacts at the retained vehicle access point on Brisbane Street with the removal of heavy vehicle access and several car parking spaces. The retained vehicle access point provides access to four proposed general parking spaces and one accessible parking space.

Considering reduced car parking provisions, the proposed development instead encourages bicycle travel by providing a new bike store and end-of-trip facilities. These on-site bicycle provisions are accessed from Brisbane Street via a new bicycle ramp along the north-western boundary of the site.

The existing northern access on Brisbane Street (to existing Freedom Furniture and Homeware underground car park) is to be removed to make way for a landscaped pedestrian access point to the site. Existing pedestrian access via Melville Street is to be retained. The formalised footpath network along Melville Street and Brisbane Street provides connections to the wider Hobart CBD including several public transport nodes on Elizabeth Street.

Minor changes to the kerb alignment along Brisbane Street are proposed including a kerb outstand at the eastern end of the site, and relocation of one existing on-street car parking space. It is noted that there is no net change in on-street parking as a result of the kerb realignment. The parking space lost due to the kerb outstand is reinstated adjacent to the amended parking area due to the reduction in driveway width. The swept path assessment provided in Appendix B demonstrates vehicle manoeuvring with the proposed changes including the following:

- Left turn from adjacent laneway for 6.4 m SRV design vehicle without encroachment onto the opposing traffic lane
- Left turn from adjacent laneway for 8.8 m MRV design vehicle which requires a gap in two-way traffic flow on Brisbane Street
- Left turn from amended parking area for B99 design vehicle.

The crash history on Melville Street and Brisbane Street does not indicate any pedestrian and cyclist crash trends that may be exacerbated by the proposed development. A decrease in vehicle trip generation to the site has no adverse impact on any existing vehicle related crash trend (parking) in the surrounding network.

The proposed development is considered to comply with Planning Scheme requirements subject to the below recommendations:

- Bike store required to provide one bicycle parking space for every 20 employees or full-time students. The required bicycle parking facility classification for employee parking is Class 1 or 2. Class 3 is considered satisfactory for student/visitor parking.
- Bollard required in shared area adjacent to proposed accessible parking space.
- One shower and change room facility to be provided for more than five bicycle parking spaces, plus one additional shower for each 10 additional employee bicycle spaces after.
- Bicycle parking facilities to be designed in accordance with AS 2890.3: 2015 *Parking facilities, Part 3: Bicycle parking*.
- A maximum gradient of 1:10 (10%) adopted for the bicycle access ramp, along with mitigation measures including centre line marking, pavement writing ("SLOW") and tactile treatment.

Based on the above findings, the proposed development is supported on traffic and transport grounds.

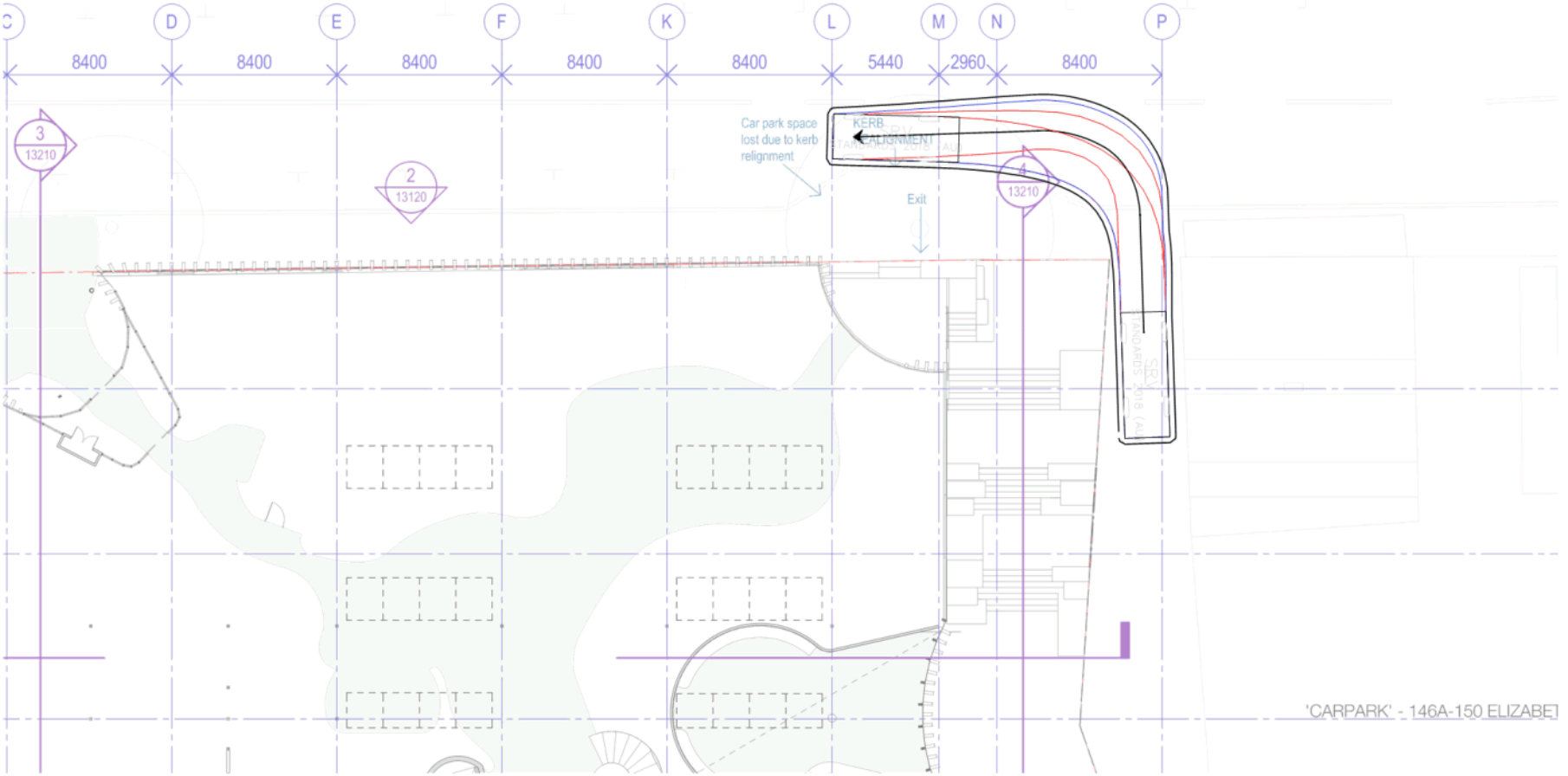
Appendix A

Plan drawings

94 BRISBANE ST
143 MURRAY ST
141 MURRAY ST
131-133 MURRAY ST
132-146 ELIZABETH ST
WINTER GARDEN
Southern Futures: Forestry / Timber Yards
80 Brisbane Street / 79-83 Melville Street, Hobart
University of Tasmania
W–B
WOODS BAGOT
130807
Overall Plan
Level 2
AR-12320
A
For Information

Appendix B

Swept Path Assessments

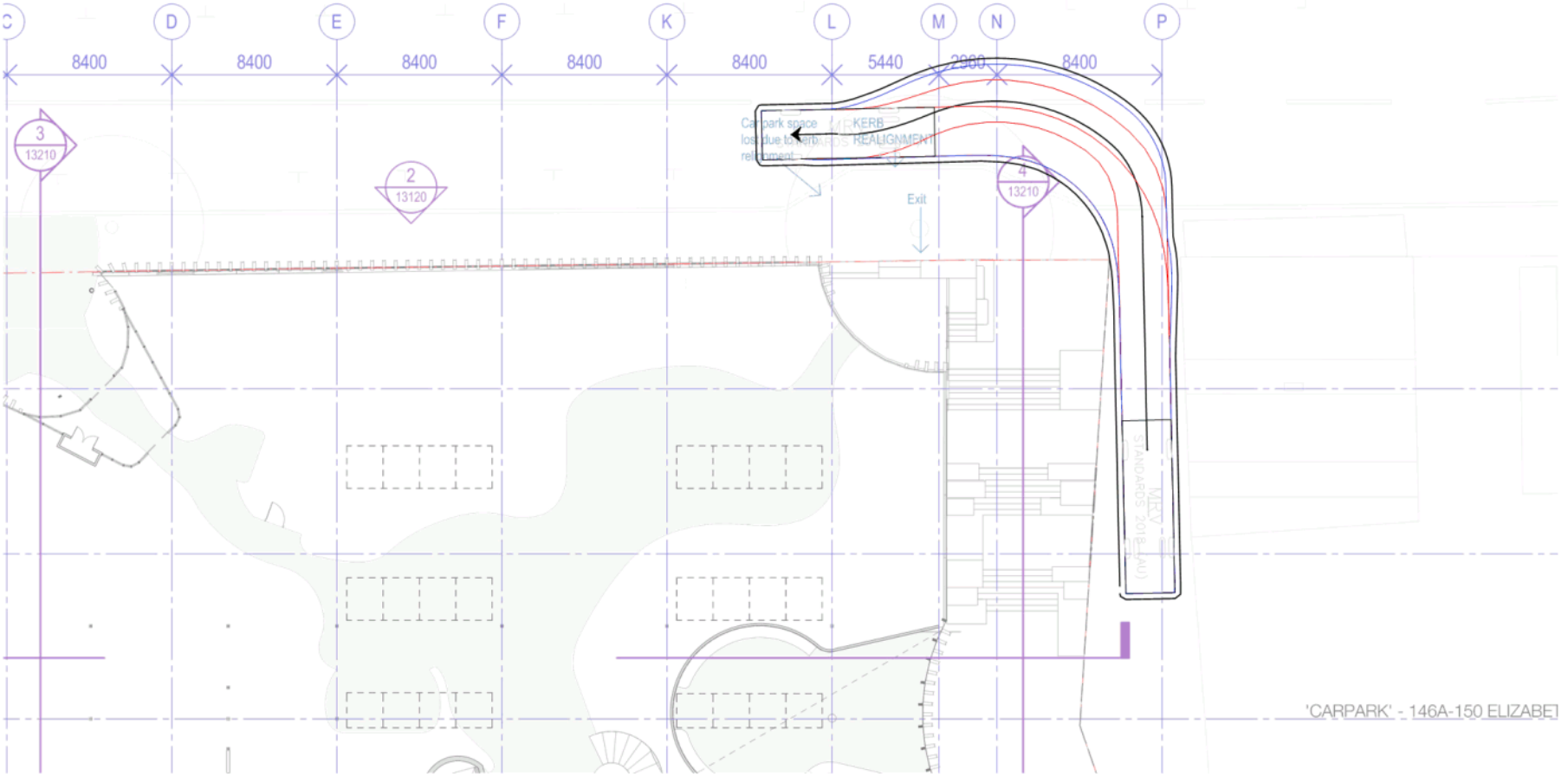


0 2 4 6m
SCALE 1:200 AT ORIGINAL SIZE

University of Tasmania
Forestry Building Revitalisation
Traffic Impact Statement
Swept Path Assessment
6.4 m SRV Design Vehicle

Job Number 12547815
Revision A
Date Dec 2021
Figure B1

Level 8, 180 Lonsdale Street Melbourne VIC 3000 Australia T 61 3 8687 8000 F 61 3 8687 8111 E melmail@ghd.com.au W www.ghd.com



0 2 4 6m
SCALE 1:200 AT ORIGINAL SIZE

University of Tasmania
Forestry Building Revitalisation
Traffic Impact Statement
Swept Path Assessment
8.8 m MRV Design Vehicle

Job Number 12547815
Revision A
Date Dec 2021
Figure B2

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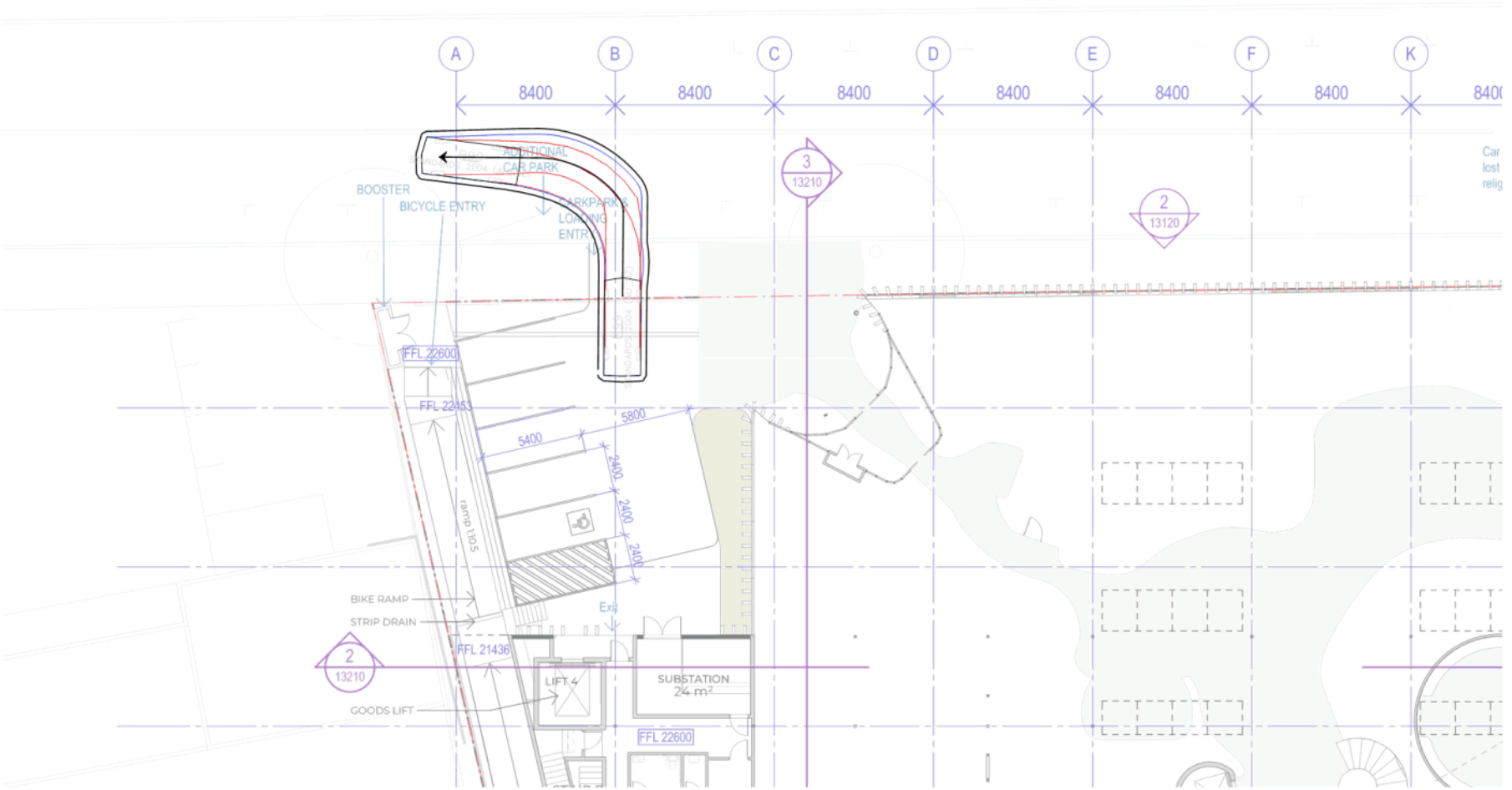

0 2 4 6m
SCALE 1:200 AT ORIGINAL SIZE

University of Tasmania
Forestry Building Revitalisation
Traffic Impact Statement
Swept Path Assessment
B99 Design Vehicle

Job Number 12547815
Revision A
Date Dec 2021
Figure B3

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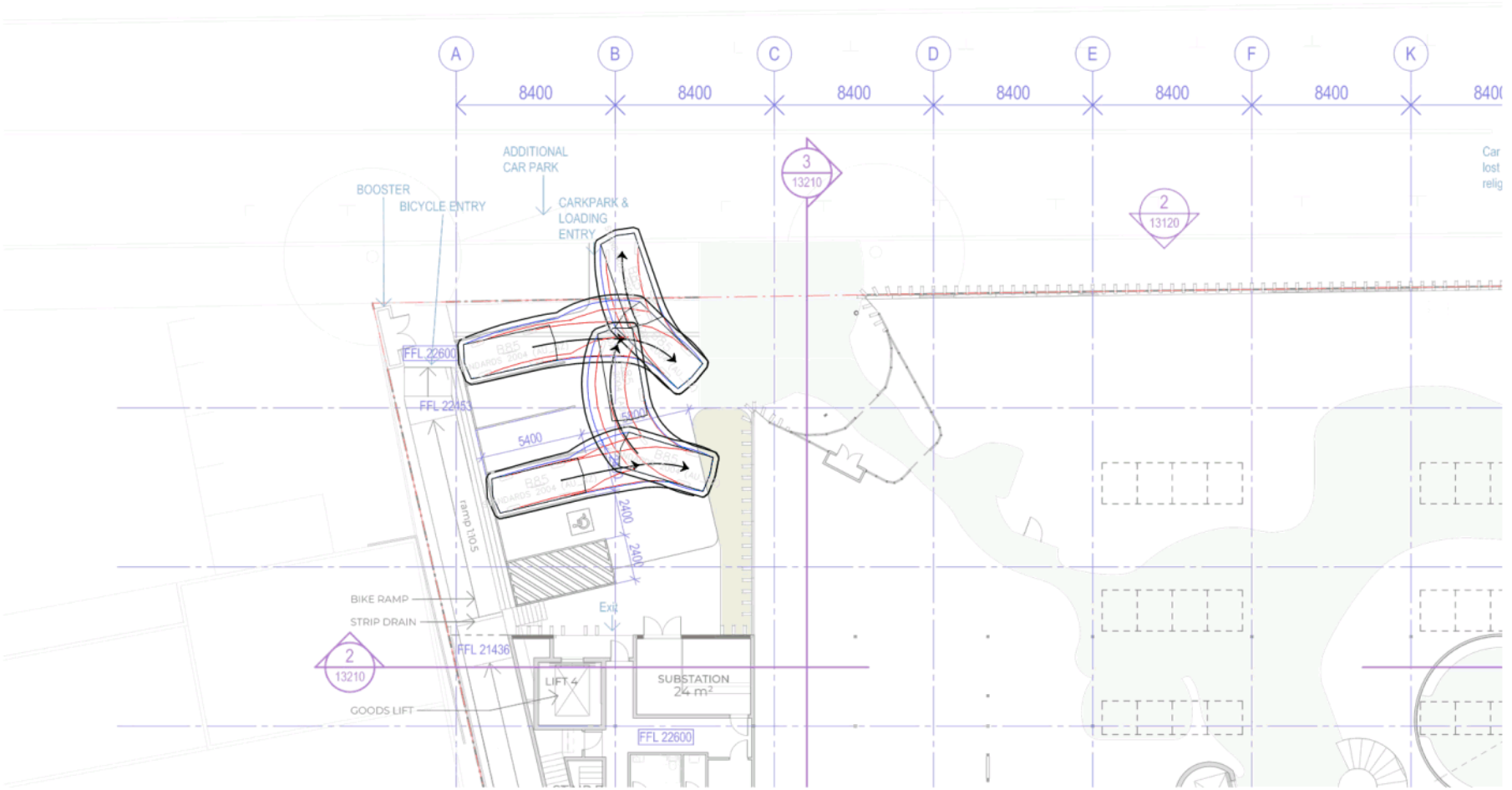

0 2 4 6m
SCALE 1:200 AT ORIGINAL SIZE

University of Tasmania
Forestry Building Revitalisation
Traffic Impact Statement
Swept Path Assessment
B85 Design Vehicle

Job Number 12547815
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Figure B2

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The Power of Commitment

FLOOD ANALYSIS AND STORMWATER REPORT

UNIVERSITY OF TASMANIA

FORESTRY / TIMBER YARDS & FREEDOM BUILDINGS DEVELOPMENT

79-83 Melville Street & 80 Brisbane Street, Hobart

December 2021

ARUP

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1. Introduction

The University of Tasmania's Forestry / Timber Yards and Freedom Building Project forms part of the Southern Transformation Program, which will deliver on their long-term plan to consolidate the University's campus to the Hobart CBD.

JMG in partnership with ARUP have been appointed to provide Building Services Engineering design for the Project which encompasses 79-83 Melville Street and 80 Brisbane Street, Hobart.

The architectural design is being undertaken by Woods Bagot.

The following summarises the key information about the project:

- The project is a refurbishment of existing buildings, which were formerly a showroom and office space for Forestry Tasmania and Freedom Furniture. The glazed, domed atrium over the central courtyard was a feature of the 1997 redevelopment for Forestry Tasmania.
- The Timber Yards is currently occupied by Freedom Furniture and comprises a site area and building GLA of approximately 12,400 m^2.
- The university spaces will comprise a mixture of teaching spaces, collaborative areas, meeting rooms, ancillary spaces and workplace spaces for university staff and services groups.
- The existing carpark located under the Freedom building is to be infilled with services associated with the operation of the new building and office space.
- Trunk sewer and stormwater mains currently running through the centre of the Freedom site are to be relocated to the eastern site boundary to allow for the infill of the basement level with the new office area and upsizing of the services to provide for future upstream development and stormwater capacity to lessen or remove the impact of overland flows on the site.
- Existing titles covering the site are to be amalgamated into a single title as part of the redevelopment.

Trunk stormwater pipes, carrying flow from a 27Ha catchment, pass through the Site. The development plans for the Site require the relocation of these pipes, refer the sites concept services report "UTAS Forestry / Timber Yards & Freedom Buildings Development, 79-83 Melville Street & 80 Brisbane Street Concept Services Report" JMG Engineers & Planners December 2021 for details on the relocation of these pipes.

A hydrologic and hydraulic analysis has been carried out to determine the peak flow for the 5% and 1% AEP flood events plus increases to account for the impacts of climate change. An assessment has been made of the capacity of the existing stormwater infrastructure that passes through the Site.

This report details the results of this analysis and makes recommendations for the design capacity of pipework through the Site to provide, at minimum, the 5% AEP flood event and to provide a pathway through the site for the 1% AEP flood event to ensure flooding of habitable building spaces does not occur for this extreme flood event.

The location of 79-83 Melville Street is shown in Figure 1. It is referred to as the Site in this report.

Figure 1- Development Site, 79-83 Melville Street

2. Limitations

The analysis carried out is limited within the terms of its objectives.

- The study was designed to determine the 5% and 1% AEP flood event impacting the Site and to identify the effects of a new development on flooding behavior. It should not be used as a full flood study outside of the defined area without further evaluation. The details for the existing pipe network within the catchment have been taken from Hobart City Councils GIS information, limited site investigation, CCTV, and field survey. Level information for pipe inverts were established from detailed survey only for Brisbane Street, Melville Street, and areas within the Site. Overland flow paths outside of the site were determined using LIDAR and through site visits.
- Hobart City Council investigated the size of the existing stormwater main (DP24576) immediately downstream of 250-270 Murray Street and confirmed that this was a DN1800 RCP.
- Analysis of the pipe network within the catchment upstream of Brisbane Street is limited in extent to invert levels available from Councils GIS and where this information is not available assumes pipes have 1m cover and follow surface level grades.

3. Design Basis and Methodology

Hydrologic and hydraulic, HEC-HMS and 2D HEC-RAS models were created, respectively, to determine flows and the extent of flooding through the Site for the 1% AEP + Climate Change rainfall event.

The analysis has been carried out according to ARR 2019 Guidelines with additions to rainfall intensities to allow for the impact of climate change. Hobart City Council have

nominated this factor as 17.9% All rainfall intensities used in the analysis presented in this report have been increased by 17.9%.

4. Existing Stormwater Network

The stormwater catchment upstream of the Site receives inflows from three sub catchments as shown in Figure 2.

Sub catchment S_2 is the primary catchment for the Site.

Sub catchments S_1 and S_3 contribute via overland flows when their pipe network capacity is exceeded. The locations of these overflows into Catchment S_2 are described below.

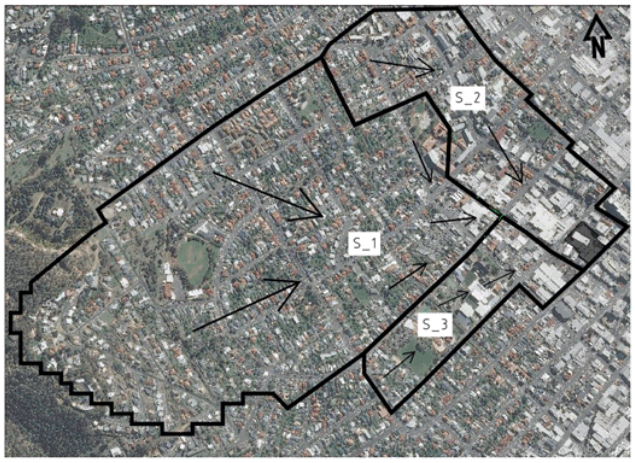


Figure 2 - Development Site Contributing Catchments

Overland flow from Catchment S_1 can enter the S_2 catchment through a series of inlet pits from a sag point in Murray Street, opposite 250-270 Murray Street and by overflow down the laneway accessing the rear of 222-228 Elizabeth Street as shown in Figure 3. The S_1 catchment pipework upstream of these pits previously flowed into the S_2 catchment but was disconnected and redirected with the installation of a DN1800 pipe down Murray Street circa 1976. The DN1800 extends down Murray Street and into Melville Street as shown in Figure 4. The pipe network of Catchment S_2 flows into this DN1800 in Melville Street after passing through the Site. The flows that enter S_2 from catchment S_1 are shown by the red arrows in Figure 4.

Figure 3 - Murray Street Grated Pits and flow path for overflows from Sub Catchment S_1

Figure 4 - Catchment S_2 Overland Flow Paths, Ponding Areas, and Inflows from Catchments S_1 and S_3

The upper catchment S_2 flows from North Hobart via Elizabeth Street and enters the existing main with a DN900 connection (HCC Asset ID205923) within the vehicle parking and hardstand area of 222-228 Elizabeth Street (rear of Mundy Meats / Shambles Brewery). This connection, together with overland flows collected by the Murray Street inlet pits contribute the majority of the flow to the existing pipework flowing to the Site.

Additional contributions come from the lower eastern section of S_2. Flows from sub area contribute approximately 20% of catchment flow combining with the upper catchment in Patrick Street and flowing into twin DN1050 pipes.

Overland flows also enter the S_2 catchment from the S_3 catchment. This occurs when the capacity of the S_3 pipes in Brisbane Street are exceeded and continue across Murray Street into the S_2 catchment. These flows are shown by the yellow arrows in Figure 4.

Within the Site, a stone lined arch drain and DN1050 pipeline conveys stormwater from the S_2 catchment passing under the existing buildings as shown in Figure 5.

Figure 5 - Existing Stormwater Pipework through the Site

The DN1050 pipeline was installed as part of the redevelopment of the Forestry building which occurred in 1997, the DN1050 pipe is of smaller diameter than the adjoining upstream and downstream pipes which are DN1350. Whilst the capacity of the DN1050 pipe is sufficient to accommodate the 5% AEP flood event of 3.7 m^3/s, the existing pipework provides a restriction in the flow capacity of Council's system. The main is laid at depths which provide between 0.5 & 2m of cover to the existing carpark and building floor slab. Under Brisbane Street the stone arch main has approximately 4m of cover. The profile of this section of the pipeline is shown in Figure 6 and is included with greater clarity in Appendix C - JMG Drawings.

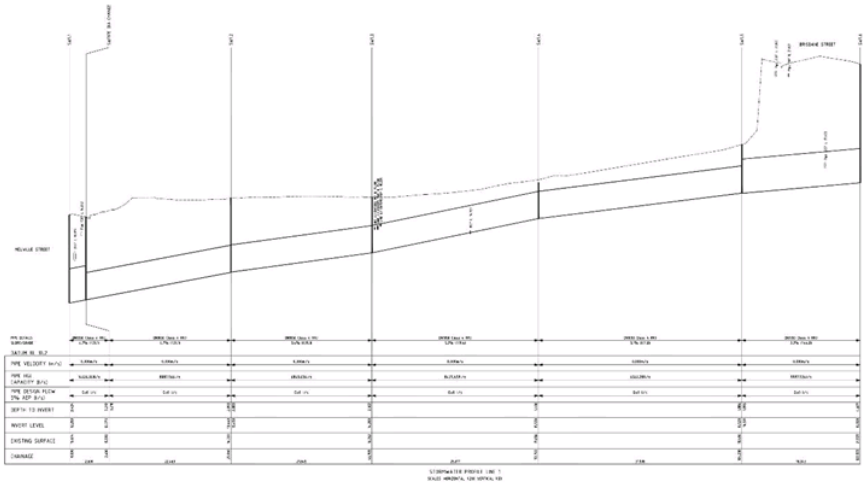


Figure 6 - Existing DN1050 Stormwater Pipe Profile

5. Catchment Topography and Modelling

Three computer models were used to analyse flows from the catchments. The catchment extents were determined from Hobart City Council's stormwater pipe network available on their website and LIDAR imagery.

The terrain model generated was used for a hydrologic model using HEC-HMS producing the peak flow values for the 3 sub catchments shown in Figure 2 with the results presented below in Section 6.

A HEC-RAS hydraulic model was developed for the area immediately surrounding the site using LIDAR data, supplemented with a detailed topographic and feature survey undertaken by PDA Surveyors and a 3D surface of the proposed development within the Site. An example of the output of this 3D view is shown in Figure 12 and modelling results using HEC-RAS and the 3D view discussed in Section 7.

Flow capacities of proposed pipes entering and through the site were determined using Civil Site Design (CSD) modelling. CSD is a sub feature of Civil 3D design and drafting software. Pipe sizes were obtained by field survey and from Council's GIS and invert levels used where available. If invert levels were not available and also not obtained by site survey, pipes were assumed to run at grade equal to ground level elevations. Further details are provided in Section 7.

6. Hydrology

To determine the flow hydrographs immediately upstream of 79-83 Melville Street Hobart a hydrological model was developed using HEC-HMS software.

Catchment details used for the modelling are shown in Table 1. Impervious areas shown in the table were provided by Hobart City Council. These values have been used in the modelling together with ARR runoff coefficient factors.

Sub-Catchment	Area (km²)	Average Slope (%)	Impervious (%)
S_1	*.9139*	*14.26*	*78.6*
S_2	*.2576*	*4.92*	*93.5*
S_3	*.1165*	*3.66*	*90.0*

Table 1 - Sub-Catchment Details

The model created the 3 separate sub catchments that impact the Site and then analysed this model to determine the critical storm durations for peak outflows. The model structure is shown in Figure 9. Sub catchment S_2 has been divided into 5 sub basins with catchment S_1 entering S_2 at node (Sub Basin) 3, either via the laneway accessing the rear of 222-228 Elizbeth Street or the grated pits in Murray Street shown in Figure 7. The boundaries for sub basins within the S_2 catchment are shown in Figure 8. Further details of the calculations and input values are provided in Appendix D - Stormwater Calculations.

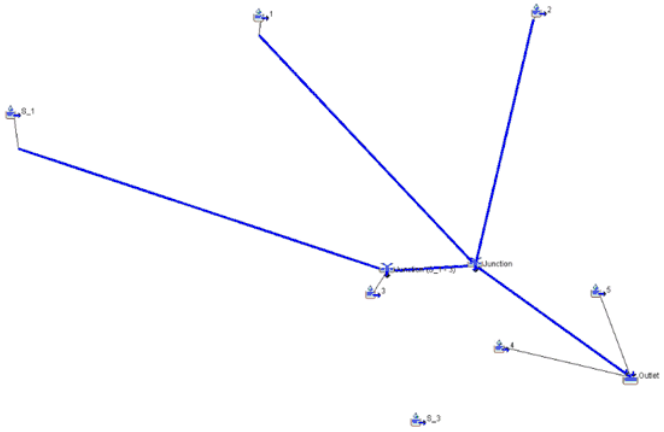


Figure 9 - HEC-HMS Hydrologic Model Structure

Figure 10 - Catchment S_2 Sub Areas

Various storm durations were tested with the 15-minute storm period resulting in the highest flows for the catchment. Table 2 presents the results from the combined model, showing peak flows for each sub basin for the 1% AEP storm event and

Sub Catchment flows at Outlet	Drainage Area (km^2)	5% Peak Flow (m^3/s)
S_1	0.9139	6.6
S_2 without S_1 overflows	0.2576	3.6
S_2 with S_1 overflows *	0.2576	3.6
S_3	0.1165	1.1

*Contributing flow from S_1 to S_2 reduced by the Q_{20} flow in the pipe network resulting in no overflow to S_2

Table 3
for the 5% AEP storm event

Rainfall intensities for Hobart were obtained from the Bureau of Meteorology (BOM) website. The rainfall values for each storm duration were increased by 17.9% to consider the Climate Change impact at the year 2100. (As per advice from HCC 22 Feb 2022). Temporal patterns for each storm duration were extracted from the ARR Data Hub.

Initial and continuing losses of 10 mm and 3 mm/h respectively were applied for pervious areas and 0mm initial and continuing losses for impervious areas.

Sub Catchment flows at Outlet	Drainage Area (km^2)	1%+CC Peak Flow (m^3/s)
S_1	0.9139	10.0
S_2 without S_1 overflows	0.2576	5.2
S_2 with S_1 overflows *	0.2576+part S_1	6.1
S_3	0.1165	1.6

*Contributing flow from S_1 to S_2 reduced by the Q_{20} flow carried by the pipe network

Table 2 - Sub Catchment (S_1, S_2 and S_3) Peak Discharges for the 1% AEP - 15 minute storm period event with +17.9% CC Factor

Sub Catchment flows at Outlet	Drainage Area (km^2)	5% Peak Flow (m^3/s)
S_1	0.9139	6.6
S_2 without S_1 overflows	0.2576	3.6
S_2 with S_1 overflows *	0.2576	3.6
S_3	0.1165	1.1

*Contributing flow from S_1 to S_2 reduced by the Q_{20} flow in the pipe network resulting in no overflow to S_2

Table 3 - Sub Basins (S_1, S_2 and S_3) Peak Discharges for the 5% AEP - 15 minute

Based upon the initial model, a variant was developed to reflect the actual flow conditions occurring at the catchment boundaries. This variant modelled only the overland flow component that enters sub basin S_2, with the piped flow contributions from sub catchments S_1 and S_3 bypassing sub catchment S_2.

Sub Catchment	Total Outflow from Catchment (m^3/s)	Piped Flow bypassing Catchment S_2 (m^3/s)	Overland Flow into Catchment S_2 (m^3/s)
S_1 1% AEP Flow	10.0	6.9	3.1
S_1 5% AEP Flow	6.6	6.6	0.0
S_3 1% AEP Flow	1.6	1.0	0.6
S_3 5% AEP Flow	1.1	1.0	0.1

Table 4 - Piped Flow and Overland Flow Components from Catchments S_1 and S_3

The HEC-HMS hydrologic model scenarios reflect a future situation and not the current state of catchment development and overland flow paths. The primary assumption for this future scenario is for the 1% AEP flood to flow unrestricted through the catchments. This is not the situation currently with significant barriers to flow paths, causing ponding at various locations as shown in Figure 4.

The model also assumes that, for this future scenario, flows resulting from the 5% AEP storm event are contained totally within the piped network. The overland flow components for the 1% AEP storm event are therefore determined by subtracting the 5% AEP flow from the 1% AEP flow. This is further examined by hydraulic analysis with results discussed and presented in Section 7.

Table 2, Table 3 and Table 4 above show how relevant flows affect the resulting piped flow and overland flow reaching the Site. The values shown in these Tables are discussed below.

For sub catchment S_1 (refer Table 4), the 1% AEP storm flow is 10.0 m^3/s. Of this 10.0 m^3/s, 6.9 m^3/s is assumed contained within the pipe network and therefore 3.1 m^3/s overflows into sub catchment S_2. The 6.9 m^3/s is the capacity of a DN1500 pipe flowing at grade. DN1500 was selected to reflect the current development proposal for the site, which nominates a 1500 x 1500 box culvert through the 250-270 Murray Street development. The existing pipe diameter is shown as DN1200[1] increasing to DN1800 on the HCC GIS system and, with the DN1200 as the critical element, will result in a reduction in capacity to 4.6 m^3/s increasing overland flow to 5.4 m^3/s. The current circumstances within sub catchment S_2 also result in flood attenuation through the site because of the ponding areas as shown in Figure 4 and a DN900 pipe. For the future scenario it is assumed the flow restrictions caused by ponding, the DN900 pipe and the DN1200 pipe are removed to enable the system to perform in accordance with design standards.

For sub catchment S_3 (refer Table 4), the 1% AEP storm flow is 1.6 m^3/s. Of this 1.6 m^3/s, 1.0 m^3/s is assumed contained within the pipe network and therefore 0.6 m^3/s overflows from the catchment. The DN675 pipe exiting sub catchment S_3 has a capacity of 1.0 m^3/s which is slightly below the 5% AEP storm flow of 1.1 m^3/s (refer Table 3). This overland flow predominantly flows into Brisbane Street and for the purposes of modelling it is assumed the entire 0.6 m^3/s enters the S_2 catchment. The hydraulic impacts of this are analysed in Section 7.

[1] On 24 Feb 2022 HCC advised the section of DN1200 in Murray St shown on their GIS system is actually DN1800. This will provide an increase in pipe capacity greater than used in JMG modelling.

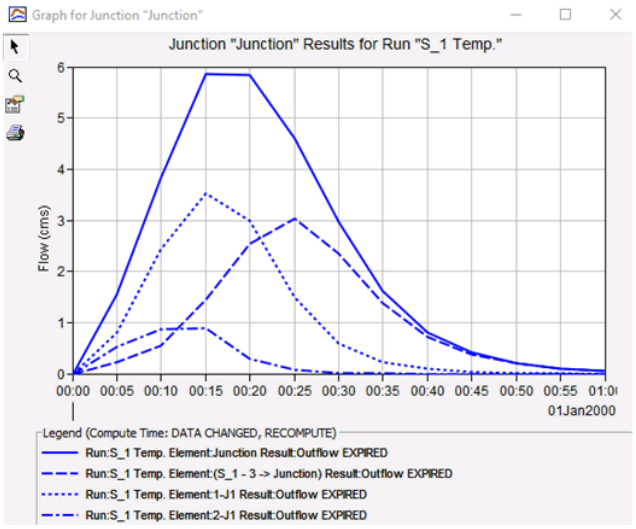


Figure 11 - Sub Catchment S_2, 'Junction' Node Hydrographs

For sub catchment S_2 (refer Table 2 and Table 3), the 1% AEP storm flow is 6.1 m^3/s. Of this 6.1 m^3/s, 3.6 m^3/s (the 5% AEP flow), is assumed contained within the pipe network and therefore 2.5 m^3/s overflows from the catchment into Brisbane Street. This flow is joined by the 0.6 m^3/s overland flow from sub catchment S_3. The hydraulic impacts of these flows are analysed in Section 7.

Whilst the overland flow into S_2 from S_1 has a peak flow of 3.1 m^3/s, due to the timing of the hydrograph peak and routing of the hydrograph through S_2 this this does not add directly to the outlet flow for S_2. Refer Table 2, the peak flow at the outlet increases by only 0.9 m^3/s (6.1 m^3/s - 5.2 m^3/s) whilst the input for the 1% AEP storm event is 3.1 m^3/s. This is best demonstrated by examination of the hydrograph occurring at the 'Junction' node of the model (refer Figure 9). The hydrographs at the 'Junction' node are shown in Figure 11.

The hydrograph from S-1 peaks at 3.0 m^3/s (3.1), after 25 minutes, whereas the main channel peaks after 15 minutes. The resultant peak flow at the 'Junction' node is 5.9 m^3/s which increases to 6.1 m^3/s at the 'Outlet" node as shown in Table 2.

7. Hydraulics

7.1 Pipe Flow Hydraulic Modelling

To demonstrate the adequacy of the proposed pipework through the Site to accommodate the 5% AEP storm flood event, flow capacities of the pipes were determined using Civil Site Design (CSD) modelling. CSD is a sub feature of Civil 3D design and drafting software.

The proposed pipe layout is shown on drawing C-17 in Appendix C and in **Figure 13**.

7.2 Overland Flow Hydraulic Modelling

The hydraulic model for overland flows was developed using HEC-RAS under a 2D analysis across the 3D terrain model generated on Civil Site Design software as a base. The purpose

of the model is to demonstrate the impact of the 1% AEP flood event within Brisbane Street, Elizabeth Street, and overland flows through the site into Melville Street.

The 3D model was created using field survey levels, LIDAR information and the finished surface levels of flow pathways and new structures within the Site.

Figure 12 shows the 3D model of the overland flow path through the Site, down the stairway from Brisbane Street and through the glass domed atrium into Melville Street.

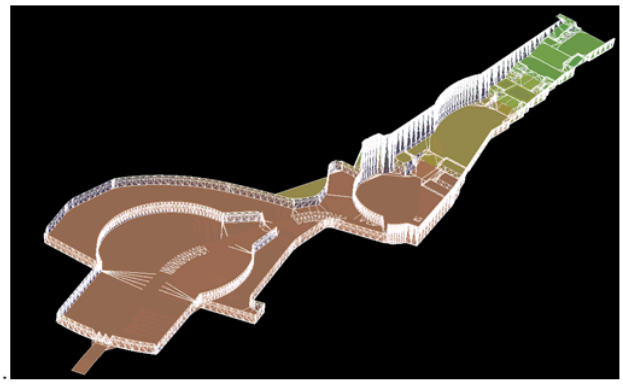


Figure 12 - 3D View of surfaces through the Site for HEC-RAS Site Model

Inputs to the HEC-RAS model were used from the hydrologic modelling with flows derived from the values as shown in Table 2 and Table 3. The 5% AEP flow of 3.6 m^3/s for sub catchment S_2 shown in Table 3 was adopted as the required capacity for the stormwater pipework through the Site. The difference between this 5% AEP flow and the 1% AEP flow of 6.1 m^3/s. has been used as the overland flow from sub catchment S_2 and input to the HEC-RAS model. The second overland inflow is from sub catchment S_3. With an existing pipe capacity of 1.0 m^3/s and 1% AEP flow of 1.6 m^3/s, a peak overland flow of 0.6 m^3/s enters Brisbane St. This results in a total overland into Brisbane St of 3.1 m^3/s (2.5 + 0.6) as summarised in Table 5.

Surface roughness coefficients for the hydraulic model were derived from ARR 2019 Guidelines.

Sub Catchment	Total Outflow from Catchment (m^3/s)	Piped Flow through the Site (AEP Q_{20}) (m^3/s)	Overland Flow input to HEC-RAS model (m^3/s)
S_2 1% AEP Flow	6.1	3.6	2.5
S_3 1% AEP Flow	0.6	0	0.6

Table 5 - Input Values of Peak Flows for the HEC-RAS Model

8. Modelling Results and Flow Summary

8.1 Pipe Flow Hydraulic Modelling

The capacities within the critical sections of the proposed pipework through the Site are shown in Figure 13 and comparison with the 5% AEP flows shown in Table 6.

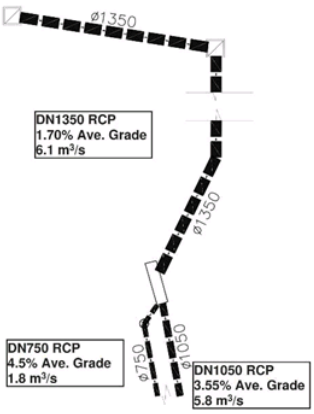


Figure 13 - Proposed Stormwater Pipework

Pipe Section	5% AEP Storm Flow	Pipe Grade	Full Pipe Flow
DN1350 in Brisbane St	3.6 m^3/s	1.7%	6.1 m^3/s
DN1050 through lower Building	3.6 m^3/s	3.55%	5.8 m^3/s
DN750 through lower Building	Included Above	4.5%	1.8 m^3/s

Table 6 - Comparison of Proposed Pipework Hydraulic Capacity with the 5% AEP Storm Flow Event

Flow Capacities

It should be noted that under full pipe capacities the hydraulic grade line (HGL) for the DN750 and DN1050 will be very similar with the result that flow apportionment between the two pipes will occur to match the HGL and flows will differ to those shown in Table 6.

The analysis shows there is sufficient capacity within the proposed pipework through the Site for the 5% AEP storm event flow.

8.2 Overland Flow Hydraulic Modelling

Figure 14 below is an example of the output from the HEC-RAS modelling showing the extent of overland flows in Brisbane Street and downstream through the Site and into Melville Street.

Overland flows enter Brisbane Street from two locations, peak flows of 2.5m^3/s enters from the access lane between 77 and 79 Brisbane Street and 0.6m^3/s enters from the junction with Murray Street (refer Table 5).

Approximately 75% of the flow entering Brisbane Street exits into Elizabeth Street with a peak flow of 740 L/s entering the Site via the access ramp to the current carpark, which becomes pedestrian only access in the new development. It should be noted the new surface used in the model, and shown in Figure 12, has an overflow level from Brisbane Street the same as currently exists, and therefore neither aggravates nor mitigates flooding of adjacent or nearby structures and property.

Within the Site, depths of inundation are generally low, at less than 100mm, with a maximum depth of 230mm within the courtyard above the entrance to the atrium. The depth of flooding, elevation and velocities are shown in Appendix C - JMG Drawings. Table 7 provides the drawing numbers for ease of reference. Extracts from these drawings are shown in Figure 15, Figure 18, Figure 17 and Figure 18.

Drawing Title	Drawing No.
Hydraulic Analysis (HEC-RAS) Depths (Upper Site)	HR-1
Hydraulic Analysis (HEC-RAS) Depths (Lower Site)	HR-2
Hydraulic Analysis (HEC-RAS) Velocities (Upper Site)	HR-3
Hydraulic Analysis (HEC-RAS) Velocities (Lower Site)	HR-4
Hydraulic Analysis (HEC-RAS) Water Surface Elevation (Upper Site)	HR-5
Hydraulic Analysis (HEC-RAS) Water Surface Elevation (Lower Site)	HR-6

Table 7 - Appendix C JMG Drawings with HEC-RAS Modelling Results

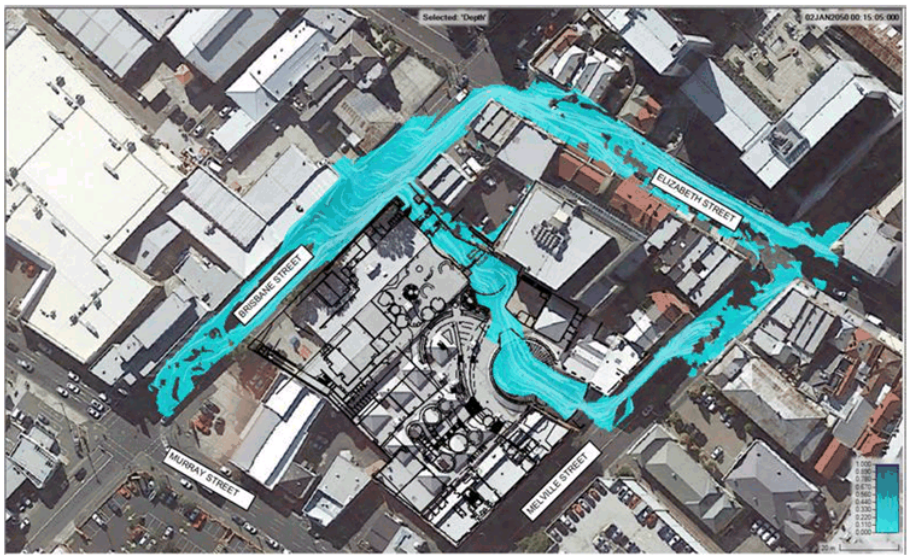


Figure 14 - - (1% AEP + Climate Change 17.9%) Overland Flow Path

Flood flows that enter via the crossover to 146B Brisbane St, adjacent currently flow back into the Site through wire fencing between the properties. Provision should be made in the design of the site boundary wall for this flow path to remain open with the provision of openings at the level of the existing ground surface in the 146B Brisbane Street carpark.

Flow velocities are generally low, staying well below 2m/s. The lower site area with the atrium is entirely below 2m/s. Figure 15 below shows velocities in the upper section of the Site that includes the steps and courtyard area. A velocity of 2m/s or higher is shown in yellow with increasing velocity changing to orange or red, with red being 5m/s or greater. The peak velocity in the model is 5.0m/s. The areas with high velocities are the steps. Clearly, with vertical drops, velocities are high. The depth of flow across tread of the steps will vary according to flow velocity and width of the steps.

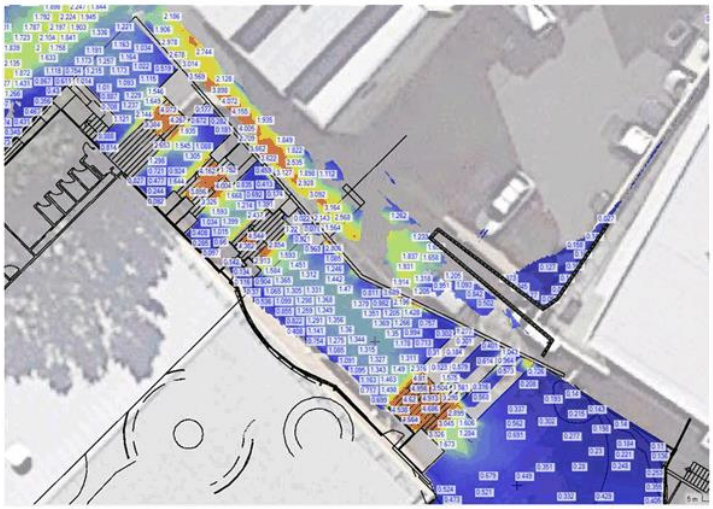


Figure 15 - HEC-RAS Model Results Flow Velocity Upper Site - Steps and Courtyard

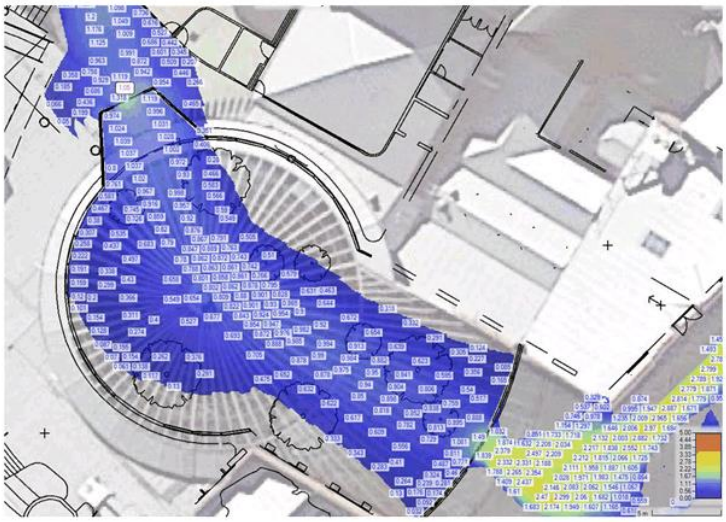


Figure 16 - HEC-RAS Model Results Flow Velocity Lower Site - Melville Entrance and Atrium

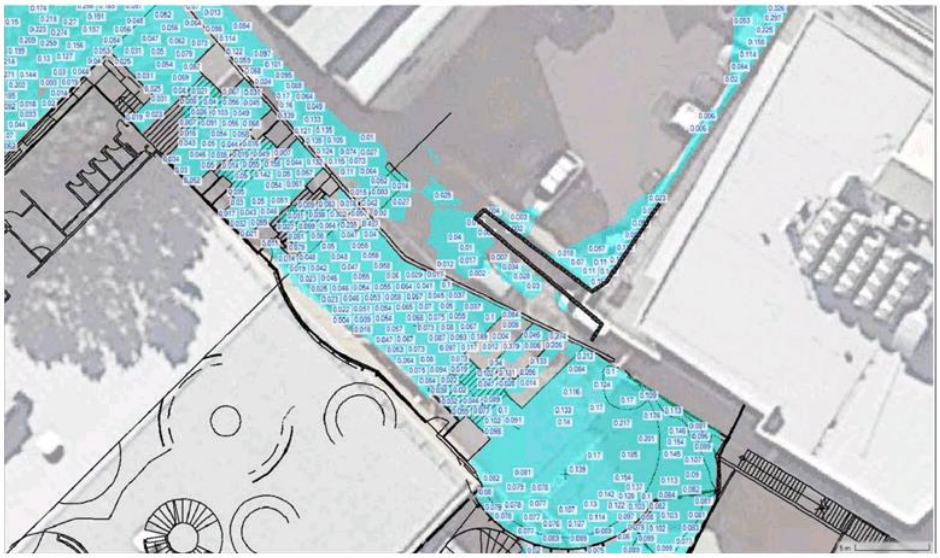


Figure 17 - HEC-RAS Model Results Flow Depth Upper Site - Steps and Courtyard

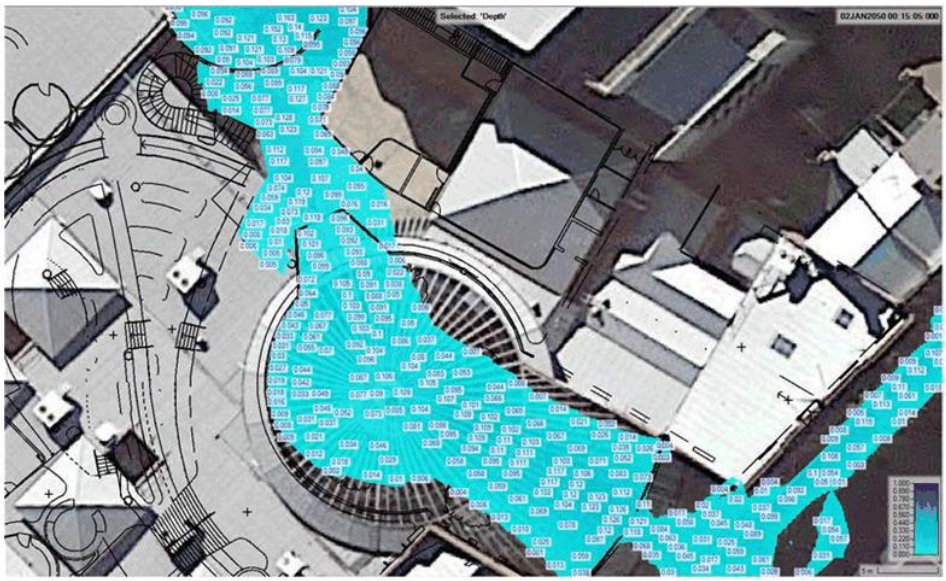


Figure 18 - HEC-RAS Surface Depths Lower Site - Melville Entrance and Atrium

9. Flood Hazard Assessment

The hydrologic and hydraulic analyses show that, when the upstream flow paths are clear of obstructions, sections of the Site are subject to inundation during the 1% plus climate change AEP storm flood event.

The areas inundated are shown in Figure 14 to Figure 18. Additional and more detailed information for inundation within the Site can be located in Appendix C - JMG Drawings. Refer Table 7 for the list of relevant drawings.

Flow depth and velocity combine to determine the Hazard Category. Categories are defined by the Australian Flood Resilience and Design Handbook as shown in Figure 19. Most of the Site is within the category H2 (Generally Safe for People Vehicles and Buildings). The exceptions to this are the series of steps leading down from Brisbane Street. The steps will fall into category H4 or H5 because of high velocities, between 2m/s and 4m/s for category H4 and greater than 4m/s for category H5. It should be noted the steps replace a steeply sloping driveway reducing the hazard impact of overland flow entering the Site.

The steps vary in width between approximately 3.5m and 6m. At 3.5m width, and a flow of 730L/s, the average depth of flow over the tread is 42mm at 5m/s and 100mm at 2.1m/s.

The steps will be made with reinforced concrete and will be capable of withstanding the inundation and velocities. Vehicles will not be affected because the area is for pedestrians only.

Mitigation measures to improve safety for people will need to provide safety refuges in H4, H5 zones. These are already proposed in the form of landings between step runs and by the use of planting areas and hand railings, whilst closure of the steps during a 1%AEP would be the ideal solution. The short duration of the event and infrequency of occurrence may make this impractical.

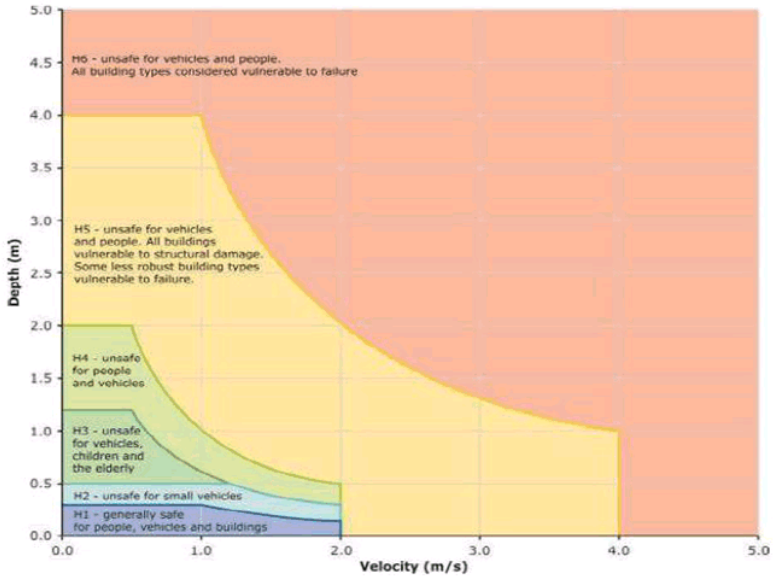


Figure 19 - Hazard Categories Australian Disaster Resilience Handbook

10. Conclusions

This report is submitted to show compliance with Council requirements with regards to the Protection of Council Infrastructure - Stormwater, and the Inundation Prone Land Code.

The following conclusions were derived in this report:

- The development of the Site will not increase the risk of flooding to neighbouring properties
- Provision be made in the design of the site boundary wall adjacent 146B Brisbane Street for overland flow to enter the site from the existing carpark
- Overland flows associated with the 1% plus climate change AEP flood event can be managed through the site safely with the inclusion of some mitigation measures necessary for traversing the steps.
- The proposed relocation and increases to the capacity of existing stormwater pipework will provide opportunities to reduce overland flow through the Site
- The development will not change the volume of overland flow or water surface levels in Brisbane Street east of the site towards Elizabeth Street
- Runoff from within the Site will be the same as the existing development levels.

11. References

Chow, V. T. (1959). Open-Channel Hydraulics. *Science*, 680.

Melbourne Water. (2017, September 27). *Loss coefficient for pits and junctions*. Retrieved from Melbourne Water: https://www.melbournewater.com.au/planning-and-building/developer-guides-and-resources/standards-and-specifications/loss-coefficient

AR&R 2019

HCC Email - M. Foale 24-02-2022

HCC Email - M. Foale 22-02-2022

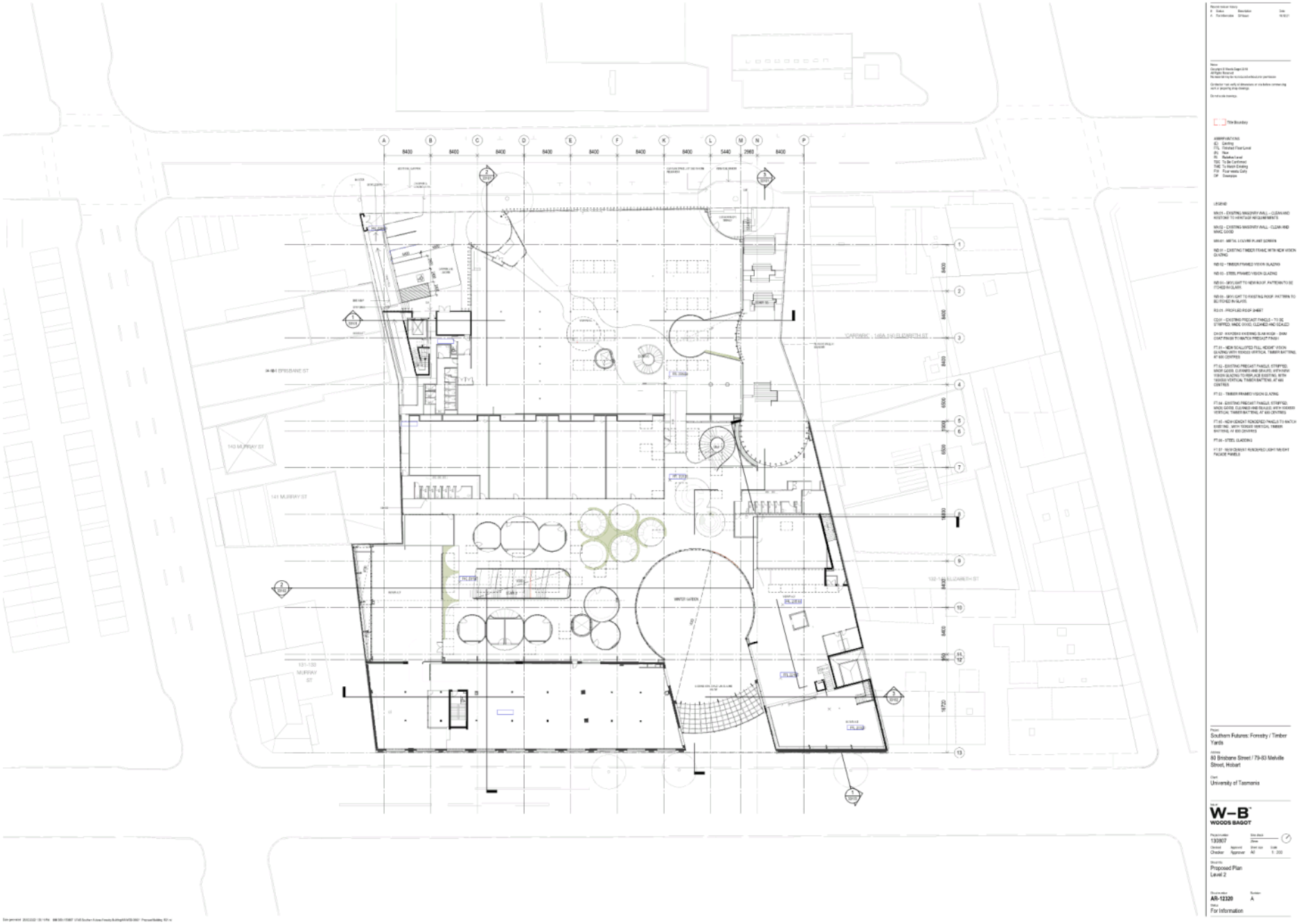
HCC Email - M. Foale 18-02-2022

APPENDIX A

Architectural Drawings

WOODS BAGOT
SCALE: 1:100
SK-050
LEVEL 1 FLOOR LEVELS

Southern Futures: Forestry / Timber Yards
80 Brisbane Street / 79-83 Melville Street, Hobart
University of Tasmania
W–B
WOODS BAGOT
Proposed Plan
Level 1
AR-12310
A
For Information


Southern Futures: Forestry / Timber Yards
80 Brisbane Street / 79-83 Melville Street, Hobart
University of Tasmania
W–B
WOODS BAGOT
Proposed Plan
Level 2
AR-12320
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APPENDIX B

Catchment Plans

S_1
S_2
S_3
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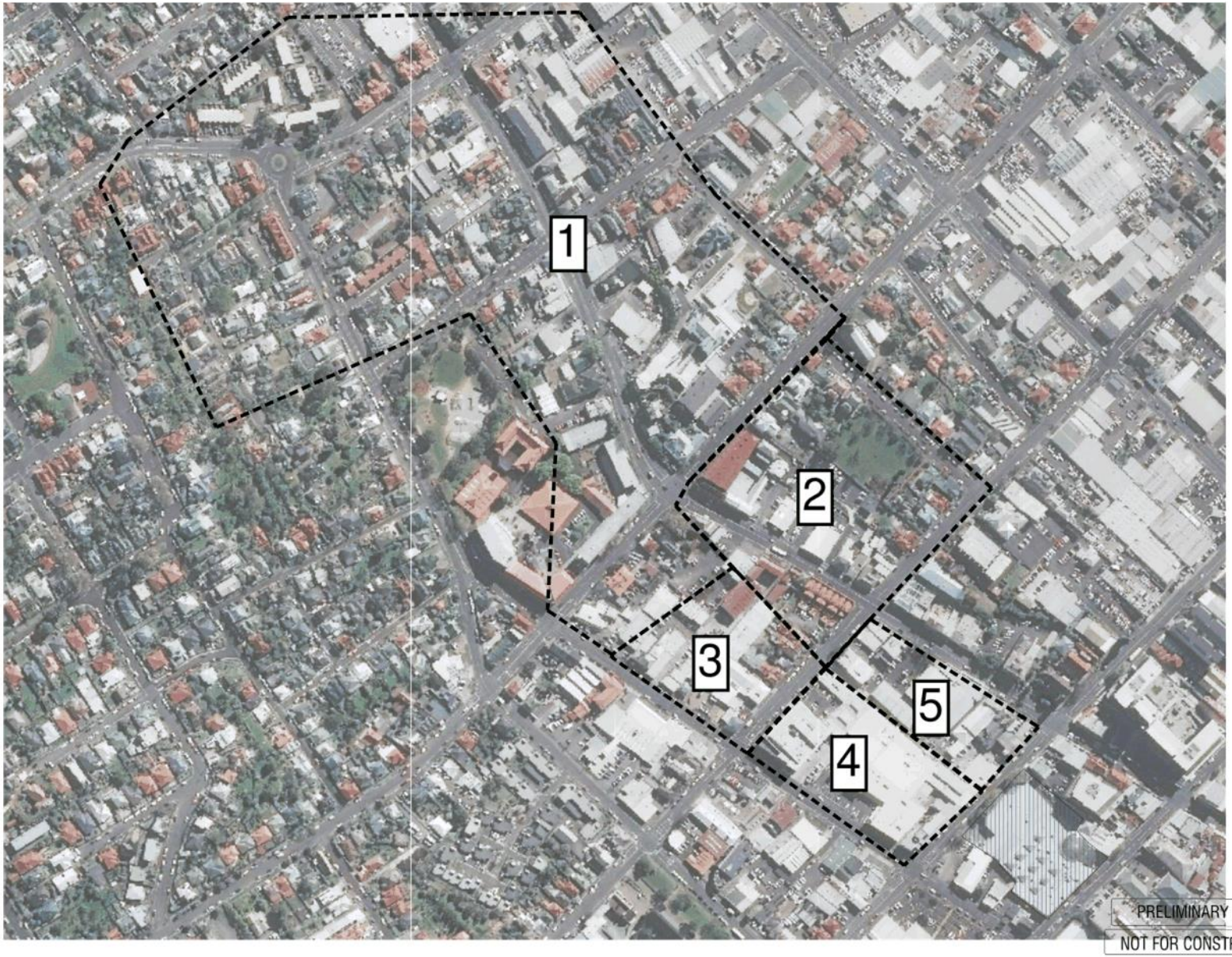
ANALYSIS)
P205082SH
CTM-1
DA1



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PROJECT
79-83 MELVILLE STREET
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REDEVELOPMENT

TITLE
HYDRAULIC ANALYSIS
(HEC-RAS) DEPTHS

Accepted: Chris M. (Discipline Head)	Date
Accepted: CDH (Chief Engineer)	Date
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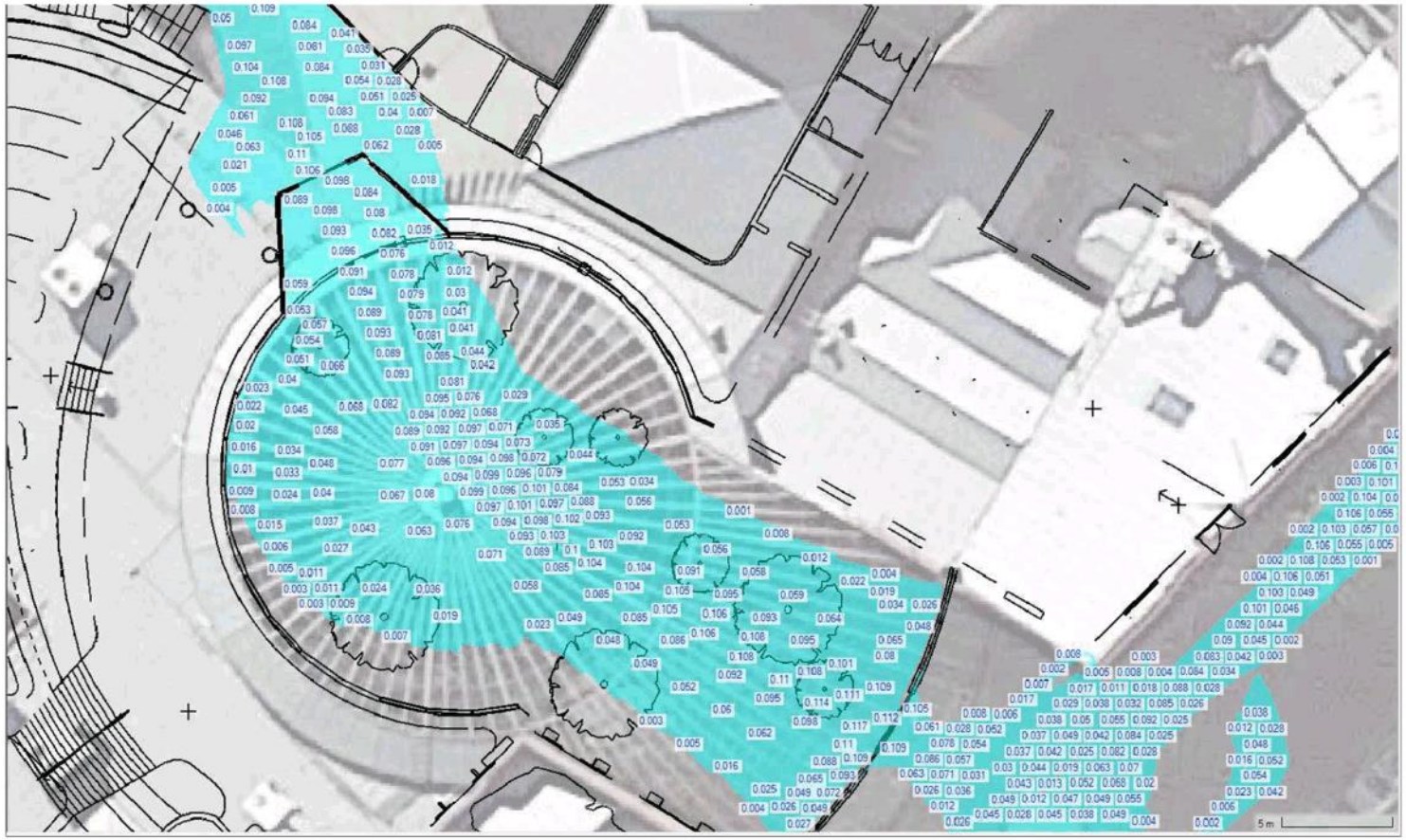

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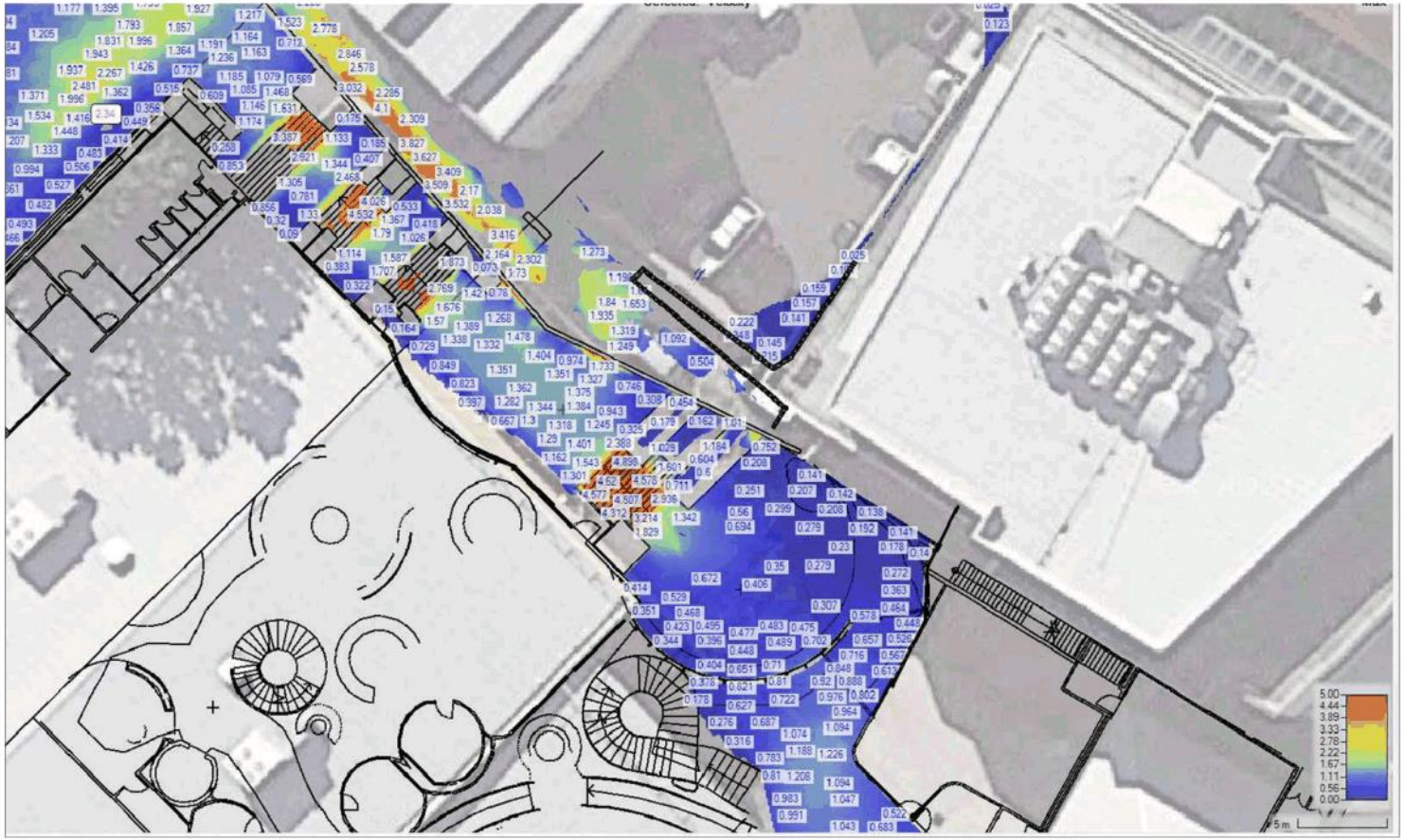

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REDEVELOPMENT

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(HEC-RAS) VELOCITIES

Accepted: Chris M. (Discipline Head)	Date
Accepted: CGH (Team Leader)	Date
Approved: GLG (Principal)	Date

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PROJECT NO. 205028SH

DRWG NO. HR-3 REVISION P1

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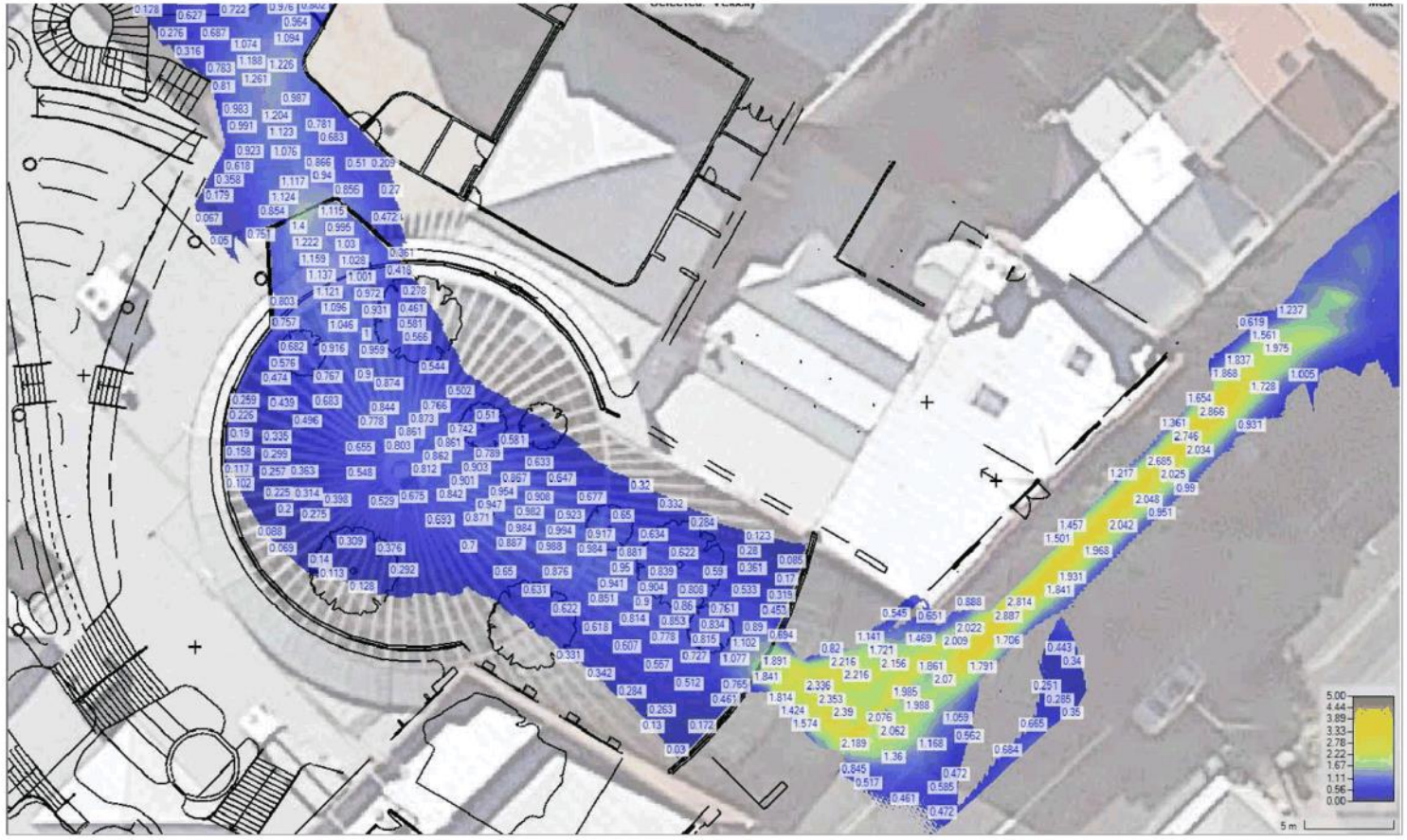

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PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT

TITLE
HYDRAULIC ANALYSIS
(HEC-RAS) VELOCITIES

Accepted: Chris W. (Discipline Head) Date
Accepted: CDH (Team Leader) Date
Approved: GLG (Principal) Date

SCALES @ A1 | DESIGNED BY | DRAWN BY
CAD | PLOT DATE

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PLOT CD TABLE HEC-RAS DRAWINGS.DWG

PROJECT NO. 205028SH

DWG NO. HR-4 REVISION P1

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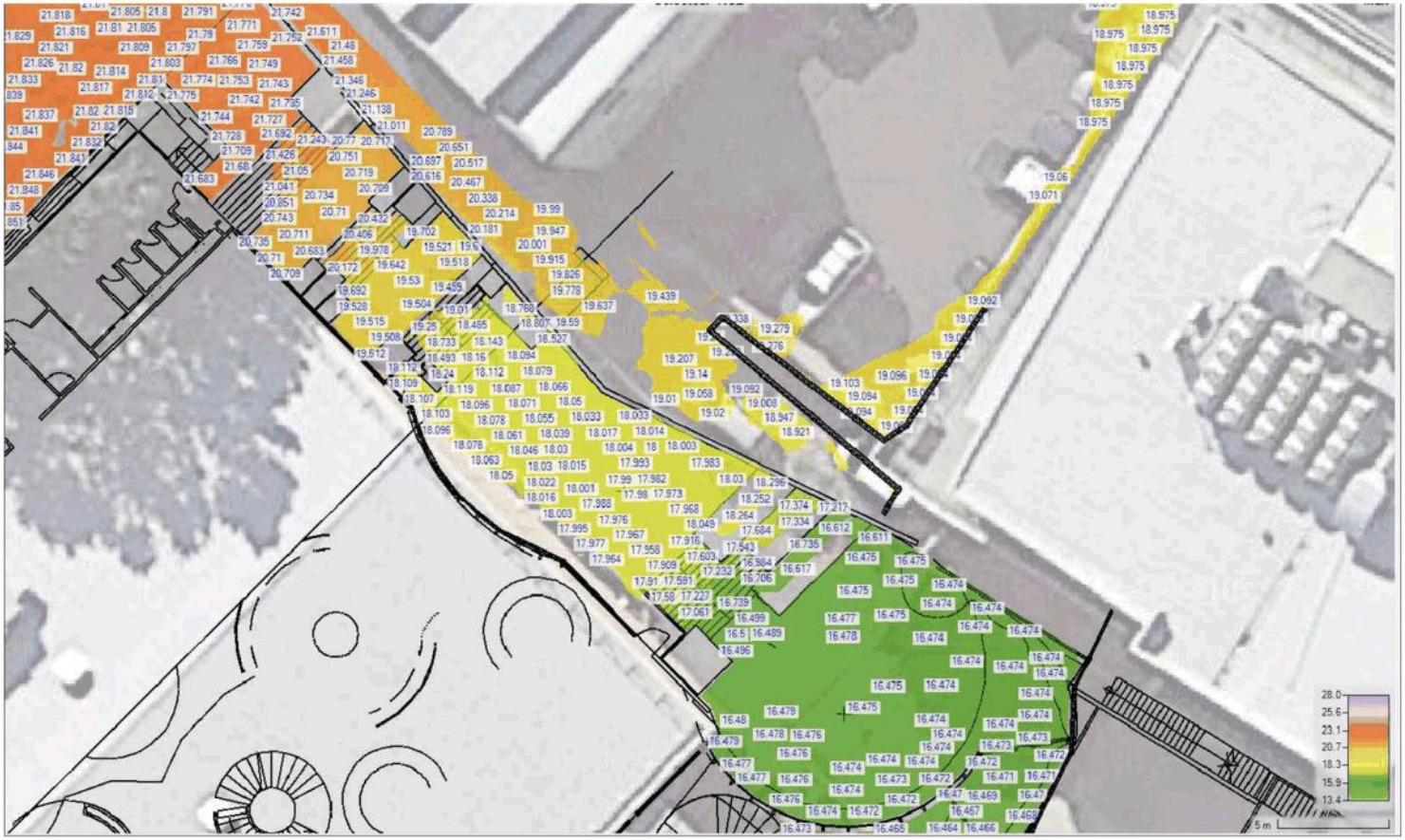

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PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT

TITLE
HYDRAULIC ANALYSIS
(HEC-RAS) WATER SURFACE
ELEVATION

Accepted: Chris M. (Discipline Lead)	Date
Accepted: CDH (Chief Leader)	Date
Approved: GLG (Principal)	Date

SCALES @ A1 | DESIGNED BY | DRAWN BY
CJM | HVL
PLOT DATE | 24/02/2022

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PLOT DETAILS | HEC-RAS DRAWING.DWG

PROJECT NO. 205028SH

DWG NO. HR-5 | REVISION P1

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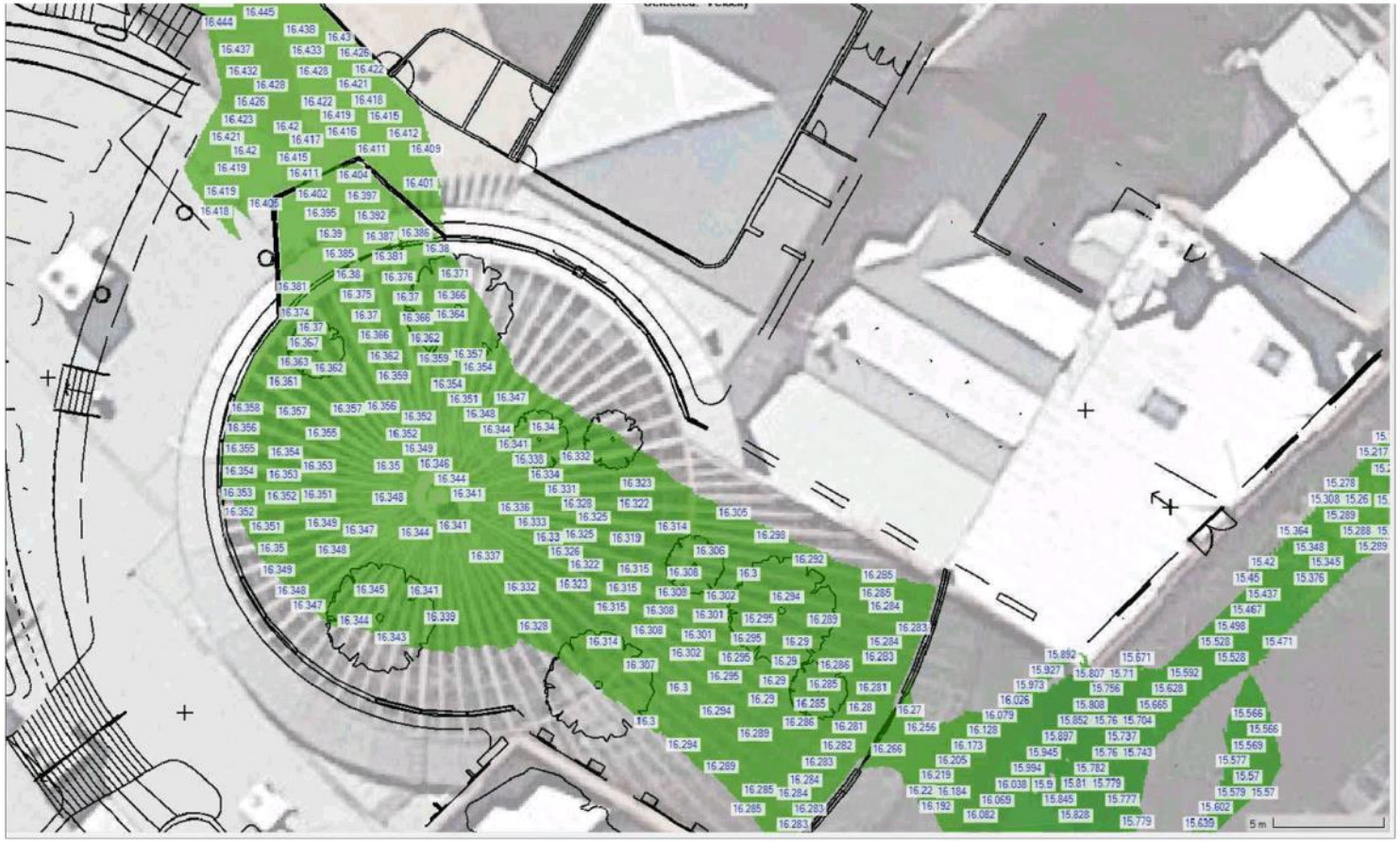

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P1 | 25.02.2022 | ISSUED FOR COUNCIL RFI RESPONSE
REV | DATE | REMARK

SAFETY IN DESIGN REPORT
In accordance with the Workplace Health & Safety Act, and Regulations, JMG have considered the potential hazards and risks that are capable in the design.

Are there any hazards or risks that are not manageable under the hierarchy of control?	No
The work has no or minor exposure and is not expected to cause an injury, illness, health or safety concern or risk.	

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PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT

TITLE
HYDRAULIC ANALYSIS
(HEC-RAS) WATER SURFACE
ELEVATION

Accepted: Chris M. (Discipline Lead)	Date
Accepted: CDH (Chief Engineer)	Date
Approved: GLG (Principal)	Date

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	PLOT DATE	24/02/2022

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PLOT DETAILS HEC-RAS DRAWING.DWG

PROJECT NO. 205028SH

DWG NO. HR-6 REVISION P1

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APPENDIX C

JMG Drawings

WARNING - DEPARTURE OF UNDERGROUND SERVICES
THE LOCATION OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THE EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL SERVICES ARE SHOWN.

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DRAWING REGISTER

DRAWING	DESCRIPTION
C01	DRAWING REGISTER AND LOCALITY
C02	EXISTING SITE SERVICES PLAN
C03	EXISTING STORMWATER PROFILE
C04	EXISTING SEWER PROFILE
C05	PROPOSED WORKS - COMBINED SERVICES PLAN
C06	PROPOSED WORKS - STORMWATER RELOCATION PLAN
C07	PROPOSED WORKS - SEWERAGE RELOCATION
C08	PROPOSED STORMWATER - LINE 1,2 & 3 LONGITUDINAL SECTION
C09	PROPOSED GRAVITY SEWER - LINE 1 LONGITUDINAL SECTIONS
C10	PROPOSED GRAVITY SEWER - LINE 2 & 3 LONGITUDINAL SECTIONS
C11	BRISBANE STREET KERB MODIFICATION
C12	BRISBANE STREET KERB AND FOOTPATH LONGITUDINAL PROFILES
C13	BRISBANE STREET CROSS SECTIONS
C14	DETAILS SHEET
C15	EXISTING PIPE DN1050, 1350 AND 1800 PLAN
C16	FINISHED SURFACE LEVELS NOTHERN STAIRS/WALKWAY
C17	PROPOSED SERVICES ALIGNMENTS RELATIVE TO FOOTINGS
C18	HGL REPORT (5% AEP) TO PROPOSED STORMWATER DN1350 & DN750
CTM-1	GENERAL CATCHMENTS (HYDROLOGY & HYDRAULIC ANALYSIS)
CTM2	SUB-CATCHMENT 5_2
HR-1	HYDRAULIC ANALYSIS (HEC-RAS) DEPTHS
HR-2	HYDRAULIC ANALYSIS (HEC-RAS) DEPTHS
HR-3	HYDRAULIC ANALYSIS (HEC-RAS) VELOCITIES
HR-4	HYDRAULIC ANALYSIS (HEC-RAS) VELOCITIES
HR-5	HYDRAULIC ANALYSIS (HEC-RAS) WATER SURFACE ELEVATION
HR-6	HYDRAULIC ANALYSIS (HEC-RAS) WATER SURFACE ELEVATION

REV	DATE	REMARK
DA2	25.02.2022	ISSUED FOR COUNCIL RFI RESPONSE
DA1	15.02.2021	ISSUED FOR COUNCIL DA
CA	15.12.2021	ISSUE FOR KCI GENERAL MANAGEMENT CONSENT
P1	11.12.2021	ISSUED FOR REVIEW

SAFETY IN DESIGN REPORT
In accordance with the Workplace Health & Safety Act and Regulations JMG have identified the potential hazards and risks that are specific to this design.

JMG Hazard Register identified no hazards requiring further identification	No
This design has potential hazards requiring further identification and control measures. Refer to JMG's Safety in Design Report for details.	Yes

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PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT

TITLE
DRAWING REGISTER
AND LOCALITY PLAN

Accepted: EMA/JA (Checklist Hold)	Date
Accepted: EGH (Team Leader)	Date
Approved: GLK (Principal)	Date

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1:200	GJW	CAG
	PLOT DATE	25.02.2022

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PLOT CB TABLE GA STYPLOT.PLANC.DWG

PROJECT NO. 205082SH

DWG NO. C01 REVISION DA2

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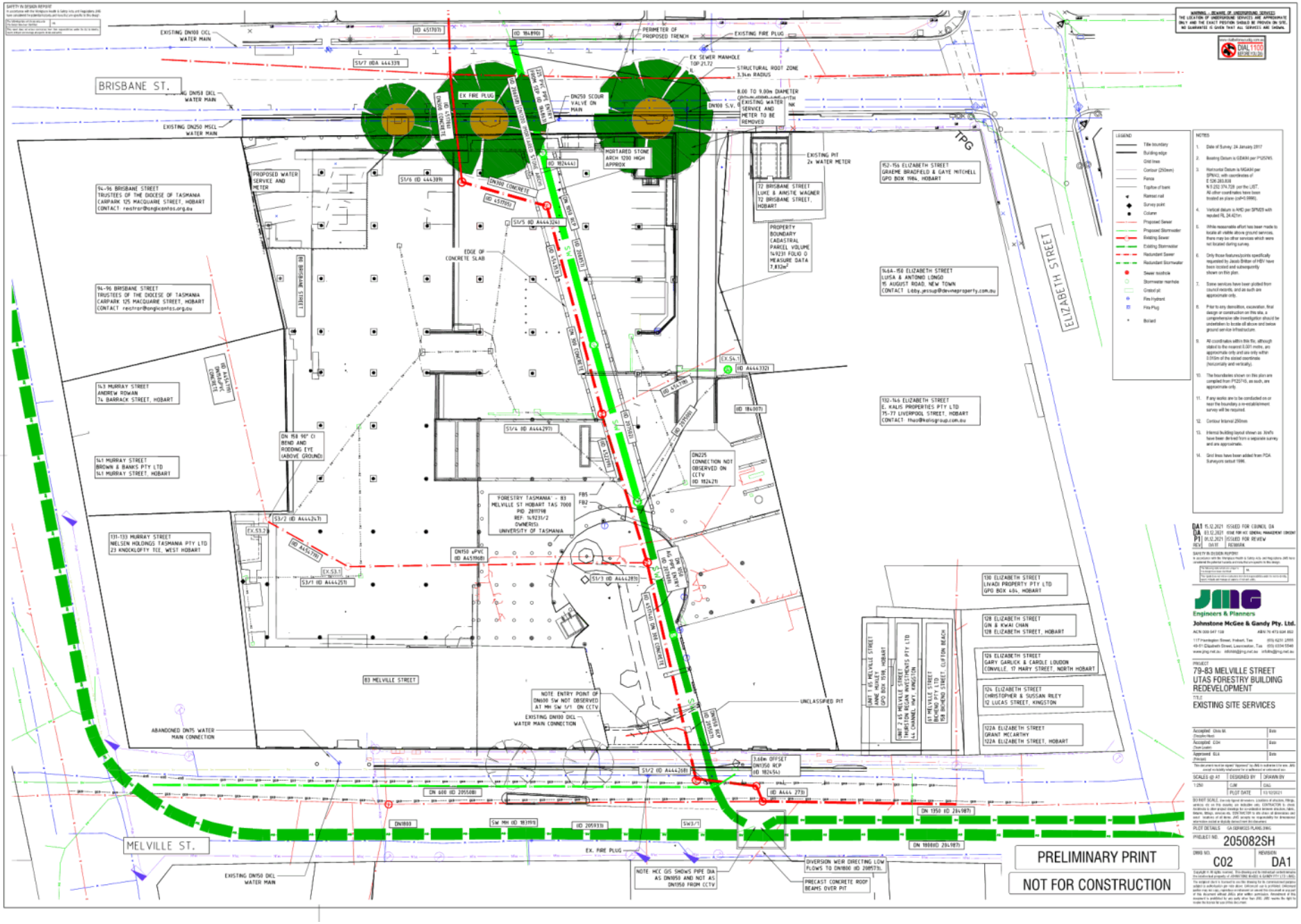
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MELVILLE ST.
ELIZABETH STREET
TPG
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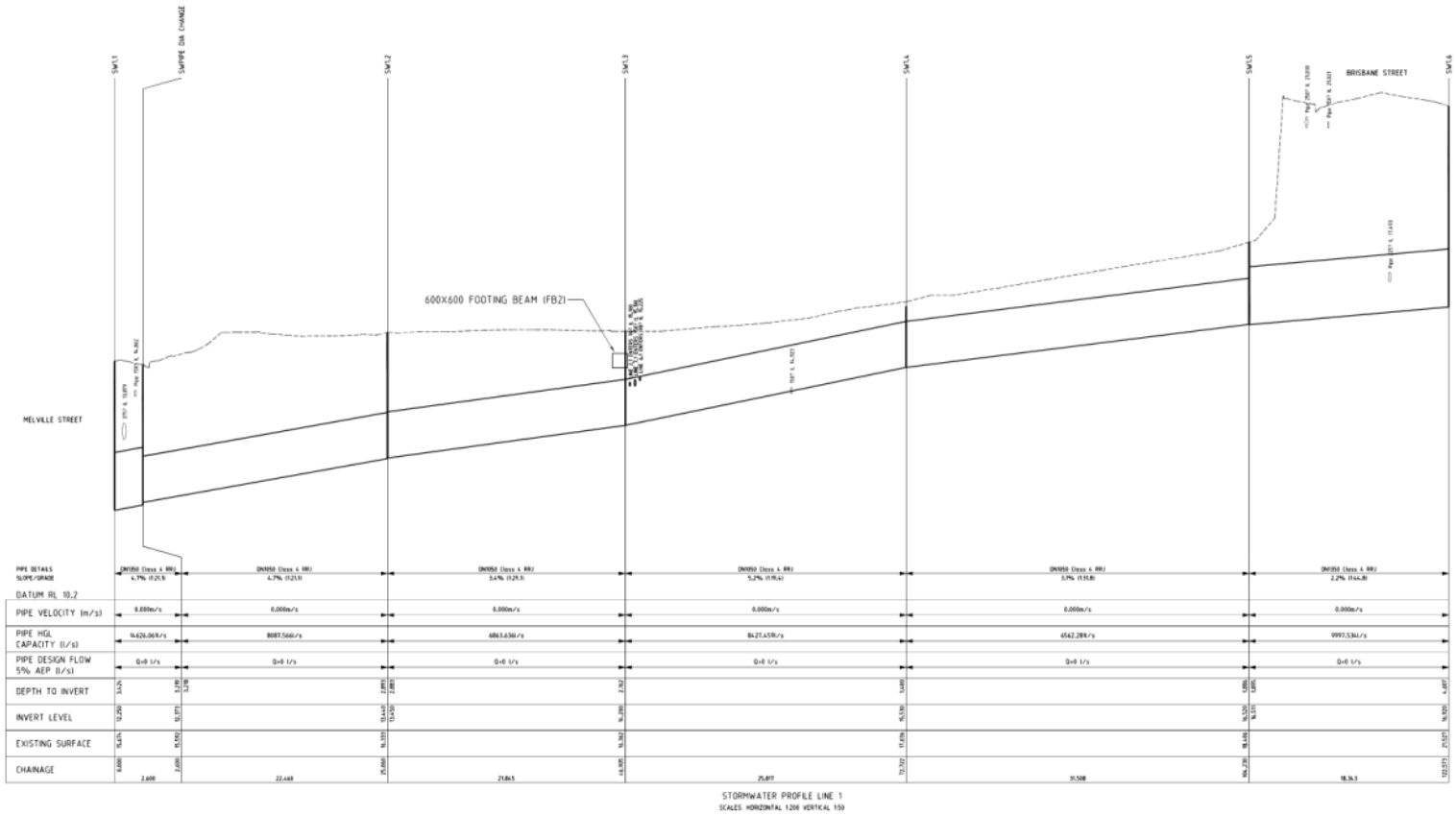
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT
TITLE
EXISTING SITE SERVICES
PROJECT NO.
205082SH
DRWG NO.
C02
REVISION
DA1



STORMWATER PROFILE LINE 1
SCALES HORIZONTAL 1:200 VERTICAL 1:50

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DA1 15.12.2021 ISSUED FOR COUNCIL DA
DA 03.12.2021 ISSUED FOR MC GENERAL MANAGER COMENT
P2 23.06.2021 ISSUED FOR SD REPORT
P1 31.05.2021 PRELIMINARY ISSUE
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PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT

TITLE
EXISTING STORMWATER
PROFILE

Accepted: Chris W. (Discipline Head) Date
Accepted: CDH (Team Leader) Date
Approved: GLG (Principal) Date

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CJW | CAG
PLOT DATE | 13/12/2021

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PLOT DETAILS EXISTING SW PROFILES.DWG

PROJECT NO. 205082SH

DWG NO. C03 REVISION DA1

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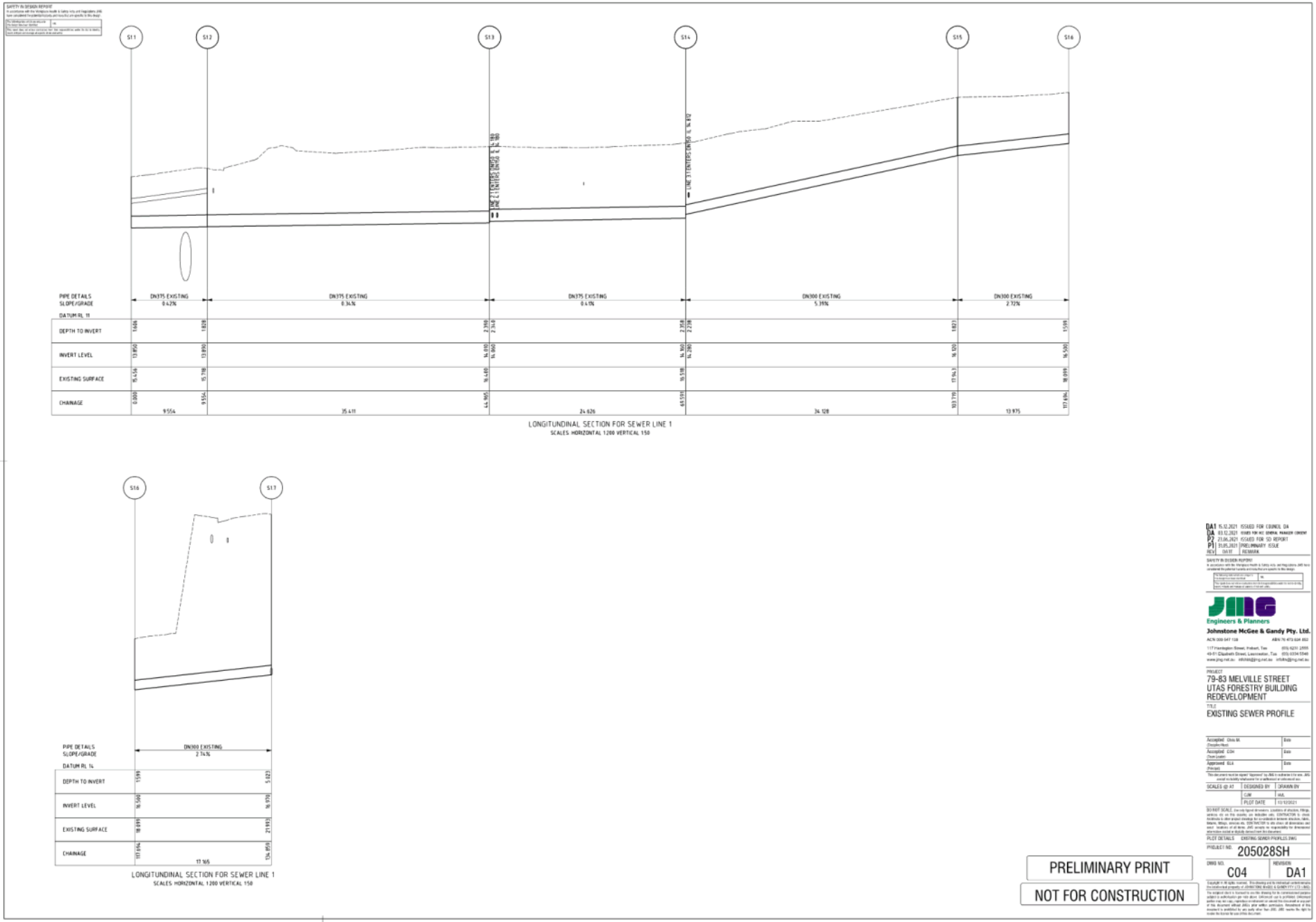
S1.1
S1.2
S1.3
S1.4
S1.5
S1.6
PIPE DETAILS SLOPE/GRADE
DN375 EXISTING 0.42%
DN375 EXISTING 0.34%
DN375 EXISTING 0.41%
DN300 EXISTING 5.39%
DN300 EXISTING 2.72%
DATUM RL 11
DEPTH TO INVERT
INVERT LEVEL
EXISTING SURFACE
CHAINAGE
9.554
35.411
24.626
34.128
13.975
LONGITUNDINAL SECTION FOR SEWER LINE 1
SCALES HORIZONTAL 1:200 VERTICAL 1:50
S1.6
S1.7
PIPE DETAILS SLOPE/GRADE
DN300 EXISTING 2.74%
DATUM RL 14
DEPTH TO INVERT
INVERT LEVEL
EXISTING SURFACE
CHAINAGE
17.165
LONGITUNDINAL SECTION FOR SEWER LINE 1
SCALES HORIZONTAL 1:200 VERTICAL 1:50
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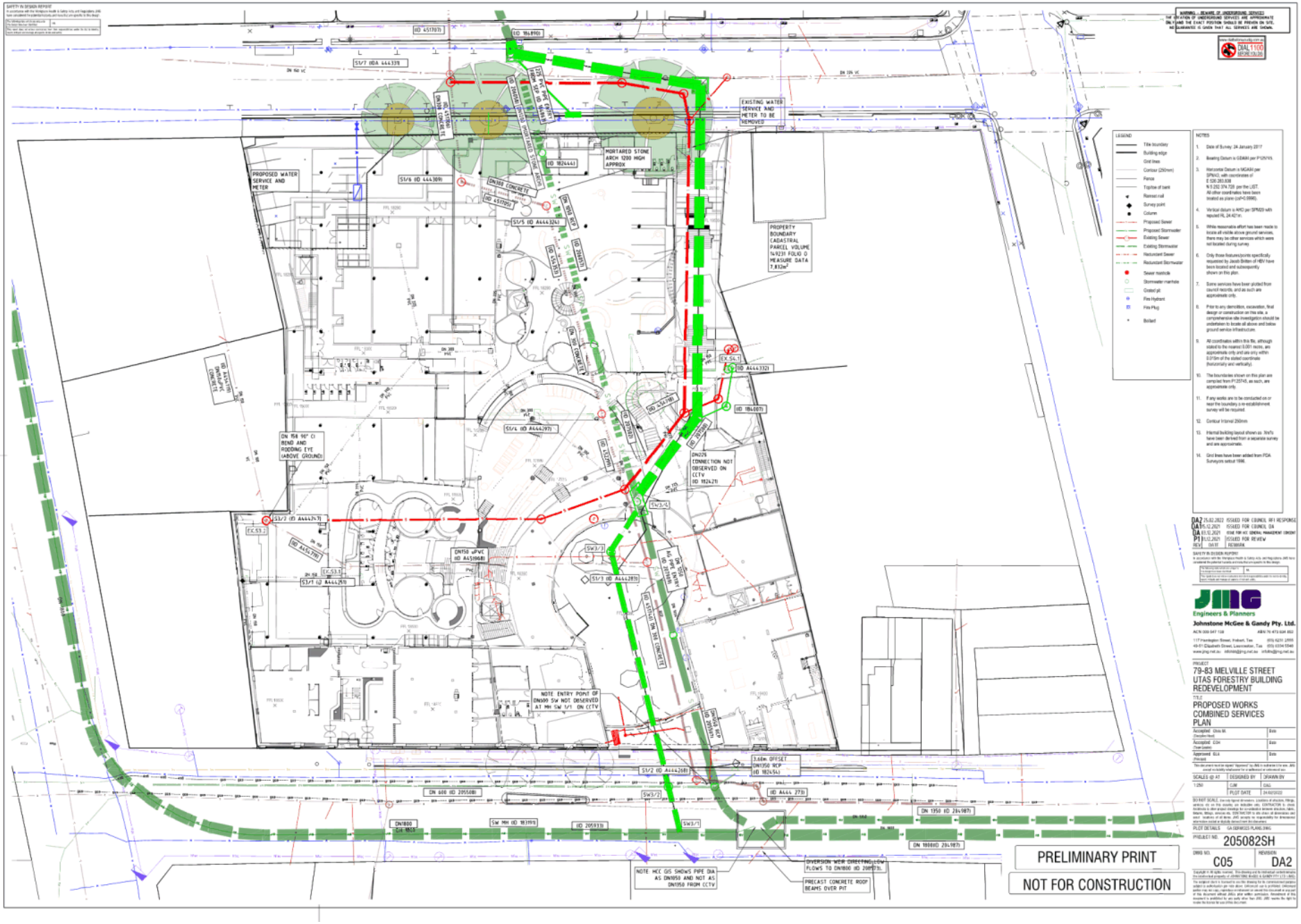
TITLE
EXISTING SEWER PROFILE
PROJECT NO. 205028SH
DWG NO. C04
REVISION DA1


PROPOSED WATER SERVICE AND METER
EXISTING WATER SERVICE AND METER TO BE REMOVED
MORTARED STONE ARCH 1200 HIGH APPROX
PROPERTY BOUNDARY CADASTRAL PARCEL VOLUME 14923F FOLIO 0 MEASURE DATA 7,832m²
DN 150 90° CI BEND AND RODDING EYE (ABOVE GROUND)
DN225 CONNECTION NOT OBSERVED ON CCTV (ID 182421)
NOTE ENTRY POINT OF DN600 SW NOT OBSERVED AT MH SW 1/1 ON CCTV
NOTE HCC GIS SHOWS PIPE DIA AS DN1050 AND NOT AS DN1350 FROM CCTV
DIVERSION WEIR DIRECTING LOW FLOWS TO DN1800 (ID 205973)
PRECAST CONCRETE ROOF BEAMS OVER PIT
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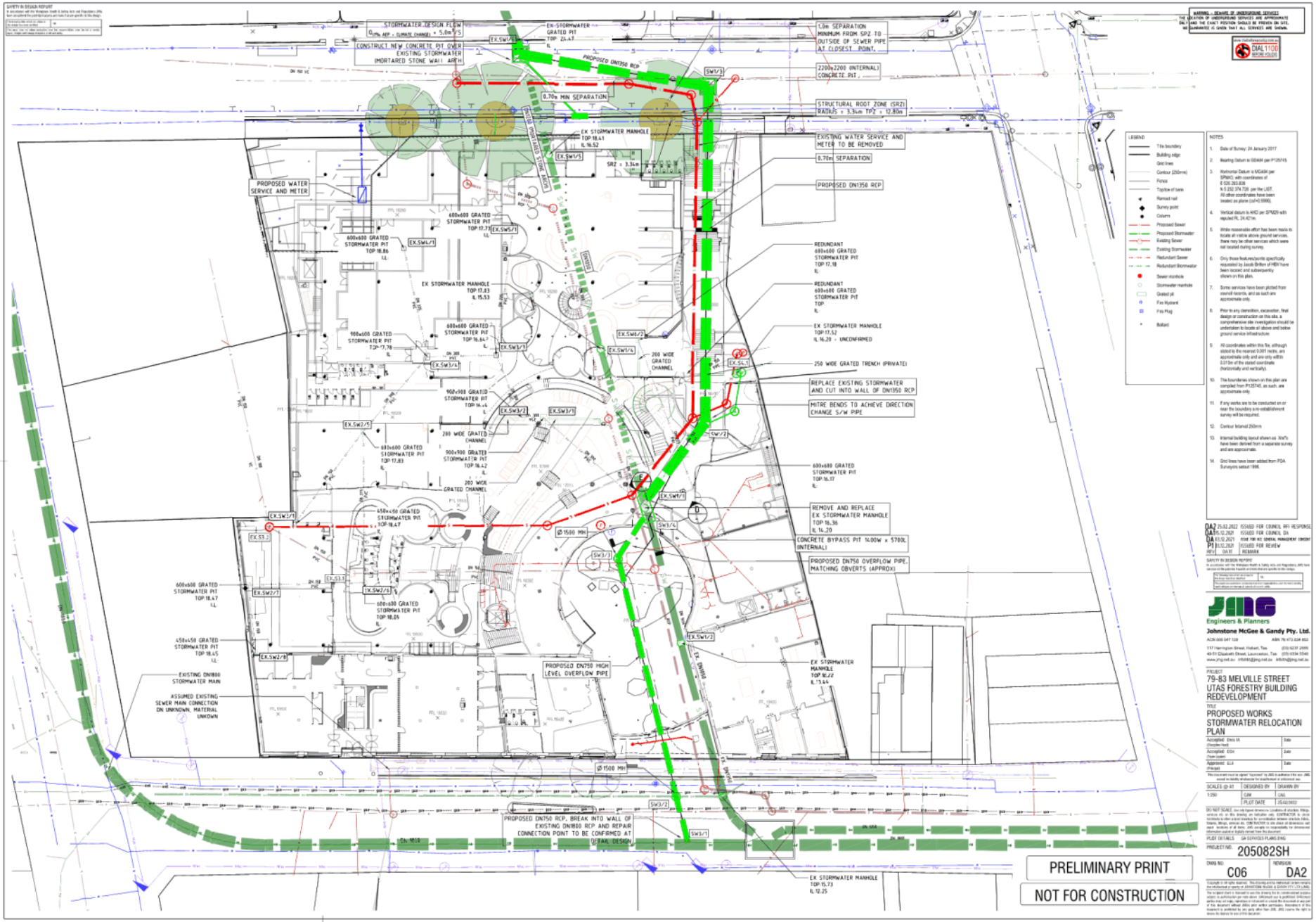
PROPOSED WORKS COMBINED SERVICES PLAN
205082SH
C05
DA2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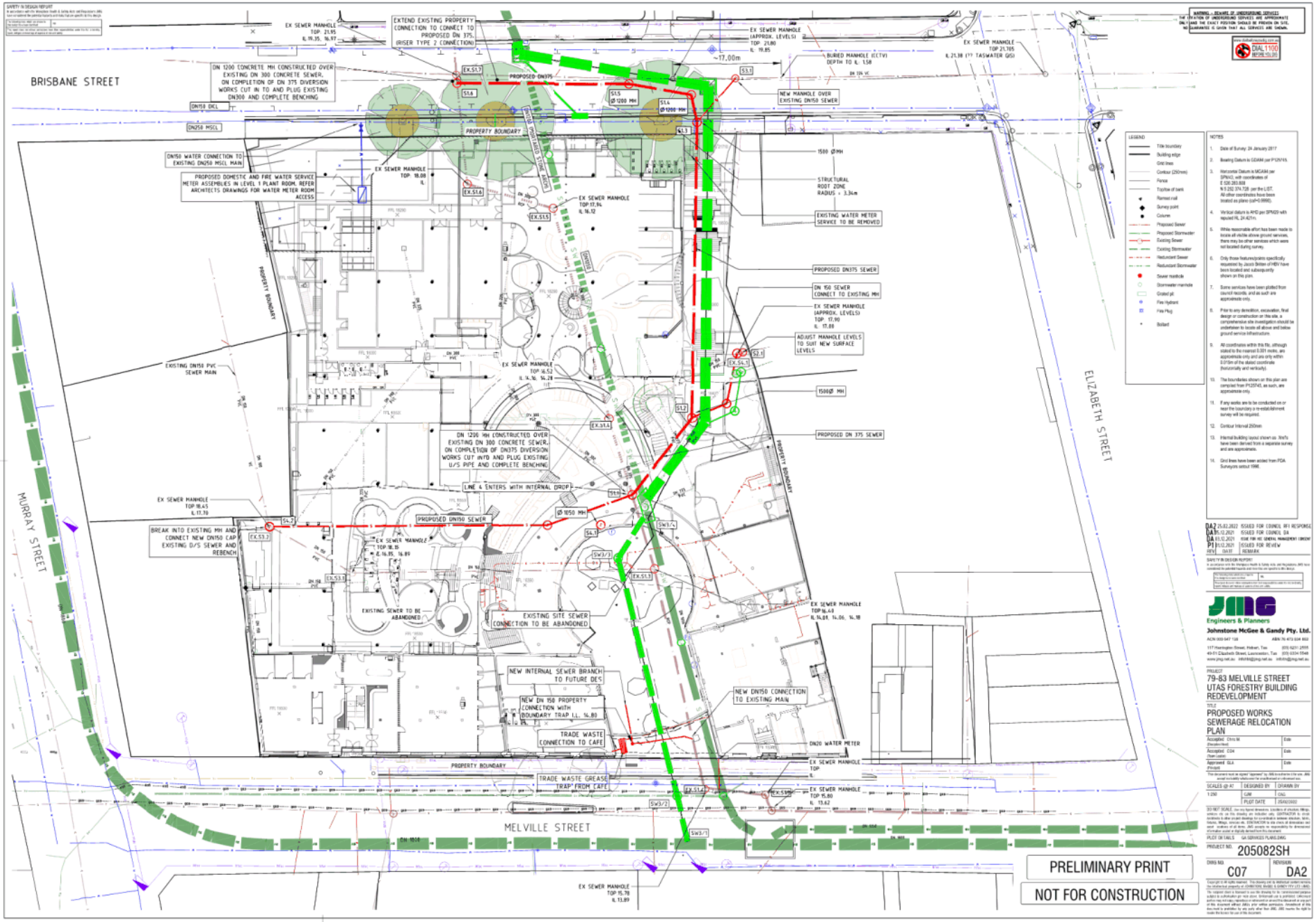
STORMWATER RELOCATION
PLAN
205082SH
C06
DA2


BRISBANE STREET
MURRAY STREET
ELIZABETH STREET
MELVILLE STREET
PROPERTY BOUNDARY
EXTEND EXISTING PROPERTY CONNECTION TO CONNECT TO PROPOSED DN 375. (RISER TYPE 2 CONNECTION)
DN 1200 CONCRETE MH CONSTRUCTED OVER EXISTING DN 300 CONCRETE SEWER. ON COMPLETION OF DN 375 DIVERSION WORKS CUT IN TO AND PLUG EXISTING DN300 AND COMPLETE BENCHING
PROPOSED DN375
NEW MANHOLE OVER EXISTING DN150 SEWER
DN150 WATER CONNECTION TO EXISTING DN250 MSCL MAIN
PROPOSED DOMESTIC AND FIRE WATER SERVICE METER ASSEMBLIES IN LEVEL 1 PLANT ROOM. REFER ARCHITECTS DRAWINGS FOR WATER METER ROOM ACCESS
STRUCTURAL ROOT ZONE RADIUS = 3.34m
EXISTING WATER METER SERVICE TO BE REMOVED
PROPOSED DN375 SEWER
DN 150 SEWER CONNECT TO EXISTING MH
ADJUST MANHOLE LEVELS TO SUIT NEW SURFACE LEVELS
EXISTING DN150 PVC SEWER MAIN
DN 1200 MH CONSTRUCTED OVER EXISTING DN 300 CONCRETE SEWER. ON COMPLETION OF DN375 DIVERSION WORKS CUT INTO AND PLUG EXISTING U/S PIPE AND COMPLETE BENCHING
PROPOSED DN 375 SEWER
LINE 4 ENTERS WITH INTERNAL DROP
BREAK INTO EXISTING MH AND CONNECT NEW DN150 CAP EXISTING D/S SEWER AND REBENCH
PROPOSED DN150 SEWER
EXISTING SEWER TO BE ABANDONED
EXISTING SITE SEWER CONNECTION TO BE ABANDONED
NEW INTERNAL SEWER BRANCH TO FUTURE DES
NEW DN 150 PROPERTY CONNECTION WITH BOUNDARY TRAP I.L. 14.80
TRADE WASTE CONNECTION TO CAFE
NEW DN150 CONNECTION TO EXISTING MAIN
TRADE WASTE GREASE TRAP FROM CAFE
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Johnstone McGee & Gandy Pty. Ltd.
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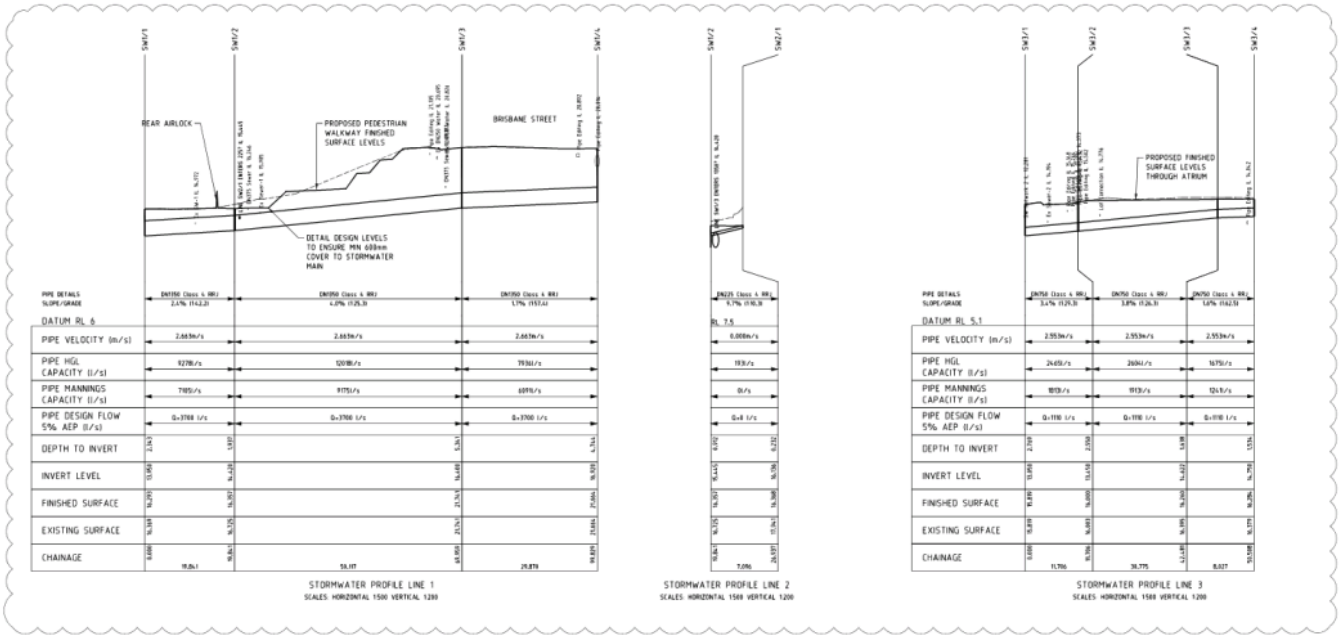
UTAS FORESTRY BUILDING REDEVELOPMENT
TITLE
PROPOSED WORKS SEWERAGE RELOCATION PLAN
PROJECT NO. 205082SH
DWG NO. C07
REVISION DA2



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DA2	25.02.2022	REVISED COUNCIL DA ISSUE
DA1	15.12.2021	ISSUED FOR COUNCIL DA
DA	03.12.2021	ISSUED FOR MC GENERAL MANAGER COMENT
P2	21.06.2021	ISSUED FOR SD REPORT
P1	31.05.2021	PRELIMINARY ISSUE

SAFETY IN DESIGN REPORT

Engineers & Planners

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PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT

TITLE
PROPOSED STORMWATER
LINE 1,2 & 3 LONGITUDINAL
SECTION

Accepted: Chris M (Resident Rep) — Date
Accepted: CGH (Town Lawn) — Date
Approved: GLA (Project) — Date

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	CJM	CAG
	PLOT DATE	25/02/2022

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PLOT DETAILS PROPOSED SW PROFILES.DWG

PROJECT NO. 205082SH

DWG NO. C08 REVISION DA2

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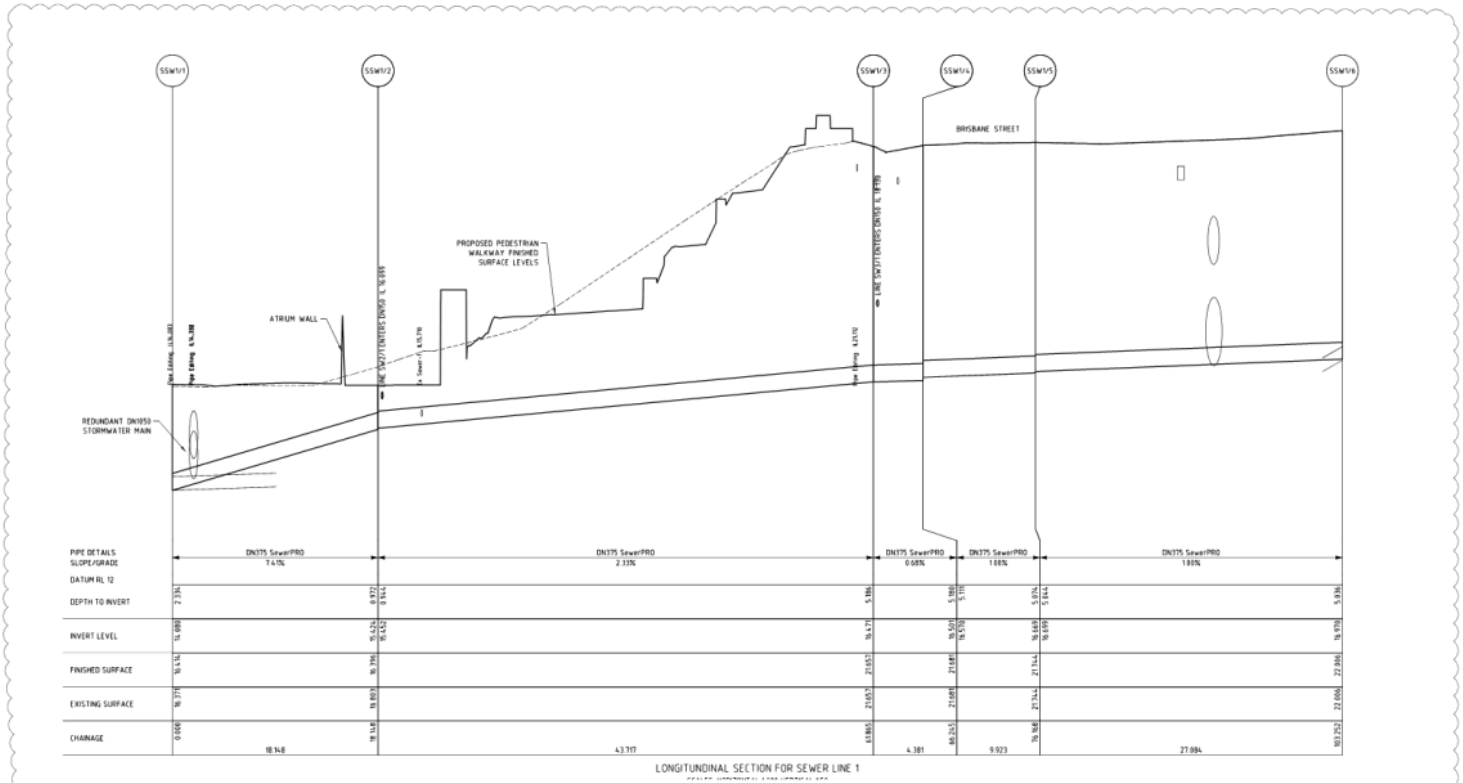

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DA 03.12.2021 ISSUED FOR MC GENERAL MANAGER COMMENT
P2 23.06.2021 ISSUED FOR SD REPORT
P1 31.05.2021 PRELIMINARY ISSUE
REV | DATE | REMARK

SAFETY IN DESIGN REPORT
In accordance with the Workplace Health & Safety Act and Regulations JMG have considered the potential hazards and risks that are specific to this design.

Are there any hazardous substances used in the design?	No
Are there any other hazards that are not readily apparent?	

The work does not relieve contractors from their responsibilities under the Work Health & Safety Act and Regulations.

Engineers & Planners

Johnstone McGee & Gandy Pty. Ltd.
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PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT

TITLE
PROPOSED GRAVITY SEWER LINE 1 LONGITUDINAL SECTION

Accepted: Chris Sh (Developer Rep)	Date
Accepted: EGH (Town Planner)	Date
Approved: GLG (Principal)	Date

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	CJW	HVL
	PLOT DATE	24/02/2022

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PLOT DETAILS PROPOSED SEWER PROFILES.DWG

PROJECT NO. 205028SH

DWG NO. C09 REVISION DA2

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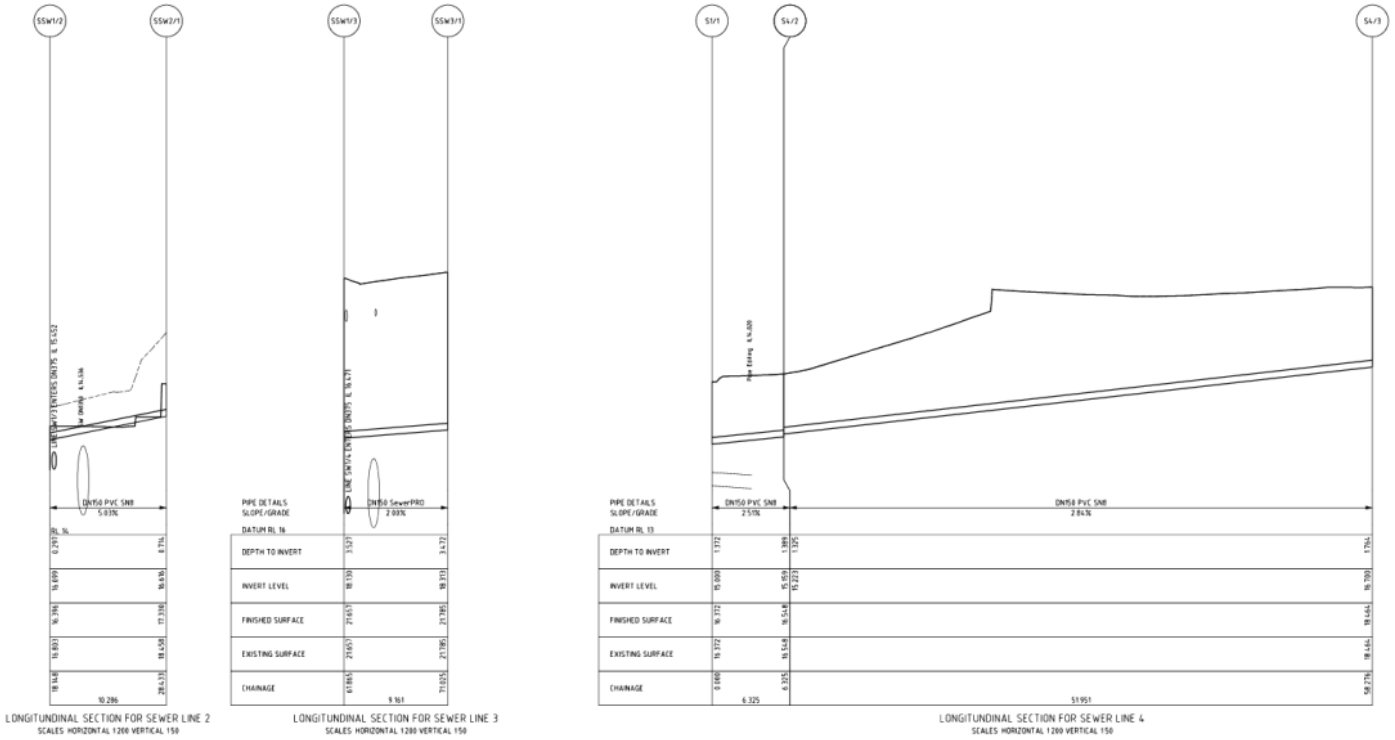

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DA2 25.02.2022 ISSUED FOR COUNCIL RFI RESPONSE
DA1 15.12.2021 ISSUED FOR COUNCIL DA
DA 03.12.2021 ISSUED FOR M1 GENERAL MANAGER REVIEW
P2 21.06.2021 ISSUED FOR SD REPORT
P1 31.05.2021 PRELIMINARY ISSUE
REV | DATE | REMARK

SAFETY IN DESIGN REPORT

Engineers & Planners

Johnstone McGee & Gandy Pty. Ltd.
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117 Harrington Street, Hobart, Tas (03) 6231 2555
40-51 Elizabeth Street, Launceston, Tas (03) 6334 5548
www.jmg.net.au info@jmg.net.au info(ln)@jmg.net.au

PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT

TITLE
PROPOSED GRAVITY SEWER
LINE 2 & 3 LONGITUDINAL
SECTION

Accepted: Chris Vik (Checker-Hwy) | Date
Accepted: EGH (Town Leader) | Date
Approved: GLR (Principal) | Date

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	PLOT DATE	25/02/2022

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PLOT DETAILS PROPOSED SEWER PROFILES.DWG

PROJECT NO. 205028SH

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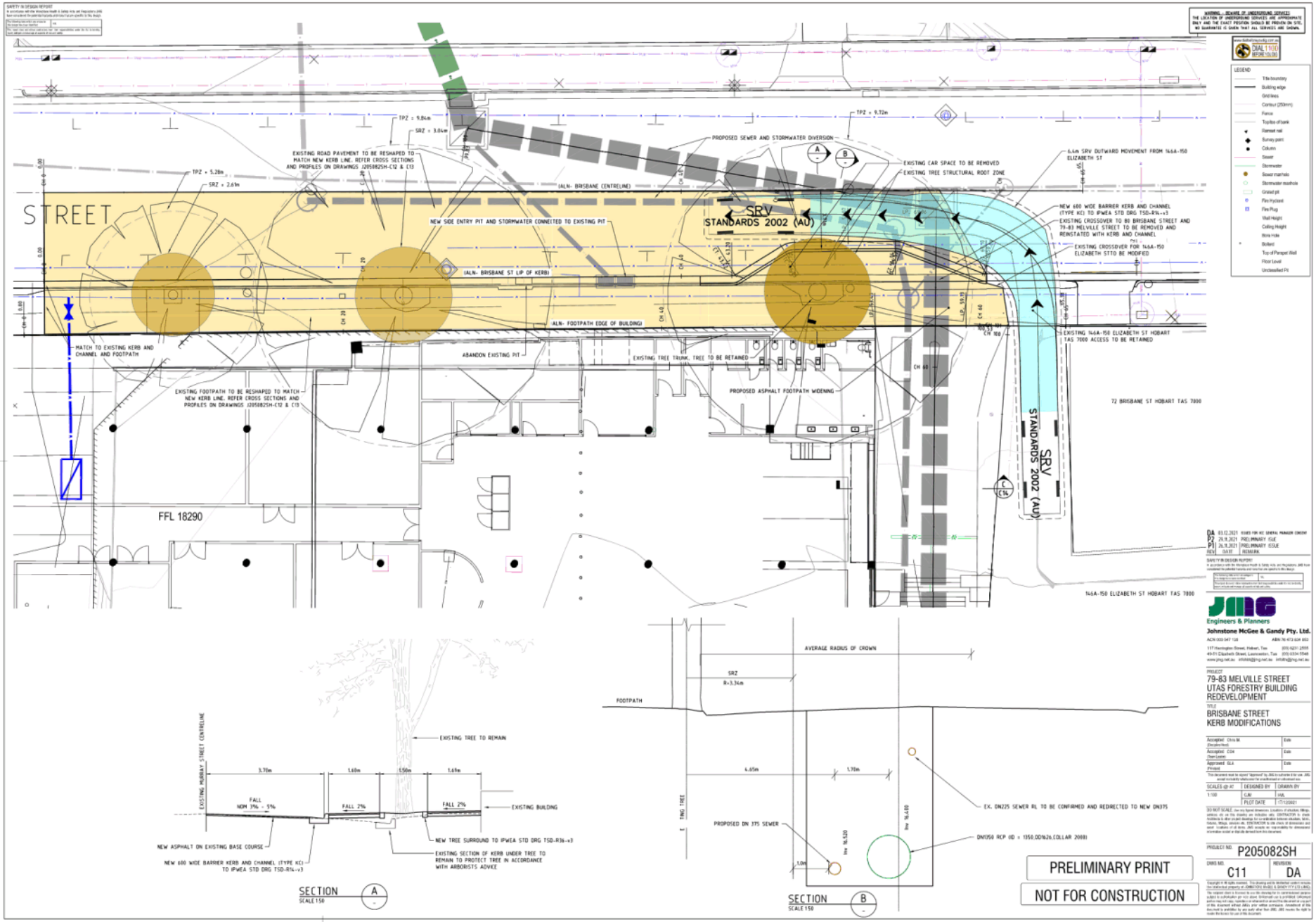
STREET
SRV STANDARDS 2002 (AU)
FFL 18290
PROPOSED SEWER AND STORMWATER DIVERSION
EXISTING CAR SPACE TO BE REMOVED
EXISTING TREE STRUCTURAL ROOT ZONE
NEW 600 WIDE BARRIER KERB AND CHANNEL (TYPE KC) TO IPWEA STD DRG TSD-R14-v3
EXISTING CROSSOVER TO 80 BRISBANE STREET AND 79-83 MELVILLE STREET TO BE REMOVED AND REINSTATED WITH KERB AND CHANNEL
EXISTING CROSSOVER FOR 146A-150 ELIZABETH STTO BE MODIFIED
EXISTING 146A-150 ELIZABETH ST HOBART TAS 7000 ACCESS TO BE RETAINED
72 BRISBANE ST HOBART TAS 7000
146A-150 ELIZABETH ST HOBART TAS 7000
NEW SIDE ENTRY PIT AND STORMWATER CONNETTED TO EXISTING PIT
EXISTING ROAD PAVEMENT TO BE RESHAPED TO MATCH NEW KERB LINE. REFER CROSS SECTIONS AND PROFILES ON DRAWINGS J205082SH-C12 & C13
EXISTING FOOTPATH TO BE RESHAPED TO MATCH NEW KERB LINE. REFER CROSS SECTIONS AND PROFILES ON DRAWINGS J205082SH-C12 & C13
MATCH TO EXISTING KERB AND CHANNEL AND FOOTPATH
ABANDON EXISTING PIT
EXISTING TREE TRUNK. TREE TO BE RETAINED
PROPOSED ASPHALT FOOTPATH WIDENING
(ALN- BRISBANE CENTRELINE)
(ALN- BRISBANE ST LIP OF KERB)
(ALN- FOOTPATH EDGE OF BUILDING)
TPZ = 9.72m
TPZ = 9.84m
SRZ = 3.84m
TPZ = 5.28m
SRZ = 2.69m
EXISTING TREE TO REMAIN
EXISTING MURRAY STREET CENTRELINE
3.70m
1.60m
1.50m
1.69m
FALL NOM 3% - 5%
FALL 2%
FALL 2%
EXISTING BUILDING
NEW ASPHALT ON EXISTING BASE COURSE
NEW 600 WIDE BARRIER KERB AND CHANNEL (TYPE KC) TO IPWEA STD DRG TSD-R14-v3
NEW TREE SURROUND TO IPWEA STD DRG TSD-R36-v3
EXISTING SECTION OF KERB UNDER TREE TO REMAIN TO PROTECT TREE IN ACCORDANCE WITH ARBORISTS ADVICE
SECTION A
SCALE 1:50
AVERAGE RADIUS OF CROWN
SRZ
R=3.34m
FOOTPATH
4.65m
1.70m
PROPOSED DN 375 SEWER
EX. DN225 SEWER RL TO BE CONFIRMED AND REDIRECTED TO NEW DN375
DN150 RCP OD = 1350.00%26.COLLAR 2008)
SECTION B
SCALE 1:50
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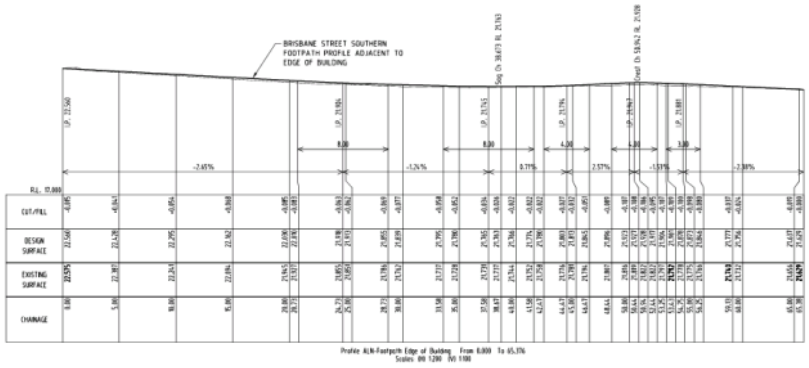
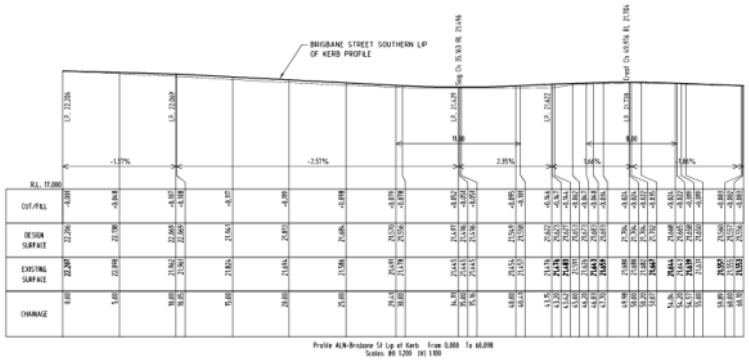
Johnstone McGee & Gandy Pty. Ltd.
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT
BRISBANE STREET
KERB MODIFICATIONS
PROJECT NO. P205082SH
DWG NO. C11
REVISION DA





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DA 03.12.2021 ISSUED FOR MC GINNA, MANAGER CONCEPT
PT 02.12.2021 PRELIMINARY ISSUE
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SAFETY IN DESIGN REPORT
In accordance with the Workplace Health & Safety Act and Regulations JMG have considered the potential hazards and risks that are specific to this design.

Are there any other hazards or risks that are specific to this design? (Including those arising from the use of the structure)	No
Are there any other hazards or risks that are specific to this design? (Including those arising from the use of the structure)	
This report does not relieve a designer from their responsibilities under the law to identify hazards and manage risks associated with the structure.	

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PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT

TITLE
BRISBANE STREET
KERB AND FOOTPATH
LONGITUDINAL PROFILES

Accepted: Chris Gil (Director/Hbt)	Date
Accepted: CGH (Chief Leader)	Date
Approved: GLA (Principal)	Date

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PLOT DETAILS BRISBANE STREET KERB PROFILES AND SECTIONS

PROJECT NO. 205028SH

DWG NO. C12 REVISION DA1

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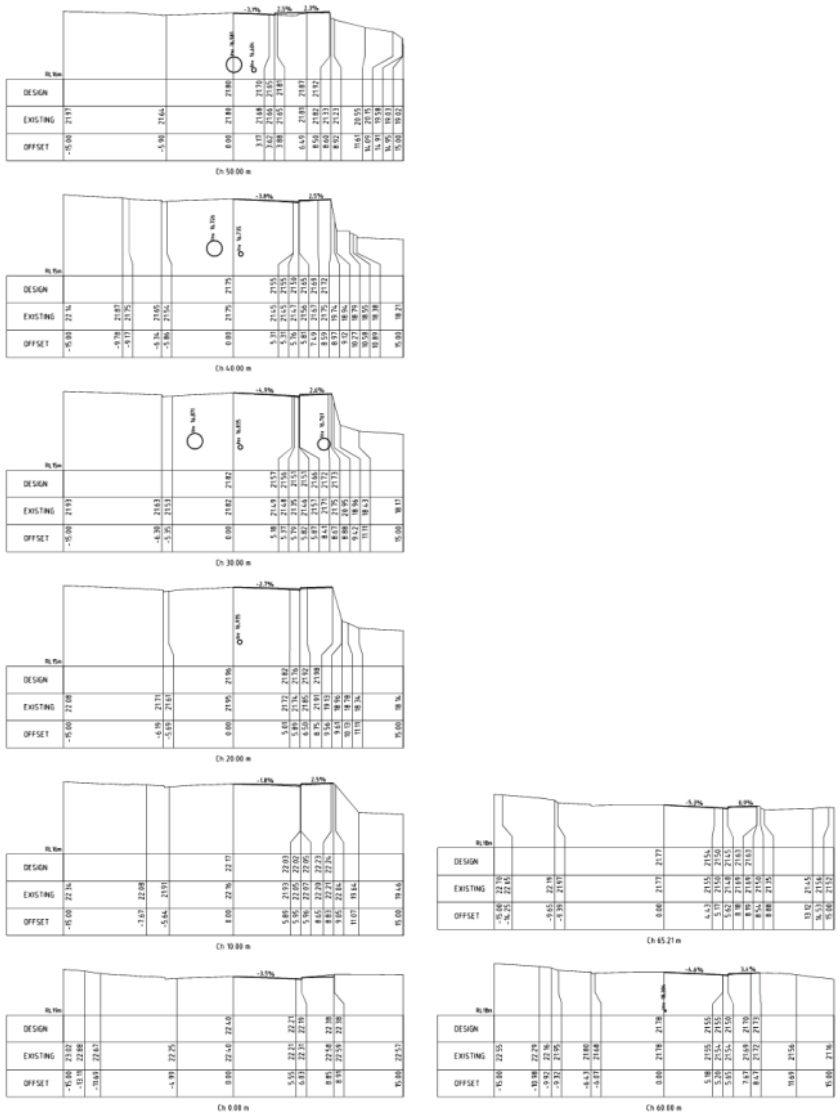

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DA 03.12.2021 ISSUED FOR MCC GENERAL MANAGER CONSENT
PT 02.12.21 PRELIMINARY ISSUE
REV. DATE REMARK

SAFETY IN DESIGN REPORT
In accordance with the Workplace Health & Safety Act and Regulations JMG have considered the potential hazards and risks that are specific to this design.

Are there any hazards that are not adequately addressed by the design?	No
The design does not adhere to standards or best practice.	
This work does not relieve contractors from their responsibilities under the WHS Act, Regulations and Codes of practice.	

Engineers & Planners
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PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT

TITLE
BRISBANE STREET CROSS SECTIONS

Accepted: Chris Mc (Discipline Head)	Date
Accepted: EGH (Team Leader)	Date
Approved: GLA (Principal)	Date

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PLOT DETAILS BRISBANE STREET ADM-PROFILES AND SECTIONS

PROJECT NO. 205028SH

DWG NO. C13 REVISION DA1

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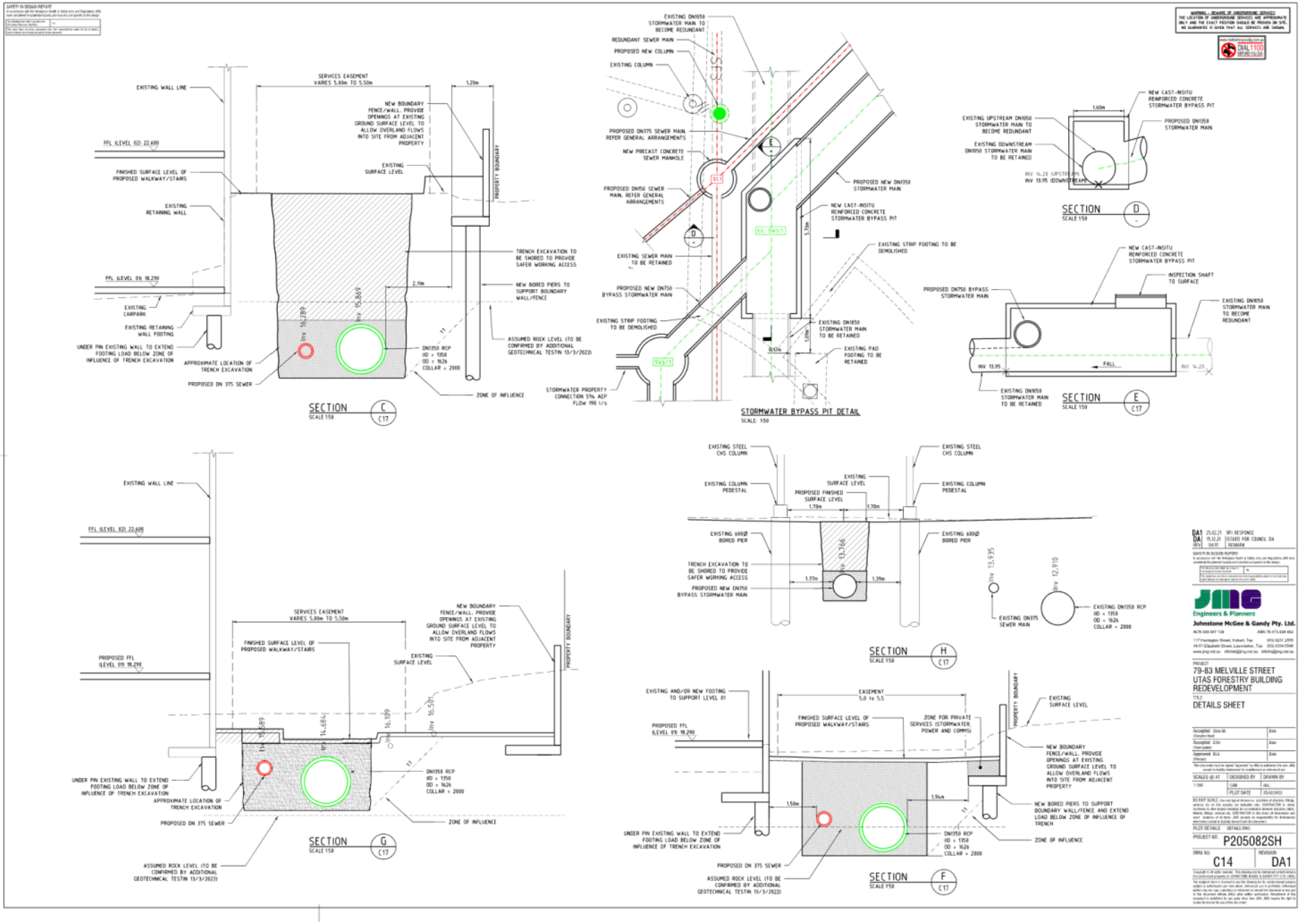
SECTION C
SCALE 1:50
SERVICES EASEMENT VARIES 5.80m TO 5.50m
EXISTING WALL LINE
NEW BOUNDARY FENCE/WALL. PROVIDE OPENINGS AT EXISTING GROUND SURFACE LEVEL TO ALLOW OVERLAND FLOWS INTO SITE FROM ADJACENT PROPERTY
FFL (LEVEL 02) 22.600
FINISHED SURFACE LEVEL OF PROPOSED WALKWAY/STAIRS
EXISTING SURFACE LEVEL
EXISTING RETAINING WALL
PROPERTY BOUNDARY
TRENCH EXCAVATION TO BE SHORED TO PROVIDE SAFER WORKING ACCESS
NEW BORED PIERS TO SUPPORT BOUNDARY WALL/FENCE
FFL (LEVEL 01) 18.290
EXISTING CARPARK
EXISTING RETAINING WALL FOOTING
UNDER PIN EXISTING WALL TO EXTEND FOOTING LOAD BELOW ZONE OF INFLUENCE OF TRENCH EXCAVATION
APPROXIMATE LOCATION OF TRENCH EXCAVATION
PROPOSED DN 375 SEWER
DN1350 RCP
ID = 1350
OD = 1626
COLLAR = 2000
ASSUMED ROCK LEVEL (TO BE CONFIRMED BY ADDITIONAL GEOTECHNICAL TESTIN 13/3/2022)
ZONE OF INFLUENCE
STORMWATER BYPASS PIT DETAIL
SCALE: 1:50
EXISTING DN1050 STORMWATER MAIN TO BECOME REDUNDANT
REDUNDANT SEWER MAIN
PROPOSED NEW COLUMN
EXISTING COLUMN
PROPOSED DN375 SEWER MAIN. REFER GENERAL ARRANGEMENTS
NEW PRECAST CONCRETE SEWER MANHOLE
PROPOSED DN150 SEWER MAIN. REFER GENERAL ARRANGEMENTS
EXISTING SEWER MAIN TO BE RETAINED
PROPOSED NEW DN750 BYPASS STORMWATER MAIN
EXISTING STRIP FOOTING TO BE DEMOLISHED
STORMWATER PROPERTY CONNECTION 5% AEP FLOW 190 l/s
PROPOSED NEW DN1350 STORMWATER MAIN
NEW CAST-INSITU REINFORCED CONCRETE STORMWATER BYPASS PIT
EXISTING STRIP FOOTING TO BE DEMOLISHED
EXISTING DN1350 STORMWATER MAIN TO BE RETAINED
EXISTING PAD FOOTING TO BE RETAINED
SECTION D
SCALE 1:50
EXISTING UPSTREAM DN1050 STORMWATER MAIN TO BECOME REDUNDANT
EXISTING DOWNSTREAM DN1050 STORMWATER MAIN TO BE RETAINED
PROPOSED DN1350 STORMWATER MAIN
SECTION E
SCALE 1:50
PROPOSED DN750 BYPASS STORMWATER MAIN
INSPECTION SHAFT TO SURFACE
EXISTING DN1050 STORMWATER MAIN TO BECOME REDUNDANT
EXISTING DN1050 STORMWATER MAIN TO BE RETAINED
FALL
SECTION G
SCALE 1:50
SECTION H
SCALE 1:50
EXISTING STEEL CHS COLUMN
EXISTING COLUMN PEDESTAL
PROPOSED FINISHED SURFACE LEVEL
EXISTING SURFACE LEVEL
EXISTING 600Ø BORED PIER
TRENCH EXCAVATION TO BE SHORED TO PROVIDE SAFER WORKING ACCESS
PROPOSED NEW DN750 BYPASS STORMWATER MAIN
EXISTING DN375 SEWER MAIN
EXISTING DN1350 RCP
ID = 1350
OD = 1626
COLLAR = 2000
SECTION F
SCALE 1:50
EXISTING AND/OR NEW FOOTING TO SUPPORT LEVEL 01
EASEMENT 5.0 to 5.5
ZONE FOR PRIVATE SERVICES (STORMWATER, POWER AND COMMS)
NEW BORED PIERS TO SUPPORT BOUNDARY WALL/FENCE AND EXTEND LOAD BELOW ZONE OF INFLUENCE OF TRENCH
Engineers & Planners
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79-83 MELVILLE STREET
UTAS FORESTRY BUILDING REDEVELOPMENT
DETAILS SHEET
P205082SH
C14
DA1

PATRICK STREET
MURRAY STREET
ELIZABETH STREET
BRISBANE STREET
MELVILLE STREET
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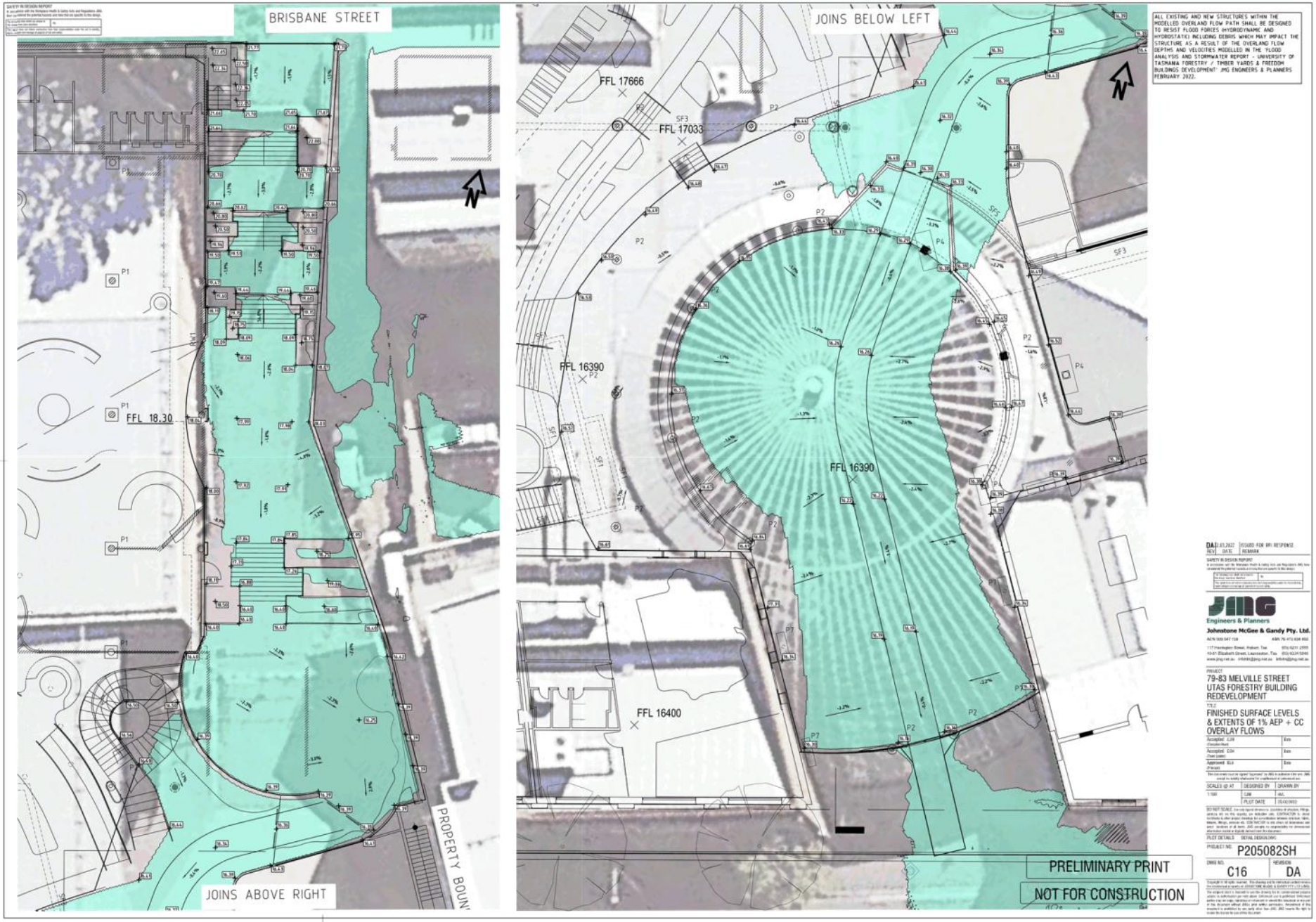
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT
EXISTING PIPE DN1050, 1350
AND 1800 PLAN
205082SH
C15
DA


BRISBANE STREET
JOINS ABOVE RIGHT
PROPERTY BOUN
FFL 18.30
JOINS BELOW LEFT
FFL 17666
FFL 17033
FFL 16390
FFL 16390
FFL 16400
ALL EXISTING AND NEW STRUCTURES WITHIN THE MODELLED OVERLAND FLOW PATH SHALL BE DESIGNED TO RESIST FLOOD FORCES (HYDRODYNAMIC AND HYDROSTATIC) INCLUDING DEBRIS WHICH MAY IMPACT THE STRUCTURE AS A RESULT OF THE OVERLAND FLOW DEPTHS AND VELOCITIES MODELLED IN THE 'FLOOD ANALYSIS AND STORMWATER REPORT - UNIVERSITY OF TASMANIA FORESTRY / TIMBER YARDS & FREEDOM BUILDINGS DEVELOPMENT' JMG ENGINEERS & PLANNERS FEBRUARY 2022.
DA 18.03.2022 ISSUED FOR RFI RESPONSE
REV DATE REMARK
Engineers & Planners
Johnstone McGee & Gandy Pty. Ltd.
PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT
TITLE
FINISHED SURFACE LEVELS
& EXTENTS OF 1% AEP + CC
OVERLAY FLOWS
SCALES @ A1
DESIGNED BY
DRAWN BY
PLOT DATE
PLOT DETAILS DETAIL DESIGNING
PROJECT NO. P205082SH
DWG NO. C16
REVISION DA
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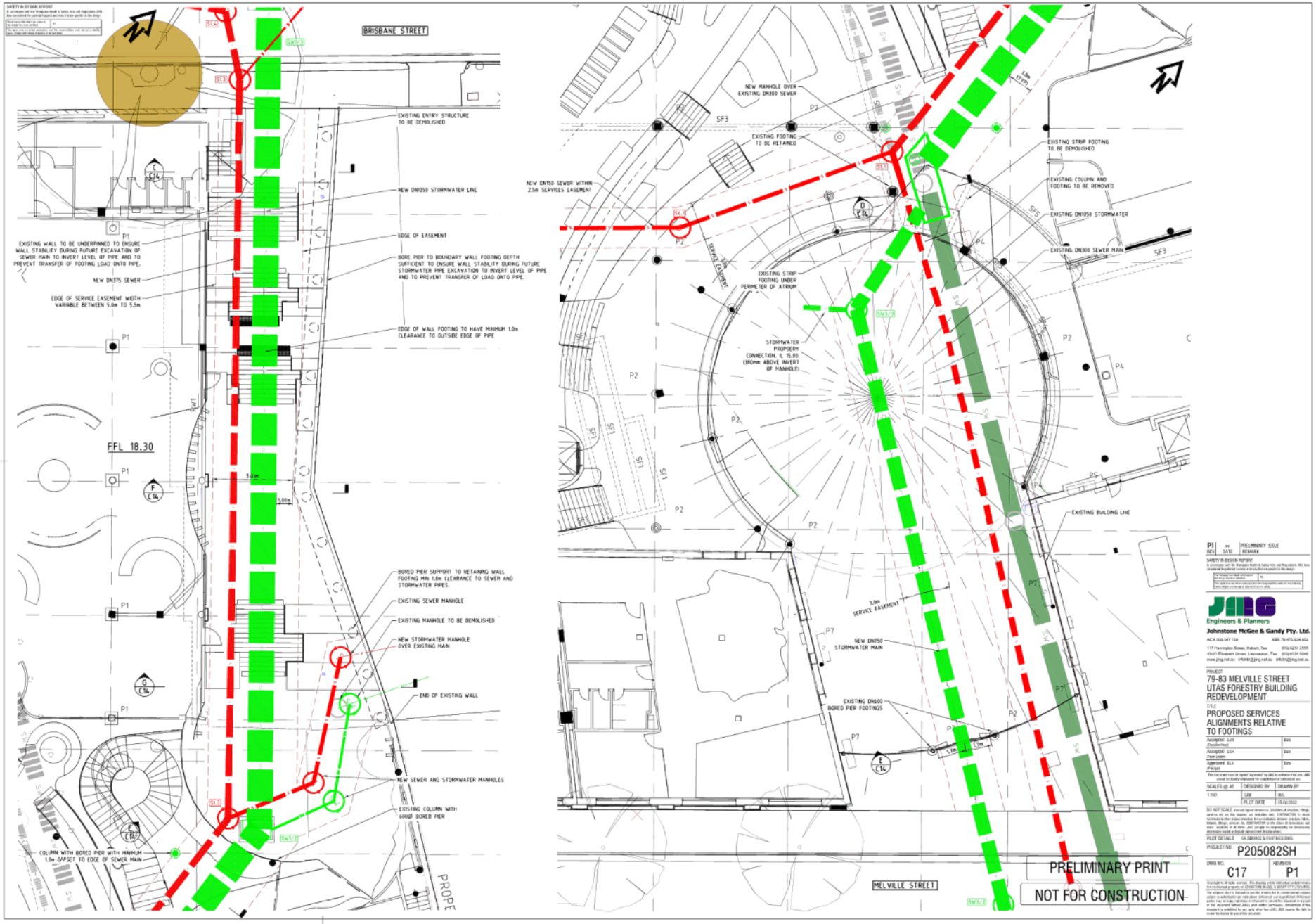
BRISBANE STREET
EXISTING ENTRY STRUCTURE TO BE DEMOLISHED
NEW DN1350 STORMWATER LINE
EDGE OF EASEMENT
BORE PIER TO BOUNDARY WALL FOOTING DEPTH SUFFICIENT TO ENSURE WALL STABILITY DURING FUTURE STORMWATER PIPE EXCAVATION TO INVERT LEVEL OF PIPE AND TO PREVENT TRANSFER OF LOAD ONTO PIPE.
EXISTING WALL TO BE UNDERPINNED TO ENSURE WALL STABILITY DURING FUTURE EXCAVATION OF SEWER MAIN TO INVERT LEVEL OF PIPE AND TO PREVENT TRANSFER OF FOOTING LOAD ONTO PIPE.
NEW DN375 SEWER
EDGE OF SERVICE EASEMENT WIDTH VARIABLE BETWEEN 5.0m TO 5.5m
EDGE OF WALL FOOTING TO HAVE MINIMUM 1.0m CLEARANCE TO OUTSIDE EDGE OF PIPE
FFL 18.30
BORED PIER SUPPORT TO RETAINING WALL FOOTING MIN 1.0m CLEARANCE TO SEWER AND STORMWATER PIPES.
EXISTING SEWER MANHOLE
EXISTING MANHOLE TO BE DEMOLISHED
NEW STORMWATER MANHOLE OVER EXISTING MAIN
END OF EXISTING WALL
NEW SEWER AND STORMWATER MANHOLES
EXISTING COLUMN WITH 600Ø BORED PIER
COLUMN WITH BORED PIER WITH MINIMUM 1.0m OFFSET TO EDGE OF SEWER MAIN
NEW MANHOLE OVER EXISTING DN300 SEWER
EXISTING FOOTING TO BE RETAINED
NEW DN750 SEWER WITHIN 2.5m SERVICES EASEMENT
EXISTING STRIP FOOTING TO BE DEMOLISHED
EXISTING COLUMN AND FOOTING TO BE REMOVED
EXISTING DN1350 STORMWATER
EXISTING DN300 SEWER MAIN
EXISTING STRIP FOOTING UNDER PERIMETER OF ATRIUM
STORMWATER PROPOERY CONNECTION. IL 15.80. (380mm ABOVE INVERT OF MANHOLE)
EXISTING BUILDING LINE
3.0m SERVICE EASEMENT
NEW DN750 STORMWATER MAIN
EXISTING DN600 BORED PIER FOOTINGS
MELVILLE STREET
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Engineers & Planners
Johnstone McGee & Gandy Pty. Ltd.
PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT
TITLE
PROPOSED SERVICES
ALIGNMENTS RELATIVE
TO FOOTINGS
PROJECT NO. P205082SH
DWG NO. C17
REVISION P1

APPENDIX D

Stormwater Calculation

Johnstone McGee & Gandy
incorporating **Dale P Luck & Associates**

117 Harrington Street, Hobart. 7000
Phone (03)6231 2555 Fax (03) 6231 1535
Email : infohbt@jmg.net.au

Engineers & Planners

UTAS 79-83 Melville Street

IFD TABLE (AEP)

Rainfall mm/hr								
Annual Exceedance Probability (AEP) mm/hr								
Duration	Duration (min)	63.20%	50%	20%	10%	5%	2%	1%
1 min	1	61.8	70.3	98.7	120	142	173	198
2 min	2	53.2	60.1	82	97.2	112	132	147
3 min	3	47.1	53.3	73.2	87.3	101	120	135
4 min	4	42.4	48.1	66.6	79.9	93.5	112	126
5 min	5	38.8	44	61.4	74	86.9	105	120
10 min	10	28	31.9	45.1	54.9	65.2	80.2	92.8
15 min	15	22.7	25.8	36.5	44.5	52.9	65.2	75.5
20 min	20	19.4	22.1	31.1	37.9	45	55.3	64
25 min	25	17.2	19.5	27.4	33.3	39.5	48.3	55.7
30 min	30	15.5	17.6	24.7	29.9	35.4	43.2	49.6
45 min	45	12.4	14.1	19.6	23.6	27.7	33.4	38
1 hour	60	10.6	12	16.7	20	23.3	27.9	31.6
1.5 hour	90	8.57	9.71	13.4	15.9	18.5	21.8	24.5
2 hour	120	7.37	8.37	11.5	13.6	15.8	18.5	20.7
3 hour	180	5.99	6.81	9.37	11.1	12.8	14.9	16.6
4.5 hour	270	4.86	5.55	7.68	9.09	10.4	12.2	13.6
6 hour	360	4.19	4.8	6.67	7.91	9.1	10.7	11.9
9 hour	540	3.37	3.87	5.44	6.49	7.49	8.84	9.87
12 hour	720	2.86	3.3	4.67	5.6	6.5	7.71	8.65
18 hour	1080	2.24	2.59	3.71	4.47	5.23	6.26	7.07
24 hour	1440	1.85	2.15	3.09	3.75	4.41	5.3	6.02
30 hour	1800	1.59	1.84	2.66	3.24	3.81	4.61	5.24
36 hour	2160	1.39	1.61	2.33	2.84	3.36	4.07	4.63
48 hour	2880	1.12	1.3	1.87	2.29	2.71	3.28	3.74
72 hour	4320	0.807	0.931	1.34	1.63	1.93	2.33	2.65
96 hour	5760	0.635	0.73	1.04	1.26	1.49	1.79	2.03
120 hour	7200	0.526	0.604	0.854	1.03	1.21	1.44	1.63
144 hour	8640	0.452	0.518	0.727	0.873	1.02	1.21	1.36
168 hour	10080	0.399	0.457	0.638	0.761	0.882	1.05	1.18

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ABN 76 473 834 852 ACN 009 547 139

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Engineers & Planners

CONCEPT SERVICES REPORT

UNIVERSITY OF TASMANIA

FORESTRY / TIMBER YARDS & FREEDOM BUILDINGS DEVELOPMENT

79-83 Melville Street & 80 Brisbane Street, Hobart

December 2021

ARUP

JMG Engineers & Planners

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1 Introduction

The University of Tasmania, Forestry / Timber Yards and Freedom Building Project forms part of the Southern Transformation Program, which will deliver on their long-term plan to consolidate the University's campus to the Hobart CBD.

JMG in partnership with Arup have been appointed to provide Building Services Engineering design for the Project which encompasses 79-83 Melville Street and 80 Brisbane Street, Hobart.

The architectural design is being undertaken by Woods Bagot.

The following summarises the key information about the project:

- The project is a refurbishment of existing buildings, which were formerly a showroom and office space for Forestry Tasmania and Freedom Furniture. The glazed, domed atrium over the central courtyard was a feature of the 1997 redevelopment for Forestry Tasmania.
- The Timber Yards is currently occupied by Freedom Furniture and comprises a site area and building GLA of approximately 12,400 m^2.
- The university spaces will comprise a mixture of teaching spaces, collaborative areas, meeting rooms, ancillary spaces and workplace spaces for University staff and services groups.
- The existing carpark located under the Freedom building is to be infilled with services associated with the operation of the new building and office space.
- Trunk sewer and stormwater mains currently running through the centre of the Freedom site are to be relocated to the eastern site boundary to allow for the infill of the basement level with the new office area and upsizing of the services to provide for future upstream development and stormwater capacity to lessen or remove the impact of overland flows on the site.
- Existing titles covering the site are to be amalgamated into a single title as part of the redevelopment.

This concept services report has been prepared in support of the development application to be lodged with the Hobart City Council and details how the development is to be serviced with water, sewer and stormwater and how it will meet the requirements of the Hobart Interim Planning Scheme 2015, "the planning scheme", all of the existing services servicing the site are to be relocated or modified as part of the development.

A separate report has been prepared by JMG & ARUP, which considers the sites susceptibility to flooding because of its location in the low point of the Warwick Street stormwater catchment, the findings of this report are detailed in the "UTAS Forestry / Timber yards & Freedom Buildings Development, 79-83 Melville Street & 80 Brisbane Street Flood Analysis and Stormwater Report" JMG Engineers & Planners December 2021.

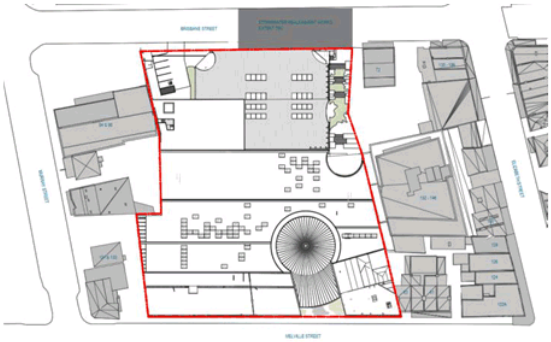


Figure 1 - Site Locality Plan

2 Sanitary Drainage System

2.1 Applicable Design Standards

Private sanitary drainage systems for the site shall be designed to comply with AS 3500.2 National Plumbing and Drainage Code - Sanitary Plumbing and Sanitary Drainage.

TasWater Infrastructure shall be designed and installed in accordance with TasWater's Technical Design Standards available from their website

https://www.taswater.com.au/Development/Technical-Standards

2.2 Existing TasWater System

TasWater have a number of existing mains traversing the site including:

- A DN300 PVC trunk sewer running north south between Brisbane Street and Melville Street. This sewer passes through the existing carpark under the Freedom building before passing through the Atrium area of the Forestry building. The main was laid in 1997 as part of the previous redevelopment of the site and generally runs parallel with the existing DN1050 council stormwater main. Depths to invert vary from over 4.5m under Bathurst Street to less than 2m where it passes through the carpark. The main has been CCTV'd as part of the investigation for the redevelopment and is generally considered to be in good condition.

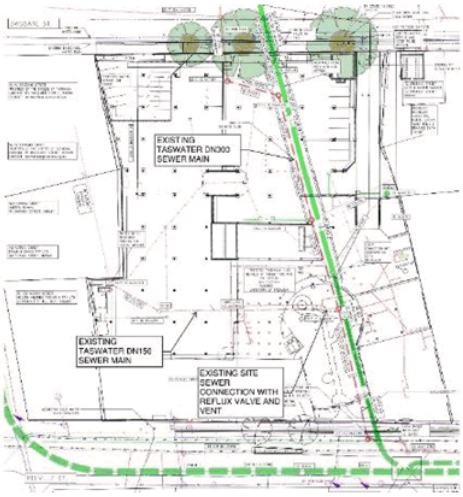


Figure 2 - TasWater Trunk Sewer

- A DN150 sewer enters the trunk main from the east about midway across the site, this sewer services the property at 146 Elizabeth Street.
- A DN150 sewer enters the trunk main from the west crossing through the existing Forestry under cover carpark and Forestry Atrium, this sewer services properties from 141 to 145 Murray Street and 94 Brisbane Street.

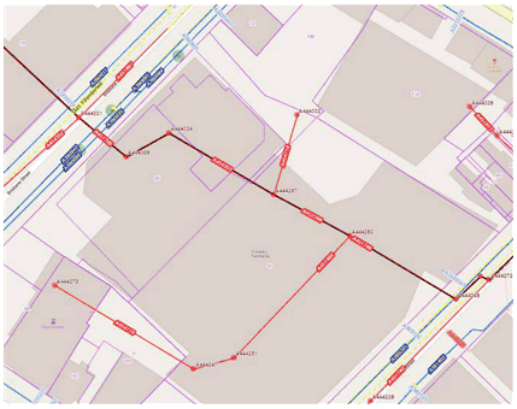


Figure 3 - TasWater DN300 Main and DN150 Branches

2.3 Proposed TasWater Relocations

In order to allow for the redevelopment of the site and particularly the development of new office space within the current basement carpark under Freedom, it is proposed that the existing DN300 sewer be relocated into the future footway which is to be constructed along the alignment of the current Freedom and Forestry carpark driveway on the eastern side of the site. While TasWater have confirmed that the existing DN300 pipe has sufficient current capacity, TasWater Email 24-5-2021, it is proposed that associated with the relocation the

pipe be upsized to DN375 to provide for future increases in flows from upstream in the catchment. New manholes to be installed on the main shall have a minimum internal size of DN1200 to comply with WSAA Std Drg MRWA-S-300 Table 300-C. From the point where the new sewer joins back onto the alignment of the existing, the existing the DN300 main will be retained through to Melville Street, this section is through the existing Forestry Atrium which will be substantially retained as an open pedestrian space as part of the redevelopment.

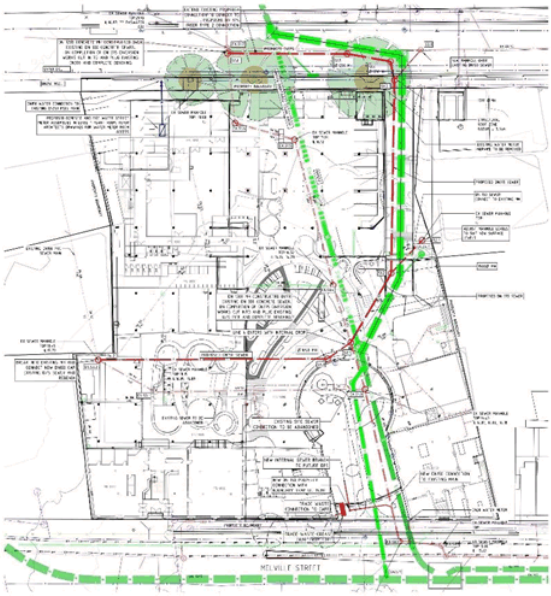


Figure 4 - TasWater Sewer Relocations

Within Brisbane Street and down the new footway the invert level of the new sewer will be similar to that of the relocated stormwater, refer discussion in Section 4.4 for the implications of this on the operation of Brisbane Street during the works, a new connection will be required from manhole S1.3 to the existing DN150 main located in Brisbane Street, this branch will cross over the new stormwater and enter the new main with an internal drop in manhole S1.3.

Refer Figure 4 for the extent of the sewer relocation works through the site. There are two existing branch lines which enter the existing DN300 main within the site, both of these will need to be relocated as part of the development.

The existing main which services 146 Elizabeth Street and enters manhole (A444297) needs to be raised so as it passes over the new stormwater main, this branch will connect to manhole S1.2 with an internal drop. Refer sewer profile S1.2 to S2.1 on Drawing 205028SH-C10 in Appendix C.

The existing main servicing the properties along Murray Street and running through the site from manholes Ex S1.3 to Ex S3.2 is to be relocated so as manhole Ex S3.1 can be removed from the system as this would be within proposed new teaching and amenities areas.

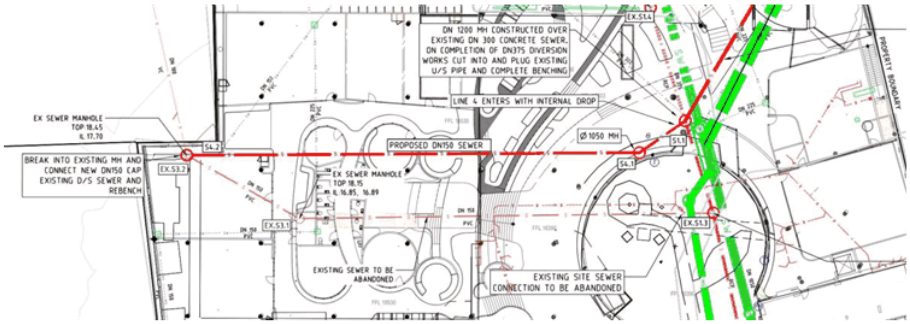


Figure 5 - Murray Street Sewer Branch Relocation

Manhole Ex S3.2, along with the existing external drop which enters through the existing carpark retaining wall from the adjacent carpark, is to be retained. A utility room will be constructed in the vicinity of the manhole so as it is wholly contained within the room and access can be maintained to the access plate on the bend. TasWater will potentially require access through the building from the Melville Street entrance with a pressure cleaning hose in the event that access is required to this manhole and bend for clearing of the main.

Figure 6 - Existing Manhole Ex S3.2 and External Drop

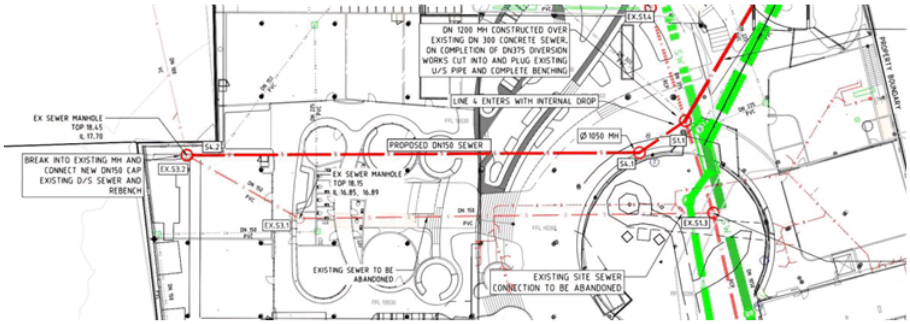


Figure 7 - S4.3 Access path

From this manhole a new main is to be laid across to the trunk sewer with a new manhole located within the Atrium area before the line connects to new manhole S1.1 with an internal drop. Refer Sewer profile S1.1 to S4.3 on Drawing 205028SH-C10 in Appendix C.

All abandoned mains will either be grout slurry filled or excavated, removed and backfilled in accordance with the requirements of the structural building design.

2.4 Property Sewer Connection

The Forestry sites existing property sewer connection, which includes a boundary trap and reflux valve, is located on the branch line to the Murray Street properties adjacent to manhole Ex S1.3, this connection will be abandoned.

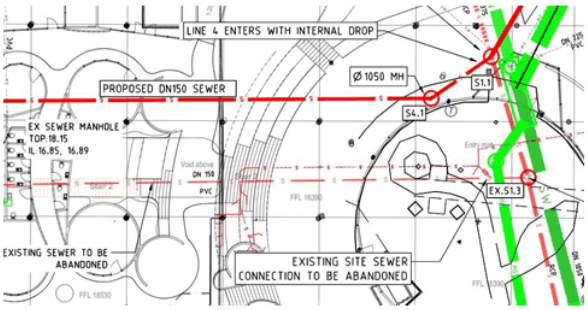


Figure 8 - Existing Sewer Connection

The new development will be serviced by new internal sanitary drainage pipework designed and installed in accordance with AS3500.2. This pipework will be connected to a new DN150 sewer lot connection with boundary trap located just outside of the Melville Street entrance to the Atrium. The proposed development has been assessed in accordance with AS3500.2 Table 6.3(A) as having a fixture unit loading as shown in table 1

Table 1: Sewer Flow Calculations

	Value	Units
Fixture Unit Loading	339	No.

Trade waste will be generated by the new tenancy located on the ground floor level adjacent to the Melville Street entrance. A new grease arrester of min size 1000l shall be installed adjacent to the western side of the entrance just upstream of the lot connection. Access to the arrester for cleaning will be available from Melville Street

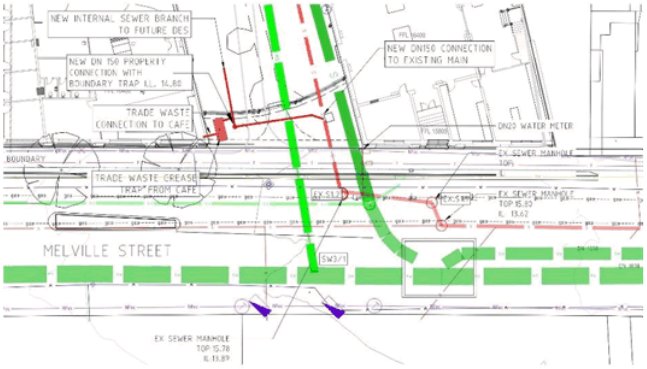


Figure 9 - Sanitary Drainage Connection

The DN150 connection size complies with the minimum lot connection size required by TasWater and referenced on Standard Drg. MRWA-S-104A Table 104-A.

3 Water

3.1 Applicable Design Standards

The water reticulation system for the site shall be designed to comply with AS3500.1 National Plumbing and Drainage Code - Water Supply.

Water metering shall be provided in accordance with TasWater's Water Metering & Guidelines.

Backflow Protection of the site shall be provided in accordance with AS3500.1 Table F2 & TasWater's Water Boundary Backflow Containment Selection Guidelines.

Fire hydrant coverage of the site is to be provided in accordance with AS2419.1

The development is to have a fire sprinkler system designed and installed in accordance with AS2118.1.

3.2 Existing System

The site is currently serviced by three water connections, these include a DN100 connection located at the top of the Freedom driveway ramp in Brisbane St., a DN100 connection located in Melville St. and servicing the main Forestry building, and a smaller DN25 connection servicing the heritage building on the eastern side of the Forestry atrium.

Each of the existing connections are to be made redundant and replaced with a new supply off Brisbane Street. The existing connections supply internal domestic and fire service systems all of which will either become redundant and/or be serviced from the new connection point.

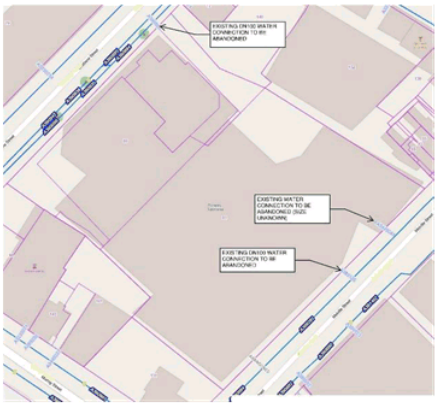


Figure 10 - Existing Site Water Connections

3.3 Proposed System

A new water connection to the development is proposed in Brisbane Street towards the western end of the site, adjacent the new carpark and service delivery area, this shall replace all of the existing connections. There are two water mains located in Brisbane Street capable of servicing the development. A DN250 MSCL main (A390898) located under the southern footpath adjacent to the existing building and a DN150 DICL main (A390942) located under the southern edge of the roadway. Each of these mains is connected to the Hobart City Low Level zone supplied from the Domain Twin Tanks with a design supply head of 100.3m AHD.

Figure 11 - TasWater Water Mains Brisbane Street

Water demand for the development has been assessed in accordance with AS3500.1 Table 3.2.1 and Table 3.2.4 and determined as

Table 2: Residential Water Demand Calculations <100ET - AS3500.1-2003

	Value	Units
FU	241	(-)

Probable Simultaneous Flow rate	1.98	(L/s)
Fire water supply demand	40	(L/s)

TasWater have provided advice, email 9th December 2021, that both of the existing mains are able to provide fire flows to the site of up to 50l/s with residual pressure in the mains as shown in Table 1 & 2 below

Table 1 - connection to DN250 Water Main

Fire Flow (L/s)	Residual Pressure (m)
0.00	73.6
5.00	73.4
10.00	73.1
15.00	72.8
20.00	72.6
25.00	72.3
30.00	72.0
40.00	71.5
50.00	70.9

Table 2 - connection to DN150 Water Main

Fire Flow (L/s)	Residual Pressure (m)
0.00	73.6
5.00	73.1
10.00	72.8
15.00	72.6
20.00	72.3
25.00	71.9
30.00	71.5
40.00	70.7
50.00	69.6

It is proposed that for the development a new DN150 connection be provided to the existing DN250 MSCL main located under the footpath as this provides the highest residual pressures and is more assessable to the site

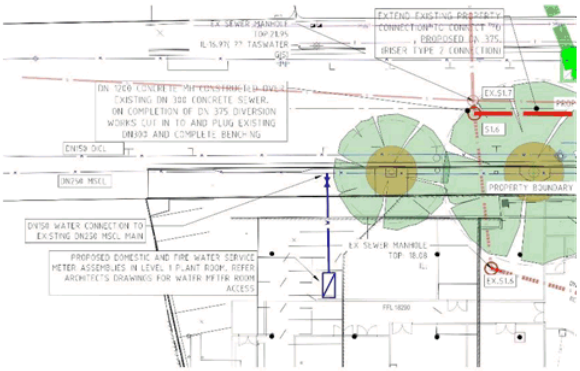


Figure 12 - Water Connection Location

A new domestic and fire water meter assembly is to be located in the Level 01 plant area of the building. This plant area is accessible from the ground floor service entry located off the Brisbane Street carpark at the western end of the development. Refer Figure 13 - Water Meter Assembly Access below. TasWater require 24/7 assess to the water meter assembly, this can be provided for TasWater staff via an externally located strong box keyed to TasWater's standard

key system, this strong box containing a swipe card or similar to allow TasWater staff access to the building.

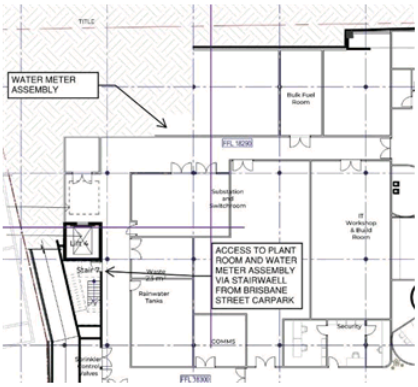


Figure 13 - Water Meter Assembly Access

In accordance with AS3500.1 Table F3 and TasWater's Boundary Backflow Containment Guidelines the site is assessed as High Hazard.

A high hazard domestic boundary meter assembly incorporating a RBT or RPZD is to be provided.

The fire service meter assembly shall incorporate a testable double detector check assembly with metered low flow bypass. Only automatic fire sprinkler systems and fixed fire hydrants shall be connected to the fire service.

4 Stormwater

4.1 Applicable Planning Scheme Requirements

The applicable planning scheme is the *Hobart Interim Planning Scheme 2015*; with the applicable provisions provided by Section E7, Stormwater Management Code. The proposal has been assessed against the requirements of the scheme as detailed in Section 4.4.3.

4.2 Applicable Design Standards

The stormwater reticulation system for the site shall be designed to comply with:

- IPWEA Tasmania Standard Drawings V3 December 2020
- Hobart City Council Stormwater Standards
- AS3500.3 National Plumbing and Drainage Code - Stormwater Drainage.

4.3 Existing System

A DN1050 stormwater main conveys stormwater through the site from the Warwick Street catchment which originates upstream of the site.

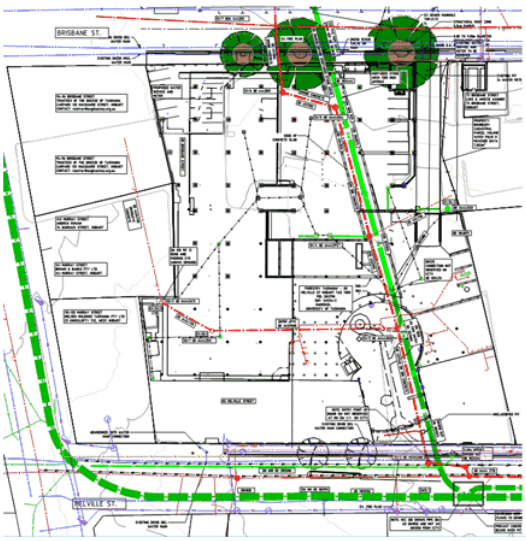


Figure 14 - Existing Site Stormwater

The DN1050 pipe originates at a series of inlet pits in a sag point of Murray Street, opposite 250-270 Murray Street. The Warwick Street catchment upstream of this point has previously been disconnected from the downstream pipework with the installation of a DN1800 pipe down Murray Street circa 1976.

Figure 15 - Commencement of Stormwater Pipework Upstream of Site

A secondary catchment flowing in from North Hobart via Elizabeth Street enters the existing main with a DN900 connection within the vehicle parking and hardstand area of 222-228

Elizabeth Street, this connection, together with overland flows collected by the Murray Street inlet pits contribute the majority of the flow to the existing pipework flowing through the site.

Refer "UTAS 79-83 Melville Street Forestry Building Flood Analysis and Stormwater Report" JMG Engineers & Planners December 2021 for full assessment of the stormwater system and overland flow paths through the site.

Within the existing site the stormwater was laid with the redevelopment of the Forestry building which occurred in 1997, the DN1050 size of the pipework is less than the adjoining upstream and downstream pipes which are a brick arch of nominal dimensions 1400 wide x 1600 high under Brisbane Street and DN1350, as such the existing pipework provides a restriction in the flow capacity of Councils system through the site. The main is laid at depths which provide between 0.5 & 2 m of cover to the existing carpark and building floor slab. Under Brisbane Street the main has close to 4m of cover.

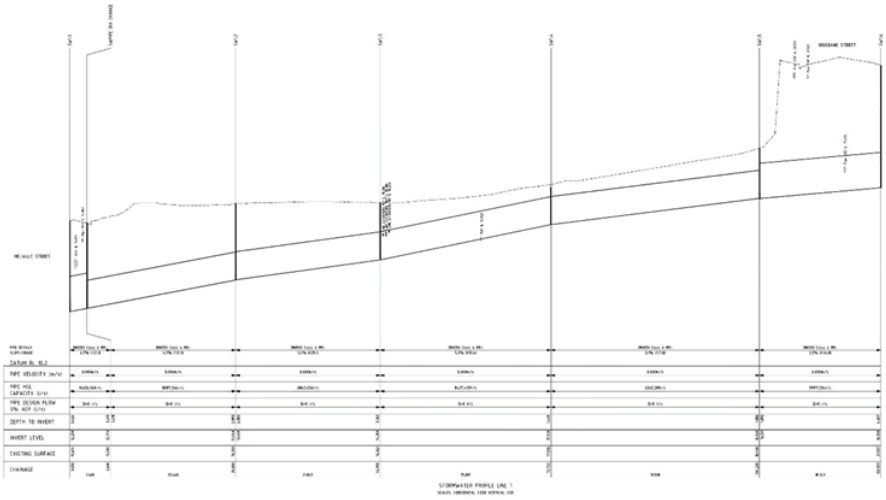


Figure 16 - Existing DN1050 Stormwater Pipe Profile

A DN150 branch draining the rear of properties on Elizabeth Street connects with the DN1050 main at manhole SW1.3.

4.3.1 Stormwater Run-off Existing Site

The existing site has been assessed as 100% impervious with all areas consisting of either roof, concrete or asphalt pavements. The site has an area of 7850m^2 with an estimated peak 5% AEP run-off of 190 l/s. Stormwater from the site is connected to the Council main at manhole Ex SW1.3.

4.4 Proposed Systems

4.4.1 Trunk Stormwater Main Relocation

In order to allow for the redevelopment of the site, and particularly the development of office space within the current basement carpark under Freedom, it is proposed that the existing

DN1050 stormwater be relocated into the future footway which is to be constructed along the alignment of the current carpark driveway on the eastern side of the site.

Associated with the relocation of the pipe it is to be upsized to DN1350 to provide for upstream flows up to and including the 5% AEP storm event. The proposed alignment for this new DN1350 is shown by a dashed green line in Figure 17. Downstream of SW1/1 stormwater will be conveyed through the site to Melville Street utilising the existing DN1050 main and a new high level DN750 main laid parallel with the existing on the western side of the sewer. This main will connect directly with the existing DN1800 pipe located in Melville Street.

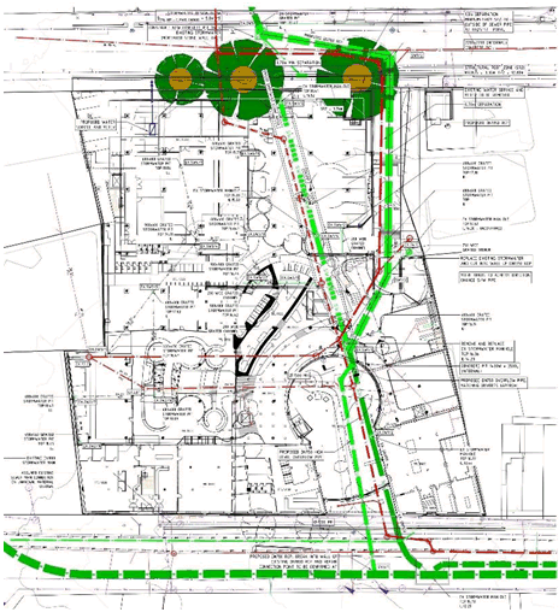


Figure 17 - Trunk Stormwater Main Relocation

The existing branch servicing 146 Elizabeth Street will be reconstructed to connect with the new main at bend SW1/2.

Refer "UTAS 79-83 Melville Street Forestry Building Flood Analysis and Stormwater Report" JMG Engineers & Planners December 2021 for full assessment of the stormwater system capacity and overland flow paths for the 1% AEP plus climate change event through the site.

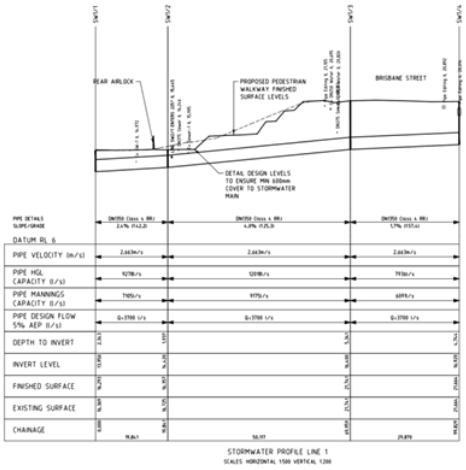


Figure 18 - New DN1350 Stormwater Profile

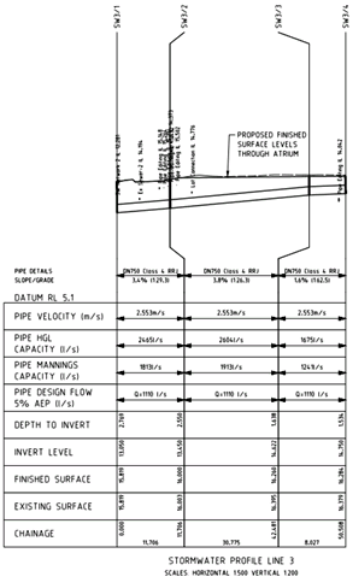


Figure 19 - DN750 Stormwater Main Profile

4.4.2 Stormwater Main Design & Installation Consideration

The new stormwater main installation requires excavation depths varying between 1.5m through the 'Forestry Dome' and base of the pedestrian walkway up to 5.3m across Brisbane Street and at the top of the pedestrian walkway. The depth of excavation being governed by

the depth of the existing main on the northern side of Brisbane street and the fall on the pedestrian walkway from Brisbane Street down to the rear of the 'Forestry Dome'.

Figure 20 - Services Route into Site from Brisbane Street

The existing carpark access ramp is to be redeveloped at its current width into a pedestrian walkway which will link Brisbane Street with the rear of the 'Forestry Dome', this path will also provide an egress point from the new Level 01 floor space out onto a landing at the midpoint of the path. Refer DN1350 pipe profile, Figure 18, for the proposed finished surface levels relative to the existing ramp levels, generally the level of the existing ramp will be lowered, with the introduction of a series of steps and landings, to allow for the required level transition across the site.

A new low height boundary wall is to be constructed along the eastern side of the ramp, this wall will also provide retaining for sections where the new pedestrian path levels are lower than the adjacent property. Given the depth of the new stormwater and sewer mains relative to the adjacent property and the new finished levels on the subject property it will be necessary to extend the footing system for the wall below the zone of influence of pipe installation trench walls, this will prevent unnecessary loading onto trench shoring which will be necessary for the excavation depths required for the installation and/or maintenance of the pipe. The exact width and angle of the zone of influence is unknown at this time, additional site geotechnical investigation is being undertaken in mid-March 2022 which will provide additional information on the expected depth of rock along the stormwater alignment as well as the stability of the overlying soils. This information will be used to inform the 'detailed design' and set the required depths of footings for the wall. As discussed in the "Flood Analysis" report this wall will need to provide openings through it at the existing ground surface level to allow overland flows to re-enter the site.

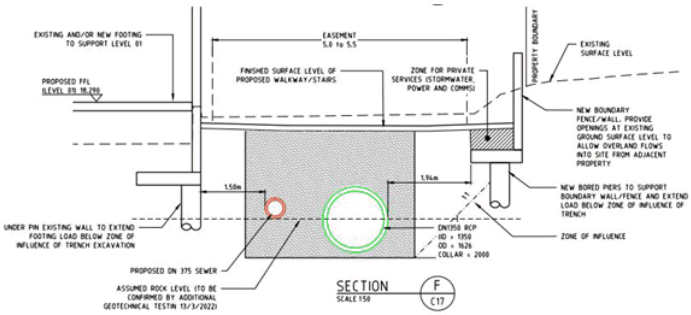


Figure 21 - Typical Section Level 01 Entry from Pedestrian Way

There are no existing structures located on the property adjacent to the ramp which will be impacted by the proposed stormwater trench excavation. The driveway along the boundary provides a minimum 7.3m setback from the edge of the proposed trench to the building. Consideration during detail design will however need to be given to the protection of the adjacent structure at the bottom of the walkway where the boundary splays out and is located close to the rear of the building at 132-146 Elizabeth Street.

Figure 22 - Driveway on Adjacent Property at Top of Ramp

The existing building is to be retained on the western side of the ramp with a new infill slab to be installed in the basement carpark area to provide additional floor space. The existing retaining wall which is located along the western side of the current driveway and supports it relative to the level of the basement carpark is to be retained. Given the depth of the new stormwater and sewer mains relative to this existing structure it may, subject to geotechnical investigation and exposure of the footing during the commencement of site works, be necessary to provide underpinning of the existing wall so as any load supported by it can be extended below the line of the zone of influence of the pipe trench. These proposed works are indicated in Figure 21.

From the bottom of the walkway stairs the depth of the new DN1350 and DN750 pipes are relatively shallow varying between 1.9 & 2.5m. There are a number of existing building footings and several proposed new footings adjacent to the new main, the main and/or new footings have been located to provide min 1m horizontal clearance to these.

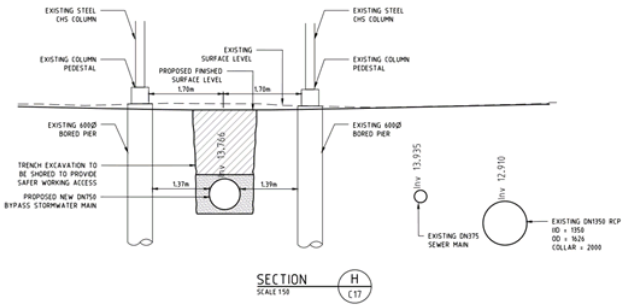


Figure 23 - DN750 Stormwater Atrium Entry

Installation of the Bypass Pit will occur over the existing DN1050 stormwater main just outside of the existing building line. There is a redundant strip footing to be removed with a pad footing on a retained column located just over 1m from the edge of the pit. Access to the pit will be via a manhole access lid located on the northern end of the pit.

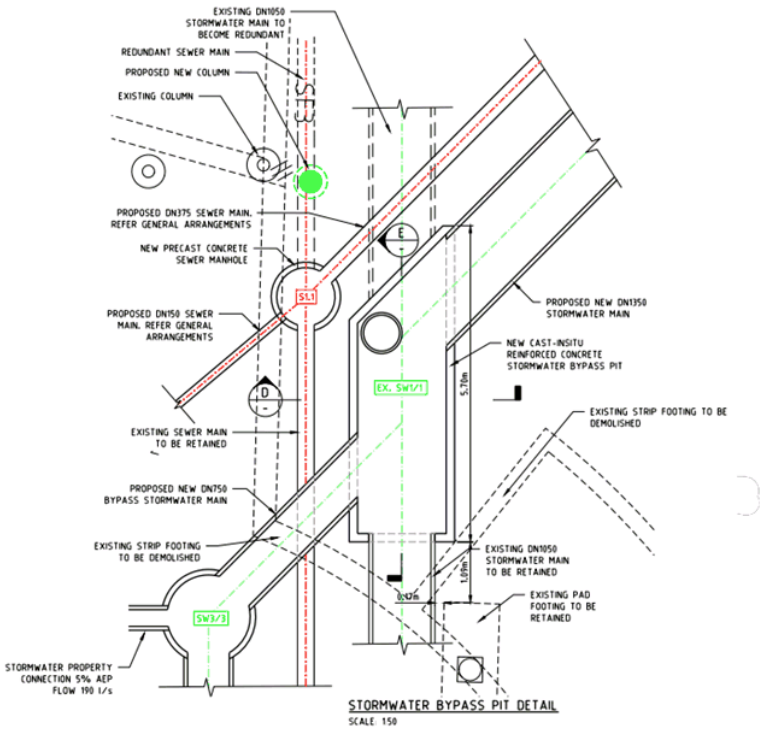


Figure 24 - Bypass Pit Relative to Sewer & Footings

Installation can be undertaken within the Dome, given it's substantial vertical clearance which is in excess of 5m for all but its perimeter where it joins the existing building lines. A similar vertical clearance is available from the rear of the Dome, northern side, under the new Level 2 slab which is to be constructed from the existing building line across to the eastern boundary.

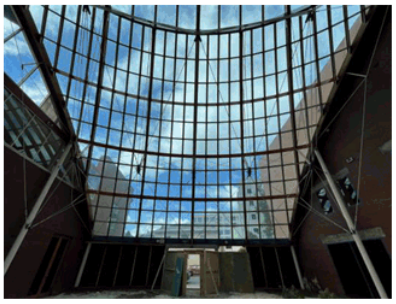


Figure 25 - Atrium Vertical Clearance

On completion of the development the construction of new airlocks on the southern and northern sides of the Dome will restrict access to all of the authority services through this area to all but small machinery which is able to access the site through the pedestrian doorways. The need to access the internal area with a large machine, capable of lifting pipe sections, is considered extremely unlikely in the lifecycle of the building. New pipework is being installed in either Class 4 reinforced concrete for stormwater mains or Class 8 uPVC for sewer mains, these materials installed with good construction techniques should provide a 100yr Design life. CCTV of the existing DN1050 main, installed in 1997 indicates that this is still in good condition with no signs of any failures.

It should also be noted that these services will not be subject to any vehicle or building loads due to their location. It is typical that if remediation works are required on a major trunk main such as these that this will be done internally using structural lining techniques. The "Flood Analysis and Stormwater Report" provides details on the excess 5% AEP capacity in the proposed stormwater network which would allow for slight reduction in flow capacities should lining of the pipework be required sometime in the future.

4.4.3 Site Stormwater Connection

The redeveloped site has been assessed as 100% impervious with all areas consisting of either roof, concrete or asphalt pavements. The site has an area of 7850m^2 with an estimated 5% AEP run-off of 190l/s which is the same as the existing site. Stormwater from the site is to be connected to the Council main at new manhole SW3/3 which is located on the DN750 bypass line within the Atrium.

4.4.4 Planning Scheme Requirements

E7.7.1(A1) - Stormwater Gravity Connection

The site can be drained by gravity via the proposed internal stormwater network and connect to the relocated DN1350 stormwater main at pit SW1/1

- The development is compliant with the acceptable solution A1.

E7.7.1(A2) - WSUD System

The new development is proposed to incorporate the capture and re-use of roof water which will be used for irrigation of new garden beds and toilet flushing. This will result in an overall decrease in the volume of stormwater entering the council system.

- The development is compliant with the acceptable solution A1.

The specifics of this re-use do not need to be addressed to show compliance with E7.7.1(A2) as the development does not have an increase in impervious area, the number of on-site carparks is reduced with the removal of the existing undercover carpark, and there is no subdivision.

- The development is compliant with acceptable solution A2 as:
  - (a) The size of new impervious area is less than 600 m^2.
  - (b) New car parking is not provided for more than 6 cars.
  - (c) The proposal is not for a subdivision for more than 5 lots.

E7.7.1(A3) - *Minor Stormwater Drainage System*

(a) The stormwater connection provided by the development can be adequately sized to transfer 5% AEP flows from the development to Council's stormwater main.

(b) *Stormwater runoff will be no greater than pre-existing runoff* The development is compliant with acceptable solution A3

- The development is compliant with the acceptable solution A3.

E7.7.1 *(A4) - Major Stormwater Drainage System*

Overland flows generated on the site or likely to impact the site from upstream can be safely conveyed across or around the site without impacting the proposed development. Refer "UTAS 79-83 Melville Street Forestry Building Flood Analysis and Stormwater Report" JMG Engineers & Planners December 2021 for full details

- The development is compliant with acceptable solution A4.

5 Brisbane Street Works

Significant works are proposed within the road reservation of Brisbane Street to allow for the relocation of the sewer and stormwater running through the site, new water connection and footpath reconstruction as described in the sections below.

5.1 Sewer

In order to allow for the redevelopment of the site and particularly the development of office space within the current basement carpark under Freedom it is proposed that the existing DN300 sewer be relocated into the future footway which is to be constructed along the alignment of the current carpark driveway on the eastern side of the site. Associated with this relocation of the pipe, it is to be upsized to DN375 to provide for future increases in flows from upstream in the catchment. Refer the red bold line in Figure 19.

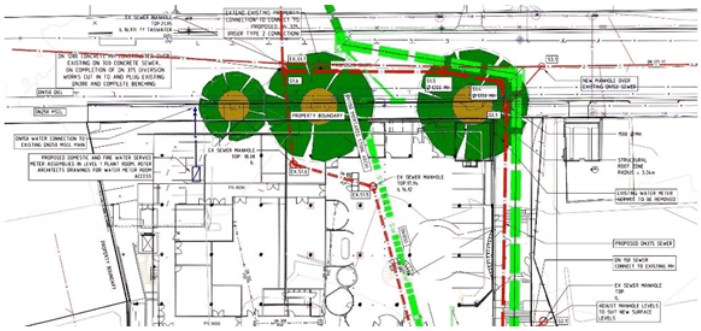


Figure 26 - Brisbane Street Sewer Relocation

The invert level of the sewer will be similar to that of the relocated stormwater, refer discussion in section 3.2 for the implications of this on the operation of Brisbane Street during the works.

5.2 Stormwater

In order to allow for the redevelopment of the site, and particularly the development of office space within the current basement carpark under Freedom, it is proposed that the existing DN1050 stormwater be relocated into the future footway which is to be constructed along the alignment of the current carpark driveway on the eastern side of the site. Associated with the relocation of the pipe, it is to be upsized to DN1350 to provide for upstream flows and to

reduce the risk of overland flows impacting the site in a 1% AEP flood event. The proposed alignment for this new DN1350 is shown by a dashed green line in Figure 20. The width of the line reflects the diameter of the stormwater.

A full flood assessment report for the site detailing the capacity of the existing and proposed system and overland flows implications will be provided as part of the DA submission for the development.

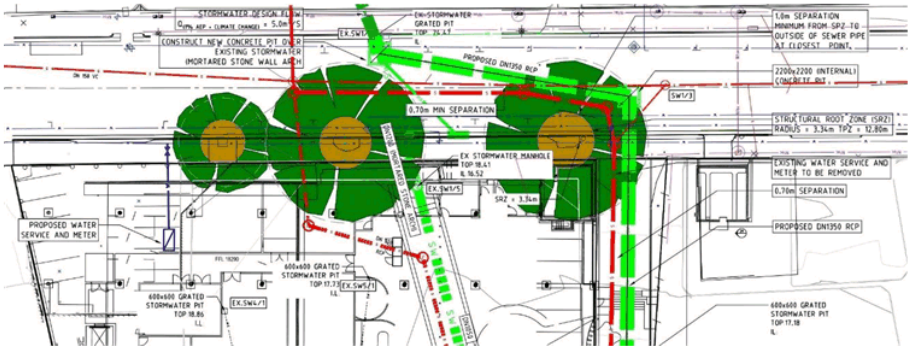


Figure 27 - Brisbane Street Stormwater Relocation

Construction of the stormwater from SW1/3 to SW1/4 will necessitate excavation depths of up to 5.2m in Brisbane Street, this cannot be achieved without the closure of the existing street, either side of the works. Depending on the geotechnical conditions encountered this closure could be for up to a month. Staging of the works between these two pits, with appropriate site security management would permit a single pedestrian path to be maintained along the street at all times. Vehicle movements along this section of roadway and into the laneway between 79-81 Brisbane Street and 160 Elizabeth Street will be restricted as will existing on-street parking. Alternative access into the laneway is available via its connection to Patrick Street.

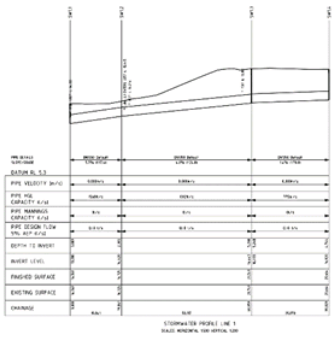


Figure 28 - Stormwater Profile

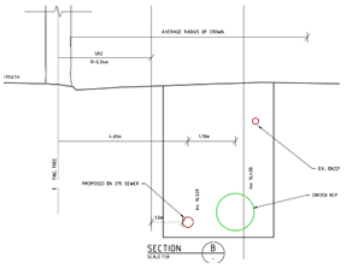


Figure 29 - Stormwater Typical Section

5.3 Water

A new water connection is required to the property, this is to be located towards the western end of the site near the existing Freedom loading dock entry. In order to make the connection to the existing water main it will be necessary to excavate the existing footpath and kerb and channel so as the main can be located and the connection made to it. The depth of the

existing main is unknown at this stage but is expected to be about 1m below existing pavement level. All proposed works will be clear of the drip line of the existing Plane tree at the western end of the site.

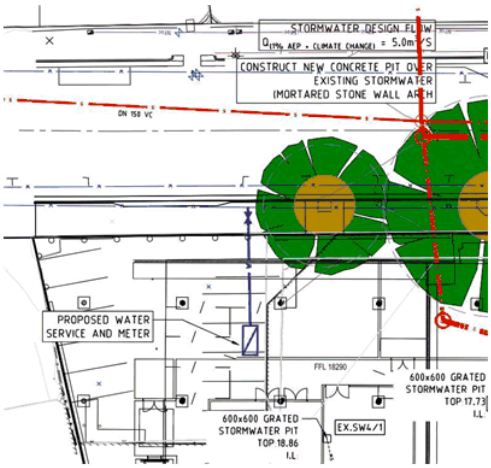


Figure 30 - Proposed New Water Connection

5.4 Existing Street Trees Road and Footpath Impacts

The existing Plane trees located in Brisbane Street, along the Freedom store frontage are causing deformation of the existing kerb and footpath, in order that these trees can be retained and protected from damage when the surfaces are reconstructed it is proposed that the footpath level be raised by up to 200mm adjacent to the trees.

Figure 31 - Street Tree Impacting Kerb and Footpath

It is proposed that a new kerb extension be constructed around the eastern most tree, this will permit the construction of a new kerb without having to disturb the base of the existing tree which has grown out over the existing kerb. See Figures 25 & 26 below showing the kerb realignment in plan and typical section. The realignment of the kerb will result in the relocation of one existing parking space adjacent to this tree. This space will be relocated

adjacent to the new carpark entry at the western end of the site. Refer to the Traffic Impact Assessment for the location of this new space.

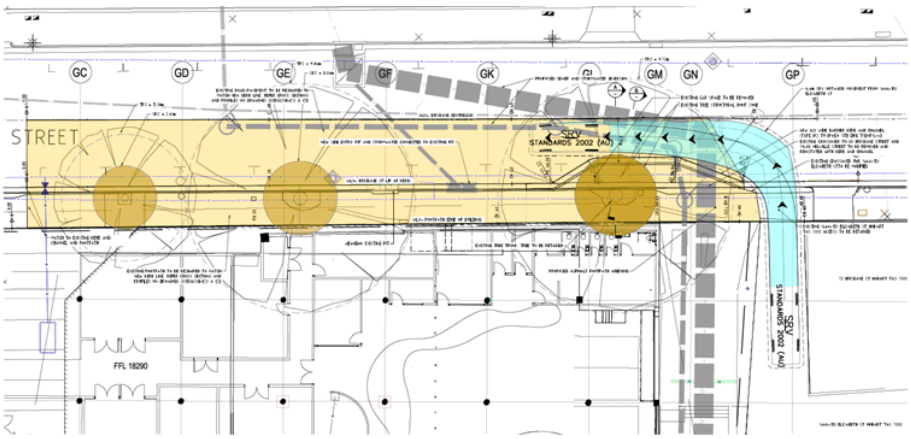


Figure 32 - Road Reconstruction Works Brisbane Street

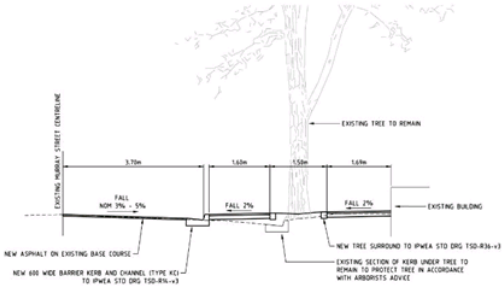


Figure 33- Typical Section Brisbane Street

Along the rest of the road frontage the kerb and channel will be replaced on the same alignment but at a higher level to the existing allowing the footpath levels to be raised. The cross fall of Brisbane Street will be adjusted by re-sheeting of the road to match the new lip of channel levels. A new Side Entry Pit and DN300 RCP drainage pipe will be installed outside of the drip line of the two trees and discharge into the new stormwater pit on the northern side of Brisbane Street. Cross sections of the road showing proposed crossfalls, and the vertical profile of the new lip of channel and back edge of footpath are included on drawings J205082SH-C12 & C13 in Appendix A.

6 Melville Street Works

Works are proposed within the road reservation of Melville Street to allow for the duplication of the stormwater running through the site as described in the sections below. The existing TasWater sewer is not proposed to be modified with the Brisbane Street realignment connecting into the existing main on the northern side of the Forestry Atrium.

6.1 Stormwater

A new DN750 stormwater line is proposed to be constructed through the "Forestry" building atrium to Melville Street in order to supplement the capacity of the existing DN1050 stormwater through the site. This pipe is proposed to be connected directly to the existing DN1800 main running parallel to the site on the southern side of Melville Street. Refer Figure 34 - Melville Street Stormwater Works below.

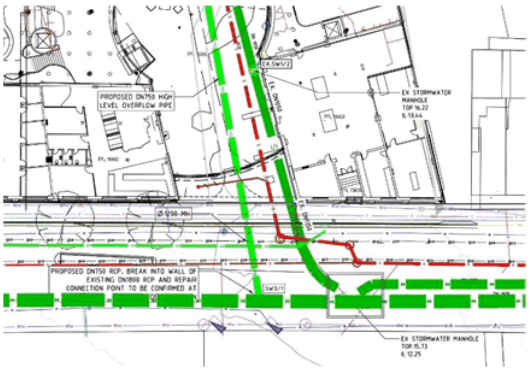


Figure 34 - Melville Street Stormwater Works

6.2 Road and Footpath Impacts

In order to make the new stormwater connection to the existing main it will be necessary to temporarily close Melville Street to the east of the Melville Street carpark access to allow a new trench to be constructed across the road to the DN1800 pipe.

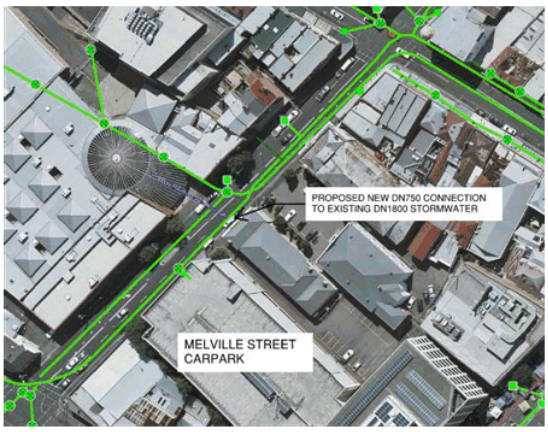


Figure 35 - Melville Street Stormwater Connection

7 Conclusion

The proposed development can be constructed with the provision of all required services to comply with the requirements of Council's planning scheme, TasWater's design guidelines and the applicable Australian Standards.

- The site can be serviced with water, fire service, sewer and stormwater connections adequately sized to cater for the size of the development.
- Existing Council and TasWater services can be relocated in order to allow for the development of the Level 01 office and back of house services.
- New services can be installed such that loads from existing structures will not be imposed on them.
- New works can be designed to ensure loads are not transferred onto new Authority Services and to ensure they are stable in the event that excavation of the services are required in the future.
- While works within Brisbane and Melville Streets will have a temporary impact on traffic and pedestrian flows these can be minimised through appropriate staging of the works.

8 References

1. TasWater Development Technical Standards. [Online] https://www.taswater.com.au/Development/Technical-Standards.

2. HCC Planning Scheme (iplan). [Online] https://iplan.tas.gov.au/Pages/XC.Home/Default.aspx?hid=95613.

3.Traffic Impact Assessment - GHD December 2021

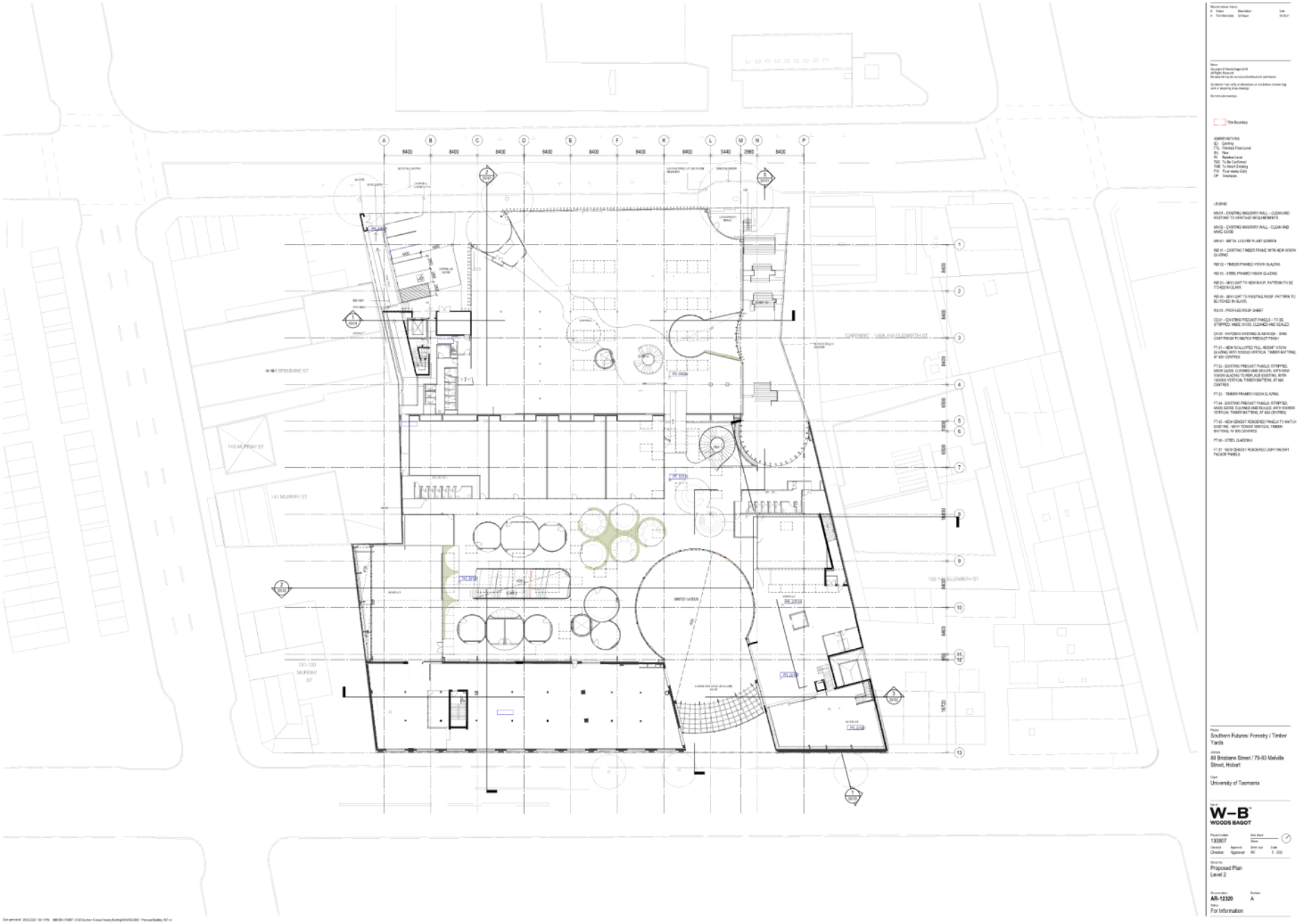
4.UTAS Forestry / Timber yards & Freedom Buildings Development, 79-83 Melville Street & 80 Brisbane Street Flood Analysis and Stormwater Report" JMG Engineers & Planners December 2021

APPENDIX A

Architectural Plans

WOODS BAGOT
SCALE: 1:100
SK-050
LEVEL 1 FLOOR LEVELS

Southern Futures: Forestry / Timber Yards
80 Brisbane Street / 79-83 Melville Street, Hobart
University of Tasmania
W–B
WOODS BAGOT
Proposed Plan
Level 1
AR-12310
A
For Information


Southern Futures: Forestry / Timber Yards
80 Brisbane Street / 79-83 Melville Street, Hobart
University of Tasmania
W–B
WOODS BAGOT
Proposed Plan
Level 2
AR-12320
A
For Information

APPENDIX B

Title Plans

CERTIFICATE OF TITLE

LAND TITLES ACT 1980

TASMANIA

TORRENS TITLE

VOLUME	FOLIO
149231	2
EDITION 8	DATE OF ISSUE 04-Feb-2019
Page 1	of 1

I certify that the person described in Schedule 1 is the registered proprietor of an estate in fee simple (or such other estate or interest as is set forth in that Schedule) in the land within described subject to such exceptions, encumbrances, interests and entries specified in Schedule 2 and to any additional entries in the Folio of the Register.

Alice Kawa

Recorder of Titles.

DESCRIPTION OF LAND

City of HOBART
Lot 2 on Strata Plan 149231 and a general unit entitlement operating for all purposes of the Strata Scheme being a 8103 undivided 1/10,000 interest
Derived from Strata Plan 149231
Derivation : SEE PLAN.

SCHEDULE 1

E109603 TRANSFER to UNIVERSITY OF TASMANIA Registered 04-Feb-2019 at 12.01 PM

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
The registered proprietor holds the lot and unit entitlement subject to any interest noted on common property Folio of the Register volume 149231 folio 0

WARNING: BEFORE DEALING WITH THIS LAND SEARCH THE CURRENT FOLIO OF THE REGISTER

FOLIO PLAN

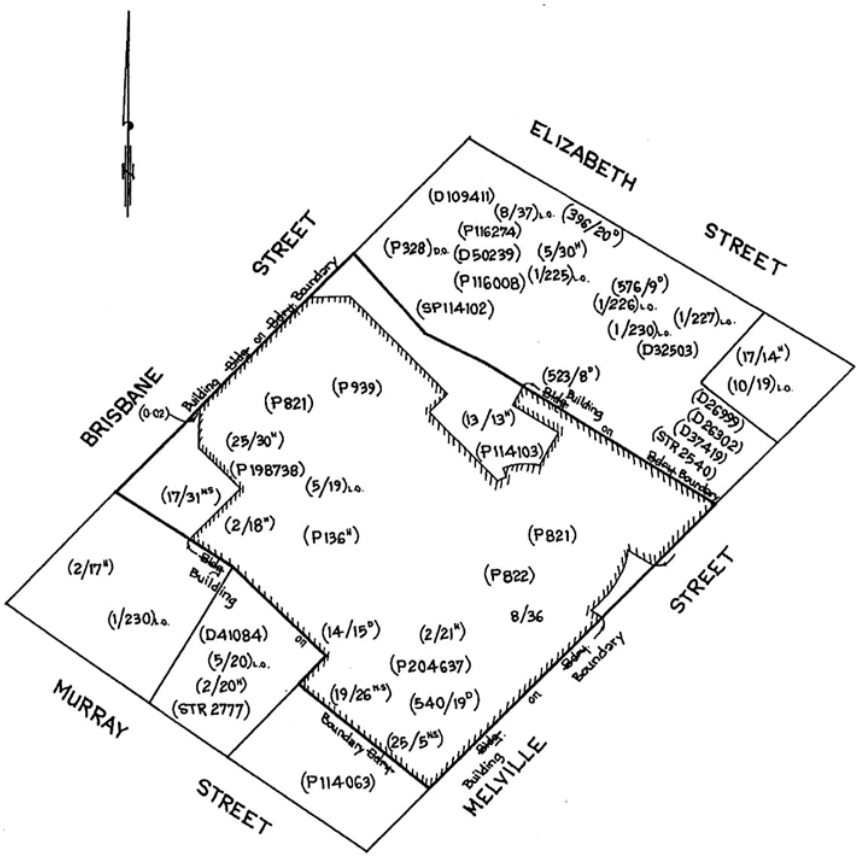
RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

CITY/TOWN HOBART SUBURB — FOLIO REFERENCE C.T.125745-1 SITE COMPRISES THE WHOLE OF LOT 1 ON PLAN No. P125745	STRATUM PLAN SHEET 1 OF ~~4~~ 5 SHEETS NAME OF BUILDING 79-83 Melville Street & 80 Brisbane Street - Hobart.	REGISTERED NUMBER 149231 REGISTERED - 3 OCT 2007 Alice Kawa Recorder of Titles.
MAPSHEET MUNICIPAL CODE No. 114 / LAST UPI No. FEZ64	SCALE 1: 750 / LENGTHS IN METRES	

SITE PLAN



NOTES: ALL BUILDINGS ON THE SITE TO BE SHOWN ON SHEET 1.
BUILDING TO SITE BOUNDARY OFFSETS OF LESS THAN 2·00 METRES TO BE SHOWN ON SHEET 1.
THE FEE SIMPLE OF THE SITE IS CONTAINED WITHIN THE STRATUM PLAN/BODY CORPORATE FOLIO.
FLAT FOLIOS ARE HELD SUBJECT TO STRATUM PLAN ENDORSEMENTS.

STRATA DEVELOPMENT CONTRACT No. (IF APPLICABLE)

LODGED BY PAGE SEAGER

A-148

the List...

FOLIO PLAN

RECORDER OF TITLES

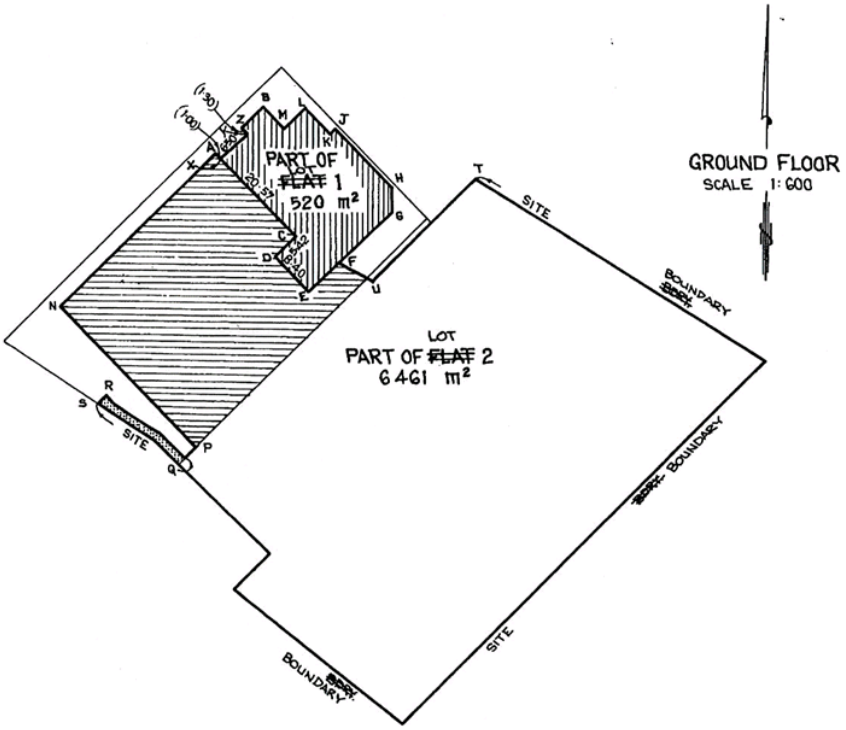
Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

STRAT~~UM~~A PLAN

NEW M607987 SHEET 2 OF 4 SHEETS

Registered Number **149231**



The horizontal ~~flat~~ lot boundaries are shown by heavy unbroken lines and defined by:

- site boundaries
- edge of bitumen or extension thereof labelled YZB & A.N.P.Q.
- centre of concrete & steel posts & extension there of labelled AXC.
- open & perpendicular to A.C. & through the centre of column where labelled D.C.
- open & perpendicular to D.C. where labelled D.E.
- open & through the centre of concrete columns & extension thereof where labelled E.F.
- open & from centre of concrete column at F. to inside face of brick wall where labelled F.G.
- inside face of brick wall labelled G.H.J.K.L.
- edge of concrete steps & extension there of labelled L.M.
- inside face of brick wall & extension thereof labelled M.B.
- centreline of wall Q.R.S.
- northwest face of low block wall and extension thereof labelled T.U.
- edge of concrete labelled U.F.

U. & F. are the centres of columns.

- open & parallel to NA where labelled XY.

The vertical ~~flat~~ lot boundaries extend from 5m below ground level to a height of ~~14~~ 50m above ground level except for:

- the hachured portions which extend from 5m below ground level to the centre of the concrete slab above and
- the dotted portion which extends from 5m below ground level to the centre of the ceiling of the fire escape tunnel above.

the List

FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

STRAT~~UM~~A PLAN

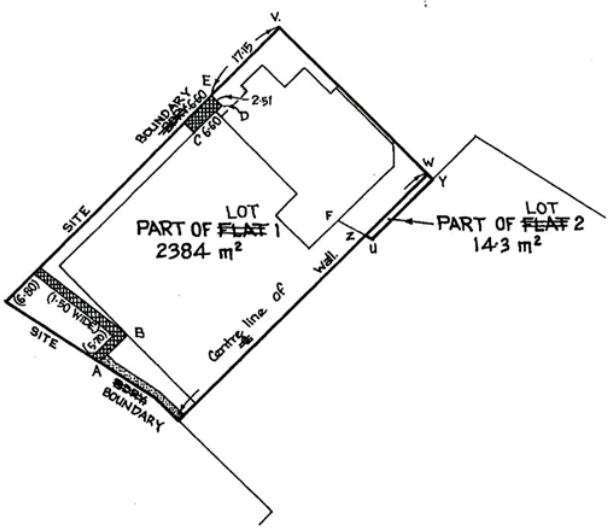
NEW SHEET 3 OF 4 SHEETS

M607987

Registered Number **149231**

IF FURTHER SHEETS ARE REQUIRED USE STRATUM PLAN ANNEXURE SHEETS COMMENCING AT SHEET 4

FIRST FLOOR
SCALE 1:600



The horizontal ~~flat~~ lot boundaries are shown by heavy unbroken lines defined by:
- site boundaries
- centreline of wall
- outer face of wall V.W. & extension thereof labelled W.Y.
- open where labelled Y.U.Z.

U.Y. is on the line of the vertical extension of the north west face of the low block wall below labelled U.T on sheet 2.
U.Z. is on the line between the centre of columns ~~(U. & F.)~~ below labelled U F on sheet 2.

The vertical ~~flat~~ lot boundaries extend from the centre of the concrete slab floor below to a height of ~~14~~ 50m above ground level except for:
- the dotted portion which extends from the centre of the ceiling of the fire escape tunnel below to 14m above ground level.

The cross hachured portions of Lot 1 are restricted under Section 151(b) for use by Lot 2 as emergency access ways.

AB is the centreline of a wall.

~~B is the intersection of the centreline of the wall AB & the outer face of the wall perpendicular thereto.~~

CDE is the face of wall or the extension thereof.

the List

FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

STRATUM PLAN

SHEET 4 OF 5 SHEETS

Registered Number **149231**

POSTAL ADDRESS FOR SERVICE OF NOTICES ON THE BODY CORPORATE:

Trust Company of Australia
C/- Heine Property Management
P.O. Box 7639
Melbourne 3004.

NAME OF BODY CORPORATE: STRATA CORPORATION No 149231, 79-83 MELVILLE STREET & 80 BRISBANE STREET, HOBART

SURVEYORS CERTIFICATE

I, Craig McDowall Terry
of Hobart
a surveyor registered under the Land Surveyors Act 1909 hereby certify that the building erected on the site and drawn on sheet 1 of this plan is within the external boundaries of the folio stated on sheet 1.

Registered Surveyor — 16/12/97 date — W405C ref no

UNIT ENTITLEMENTS FOR THIS BODY CORPORATE

LOT	UNIT ENTITLEMENT	LOT	UNIT ENTITLEMENT
1	1897		
2	8103		

TOTAL ENTITLEMENTS FOR STRATUM PLAN = 10,000

COUNCIL CERTIFICATE

I certify that the HOBART CITY Council has:
(a) approved the subdivision shown in this plan and
(b) issued a building certificate in respect of each flat in this plan, in accordance with Section 119 of the Local Government (Building & Miscellaneous Provisions) Act 1993

General Manager / SURVEYING SERVICES MANAGER — 22.1.2001 date — 5669571 ref no

(FOR OFFICE USE ONLY)
MEMORIALS AFFECTING THE STRATUM PLAN

the List

FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

STRATA PLAN

~~NEW~~ SHEET 5 OF 5 SHEETS

E70820

STRATA TITLES ACT 1998

Registered Number

149231

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 Surveyor

Date 22/9/2016

Council Delegate

Date

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 to the body corporate; or
(ii) for fixing the owner's proportionate interest in the common property; or
(iii) for fixing the number of votes to be exercisable by the owner of the lot at a general meeting of the body corporate; or
(iv) for fixing the proportion of the body corporate's income to be apportioned to the owner of the lot.

NAME OF (THIS) BODY CORPORATE	NAME OF (THIS) BODY CORPORATE	NAME OF (THIS) BODY CORPORATE
STRATA CORPORATION NO. 149231-1, ~~79-83 MELVILLE ST AND~~ 80 BRISBANE ~~ST~~ HOBART STREET,	STRATA CORPORATION NO. 149231-2, 79-83 MELVILLE ~~ST AND~~ STREET, ~~80 BRISBANE ST HOBART~~ HOBART	
ADDRESS FOR THE SERVICE OF NOTICES STRATA CORPORATION No. 149231-1, 80 BRISBANE ST, HOBART c/- HEINE PROPERTY MANAGEMENT PO BOX 7639 MELBOURNE 3004	ADDRESS FOR THE SERVICE OF NOTICES STRATA CORPORATION No. 149231-2, 79-83 MELVILLE ST, HOBART c/- HEINE PROPERTY MANAGEMENT PO BOX 7639 MELBOURNE 3004	ADDRESS FOR THE SERVICE OF NOTICES

LOT No.	UNIT ENTITLEMENT GENERAL	SPECIAL (IF ANY) (i)	(ii)	(iii)	(iv)	LOT No.	UNIT ENTITLEMENT GENERAL	SPECIAL (IF ANY) (i)	(ii)	(iii)	(iv)	LOT No.	UNIT ENTITLEMENT GENERAL	SPECIAL (IF ANY) (i)	(ii)	(iii)	(iv)
1	1897					2	8103										
TOTAL	1897					TOTAL	8103					TOTAL					

APPENDIX C

JMG Concept Services Drawings

WARNING - BEWARE OF UNDERGROUND SERVICES
THE LOCATION OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THE EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL SERVICES ARE SHOWN.

DIAL1100 RESPONSIBLE DIG

DRAWING REGISTER

DRAWING	DESCRIPTION
C01	DRAWING REGISTER AND LOCALITY
C02	EXISTING SITE SERVICES PLAN
C03	EXISTING STORMWATER PROFILE
C04	EXISTING SEWER PROFILE
C05	PROPOSED WORKS - COMBINED SERVICES PLAN
C06	PROPOSED WORKS - STORMWATER RELOCATION PLAN
C07	PROPOSED WORKS - SEWERAGE RELOCATION
C08	PROPOSED STORMWATER - LINE 1,2 & 3 LONGITUDINAL SECTION
C09	PROPOSED GRAVITY SEWER - LINE 1 LONGITUDINAL SECTIONS
C10	PROPOSED GRAVITY SEWER - LINE 2 & 3 LONGITUDINAL SECTIONS
C11	BRISBANE STREET KERB MODIFICATION
C12	BRISBANE STREET KERB AND FOOTPATH LONGITUDINAL PROFILES
C13	BRISBANE STREET CROSS SECTIONS
C14	DETAILS SHEET
C15	EXISTING PIPE DN1050, 1350 AND 1800 PLAN
C16	FINISHED SURFACE LEVELS NOTHERN STAIRS/WALKWAY
C17	PROPOSED SERVICES ALIGNMENTS RELATIVE TO FOOTINGS
C18	HGL REPORT (5% AEP) TO PROPOSED STORMWATER DN1350 & DN750
CTM-1	GENERAL CATCHMENTS (HYDROLOGY & HYDRAULIC ANALYSIS)
CTM2	SUB-CATCHMENT S_2
HR-1	HYDRAULIC ANALYSIS (HEC-RAS) DEPTHS
HR-2	HYDRAULIC ANALYSIS (HEC-RAS) DEPTHS
HR-3	HYDRAULIC ANALYSIS (HEC-RAS) VELOCITIES
HR-4	HYDRAULIC ANALYSIS (HEC-RAS) VELOCITIES
HR-5	HYDRAULIC ANALYSIS (HEC-RAS) WATER SURFACE ELEVATION
HR-6	HYDRAULIC ANALYSIS (HEC-RAS) WATER SURFACE ELEVATION

REV	DATE	REMARK
DA2	25.02.2022	ISSUED FOR COUNCIL RFI RESPONSE
DA1	05.12.2021	ISSUED FOR COUNCIL DA
DA	03.12.2021	ISSUE FOR HOT GENERAL MANAGEMENT CONSENT
P1	01.12.2021	ISSUED FOR REVIEW

SAFETY IN DESIGN REPORT

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49-51 Elizabeth Street, Launceston, Tas (03) 6334 6648
www.jmg.net.au info@jmg.net.au info@jmg.net.au

PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT

TITLE
DRAWING REGISTER
AND LOCALITY PLAN

Accepted: Date
Accepted: Date
Approved: Date

SCALES @ A1	DESIGNED BY	DRAWN BY
1:250	CJN	CAB
	PLOT DATE	25/02/2022

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PLOT DETAILS: GA SERVICES PLANS.DWG

PROJECT NO. 205082SH

DWG NO. C01 REVISION DA2

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www.dialbeforeyoudig.com.au
DIAL 1100 BEFORE YOU DIG

DRAWING REGISTER

DRAWING	DESCRIPTION
C01	DRAWING REGISTER AND LOCALITY
C02	EXISTING SITE SERVICES PLAN
C03	EXISTING STORMWATER PROFILE
C04	EXISTING SEWER PROFILE
C05	PROPOSED WORKS - COMBINED SERVICES PLAN
C06	PROPOSED WORKS - STORMWATER RELOCATION PLAN
C07	PROPOSED WORKS - SEWERAGE RELOCATION
C08	PROPOSED STORMWATER - LINE 1,2 & 3 LONGITUDINAL SECTION
C09	PROPOSED GRAVITY SEWER - LINE 1 LONGITUDINAL SECTIONS
C10	PROPOSED GRAVITY SEWER - LINE 2 & 3 LONGITUDINAL SECTIONS
C11	BRISBANE STREET KERB MODIFICATION
C12	BRISBANE STREET KERB AND FOOTPATH LONGITUDINAL PROFILES
C13	BRISBANE STREET CROSS SECTIONS
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C15	EXISTING PIPE DN1050, 1350 AND 1800 PLAN
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CTM-1	GENERAL CATCHMENTS (HYDROLOGY & HYDRAULIC ANALYSIS)
CTM2	SUB-CATCHMENT 5_2
HR-1	HYDRAULIC ANALYSIS (HEC-RAS) DEPTHS
HR-2	HYDRAULIC ANALYSIS (HEC-RAS) DEPTHS
HR-3	HYDRAULIC ANALYSIS (HEC-RAS) VELOCITIES
HR-4	HYDRAULIC ANALYSIS (HEC-RAS) VELOCITIES
HR-5	HYDRAULIC ANALYSIS (HEC-RAS) WATER SURFACE ELEVATION
HR-6	HYDRAULIC ANALYSIS (HEC-RAS) WATER SURFACE ELEVATION

REV	DATE	REMARK
DA2	25.02.2022	ISSUED FOR COUNCIL RFI RESPONSE
DA1	15.02.2021	ISSUED FOR COUNCIL DA
CA	15.12.2021	ISSUE FOR KCI GENERAL MANAGEMENT CONSENT
P1	11.12.2021	ISSUED FOR REVIEW

SAFETY IN DESIGN REPORT
In accordance with the Workplace Health & Safety Act and Regulations JMG have considered the potential hazards and risks that are specific to this design.

JMG Hazard Register identified no hazards requiring further identification	No
This report is available upon request from JMG's office. JMG's Hazard Register is available upon request.	

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PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT

TITLE
DRAWING REGISTER
AND LOCALITY PLAN

Accepted: EMA/JN (Discipline Head)	Date
Accepted: EGH (Team Leader)	Date
Approved: GLK (Principal)	Date

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1:200	CJW	CAG
	PLOT DATE	25.02.2022

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PLOT STATUS GA SUPPLIED PLANNING

PROJECT NO. 205082SH

DWG NO. C01 REVISION DA2

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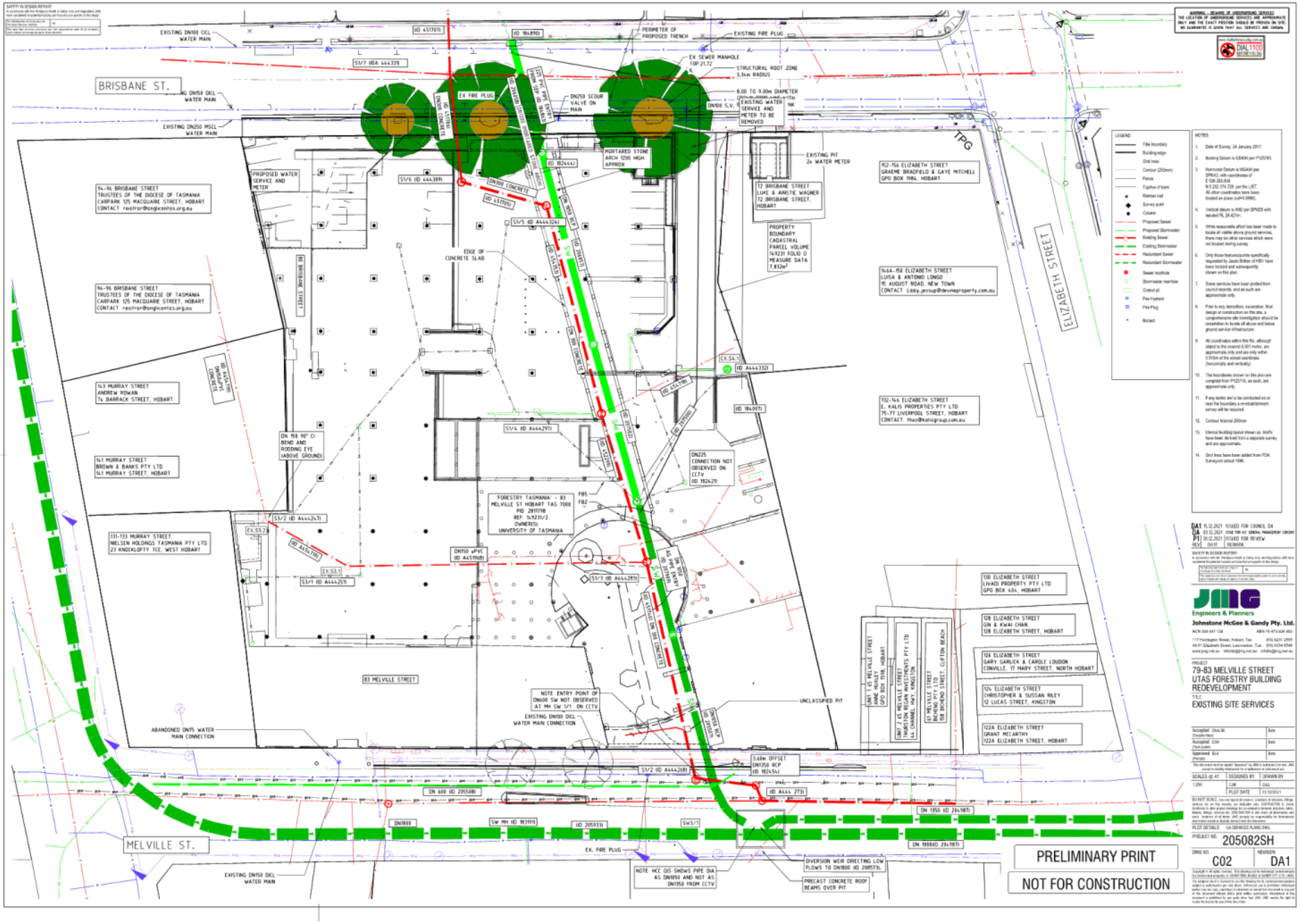
BRISBANE ST.
MELVILLE ST.
ELIZABETH STREET
TPG
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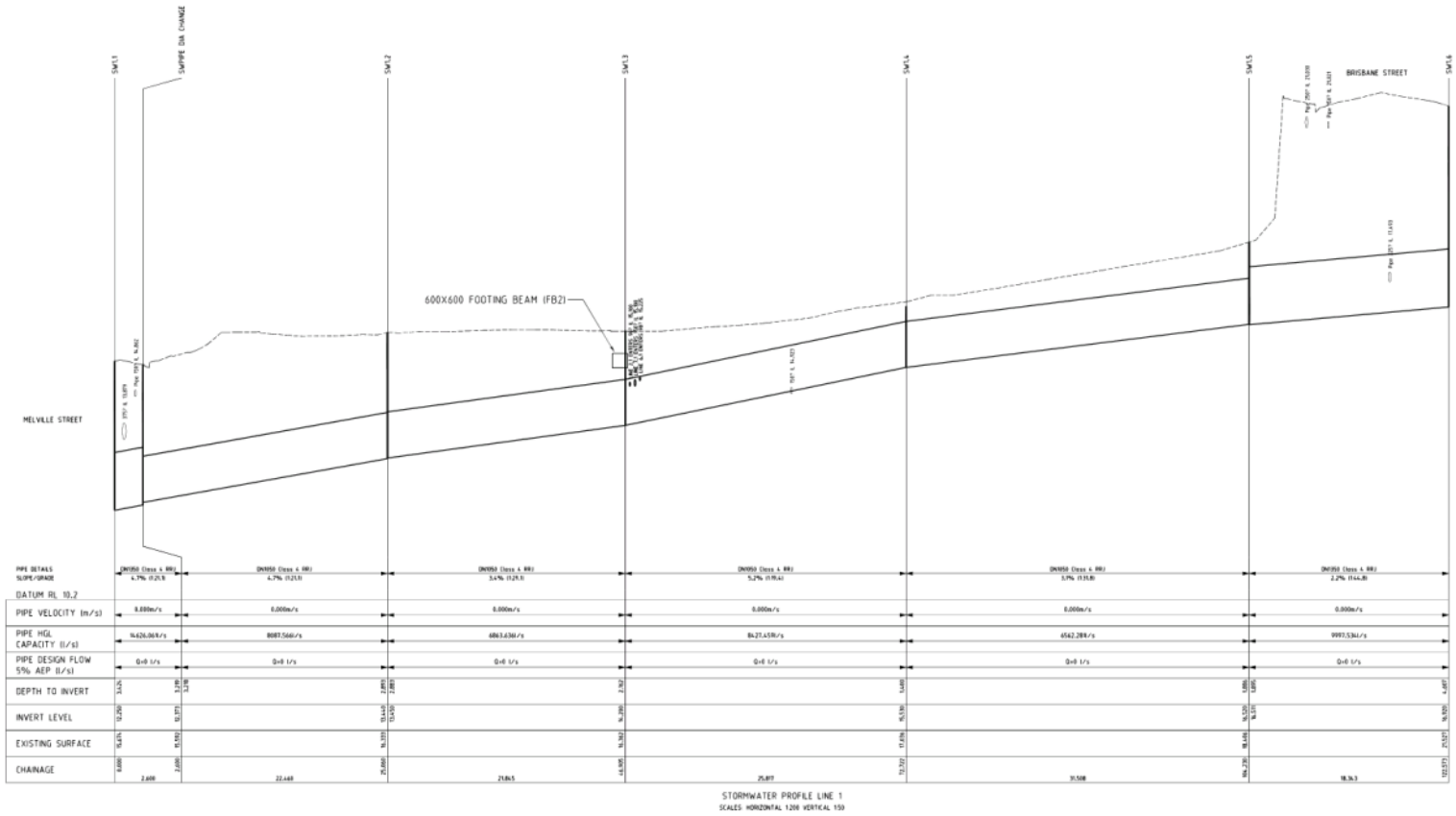
Engineers & Planners
Johnstone McGee & Gandy Pty. Ltd.
PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT
TITLE
EXISTING SITE SERVICES
PROJECT NO.
205082SH
DRWG NO.
C02
REVISION
DA1



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DA 03.12.2021 ISSUED FOR WC GENERAL MANAGER COMENT
P2 23.06.2021 ISSUED FOR SD REPORT
P1 31.05.2021 PRELIMINARY ISSUE
REV | DATE | REMARK

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PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT

TITLE
EXISTING STORMWATER
PROFILE

Accepted: Chris W. (Discipline Head) Date
Accepted: CDH (Team Leader) Date
Approved: GLG (Principal) Date

SCALES @ A1 | DESIGNED BY | DRAWN BY
CJW | CAG
PLOT DATE 13/12/2021

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PLOT DETAILS EXISTING SW PROFILES.DWG

PROJECT NO. 205082SH

DWG NO. C03 REVISION DA1

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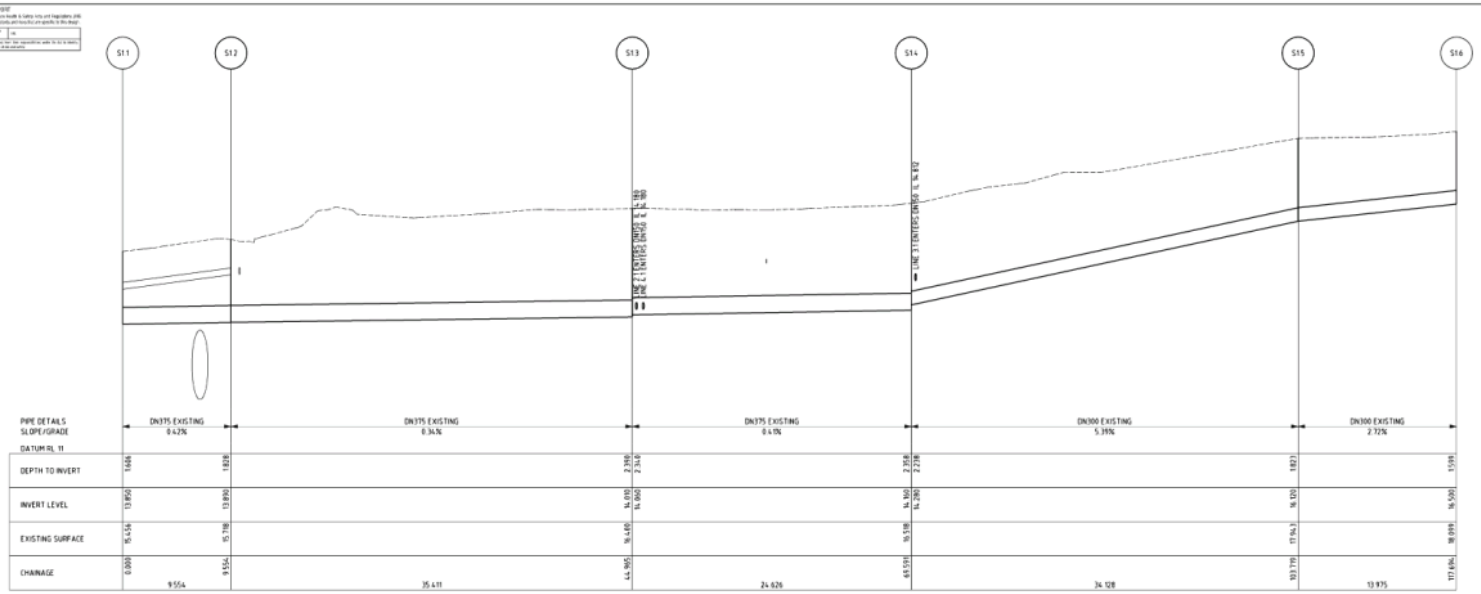
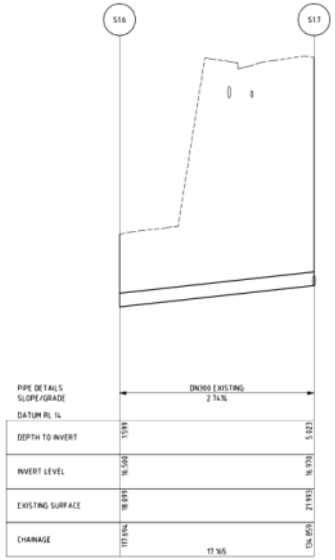


LONGITUNDINAL SECTION FOR SEWER LINE 1
SCALES HORIZONTAL 1:200 VERTICAL 1:50



LONGITUNDINAL SECTION FOR SEWER LINE 1
SCALES HORIZONTAL 1:200 VERTICAL 1:50

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DA1 15.12.2021 ISSUED FOR COUNCIL DA
DA 03.12.2021 ISSUED FOR MC GENERAL MANAGER COMMENT
P2 23.06.2021 ISSUED FOR SD REPORT
P1 11.05.2021 PRELIMINARY ISSUE
REV | DATE | REMARK

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PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT

TITLE
EXISTING SEWER PROFILE

Accepted: Chris W. (Discipline Hdr) | Date
Accepted: CDH (Chief Engr) | Date
Approved: GLA (Principal) | Date

SCALES @ A1 | DESIGNED BY: CJW | DRAWN BY: HVL
PLOT DATE: 13/12/2021

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PLOT DETAILS: EXISTING SEWER PROFILE.DWG

PROJECT NO. 205028SH

DWG NO. C04 | REVISION DA1

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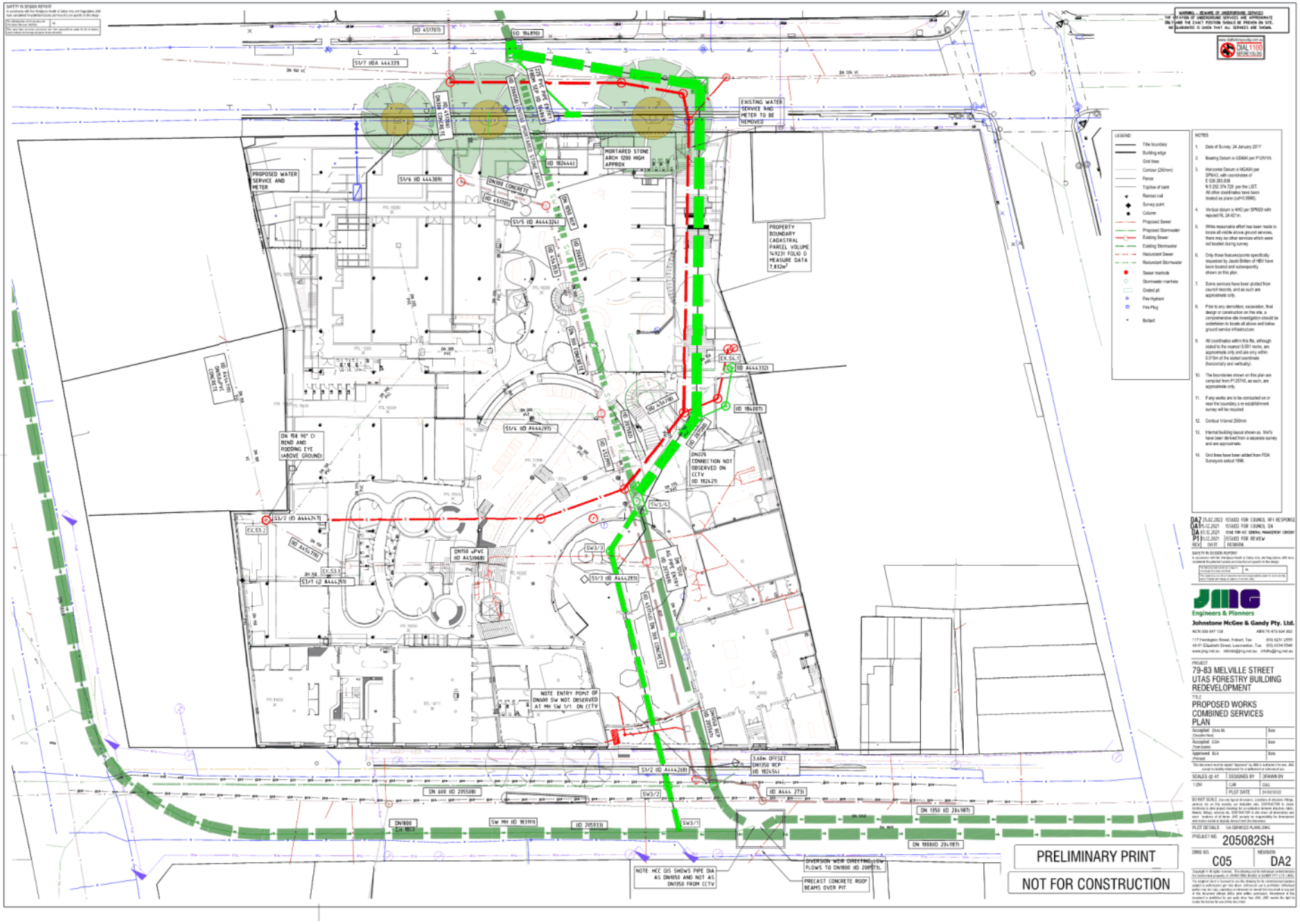
PROPOSED WATER SERVICE AND METER
EXISTING WATER SERVICE AND METER TO BE REMOVED
MORTARED STONE ARCH 1200 HIGH APPROX
PROPERTY BOUNDARY CADASTRAL PARCEL VOLUME 14923F FOLIO 0 MEASURE DATA 7,832m²
DN 150 90° CI BEND AND RODDING EYE (ABOVE GROUND)
DN225 CONNECTION NOT OBSERVED ON CCTV (ID 182421)
NOTE ENTRY POINT OF DN600 SW NOT OBSERVED AT MH SW 1/1 ON CCTV
NOTE HCC GIS SHOWS PIPE DIA AS DN1050 AND NOT AS DN1350 FROM CCTV
DIVERSION WEIR DIRECTING LOW FLOWS TO DN1800 (ID 205973)
PRECAST CONCRETE ROOF BEAMS OVER PIT
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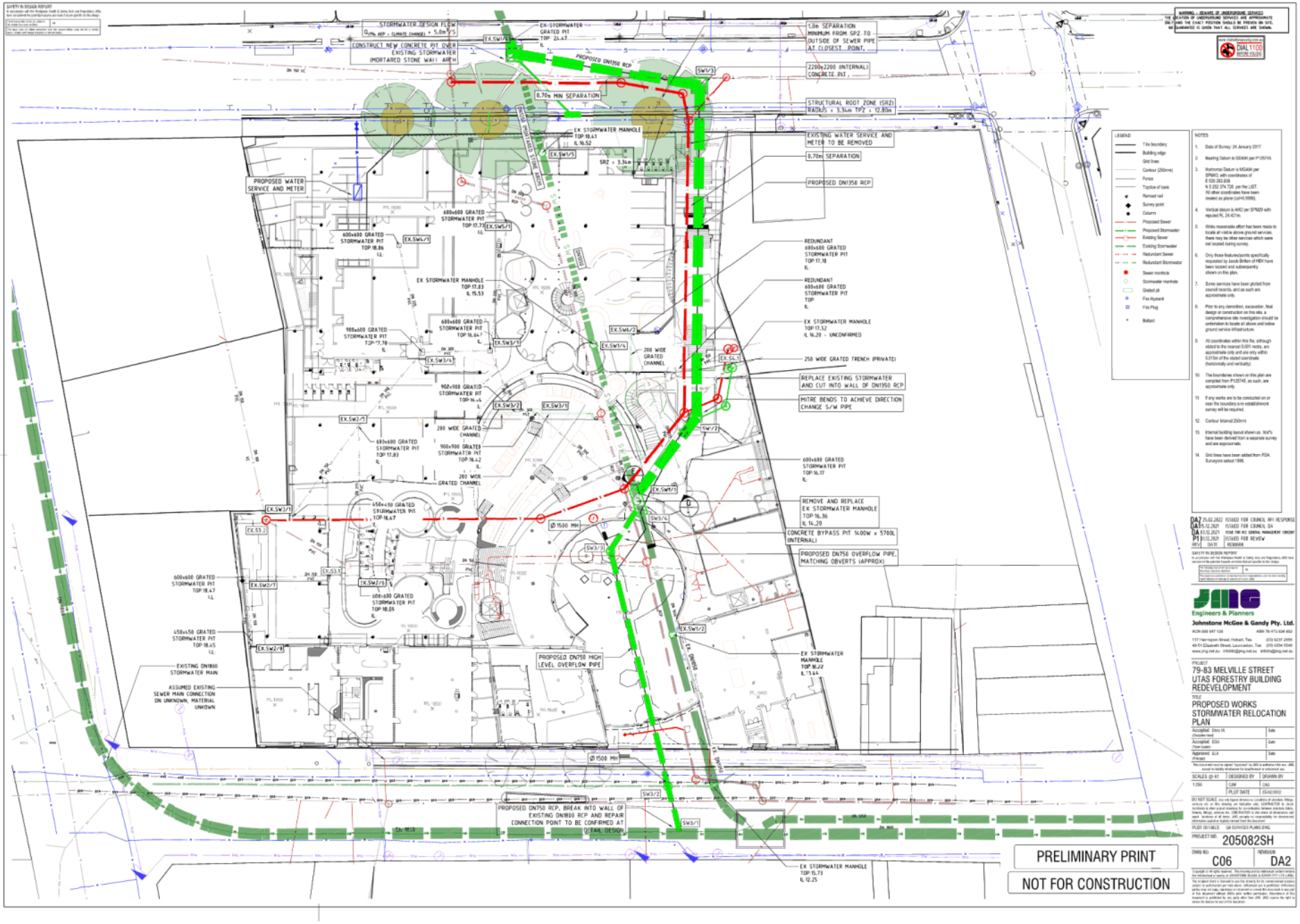
79-83 MELVILLE STREET UTAS FORESTRY BUILDING REDEVELOPMENT
PROPOSED WORKS COMBINED SERVICES PLAN
205082SH
C05
DA2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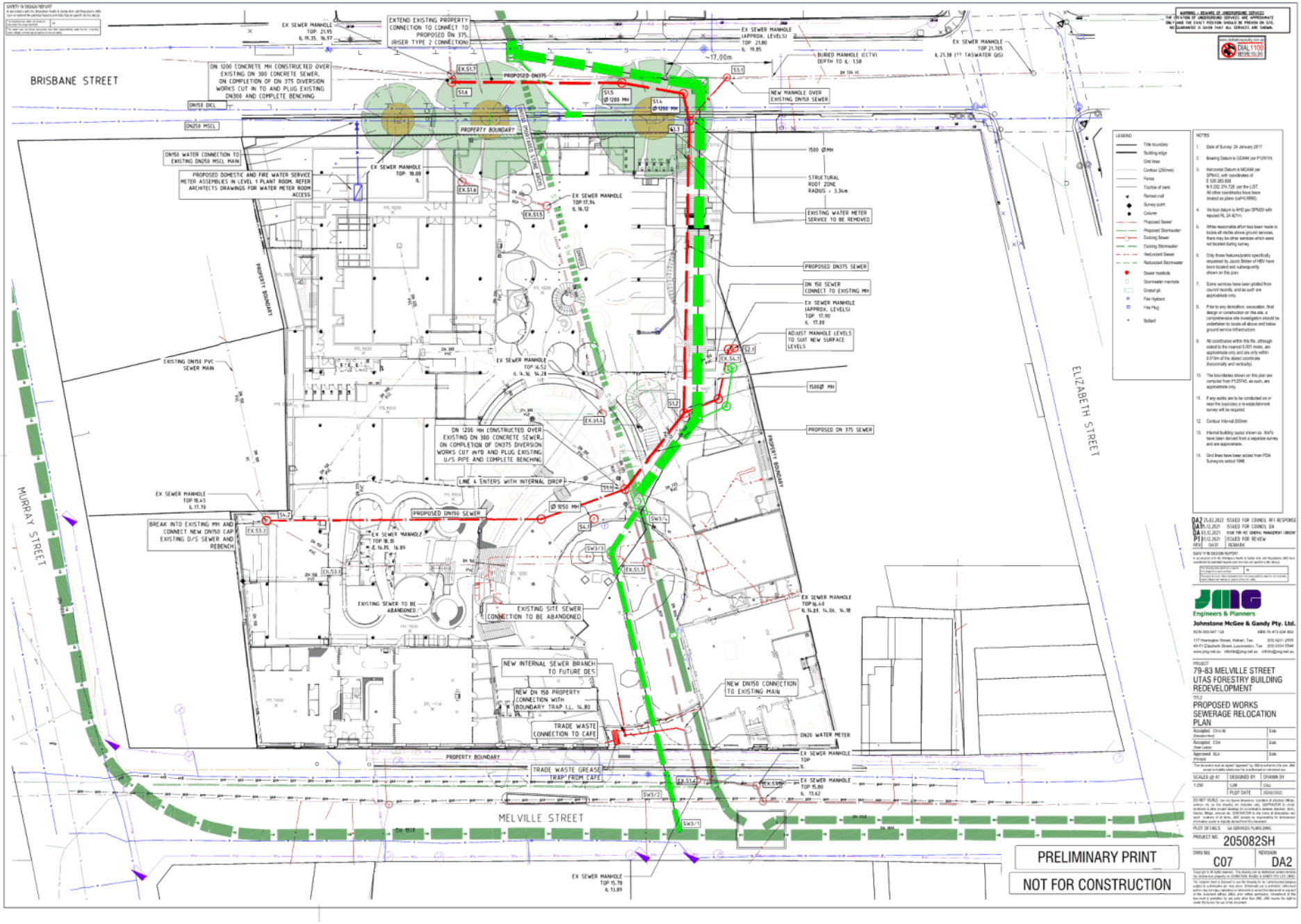
UTAS FORESTRY BUILDING
REDEVELOPMENT
PROPOSED WORKS
STORMWATER RELOCATION
PLAN
205082SH
C06
DA2


BRISBANE STREET
MURRAY STREET
ELIZABETH STREET
MELVILLE STREET
PROPERTY BOUNDARY
EXTEND EXISTING PROPERTY CONNECTION TO CONNECT TO PROPOSED DN 375. (RISER TYPE 2 CONNECTION)
DN 1200 CONCRETE MH CONSTRUCTED OVER EXISTING DN 300 CONCRETE SEWER. ON COMPLETION OF DN 375 DIVERSION WORKS CUT IN TO AND PLUG EXISTING DN300 AND COMPLETE BENCHING
PROPOSED DN375
NEW MANHOLE OVER EXISTING DN150 SEWER
DN150 WATER CONNECTION TO EXISTING DN250 MSCL MAIN
PROPOSED DOMESTIC AND FIRE WATER SERVICE METER ASSEMBLIES IN LEVEL 1 PLANT ROOM. REFER ARCHITECTS DRAWINGS FOR WATER METER ROOM ACCESS
STRUCTURAL ROOT ZONE RADIUS = 3.34m
EXISTING WATER METER SERVICE TO BE REMOVED
PROPOSED DN375 SEWER
DN 150 SEWER CONNECT TO EXISTING MH
ADJUST MANHOLE LEVELS TO SUIT NEW SURFACE LEVELS
EXISTING DN150 PVC SEWER MAIN
DN 1200 MH CONSTRUCTED OVER EXISTING DN 300 CONCRETE SEWER. ON COMPLETION OF DN375 DIVERSION WORKS CUT INTO AND PLUG EXISTING U/S PIPE AND COMPLETE BENCHING
PROPOSED DN 375 SEWER
LINE 4 ENTERS WITH INTERNAL DROP
BREAK INTO EXISTING MH AND CONNECT NEW DN150 CAP EXISTING D/S SEWER AND REBENCH
PROPOSED DN150 SEWER
EXISTING SEWER TO BE ABANDONED
EXISTING SITE SEWER CONNECTION TO BE ABANDONED
NEW INTERNAL SEWER BRANCH TO FUTURE DES
NEW DN 150 PROPERTY CONNECTION WITH BOUNDARY TRAP I.L. 14.80
NEW DN150 CONNECTION TO EXISTING MAIN
TRADE WASTE CONNECTION TO CAFE
TRADE WASTE GREASE TRAP FROM CAFE
DN20 WATER METER
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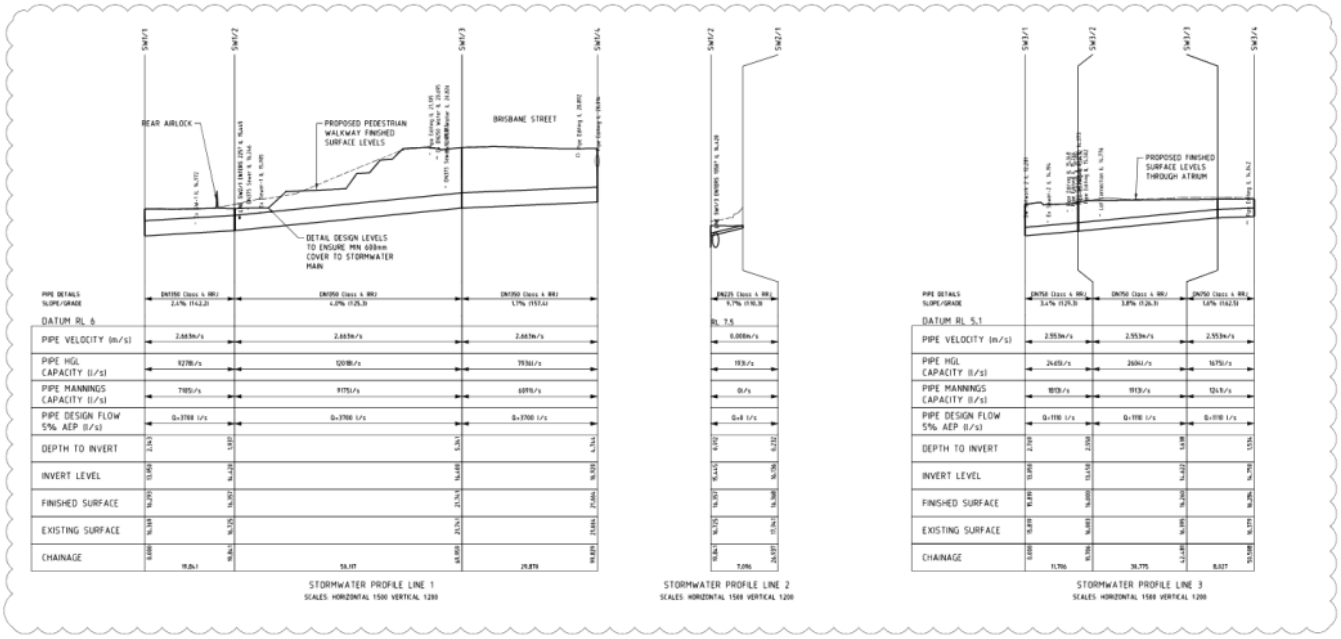
NOT FOR CONSTRUCTION
Engineers & Planners
Johnstone McGee & Gandy Pty. Ltd.
PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING REDEVELOPMENT
TITLE
PROPOSED WORKS SEWERAGE RELOCATION PLAN
PROJECT NO. 205082SH
DWG NO. C07
REVISION DA2



DA2 25.02.2022 REVISED COUNCIL DA ISSUE
DA1 15.12.2021 ISSUED FOR COUNCIL DA
DA 03.12.2021 ISSUED FOR DEVELOPMENT MANAGER
P2 21.06.2021 ISSUED FOR SD REPORT
P1 31.05.2021 PRELIMINARY ISSUE
REV | DATE | REMARK

SAFETY IN DESIGN REPORT
In accordance with the Workplace Health & Safety Act and Regulations JMG have considered the potential hazards and risks that are specific to this design.

Are hazardous materials or substances in the design to be used on site?	No
The design has been carried out in accordance with the Workplace Health and Safety Act and Regulations, JMG have adopted a hierarchy of control and will not accept responsibility under the Act for risks arising from adopted controls or lack of control beyond JMG's control.	

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49-51 Elizabeth Street, Launceston, Tas (03) 6334 5548
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PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT

TITLE
PROPOSED STORMWATER LINE 1,2 & 3 LONGITUDINAL SECTION

Accepted: Chris Sit (Resident Rep)	Date
Accepted: CGH (Town Lawn)	Date
Approved: GLA (Project)	Date

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SCALES @ A1	DESIGNED BY	DRAWN BY
	CJW	CAG
	PLOT DATE	25/02/2022

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PLOT DETAILS PROPOSED SW PROFILES.DWG

PROJECT NO. 205082SH

DWG NO. C08 REVISION DA2

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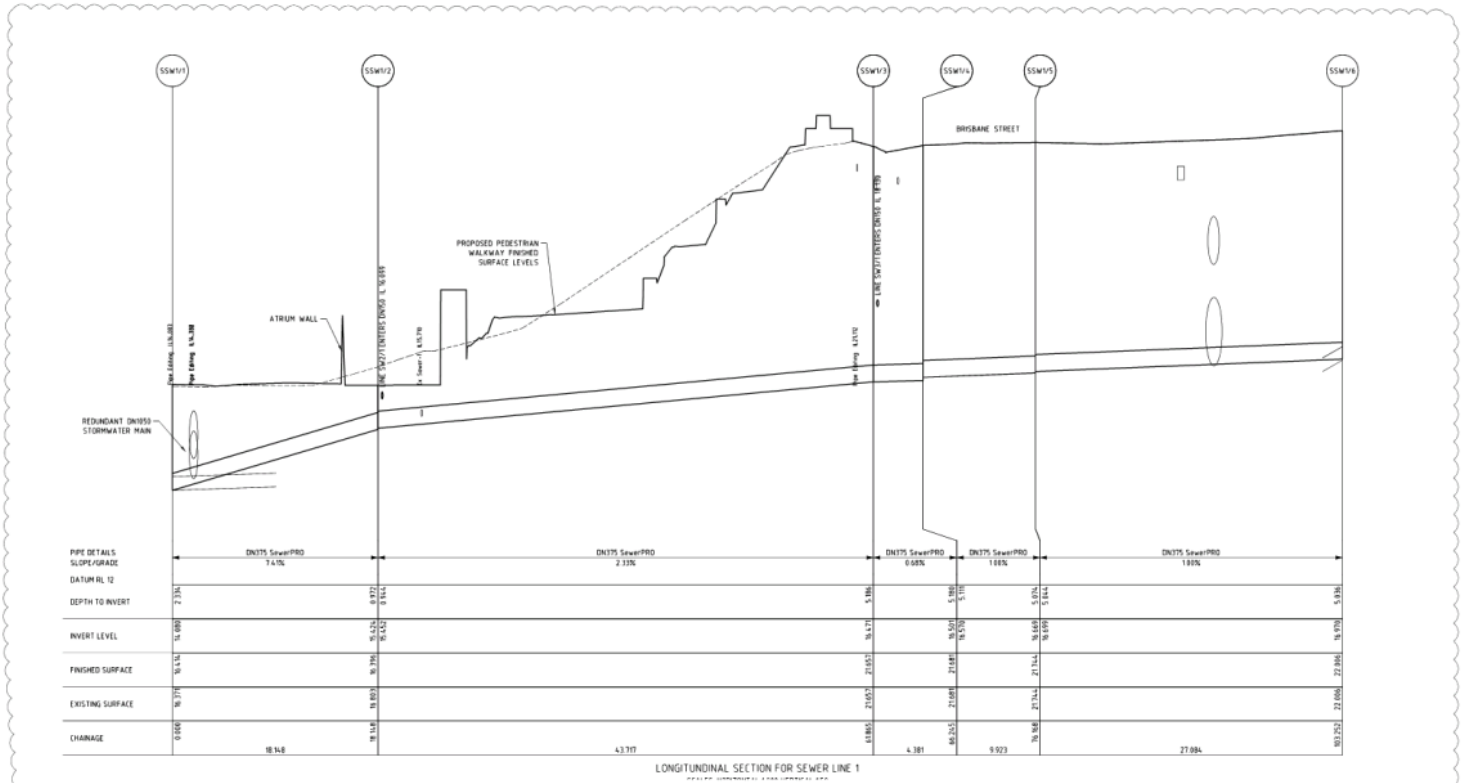

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DA2 25.02.2022 UPDATED FOR COUNCIL RFI RESPONSE
DA1 15.12.2021 ISSUED FOR COUNCIL DA
DA 03.12.2021 ISSUED FOR MC GENERAL MANAGER COMMENT
P2 23.06.2021 ISSUED FOR SD REPORT
P1 31.05.2021 PRELIMINARY ISSUE
REV | DATE | REMARK

SAFETY IN DESIGN REPORT
In accordance with the Workplace Health & Safety Act and Regulations JMG have considered the potential hazards and risks that are specific to this design.

Are there any hazardous substances used or produced in the design or construction stages?	No
The work does not relieve contractors from responsibility under the Work Health and Safety Act and Regulations.	

Engineers & Planners

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PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT

TITLE
PROPOSED GRAVITY SEWER LINE 1 LONGITUDINAL SECTION

Accepted: Chris Gil (Consultant Head)	Date
Accepted: EGH (Team Leader)	Date
Approved: GLG (Principal)	Date

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	CJW	HVL
	PLOT DATE	24/02/2022

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PLOT DETAILS PROPOSED SEWER PROFILES.DWG

PROJECT NO. 205028SH

DWG NO. C09 REVISION DA2

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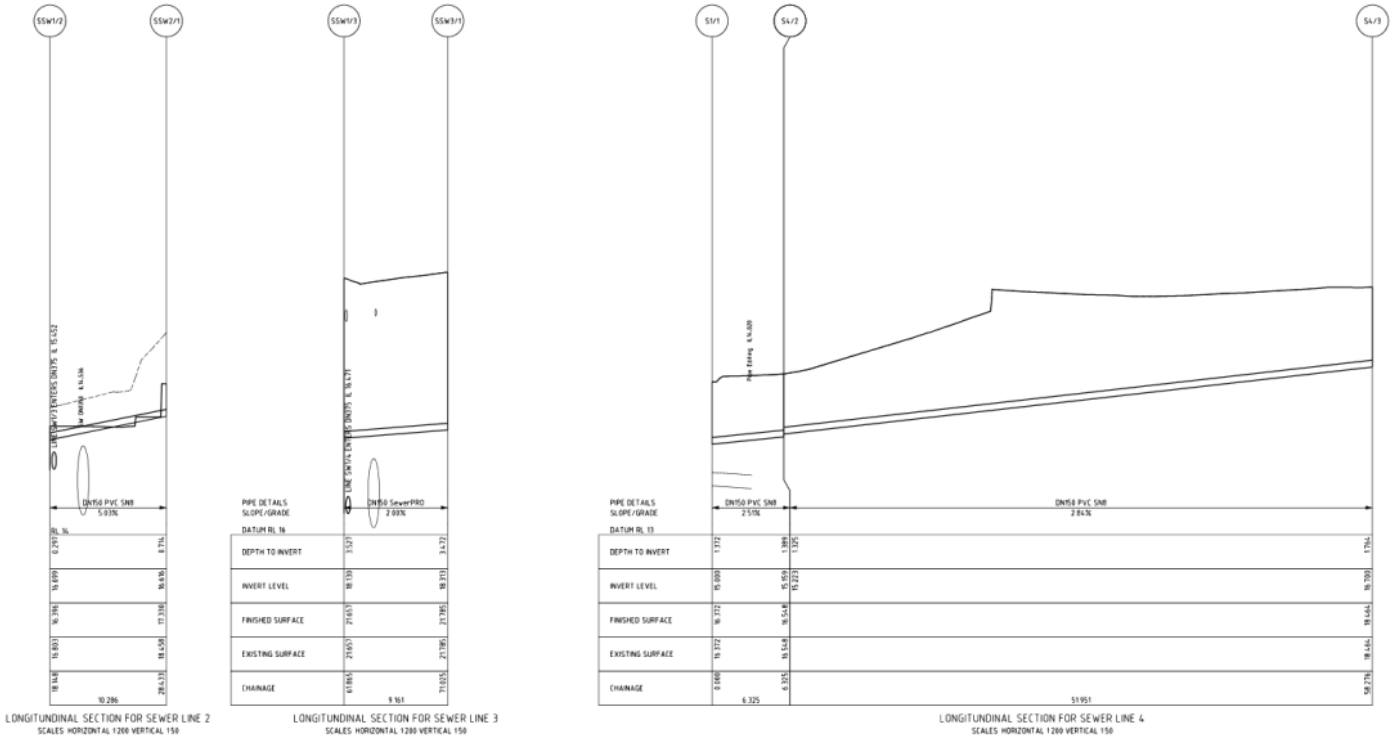

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DA2 25.02.2022 ISSUED FOR COUNCIL RFI RESPONSE
DA1 15.12.2021 ISSUED FOR COUNCIL DA
DA 03.12.2021 ISSUED FOR M1 GENERAL MANAGER REVIEW
P2 21.06.2021 ISSUED FOR SD REPORT
P1 31.05.2021 PRELIMINARY ISSUE
REV | DATE | REMARK

SAFETY IN DESIGN REPORT

Engineers & Planners

Johnstone McGee & Gandy Pty. Ltd.
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PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT

TITLE
PROPOSED GRAVITY SEWER
LINE 2 & 3 LONGITUDINAL
SECTION

Accepted: Chris Vik (Checker Hwd) | Date
Accepted: EGH (Town Leader) | Date
Approved: GLR (Principal) | Date

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CJW | AKL
PLOT DATE | 25/02/2022

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PLOT DETAILS | PROPOSED SEWER PROFILES.DWG

PROJECT NO. 205028SH

DWG NO. C10 | REVISION DA2

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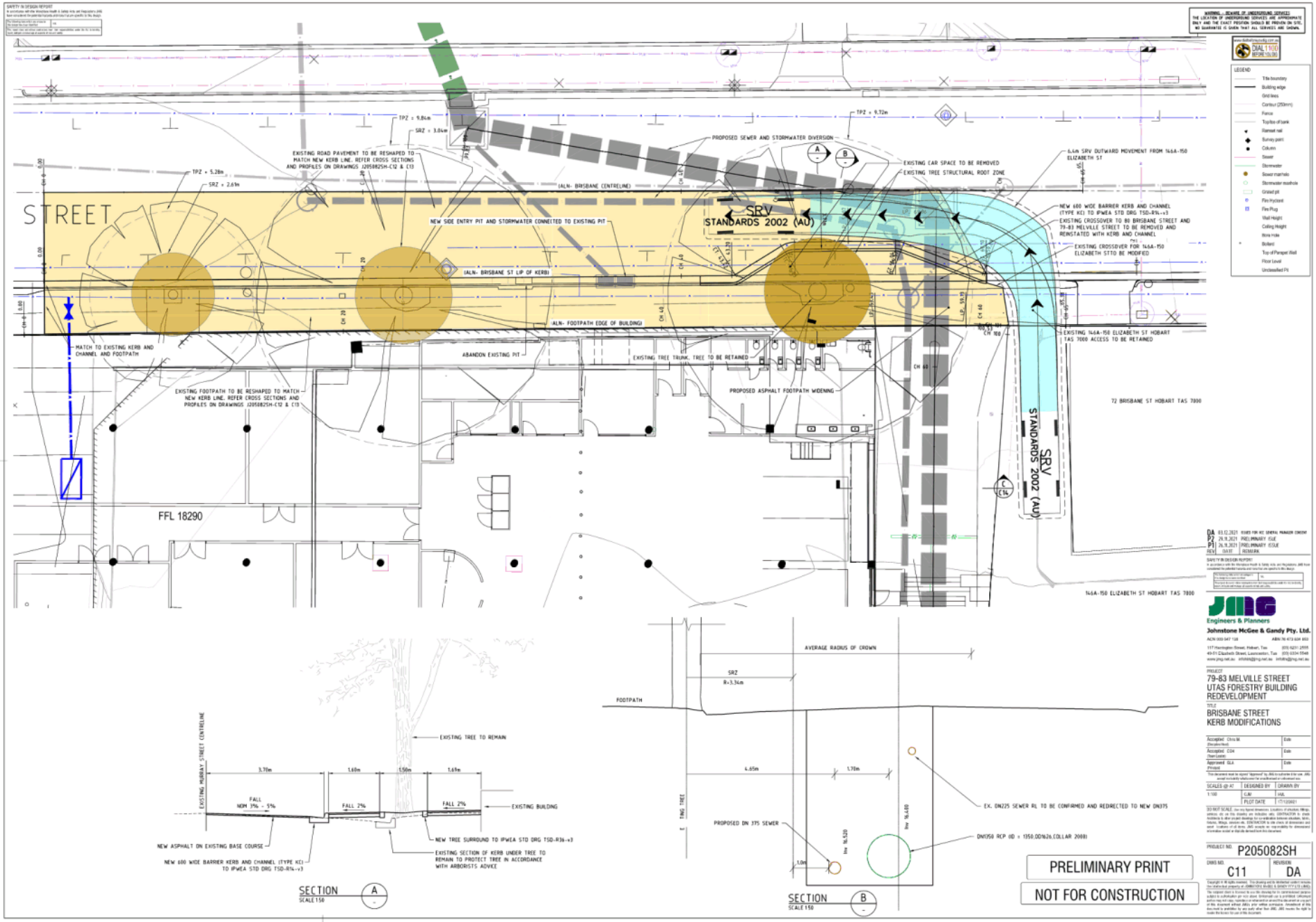
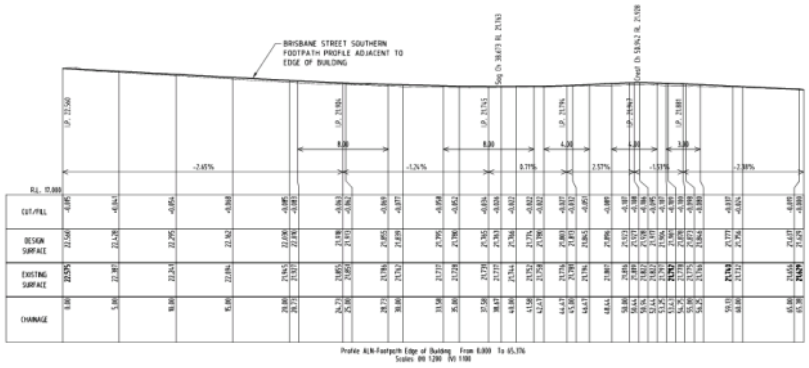
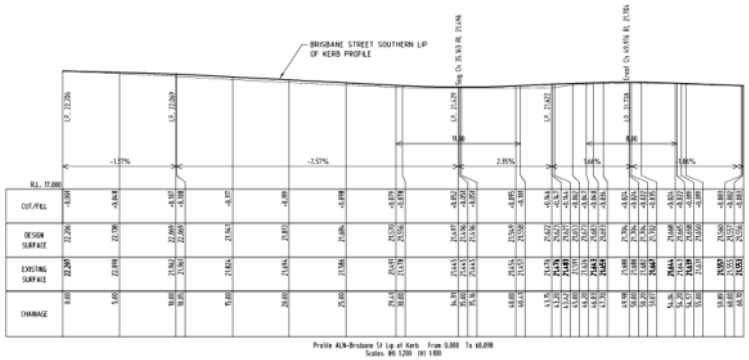

STREET
SRV STANDARDS 2002 (AU)
FFL 18290
PRELIMINARY PRINT
NOT FOR CONSTRUCTION
SECTION A
SECTION B
Johnstone McGee & Gandy Pty. Ltd.
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT
BRISBANE STREET
KERB MODIFICATIONS
P205082SH
C11
DA





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DA1 15.12.2021 ISSUED FOR COUNCIL DA
DA 03.12.2021 ISSUED FOR MC GINNA, MANAGER CONSENT
PT 02.12.2021 PRELIMINARY ISSUE
REV | DATE | REMARK

SAFETY IN DESIGN REPORT
In accordance with the Workplace Health & Safety Act and Regulations JMG have considered the potential hazards and risks that are specific to this design.

Are there any other hazards or risks that are specific to this design? (Including those arising from the use of the structure)	No
Are there any other hazards or risks that are specific to this design, which are not manageable under the Act or Regulations (such as those arising from unusual or unique structural elements)?	No

Engineers & Planners
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PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT

TITLE
BRISBANE STREET
KERB AND FOOTPATH
LONGITUDINAL PROFILES

Accepted: Chris Sit (Director/Hbt)	Date
Accepted: EGH (Team Leader)	Date
Approved: GLA (Principal)	Date

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	CJW	HVL
	PLOT DATE	13/12/2021

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PLOT DETAILS BRISBANE STREET KERB PROFILES AND SECTIONS

PROJECT NO. 205028SH

DWG NO. C12 REVISION DA1

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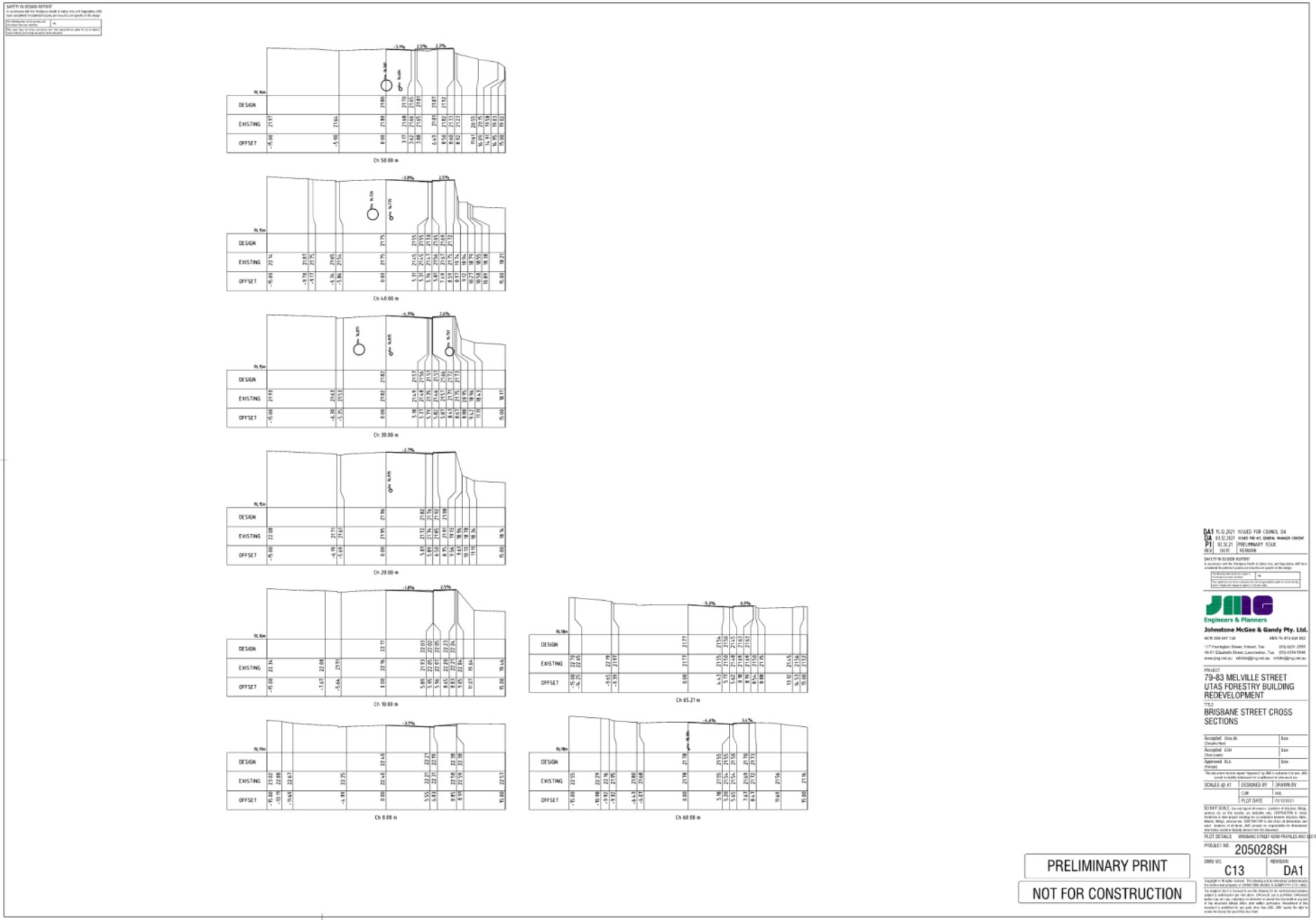
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EXISTING
OFFSET
Ch 50.00 m
Ch 40.00 m
Ch 30.00 m
Ch 20.00 m
Ch 10.00 m
Ch 0.00 m
Ch 65.21 m
Ch 60.00 m
DA1 15.12.2021 ISSUED FOR COUNCIL DA
DA 03.12.2021 ISSUED FOR MC GENERAL MANAGER CONSENT
P1 02.12.21 PRELIMINARY ISSUE
REV DATE REMARK
Engineers & Planners
Johnstone McGee & Gandy Pty. Ltd.
PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT
TITLE
BRISBANE STREET CROSS
SECTIONS
SCALES @ A1
DESIGNED BY
DRAWN BY
PLOT DATE
PLOT DETAILS
PROJECT NO. 205028SH
DWG NO. C13
REVISION DA1
PRELIMINARY PRINT
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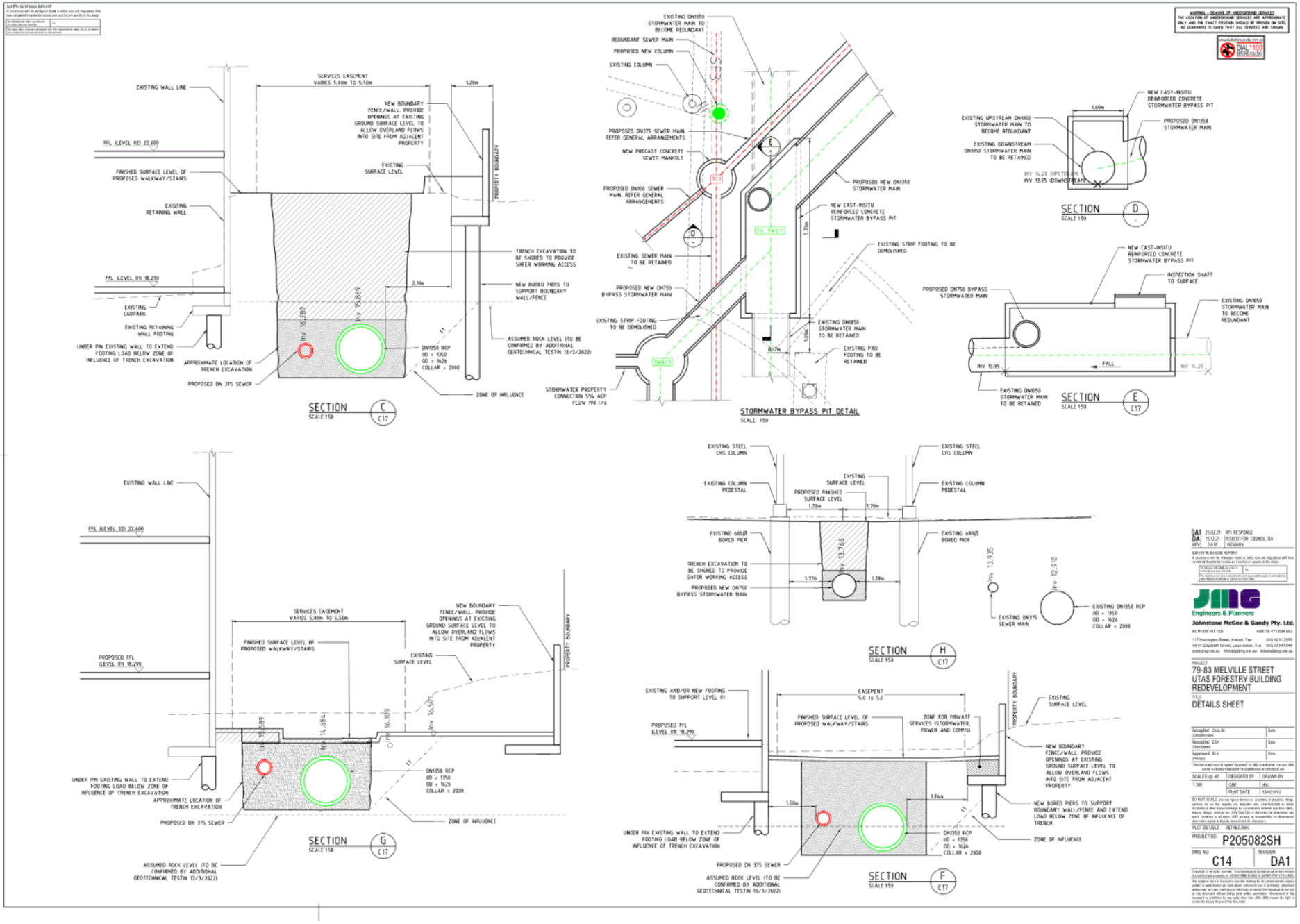
SECTION C
SCALE 1:50
SERVICES EASEMENT VARIES 5.80m TO 5.50m
EXISTING WALL LINE
NEW BOUNDARY FENCE/WALL. PROVIDE OPENINGS AT EXISTING GROUND SURFACE LEVEL TO ALLOW OVERLAND FLOWS INTO SITE FROM ADJACENT PROPERTY
FFL (LEVEL 02) 22.600
FINISHED SURFACE LEVEL OF PROPOSED WALKWAY/STAIRS
EXISTING SURFACE LEVEL
EXISTING RETAINING WALL
PROPERTY BOUNDARY
TRENCH EXCAVATION TO BE SHORED TO PROVIDE SAFER WORKING ACCESS
FFL (LEVEL 01) 18.290
NEW BORED PIERS TO SUPPORT BOUNDARY WALL/FENCE
EXISTING CARPARK
EXISTING RETAINING WALL FOOTING
UNDER PIN EXISTING WALL TO EXTEND FOOTING LOAD BELOW ZONE OF INFLUENCE OF TRENCH EXCAVATION
APPROXIMATE LOCATION OF TRENCH EXCAVATION
PROPOSED DN 375 SEWER
DN1350 RCP ID = 1350 OD = 1626 COLLAR = 2000
ASSUMED ROCK LEVEL (TO BE CONFIRMED BY ADDITIONAL GEOTECHNICAL TESTIN 13/3/2022)
ZONE OF INFLUENCE
STORMWATER BYPASS PIT DETAIL
SCALE: 1:50
EXISTING DN1050 STORMWATER MAIN TO BECOME REDUNDANT
REDUNDANT SEWER MAIN
PROPOSED NEW COLUMN
EXISTING COLUMN
PROPOSED DN375 SEWER MAIN. REFER GENERAL ARRANGEMENTS
NEW PRECAST CONCRETE SEWER MANHOLE
PROPOSED DN150 SEWER MAIN. REFER GENERAL ARRANGEMENTS
EXISTING SEWER MAIN TO BE RETAINED
PROPOSED NEW DN750 BYPASS STORMWATER MAIN
EXISTING STRIP FOOTING TO BE DEMOLISHED
STORMWATER PROPERTY CONNECTION 5% AEP FLOW 190 l/s
PROPOSED NEW DN1350 STORMWATER MAIN
NEW CAST-INSITU REINFORCED CONCRETE STORMWATER BYPASS PIT
EXISTING STRIP FOOTING TO BE DEMOLISHED
EXISTING DN1350 STORMWATER MAIN TO BE RETAINED
EXISTING PAD FOOTING TO BE RETAINED
SECTION D
SCALE 1:50
EXISTING UPSTREAM DN1050 STORMWATER MAIN TO BECOME REDUNDANT
EXISTING DOWNSTREAM DN1050 STORMWATER MAIN TO BE RETAINED
NEW CAST-INSITU REINFORCED CONCRETE STORMWATER BYPASS PIT
PROPOSED DN1350 STORMWATER MAIN
SECTION E
SCALE 1:50
PROPOSED DN750 BYPASS STORMWATER MAIN
INSPECTION SHAFT TO SURFACE
EXISTING DN1050 STORMWATER MAIN TO BECOME REDUNDANT
EXISTING DN1050 STORMWATER MAIN TO BE RETAINED
SECTION G
SCALE 1:50
SECTION H
SCALE 1:50
EXISTING STEEL CHS COLUMN
EXISTING COLUMN PEDESTAL
PROPOSED FINISHED SURFACE LEVEL
EXISTING SURFACE LEVEL
EXISTING 600Ø BORED PIER
TRENCH EXCAVATION TO BE SHORED TO PROVIDE SAFER WORKING ACCESS
PROPOSED NEW DN750 BYPASS STORMWATER MAIN
EXISTING DN375 SEWER MAIN
EXISTING DN1350 RCP ID = 1350 OD = 1626 COLLAR = 2000
SECTION F
SCALE 1:50
EXISTING AND/OR NEW FOOTING TO SUPPORT LEVEL 01
EASEMENT 5.0 to 5.5
ZONE FOR PRIVATE SERVICES (STORMWATER, POWER AND COMMS)
NEW BORED PIERS TO SUPPORT BOUNDARY WALL/FENCE AND EXTEND LOAD BELOW ZONE OF INFLUENCE OF TRENCH
Engineers & Planners
Johnstone McGee & Gandy Pty. Ltd.
ACN 050 047 108
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43-51 Elizabeth Street, Launceston, Tas (03) 6334 5548
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PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT
TITLE
DETAILS SHEET
PROJECT NO. P205082SH
DWG NO. C14
REVISION DA1

PATRICK STREET
MURRAY STREET
ELIZABETH STREET
BRISBANE STREET
MELVILLE STREET
PRELIMINARY PRINT
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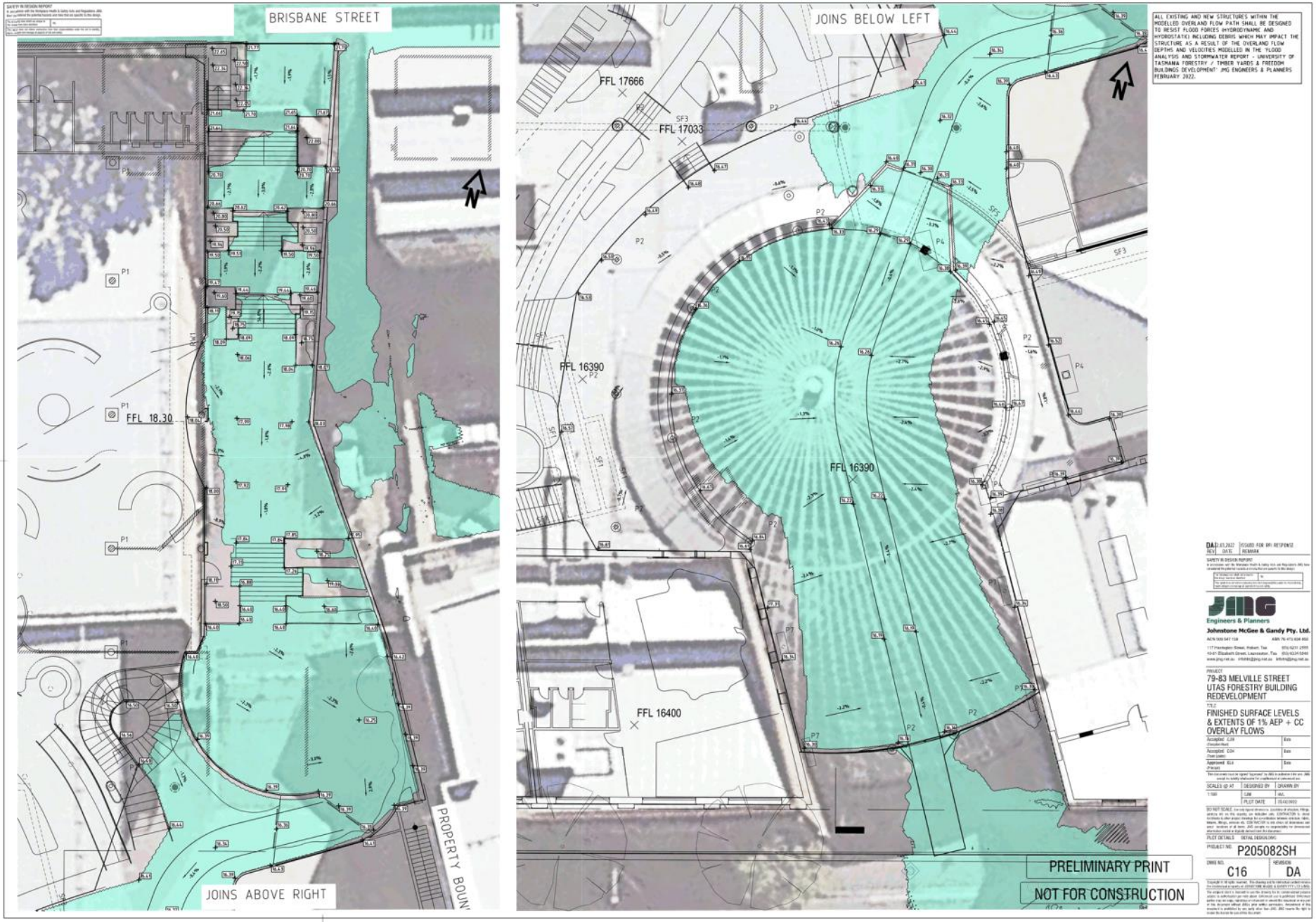
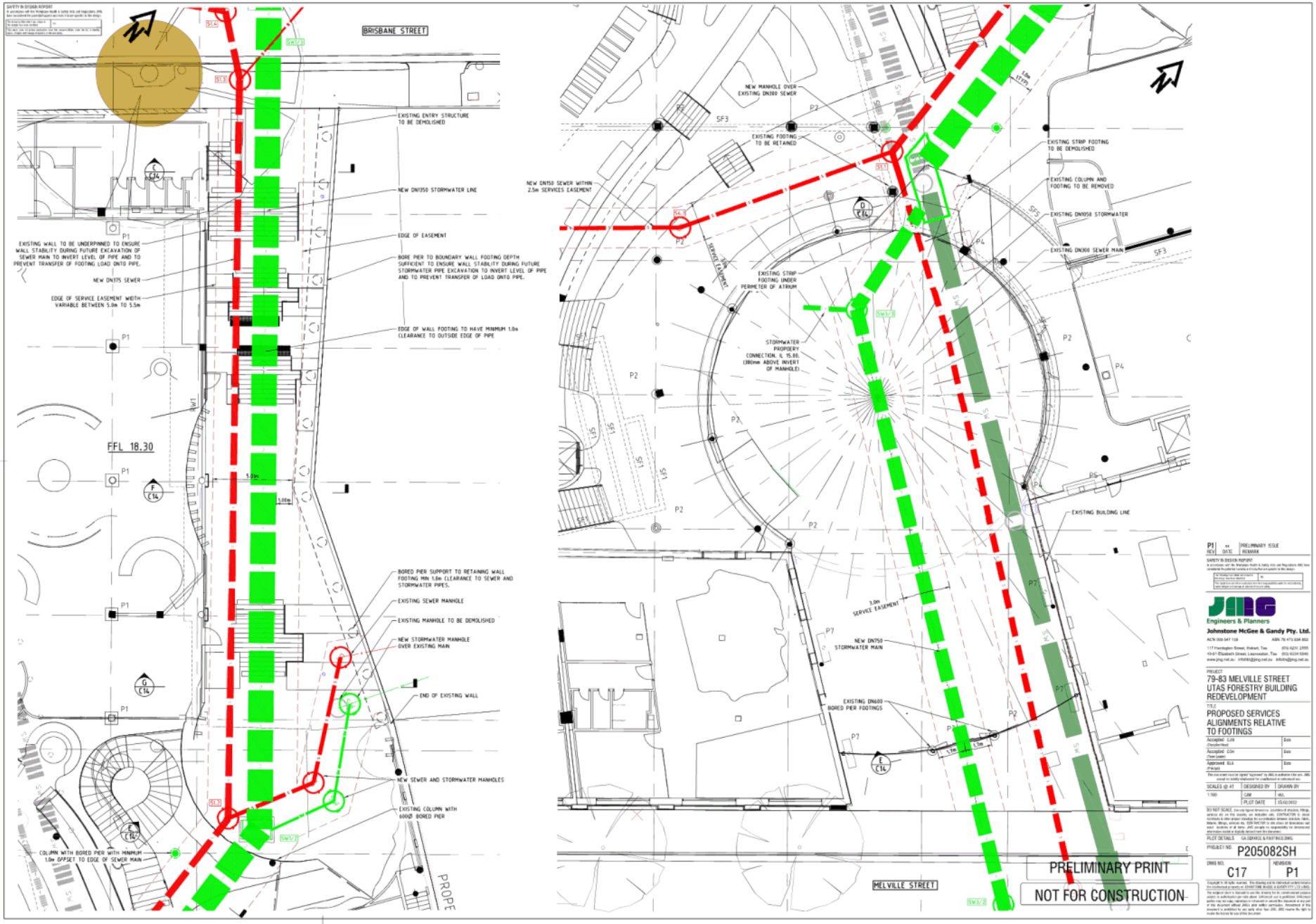
Engineers & Planners
Johnstone McGee & Gandy Pty. Ltd.
PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT
TITLE
EXISTING PIPE DN1050, 1350
AND 1800 PLAN
SCALES @ A1
DESIGNED BY
DRAWN BY
1:750
CJM
CAD
PLOT DATE
DO NOT SCALE
PLOT DETAILS
PROJECT NO.
205082SH
DWG NO.
C15
REVISION
DA


BRISBANE STREET
JOINS ABOVE RIGHT
PROPERTY BOUN
FFL 18.30
JOINS BELOW LEFT
FFL 17666
FFL 17033
FFL 16390
FFL 16390
FFL 16400
ALL EXISTING AND NEW STRUCTURES WITHIN THE MODELLED OVERLAND FLOW PATH SHALL BE DESIGNED TO RESIST FLOOD FORCES (HYDRODYNAMIC AND HYDROSTATIC) INCLUDING DEBRIS WHICH MAY IMPACT THE STRUCTURE AS A RESULT OF THE OVERLAND FLOW DEPTHS AND VELOCITIES MODELLED IN THE 'FLOOD ANALYSIS AND STORMWATER REPORT - UNIVERSITY OF TASMANIA FORESTRY / TIMBER YARDS & FREEDOM BUILDINGS DEVELOPMENT' JMG ENGINEERS & PLANNERS FEBRUARY 2022.
Engineers & Planners
Johnstone McGee & Gandy Pty. Ltd.
PROJECT
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING
REDEVELOPMENT
TITLE
FINISHED SURFACE LEVELS
& EXTENTS OF 1% AEP + CC
OVERLAY FLOWS
PRELIMINARY PRINT
NOT FOR CONSTRUCTION
PROJECT NO. P205082SH
DWG NO. C16
REVISION DA


BRISBANE STREET
EXISTING ENTRY STRUCTURE TO BE DEMOLISHED
NEW DN1350 STORMWATER LINE
EDGE OF EASEMENT
BORE PIER TO BOUNDARY WALL FOOTING DEPTH SUFFICIENT TO ENSURE WALL STABILITY DURING FUTURE STORMWATER PIPE EXCAVATION TO INVERT LEVEL OF PIPE AND TO PREVENT TRANSFER OF LOAD ONTO PIPE.
EXISTING WALL TO BE UNDERPINNED TO ENSURE WALL STABILITY DURING FUTURE EXCAVATION OF SEWER MAIN TO INVERT LEVEL OF PIPE AND TO PREVENT TRANSFER OF FOOTING LOAD ONTO PIPE.
NEW DN375 SEWER
EDGE OF SERVICE EASEMENT WIDTH VARIABLE BETWEEN 5.0m TO 5.5m
EDGE OF WALL FOOTING TO HAVE MINIMUM 1.0m CLEARANCE TO OUTSIDE EDGE OF PIPE
FFL 18.30
BORED PIER SUPPORT TO RETAINING WALL FOOTING MIN 1.0m CLEARANCE TO SEWER AND STORMWATER PIPES.
EXISTING SEWER MANHOLE
EXISTING MANHOLE TO BE DEMOLISHED
NEW STORMWATER MANHOLE OVER EXISTING MAIN
END OF EXISTING WALL
NEW SEWER AND STORMWATER MANHOLES
EXISTING COLUMN WITH 600Ø BORED PIER
COLUMN WITH BORED PIER WITH MINIMUM 1.0m OFFSET TO EDGE OF SEWER MAIN
NEW MANHOLE OVER EXISTING DN300 SEWER
EXISTING FOOTING TO BE RETAINED
NEW DN750 SEWER WITHIN 2.5m SERVICES EASEMENT
EXISTING STRIP FOOTING TO BE DEMOLISHED
EXISTING COLUMN AND FOOTING TO BE REMOVED
EXISTING DN1350 STORMWATER
EXISTING DN300 SEWER MAIN
EXISTING STRIP FOOTING UNDER PERIMETER OF ATRIUM
STORMWATER PROPERTY CONNECTION. IL 15.80. (380mm ABOVE INVERT OF MANHOLE)
EXISTING BUILDING LINE
3.0m SERVICE EASEMENT
NEW DN750 STORMWATER MAIN
EXISTING DN600 BORED PIER FOOTINGS
MELVILLE STREET
PRELIMINARY PRINT
NOT FOR CONSTRUCTION
Engineers & Planners
Johnstone McGee & Gandy Pty. Ltd.
79-83 MELVILLE STREET
UTAS FORESTRY BUILDING REDEVELOPMENT
PROPOSED SERVICES ALIGNMENTS RELATIVE TO FOOTINGS
P205082SH
C17
P1

APPENDIX D

Tree Report

APPENDIX D

Tree Report

ELEMENT
TREE SERVICES

DEVELOPMENT IMPACT ASSESSMENT

79-83 Melville Street, Hobart

1/12/2021

For: ALASTAIR FLYNN
SENIOR ASSOCIATE
WOODS BAGOT
MEZZANINE
498 LITTLE COLLINS STREET
MELBOURNE

Alister Hodgman
Diploma (Hort/Arb)
QTRA Register User: 3743

Element Tree Services
alister@elementtree.com.au

1. Terms of Reference

Alastair Flynn, Senior Associate at Woods Bagot, requested this report to assess the impacts of proposed development at 79-93 Melville Street, Hobart. An assessment of the site was undertaken on the 16th of November 2021. Contained in this report will be an assessment of the proposal on the established trees and recommendations to protect them during the development.

Fig. 1 – an aerial image of the site indicating the trees subject to this report. Image courtesy of listmap.

2. Site Findings

The current proposal has the potential to impact two trees growing adjacent to 80 Brisbane Street. These two trees, London planes (*Platinus x acerfolia*) are of good vitality and form.

They are located adjacent to the kerb within an asphalt footpath. Due their extensive buttress and root development, displacement of these hard surfaces is occurring.

It is unlikely that these trees are growing in structural soils or contained in tree pits. The assumption is that there will be limited root development within Brisbane Street, with the majority influenced by the kerb and will be growing radially throughout the footpath.

3. Development Impacts

As a result of infrastructure upgrades within Brisbane Street, the following table will contain information on tree protection zone (TPZ) and the incursions. The proposal includes a new stormwater and sewer lines to service the buildings. The design has ensured that there are no incursions into the structural root zones (SRZ).

3.1 Impacts Table

TREE	DAB	DBH	SRZ	TPZ	INCURSION m^2	% INCURSION	RETAIN
1	1.02	0.82	3.04	9.84	112.5	37%	YES
2	1	0.81	3.31	9.72	46.9	16%	YES

The incursions into the TPZ are both above minor (<10%), however this does not consider the current limitations imposed on the roots by the built environment. As the assumption is that there will be limited root development within the road, severance for tree 2 will be minimal.

Although root development may be limited in the road from tree 1, there may be severance on the northern side of the tree where the services head towards the forestry building. Disregarding the roots within the road as an incursion, this represents approximately 9%. As this species generally tolerates damage well, this incursion may not be as significant as the standard suggests.

4. Tree protection

Prior to the commencement of works, all of the TPZ's should be fenced off and signs erected to indicate the purpose of the zone. Where works encroach on the TPZ, the fencing should be erected as close to the edge as possible.

Activities to avoid in this zone are:

- 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).

To reduce the potential impacts on these trees, ideally the work should be completed during dormancy. Additionally, the roots should be pruned with a sharp tool leaving a clean cut and not torn out by machinery. If the trench is to be left exposed for a continued period of time, the cut should be covered with hessian and kept wet.

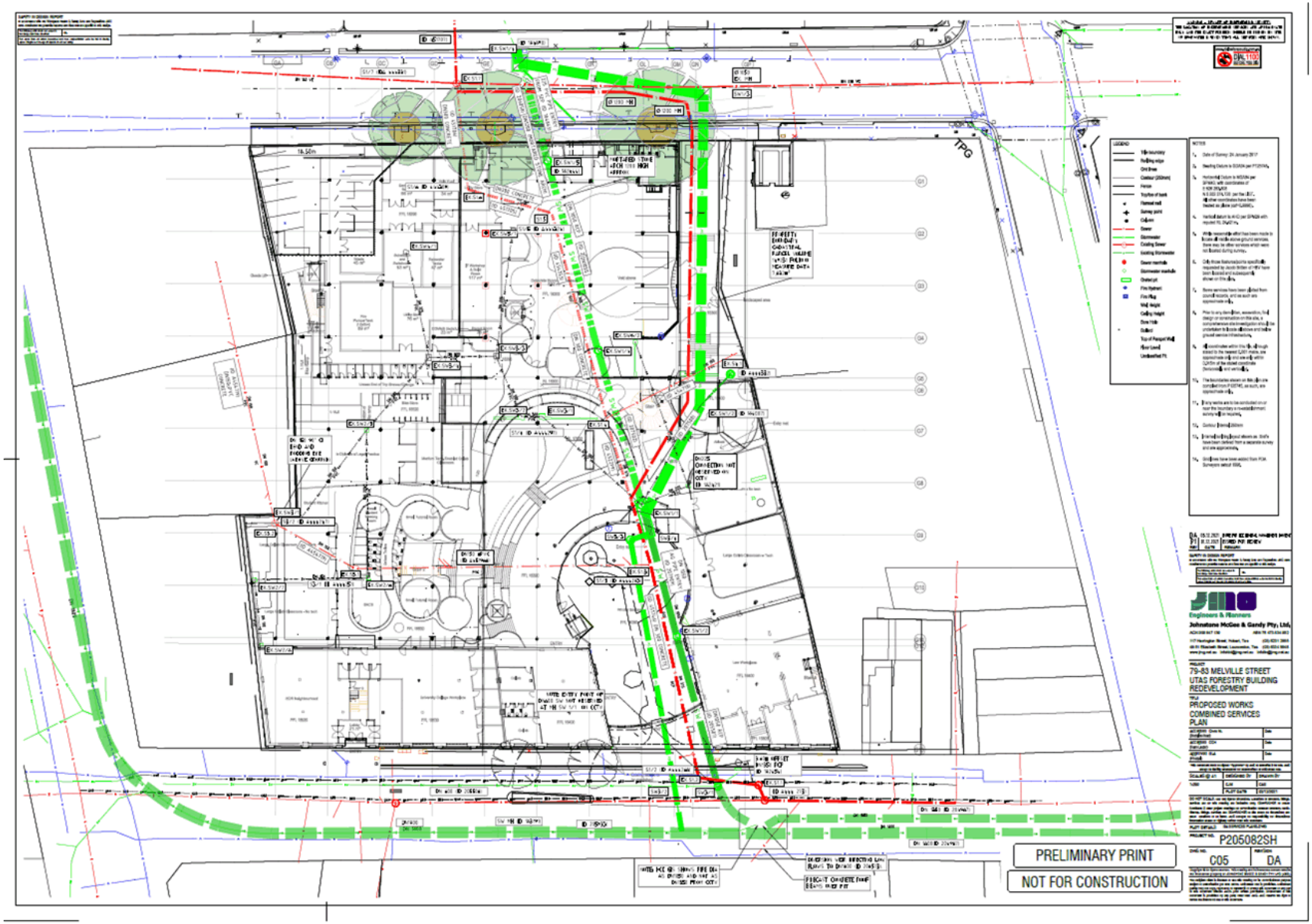
5. Conclusion

- The current proposal avoids severing the structural root zones and therefore stability should not be compromised.
- The incursions into the tree protection zones are above minor, but this assessment is made without a clear understanding of the roots' distribution.
- Given the species profile, it is likely that they will tolerate the works if correct tree protection measures are implemented

Yours sincerely,

Alister Hodgman

Appendix 1 – Referenced design (DWG C05 Rev. DA)



APPENDIX E

TasWater Emails

Christopher Males

From: Adam Johnston
Sent: Monday, 24 May 2021 8:54 AM
To: Keenan O'Shea
Cc: David Mason; Luke Treadwell; Christopher Males
Subject: FW: 79-83 MELVILLE ST, HOBART | SI 2017/01047-HCC
Attachments: speculate UNDERUTILISED stats 20190214 HN stats (002).pdf; 80 Melville Street Modelling.xlsx

Categories: Saved_To_Project

Gents,

Please see below additional information from TasWater.

Adam Johnston | Principal Hydraulics Designer
JMG ENGINEERS & PLANNERS

117 Harrington St. Hobart TAS 7000
E: ajohnston@jmg.net.au
P: 03 6231 2555

Email Confidentiality Notice and Disclaimer

From: Cengia, Anthony <Anthony.Cengia@taswater.com.au>
Sent: Friday, 21 May 2021 11:06 AM
To: Adam Johnston <ajohnston@jmg.net.au>; Mark White <mark.white@utas.edu.au>
Subject: 79-83 MELVILLE ST, HOBART | SI 2017/01047-HCC

Adam/Mark,
Please see below advice from our Senior Engineer Network Asset Performance:

79-83 MELVILLE ST, HOBART UTAS Development

Background

- *TasWater has received a pre planning enquiry regarding TasWater's interest in jointly upgrading the sewers traversing the subject property at the time of development by UTAS.*

Existing Servicing

- *Site is fully traversed by DN300 reinforced concrete sewer mains laid in 1997. There are also 2 off DN150 PVC-U sewers feeding sewage from adjacent properties, also laid in 1997.*

Existing capacity

- *Modelling of a 1 in 5 year recurrence interval storm of duration 6 hours identified that part of the existing sewer could be expected to surcharge beyond full pipe but still well contained within acceptable limits defined by TasWater.*

Future Growth within the upstream sewerage catchment & associated impacts on capacity.

- *Hobart City Council has consulted widely with the development of its vision for "Midtown" and has advised a potential growth of up to 20,000 to 30,000 residents. There has not, to my knowledge, been any further peer review of this estimate and it has been very loosely estimated based upon identified underutilized lots, maximum height limits and densities drawing upon stated best practice examples of densification in NSW.*
- *The attached image shows HCC's 2019 survey of what it considered to be "Underutilized Lots". Using this assessment as a first pass of possible future development potential, the proportion of lots located in the upstream catchment of the UTAS site in Melville Street represents less than 10% of the available developable lots in the Midtown study area. This would approximate to an upper limit of an additional population of an additional 2000-3000 people in the catchment upstream of the subject property.*

- *Considering these uncertainties, modelling of flows from **2010.5** ET (existing), **4021 ET (2X)** and **6031.5 ET (3X)** upstream of the subject property has been undertaken by Tristan Ross and applied to sewers between the subject property and Liverpool Street*
- *All scenarios produced surcharging to some degree for the design worst case storm. For the subject property, this remains within TasWater's current containment standards for all scenarios. Downstream sewers on Elizabeth Street exceeded the containment standard for 2X and 3X scenarios*
- *Additional scenarios were modelled where the sewers traversing the subject property were upsized to DN450, testing the potential benefit of augmenting in conjunction with UTAS works . This did not result in any modelled improvement in localised surcharge height for the subject property , and considering the age of the existing sewer and capacity constraints are located remote from the subject property, upsizing is deemed of marginal benefit.*

Opportunities for diversion of sewers away from the subject property

- *The sewers downstream from 79-83 Melville Street are largely original DN300 VC and extend approximately 280 metres until DN400 / DN450 sewers are reached near the intersection of Elizabeth and Liverpool Streets.*
- *The opportunity to divert upstream flows from Brisbane Street down Elizabeth Street has previously been examined. This would divert from manhole A444331 with an Invert level of 16.965 AHD Northwards along Brisbane Street towards Elizabeth street where a new manhole would have an approximate surface level equivalent to A444393's level of 21.375 AHD. Accounting for approximate fall of 1.0m this implies an approximate depth of sewer of 5.4m at the Brisbane /Elizabeth Street intersection.*
- *To achieve this diversion, a trenchless directional drill would be required along Elizabeth Street between Brisbane and Melville Streets due to the heavily trafficked bus route. This would undoubtedly be an expensive diversion but is theoretically possible with minimal conflicts with stormwater infrastructure.*

Recommendations

- *Based on the*
  - *modelled hydraulic performance of the existing sewer and acceptable level of containment during the design storm event*
  - *the uncertainty surrounding HCC's untested urban growth potential identified within the upstream sewerage catchment*
  - *the availability of diversion options beyond the subject property, even given their considerable cost*
  - *the as new condition of the existing DN300 concrete sewers*

  it is not recommended to augment the sewers across the subject property at this time.

So in summary, we're all good, no up-grades of the sewer are recommended now under this further investigation.

Regards,

Anthony Cengia
Senior Assessment Officer

taswater

M 0474 933 293
F 1300 862 066
A GPO Box 1393, Hobart TAS 7001
169 Main Road, Moonah, TAS 7009
E anthony.cengia@taswater.com.au
W http://www.taswater.com.au/

Please note that I am working from both home and the office on a 9 day fortnight, every second Monday is my non-work day.

Day	Monday	Tuesday	Wednesday	Thursday	Friday
Location W1	N/A	Home	Office	Home	Home
Location W2	Office	Home	Home	Home	Home
Usual Hours	8am-5pm	8am-5pm	8am-5pm	8am-5pm	8am-4:30/5pm

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Christopher Males

From: Cengia, Anthony Anthony.Cengia taswater.com.au
Sent: Thursday, 9 Decem er 2021 7:40 AM
To: Kelvin.Chieng arup.com
Cc: Mike.Dodd arup.com; Adam Johnston; Christopher Males
Subject: Modelling Results | 79-83 MELVILLE ST, HOBART | SI 2017/01047-HCC

Categories: Saved_To_Project

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Option 1 connection to N250

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Option 2 connection to N150

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Location W2	h		h	h	h
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Subject: w t C a

Hi Anthony

Hope this email inds you ell

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Please see attached mar up or details and eel ree to call i you ish to discuss

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Fire Flow	Residual Pressure

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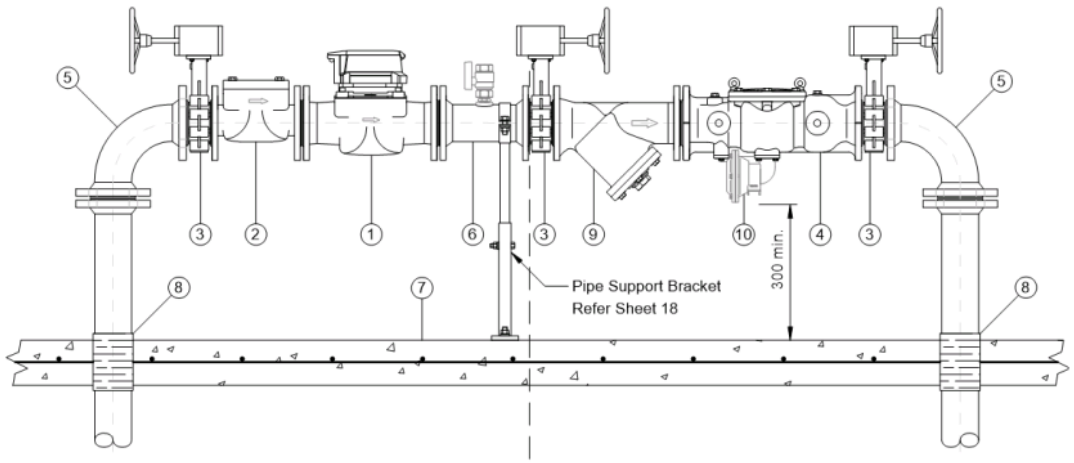
APPENDIX F

TasWater Standard Drawings



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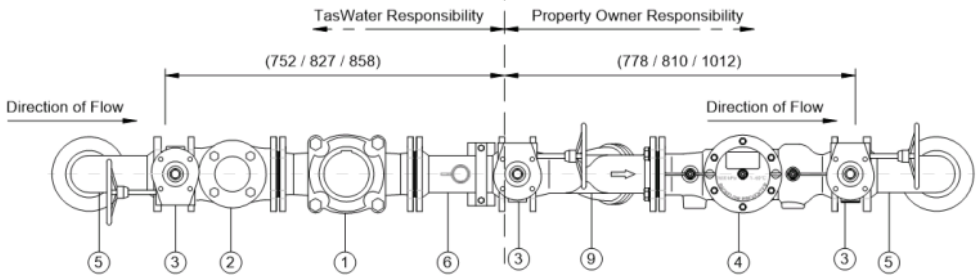

PLAN
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0 0.2 0.4 0.6 0.8 1.0 metres
SCALE - 1 : 10

GENERAL NOTES

1. All dimensions in millimeters (mm), unless noted otherwise.
2. Installation and fittings schedule is also suitable for DN.80 and DN.100 meters.
3. Dimensions shown in brackets apply to (DN.65 / DN.80 / DN.100).
4. A 3mm clearance has been added where a gasket is required.
5. All metallic pipe work to be 'Denso' wrapped, or equivalent where it comes in contact with concrete - to protect it from corrosion.
6. Install and locate the meter assembly so that the meter can be easily read.
7. Where a vented back flow prevention device is required such as a Reduced Pressure Zone Device (RPZD) it shall:
   - Comply with AS 3500 and AS 2845; and shall
   - Have free ventilation to the atmosphere for the relief valve at all times.
   - Not be in an area that may be subject to ponding;
   - Have the relief drain outlet not less than 300mm above the surrounding surface.
8. Install the meter assembly in cage in accordance with TWS-W-0003.
9. The Property Owner is responsible for the ongoing maintenance of the security cage.

VALVE & EQUIPMENT SCHEDULE

1. Only use products with watermark certification and approved for use by TasWater and listed within City West Water's approved products catalogue.
2. Installation must comply with manufacturer's written instructions.
3. All valves must be resilient seated, clockwise closing to AS 1628 with 316 stainless steel bolts and washers.
4. Unless approved otherwise the water meter/s, tails and meter boxes are to be supplied by TasWater.

BOUNDARY CONNECTION PARTS LIST

No.	DESCRIPTION	COMMENTS
1	DN.65 'Sensus' Meistream Plus Water Meter	Supplied by TasWater
2	DN.65 'Sensus' WP-F 250mm Dirt Box	Supplied by TasWater
3	DN.65 Lug Type Butterfly Valve with Worm Gear Actuator	Supplied by TasWater
4	Medium Hazard DN.65 'ValvCheQ' DCO3U Double Check Valve High Hazard DN.65 'ValvCheQ' RPZD RP03 Valve Only	Owned, operated and maintained by Property Owner
5	DN.65 PN16 Metallic Water Pipe	Copper not to be used for DN.100
6	DN.65 x 200mm Hydrant Riser with 25mm Tapping for Pressure Testing, 20mm Valve and Plug	Supplied by TasWater
7	100mm (minimum) Reinforced Concrete Slab	SL72 placed central
8	Pipe Wrapped where Concrete will contact Pipe	(Refer Note 5)
9	DN.65 Strainer	Owned, operated and maintained by Property Owner
10	Vent only applies on High Hazard installations where a RPZD is used	

Revision Notes
5. AMENDMENTS TO SHEETS 7, 12 AND 17

Rev.	5	Date	31/10/2018	Approved	G. HENDERSON

Scale 1 : 10
Datum N/A
Sheet Size A3
References

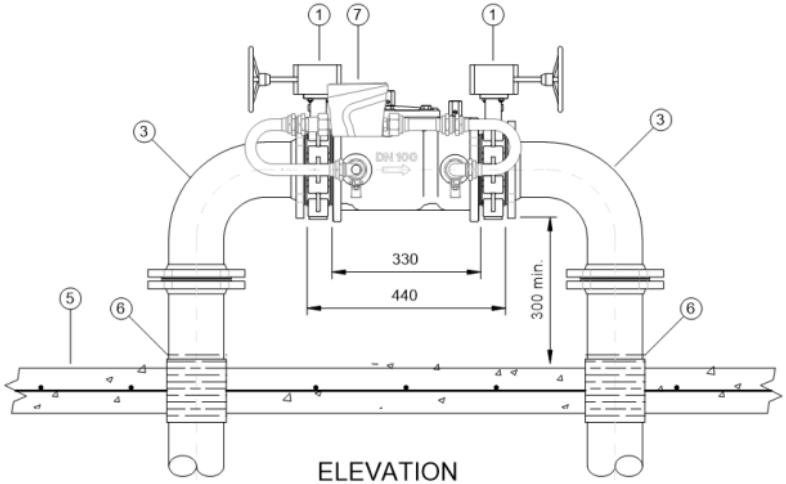
Drawn	R. HAWLEY	07/02/2017
Designed	R. CAMERON	09/02/2017
Verified	R. JAMES	20/03/2017
Project No.	JR16562-035	Discipline W
Vault Folder	STANDARDS	© 2018
HPRM File Ref.	T15/62-006-0004	

DRAWING ISSUE
APPROVED

TASWATER STANDARD DRAWING
PROPERTY SERVICE CONNECTIONS
DN.65, DN.80 AND DN.100 WATER METERS
MEDIUM - HIGH HAZARD

TASMANIAN WATER & SEWAGE CORPORATION PTY LTD
ABN: 47 162220 653

TWS-W-0002 | Sheet Number 16 of 19 | Revision 5



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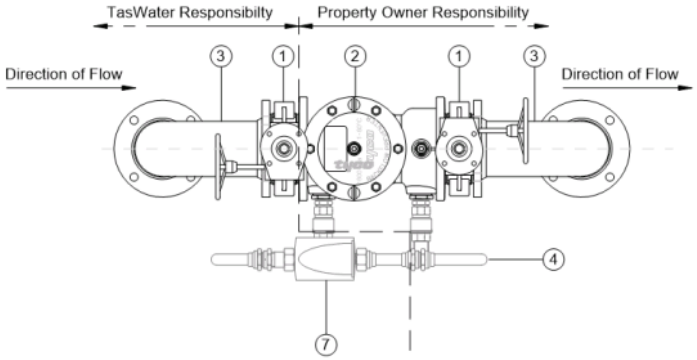

PLAN
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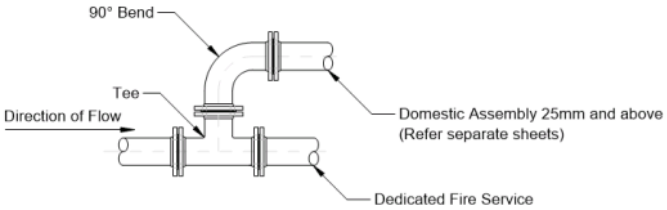
SCALE - 1 : 10

0 0.4 0.8 1.2 1.6 2.0 metres
SCALE - 1 : 20

BOUNDARY CONNECTION PARTS LIST		
No.	DESCRIPTION	COMMENTS
1	DN.100 Lug type Butterfly Valve with Worm Gear Actuator	1 x Supplied by TasWater
2	Low Hazard 'ValvCheQ' DN.100 SDCT03 Single Check Valve	Owned, operated and maintained by Property Owner
3	DN.100 PN16 Metallic Water Pipe	Copper not to be used
4	Metered Bypass	Supplied by TasWater
5	100mm (minimum) Reinforced Concrete Slab	SL72 placed central
6	Pipe Wrapped where Concrete will contact Pipe	(Refer Note 3)
7	'Sensus' Meter size for Low Flow Bypass	DN.25 Bypass for DN.100 - DN.150 DN.32 Bypass for DN.200 DN.40 Bypass for >DN.200



PLAN - DOMESTIC ASSEMBLY
1 : 20

VALVE & EQUIPMENT SCHEDULE

1. Only use products with watermark certification and approved for use by TasWater and listed within City West Water's approved products catalogue.
2. Installation must comply with manufacturer's written instructions.
3. All valves must be resilient seated, clockwise closing to AS 1628 with 316 stainless steel bolts and washers.
4. Unless approved otherwise the water meter/s, tails and meter boxes are to be supplied by TasWater.

GENERAL NOTES

1. All dimensions in millimeters (mm), unless noted otherwise.
2. Install and locate the meter assembly so that the meter can be easily read.
3. All metallic pipe work to be 'Denso' wrapped, or equivalent where it comes in contact with concrete - to protect it from corrosion.
4. Where a vented back flow prevention device is required such as a Reduced Pressure Zone Device (RPZD), it shall:
   - Comply with AS 3500 and AS 2845; and shall
   - Have free ventilation to the atmosphere for the relief valve at all times;
   - Not be in an area that may be subject to ponding;
   - Have the relief drain outlet not less than 300mm above the surrounding surface.
5. Install the meter assembly in cage in accordance with TWS-W-0003.
6. The Property Owner is responsible for the ongoing maintenance of the security cage.

Revision Notes
5. AMENDMENTS TO SHEETS 7, 12 AND 17

Rev.	5	Date	31/10/2018	Approved	G. HENDERSON

taswater

Scale	1 : 10
Datum	N/A
Sheet Size	A3

References

Drawn	R. HAWLEY	07/02/2017
Designed	R. CAMERON	08/02/2017
Verified	R. JAMES	20/03/2017
Project No.	JR16562-035	Discipline W
Vault Folder	STANDARDS	© 2018
HPRM File Ref.	T15/62-006-0004	

DRAWING ISSUE
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This drawing is produced on an A3 size sheet. DO NOT SCALE if a sheet printed at any other size.

TASWATER STANDARD DRAWING
PROPERTY SERVICE CONNECTIONS
DN.100 WATER METER
FIRE CONNECTION

TASMANIAN WATER & SEWAGE CORPORATION PTY LTD
ABN: 47 162220 653

DRAWING NO.	SHEET NUMBER	REVISION
TWS-W-0002	17 of 19	5

Johnstone McGee & Gandy Pty Ltd

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Engineers & Planners

D

Appendix D:

Heritage Report

On behalf of the University of Tasmania
May 2021 (Heritage Impact Assessment
December 2021)

HISTORIC HERITAGE MANAGEMENT STRATEGY

79-83 Melville Street, HOBART, TASMANIA

praxisenvironment
heritage | planning | archaeology
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north hobart
tasmania 7002
0418 303184
info@prax.com.au

This document was written by Brad Williams (BA.Hons Archaeology, MA Cultural Heritage Management, G.Dip Environmental Planning) Director – Praxis Environment, with historical research part of Section 3 authored by Alan Townsend, Consultant Historian.

Unless otherwise stated, all photographs were taken by Brad Williams, 2021

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 Elizabeth Street frontage.

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. Floor and roof plans are not necessarily to scale and indicative only. Unless expressly stated, measurements are only indicative.

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PO Box 5228 SOUTH MELBOURNE 3205

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1. INTRODUCTION

1.1. RATIONALE, PROJECT BRIEF AND SCOPE

This document has been commissioned by the University of Tasmania, via Morrison Breytenbach Architects (Hobart) and Woods Bagot Architects (Melbourne) in order to comprehensively and strategically manage any historic heritage values of the subject site at 79-83 Melville Street, Hobart (the *site*) in an any future development of that site. Praxis Environment were commissioned to undertake this project, further to the brief of providing a staged process of heritage guidance, that of the provision of preliminary heritage advice to assist in any broad feasibility studies and concepts of future development, followed by a more detailed and specific project to further guide the design of a more detailed development scheme followed by a heritage impact assessment of that scheme. Specifically, the brief for this project was:

1. **A detailed review and confirmation of heritage requirements** - Undertake a review of all statutory historic heritage and archaeological requirements associated with the proposed development (e.g. site and surrounds) and provide a detailed framework of those requirements as early as possible in the planning process. Also, undertake a review of all non-statutory policy/guidelines which may provide a framework for understanding the heritage issues, significance and requirements relevant to the subject site and surrounds (including a review of the client-provided heritage assessment).

2. **An overview site history -** which is the essential basis for (3) and (4) below.

3. **Statement of Historical Archaeological Potential** for the place which would involve a review of historic documents and secondary source material with the aim of gaining a detailed understanding of the development of the site and therefore gaining a detailed understanding of the site formation processes acting upon that site. This would also include a regional, thematic and temporal analysis of any identified/likely archaeological remains in order to gain a thorough understanding of the significance of such as well as a detailed title history search. This (and other archaeological approaches) would be in accordance with the relevant industry standards, namely the Tasmanian Heritage Council's Practice Note 2 (Managing Historical Archaeological Significance in the Works Application Process) which is considered to be the industry benchmark for sites of historical archaeological potential. The results of this exercise would be used to guide the design process with the aim of minimising/avoiding impact upon significant archaeological remains, or to provide a substantive understanding of the site sufficient to guide the management and mitigation strategies in points (5b) and (5c) below if impact is not feasibly avoidable.

4. **A Conservation Brief for the listed portion of the site (i.e. refined by the results of (1)).** An assessment of the form and fabric of the listed portion of the site as a means of determining, potentially limiting and ranking the significance of the various portions of the building(s). This would also include a review of the significance, setting and context of the heritage building(s) within the wider townscape attributes of the vicinity, which seeks to set policy for appropriate (re)development of the site consistent with ICOMOS Australia Burra Charter process and the applicable statutory heritage requirements. This policy should be used to guide the development design to respond to any significant heritage values of adjacent places/areas.

5. If Step 4 has determined archaeological potential (likely) and impact upon significant remains cannot feasibly be avoided, then undertake an **Archaeological Impact Assessment** alongside the specifications of the proposed development which aims to fully understand the impact of the proposed development in order to formulate mitigation strategies via an **Archaeological Method Statement** which would provide a methodology for managing archaeological values ahead of, and/or during, the works process.

6. **Heritage Impact Assessment.** Once the design detail of the proposed development is resolved (as informed by the heritage conservation policies in (4), undertake a Heritage Impact Assessment which will assess the proposed development against those policies and other statutory requirements identified in (1) with the aim of demonstrating compliance with those policies and provisions. (note that my time estimate below is based on the assumption that the proposal will adhere to the heritage conservation policies developed - if justification for diverting from those policies needs to be developed, then this may take additional time).

Note that part-way through the project, the brief was extended to include the portion of the strata-titles place known as the 'Freedom' building facing Brisbane Street.

1.2. DEFINITION OF PLACE

The *subject site* is comprised of 79-83 Melville Street, Hobart, Tasmania, which includes the following broad site features as considered here:

- The former Crisp and Gunn warehouse/store (a 2-3 storey c1923 building facing Melville Street).
- The former Crisp and Gunn office (a 2 storey c1923 building facing Melville Street).
- The 'Forestry Dome' – a large glass dome between the two above buildings, built in 1997.
- The 'Freedom' building, a late 1990s showroom with a near full-footprint basement carpark, facing Brisbane Street.
- The 1997 Forestry offices, carpark etc. between the two building complexes (i.e. central portion of the site)

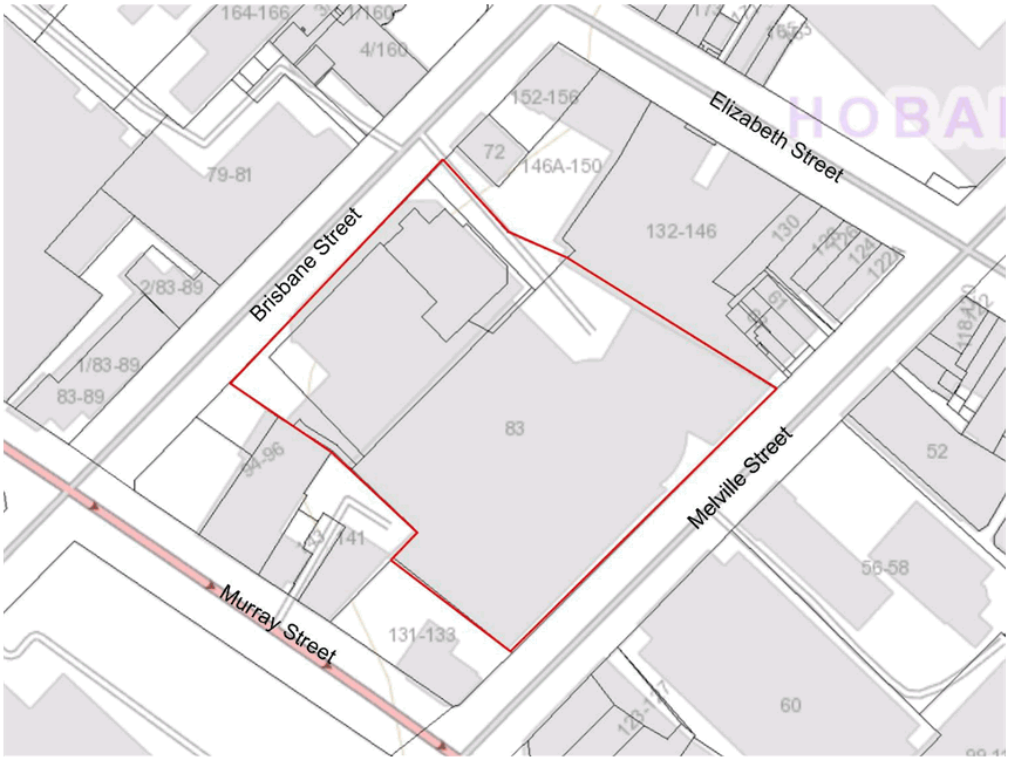


Figure 1.1 – The cadastral parcels comprising the subject site (depicted in red) and surrounds (www.thelist.tas.gov.au).

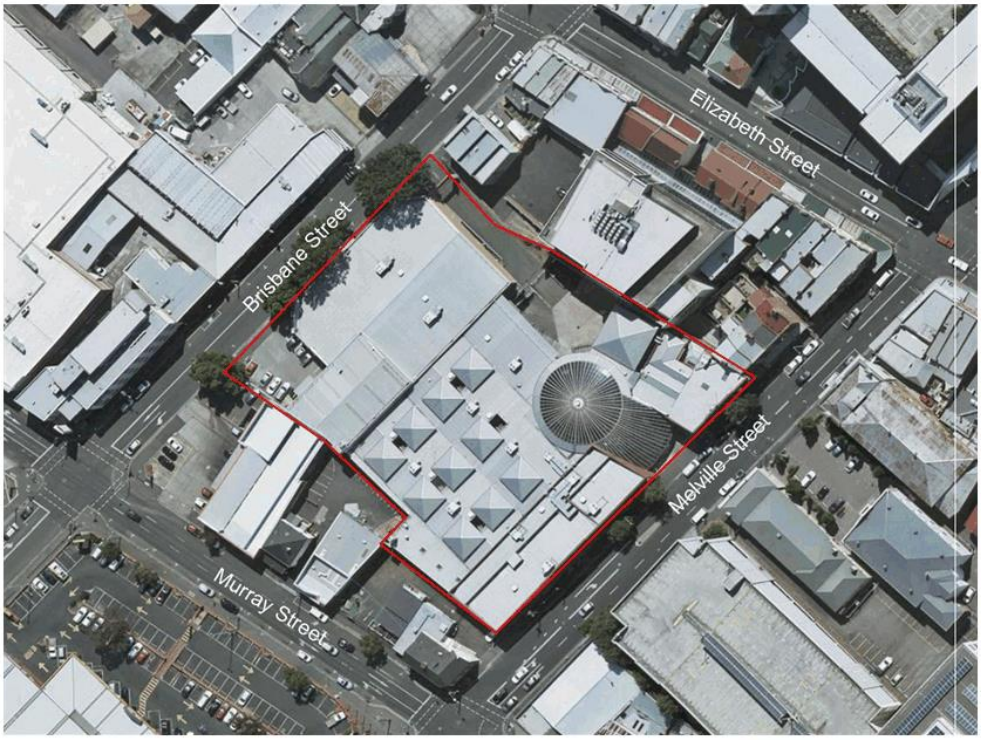


Figure 1.2 – A recent aerial image of the site and immediate surrounds– the subject site outlined in red. www.thelist.tas.gov.au

1.3. METHODOLOGY

This assessment has been undertaken in accordance with the ICOMOS Australia ***Burra Charte***, which is considered to be the Australian heritage industry's benchmark for assessing, understanding and managing heritage values. Figure 1.3 depicts this process:

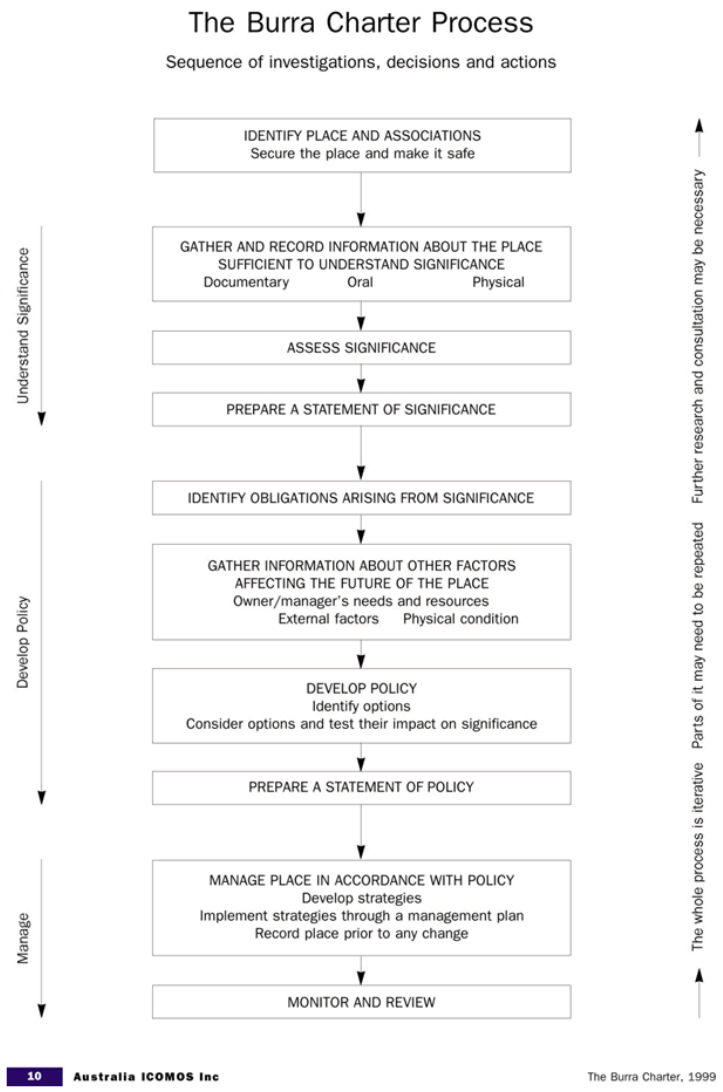


Figure 1.4 – The Burra Charter Process. ICOMOS Australia.

The statutory provisions and consequent responsibilities as outlined in Section 1.2 have also been considered in formulating this document.

This document takes the 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]

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 1.5 depicts this process:

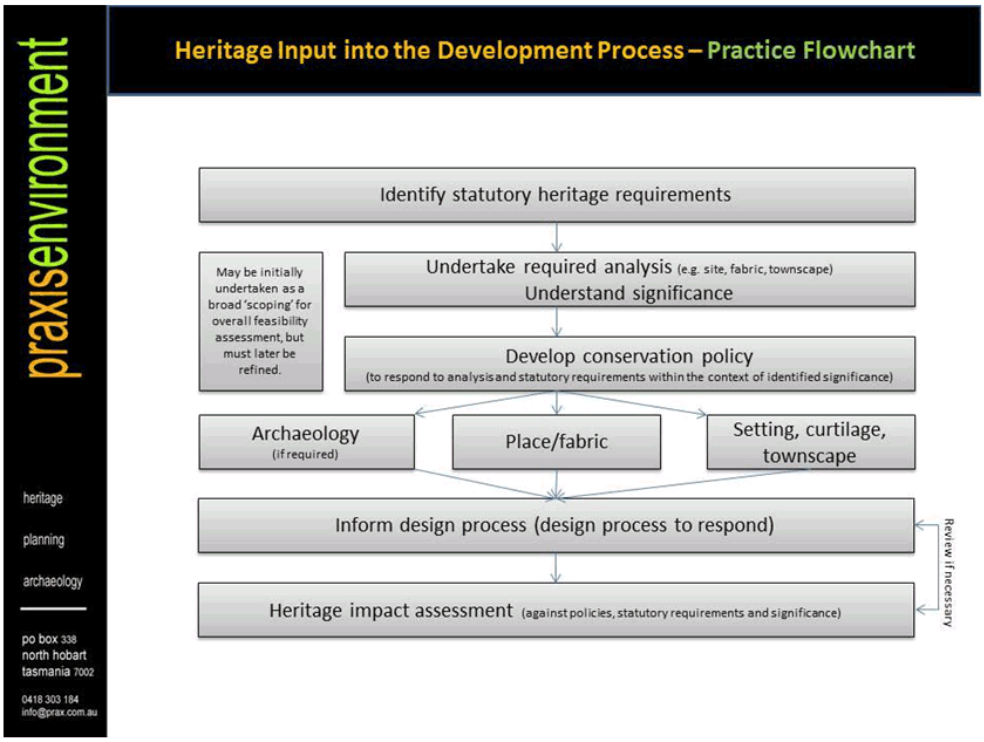


Figure 1.5 – Practice flowchart for the application of this conservation planning document.

[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

1.4. PROJECT TEAM AND ACKNOWLEDGEMENTS

This document as written by Brad Williams, heritage consultant and historical archaeologist, Praxis Environment – a division of Praxis Synergy Pty. Ltd. (Hobart and Melbourne). Historical research assistance was provided by Alan Townsend, sub-consultant historian. The author would like to acknowledge the following for their assistance in this project:

- James Morrison and Yvette Breytenbach – Morrison Breytenbach Architects
- William Thiessen, Fernanda Eusebio and Alistair Flynn – Woods Bagot Architects
- Justin Hanlon – University of Tasmania
- Sarah Waight, Hobart City Council

-

2. STATUTORY HERITAGE REQUIREMENTS

The following heritage listings and overarching legislative provisions are relevant to the management of the historic cultural heritage values of the place:

2.1. HOBART INTERIM PLANNING SCHEME 2015 (HIPS15)

HERITAGE PLACE

83 Melville Street is listed as a *Heritage Place* on Table E13 of the scheme (as defined in Figure E.13.1.11 'Specific Extent 83 Melville Street', which basically includes only the footprint of the two former Crisp and Gunn (1923) buildings:

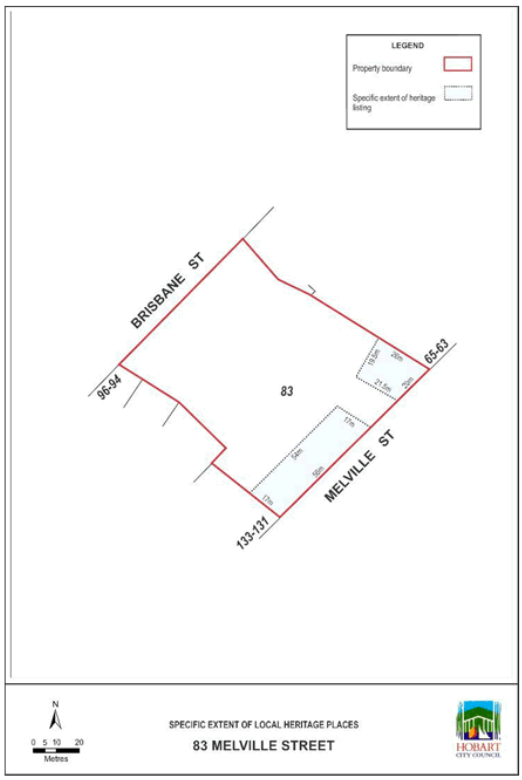


Figure 2.1 – Area affected by Table E.13 of the HIPS15 (Fig. E.13.1.11)

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.*	*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.*
E.13.7.2 Building and Works other than Demolition	*A1. No Acceptable Solution.*	*P1. Development must not result in any of the following:* *(a) loss of historic cultural heritage significance to the place through incompatible design, including in height, scale, bulk, form, fenestration, siting, materials, colours and finishes;* *(b) substantial diminution of the historic cultural heritage significance of the place through loss of significant streetscape elements including plants, trees, fences, walls, paths, outbuildings and other items that contribute to the significance of the place.*
	A2. No Acceptable Solution.	*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.*
	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.*	*P1. A proposed plan of subdivision must show that historic cultural heritage significance is adequately protected by complying with all of the following:* *(a) ensuring that sufficient curtilage and contributory heritage items (such as outbuildings or significant plantings) are retained as part of any title containing heritage values;* *(b) ensuring a sympathetic pattern of subdivision;* *(c) providing a lot size, pattern and configuration with building areas or other development controls that will prevent unsympathetic development on lots adjoining any titles containing heritage values, if required.*

PLACE OF ARCHAEOLOGICAL POTENTIAL

The site 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 to the entire site. This means that any development on the subject site will need to be informed by a *statement of historical archaeological potential* (SoHAP) which will consider the site history, past development, the research potential of such (along a range of regional, thematic and temporal lines), and the disturbance history and propose an *archaeological zoning plan* for the site.

Any future development will require an *archaeological impact assessment* to be undertaken as informed by the SoHAP. If impact is likely, this will require consideration of design amendments to avoid or minimise that impact (particularly on very significant remains) – unless there are no prudent or feasible alternatives to that impact. If impact is likely and unavoidable, then an *archaeological method statement* will be required.

	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.*	*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;* *(a) measures proposed to preserve significant archaeological evidence 'in situ'.*
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.*	*P1. Subdivision must not impact on archaeological resources at Places of Archaeological Potential through demonstrating either of the following:* *(a) that no archaeological evidence exists on the land;* *(b) that there is no significant impact upon archaeological potential.*

HERITAGE PRECINCT

The subject site is not within any Heritage Precinct as defined by Table E13.2 and depicted on Map E13.3 of the Scheme, therefore the provisions of Clause E13.8 do not apply.

SUBMISSION REQUIREMENTS

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;

2.2. HISTORIC CULTURAL HERITAGE ACT 1995

83 Melville Street (the former Crisp and Gunn buildings) is listed on the Tasmanian Heritage Register (ID#2507); therefore, the place is subject to the provisions of the *Historic Cultural Heritage Act 1995* (HCHA).

At the outset of this project, only a basic datasheet for the place existed, and no Central Plan Registry registered plan existed to explicitly define the registered area, therefore the listing deferred to the cited title (C/T 149231/2).

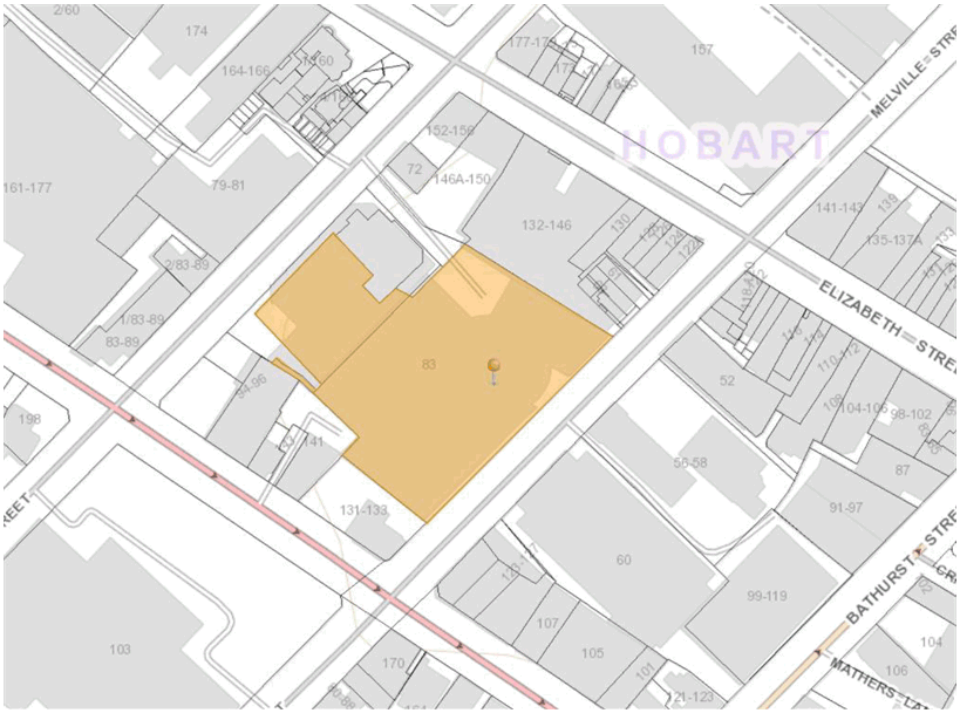


Figure 2.2 – Area affected by the Tasmanian Heritage Register entry at the time of project inception (i.e. C/T 149231/2).

That area the area includes the buildings on the Melville Street frontage (i.e. the two brick former Crisp and Gunn buildings – the stated intent of the listing) however the land affected also includes the 1997 Forestry dome and associated buildings, as well as the basement carpark of the Freedom building (not the building itself though, which has a separate C/T reference as part of a strata title).

In mid-2021, the Tasmanian Heritage Council provided a replacement entry for the place, which added C/T's 149231/1 and 149231/0 to the registered area (i.e. the entire subject site here). That datasheet (provided here as Appendix A) also explicitly adds reference to the Forestry Dome and a sandstone wall on the Brisbane Street frontage of the site.

Part 6 of the HCHA (Heritage Works) sets the process by which approvals for works may be gained from the Tasmanian Heritage Council (THC):

35. Heritage works require heritage approval

(1) *A person must not carry out any heritage works unless those heritage works have heritage approval.*

(2) *For the purposes of subsection (1), heritage works are taken to have heritage approval if, and only if –*

(a) *in a case where a certificate of exemption has been issued, the heritage works are carried out in accordance with –*

(i) *that certificate of exemption; and*

(ii) *if a discretionary permit or other permit is required for the heritage works under the Planning Act, that discretionary permit or other permit; or*

(b) *in a case where a certificate of exemption has not been issued, the heritage works are carried out in accordance with a discretionary permit.*

(3) *It is a defence in proceedings for an offence under subsection (1) if the defendant establishes that –*

(a) *the heritage works were carried out in response to an emergency; and*

(b) *the heritage works were, both as to nature and extent, reasonably necessary for the purposes of responding to the emergency; and*

(c) *in the circumstances, it was not practicable to seek a certificate of exemption; and*

(d) *the defendant, before, while or as soon as practicable after carrying out the heritage works, notified the Heritage Council, in writing, of the emergency and the details of the heritage works.*

Sections 36-41 set the process for the lodgement and assessment of applications for a heritage works permit, via a Discretionary Development Application under the Land Use Planning and Approvals Act 1993. Section 42 describes the process whereby certain works may be exempt from the requirement of s.35:

42. Certificates of exemption for heritage works

(1) *A person may apply to the Heritage Council for a certificate of exemption for heritage works.*

(2) *The exemption certificate application –*

(a) *is to be in a form provided or approved by the Heritage Council; and*

(b) *is to be supported by such information as the Heritage Council requires, either at the time of lodgment or subsequently.*

(3) *The Heritage Council may –*

(a) *approve the exemption certificate application; or*

(b) *refuse the exemption certificate application.*

(4) *Without limiting its discretion, the Heritage Council must approve the exemption certificate application if it is reasonably satisfied that the heritage works –*

(a) *are identified in the works guidelines as works that will have no impact or only negligible impact on the historic cultural heritage significance of the relevant registered place or heritage area; and*

(b) *are capable of being carried out in accordance with the works guidelines.*

Whilst the HCHA provides no specific detail as to how particular proposals are considered, nor does it provide any indicative thresholds of what may be considered to have *no or negligible* heritage impact, the THC/Tasmanian Government publication *Works Guidelines for Historic Heritage Places* (November 2015)[4] provides further detail on the application process, guiding principles and the basis for decisions made by the THC. In addition, the THC has a series of practice notes and technical guides, available via www.heritage.tas.gov.au which provide useful guiding principles for how the THC are expected to assess and determine applications for heritage works.

2.3. 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.

2.4. ABORIGINAL HERITAGE ACT 1975 (AMENDED 2017)

An assessment of any possible Aboriginal heritage values is not part of the brief for this report; nonetheless the provisions of the *Aboriginal Heritage Act 1975* are applicable to the place. A search of the Tasmanian Aboriginal Heritage sites register (Job # 21898847) did not identify any registered Aboriginal relics nor apparent risk of impacting Aboriginal relics (search valid until 28/12/21). The Tasmanian Government *Unanticipated Discovery Plan*

[4] http://heritage.tas.gov.au/Documents/Works_Guidelines_FINAL_Nov2015.pdf

– *Procedure for the management of unanticipated discoveries of Aboriginal relics in Tasmania* must be adhered to in the event that any Aboriginal heritage items are discovered during the course of any works.

2.5. PREVIOUS CONSERVATION PLANNING DOCUMENTS

Although not having any statutory standing, there are two relevant previous conservation planning documents relating to the former Crisp and Gunn buildings:

- A Statement of Cultural Significance of Crisp and Gunn Buildings, Melville Street, Hobart. Michael Court and Kerry Edwards, Historical Interpretation Consultants. (1990).
- 79 Melville Street, Fabric Assessment & Retention of Significance Study. Robert Vincent and Mike Grant, April 1995.

Both of these documents relate to the office building as part of the wider complex. The latter document appears to be intended to guide the redevelopment of the building post-Tasmanian Fire Service divestment and appears to have strongly guided the 1997 Forestry redevelopment of the site.

The Court and Edwards document provided some conservation policy for the buildings, noting that this was before they had any form of statutory heritage protection. Those policies have been considered here in the formulation of conservation policies in Section 8.

The Vincent and Grant document goes into a great deal more detail and was informed by the Court and Edwards document (which was included in the later report as Appendix 2). That document provided a thorough photographic survey of the building, a detailed fabric analysis and statement of significance. The report ranks the significance of the various forms, fabric and spaces of the building. The recommendations arising form that report and relative significance of the various elements have been used here in the formulation of conservation policies in Section 8 and the heritage impact assessment.

3. DOCUMENTARY EVIDENCE – HISTORICAL BACKGROUND

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.). To enable this assessment, this research will focus on the physical development of the subject area, in order to provide the most detailed possible account of the structures erected on this site, their purposes, and their fate since European settlement in 1804.

3.1. PRE THE 1886 CRISP AND GUNN OCCUPATION

The subject site is comprised of eight early grants – for the sake of the early history of the site (at least) the narrative will follow each of those grants, as their dates of development, later subdivision and functional uses all vary. Following the 1886 Crisp and Gunn acquisition, these were progressively adhered – as the narrative further below will follow. Figure 3.1 provides this arrangement:

Figure 3.1 – Configuration of early land grants comprising the subject site, showing the early tenure of parcels comprising the subject site (l a r g e l y b a s e d o n S p r e n t ' s c 1 8 4 5 s u

1	1 rood, 7 perches	Orignally granted to Joseph Bowden, recorded as being owned by Thomas Priest prior to 1833.
2	1 rood, 6.5 perches	Originally granted to Thomas Hoskission, gained by debtors judgment by William Lindsay in 1833.
3	25 2/10 perches	Originally located to John Swan, formally granted to Andrew Bent in 1828.
4	31 perches	In 1838 Joseph Barker addigend the land to his daughter Elizabeth Ibbotson, and granted to Henry Wilks as trustee for Ibbotson in 1840.
5	15 perches	Claimed by William Morgan prior to 1857, not formally granted until 1924 to Crisp and Gunn.
6	17 perches	Granted to Joseph Molloy pre-1845.
7	27 & 6/10 Perches	Claimed by William Willet and Bryant Webb pre-1845. Not formally granted until 1919 when granted to Emma and Frederick Crisp.
8	1 rood, 37 perches	Originally granted to Lewis Riley in 1867 apparantly after an earlier claim by Joseph Bowden that was cancelled in 1846.

Figure 3.2 - C1832 survey of Hobart – Hobart H5

This survey shows four substantial timber buildings fronting Melville Street, as well as a larger masonry building with timber additions fronting the western frontage of Brisbane Street. The interior of the site appears undeveloped, however this survey is known to only show major buildings. The accuracy of this survey is dubious in terms of precise boundaries and buildings, however, is generally accurate in depicting the general presence of buildings. The grey shading depicts timber buildings, and the pink shading depicts masonry buildings.

1.	The earliest record found for this 1 rood 7 perch allotment (shown as 33 and 14 perches on Sprent) records Thomas Priest in 1833 as living on this allotment[5], which had originally been part of a location to Joseph Bowden[6]. The c1832 survey of Hobart shows a timber building on this lot close to Melville Street.

[5] *The Colonist & Van Diemen's Land Commerce and Agricultural Advertiser*, 8 March 1833 p1
[6] *Cornwall Chronicle* 10 March 1875 p.4

2.	This allotment was originally granted to Thomas Hoskisson (date unknown). By August 1833, Hoskisson was indebted to William Lindsay for 200 pounds. The debt fell into arrears and in June 1839 Lindsay gained a judgement against Hoskisson from the Supreme Court. Eventually, Hoskisson conveyed the allotment to Lindsay in August 1843 in satisfaction of the debt[7]. The c1832 survey depicts a large timber building fronting Melville Street on this allotment.
3.	This allotment was originally located to John Swan, date unknown.[8] The first recorded transaction on this allotment occurs in May 1828, at which point Andrew Bent conveyed the property to Richard Bent for 70 pounds. The memorial for this transaction states that the property included "the weatherboarded house and other erections now thereupon standing"[9], which is consistent with the c1832 depiction. The boundaries described appear to correspond to the block shown on Sprent including the smaller division labelled "claimed by S.A. Shirley".
4.	The first recorded transaction on this land occurs in February 1838, when Joseph Barker, a farmer from New Norfolk, assigned the land to his daughter, Elizabeth Ibbotson[10]. The c1832 survey shows a timber building on the site fronting Melville Street.
5.	The site is shown as undeveloped on this survey.
6.	
7.	
8.	Ownership of this part of the site at this time is unclear, however a large masonry building is depicted, which appears to be larger than domestic scale, with two timber outbuildings nearby. The precise purpose of this building is not known although it is known that the site was later (at least) owned by Joseph Bowden who was the proprietor of the Lamb Inn in Brisbane Street. Sprent's survey of Hobart does not show Bowden as owning any other land in Brisbane Street, therefore this building *may* represent the Lamb Inn.

[7] DPIPWE The LIST Mem 2/6453
[8] *The Mercury* 24 August 1876 p.4
[9] DPIPWE The LIST Mem 1/657
[10] DPIPWE The LIST Mem 2/1939

Figure 3.3 – Frankland's 1839 survey of Hobart

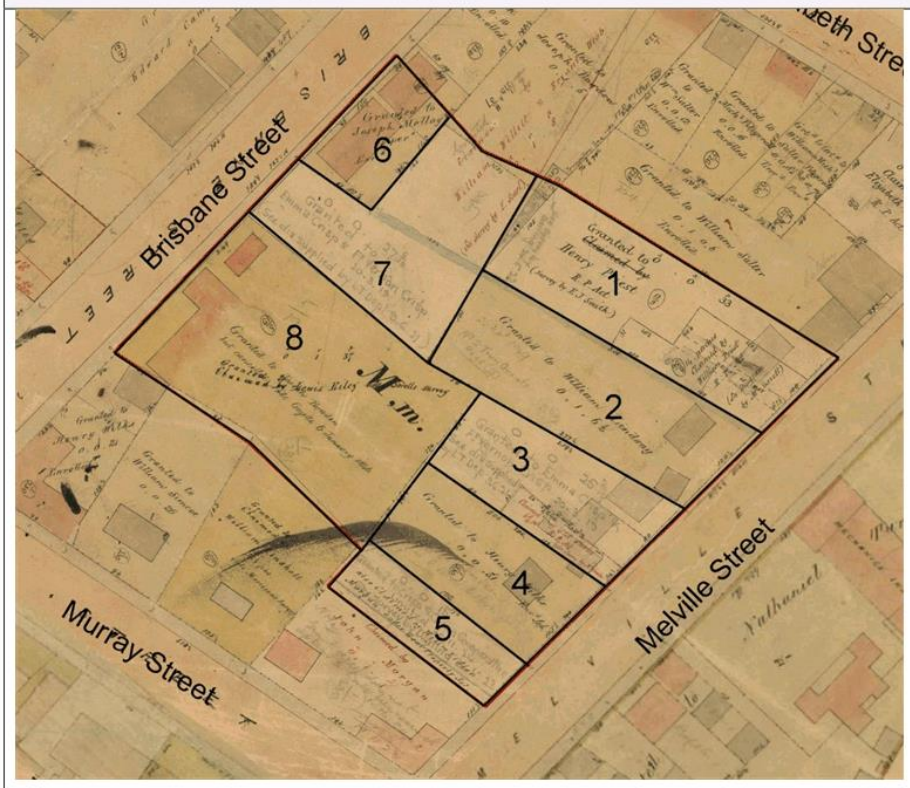
As pe the c1832 survey, this survey has a degree of inaccuracy insofar as boundaries and precise building locations, however it is known to reasonably accurately depict the general presence of buildings on a particular site.	
1.	As per the c1832 survey, it appears that a substantial building was present on the Melville Street frontage of this lot.
2.	As per the c1832 survey, it appears that a substantial building was present on the Melville Street frontage of this lot.
3.	In 1835, Richard Bent subdivided the allotment. The larger portion was sold to Thomas Fisher for 500 pounds[11]; this is the 25 2/10 perch allotment shown on Sprent, together with "the Brick Messuage thereon built with the kitchen detached", for 150 pounds[12]. This allotment remained in the hands of Fisher and his

[11] DPIPWE The LIST Mem 1/4461
[12] DPIPWE The LIST Mem 1/4460

	heirs until June 1897, when William Fisher sold it to Frederick Henry Crisp for 400 pounds[13]. Frankland's 1839 survey shows a larger complex of buildings on this site than the c1832 survey. See below for the divergent history of the smaller portion of the subdivision, sold to a Sarah Ann Shirley.
4.	The 1839 survey shows what is likely to be the same building as per the c1832 survey.
5.	This site is shown as undeveloped on this survey.
6.	A pair of houses had been developed on the Molloy lot by this time – likely only one (and a part of another) of these was within the subject site.
7.	A dwelling and rear outbuilding had been developed by this time. The ownership at the time is unclear.
8.	The earlier buildings are depicted on this survey, again the ownership and function is unclear but it is possibly that this Joseph Bowden's Lamb Inn.

[13] DPIPWE The LIST Mem 9/7771

Figure 3.4 – Sprent 3' survey of Hobart.



The c1843 Sprent survey of Hobart is known to have a very high degree of accuracy in terms of building locations, boundaries and materials (i.e. grey = timber, pink = masonry). This survey has been relied upon here for the designation of the early allotments comprising the subject site – note however Sprent only recorded portions of buildings that were visible from the public domain, therefore may not represent a comprehensive dossier of all buildings on ay particular site, and in the case of area 8 only depicts the front (i.e. publicly visible) portion of that building.

1.	The large timber building fronting Melville Street is seen on this survey, with a subdivision of the lot having occurred which passed through the building. Priest died in Hobart in December 1874[14] leaving the property to Henry and William Priest. This structure is bisected by later additions to Sprent showing a shared roadway passing through the location of the wooden structure. In March 1875, William Priest applied for and was granted 14 perches of Thomas' allotment.[15]

[14] TAHO RGD 35/1/8 No 2372
[15] *Cornwall Chronicle* 10 March 1875 p.4

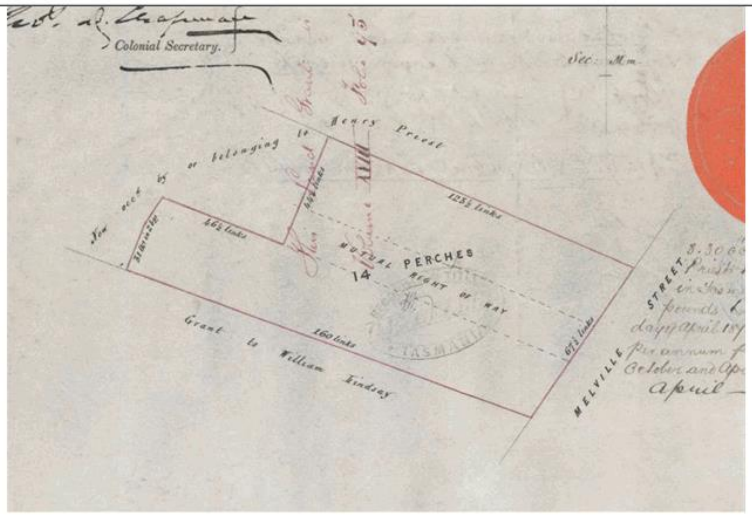


Figure 3.4a - Detail from Purchase Grant 25/121 showing William Priests' 14 perches

In October 1875, Priest sold the 14 perches to William Bezett, a licensed victualler, for 300 pounds[16]; in April 1885 Bezett sold to George Salier and George James[17]. In September 1885, Salier and James further subdivided the 14 perch block by dividing it in two:

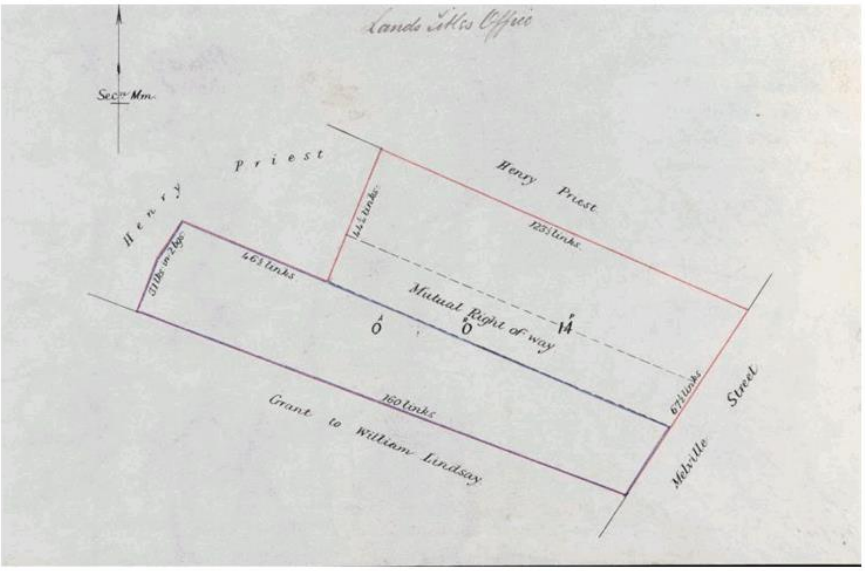


Figure 3.4b - Detail from DPIPWE CT47/8

[16] DPIPWE The LIST PG25/121 Purchase Grant
[17] DPIPWE The LIST CT18/93

The Murray Street side, measured at 7 perches (see blue outline above) was sold to William Langford, a licensed victualler, for 100 pounds[18]. In December 1894, Langford sold this 7 perch block to Frederick Henry Crisp for 135 pounds[19]. By 1914, this had been absorbed into the 32.9 perch Crisp block[20] which eventually enlarged to include the entire subject area.

The remaining portion of William Priests' 14 perch allotment (outlined in red above) sold to George Grey in May 1886 for 425 pounds[21]. The survey diagram from this sale (see below) depicts "old brick houses" at the front of this allotment[22]. Grey sold to Joshua Simmons in June 1891 for 400 pounds[23]. The allotment was purchased by Frederick Henry Crisp in May 1903[24].

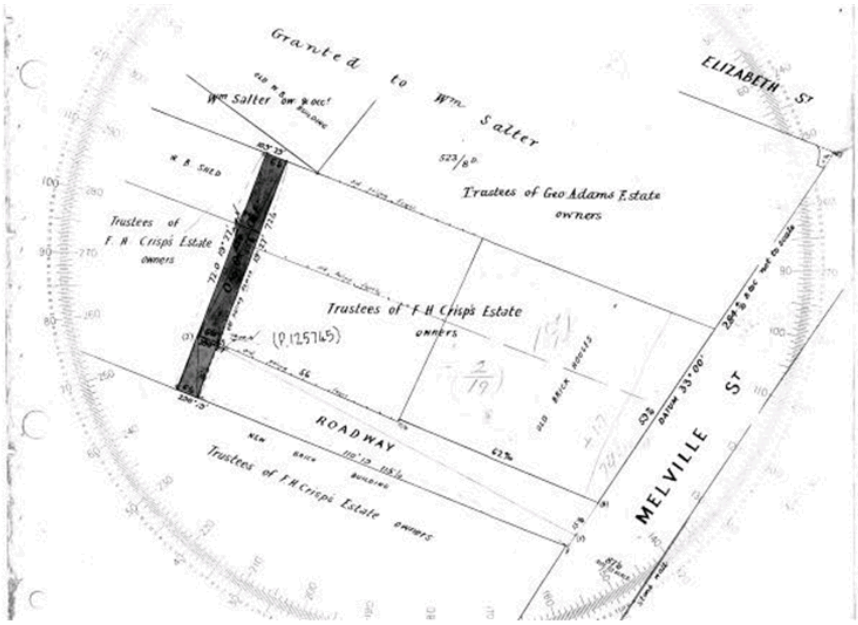


Figure 3.4c - Detail from DPIPWE Survey Diagram Hobart 13/13 (90323): The 8 perch portion of William Priest's grant

The remaining 33 perch portion of Thomas Priest's original allotment was granted to Henry Priest in August 1893[25] (see below). In April 1900, Henry Priest sold this allotment to Frederick Henry Crisp for 575 pounds[26].

[18] DPIPWE The LIST CT47/8
[19] DPIPWE The LIST CT49/72
[20] DPIPWE The LIST CT218/118
[21] DPIPWE The LIST CT47/8
[22] DPIPWE Survey Diagram Hobart 13/13
[23] DPIPWE The LIST CT54/96
[24] DPIPWE The LIST CT110/23
[25] DPIPWE The LIST PG67/74
[26] DPIPWE The LIST CT115/106

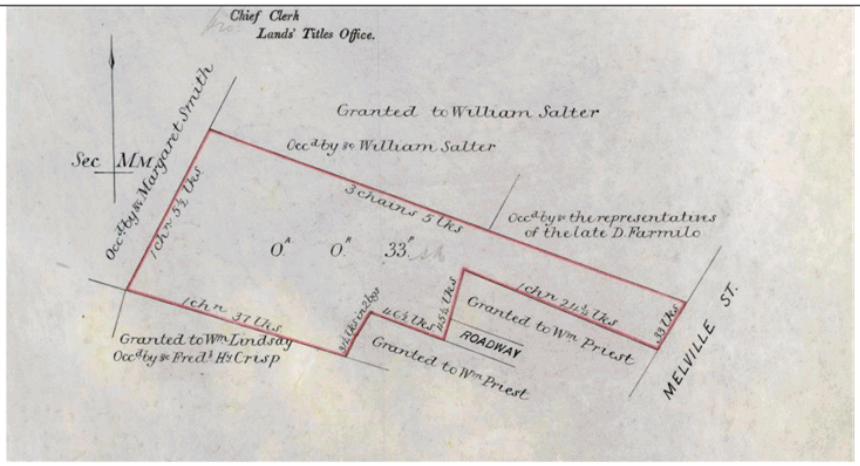


Figure 3.4d - Detail from DPIPWE CT115/106 showing Henry Priest's 33 perch grant

2.	A notation on Sprent records that the allotment was granted to William Lindsay in September 1849. Sprent records two timber structures fronting Melville Street. This research has not been able to trace the title history beyond this point, other than that by the early 20th century it was part of the F.H.Crisp block.
3.	As per the discussion on the 1839 survey, Sprent's c1845 survey shows a complex of timber buildings on this site, and the site having been subdivided into two lots. That survey shows a (much later) notation of a small lot (5.8 perches) having been acquired by a Sarah Ann Shirley. The pre-1832 dwelling appears to be the house and detached kitchen shown on the 1876 survey (see below). In March 1843, Jones conveyed the allotment to his son Richard Jones the younger in the form of a trust[27]. In April 1861, Jones Jr sold the property to William Morton for 60 pounds[28]. In March 1870, Morton conveyed the property to Robert Howard as a trustee for his 'spinster daughter' Sarah Ann Morton[29]. In April 1873, Sarah married Henry Shirley[30], and in August 1876 Sarah Ann Shirley applied to have her title to the allotment recognised by way of a grant from the Crown[31].

[27] DPIPWE The LIST Mem 2/6046
[28] DPIPWE The LIST Mem 4/9844
[29] DPIPWE The LIST Mem 5/6864
[30] TAHO RGD37/1/32 no 357
[31] *The Mercury* 24 August 1876 p.4

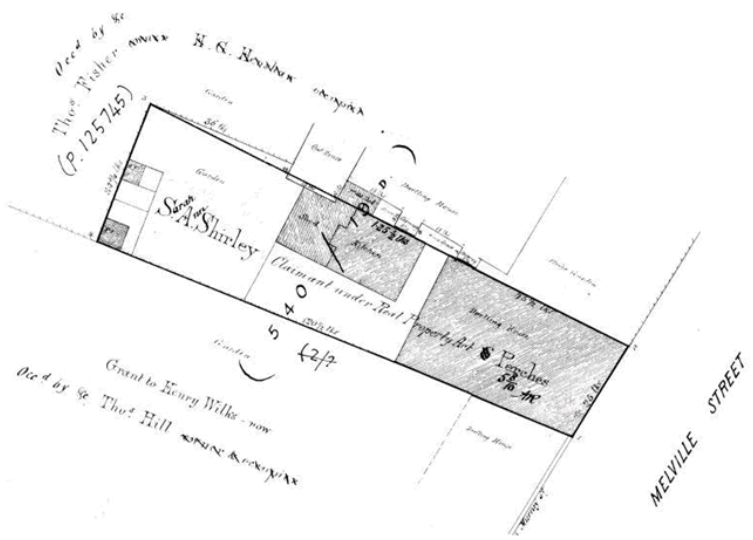


Figure 3.4e - Detail from Survey Diagram Hobart 2/21 showing the dwelling, detached kitchen and offices and privies.

Sarah Ann Shirley was granted this land in September 1876 and retained it until November 1892, at which point she sold it to William George Ibbotson for 400 pounds[32]. In 1922, Crisp and Gunn Co-Operative Ltd became the owners through the will of William George Ibbotson[33]. In January 1925, this allotment was subsumed by the larger Crisp & Gunn Co-Operative Ltd title.[34]

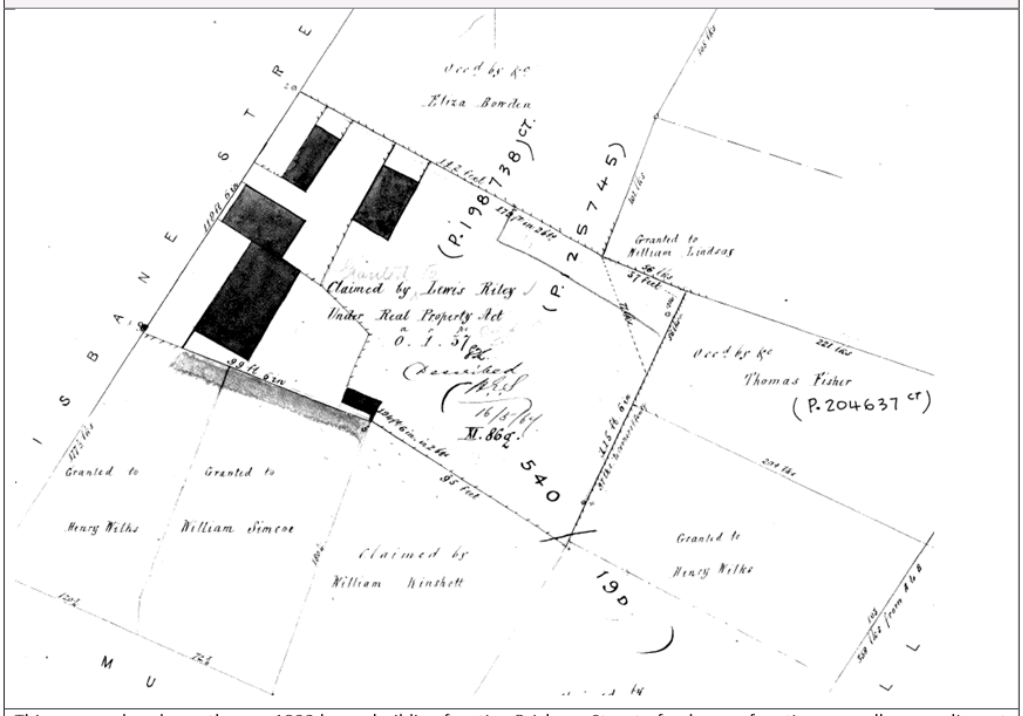
4.	The Sprent survey shows a single timber building on the site as well as a small timber outbuilding forward of the main building. The property was used in a series of mortgages until it was eventually conveyed to Elizabeth's son William George Ibbotson in July 1883. By this time, the property included a blacksmith's shop and a house[35] (possibly those buildings depicted on Sprent?). By 1922, the property was still in William George Ibbotson's hands, and at this point he mortgaged it to James Isherwood[36]. This research was unable to trace the title history further, other than to state that it had become subsumed into the amalgamated Crisp & Gunn Co-Operative block by 1923[37].
5	In 1923, Crisp & Gunn applied for 15 perches fronting Melville Street. The Lands Titles Office queried the Surveyor General as to "whether any portion of the land has been granted" and were advised that it did seem

[32] DPIPWE The LIST PG28/160 Purchase Grant
[33] DPIPWE The LIST CT85/177
[34] DPIPWE The LIST CT326/126
[35] DPIPWE The LIST Mem 7/1384
[36] DPIPWE The LIST Mem 15/8213
[37] DPIPWE The LIST CT 326/126

	to be part of a larger claim for grant by John Morgan in July 1857[38]. A notation on Sprent records that it was also claimed by William L Morgan under the Real Property Act. Crisp & Gunn Co-operative Limited were granted the 15 perches in November 1924[39].
6	The earlier Molloy houses are shown in greater detail and accuracy on this survey, one and a part of another being within the subject site.
7	Although the earlier (1839) survey shows two buildings on this lot – the Sprent survey shows it as vacant. Ownership at the time is unclear.
8	This survey shows the earlier large masonry building, with an adjacent building earlier depicted as timber now being depicted as masonry. The annotations state that the site was granted to Joseph Bowden, but that grant being cancelled in 1846 in favour of Lewis Riley, who did not receive a formal grant until 1867. The detail of these early transactions requires further research beyond the scope of the current investigations. It is possible that this is the Lamb Inn of which Bowden was the proprietor through the 1830s.

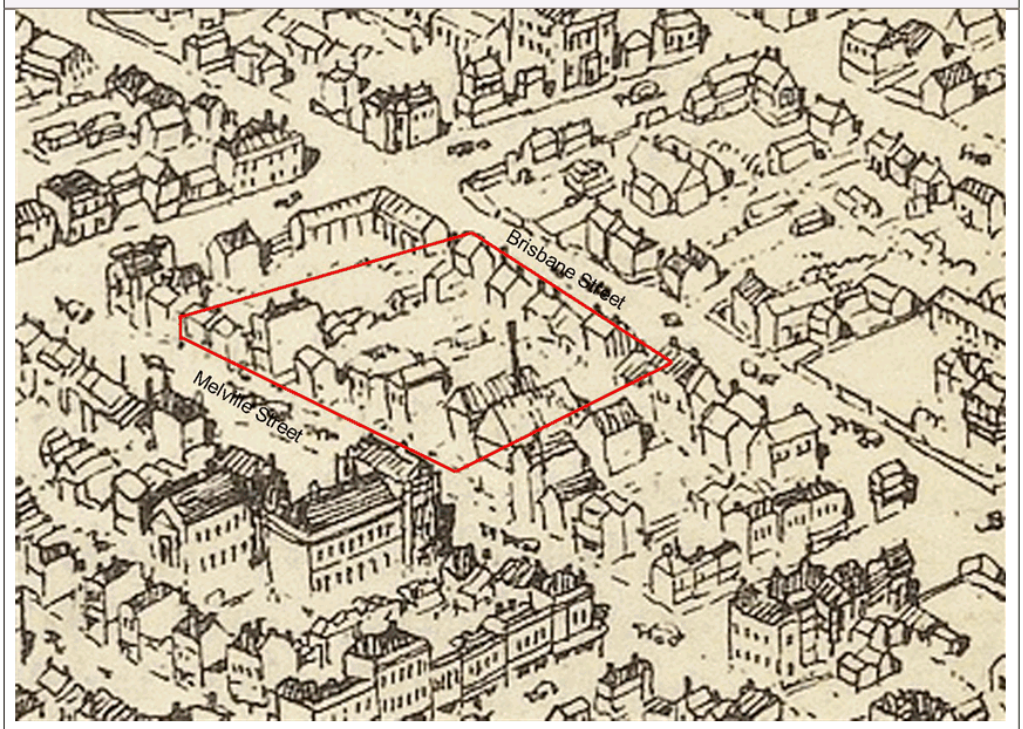
[38] DPIPWE The LIST Survey Notes 67825 (re Hobart 25/5)
[39] DPIPWE The LIST PG 165/97 Purchase Grant

Figure 3.5 – Layout of the Riley (formerly Bowden) lot (Area 8) in 1867 DPIPWE The LIST PG11/86.



This survey plan shows the pre-1832 larger building fronting Brisbane Street of unknown function, as well as an adjacent building shown on that early map also. Another rear building shown on the 1832 map has been removed by this time and another rear building added to the north. This again shows the internal portion of the site as vacant.

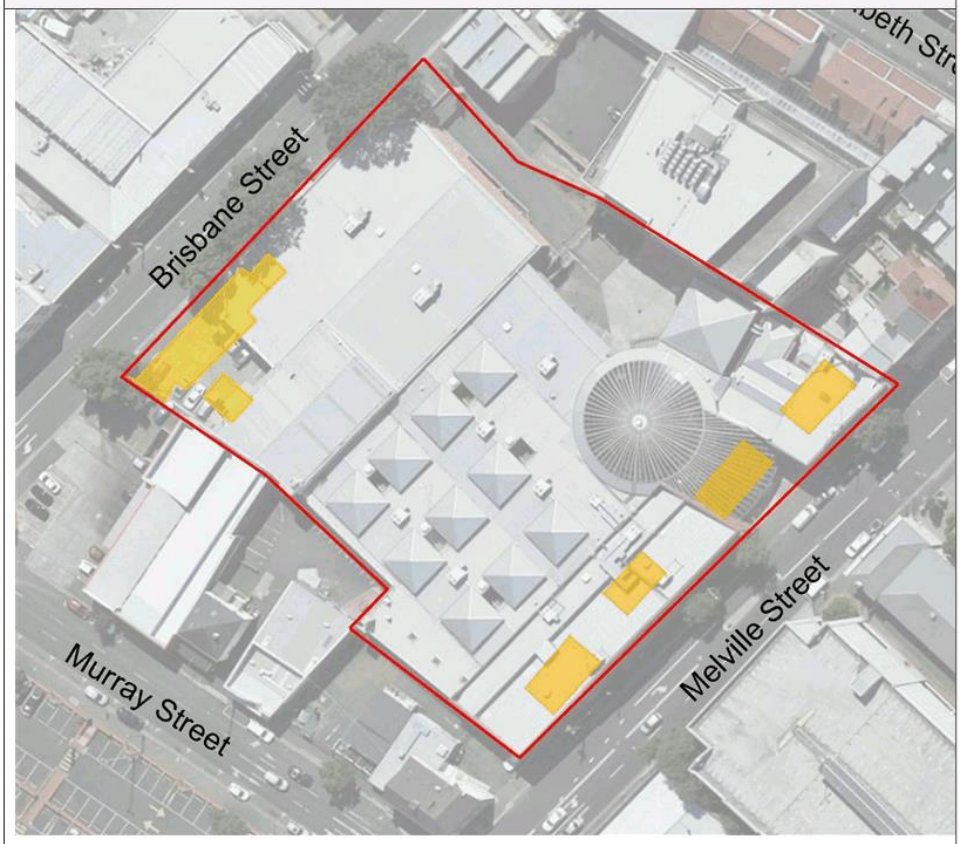
Figure 3.6– Birds Eye View of Hobart, The Town and Country Journal, 17/11/1894:26-27.



This image depicts the site following the first Crisp acquisitions, with buildings fronting Brisbane and Melville Streets and a generally open area in the central part of the site – note however the chimney depicting the change to industrialisation of the site. Whilst the 'artistic licence' of this image makes it difficult to ascertain individual buildings on each earlier allotment, it suggests that by this time some of the presumably ephemeral timber buildings fronting Melville Street had been removed in favour of larger commercial buildings.

The following figures depict the pre-Crisp acquisition historical evolution of the site based on the (most reliable depictions) from the historical overview above:

Figure 3.7 – Locations of pre-1832 buildings, based on the 1832 survey over a recent aerial photograph.



The orange areas represent the presence of buildings on the c1832 survey of Hobart. This survey is known to not be highly accurate in terms of the precise size and location of building but is generally accurate in the depiction of the presence of buildings – therefore is likely to reliably depict the presence of a building on each lot at that time. That survey also did not necessarily pick up all minor site features (e.g. sheds, privies etc.). What this does show however is that development was likely concentrated on the Melville and Brisbane Street frontages.

Figure 3.8 – Locations of pre-c1843 buildings, based on the Sprent survey over a recent aerial photograph.

The yellow areas depict the location of building footprints as per the c1843 Sprent survey, which is known to be a very accurate, yet possibly incomplete depiction of the development of the site by that time. Again, this indicates that development was concentrated on the Melville and Brisbane Street frontages. The above has been supplemented by the 1867 Riley survey in the north-western corner of the subject site (purple).

There are no known depictions of the site layout in the later c19th – see below for some distant panoramic images which give some indication of the post 1886 Crisp development, and the later 1908 depiction being the next known depiction of site layout.

The following Figure provides an overview of nineteenth century function of the various parts of the site that will lead the later discussion on archaeological potential (note that twentieth century development has been omitted here, as this is not considered to have any archaeological significance, however will be discussed below in terms of possible disturbance of earlier archaeological remains).

Figure 3.9 – Functional overview of pre-1900 development.

Colour	Historial activity
Red	Small-scale residential development from as early as pre-1832.
Blue	Probable commercial development, most likely a hotel, from as early as pre-1832.
Remainder of site	Backyard spaces, with development likely limited to minor/ancillary structures, paths, drains, garden beds etc.

3.2. POST-1886 CRISP AND GUNN OWNERSHIP & EXPANSION OF THE SITE

Samuel Crisp arrived in Van Diemen's Land the 1830s from Suffolk, England and established a timber business in Campbell Street around 1850. His son George served his apprenticeship in the business and later set up a timber business in the Old Market Place – taking over his father's business c1853. By 1865 he was trading with his brother, Alfred Crisp at 3 Campbell Street. Both George and Alfred each served terms as Mayor of Hobart. Alfred's sons, Ernest and Samuel eventually assumed the business, with Ernest later buying his brother out. George's son, Frederick established a sawmill and offices in Melville Street in 1886 (part of the subject site) and successfully imported timber from America, the Baltic and New Zealand. In 1902, cousins Ernest and Frederick merged, trading as F and E Crisp from the Melville Street premises. Around 1900, the cousins built elaborate Victorian Italianate style premises fronting Melville Street (likely in area 3 as described here) and had a timber yard extending rearward to Brisbane Street (on area 7 as described here).

Figure 3.10 - The original Crisp and Gunn building, c1900. The 'Shirley' residence can be seen to the far left of this image. Libraries Tasmania AUTAS001139594071.

Figure 3.11 - Crisp and Gunn offices and showroom, c1910. State Library of Victoria, H27134.

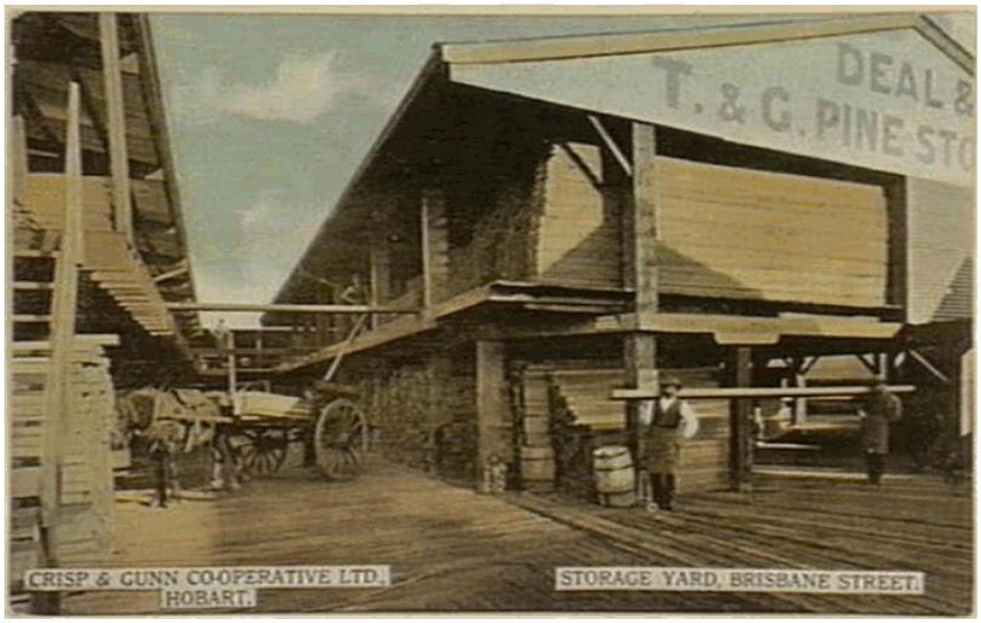


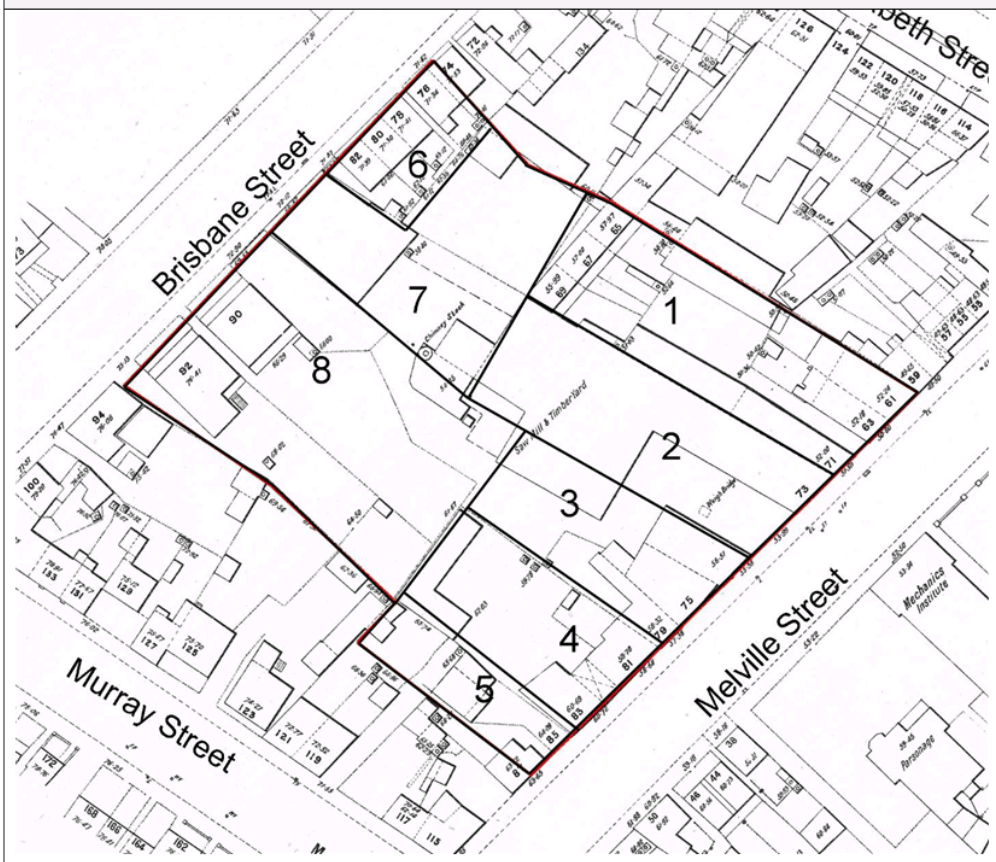
Figure 3.12 - The Crisp and Gunn timber yard, Brisbane Street, c1910. State Library of Victoria a11526.

Figure 3.13 - Crisp's Timber Yard Brisbane Street frontage from the north-west c1900 (within area 7 as discussed here. Tasmanian Archive and Heritage Office NS1013/1/522.

Figure 3.14 – The c1900 Crisp-occupied parts of the subject site. Note that Crisp's ownership was wider, however it seems that his earlier occupation phase retained many of the residential buildings and small backyards, whilst the timber yard operations filled excess backyard spaces.

In 1908, the Crisp cousins went into partnership with the southern interests of J & T Gunn and formed the Crisp and Gunn Cooperative Ltd, continuing their operation from their Melville Street offices and Brisbane Street timber yard.

Figure 3.15 - Metropolitan Drainage Board survey 1907. Libraries Tasmania SD_ILS:553788.



The Metropolitan Drainage Board plan is probably the most accurate and detailed depiction of the circa-1900 layout of the site.

1	The narrow lot on the Murray Street side of this area had been acquired by Crisp in 1894, but appears not to have been developed. The Melville Street frontage closer to Elizabeth Street of this area had been bought by Crisp in 1903, however appears to have still retained the 'old brick houses' (i.e. then 61 and 63 Melville Street) as described on that transfer until after 1907 – these are likely to have been post-1845 construction relacing the earlier timber building in that area). The rear portion accessed by the right-of-way to Melville Street had been developed as three cottages, probably after the 1893 sale to Henry Priest and sold to Crisp in 1900. Overall, the 1907 survey depicts this area still as residential, owned by Crisp, but not yet incorporated into the timber yard operations.
2	Owned by Crisp at the time, the was the main Melville Street entrance to the timber yards.

3	Owned by Crisp at the time, this was the site of the elaborate Victorian Italianate office building and adjacent showroom. One earlier (1830s/40s) residence remained standing to the immediate west.
4	Residential, owned by the Ibbottson family.
5	Residential, owned by Morgan at the time.
6	Crisp owned these buildings at the time, which presumably remained as tenanted residences, but with almost all of their backyard space occupied by timber yard operations.
7	Owned by Crisp by this time, this was the primary Brisbane Street frontage of the timber yard site.
8	Lewis Riley died in 1906 and his estate was devised to Edward Mulhearin, who sold the property to a Mr. Lilley who undertook a complex series of subdivisions. Of relevance to the current considerations is that by 1908 the earlier large masonry building (and others) had been cleared and two houses had been built facing Brisbane Street. The interior of the lot appears relatively undeveloped. Crisp and Gunn eventually acquired all of these titles between 1919 and 1957. Note that the westernmost house survived on a remnant lot until purchased by Crisp and Gunn in 1957 as the last domestic building in the entire subject site.

A 1921 oblique aerial photograph of Hobart shows the peak of the earliest form of the Crisp and Gunn site, with the Victorian Italianate offices facing Melville Street, two large workshops in the central part of the site and the timberyard sales office fronting Brisbane Street. At that time, the current subject site included at least 10 residential properties which were not owned /occupied by Crisp and Gunn at the time. By that time, substantial buildings had been erected within the central portion of the site.

Figure 3.16 – 1921 excerpt of a panorama of Hobart. Tasmanian Archive and Heritage Office NS5748-1-78

On the 13th May 1922, a fire tore through the Crisp and Gunn timber yard and joinery works causing £25,000 damage. The following report from *The Daily Telegraph* (15/5/1922:4) gives an account of the total destruction:

> *BIG BLAZE IN HOBART: CRISP & GUNN'S TUBER YARDS WOKS, OFFICES, ETC., DESTROYED) DAMAGES ESTIMATED AT £25,000*
>
> *HOBART, Sunday. — It is but comparatively a short time back since Risby's timber yards at the bottom of Elizabeth-street was devastated by fire, and it has now to be reported that an outbreak on a similarly large scale occurred just before midnight on Saturday, when Crisp and Gunn's timber yard, joinery, works, show-rooms and offices were completely destroyed.*
>
> *For years, there has been considerable talk as to the danger of having timber yards so close to the city business establishments, and this was exemplified on Saturday night. Crisp and Gunn's promises were practically in the heart of the city, located in the centre of a block surrounded by Elizabeth, Murray, Brisbane and Melville Streets. The premises in Elizabeth Street in the vicinity of Crisp and Gunn's consist of about ten new business places and three or four shops that have been there for a very long time, In the Melville and Murray Streets block they are mainly cottages. Opposite where the fire occurred are situated the Temperance Hall, Methodist Church, and Mechanics' Institute. The fire broke out so suddenly that it was a foregone conclusion that the whole of the timber premises would be destroyed. The only question that had to be solved was would the brigade be able to save the surrounding properties and for a long time a satisfactory answer was not forthcoming. At the outset the night was calm, and it was this fact that really saved the situation so far as contiguous premises were concerned. The flames rose to a great height and sparks travelled a considerable distance, even with the wind as light as it was. The reflection lit up the heavens for miles around and this had the effect of drawing a huge crowd to witness the conflagration, and each street of the block had its large coterie of onlookers. The fire was assailed from every side by a large number of hoses pouring copious supplies of water onto the adjoining properties, but it is a matter for regret that so many of the hoses were in such a state of disrepair that leakages were of common occurrence. Looking down on the outbreak from Brisbane-street, the seat of fire from this aspect being some 10 or 15ft below the roadway, it presented a miniature Dante's Inferno. Right to Melville Street, with a width of around 200ft, was a veritable block of fire throwing off heat, and considerably hampering efforts of firemen. At one o'clock a little wind arose, and in con confluence sparks and burning paper were carried onto the roofs of the Mechanics' Institute and Wesleyan Church, and water was promptly played on to the shingles and prevented a spread of the outbreak in that direction. This performance had to be repeated at intervals. The changing of hoses from one side of the road to the other had the effect of completely dousing a large number of spectators, and this provided a humorous side to otherwise a very serious matter.*

A pathetic site to the picture was the removal of furniture from the houses in the immediate danger zone and keeping guard thereof by women. Murray, Brisbane and Elizabeth-street accommodating all kinds of furniture, some of which had suffered materially in handling.

By 1.30 a.m. although the fire was still raging heavily, yet it could be seen that it was quickly burning itself out to such a degree that the work of members of the fire brigade was made a degree lighter, because it was apparent that with no increase in the strength of the wind and the surrounding places as yet untouched would be saved. And this proved to be the case. Gradually the flames got less and less, while more water could be directed at the fire until it was reduced to a smouldering heap. The firemen maintained their efforts throughout the night, and when the scene of outbreak was visited this morning, water was still being played on the smoking debris. The daylight revealed, the havoc that had been made during the few horns the fire had raged. The whole of the interior of the block had been gutted. The offices and stables were left with but brick walls and chimney standing, and that was all. that remained of Crisp and Gunn's hive of industry of a few short hours previously. The fire is believed to have occurred near the boiler, right in the centre of the yards. It is somewhat significant that three months ago a lad was found lighting some shavings near a pine stack, when some boards were charred, and he was dealt with at the Juvenile Court.

Several householders; reported that looters had taken away some goods that had been placed in the streets, while Mr Nat Edwards states that his shop was deliberately broken into and articles of clothing taken.

Mr E.T. Crisp, one of the principals of the firm, said he. estimated the damage at about £25,000, although he was unable to make an absolutely accurate estimate. The plant and stock were well insured. Mr Crisp said there were about 150 men employed in the different yards and mill, and the majority worked at the premises which had been destroyed. The men included carpenters, joiners, mill hands, machinists, engine drivers and yardmen. There were 13 horses in the stables, and they were all saved. Carts and harness were also safely removed. The plant, which included planing, sandpapering, and other timber-dressing machines, was one of the most up to date in the Commonwealth and considerable delay must ensue before it can be replaced; Mr Crisp added that the origin of the fire was a complete mystery. When he left the premises at 12.45 p.m. on Saturday everything was all right. He was asleep when the fire broke out. Superintendent Trousselot said the alarm was given 11:51; and when the brigade arrived immediately after, the whole premises were well alight.

TIMBER STACK MENACE AGAIN EMPHASISED

CRISP AND GUNN'S BIG YARDS AND FACTORY GUTTED

SEETHING MASS OF FLAME ILLUMINATES THE CITY

FIRE BRIGADE'S HEROIC EFFORTS TO PREVENT GREAT DISASTER

Figure 3.17 – Headline from *The World,* 15/5/1922:5.

Newspaper articles in the following month discussed the disaster in terms of the ability of the city's fire brigade to deal with such occurrences, as well as the suitability of such businesses in the central city. The 1922 Crisp and Gunn fire followed the disastrous Risby Bros. fire in Elizabeth Street 15 months before, and the Chesterman's fire in Campbell Street nine months before. Noting also that the earlier Crisp's timber yard in Macquarie Street had been destroyed by fire in 1890. Crisp and Gunn however had a quick recovery, with plans submitted to the City Council in July of that year for new premises. *The World,* 11/7/1922:6 reported:

> *CRISP AND GUNN: Plans for New Building Approved by City Council*
>
> *Messrs Crisp and Gunn Co-operative limited submitted tentative plans to last nights meeting of the City Council, for their proposed new buildings in Melville Street. The plans show brick parapet walls on all boundary lines; and all buildings with the exception of the mill proper, which are of brick. Each block is separated from another with solid brick walls and fire, proof doors, where openings occur. Alderman Valentine moved the adoption of the report and said the layout was one which would give satisfaction. Alderman Shield seconded; and said the plans complied with the Act. Alderman Lord said the Superintendent of the Fire Brigade was well satisfied with the plans. Alderman Williams said he thought that before any attempt was made to re-build the premises that were destroyed, they should have had the report of the committee which recently took evidence regarding fire risks to the city. He was rather surprised that the report had not been furnished. Alderman Rogers was of opinion that they should delay approving of the plans if possible. There was a big diversity of opinion regarding the matter, which was one they should not hurriedly agree to. Alderman Wignall: The plans comply with the Act, and we have no power to hold them up. Alderman Martin: If the Superintendent of the Fire Brigade was satisfied with the plans there was no reason why the scheme should be retarded. He could not see why the Council should attempt to hold up the work. Alderman Valentine said he regretted that the committee had not been able to furnish its, report, but nevertheless it was not for the aldermen to anticipate what that document would contain. The recommendation was adopted.*

The plans for the new buildings were by Architect George Stanley Crisp (1883-1933) who was the son of Alfred Crisp of Crisp Bros. Crisp was a prominent Hobart architect of the 1920s, designing notable buildings including:

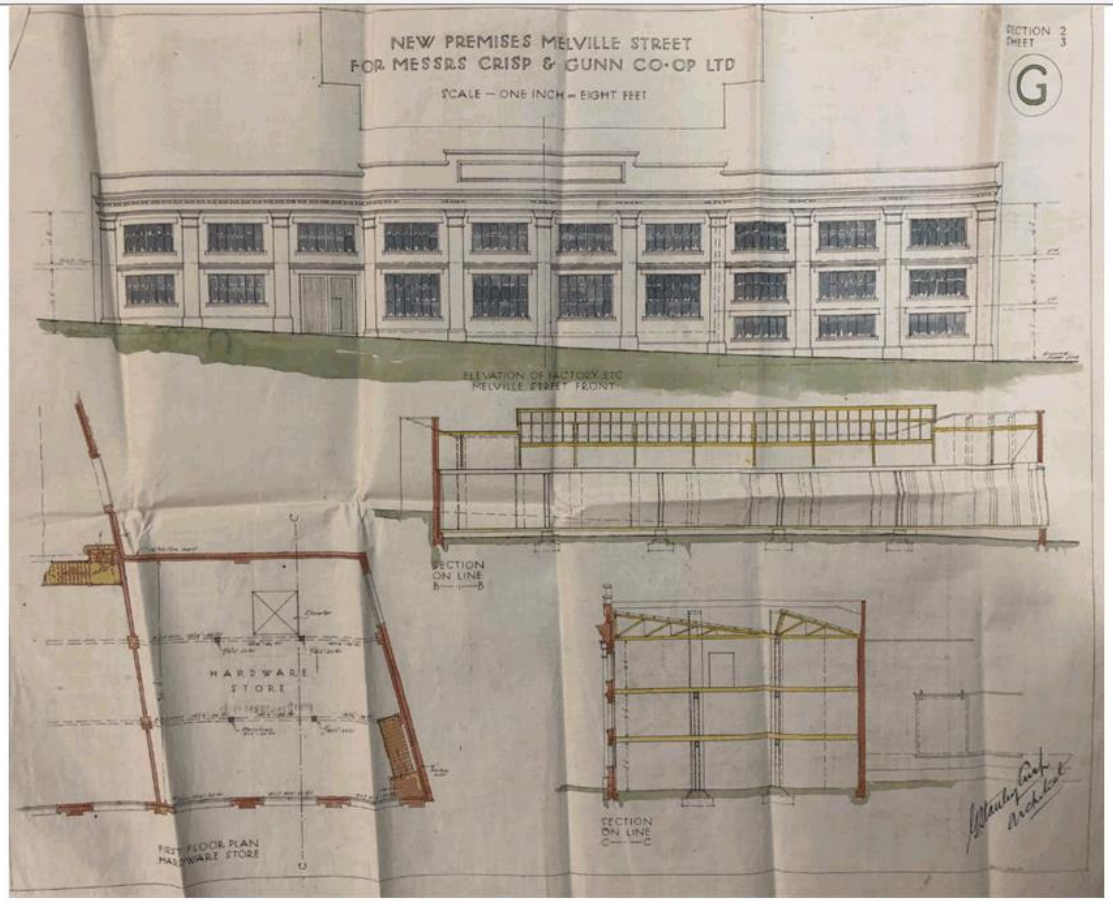
- Waimea and Graystanes houses, Sandy Bay.
- The Odeon (formerly His Majesty's and Strand) Theatre, Liverpool Street Hobart.
- The Palace Theatre, 28-32 Elizabeth Street Hobart (demolished)
- Commercial Bank, 75 Wilson Street Burnie.
- Commercial Bank Moonah.
- Fifth floor extension, Kodak Building, 45 Elizabeth Street Hobart.
- Heathorns Garage, Bathurst Street Hobart (largely destroyed by fire 2010).
- Additions to Brownell's Department Store, Liverpool Street Hobart (destroyed by fire 2007).

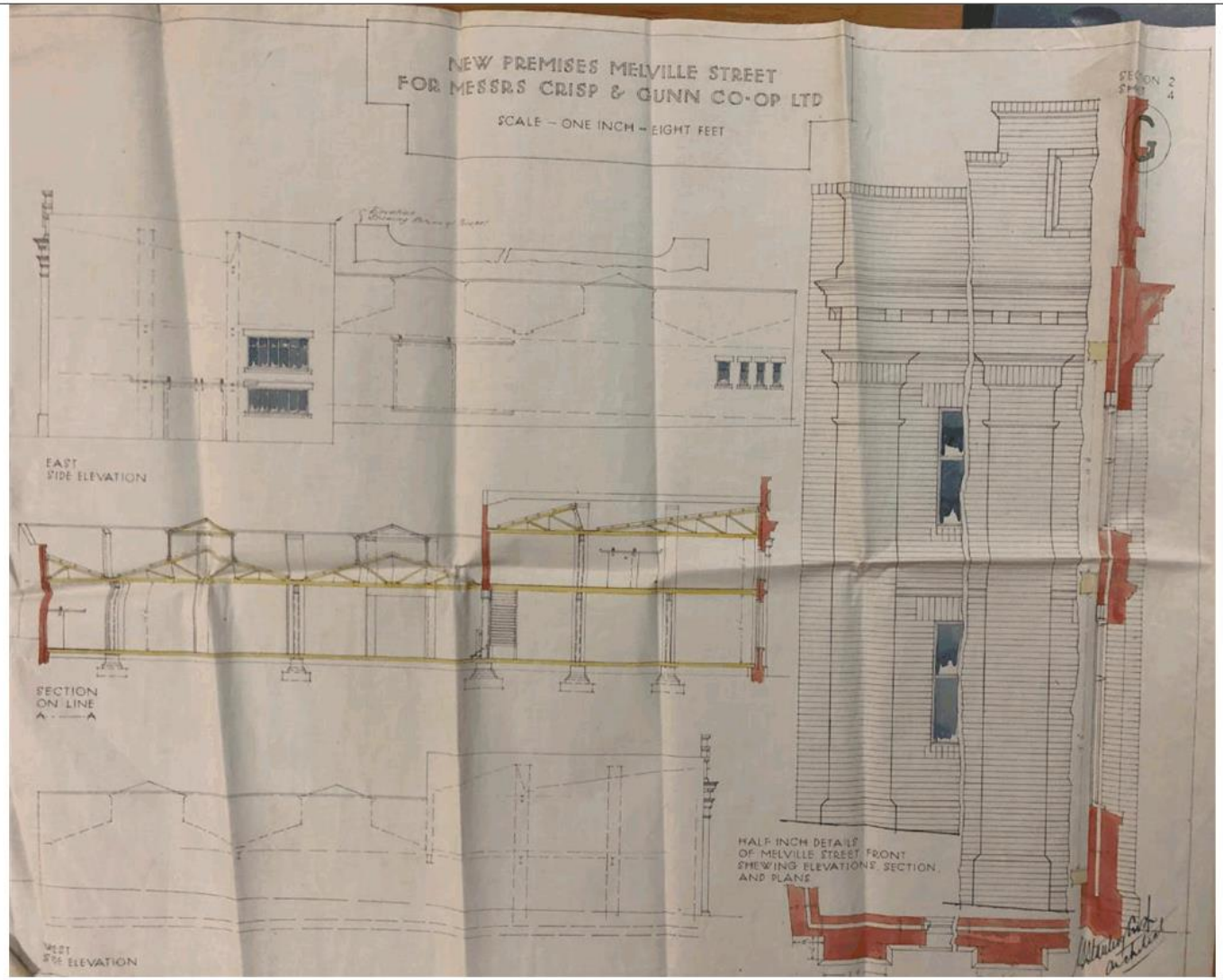
Crisp was the President of the Tasmanian Chapter of the Architect's Institute during 1917, 1918, 1926, 1927 and the year of his death in 1933. Noting his death at age 50 (the result of being hit by a vehicle), Crisp did not have a particularly long architectural career. His nephew Albert Lauriston Crisp worked for him and is perhaps better represented amongst Tasmanian commercial and public architecture, continuing the Crisp family's name in architecture, particularly in the Art-Deco realm, designing buildings such as the Hobart Masonic Temple, Sandy Bay Savings Bank, Motors Garage Launceston, the Paragon Theatre Queenstown and Millbrook Rise at New Norfolk. The Crisp family are therefore prominent not just in building materials in late c19th and early c20th Tasmania, but in architecture through the first half of the c20th also.

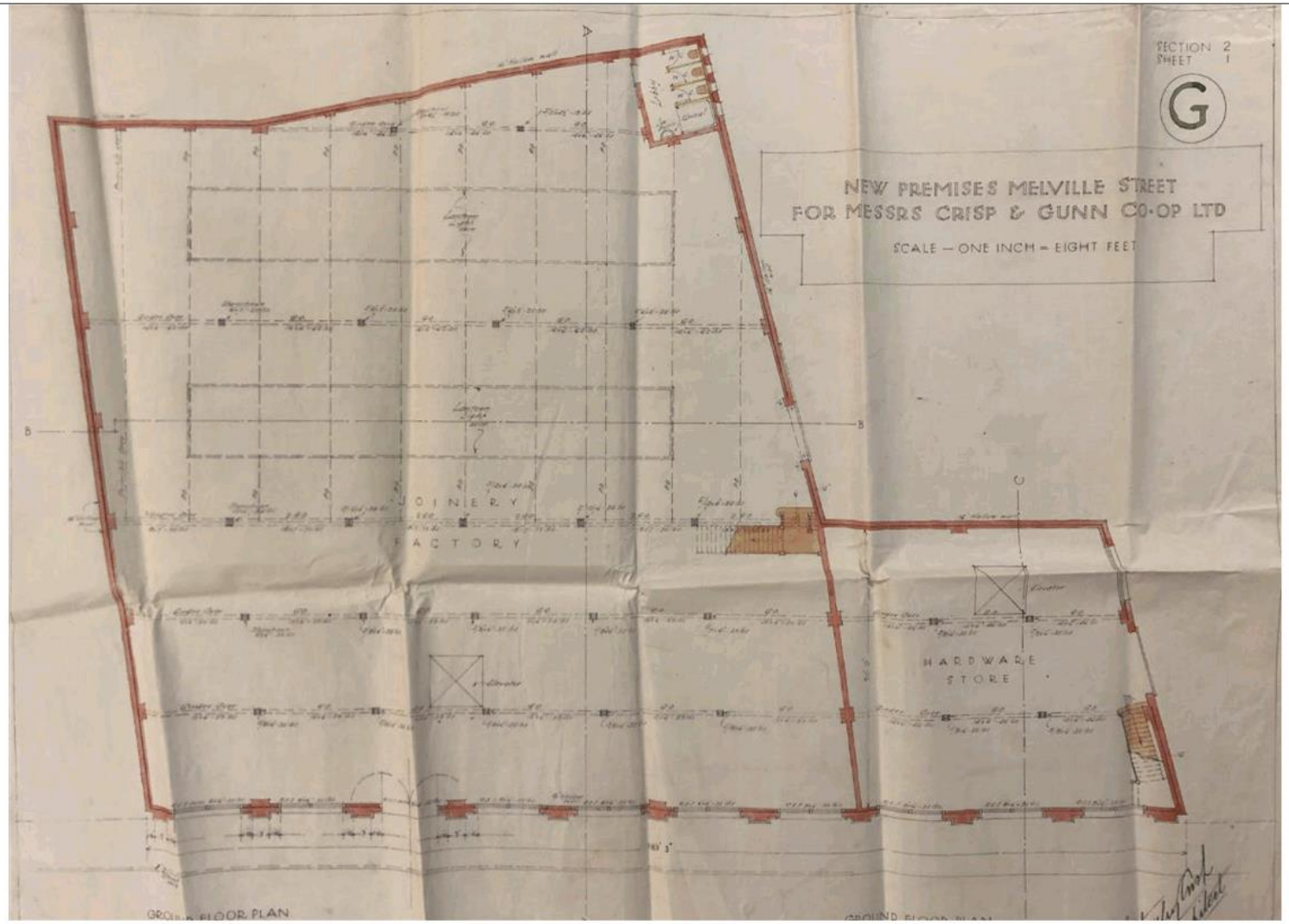
Whilst the former Commercial Bank in Burnie is perhaps the best example of Federation Free-Classical architecture by George Stanley Crisp, the Crisp and Gunn buildings are a more restrained and slightly later example of his commercial work and one of the better-known Hobart examples of his commercial work. The interior of the offices in particular attest to his quality of work and the use of the roof lanterns were perhaps an innovative feature adopted by Crisp.

The buildings were constructed by William Cooper and Sons of Molle Street, Hobart.

Figure 3.18 – 1919 plans for the 1923 Crisp and Gunn workshops and store. Tasmanian Archive and Heritage Office AE417/1/48




NEW PREMISES MELVILLE STREET
FOR MESSRS CRISP & GUNN CO-OP LTD
SCALE – ONE INCH – EIGHT FEET
EAST
SIDE ELEVATION
SECTION
ON LINE
A - A
HALF INCH DETAILS
OF MELVILLE STREET FRONT
SHEWING ELEVATIONS, SECTION,
AND PLANS
WEST
SIDE ELEVATION


SECTION 2
SHEET 1
G
NEW PREMISES MELVILLE STREET
FOR MESSRS CRISP & GUNN CO-OP LTD
SCALE — ONE INCH = EIGHT FEET
JOINERY
FACTORY
HARDWARE
STORE
GROUND FLOOR PLAN

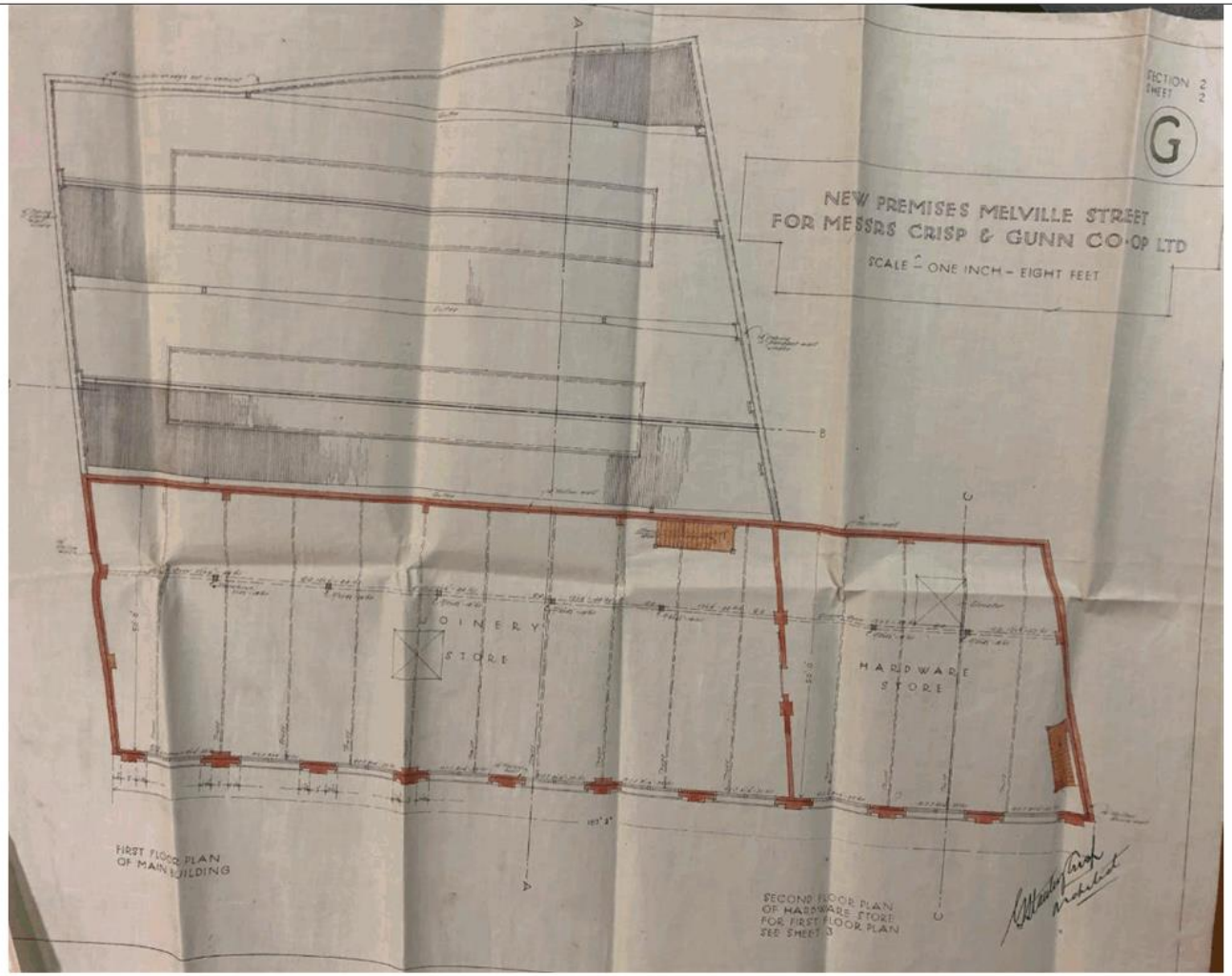
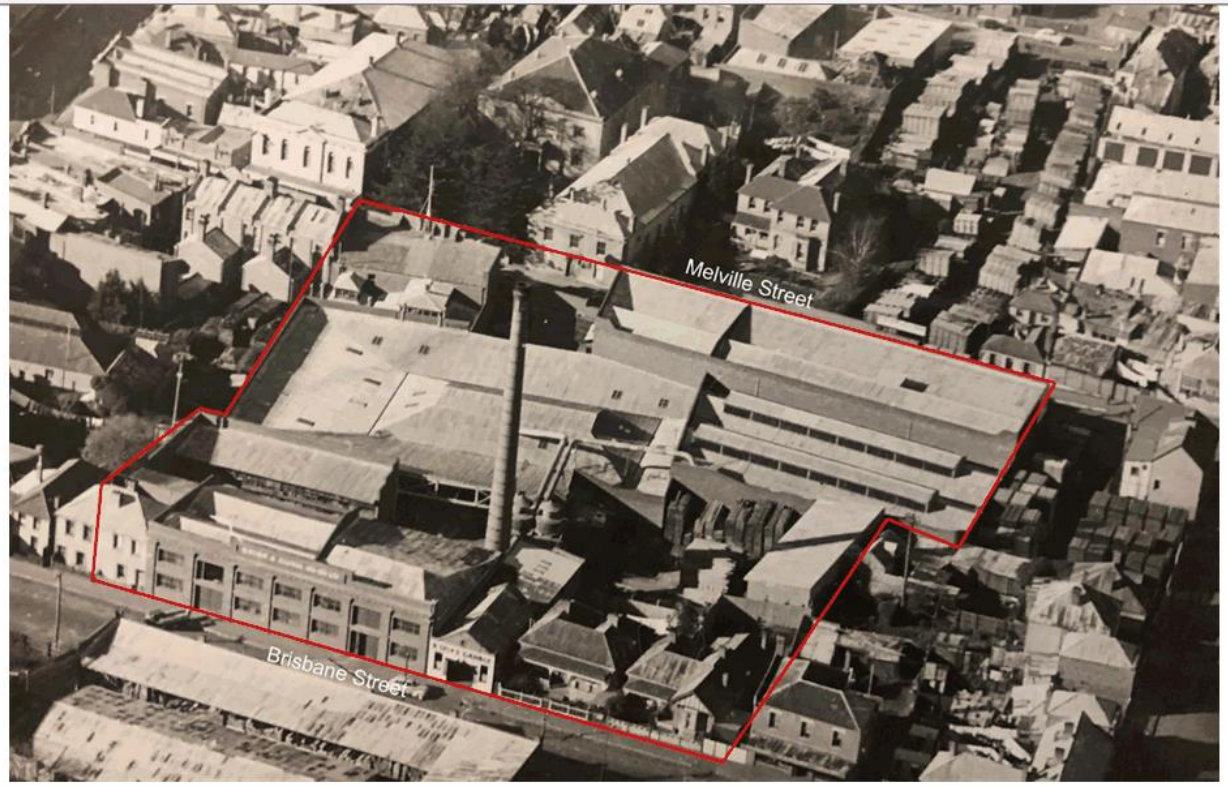

SECTION 2
SHEET 2
G
NEW PREMISES MELVILLE STREET
FOR MESSRS CRISP & GUNN CO-OP LTD
SCALE ONE INCH = EIGHT FEET
JOINERY
STORE
HARDWARE
STORE
FIRST FLOOR PLAN
OF MAIN BUILDING
SECOND FLOOR PLAN
OF HARDWARE STORE
FOR FIRST FLOOR PLAN
SEE SHEET 3

Figure 3.19 – Oblique aerial photograph from the north-west 1940s. Tasmanian Archive and Heritage Office NS3826/1/88.



An excerpt from a 1946 panorama of Hobart clearly shows the layout of the site at that time, with the 1923 warehouse, store and office fronting Melville, a similarly styled building fronting Brisbane Street (built c1922 – no plans for this building were found) and several remaining early residential properties fronting Brisbane Street. The central portion of the site including a post-1923 series of large sheds, the chimney (which survived the fire) and open yard space.

Figure 3.20 - Aerial photograph 1946. Lands Tasmania 1946 Hobart Run 1-10893.

The 1946 aerial photograph shows the layout of the site at that time, with the 1923 warehouse, store and office fronting Brisbane Street, a similarly styled building fronting Brisbane Street and several remaining early residential properties fronting Brisbane Street. The central portion of the site including a post-1923 series of large sheds, the chimney (which survived the fire) and open yard space.

Figure 3.21 – 1964 modifications of Crisp and Gunn workshops in central portion of the site (including retaining walls). Tasmanian Archive and Heritage Office AE417/4/97

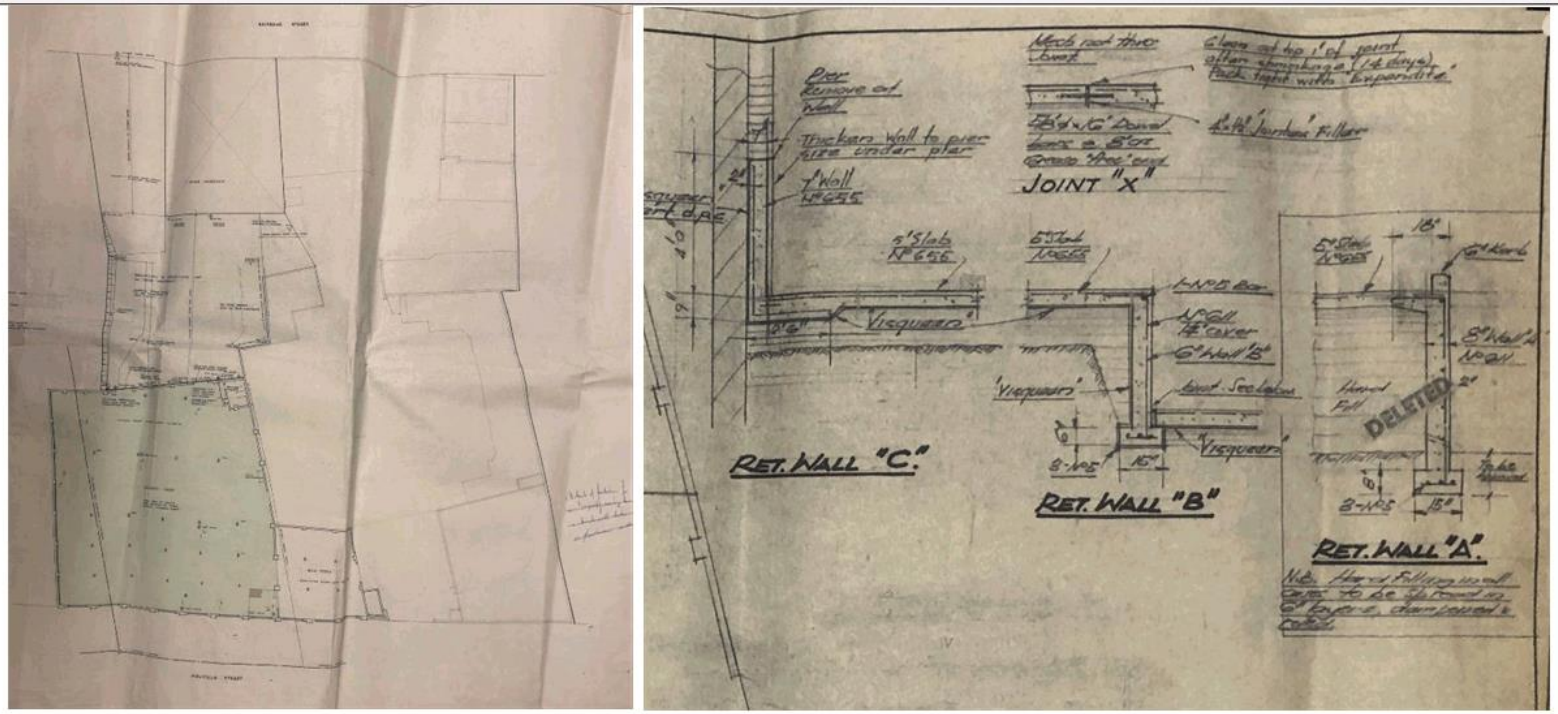


Figure 3.22 – 1972 Public Works Department plans for office conversion of the former Crisp and Gunn offices (existing condition). Tasmanian Archive and Heritage Office AE417/45/1478/

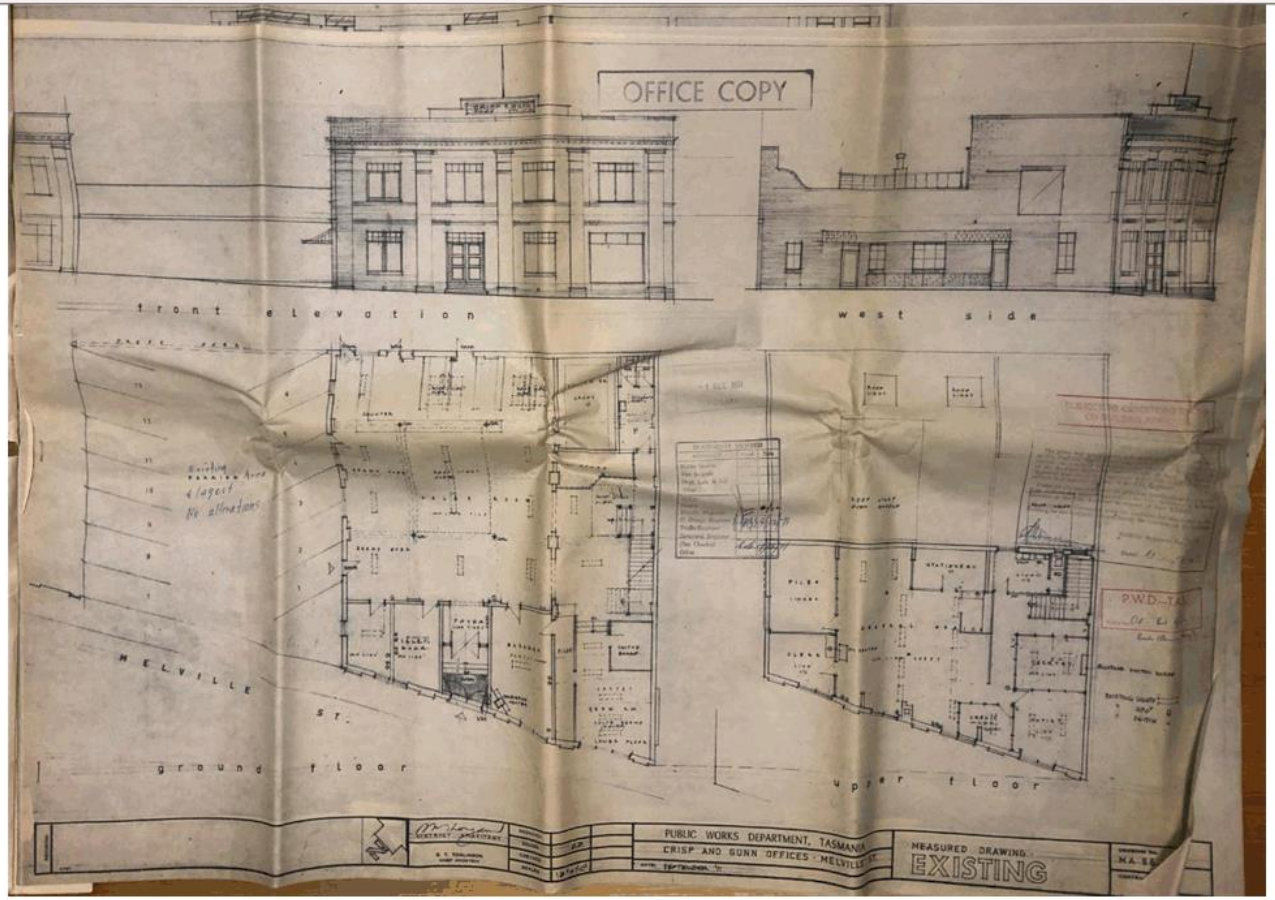
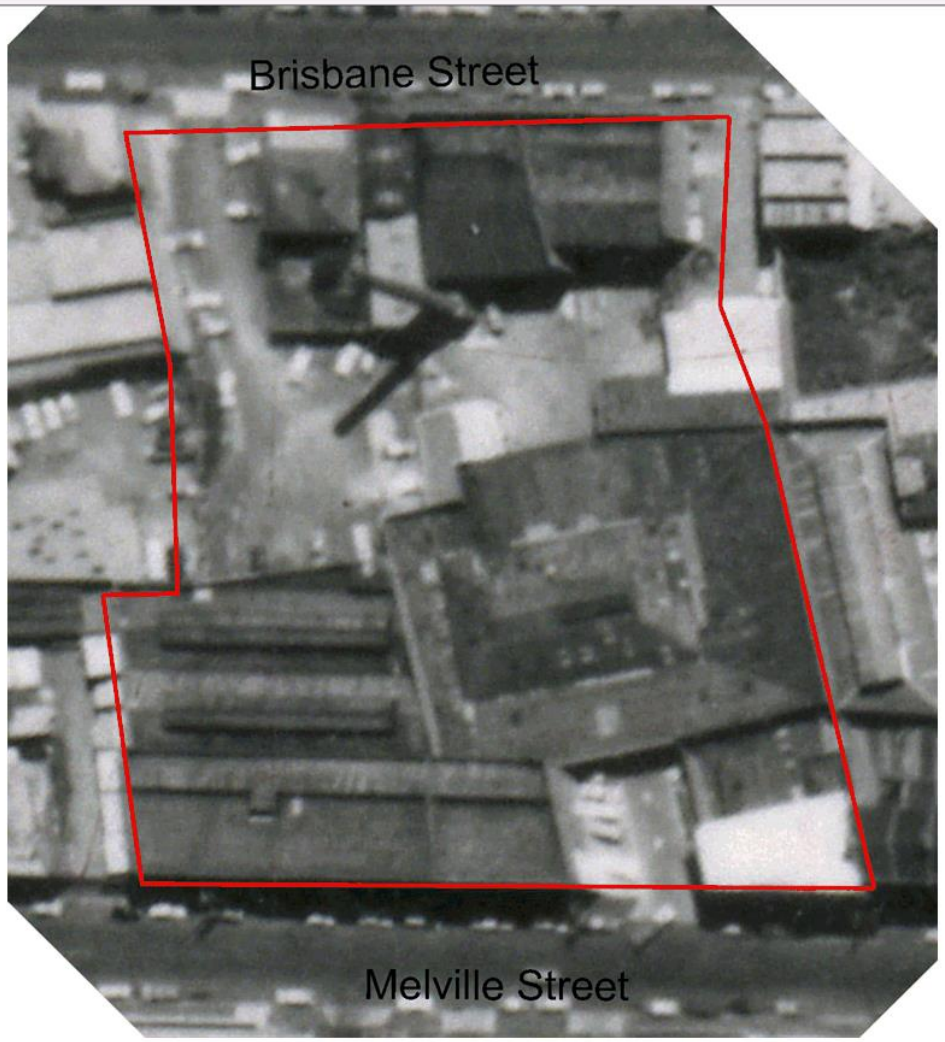


Figure 3.23 - Aerial photograph 1968. Lands Tasmania Hobart Metro Run 6-153.



This image shows the site at the end of almost 100 years (of parts) of Crisp (and later Crisp and Gunn) occupation.

3.3. TASMANIAN GOVERNMENT OCCUPATION AND DIVESTMENT

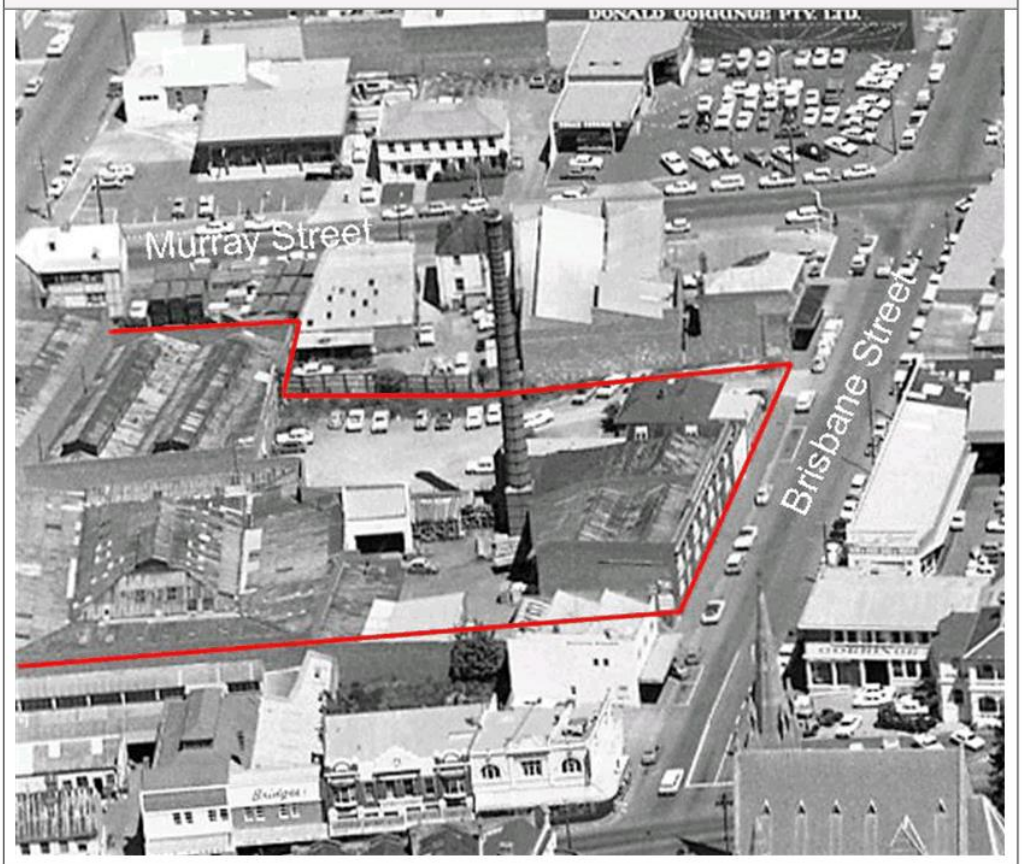
Following the 1960s sale to the Tasmanian Government, a series of works were undertaken to remove the timberyard buildings and to install Government offices into the Melville Street buildings. Modifications were made in 1971 to the former Crisp and Gunn office building including partitioning of the first floor and removal of the blackwood counters in the ground floor chamber.

Since that time the buildings were used for the State Emergency Service and the Tasmanian Fire Service. Various Government departments utilised the former timber yard buildings in the central part of the site.

In 1997 the site was redeveloped, and strata titled. The Brisbane Street frontage was divested and the central portion of the site and former Crisp and Gunn buildings redeveloped for use by Forestry Tasmania. A distinctive domed structure linked the two buildings fronting Melville Street, designed by Morris-Nunn and Associates in conjunction with Gandy and Roberts Engineers. The project was awarded the 1998 BHP Colourbond Award (outstanding use of steel) and the Recycling and Conservation Award by the Australian Institute of Architects.

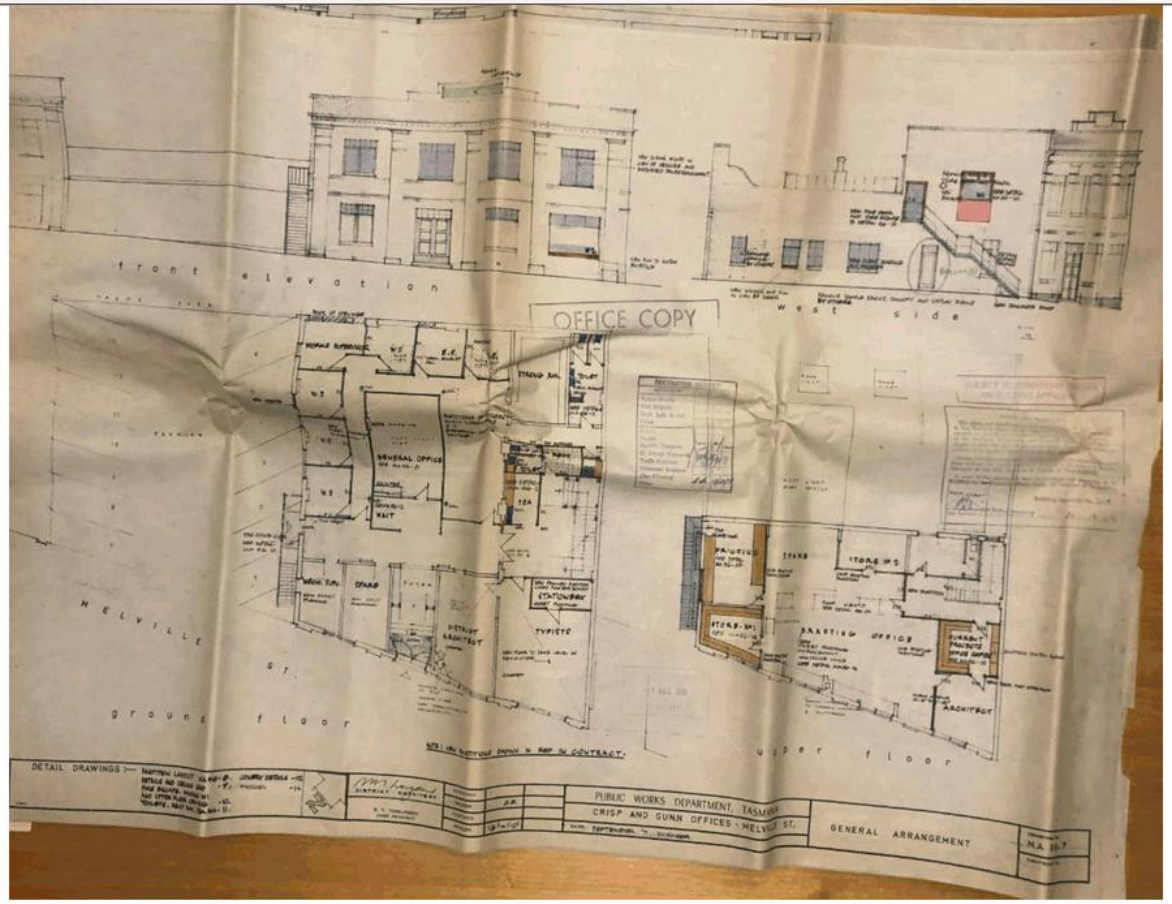
Forestry Tasmania operated from the building until 2017. In 2018 the University of Tasmania purchased the former Crisp and Gunn Buildings and added the Brisbane Street building (Freedom Furniture) back to the holding in mid-2021.

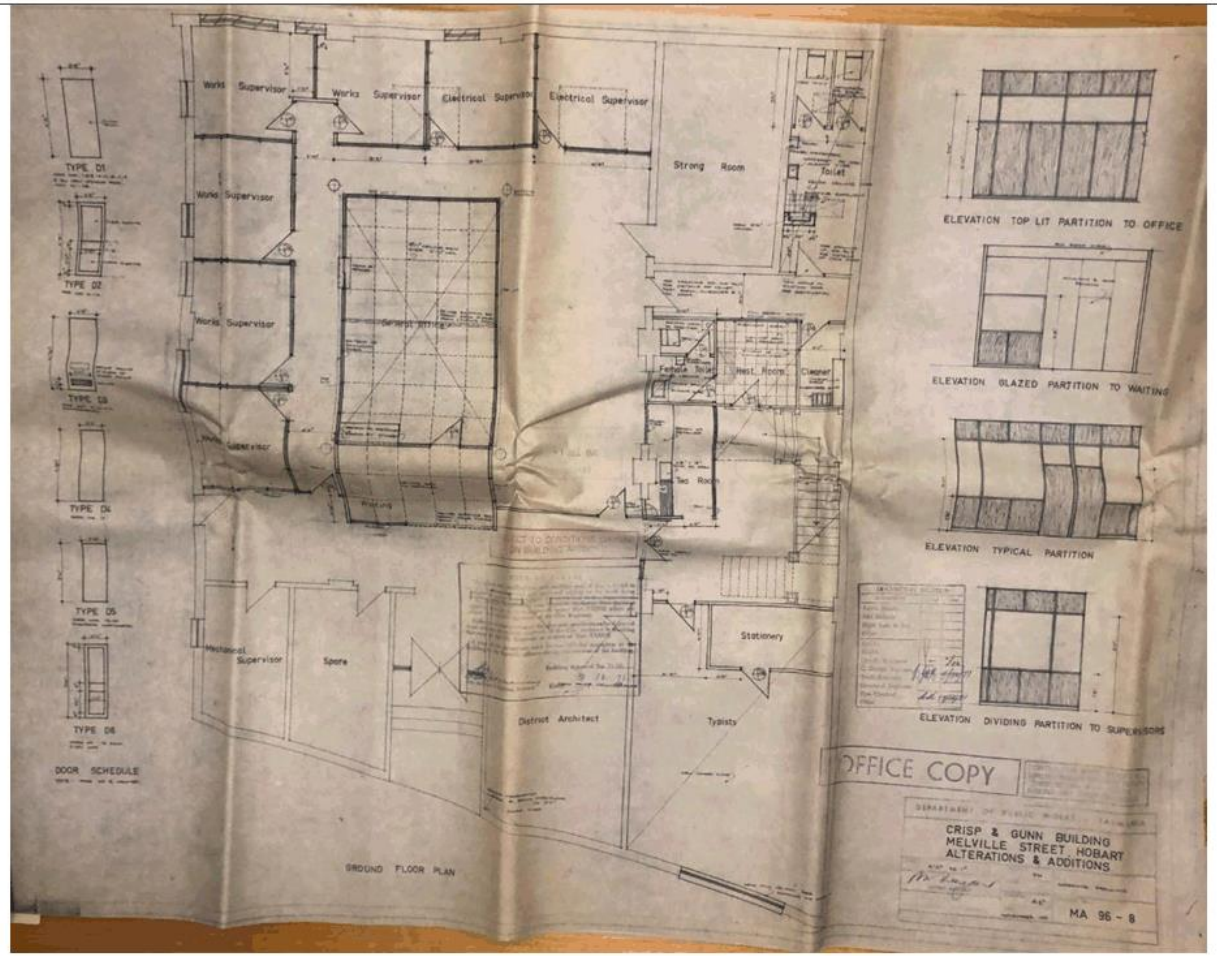
Figure 3.24 – Oblique aerial photograph from the north east c1970. Tasmanian Archive and Heritage Office AB713/1/12044.



Note the retaining wall and cut in the centre of the photograph (with cars parked against) which derives from the 1964 workshop renovations/additions which required bulk excavation of the central portion of the site (see Section 7.3).

Figure 3.25 – 1972 Public Works Department plans for office conversion of the former Crisp and Gunn offices (proposed). Tasmanian Archive and Heritage Office AE417/45/1478.




Works Supervisor
Works Supervisor
Electrical Supervisor
Electrical Supervisor
Strong Room
Toilet
Works Supervisor
Works Supervisor
Works Supervisor
Female Toilet
Rest Room
Cleaner
Tea Room
Stationery
Mechanical Supervisor
Spare
District Architect
Typists
TYPE D1
TYPE D2
TYPE D3
TYPE D4
TYPE D5
TYPE D6
DOOR SCHEDULE
GROUND FLOOR PLAN
ELEVATION TOP LIT PARTITION TO OFFICE
ELEVATION GLAZED PARTITION TO WAITING
ELEVATION TYPICAL PARTITION
ELEVATION DIVIDING PARTITION TO SUPERVISORS
OFFICE COPY
CRISP & GUNN BUILDING
MELVILLE STREET HOBART
ALTERATIONS & ADDITIONS
MA 96 - 8

Ref. (AE417)	Year	Proposal as per the plans	Use in the current document
4/97	1964	New workshops.	Alterations workshops at the rear of the former rear warehouse behind the Crisp and Gunn workshops (i.e. existing building) in the central portion of the block (i.e. half way between Melville and Brisbane Streets. Also concrete floor to the ground floor level of the workshops. Of use in demonstrating excavation and gravelling in that area (approx. 600mm deep) which would have had archaeological impact – and all now further excavated and removed by the 1997 works. Depicts a site plan at that time.
10/1594	1988	New showers, staff facilities and fire stairs – eastern end of the upper floor of the former workshops. State Emergency Service.	None – demolished as part of the 1997 renovations.
10/1541	1988	New workshop, toilets, general store and tea room, State Emergency Service.	None - presumed demolished as part of the 1997 renovations.

Figure 3.26 – Ground floor plan of the former Crisp and Gunn Offices, c1990. From Court and Edwards (as cited in Section 2.5).

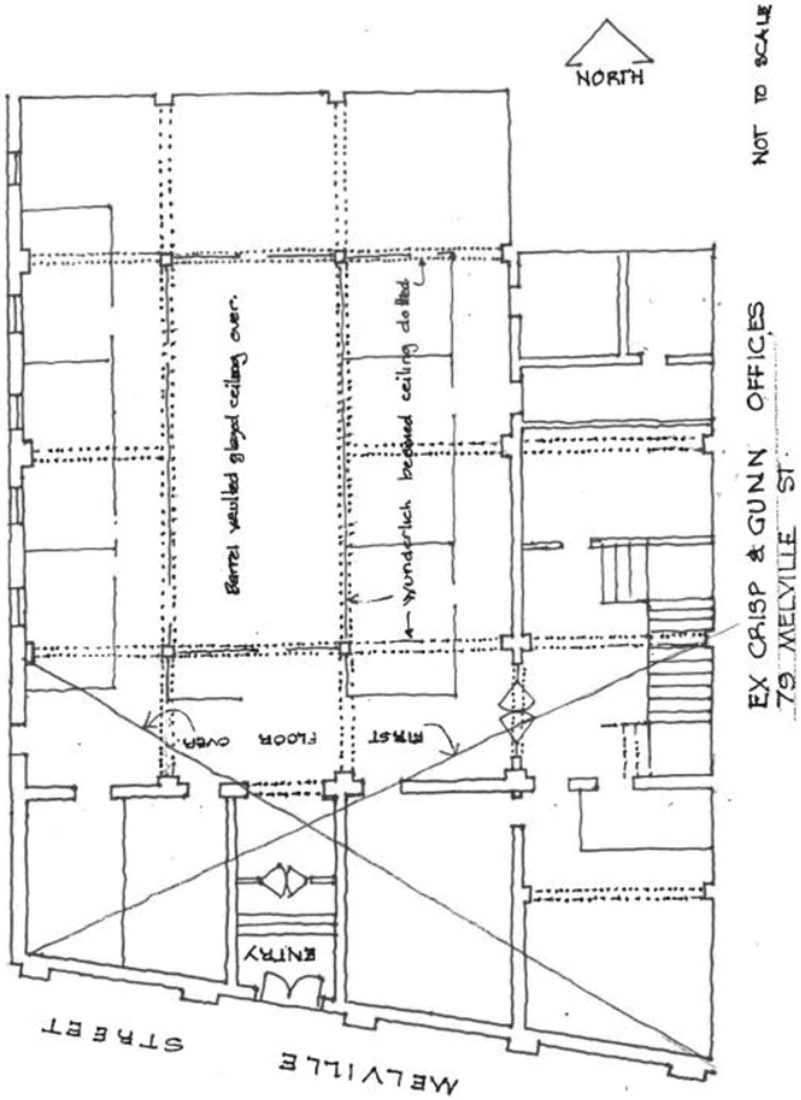


Figure 3.27 – Site plan, 1990s. From Vincent and Grant as cited in Section 2.5.

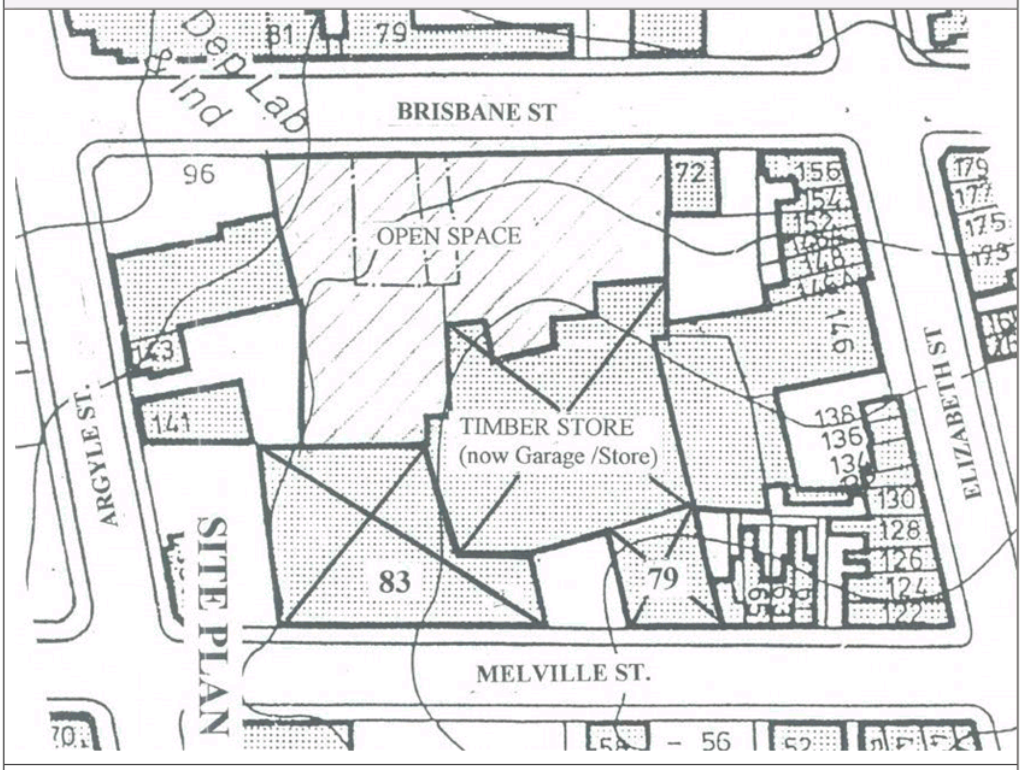


Figure 3.28 – Ground floor plan and southern elevation, former Crisp and Gunn Offices, 1990s. From Vincent and Grant as cited in Section 2.5.

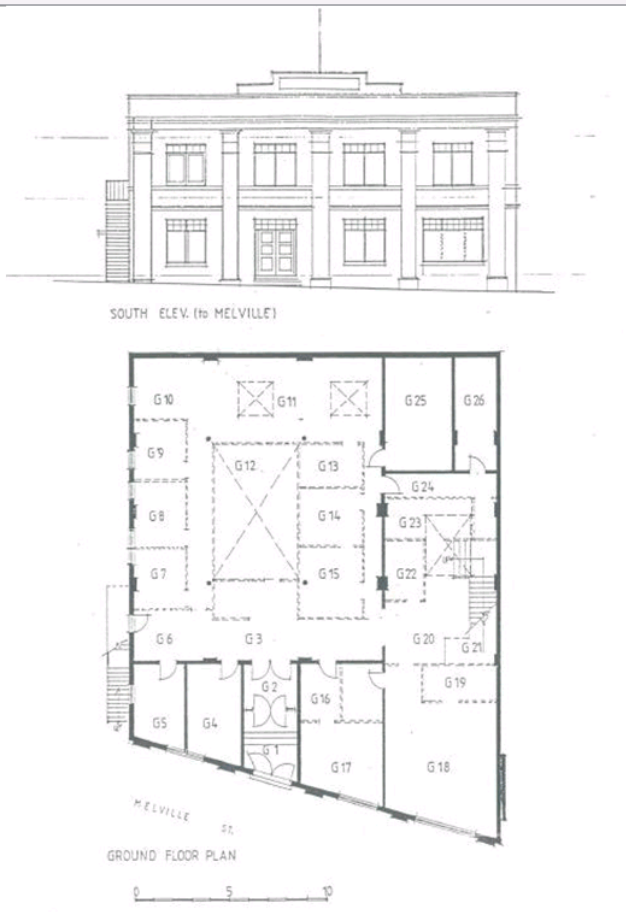


Figure 3.29 – First floor plan and western elevation, former Crisp and Gunn Offices, 1990s. From Vincent and Grant as cited in Section 2.5.

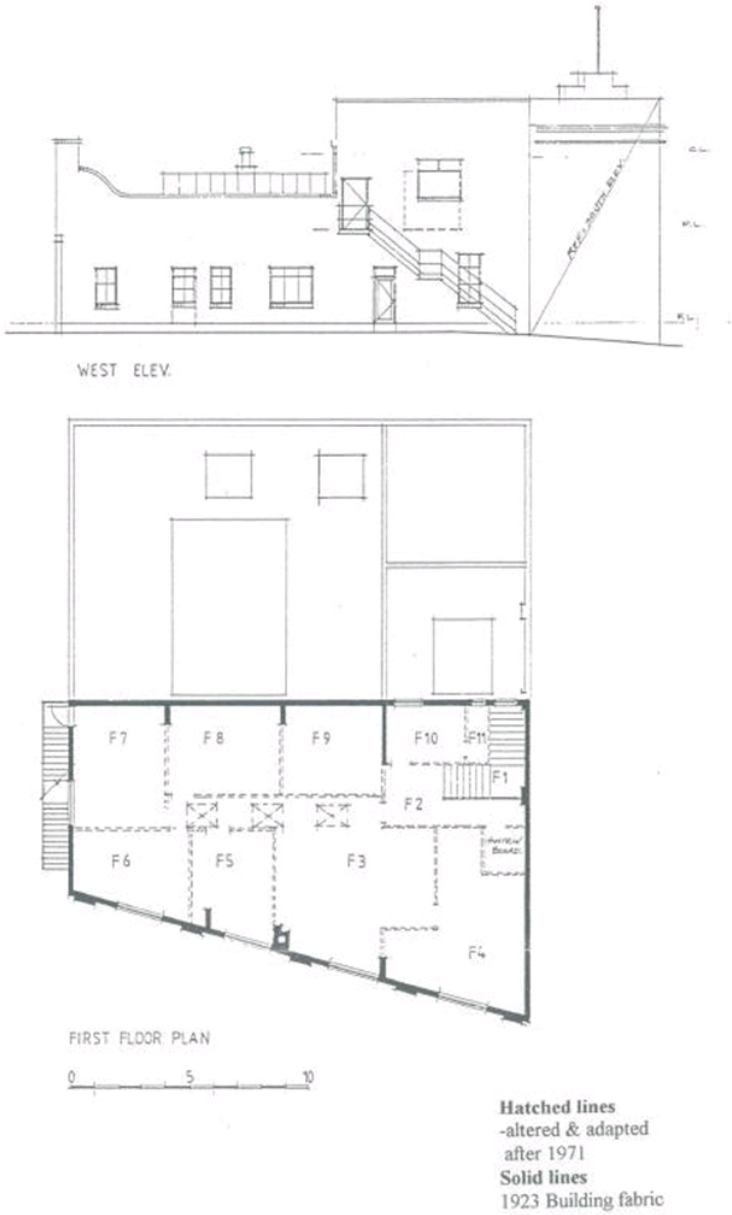


Figure 3.30 – Overview photograph, former Crisp and Gunn Offices, 1995. From Vincent and Grant as cited in Section 2.5.

4. DESCRIPTION OF THE CURRENT FORM OF THE PLACE

Note that for the purpose of this assessment, the subject site will be separated into individual buildings as these have invariably evolved in different phases and have had different uses/modifications during their lives, however reference to related buildings will be made where relevant, namely:

1. The former Crisp and Gunn workshops, 1923.
2. The former Crisp and Gunn offices, 1923.
3. The former Forestry dome and offices, 1997
4. The Freedom building, 1997. Not described here as no heritage listings apply to that place (apart from possible underlying archaeology).

Figure 4.1 depicts these buildings annotated as per the numbering above:

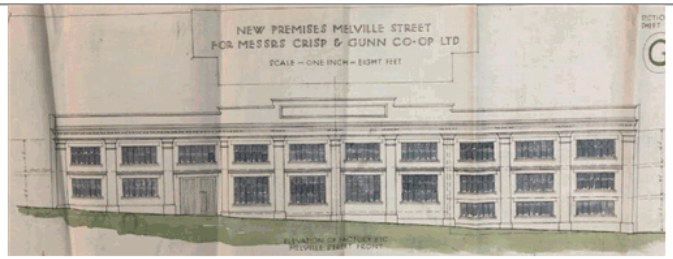
Figure 4.1 – Main built features of the subject site (www.thelist.tas.gov.au)

4.1. THE FORMER CRISP AND GUNN WORKSHOPS (1923)

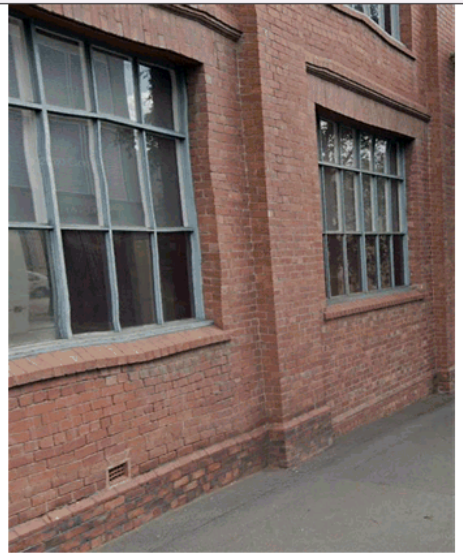
Figure 4.2 – The former Crisp and Gunn workshops and store footprint. Adapted from www.thelist.tas.gov.au

Figure 4.3 – Distinct areas of the workshops and store (adapted from Morrison Breytenbach Architects as-existing drawing, supplied by UTas).

GENERAL FORM, EVOLUTION AND DESCRIPTION	
Development phase	**Description, integrity etc.**
Crisp and Gunn 1923 - 1968	The building wholly derives from the 1923 construction following the fire which destroyed the earlier Crisp and Gunn buildings. The western end is two storey (former workshops) with the eastern end (former hardware store) being three storey (all under the same line of roof - owing to ground slope and lower floor-to-ceiling heights on the eastern end). This period of development is typified by generally clear floor plates in each of the eastern and western sections (excluding the timber column grid) and raw finishes including painted brick walls, no detailed joinery, lack of ceilings etc. The former single-storey rear warehousing contemporary with this development has been demolished. Particularly the remaining larger and open spaces of the building are very legible in demonstrating a former utilitarian workshop area.
SES and State Fire Commission 1968-1994	It is likely that some of the office partitioning/fitout on the ground floor of the western end of the building derives from this later phase of use.
Forestry Tasmania 1997-2017	As per above all of that partitioning and fitout on the ground floor of the western of the building derives from the earlier government and Forestry Tasmania use.

EXTERIOR DESCRIPTION		
Element	**Description**	**Image**
Elevations		
Northern	The northern elevation is obscured by the 1997 additions, however is unlikely to have had/have any notable architectural qualities – the western portion formerly leading to the rear warehouse/workshop.	
Eastern	The eastern elevation formerly had three large openings into the Crisp and Gunn driveway (i.e. for goods loading). These have been modified and glazed for a series of windows/doors in later development. This elevation offers no remarkable architectural qualities.	
Southern	The southern elevation is the principal street frontage of the building and is a simply yet effectively detailed treatment of the elevation utilising brick. The elevation features an upper floor row of ten windows, each corresponding with one or two windows below (noting that the eastern end is three storey and the western end two). Each bay of windows are separated by a brick engaged column with simple	

	brick bases and capitals. There is a brick stringcourse between the major floors and a more substantial capital course beneath the parapet. The centre of the parapet is heightened to include a brick-framed signboard. There is one original door opening in this elevation towards the western end – formerly timber 'barn' doors this is now a recessed glazed entrance.	
Western	The western elevation is a completely blank and unarticulared brick party wall .	

Roof		
Form	The roof retains its original simple sawtooth form with two 'teeth' – the front one being a larger span than the rear.	
Framing	The Oregon timber truss framing can be seen from the upper floor throughout the building.	
Cladding	The cladding is assumed to be either zincalume or corrugated galvanised iron.	
Rainwater goods	The rainwater goods were not inspected due to the roof parapet.	
Walls		
Foundations	The foundations are assumed to be brick and concrete as per the 1920s specifications.	
Masonry	The walls are of hard-fired brick (likely triple—skin and thicker in the areas of the engaged columns). There is a distinctly thicker foundation course, stringcourse at upper floor levels, simple capitals to the columns, and upper dentilled stringcourse, vertically laid brick lintels and a brick-framed top signboard.	

Exterior doors and windows		
Exterior doors	The original 'barn' doors leading to Melville Street have been removed (probably c1968) and replaced with a recessed and glazed porch.	
Exterior windows	The windows on the Melville Street frontage appear to be the originals, matching the depiction on the original plans.	

INTERIOR DESCRIPTION		
Element	**Description**	**Image**
Eastern end semi-basement		
Form/spaces	This is a large single room as it originally was as part of the hardware store.	
Ceilings/finishes	The ceiling is the underside of the timber flooring of the first floor.	
Walls/finishes	The walls are unlined painted brick.	
Floors	The floors were concreted in 1964.	
Joinery	The room is generally devoid of joinery as per the utilitarian original nature. Any detailed joinery appears to be post-1960s. Many of the timber posts on this level have been replaced with concrete.	

Element	Description	Image
Ground floor		
Form/spaces	The eastern end of the building (the former hardware store) is a single large room as it originally was. The larger western end (former workshop) has been partitioned into a large number of rooms, hallways etc. as well as an entrance hall.	
Ceilings/finishes	The ceilings have all been plastered and/or false ceilings added, obscuring the original lack-of ceiling configuration.	
Walls/finishes	Generally, the inside of the exterior walls remain as painted brick, however some linings have been added as part of office partitioning.	
Floors	The floor was concreted in 1964.	
Joinery	The room is generally devoid of joinery as per the utilitarian original nature. Any detailed joinery appears to be post-1960s. Many of the timber posts on this level gave been replaced with concrete.	

Element	Description	Image
First floor		
Form/spaces	Both the eastern and western ends of the building remain as large rooms (although the western end has been partitioned, with these having been removed).	
Ceilings/finishes	The ceilings have had a range of false ceilings added (to obscure ducting) and subsequently removed. Some ceilings have been installed between trusses. Generally, the sawtooth roof form and open trusses are legible.	
Walls/finishes	Generally the inside of the exterior walls remain as painted brick, however some linings have been added as part of office partitioning.	
Floors	The timber floors appear to be all original and largely intact (although obscured by a range of floorcoverings). There is evidence of earlier openings (lifts, hoists etc.).	
Joinery	The room is generally devoid of joinery as per the utilitarian original nature. Any detailed joinery appears to be post-1960s.	

Summary Descriptive comments

The Exterior envelope of the building largely retains the original 1923 form, however there has been some reconfiguration of openings on the northern (rear) and eastern walls to connect to subsequent development. The façade is practically wholly original with only minor reconfiguration of the main entrance door. The streetscape presence remains unaltered from the time of its construction. Key attributes of the exterior of the building are the sawtooth roof, finely executed brick façade and fenestrative pattern.

The interior of the building retains the ability to read as a simple and utilitarian workshop/store building. There is practically no adornment in the detailing with a lack of linings, decorative joinery etc. Key attributes of the interior are the timber floors, exposed timber structure, lack of linings and larger open spaces. The entire ground floor has been replaced with concrete, some of the structural elements have been replaced with steel and concrete however the construction methods of the building are still evident. If stripped of modern linings, services etc. the building still has the potential to read as an Inter-War commercial/industrial building interior.

4.2. THE FORMER CRISP AND GUNN OFFICES

Figure 4.4 – The former Crisp and Gunn offices footprint. Adapted from www.thelist.tas.gov.au

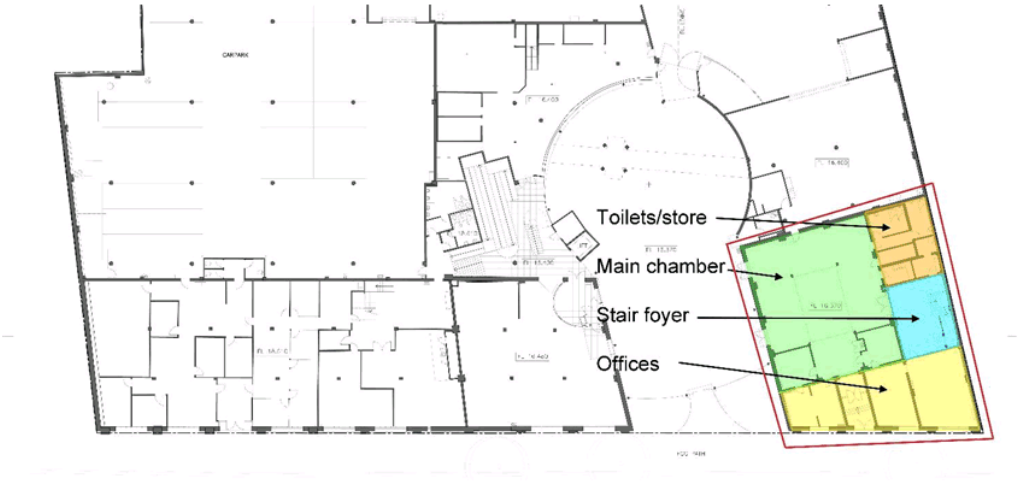


Figure 4.5 – Ground floor of the former Crisp and Gunn offices with areas as discussed here (adapted from Morrison Breytenbach Architects as-existing drawing, supplied by UTas).

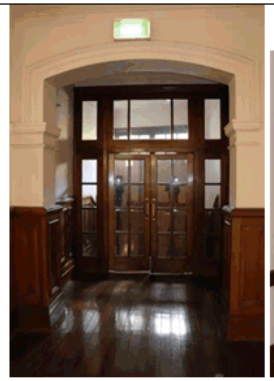
Figure 4.6 – Upper floor of the former Crisp and Gunn offices with areas as discussed here (adapted from Morrison Breytenbach Architects as-existing drawing, supplied by UTas).

GENERAL FORM, EVOLUTION AND DESCRIPTION	
Development phase	**Description, integrity etc.**
Crisp and Gunn 1923 - 1968	The building wholly derives from the 1923 construction following the fire which destroyed the earlier Crisp and Gunn buildings. The building has a notable higher level of articulation than the adjacent workshops/store building, in particular the ground floor which would have been the public face of the business.
SES and State Fire Commission 1968-1994	It is likely that minimal change occurred to the ground floor (at least) of the building during this period, with the finely articulated Crisp and Gunn office fitout remaining. The upper floor was substantially modified in the 1980s with a rearward extension which internalised the lightwells.
Forestry Tasmania 1997-2017	As per above it is likely that the ground floor was not substantially modified during this period, with the exception of the opening up of the western wall for connectivity to the new dome structure.

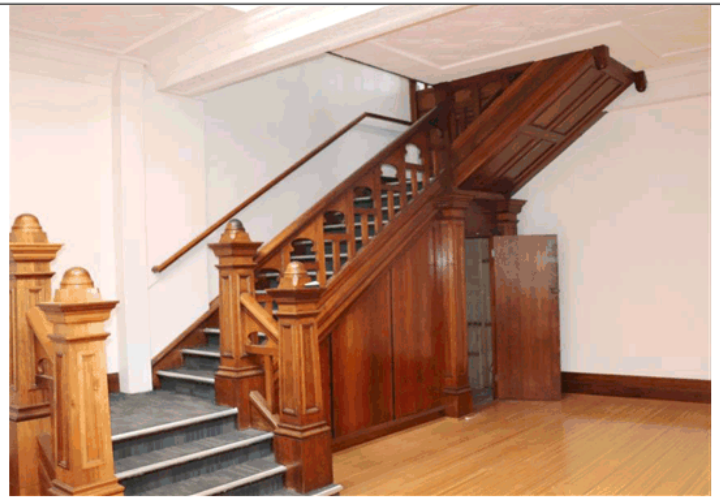
EXTERIOR DESCRIPTION		
Element	**Description**	**Image**
Elevations		
Northern	The ground level of the northern elevation is obscured by the 1997 workshop additions, however is unlikely to have had/have any notable architectural qualities. The original northern elevation of the upper floor has been wholly removed as part of the 1980s additions.	
Eastern	The eastern elevation is a completely blank and unarticulated brick party wall .	
Southern	The southern elevation is the principal street frontage of the building and is a simply yet effectively detailed treatment of the elevation utilising brick. The elevation features an upper floor row of four windows, each corresponding with a window below. Each bay of windows are separated by a brick engaged column with simple brick bases and capitals. There is a brick stringcourse between the floors and a more substantial capital course beneath the parapet with dentilling. There is an intermediate decorative course of brick featuring a chequerboard pattern of a mix of horizontally and vertically laid bricks. The centre of the parapet is heightened to include a brick-framed signboard surmounted by a flagpole. There is one original door opening in this elevation towards the western end with the original timber double doors.	

Western	The western elevation has been heavily modified with a pair of double doors on the ground level and a large and modern window on the upper floor spanning the original 1920s and 1980s portions of that floor.	
Roof		
Form	The roof retains its original skillion form behind the parapet which has been extended rearwards with a sawtooth and hipped form in the 1990s.	
Framing	The Oregon timber truss framing can be seen from the upper floor throughout the building.	
Cladding	The cladding is assumed to be either zincalume or corrugated galvanised iron.	
Rainwater goods	The rainwater goods were not inspected due to the roof parapet.	
Walls		
Foundations	The foundations are assumed to be brick and concrete.	

Masonry	The walls are of hard-fired brick (likely triple—skin and thicker in the areas of the engaged columns). There is a distinctly thicker foundation course, stringcourse at upper floor levels, simple capitals to the columns, and upper dentilled stringcourse, vertically laid brick lintels and a brick-framed top signboard.	
Exterior doors and windows		
Exterior doors	The original blackwood double doors	
Exterior windows	The windows on the Melville Street frontage appear to be the originals.	

INTERIOR DESCRIPTION		
Element	**Description**	**Image**
Ground floor offices		
Form/spaces	The four offices and foyer retain their original form.	
Ceilings/finishes	The ceilings are ornate pressed tin.	
Walls/finishes	The walls are rendered in hard plaster.	
Floors	The floors appear to be the original timber floors. The entrance has a tiled mosaic floor which is likely to be original.	
Joinery	These rooms have very high-quality blackwood joinery – clearly exhibiting the products of the original owner (i.e. finely executed joinery from Tasmanian timber. The glazed double doors leading from the entrance hall to the main chamber are very finely executed and retain their original brass hardware and the entrance hall has a panelled timber dado and an ornate entrance arch. The offices feature blackwood three-panel doors, skirtings and architraves as well as chair rails and picture rails.	

Ground floor main chamber	
Form/spaces	The main chamber was formerly a single large room, however two smaller offices have been partitioned off the front section. Doors have been added to link this room with the dome and the workshops at rear.
Ceilings/finishes	The ceiling is elaborate pressed tin with an arched central roof lantern.
Walls/finishes	The walls are hard plaster rendered onto the masonry.
Floors	The floors are the original Tasmanian Oak boards.
Joinery	The room has very high-quality blackwood joinery – clearly exhibiting the products of the original owner (i.e. finely executed joinery from Tasmanian timber). The glazed double doors leading from the entrance hall to the main chamber, as well as those leading to the stair hall, are very finely executed and retain their original brass hardware. The chamber features blackwood three-panel doors, skirtings and architraves and the structural columns are clad in blackwood.

Ground floor stair foyer		
Form/spaces	This room retains its original form, entered via a single door from one of the front offices and by double doors from the main chamber. A later door to the rear store has been added.	
Ceilings/finishes	The ceiling is elaborate pressed tin with a roof lantern.	
Walls/finishes	The walls are hard plaster rendered onto the masonry.	
Floors	The floors are the original Tasmanian Oak boards with a modern floating floor installed.	
Joinery	The room has very high-quality blackwood joinery – clearly exhibiting the products of the original owner (i.e. finely executed joinery from Tasmanian timber). The glazed double doors leading from the main chamber, as well as those leading to the stair hall, are very finely execute. The room features blackwood three-panel doors, skirtings and architraves and the structural columns are clad in blackwood. The stairs are very elaborate and Arts and Crafts in styling with oversized panelled newel posts and a decorate balustrade. The panelled understair has been partially infilled for a service room.	

Ground floor store/kitchen/toilets		
Form/spaces	This area has been divided into several small rooms – a kitchenette, switchboard room, store, toilets and also includes an early safe.	
Ceilings/finishes	False ceilings have been installed however it appears that at least part of an earlier ceiling remains above.	
Walls/finishes	The walls have been re-lined however it is likely that earlier hard plastered linings remain underneath.	
Floors	The floors have modern floorcoverings however there may be some original flooring beneath.	
Joinery	No early/original joinery can be seen in these rooms, however it may have survived beneath modern linings.	

Upper floor offices		
Form/spaces	The form of this room has been completely modified to be a single large room (some nibs remain indicating the lines of former walls). The 1972 plans show a series of offices and partitions which are likely to have been original. With that wall removal it appears that all original joinery has also been removed. In the 1980s most of the rear wall was removed for an extension over the former rear rooftop.	
Ceilings/finishes	All ceilings have been removed.	
Walls/finishes	The walls are a combination of painted brick and modern linings.	
Floors	The original timber floor remains with a sheet covering.	
Joinery	Apart from the top railing of the stairs, no original/early joinery remains.	

Upper floor rear extension		
Form/spaces	This area was added during the State Emergency Service occupation of the building onto the former roosfpace of the rear of the office building. This enclosed the formerly rooftop lightwells with modern glazed partitions and artificial lighting.	
Ceilings/finishes	Modern plaster with exposed beams.	
Walls/finishes	A variety of painted masonry and modern linings.	
Floors	Compressed sheet.	
Joinery	Modern minimalist joinery.	

Summary Descriptive comments

The Exterior envelope of the building largely retains the original 1923 form, however there has been some reconfiguration of openings on the northern (rear) and western walls to connect to subsequent development and the upper floor has been extended rearward across former roofspace and enclosing the former roof lanterns. The façade is wholly original. The streetscape presence remains unaltered from the time of its construction. Key attributes of the exterior of the building are the finely executed brick façade and fenestrative pattern.

The interior of the building (ground floor) retains the ability to read as a well-fitted 1920s office building which has utilised fine Tasmanian timber joinery to highlight its original business. The ground floor remains wholly legible and is in largely original condition (although note some earlier and non-original openings around the entrance hall have been re-blocked). Key attributes of the interior are the timber floors, pressed tin ceilings, fine blackwood joinery, tiled entrance hall, impressive stairs, large main chamber and roof lanterns. and larger open spaces. The upper floor has been practically entirely stripped and does not resemble its original form or detailing and has been extended rearward

4.3. THE FORESTRY DOME AND OFFICES

Figure 4.7 – The 1997 Forestry building footprint. Adapted from www.thelist.tas.gov.au

GENERAL FORM, EVOLUTION AND DESCRIPTION	
Development phase	**Description, integrity etc.**
1997 -	The dome and associated office building are generally as per their 1997 construction, although the plantings of the dome have recently been removed.

The following description of the Forestry dome and wider complex is drawn from the Tasmanian Heritage Register datasheet. Note also that the full series of original plans for that building exist in the Tasmanian Archive and Heritage Office (AE417

Slightly set back from the Brisbane Street footpath, the Forestry Tasmanian dome marks the current formal entrance to the complex and connects the Crisp & Gunn offices and workshop buildings; it was designed to function as a microclimate of Tasmanian rainforest. The 22-metre dome structure is constructed from 16 segments of curved laminated Tasmanian oak beams, with steel rod bracing and faceted glass cladding, and a 'tail' that continues the curved spherical surface a further 15 metres out, and down towards the front entrance. A highly modified natural rivulet runs through stormwater piping beneath the Crisp and Gunns site, including the area of the dome. Internally the structure forms a high open space; the original rainforest plantings were removed in 2018. The Forestry Tasmania dome is of high historic cultural heritage significance.

Structural timbers from the Crisp & Gunn timber store and outbuildings were reused in the 1997 redevelopment of the site, they provide an ongoing connection to the original and evolving use of the site.

5. ASSESSMENT OF HISTORIC CULTURAL HERITAGE SIGNIFICANCE

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 as detailed in this document. Note that natural history and indigenous heritage values have not been assessed here, as these are beyond the scope of this assessment.

The assessment methodology for each criterion follows the methodology details in the Tasmanian Government's *Assessing Historic Heritage Significance for Application with the Historic Cultural Heritage Act 1995* (October 2011) which is considered to represent a sound approach to assessing values (and from which the expanded definitions in the table below are drawn).

A. IMPORTANCE TO THE COURSE, OR PATTERN OF OUR CULTURAL OR NATURAL HISTORY.
A place is of importance to the course or pattern of Tasmania's history if that place is the product of, or is an example of, or was influenced by, or has influenced, or is associated with, or has a symbolic association with, or is the site of – an event, phase, period, process, function, movement, custom or way of life (including values, aspirations, tastes and fashions) which has made a strong, noticeable or influential contribution to the evolution or pattern of the settlement and development of Tasmania.
THE FORMER CRISP AND GUNN WORKSHOPS, STORE AND OFFICES
The former Crisp and Gunn buildings are of historic heritage significance in their ability to demonstrate a long-running presence (some 80 years) of that business on the site, with these specific buildings being occupied by that business for some 45 years. Crisp and Gunn are a well-known Tasmanian business with strong associations with the forestry industry, timber milling and construction and these buildings represent the public front-face of that business. The buildings represent the Inter-War expansion of such businesses as a suite of such in the Hobart CBD with wider-reaching impacts upon the Tasmanian economy and industry. The continuing use of those buildings by Forestry Tasmania continued that association with the timber industry.
THE FORESTRY BUILDING
The forestry industry, and the Tasmanian Government's involvement with such, is a key historic theme in the development of Tasmania. The 1997 Forestry building represents the corporatisation of that Government enterprise with a city presence and the dome represents a desire for design excellence as an iconic building associated with that use. Please refer to Appendix A for further commentary on the historical association and symbolism of the dome as provided by Adj. Professor Robert Morris-Nunn AM.

B. POSSESSION OF UNCOMMON, RARE OR ENDANGERED ASPECTS OF OUR CULTURAL OR NATURAL HISTORY.
A place demonstrates rare or uncommon aspects of Tasmania's heritage if that place illustrates in its fabric an event, phase, period, process, function, movement, custom or way of life (including values, aspirations, tastes and fashions) which, or an aspect of which: (i) was considered uncommon or unusual at the time of its origin; (ii) is no longer practised AND is of special interest; or (iii) was once commonplace but for which there is little surviving evidence in Tasmania.
THE OVERALL SITE
The site does not appear to exhibit any particularly rare qualities. Note that the high-quality of the blackwood fitout and intact pressed tin ceiling linings of the former Crisp and Gunn Offices are probably an uncommon survivor of modern office fit outs which may be worthy of some further consideration in their rarity.

C. POTENTIAL TO YIELD INFORMATION THAT WILL CONTRIBUTE TO AN UNDERSTANDING OF OUR CULTURAL OR NATURAL HISTORY.
A place has the potential to yield information that will contribute to an understanding of Tasmania's history if, through analysis and further examination or research of the place and its fabric (including artefacts), it can provide information that could not be derived from any other source. While this criterion in Tasmania is most often used to define archaeological research potential, it may also be used for the research potential of architectural design, construction techniques, historical gardens, etc.
THE OVERALL SITE
As per Section 7 of this document, there are areas of the site that have the potential to yield information about early commercial enterprise and a range of early domestic residences and activity which may enhance knowledge of the site, as well as a range of thematic, regional and temporal lines of archaeological enquiry. Owing to large-scale disturbance on the site, it is likely that these areas are limited to the Melville Street frontage beneath the former Crisp and Gunn buildings and the Forestry dome only.

D. IMPORTANT IN DEMONSTRATING THE PRINCIPAL CHARACTERISTICS OF A CLASS OF CULTURAL OR NATURAL PLACES OR ENVIRONMENTS.
This criterion is concerned with representativeness. A place included under this criterion should demonstrate the principal characteristics of a particular class of cultural place if that place displays the defining features, qualities or attributes of its type, where type or class of place illustrates a range of human activities including a way of life, a custom, an ideology or philosophy, a process, a land use, a function, a form, a design, a style, a technique or some other activity or achievement. To be considered a good representative example, the place should have a high level of intactness.
THE FORMER CRISP AND GUNN WORKSHOPS AND STORE
The former Crisp and Gunn offices are of historic heritage significance in demonstrating the principal characteristics of an Inter-War Stripped Classical style office building. This is evident in features such as the division of the facade into emphasised vertical bays, use of simplified classical detailing (e.g. columns, entablature and cornice) etc. This tyle of architecture is considered important in representing the inter-war commercial boom in Hobart with the expansion of many historically established companies and is a distinctive element of the Hobart CBD. The interior of the building is much less distinctive – with significance deriving from its simplicity and warehouse-style large open spaces. The building is an excellent example of the work of G. Stanley Crisp – being one of few known largely intact utilitarian commercial buildings remaining of his design in Hobart.
THE FORMER CRISP AND GUNN OFFICES
The former Crisp and Gunn offices are of historic heritage significance in demonstrating the principal characteristics of an Inter-War Stripped Classical style office building. This is evident in features such as the division of the facade into emphasised vertical bays, use of simplified classical detailing (e.g. columns, entablature and cornice) etc. This tyle of architecture is considered important in representing the inter-war commercial boom in Hobart with the expansion of many historically established companies and is a distinctive element of the Hobart CBD. The ground-floor interior of this building is particularly important in having a higher degree of ornate detailing which was clearly designed to provide the front public face of the company with an element of style absent in the more industrial areas of the site. The building is an excellent example of the work of G. Stanley Crisp – the ground floor and associated lightwells probably representing the most intact remaining commercial building by his design in Hobart (noting several other of his buildings have been demolished or destroyed by fire).
THE FORESTRY BUILDING
The Forestry dome and building is not considered to demonstrate any particular class of place of importance in the heritage or history of Tasmania, although its architectural and engineering merit is recognised as a somewhat unique approach to a Government office building.

E. IMPORTANCE IN EXHIBITING PARTICULAR AESTHETIC CHARACTERISTICS
This criterion may be interpreted as a place being important because of its aesthetic significance if that place exhibits sensual qualities that can be judged against various ideals including beauty, picturesqueness, evocativeness, expressiveness, landmark presence, symbolism or some other quality of nature or human endeavour.
THE OVERALL SITE
No part of the subject site is considered to exhibit any particularly notable aesthetic characteristics worthy of the assignment of historic heritage significance.

F. IMPORTANCE IN DEMONSTRATING A HIGH DEGREE OF CREATIVE OR TECHNICAL ACHIEVEMENT AT A PARTICULAR PERIOD.
A place is important in demonstrating a high degree of creative or technical achievement if that place illustrates artistic or technical excellence, innovation, accomplishment, extension or creative adaptation in a variety of fields of human endeavour including but not exclusive to art, engineering, architecture, industrial or scientific design, landscape design, evolved design, construction, fabrication, manufacture, or craftsmanship.
THE OVERALL SITE
It is likely that the former Forestry Dome exhibits a high degree of creative and technical achievement in its unusual and innovative design and construction. Please refer to Appendix A for further commentary on the technical aspects and design thinking of the dome as provided by Adj. Professor Robert Morris-Nunn AM. The former Crisp and Gunn buildings are not considered to exhibit any distinctive degree of creative or technical achievement.

G. STRONG OR SPECIAL ASSOCIATION WITH A PARTICULAR COMMUNITY OR CULTURAL GROUP FOR SOCIAL, CULTURAL OR SPIRITUAL REASONS.
A place has a special associational value if it is associated with a person, organisation or group of people who or which is of importance to the history of Tasmania. In this context, importance may relate not only to the great and well-known, but also to the influential, the exemplary, and the innovative.
THE OVERALL SITE
The site is not considered to have any particular special association with any particular community or cultural group for social, cultural nor spiritual reasons.

H. SPECIAL ASSOCIATION WITH THE LIFE OR WORKS OF A PERSON, OR GROUP OF PERSONS, OF IMPORTANCE IN OUR HISTORY.
A place has a special associational value if it is associated with a person, organisation or group of people who or which is of importance to the history of Tasmania. In this context, importance may relate not only to the great and well-known, but also to the influential, the exemplary, and the innovative.
THE OVERALL SITE
The site has links to a number of prominent organisations and persons of importance in our history, including: - The Crisp and Gunn empire - G. Stanley Crisp, with the warehouse/store and offices representing a largely intact example of his Hobart commercial work, of which few examples remain. - Tasmanian forestry, government involvement and as a business unit. - And more recently with prominent Architect Robert Morris-Nunn and Engineering firm Gandy and Roberts. The Forestry Dome is the work of well-known architecture firm Morris-Nunn & Associates as well as similarly well-known engineering firm Gandy and Roberts. Please refer to Appendix A for further commentary on the various associations of the dome as provided by Adj. Professor Robert Morris-Nunn AM.

6. FABRIC ANALYSIS & ABILITY TO DEMONSTRATE SIGNIFICANCE

6.1. DEGREES OF SIGNIFICANCE

Based on the overall statements of significance outlined in Section 8, as informed by the key historic themes and comparative analysis of Section 7 and the analysis of the evolution of the place as detailed in Section 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 11, to inform the implementation strategy in Section 12.

For the purposes of this section the following scale will be used to assign degrees of significance to individual elements of the fabric and form of the place:

High – Elements, forms or spaces which readily demonstrate important aspects of the significance of the place or related important historic theme.

Medium – Elements, forms or spaces which less-readily demonstrate important aspects of the history of the place, or readily demonstrate aspects of lower significance (or related important historic theme).

Low – Elements, forms or spaces which less demonstrate less important aspects of the history of the place.

Neutral – Elements, forms or spaces which neither contribute to, nor detract from, the significance of the place.

Intrusive – Elements, forms or spaces which obscure the significance or are likely to threaten the longevity/integrity of significant elements, forms or spaces. Examples:

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. Similarly, decay of significant elements may also have an impact on their ability to

demonstrate significance. Accordingly, following scale will be used to rank **levels of integrity** of elements, forms or spaces 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 matrix represents the interplay of integrity and significance and introduces colour coding as used in the following table:

	Integrity		
Significance	High	Medium	Low
High	**1**	**1**	**2**
Medium	**2**	**2**	**3**
Low	**3**	**3**	**4**
Neutral	**4**	**4**	**4**
intrusive	**5**	**5**	**5**

Accordingly, the following colour code has been adopted to consider significance in-light of the integrity of that particular element:

Red – High significance (Rank 1)

Orange – Medium significance (Rank 2)

Green – Low significance (Rank 3)

Grey – Neutral (Rank 4)

Blue – Intrusive (Rank 5)

The table below will further examine the specific fabric of the former Crisp and Gunn buildings with view of providing such recommendations for the future management of the heritage values of that place.

EXTERIOR – THE FORMER CRISP AND GUNN WORKSHOPS/STORE		
Element	**Significance**	**Recommendation**
Northern elevation		Retain the general tenor of the wall however modifications for new attachments/penetrations are likely to be acceptable.
Western elevation		Retain the general tenor of the wall however modifications for new attachments/penetrations are likely to be acceptable (noting however this is a boundary wall.
Eastern elevation		Retain the general tenor of the wall however modifications for new attachments/penetrations are likely to be acceptable.
Southern elevation		Generally retain as existing. Modifications/additions to the door aperture are likely to be acceptable within the existing opening.
Roof (form, cladding, rainwater goods)		Ideally retain as existing, however some modification may be acceptable given the parapet wall generally hides the roof from public view.
Eaves, fascias, barges etc.		Repair as necessary, preferably in like-for-like materials.
Walls generally		The exterior envelope is generally of high significance (noting that the northern and eastern elevations may sustain some modification particularly if that assists in a viable adaptive reuse in connectivity to other development).
Doors		Modify existing doors as desired within existing opening on the southern elevation. Doors on other elevations may be modified as desired and it is likely that rearrangement/enlargement of apertures would be acceptable.
Windows		Retain and repair as necessary. Modification should be limited only to works essential for security, thermal or acoustic improvement.

INTERIOR - THE FORMER CRISP AND GUNN WORKSHOPS/STORE (ALL FLOORS)		
Element	**Significance**	**Recommendation**
Form		The form and spatial qualities of the interior – representing large and open commercial/industrial spaces are of some significance in understanding the context of the building. However, in order to facilitate a suitable adaptive reuse it is considered that reconfiguration and subdivision of that form may be acceptable.

Modern partitioning		This should be removed in favour of either open space or a better resolved approach suited to an adaptive reuse.
Floors		The remaining timber floors should be retained and preferably exposed/polished to highlight the use of timber in the building (associated with its long association with the timber industry). Noting however that there may be thermal/acoustic/functional reasons why this might not be achieved. Some penetrations in the floor are likely to be acceptable (e.g. for new access points etc.).
Walls		The walls should ideally be retained as painted brick, although if linings are required for functional reasons this is likely to be acceptable.
Ceiling		The lack of ceilings reflect the utilitarian nature of the building and allow an unimpeded view of the floor/ceiling structure. Ideally these should remain exposed, however there may be thermal/acoustic/ functional reasons why this might not be achieved.
Original structural timber		The original structure reflects the use of timber in the building and the exposure of such is an integral part of interpreting the utilitarian nature of the building. Ideally this should be retained as visible. Note the modern interventions (e.g. concrete posts) would benefit from being better resolved.

EXTERIOR – THE FORMER CRISP AND GUNN OFFICES		
Element	**Significance**	**Recommendation**
Northern elevation		Given the extent of prior modification of this wall (particularly the upper level) adapt or modify as desired to promote any necessary connection to any new rear development.
Eastern elevation		Retain the general tenor of the wall however modifications for new attachments/penetrations are likely to be acceptable (noting however this is a boundary wall.
Western elevation		Retain the general tenor of the wall however modifications for new attachments/penetrations are likely to be acceptable.
Southern elevation		Retain as existing.
Roof (form, cladding, rainwater goods)		Ideally retain as existing, however some modification may be acceptable given the parapet wall generally hides the roof from public view. Noting also that the rear portion of the roof is an entirely new structure then this has a higher tolerance to modification.
Eaves, fascias, barges etc.		Repair as necessary, preferably in like-for-like materials.
Walls generally		The exterior envelope is generally of high significance (noting that the northern and western elevations may sustain some modification particularly if that assists in a viable adaptive reuse in connectivity to other development).

Doors		The front door is of high significance and should be retained as existing. All other doors are of no significance and may be adapted as desired.
Windows (front)		Retain and repair as necessary. Modification should be limited only to works essential for security, thermal or acoustic improvement.

INTERIOR – THE FORMER CRISP AND GUNN OFFICES (GROUND FLOOR)		
Element	**Significance**	**Recommendation**
Form		Retain the form of the front rooms, large chamber and stairs hall. Some modification of the rear kitchen, store, safe and toilet area is likely to be acceptable.
Modern partitioning (in the large chamber)		Retain, remove or modify as desired.
Toilets and kitchen fitout		Retain, remove or modify as desired.
Safe		Ideally retain unless this severely inhibits a suitable adaptive reuse.
Floors		The timber floors should be retained and preferably remain exposed/polished to highlight the use of timber in the building (associated with its long association with the timber industry). Remove the floating floor in the stairs hall and assess underlying flooring. Retain the tiled entry foyer.
Walls		The walls should ideally be retained as painted brick, although if linings are required for functional reasons this is likely to be acceptable.
Ceilings		Retain the distinctive pressed tin ceilings.
Joinery (doors, dados, chair rails, architraves, skirtings etc).		Retain all original joinery unless modification is absolutely necessary to facilitate a suitable adaptive reuse. Note that the joinery on the partitioning of the larger chamber is well-executed replica and may be removed or modified as desired (subject to the future of those partitions).
Stairs		Retain. Note that it is likely that a lift will be required, this may be achieved in the rear portion of the building, or possibly outside the footprint of the original building.
Lightwells		Retain and maintain solar access.

INTERIOR – THE FORMER CRISP AND GUNN OFFICES (FIRST FLOOR)

Element	Significance	Recommendation
Form (rear addition portion)		Retain as larger open spaces or subdivide as desired.
Form (front original portion)		Retain as larger open spaces or subdivide as desired.
Floors		The timber floors in the front section should be retained and preferably remain exposed/polished to highlight the use of timber in the building (associated with its long association with the timber industry). The rear may be modified as desired.
Walls		The walls should ideally be retained as painted brick, although if linings are required for functional reasons this is likely to be acceptable.
Ceilings		Replace as desired.
Joinery		Retain, remove or modify as desired.
Stairs landing		Retain as existing.
Lightwells		Retain and maintain solar access. Modify enclosures as desired.

EXTERIOR – THE FORESTRY COMPLEX		
Element	**Significance**	**Recommendation**
General form of the dome		As an iconic entrance statement and circulation space that exhibits a high degree of architectural and engineering excellence, the dome should remain largely unchanged, and its streetscape presence maintained.
Remainder of the 1997 Forestry buildings		Adapt or replace as desired, subject to consideration of impact upon the dome itself and any relevant adjacency/backdropping issues with the former Crisp and Gunn buildings.

INTERIOR – THE FORESTRY COMPLEX		
Element	**Significance**	**Recommendation**
Form of the dome		Retain the interior form of the dome as a key entry and circulation space. Note that the elevated walkway may be reconfigured or removed if required for an adaptive reuse.

Plantings within the dome		Although now removed, planting within the dome is a key attribute of its design intent. A reproduced or new planting scheme should be reinstalled.
All other interiors generally		Retain, remove or modify as desired to rationalise for a new use.
Lift, stairs and vertical circulation within/adjacent to the dome		Retain, remove or modify as desired to rationalise for a new use.
Recycled material from earlier buildings within the dome/forestry buildings		Encourage the retention and/or reuse of this elsewhere within the complex.

The analysis and recommendations above are to be read in conjunction with the conservation policy in Section 9. Where the conservation policy is at-odds with these recommendations, e.g. if additional information comes to hand which reveals further information about a particular element, then the conservation polices take precedence over these recommendations and is to be applied in a heritage impact assessment.

7. STATEMENT OF HISTORICAL ARCHAEOLOGICAL POTENTIAL

7.1. 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, summarising the developmental history of the site and developing a chronological narrative detailing an overview of the history of all known features to have ever existed on the site. Where possible, developmental overlays have been developed from historic maps, plans, photographs and other visual documentation. This overlay has been supported by other observations providing supplementary information, and also includes processes such as demolition and disturbance which may have removed or destroyed potential remains – and may have diminished the archaeological potential.

Assessing the significance and potential of any likely archaeological resources to yield meaningful information: Upon understanding the archaeological potential through desktop and site analysis, the next step was to understand its relationship to any aspect of the identified significance of the place – e.g. do the remains have the potential to demonstrate an aspect of the significance of the site or related key historic theme? The potential for any of the archaeological remains to demonstrate important aspects of the history of the site, whether in a state, regional or thematic context, is to be considered.

Understanding possible impact of development and formulation of management strategies: Based on any identified archaeological potential and significance of the site, consideration will be given as to whether the proposed development will impact upon any likely archaeological remains and if necessary broad management strategies will be proposed to manage any impact.

Table 1 (below) demonstrates the steps of this assessment:

Methodology for formulation of the statement of archaeological potential		
	If 'no'	**If 'yes'**
1. Archaeological potential. Are you likely to find something if you dig here? (i.e. a Statement of Archaeological Potential).	Further action may not be required, although a contingency plan may be required for unexpected finds.	The significance of the archaeological potential should be investigated.
2. Significance. Could anything you find here greatly contribute to our understanding of the site or related significant theme?	Further action may not be required.	The likely integrity of the archaeological remains should be investigated.
3. Integrity. Are any archaeological remains likely to be intact?	Further action may not be required, although a contingency plan is required for unexpected integrity.	The likelihood of significant archaeological remains is confirmed.
4. Impact Will proposed works impact upon the significant archaeological remains? i.e. an Archaeological Impact Assessment.	Further action may not be required, although a contingency plan may be required for unexpected impacts.	An Archaeological Method Statement will be required to detail how impact will be managed/mitigated.

7.2. HISTORICAL BACKGROUND AND SUMMARY OF SITE DEVELOPMENT

As per the methodology above, the historical background of the subject site has been provided here in Section 3 – which provides the basis for the formulation of the statement of historical archaeological potential.

The Figures in Section 3 provide a visual indication of the early layout(s) of the site, which are considered here as the first step in understanding archaeological potential – i.e. the physical evolution of the site layout (on a two-dimensional plane at this stage). Figures 7.1 to 7.4 are overlays of site development as depicted on those plans, georeferenced to a range of known reference points both on the site and in the wider environs:

Figure 7.1 depicts the earliest known buildings on the subject site, which may be as early as the 1830s and are likely to have been residential (based on the c1832 and c1845 Sprent surveys). Figure 7.2 depicts these buildings as well as those from the later c19th as depicted on the 1908 Metropolitan Drainage Board plan.

Figure 7.1 – Overlay of the footprint of buildings depicted on the c1832 and c1845 survey (all following figures adapted from GoogleEarth).

As per Section 3, further development on the site occurred after 1870, when Crisp and Gunn established their timber yard on the Melville Street frontage and progressively acquired further land back towards Brisbane Street.

Figure 7.2 – Overlay of the c1870-c1910 development footprint (blue) in relation to the pre-1845 development (colours as per above).

7.3. LIKELY DISTURBANCE EVENTS

As per the archaeological methodology above, once the possibility of archaeological remains has been ascertained in a particular location, it is pertinent to consider any possible events which have acted to disturb any such archaeological remains. In the case of this wider site, the 1997 works to create the basement parking are a very obvious event which is likely to have had major and widespread implications for the survival of any archaeological remains – therefore this will first be considered in order to narrow down what part(s) of the site may retain the ability to yield archaeological remains consistent with the historical depictions – put simply, what extent and depth of mass excavation occurred at the end of the c20th which would have destroyed any archaeological remains?

The 1920s fire destroyed most of the built structures on the site – and it is not known how thoroughly the site may have been cleared post-fire. The plans for the existing buildings do not give specific information about site clearance or excavation at the time of their construction.

A 1964 plan for alterations to the Crisp and Gunn workshops is held by the Tasmanian Archive and Heritage Office which depicts excavation of the central (western) portion of the site for those workshops, and also includes specifications for retaining walls (600mm high) along the western edge of that part of the site. This would indicate widespread and moderately deep bulk excavation at the time, affecting the area depicted in the figure below:

Figure 7.3 – Area affected by bulk excavation and grading, 1964 (blue), as depicted on TAHO AE417/4/97.

Note that the above area of 1964 works would have been further excavated and impacted as part of the 1997 works.

The sources relied upon here to ascertain the extent and depth of 1997 excavation are:

- Civil & Civic, 79-85 Melville Street Hobart, Bulk Excavation Plan, Drawing 950504-C06-01, Issue D 28/8/96.
- Civil & Civic, 79-85 Melville Street Hobart Carpark Layout and Levels, Issue B 10/9/96.

The figure below depicts the depth of bulk excavation undertaken in certain locations to form the basement as part of the 1997 works as depicted on those drawings (noting that the finish level depicts carpark surface – excavation would have been to a greater depth to prepare for that finished surface). Generally, it appears that the Brisbane Street frontage was excavated by around 2.5-3.5 metres, grading down to 1.0-2.0 metres further southward (i.e. following the natural slope of the land).

Figure 7.4 – Sampling of depth of excavation occurring as part of the 1990s redevelopment of the site (metres).

A civil works plan from c1997 indicates that there was a bowser and underground fuel tank on the Brisbane Street frontage of the site where the current driveway into the undercroft carpark is located. Whether or not this was removed at that time the installation of this tank would have had a major impact upon any archaeological remains in that area of the site which still resembles what is likely to have been historic ground level (i.e. not necessarily disturbed by the 1990s building, but previously disturbed:

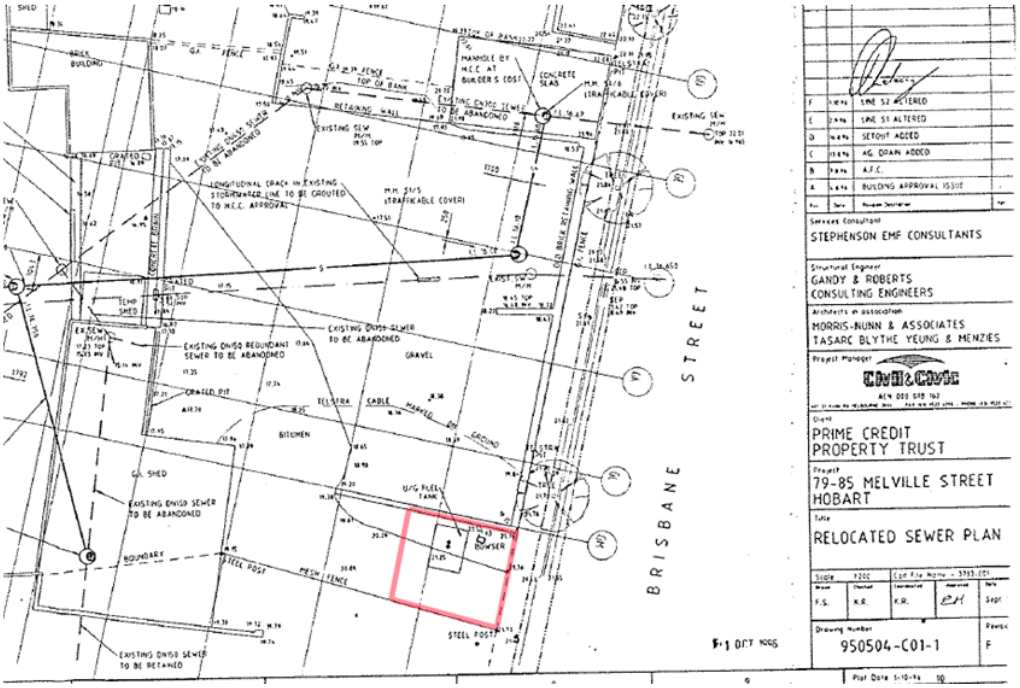


Figure 7.5 – Civil works plan c1997 showing the site of a bowser and underground tank on the Brisbane Street Frontage.

Figure 7.6 – Approximate area of the bowser and fuel tank depicted on Figure 7.5.

Site observations in the current basement parking area indicate that there has been a substantial degree of disturbance as per the levels indicated in Figure 7.4, with what appears to be an earlier wall (used as a retaining wall) having been underpinned by approximately a metre, suggesting that excavation in the late 1990s has exceeded historic ground level. Similarly, the edge of the driveway of the Freedom building to the west has been excavated to the sub-soil shale stone which his typical of sterile ground within some areas of the Hobart CBD:

Figure 7.7 – Underpinned earlier wall in the basement carpark.

Figure 7.8 – Sterile shale stone ground on the western edge of the Brisbane Street portion of the site.

Figure 7.9 – Areas of the site that appear to have been substantially disturbed.

7.5. ARCHAEOLOGICAL SIGNIFICANCE, RESEARCH FRAMEWORK & QUESTIONS

As discussed above, albeit limited to the Melville Street frontage, the subject site has the potential to yield archaeological remains associated with the following historic themes:

- Early (1820s) occupation of the site i.e. the early buildings fronting Melville Street. – albeit buildings of unknown early function, therefore their archaeological signatures are yet to be determined (most likely domestic).
- Late c19th commercial/light industrial development – i.e. the earliest occupation of the timberyard on the site – albeit probably highly disturbed and may only survive in vestiges under/close to the existing 1920s buildings.

Such analysis also has the potential to add depth to other similar such analyses of late Victorian Hobart domestic sites, particularly associated with prominent colonial Tasmanians - such as that undertaken as part of the Menzies Centre (Liverpool/Campbell Streets) excavations, which investigated several prominent 1820s-onwards inner-city residences, including Crowther's (Godden Mackay Logan/Arctas). Other sites such as Judge Pedder's house (173 Macquarie Street – Praxis Environment), Crowther's house/surgery (177 Macquarie Street – Praxis Environment) and Orr's house (3 Montpelier Retreat – Austral Tasmania). Similarly, investigations at Peter Degraves house in Collins Street (Hadleys Hotel development, Godden Mackay Logan), Anthony Fenn Kemp's house at 36 Argyle Street (Praxis Environment) and investigations at the original Hobart Port Officer's residence at 100 Salamanca Place (Praxis Environment) have investigated prominent early inner city residential sites and provide comparative datasets of early and substantial Hobart residences and their associated families.

The Melville Street frontage of the site represents what is likely to be at least eight c1830s-40s small residential buildings. There have been few examples of archaeological investigations into wider communities around the Hobart CBD, i.e. investigations which cover a wide number of adjacent sites representing different functions. Notable examples however are the range of Wapping investigations (e.g. Austral Archaeology 1996, 1998, 2002, 2009), the Whale Fishery Inn and adjacent housing in Watchorn Street (Praxis Environment 2019), 62 Patrick Street (Praxis Environment 2021) and the forthcoming report on the Montpelier Retreat excavations undertaken by Austral Tasmania in 2015.

From a wider regional perspective, archaeological data and remains yielded from the subject site, whether coupled with other Hobart/Tasmanian data, has the potential to strengthen a comparative dataset for research into intra-colonial society through comparison with mainland (and indeed inter-colonial society on an international level). For example early inner-city working-class communities such as Broadway, Cumberland/Gloucester Streets and the Rocks (Sydney) and Little Lonsdale Street (Melbourne) and portside working-class areas such as Port Adelaide, all of which have had substantial archaeological works undertaken, would provide useful datasets for the analysis of any data yielded from the earlier occupation of the current site, which would in-turn add to the depth and scope of the analysis of those collections on the range of themes as outlined above (and others).

From a temporal perspective, any remains from the earlier occupation of the site (i.e. pre-1830) represent a very formative period of Hobart's European settlement and are likely to be of significance when considering their research potential.

Consistent with the 'Tiered research question' approach outlined in the Tasmanian Heritage Council's *Guidelines for Historical Archaeological Research on Registered Places*[40], the following questions could be investigated in the archaeological remains expected to be present within the subject site:

Tier 1 Questions: These questions outline the essential knowledge base needed for any site research or significance evaluations. Such questions are often empirical in nature, and straightforward answers can be sought and often identified – generally limited to a physical knowledge of that particular place. Questions relevant to the subject site may include:

- How closely did the buildings and site features (including outbuildings, fences etc.) conform to the historic plans?
- Can the earliest date of occupation of the place be identified? (i.e. known to be earlier than 1830s, but not historically conclusive).
- What construction methods were used in the buildings and other infrastructure (in particular the industrial infrastructure)?
- What evidence of alteration of the natural landscape is archaeologically determinable (e.g. cutting/filling of the site etc.).
- Are the distinct use/development phases of the buildings distinguishable?
- Can the layout and function of the buildings, and indeed individual rooms or yard spaces be ascertained?
- How thoroughly were the buildings demolished? And what subsequent disturbance is evident?

Answers to these questions provide a foundation of information about the structure, type, use and duration of site occupation which enables the researcher to consider a second tier of questions.

Tier 2 Questions: Conclusions that can be drawn about a site that connect the material remains found on a site to specific behavior. For instance:

- How do artifacts relate to the lifeways of the households that lived on the site, or occupations, hobbies or recreation undertaken on the site?
- Do any artifacts represent class, gender, taste and health/hygiene of those living on the site?
- Particularly if artifacts can be specifically dated, and with supplementary historical research, artifact assemblages from this site may contribute knowledge and provide tangible connectedness to known inhabitants and their families, and how they lived.

[40] http://www.heritage.tas.gov.au/media/pdf/Archae%20ResGlines%20%20FINAL%20-%20June%202009.pdf

- Similarly, do artifacts or structural remains correlate with the known activities and occupations undertaken on the site. The material culture evident through archaeological remains on this site (noting however the possibility of disturbance) has the potential to provide a range of analytical approaches that may supplement, and/or refute, the historical record (particularly industrial heritage) and be a very important research tool.

Tier 3 Questions: These questions represent the highest level of inquiry. Such questions associate the activities and behavior at individual sites with broad social, technological and cultural developments – which can be of interest on local, national or global lines of enquiry. Whilst these questions posed for a single site may not reach conclusions in the short term (as Tier 1 and 2 questions might) – the collection of data can contribute to future research by the provision of a comparable dataset. The goal of such research is to develop increasingly refined and tested understandings of human cultures within broader theoretical or comparative contexts. Lines of wider enquiry that findings from within the subject site may contribute to are:

- Do the conclusions on gender, class, economic and social status of the inhabitants of the buildings conform to the 'normal' Victorian household?
- Are there class or status differences evident in the material culture of the inhabitants of this area (subject to further historical research) when compared to, say, other early Hobart residents or residents in contemporary rural areas and/or other cities.
- Did any changes in material culture through time in the residences coincide with wider Tasmanian or local events or technology (e.g. end of convict labour, urbanisation/development of Hobart, port/railway upgrades, start of rubbish collection etc.)?

7.6. ARCHAEOLOGICAL ZONING PLAN AND POLICIES

As per the methodology outlined above, this section has drawn upon the chronology of site development which has detailed the physical evolution of the site and events/processes which would have acted to build the archaeological record. Above has discussed the likely significance of those archaeological remains and what they may yield in terms of research potential alongside key historic, regional, thematic and temporal lines of enquiry. This has been coupled with provided an assessment of the events which are likely to have impacted upon the integrity of those archaeological remains.

From the above, it is therefore possible to formulate an archaeological zoning plan, which provides an indication of the parts of the site which are likely to yield significant archaeological remains. The spatial reference provided by the zoning plan can then be coupled with archaeological management policies, which are guided by the significance of the particular remains expected and their ability to yield information as per the research questions.

Figure 7.4 depicts the areas of archaeological potential as per the above discussion:

Figure 7.10 – Archaeological zoning of the subject site, as per the table below (note that the non-shaded areas are considered to have low/no archaeological potential). Adapted from www.thelist.tas.gov.au

Area	General level of archaeological potential	Management policy
General policies	Where possible, the preference is to not disturb archaeological remains, however it is acknowledged that the feasible redevelopment of the site may not be possible without doing so. Consideration should be given to any development design to minimise potential impact, however if this is not feasible the above policies (and implementation of method statements pursuant to those policies) are considered sufficient to yield the archaeological potential of the site. An archaeologist should be included in the project design team in order to manage archaeology as part of an iterative process between the client, archaeologist, designer(s) and permit authorities.	
	Consideration should be given in any redevelopment of the site to incorporate archaeological remains (e.g. as interpretation) however this should not inhibit the feasible redevelopment of the site.	
	A test-trenching program, or geophysical investigations may be employed to refine the archaeological judgments outlined in this document and to better guide the design and implementation process (note that test-trenching may require development approval).	
	All results from any archaeological work on the site should be made widely available in order to support the ongoing research of the place and associated themes.	
Red	High	Any excavation proposed in areas of **high archaeological potential** (i.e. red) must be preceded by an archaeological impact assessment, and if necessary an archaeological method statement, which details measures to be taken to avoid or mitigate impact upon the archaeological resource. That method statement must be in accordance with industry standard (e.g. the Tasmanian Heritage Council's Practice Note 2 – *Managing Historical Archaeological Significance in the Works Application Process*) and implemented in the works process (preferably ahead of any construction works program in order to allow rollout of archaeological inputs outside of any immediate critical timelines). Recording and curatorial inputs are to be as per the highest industry practice as per below and consideration should be given to the retention in-situ of any remains for perseveration or interpretation unless this is not considered prudent or feasible in an overall development process or where it is necessary to remove overlying significant remains to investigation those underlying.

Remainder of site	Low/no	All works crew involved in excavation elsewhere on the site must be brief for precautionary 'call-in' provisions for the site in the event that any unanticipated archaeological remains are present – e.g. wells, cesspits, drains, undocumented outbuildings etc. If any such possible remains are found, works must cease in that area (may continue elsewhere) and an archaeologist called-in to assess significance and manage as per the policies and directions of this document.

8. CONSERVATION POLICY

8.1. PURPOSE OF POLICY AND DEFINITIONS

It is expected that any administrators and professionals planning and undertaking physical works on site will first familiarise themselves with all general conservation policies, then the specific implementation recommendation (based on these policies) relating to the particular element on which works are being planned.

8.2. ROLE OF STATEMENT OF SIGNIFICANCE

Any conservation policy strongly favours the conservation of elements of primary significance, and the removal of elements which may be of detriment to the conservation or interpretation of elements of a higher significance. A thorough understanding of the statement of significance, and the specific significance of individual items, is therefore essential in appreciating how specific policies have been developed, and how these should be applied to the physical attributes of the place.

The statement of significance has defined and ranked the periods and themes which that place represents, and the analysis of the physical attributes has detailed exactly what has survived to represent such. Each element of the physical fabric has been assigned its own significance level, based on its ability to demonstrate the significance of the place, and thresholds for assignment of this significance have been kept consistent in the assessment of all elements.
The policies below, therefore, broadly guide how this fabric should be treated in order to allow it to better conserve and demonstrate the statement of significance.

8.3. DEVELOPMENT OF POLICY

Having ascertained the ability for fabric to demonstrate the statement of significance, constraints, opportunities and requirements are considered, alongside stakeholder requirements, to develop the broad conservation policies below. Whilst conservation policies may be contrary to the constraints, opportunities or requirements, the polices aim to best address these whilst still maintaining appropriate conservation practice. Any unresolved conflict is then specifically debated in the implementation strategy.

8.4. POLICIES

The underlying principle, by which all conservation practices should be guided, is the ICOMOS Australia *Burra Charter*. The statement of significance has defined the attributes of the site of which greatest significance is assigned, thereby the priority of conserving attributes associated with such should be considered paramount compared to those of lesser significance. This, however, must be balanced with retention of elements of lesser significance where guided by the conservation policies. With the statement of significance in mind and with the adoption of Burra Charter principles this section will introduce the conservation policies developed specifically for the subject site.

1	**General Policies**	
1.1	Approach to works	The approach to managing any works on the place must be guided by the principles of the ICOMOS Australia *Burra Charter.*[41]
1.2	Use/development	Any use or development of the place must not have any unreasonable adverse heritage impact upon identified values of the place. The site requires a suitable use or adaptive reuse in order to sustain its future maintenance.
1.3	Supervision	All works to the significant elements of the place, and planning for such works, must be guided by a conservation architect, heritage consultant or other person(s) qualified and experienced in the conservation of historic heritage places.

2	**Significant Buildings and Fabric**	
2.1	Significant buildings and fabric	Buildings deemed to be of high significance must be conserved, restored and maintained (namely the former Crisp and Gunn buildings). Significant fabric associated with those buildings must also be conserved, restored and maintained.
2.2	Non-significant buildings and fabric	Buildings and fabric which are of low or no significance may be retained, modified or demolished as desired.
2.3	Intrusive buildings and fabric	Intrusive building and fabric should be removed, unless these are providing critical supporting infrastructure to enable ongoing use of the overall buildings.

[41] http://australia.icomos.org/wp-content/uploads/The-Burra-Charter-2013-Adopted-31.10.2013.pdf

3	The former Crisp and Gunn Workshops and Store	
Exterior		
3.1	Exterior form	The overall exterior form of the building should be maintained.
3.2	Exterior walls and apertures	The northern, eastern and western walls may be adapted for the addition or modification of apertures as desired, however the general line of these walls should be maintained. The form of the southern (Melville Street) wall must be generally maintained.
3.3	New extensions	There is scope for extensions to this building on the eastern and in particular northern walls (as precedented by the 1997 Forestry extensions). The scale of any rear extension is not considered critical from a heritage perspective and is likely to be acceptable as directed by general planning provisions.
3.4	Windows	All original windows must be maintained unless modification is absolutely necessary for thermal, acoustic, fire rating or safety reasons. Any modifications should be retained within existing apertures.
3.5	Doors	The front door arrangement may be modified as desired within the existing aperture (whether flush to the façade or recessed).
3.6	Detailing	Significant exterior detailing should be retained, unless replacement is necessary for repair, weatherproofing or security purposes, in which case compatible styling and materials must be used. New work should be sympathetic to, but not necessarily imitative of, the original form, detailing and materials.
Interior		
3.7	Form	Ideally the interior of the building should retain the ability to read as a large and open form (i.e. one smaller room on the semi-basement level and one large + one smaller room on the ground and first floors). Subdivision of these spaces to suit an adaptive reuse is likely to be acceptable however some legibility of the larger spaces should remain.

3.8	Detailing	Fitout of the building should respond to the utilitarian nature of the original fitout and take a minimal approach. Do not attempt to introduce 'period' detailing that is false to the context of the building.
3.9	Services	Owing to the low integrity of the interior, installation of modern services (e.g. kitchens, toilets, electrical, fire safety) etc. are likely to be possible without heritage detriment.
3.10	Access	If a lift is required in the future, this is likely to be acceptable given the low integrity of detailing of the interior. Options for an external lift that is discrete and sympathetic to the building may be considered.

4	**The former Crisp and Gunn Offices**	
Exterior		
4.1	Exterior form	The overall exterior form of the building should be maintained.
4.2	Exterior walls and apertures	The northern, eastern and western walls may be adapted for the addition or modification of apertures as desired, however the general line of these walls should be maintained. The form of the southern (Melville Street) wall must be generally maintained.
4.3	New extensions	There is scope for extensions to this building on the western and in particular northern walls (as precedented by the 1997 Forestry extensions). The scale of any rear extension is not considered critical from a heritage perspective and is likely to be acceptable as directed by general planning provisions.
4.4	Windows	All original windows must be maintained unless modification is absolutely necessary for thermal, acoustic, fire rating or safety reasons. Any modifications should be retained within existing apertures.
4.5	Doors	The front door must be retained.

4.6	Detailing	Significant exterior detailing should be retained, unless replacement is necessary for repair, weatherproofing or security purposes, in which case compatible styling and materials must be used. New work should be sympathetic to, but not necessarily imitative of, the original form, detailing and materials.
Interior		
4.7	Ground floor form	The interior of the ground floor should be largely retained as existing, with the ability to read the original layout retained. Modification of the kitchen/toilets area may be possible and restoration of the larger volume of the main chamber is desirable.
4.8	Upper floor form	Adapt/refit the upper floor as desired (retain stairs landing and solar access to lightwells).
4.9	Ground floor detailing	Retain all detailing in the front rooms and generally of that in the main chamber and stairs hall (elements identified of low/no significance may be removed/modified).
4.10	Upper floor detailing	Fitout of the upper floor should respond to the utilitarian nature of the original fitout and take a minimal approach. Do not attempt to introduce 'period' detailing that is false to the context of the building.
4.11	Services	Installation of modern services (e.g. kitchens, toilets, electrical, fire safety) etc. are likely to be possible without heritage detriment. Ideally larger service installations should be limited to the existing toilet/kitchen area and/or the upper floor.
4.12	Access	If a lift is required in the future, this is likely to be acceptable given the low integrity of detailing of the rear portion of the interior. Options for an external lift that is discrete and sympathetic to the building may be considered.

5	The Forestry buildings	
Exterior		
5.1	The Forestry Dome	Although not considered a 'heritage building', given the prominence of the structure as well as the recognised design excellence in its execution, consideration should be given to retaining the dome in any future development as an entry statement to the heritage buildings and any new development at rear. Ideally plantings should be reinstated.
5.2	The rear 1997 building.	This building is not considered to have any heritage value and does not exhibit that same design excellence as the dome itself. Whilst it has an association with the dome, in the absence of that association it would not offer any remarkable qualities that warrant retention. Accordingly this building may be retained/modified/removed as desired.

6	Maintenance of Curtilage, Streetscape Values and New Development Guidelines	
6.1	Curtilage of existing buildings	The important curtilage to the former Crisp and Gunn buildings are their streetscape presence, which is likely to endure any development rearward permissible under the planning scheme (i.e. is not necessarily a heritage issue). The site can sustain higher/larger-scale development internal to the site which retains the streetfront scale of the existing buildings. Overall height of any internalized development becomes more a wider-townscape planning issue rather than a site-specific heritage issue particularly if this maintains the existing heritage buildings as the main streetscape elements.
6.2	Style of new development	New development need not emulate any particular architectural style of any building on the subject site, however if desired architectural form/treatments may 'borrow' stylistic elements from the existing buildings.

7	Archaeology	
7.1	Historical archaeology	Further to Section 8, any proposals for works in the areas of high archaeological potential must be accompanied by an archaeological impact assessment and, if necessary, an archaeological method statement

		consistent with the requirements of the Tasmanian Heritage Council's Practice Note 2 (archaeology) or other industry standard.
7.2	Interpretation of archaeological values	Further to the statement of archaeological potential, opportunities to interpret the archaeological value (and results of any archaeological work) in any future development should be taken (whether by in-situ interpretation of archaeology, use of artifacts, and or other interpretive devices and publications.

8	Other policies	
8.1	Subdivision	The subdivision pattern of the site is not considered significant, having been reconfigured several times, therefore any future subdivision/ consolidation is likely to be acceptable.
8.2	Interpretation	Any development on site should include interpretation of heritage values, in particular the Crisp and Gunn occupation and Forestry occupation – both with wider links to the Tasmanian timber and building industries.

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	Policy 2.1 – Retain the former Crisp and Gunn buildings. Policies 2.2-3 – Remove any non-significant/intrusive buildings/elements. Policies 3.8 & 4.6-10 – Retain significant interior detailing.	*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.*
E.13.7.2 Building and Work other than Demolition	Policies 3.1 & 4.1 – maintain the overall original form of the former Crisp and Gunn buildings. Policies 3.2 & 4.2 – limit adaptations to any walls but the façade. Policies 3.3 & 4.3 – Limit new extensions to the rear. Policies 3.4-5 & 4.4-5 – Retain significant doors and windows. Policies 3.8 & 4.9-4.10 – New detailing to respond to context. Policy 6.2 – New development need not emulate existing heritage styles.	*P1. Development must not result in any of the following:* *(a) loss of historic cultural heritage significance to the place through incompatible design, including in height, scale, bulk, form, fenestration, siting, materials, colours and finishes;* *(b) substantial diminution of the historic cultural heritage significance of the place through loss of significant streetscape elements including plants, trees, fences, walls, paths, outbuildings and other items that contribute to the significance of the place.* *P2. Development must be designed to be subservient and complementary to the place through characteristics including:* *(a) scale and bulk, materials, built form and fenestration;* *(b) setback from frontage;* *(c) siting with respect to buildings, structures and listed elements;* *(d) using less dominant materials and colours.*
	Policies 3.3 & 4.3 – Limit new extensions to the rear.	*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.*

	Policies 3.4-5 & 4.4-5 – Retain significant doors and windows. Policy 6.2 – New development need not emulate existing heritage styles.	*P4. Extensions to existing buildings must not detract from the historic cultural heritage significance of the place.*
	Not applicable.	*P5. New front fences and gates must be sympathetic in design, (including height, form, scale and materials), to the style, period and characteristics of the building to which they belong.*
		P6. The removal of areas of landscaping between a dwelling and the street must not result in the loss of elements of landscaping that contribute to the historic cultural significance of the place.
E.13.7.3 Subdivision	Policy 8.1 – The current title configuration is not considered significant.	*P1. A proposed plan of subdivision must show that historic cultural heritage significance is adequately protected by complying with all of the following:* *(a) ensuring that sufficient curtilage and contributory heritage items (such as outbuildings or significant plantings) are retained as part of any title containing heritage values;* *(b) ensuring a sympathetic pattern of subdivision;* *(c) providing a lot size, pattern and configuration with building areas or other development controls that will prevent unsympathetic development on lots adjoining any titles containing heritage values, if required.*

9. THE PROPOSED DEVELOPMENT

The University of Tasmania has proposed a redevelopment of the place predominantly as a teaching and student services facility. In brief, the project proposes:

- The near-total retention of the former Crisp and Gunn buildings. The former workshops will remain as two large spaces with some subdivision, however the tenor of these spaces as an industrial space will be better legible than the current partitioning arrangement. The former store will be modified to remove part of the floor between the semi-basement and ground floor to form an atrium and the first floor will be opened up into the first floor of the workshops.
- Restoration ground floor of the former Crisp and Gunn offices with removal of intrusive elements and the introduction of lift and stair infrastructure in the less-sensitive rear (current toilet and kitchen) space (existing stairs to be retained also). Refurbishment of the first floor of the former office building whilst maintaining the significant stair landing and solar access to the lightwells.
- Retention of the former Forestry Dome
- Substantial modification of the rear portion of the 1997 Forestry building, workshops, 'Freedom building' etc. to form a range of teaching and student service spaces.
- Note that the entire proposed development is generally within existing building envelopes.

Plans relied upon for this assessment are cited in the table below, also to be read in conjunction with the Woods Bagot design statement for the Forestry Revitalisation project.

Note that as per the conservation planning process as detailed in Section 1, the proposal for the demolition and development of the site was informed by the preliminary heritage assessment in order to ensure that the proposal was formulated in response to heritage advice and that the heritage planning process was not prejudiced by any predisposed scheme. With the refinement of the conservation policies beyond the preliminary heritage input, an iterative process of heritage input into the design process was undertaken, also in consultation with the planning authority, in order to ensure that the conservation policies were utilised in the design to achieve satisfactory heritage outcomes and the effective and feasible development of the site according to client aspirations.

10. HERITAGE IMPACT ASSESSMENT

Please note that all drawings and models in this section have been provided by Woods Bagot Architects unless otherwise noted. 'Architect comment' has been provided by Alistair Flynn of Woods Bagot (16/12/21).

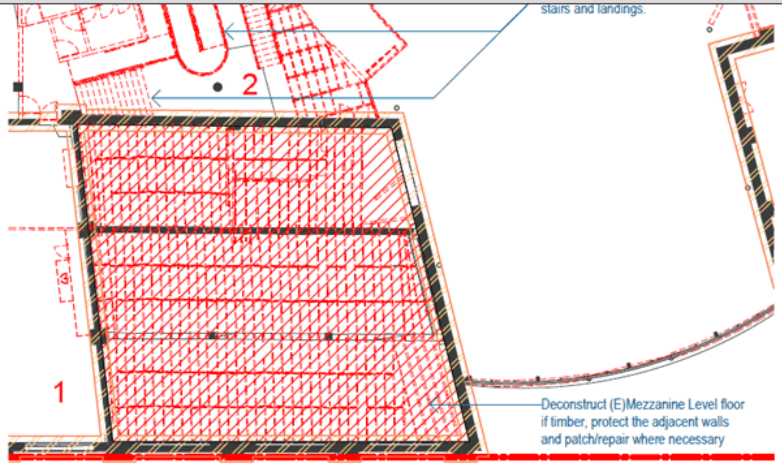
The following discussion analyses the proposed development along a number of lines, including demolition, development, viewscape/setting etc. The discussion against specific parts of the proposal are then considered against the various polices and recommendations developed in the current document as well as those cited in Section 2. Section 10.7 will then condense that assessment to specifically address the statutory heritage requirements as introduced in Section 2.

The following colour coding has been used as a 'quick' means of understanding the heritage impact:

Colour	Impact
No impact	No heritage impact and complies with conservation policies.
Minor and/or justifiable heritage impact	Minor heritage impact which may not wholly comply with conservation policies, that can be justified within the wider context of adaptive reuse of the building, or where this document proposes likely-feasible mitigation strategies, or where there is obviously no prudent/feasible alternative to that impact.
Medium or major heritage impact which requires complex justification	Medium or high heritage impact which requires justification from the architect/designer as to why there are no prudent or feasible alternatives to that action. Where necessary, commentary from the architecture team will be added to assist in explaining and justifying where impact may arise as an on-balance discussion which may be driven by other non-heritage factors.

10.1. DEMOLITION

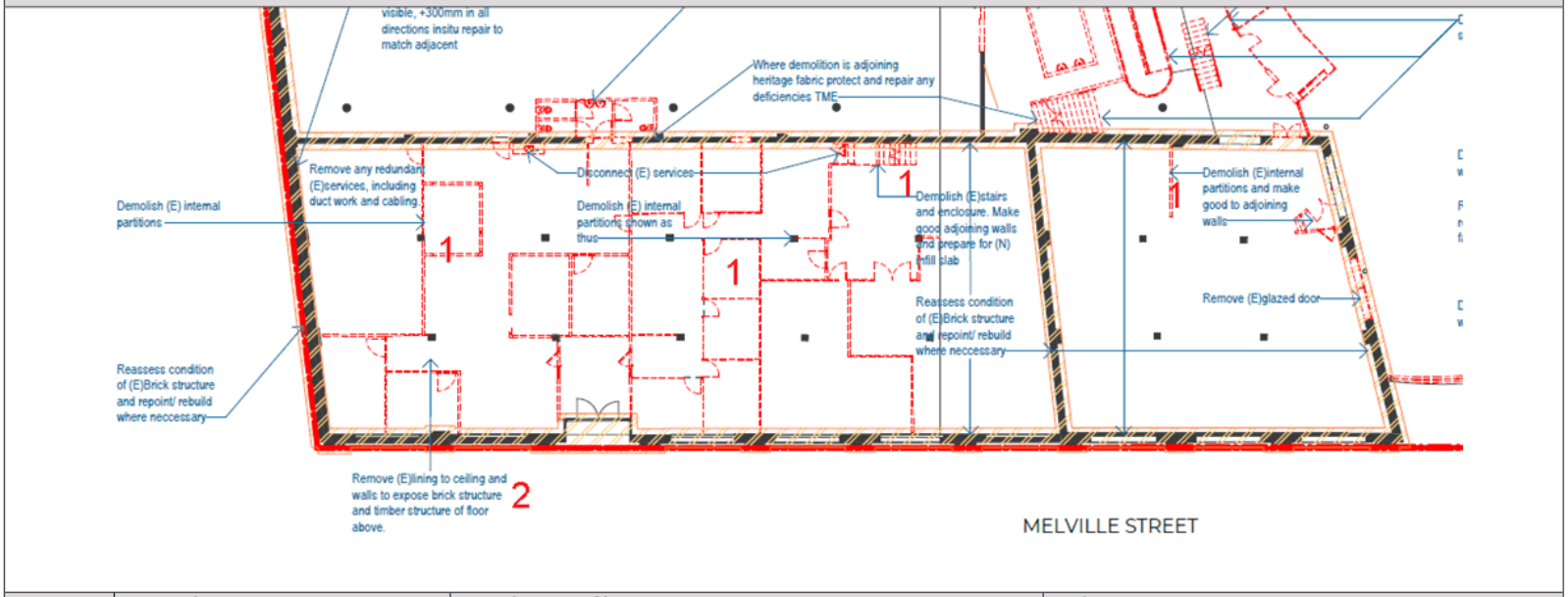
Former Crisp and Gunn Warehouse and Store – Semi-basement. Woods Bagot Drawing AR 12210 Rev. B.



Item	Proposal	Consideration of heritage impact	Architect comment
1	Demolition of floor between semi-basement and ground.	This will have a heritage impact in terms of removal of a substantial amount of structural fabric and inhibiting the ability to discern the spatial layout of the original building.	Removal of this floor allows for the creation of larger, continuous workspace areas and for the space to open up considerably. This area is currently significantly constrained.

2	Demolition of portions of wall for connectivity (not shown on the demolition plans).	This wall has previously been open and has been subject to modifications in the past. New openings for functional connectivity to the new development at rear is not considered to have an unreasonable heritage impact.	

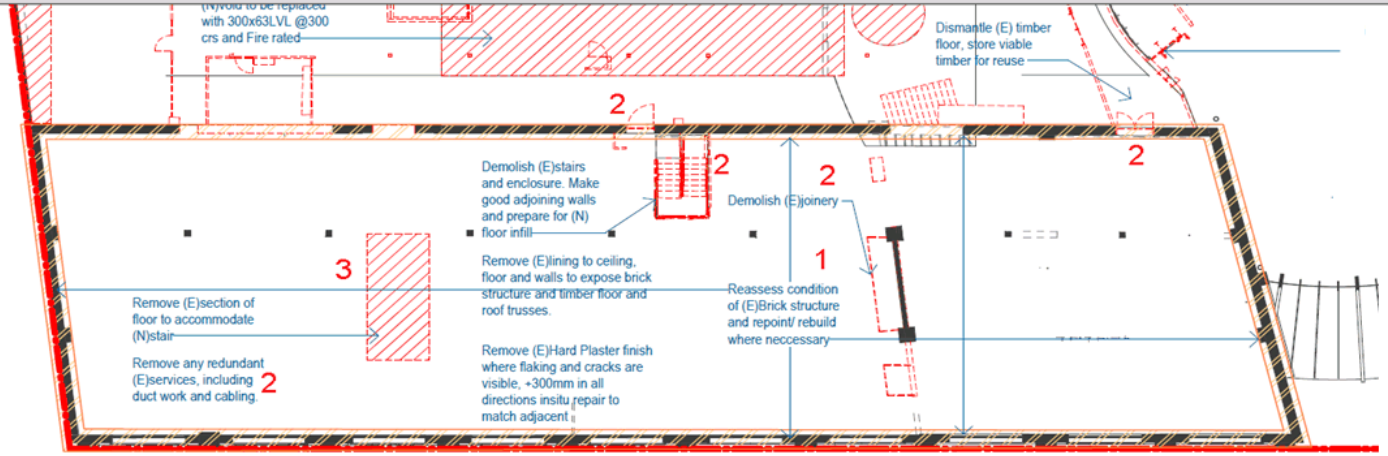
Former Crisp and Gunn Warehouse and Store – Ground floor. Woods Bagot Drawing AR 12210 Rev. B.



Item	Proposal	Consideration of heritage impact	Architect comment
1	Removal of partitioning, stairs etc.	All of these works derive from the 1997 renovation and are of no significance. Their removal in favour of a rationalised layout for an adaptive reuse is an acceptable outcome.	
2	Removal of false ceiling and walls.	This is a positive heritage outcome in exposing more significant underlying fabric and reinstating the 'warehouse feel' of the building.	

79-83 MELVILLE STREET HOBART – HISTORIC HERITAGE MANAGEMENT PLAN

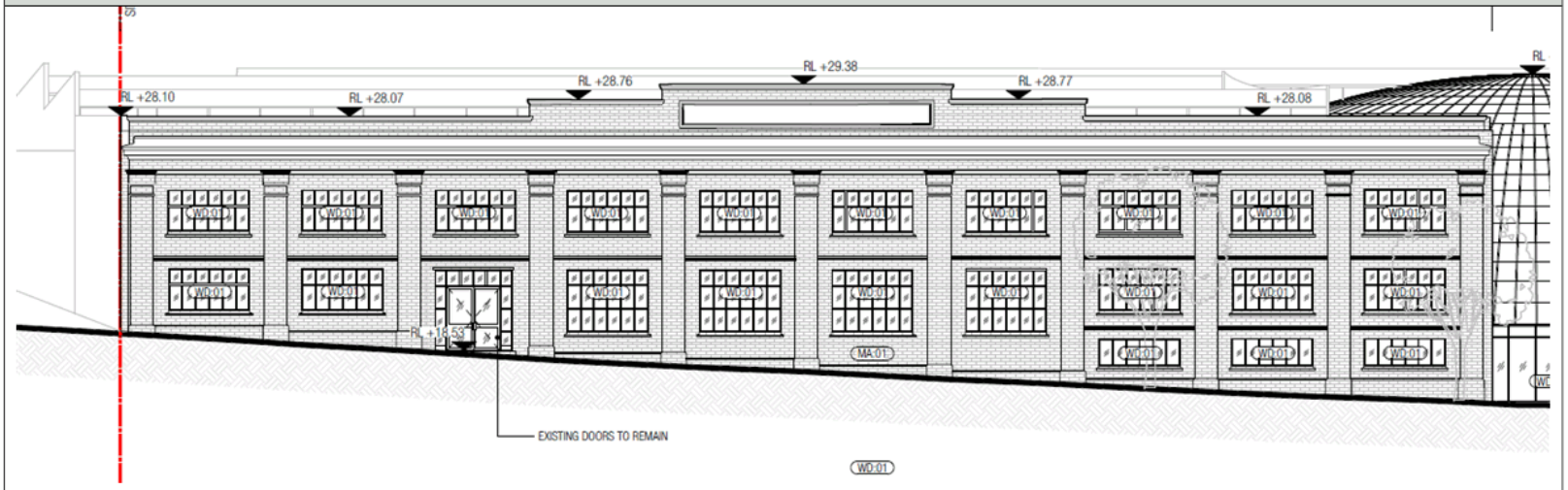
Former Crisp and Gunn Warehouse and Store – First Floor. Woods Bagot Drawing AR-12220 Rev. C.



Item	Proposal	Consideration of heritage impact	Architect comment
1	Repair of brickwork	A positive outcome in repair of original fabric.	
2	Removal of c1997 joinery, stairs, doors etc.	These are not significant elements so their removal has no impact.	
3	Removal of a section of flooring and floor structure to make way for new stairs.	Whilst this does result in the loss of some original fabric, this is not considered unreasonable in providing suitable vertical circulation infrastructure. It is recommended that the removed floorboards be used to patch/repair floors elsewhere as necessary (e.g. where the 1997 stairs are to be removed).	

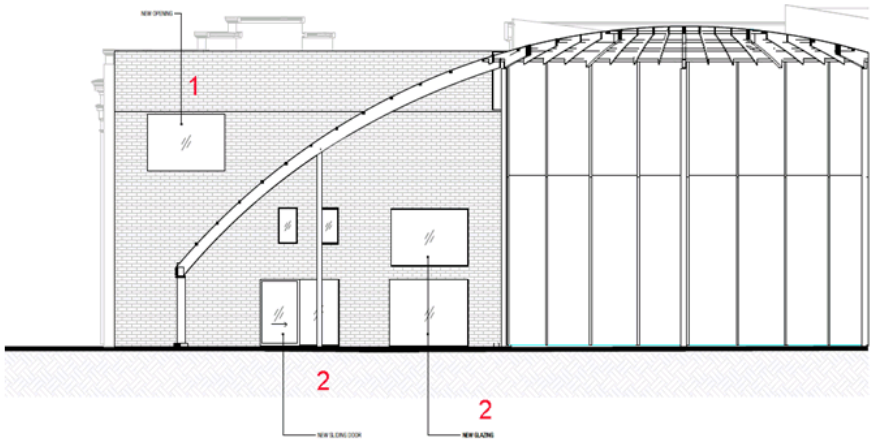
Former Crisp and Gunn Warehouse and Store – Melville Street (southern) elevation

Woods Bagot Drawing AR 13110 Rev. A.



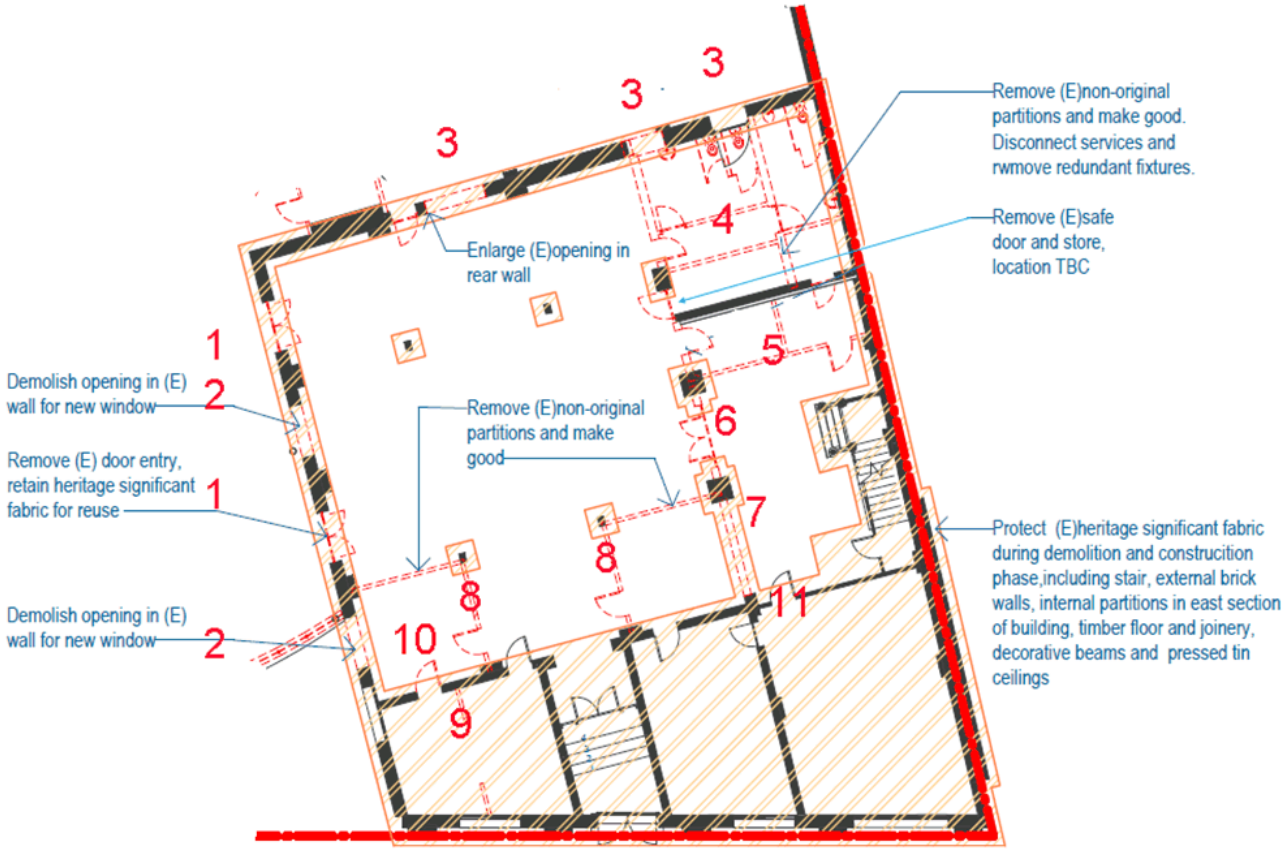
Item	Proposal	Consideration of heritage impact	Architect comment
1	No demolition to this elevation is proposed.	No impact.	

Former Crisp and Gunn Warehouse and Store – Eastern elevation. Woods Bagot supplementary drawing.



Item	Proposal	Consideration of heritage impact	Architect comment
1	New glazing in a new opening.	Minor impact by loss of some heritage fabric, however this is not considered unreasonable in allowing greater solar access to the upper floor and is precedented with other openings in this wall. This wall offers no remarkable qualities and the proposed opening will not result in the loss of any significant detailing.	The new glazing will create better visual amenity within the workspace. The wall already has a number of non-heritage openings within it and this new opening is visually similar to the existing ones.
2	Replacement of glazing/doors in existing openings.	No impact. Whilst not original openings, these are part of the 1997 renovation and will not be enlarged.	

Former Crisp and Gunn Offices – Ground floor



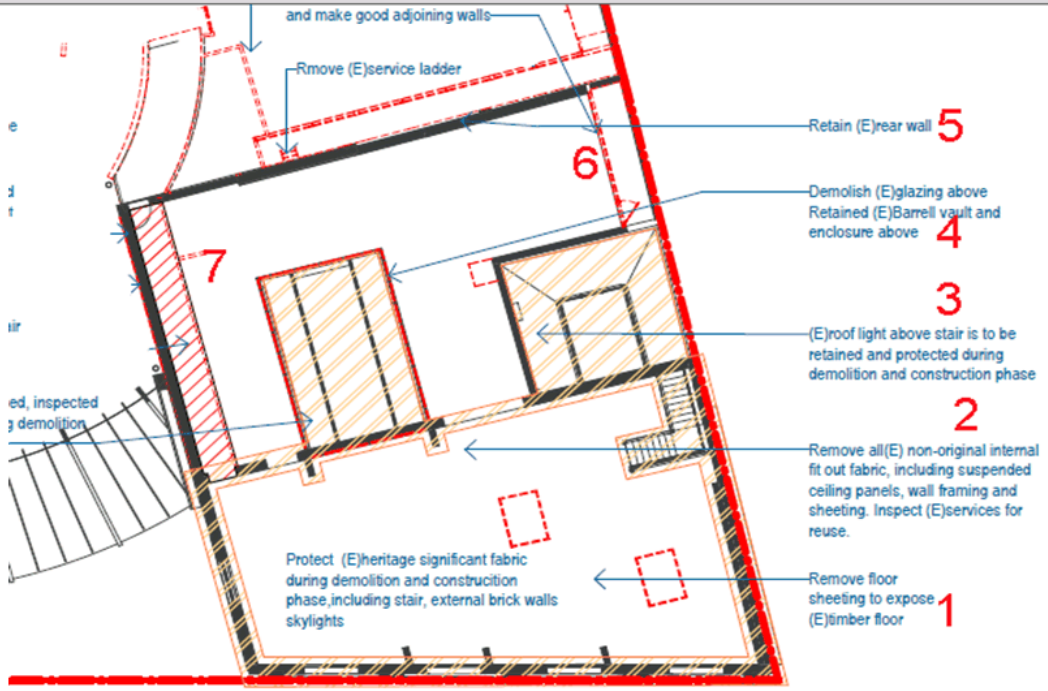
79-83 MELVILLE STREET HOBART – HISTORIC HERITAGE MANAGEMENT PLAN

Item	Proposal	Consideration of heritage impact	Architect comment
1	Adapt existing c1997 doors for new windows	No impact. This is the reconfiguration of an existing non-original opening. Note that the door to be removed has noted 'retain significant heritage fabric for reuse' – this is not necessary as this door is wholly c1997.	
2	New window insertions	Minor impact due to the loss of original fabric (blank brick wall) however this wall has been reconfigured on at least two occasions to suit adaptive reuses therefore this further adaptation is not considered unreasonable.	The new glazing will create better visual amenity within the workspace. The wall already has a number of non-heritage openings within it and this new opening is visually similar to the existing ones.
3	Enlarge and make new openings in rear wall to connect new rear development.	This is considered acceptable as a means of connecting the building to the new development at rear as part of the overall adaptive reuse plan. This wall has a history of modification/addition of openings and the wall offers no remarkable qualities. Whilst a small amount of original fabric 9blank brick walls) will be lost, this is not considered unreasonable for necessary connectivity and amenity.	These openings help create spatial and visual links between the heritage and new portions of the development.
4	Removal of partitioning/walls associated with kitchen, toilet and safe.	This area has been subject to modification in the past as a service area. The proposal will remove the walls, safe and partitioning to make a larger single space. The integral wall which separates this space from the stair hall (and contributes to the spatial qualities of the stair hall) is to be retained. The safe is to be removed. The following recommendations are made to mitigate impacts in this area:	

		- That a nib wall and bulkhead be retained between this area and the main chamber to delineate the former line of wall and to retain some spatial qualities of those separate areas. - The safe door be retained in-situ as part of the proposed partitioning between these areas. - If there are any significant tin ceilings above the current false ceilings, then these be retained and repaired if feasible.	
5	Removal of partitions around kitchenette and cleaner's store.	These partitions derive from the 1997 renovation and have impeded the original spatial qualities of the stair hall. Their removal is beneficial in reinstating that space.	
6	Removal of timber doors	These derive from the 1997 renovation and although sympathetic and of high quality they are not significant fabric. The 1970s plan shows this as an opening with small nibs against the columns. Their removal will have no impact (with the following recommendation). It is recommended that nibs be retained adjacent to the columns (i.e. only removing infill from 1997 back to the 1970s condition). It is also recommended to retain a bulkhead to assist in retaining some spatial separation of the main chamber and stair hall.	
7	Removal of a section of wall.	The 1970s plan shows this as an opening with small nibs against the columns. Removal of this will have no impact (with the following recommendation). It is recommended that nibs be retained adjacent to the columns (i.e. only removing infill from 1997 back to the 1970s condition). It is also recommended to retain a bulkhead to assist in retaining some spatial separation of the main chamber and stair hall.	

8	Removal of modern partitions	These derive from the 1997 renovations and are not significant. Their removal will have no impact.	
9	Enlargement of a later opening between rooms.	This opening between what was formerly two rooms was created in 1997. It is recommended that nibs and a bulkhead be retained to demonstrate the former spatial qualities of this area.	
10	Removal of an original door.	This is a significant original door with associated joinery. The proposed floor layout does not appear to be reliant on this door being removed. It is recommended that this door be retained and made inoperable if use is not desired.	This door can be retained – this will be further developed during the later design stages of the project.
11	Removal of a later, but sympathetic door.	Note that the demolition plan does not indicate that this door is to be removed, however the development plan shows that the wall between the office and the stair hall is not to have any doorway. This door, although sympathetic, appears to be a replica – the 1990s Fabric Survey indicates that it has been modified and this wall has a different configuration on the 1970s plans. Accordingly, modification is deemed acceptable.	

Former Crisp and Gunn Offices – First Floor. Woods Bagot Drawing AE-12220 Rev. C.

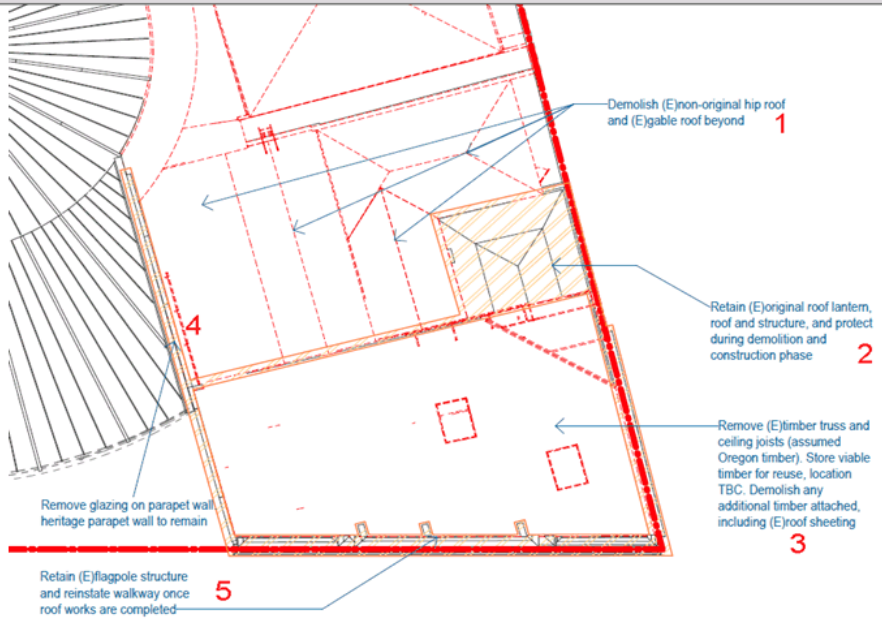


Item	Proposal	Consideration of heritage impact	Architect comment
1	Remove floor sheeting to expose floorboards	A positive heritage outcome in the reinvigoration of a currently obscured original and significant element of this area, which is largely devoid of any original internal fabric.	

2	Removal of non-original fittings including false ceiling, panelling etc.	These elements derive from the 1997 works. Their removal is not considered to have any heritage impact.	
3	Demolition of infill glazing around roof lantern – with retention of the roof lantern.	The infill glazing was added in 1997 to enclose the roof lantern when this area of first floor was added. Its removal is of no detriment. The retention of the roof lantern has been a key driver in the design of this area – noting its heritage significance and its retention is a positive heritage outcome.	
4	Removal of glazed superstructure of barrel vault skylight with retention of the barrel vault skylight itself.	This will have a heritage impact in the removal of the originally glazed superstructure of the lightwell serving the barrel-vaulted skylight. Note however that this has been substantially modified in the past, with the roof of the lantern removed and modifications to the 'skirt' (which was previously concealed within the original roofspace). The rationale of the removal of the glazing is to provide the opportunity for an uninterrupted floor plate throughout this area at a higher level than the current floor, so as to preserve the barrel vault of the roof lantern so that from the ground floor there is no apparent loss of the function, form or fabric of the lantern (it is intended to be artificially lit).	This skylight is currently already built into the second storey interior and no longer functions as a skylight. Views into this skylight from the existing L2 floorplate show the dusty and untreated rear of the barrel vault – not intended to be viewed from this location. Our approach is to maintain the barrel vault from below as a ceiling feature, which will be artificially lit from above, as it is now. Building a floorplate above the barrel vault 'unlocks' the second floor and allows for seamless links between the new and heritage portions of the development at this level.
5	Demolition of rear wall	Although the demolition plans are inaccurate as they note 'retain rear wall', only the lower portion of this is to be retained, with the portion above the new floor level to be removed for connection between this area and the new development at rear. Despite this drawing error, this wall is from the 1997 works to the building and of no significance. Its removal to facilitate an adaptive reuse is not considered to have any adverse heritage impact.	

6	Demolition of partition wall	These elements derive from the 1997 works. Their removal is not considered to have any heritage impact.	
7	Demolition of ramp		

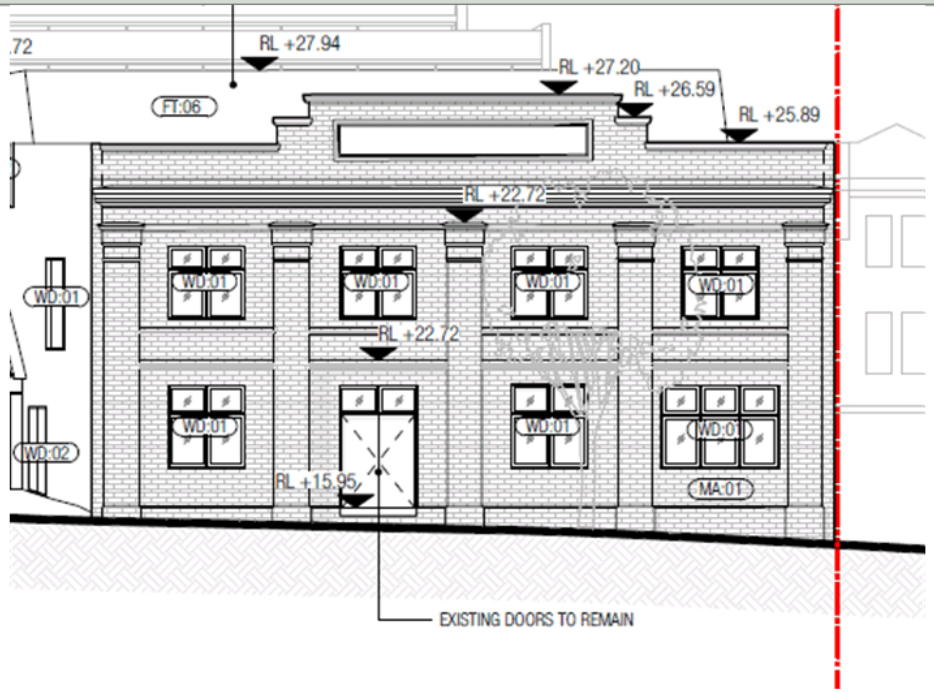
Former Crisp and Gunn Offices – Roof. Woods Bagot Drawing AE-12230 Rev. C.



Item	Proposal	Consideration of heritage impact	Architect comment
1	Removal of 1997 roof over rear section.	No impact. This is all c1997 fabric.	
2	Retain original roof lantern.	No impact. The retention of this lantern was a key design driver and a good heritage outcome.	

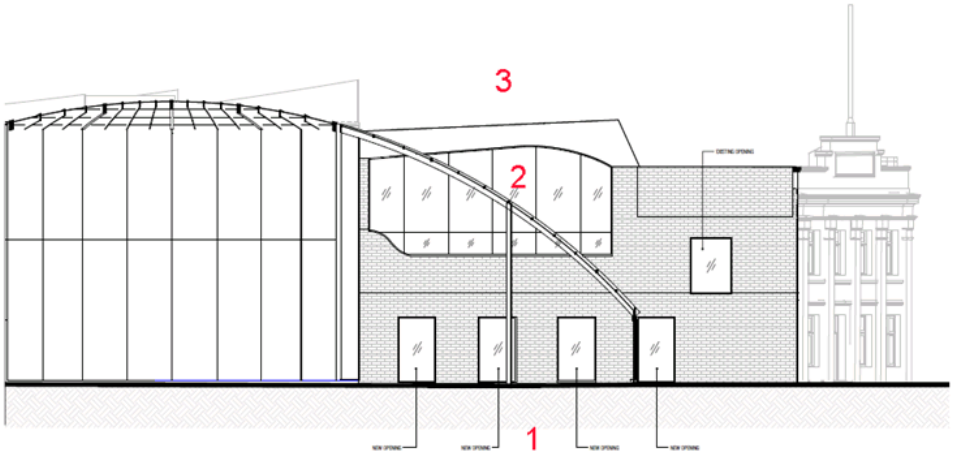
3	Removal of original roof of the front section of the building.	This will have a heritage impact in the removal of all original structural material associated with the roof.	To enable the creation of a contiguous floorplate for workplace at level two, we're proposing to remove the existing roof and replace it with a new roof, which will sit below the existing parapet. This does not impact on the streetscape view but will create an internal space with much better amenity than this space currently has.
4	Replacement of glazing on upper infill wall.	No impact. This glazing infill is c1997 and its replacement with an alternative is acceptable. This retains the original parapet wall from the original roofline of the building which assists in interpreting the evolution of the building.	
5	Temporary storage and reinstatement of flagpole.	As an important design element of the building, the retention of the flagpole is necessary and will be achieved.	

Former Crisp and Gunn Offices – Melville Street (southern) elevation. Woods Bagot Drawing AR 13110 Rev. A.



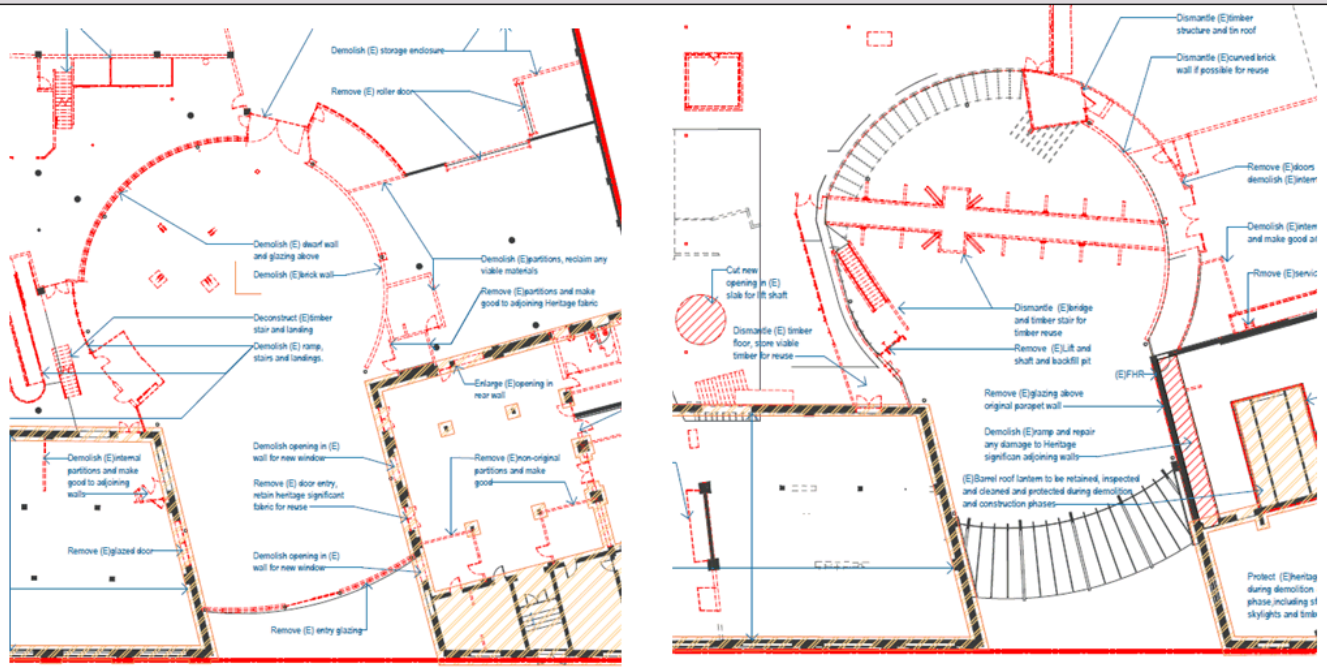
Item	Proposal	Consideration of heritage impact	Architect comment
1	No demolition to this elevation is proposed.	No impact.	

Former Crisp and Gunn Offices – Western elevation. Woods Bagot supplementary drawing.



Item	Proposal	Consideration of heritage impact	Architect comment
1	Reconfiguration of openings on ground floor wall.	Two of these openings are existing and will be reconfigured (deriving from the 1997 renovations), and two will be added. This wall was originally a blank wall and has had at least two iterations of opening configurations during various adaptive reuse periods. Whilst this will result in the loss of some original fabric (blank wall) this wall is not considered remarkable and no significant detailing will be lost, therefore this is considered acceptable. Note that this configuration is not dissimilar to the arrangement in the 1970s and involves re-opening some of these earlier blocked apertures:	The curved parapet and original outline of the brick wall will remain, allowing for the original building profile to be read visually.

Forestry Dome. Woods Bagot Drawing AR 12210 Rev. B and 12220 Rev.C.

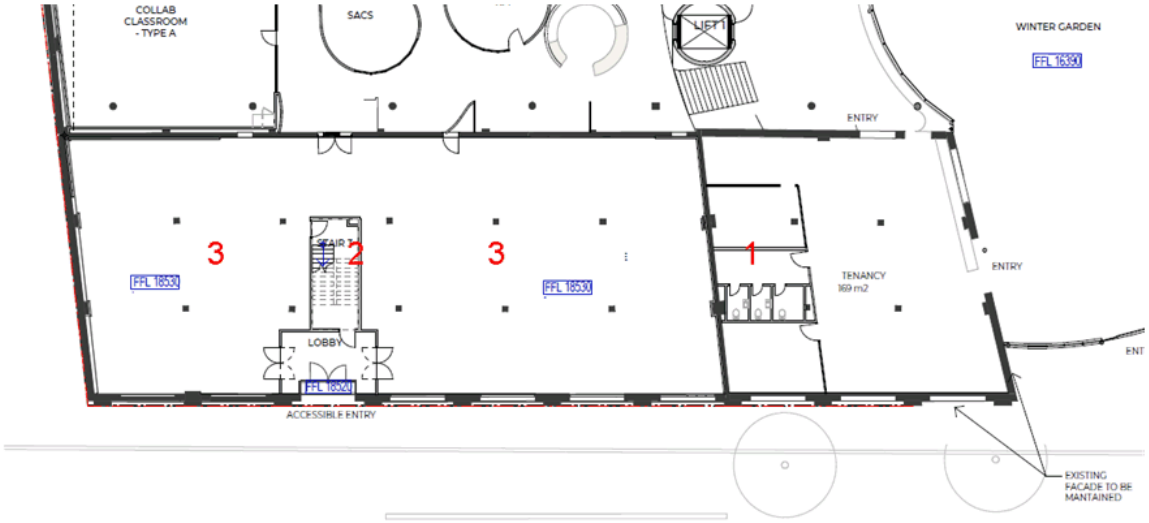


Proposal	Consideration of heritage impact	Architect comment
Removal of bridge, stairs, lift, brick walls and other minor infrastructure associated with the dome.	The proposal removes much of the 'lower' and associated infrastructure of the dome and its connections to the current form of the 1997 Forestry buildings. The distinctive bridge will be removed as it is redundant in the circulation patterns of the proposed development.	

	The overall tenor of the dome and its distinctive glass structure will be retained. As per below, a garden will be reinstated which will restore much of the design intent which has been lost. It is intended that viable materials from the removed portions of the associated structures will be retained and reused – noting that much of this was recycled from earlier timber yard buildings as part of the 1997 works – perpetuating that as an interpretive feature is a positive outcome.	

10.2. RETENTION AND ADAPTIVE REUSE OF THE FORMER CRISP AND GUNN BUILDINGS

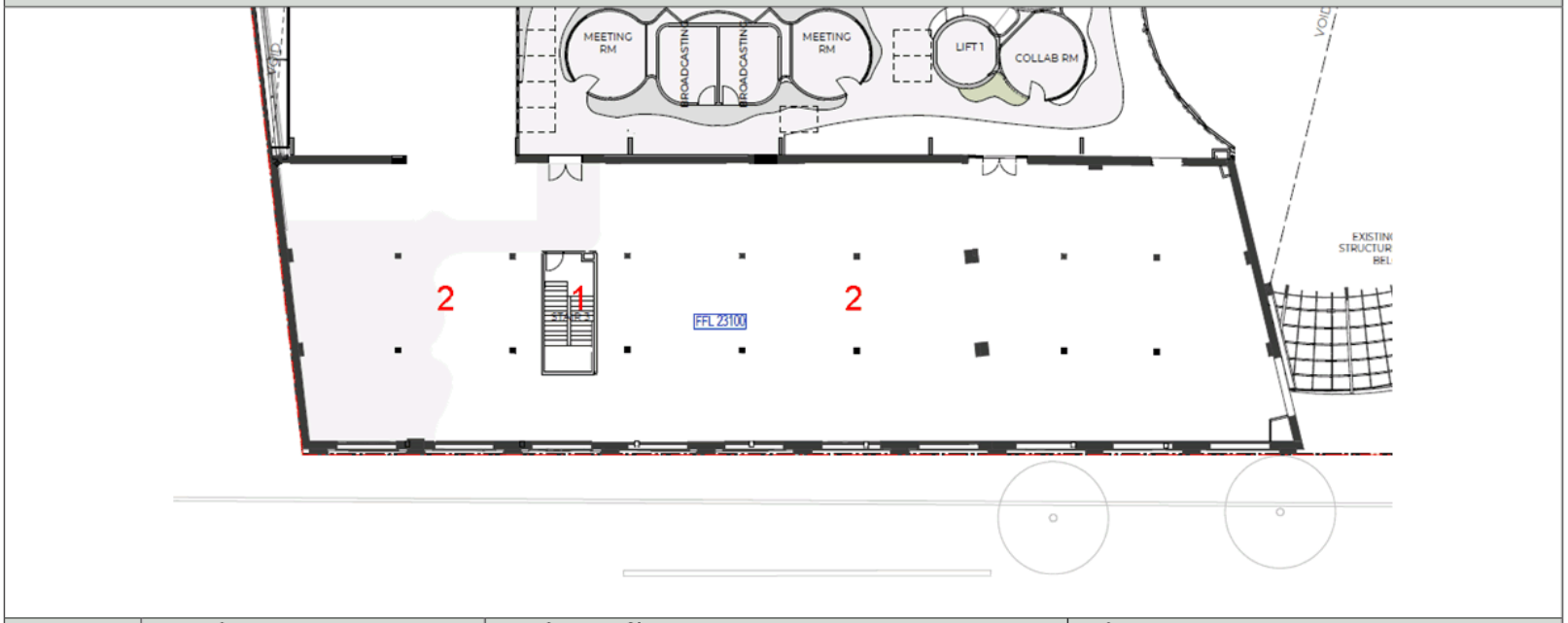
Former Crisp and Gunn Warehouse and Store – Ground floor (including current semi-basement). Woods Bagot Drawing AR-12310 Rev. A.



Item	Proposal	Consideration of heritage impact	Architect comment
1	Toilets and co-lab rooms.	No impact. Whilst this area has traditionally been larger and open, the partitioning for services is not considered to have any adverse heritage impact.	

2	New stairway	Whilst this is not a traditional area for vertical circulation, a compliant stair near the main entrance is considered to be an acceptable outcome in the feasible adaptive reuse of the building.	
3	Large open workspaces	These workspaces are interpretive of the former larger open spaces of this building and are an acceptable heritage outcome.	

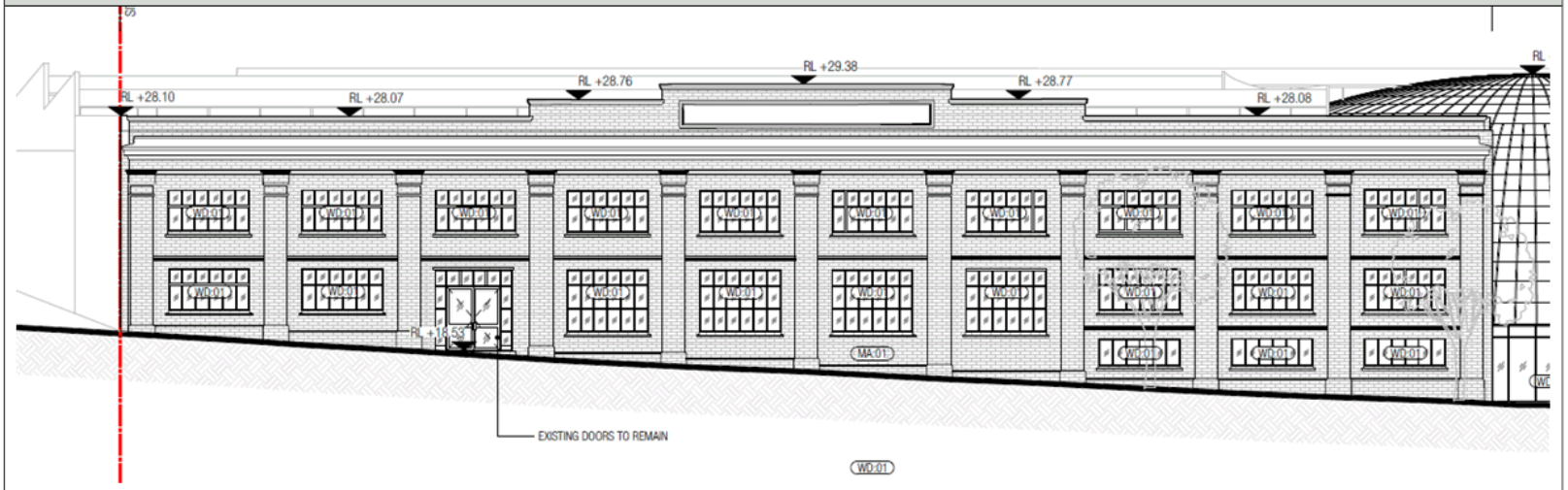
Former Crisp and Gunn Warehouse and Store – First Floor. Woods Bagot Drawing A12320 (Rev A).



Item	Proposal	Consideration of heritage impact	Architect comment
1	New stairway	Whilst this is not a traditional area for vertical circulation, a compliant stair near the main entrance is considered to be an acceptable outcome in the feasible adaptive reuse of the building.	
2	Large open workspaces	These workspaces are interpretive of the former larger open spaces of this building and are an acceptable heritage outcome.	

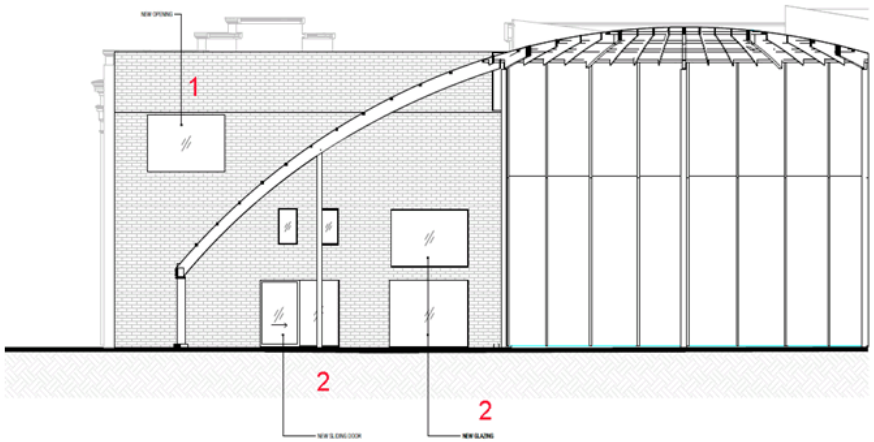
Former Crisp and Gunn Warehouse and Store – Melville Street (southern) elevation

Woods Bagot Drawing AR 13110 Rev. A.



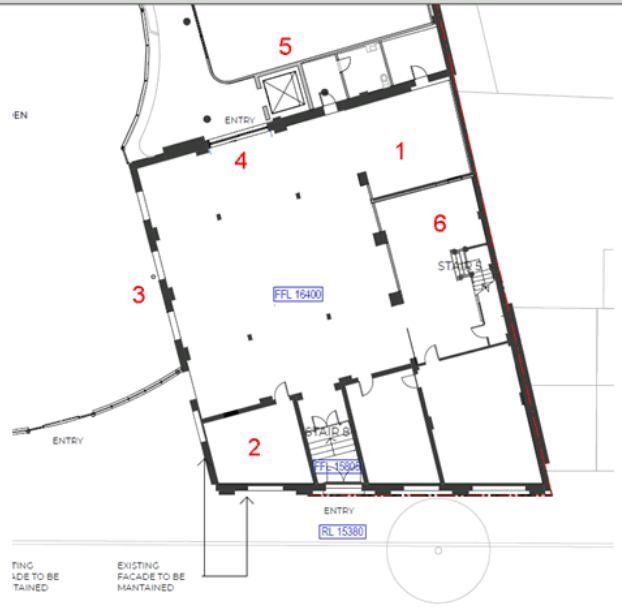
Item	Proposal	Consideration of heritage impact	Architect comment
1	No works to this elevation are proposed.	No impact.	

Former Crisp and Gunn Warehouse and Store – Eastern elevation



Item	Proposal	Consideration of heritage impact	Architect comment
1	New glazing in a new opening.	A modern window in this location nis easily readable as a new insertion therefore is not considered to have any unreasonable impact.	
2	Replacement of glazing/doors in existing openings.	No impact. Whilst not original openings, these are part of the 1997 renovation and replacement will have no impact.	

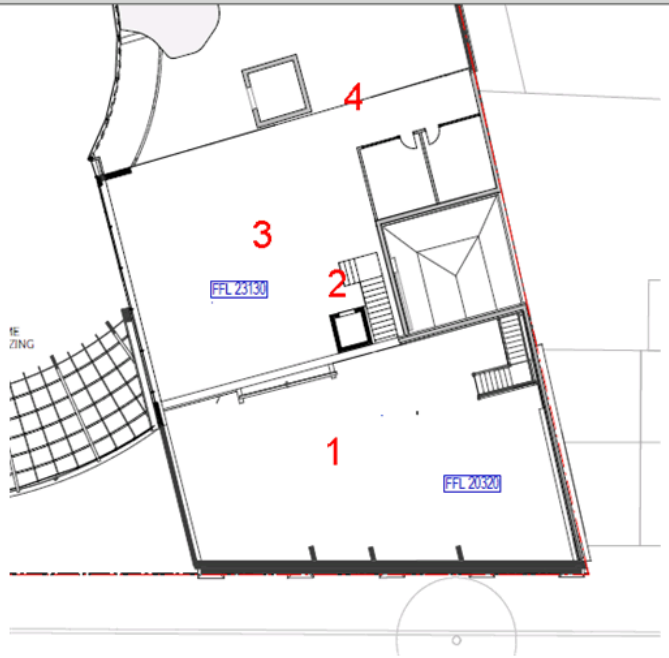
Former Crisp and Gunn Offices – Ground floor. Woods Bagot Drawing AR-12310 Rev. A.



Item	Proposal	Consideration of heritage impact	Architect comment
	General spatial arrangement	The general spatial arrangement of this area has been maintained. The conservation policy affirmed the importance of retaining the small office spaces to the front, the entrance hall and the sense of distinct large spaces in the main chamber, stairs lobby and ideally in the rear section which has been subdivided. It has been recommended that wall nibs be retained where openings are proposed to be widened, and retained bulkheads will assist in interpreting these spaces (and preserving the elaborate tin ceilings which are to be wholly retained).	

1	Open meeting space in former toilets area.	This re-opens a space that has more recently been subdivided and provides a more dynamic use. There is the opportunity to reveal currently obscured original detailing in this area which is a positive heritage outcome. Note that the demolition commentary recommends the retention of wall nibs and a bulkhead to maintain some separation between this space and the main chamber. Note that it is intended to insert glazed partitioning which will assist in separating these two spaces which is a positive outcome.	
2	Larger room created from two smaller rooms.	As per the demolition commentary, it is recommended that nibs and a bulkhead remain, and the existing original door to the main chamber be retained so as to provide the desired larger room but to mitigate impact.	The nibs and bulkhead will remain.
3	New windows	As per the demolition commentary, these window insertions are considered appropriate and reinstate somewhat an earlier configuration of this wall.	
4	New door insertion.	This widens an existing non-original door and provides necessary connectivity to the new development at rear in an appropriate and restrained way.	
5	Lift	Whilst it was desirable to have the lift infrastructure within the footprint of the heritage building, a number of options were explored however these were deemed to have too great an impact particularly where sections of the original and significant pressed tin ceilings were required to be removed. The proposed solution outside the building footprint is considered to be an excellent heritage outcome in providing compliant circulation with no heritage impact.	
6	Kitchen facilities in stair hall	This is not considered to have an adverse heritage impact as it uses the space for what ordinarily would have been somewhat wasted circulation space. Note that pre-1997 this space was partitioned and used as female toilets. The kitchenette facility is considered a much lower impact and more user-accessible space.	

Former Crisp and Gunn Offices – First Floor. Woods Bagot Drawing A12320 (Rev A).

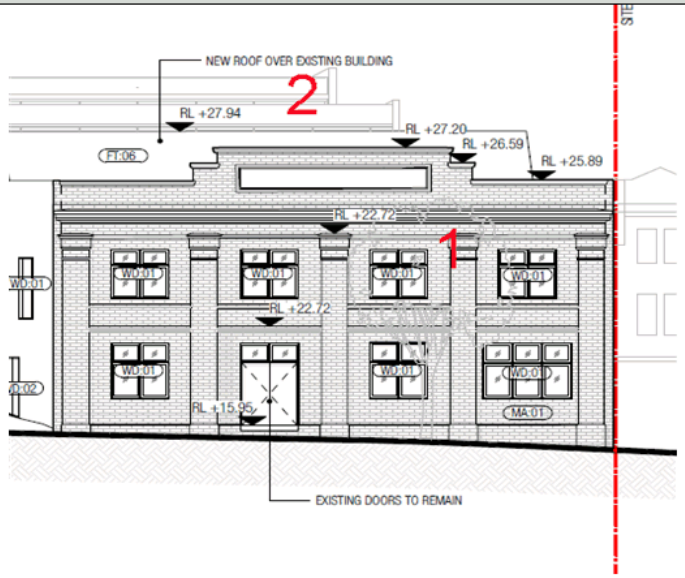


Item	Proposal	Consideration of heritage impact	Architect comment
1	Insertion of workstations and study pods.	No impact. The original spatial arrangements of this part of the building have been removed (probably during the latter-half of the c20th) and it has had at least one reconfiguration before being converted to open space as part of the 1997 works.	

2	Steps to raised rear floor level and platform lift.	These are necessary owing to the proposed higher floor level at the rear of this building which is a direct result of the need to maintain the barrel vault over the ground floor main chamber. These insertions are within the 1997 first floor extension to the original building and will have no heritage impact.	
3	Raised floor over the barrel vault	The need to retain the barrel vault and the desire to remove the superstructure above the vault results in the necessity of a higher floor in this area. This is within the 1997 upper floor extension in this area and in itself is not considered to have any adverse heritage impact (see comments above on demolition of the lightwell to the barrel vault).	
4	Offices, workstations, partitioning etc. to rear area.	This is within the 1997 upper floor extension in this area and in itself is not considered to have any adverse heritage impact.	

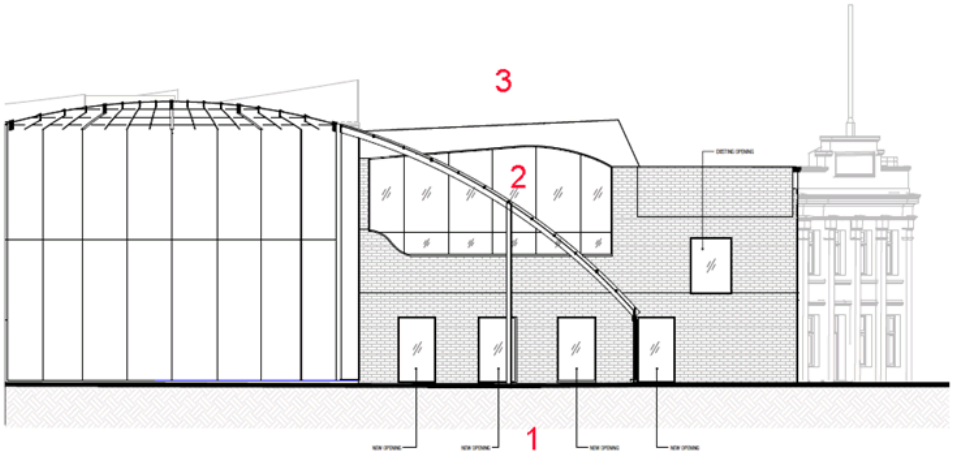
Former Crisp and Gunn Offices – Melville Street (southern) elevation

Woods Bagot Drawing AR 13110 Rev. A.

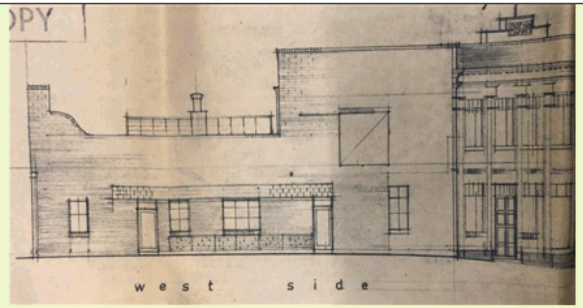


Item	Proposal	Consideration of heritage impact	Architect comment
1	No works to the street façade are proposed.	No impact	
2	Raising of roof level on rear portion of building (i.e. above 1997 upper extension).	This will be a discrete backdropping element behind the main body of the building – set lower than the roof behind and it will blend in as a transitional element between the new and old buildings. It is not considered to have any appreciable heritage impact.	

Former Crisp and Gunn Offices – Western elevation

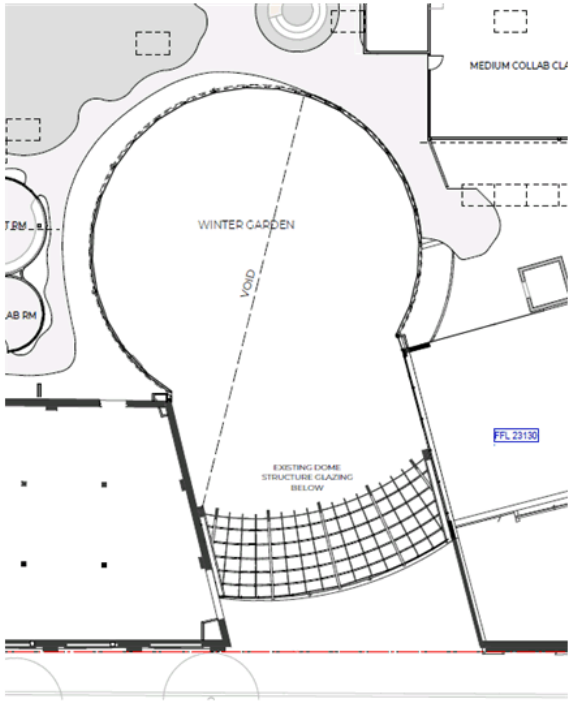


Item	Proposal	Consideration of heritage impact	Architect comment
1	Reconfiguration of openings on ground floor wall.	Two of these openings are existing and will be reconfigured (deriving from the 1997 renovations), and two will be added. This wall was originally a blank wall and has had at least two iterations of opening configurations during various adaptive reuse periods. This proposed configuration is considered sympathetic and is precedented by those previous reconfigurations. Note that this configuration is not dissimilar to the arrangement in the 1970s (see below) and involves re-opening some of these earlier blocked apertures:	

			
2	Revised upper floor glazed wall.	The existing upper floor wall is part of the 1997 renovations which provided an additional level to that area which is to be heightened and reconfigured. The new work will be clearly modern and retains the distinctive original parapet wall which allows interpretation of the original form of the building.	
3	Heightened roof form	Whilst this roof form will be higher than the original roof, it will be masked by the presence of the dome and somewhat by the parapet wall of the front portion of the building. The rationale of this heightening is to provide desired unencumbered floor space on the first floor of the rear of the building which is driven by the need to keep the arched rooflight dome to the ground floor (A significant heritage item). This is considered acceptable.	The new roof form is required to allow the creation of unencumbered interior space, as noted elsewhere. This roof form will sit below the existing street-facing parapet.

10.3. RETENTION OF THE FORESTRY DOME AND ADAPTATION OF THE 1997 FORESTRY BUILDINGS

The Dome. Woods Bagot Drawings AR-12310 Rev. A. and 12320 Rev. A.



Item	Proposal	Consideration of heritage impact	Architect comment
	Installation of a 'winter garden' in the dome.	Given that the original plantings of the dome have been removed, the intent of installing a new garden and landscape elements as a key thoroughfare, entrance and gathering space will re-emphasise the original intent of the dome and be a positive heritage outcome.	
	Adaption of the former Forestry building.	The remainder of the former Forestry building is to be adapted, largely within the existing building envelope, with some modifications and extensions to the footprint, form and major modifications to the layout. This area of the building, as opposed to the distinctive qualities of the dome, is not considered to have any notable heritage significance and its modification to suit an adaptive reuse which also supports the reinvigoration of the dome and former Crisp and Gunn buildings is considered to be an acceptable heritage outcome.	

10.4. ARCHAEOLOGICAL IMPACT ASSESSMENT

Figure 7.10 depicts the areas of the site considered to possibly have archaeological potential. These are limited to the underfloors of the former Crisp and Gunn buildings as well as the Melville Street frontage underneath the dome.

No excavation is proposed for within that area as part of the development application process. It is noted however that there are proposed kitchen and bathroom facilities in these areas and until such time as detail documentation is undertaken it is not clear as to whether these will require any excavation, or will be wholly within existing underfloor cavities.

In the event that excavation is required, it is recommended that the excavation be archaeologically monitored, and if any significant remains are encountered then these be managed in accordance with the provisions of the Tasmanian Heritage Council's Practice Note 2 (*Managing Historical Archaeological Potential in the Works Process*).

Ideally the in-situ retention of any significant archaeological remains is the preferable outcome, which may be achieved by design modification, however, if this is not prudent or feasible then removal following recording is acceptable (in accordance with Practice Note 2.

It is expected that a condition of any approval firm-up this undertaking to be implemented in the works process and may be further informed by the building approvals documentation.

Overall, with the above mitigation strategy, the proposed is unlikely to have any substantial impact upon any significant archaeological remains.

10.5. COMPLIANCE WITH CONSERVATION POLICIES

Given the above commentary on the possible heritage impact of the proposed demolitions, the following commentary is made against the conservation policies formulated in Section 8 of the current document. Note that the colour coding introduced above applies here –

Colour	Compliance with policy
	Fully complies.
	Largely complies
	Does not comply

1	General Policies		Commentary on proposal	Architect comment
1.1	Approach to works	The approach to managing any works on the place must be guided by the principles of the ICOMOS Australia *Burra Charter.*[42]	The proposal has been guided from the outset by the current conservation policy document in an iterative process between the design team and heritage consultant.	
1.2	Use/development	Any use or development of the place must not have any unreasonable adverse heritage impact upon identified values of the place. The site requires a suitable use or adaptive reuse in order to sustain its future maintenance.	The site has a history of adaptive reuse from workshops, stores and offices. It is considered that the adaptive reuse as a university facility is an appropriate means of sustaining the building into the future and will allow ongoing access to and appreciation of its heritage values.	
1.3	Supervision	All works to the significant elements of the place, and planning for such works, must be guided by a conservation architect, heritage consultant or other person(s) qualified and experienced in the conservation of historic heritage places.	Where necessary in the construction process heritage advice will be sought in the specification and execution of work to significant heritage fabric.	

[42] http://australia.icomos.org/wp-content/uploads/The-Burra-Charter-2013-Adopted-31.10.2013.pdf

2	Significant Buildings and Fabric		Commentary on proposal	Architect comment
2.1	Significant buildings and fabric	Buildings deemed to be of high significance must be conserved, restored and maintained (namely the former Crisp and Gunn buildings). Significant fabric associated with those buildings must also be conserved, restored and maintained.	The proposal retains, refits and provides a suitable adaptive reuse of the significant buildings in a way where their heritage values will overall endure. The proposal results in some impact upon the fabric of these buildings, namely the loss of the roof of the front portion of the office building, floor structure between the ground and semi-basement of the former warehouse/store and some elements of the office roof lantern. Refer to the architect's design statement for commentary on these points.	
2.2	Non-significant buildings and fabric	Buildings and fabric which are of low or no significance may be retained, modified or demolished as desired.	No building will be wholly demolished as part of the scheme. Non-significant buildings and elements will be adapted in support of the feasible use of the overall site and will also be utilised to house more 'intrusive' infrastructure to relive development pressure on the heritage buildings.	

2.3	Intrusive buildings and fabric	Intrusive building and fabric should be removed, unless these are providing critical supporting infrastructure to enable ongoing use of the overall buildings.	Some intrusive fabric will be removed in favour of better resolved architectural approaches (e.g. partitioning).	

3	The former Crisp and Gunn Workshops and Store		Commentary on proposal	Architect comment
Exterior				
3.1	Exterior form	The overall exterior form of the building should be maintained.	The proposal retains the overall form of the original buildings.	
3.2	Exterior walls and apertures	The northern, eastern and western walls may be adapted for the addition or modification of apertures as desired, however the general line of these walls should be maintained. The form of the southern (Melville Street) wall must be generally maintained.	Minor modifications will be made to the eastern and northern walls, which have already been modified. The significant southern wall (street elevation) will not be modified.	
3.3	New extensions	There is scope for extensions to this building on the eastern and in particular northern walls (as precedented by the 1997 Forestry extensions). The scale of any rear extension is not considered critical	No major new extensions are proposed – new work will be generally contained within the existing envelope of the 1997 extensions.	

		from a heritage perspective and is likely to be acceptable as directed by general planning provisions.		
3.4	Windows	All original windows must be maintained unless modification is absolutely necessary for thermal, acoustic, fire rating or safety reasons. Any modifications should be retained within existing apertures.	All original and significant windows will be retained.	
3.5	Doors	The front door arrangement may be modified as desired within the existing aperture (whether flush to the façade or recessed).	The proposal will retain the existing front doors and their current configuration.	
3.6	Detailing	Significant exterior detailing should be retained, unless replacement is necessary for repair, weatherproofing or security purposes, in which case compatible styling and materials must be used. New work should be sympathetic to, but not necessarily imitative of, the original form, detailing and materials.	The proposal retains all significant exterior detailing (i.e. the façade masonry, window/door detailing etc.).	

Interior				Architect comment
3.7	Form	Ideally the interior of the building should retain the ability to read as a large and open form (i.e. one smaller room on the semi-basement level and one large + one smaller room on the ground and first floors). Subdivision of these spaces to suit an adaptive reuse is likely to be acceptable however some legibility of the larger spaces should remain.	The first floor will be generally retained as a large space along the front of the building, with some partitioning along the rear wall. This will maintain the tenor of the building as a large workshop space. The ground floor will have some partitioning, however this will be more minimal than the current situation and be a better resolved solution which will maintain some feel of the larger space.	
3.8	Detailing	Fitout of the building should respond to the utilitarian nature of the original fitout and take a minimal approach. Do not attempt to introduce 'period' detailing that is false to the context of the building.	The proposed fitout of the building as classroom and student facilities spaces will embrace the minimalist and utilitarian nature of the detailing.	
3.9	Services	Owing to the low integrity of the interior, installation of modern services (e.g. kitchens, toilets, electrical, fire safety) etc. are likely to be possible without heritage detriment.	Only minor toilet and small kitchen facilities are to be installed within the former Crisp and Gunn workshops and store which are not considered to have any unreasonable impact upon that building and provide necessary support services for the adaptive reuse.	

3.10	Access	If a lift is required in the future, this is likely to be acceptable given the low integrity of detailing of the interior. Options for an external lift that is discrete and sympathetic to the building may be considered.	The proposed lift configuration to service this building will be outside the footprint (i.e. within the 1997 building). The proposed new stairs are not considered to have any unreasonable impact.	

4	The former Crisp and Gunn Offices		Commentary on proposal	Architect comment
Exterior				
4.1	Exterior form	The overall exterior form of the building should be maintained.	The proposal retains the overall form of the original building, albeit with some modification to the roof of the front portion of the building, however this is not largely visible from street level. The proposed modification of the1997 upper floor extension to the rear portion of the building retains the ability to interpret the original form of the rear parapet.	
4.2	Exterior walls and apertures	The northern, eastern and western walls may be adapted for the addition or modification of apertures as desired,	Minor modifications will be made to the western and northern walls, which have already been modified. The significant	

		however the general line of these walls should be maintained. The form of the southern (Melville Street) wall must be generally maintained.	southern wall (street elevation) will not be modified).	
4.3	New extensions	There is scope for extensions to this building on the western and in particular northern walls (as precedented by the 1997 Forestry extensions). The scale of any rear extension is not considered critical from a heritage perspective and is likely to be acceptable as directed by general planning provisions.	Extensions will be limited to the reuse (and extension) of the existing extension on the northern side of the building (i.e. 1997 Forestry workshops).	
4.4	Windows	All original windows must be maintained unless modification is absolutely necessary for thermal, acoustic, fire rating or safety reasons. Any modifications should be retained within existing apertures.	All original and significant windows will be retained.	
4.5	Doors	The front door must be retained.	The proposal retains the front door arrangement.	
4.6	Detailing	Significant exterior detailing should be retained, unless replacement is necessary for repair, weatherproofing or security	The proposal retains all significant exterior detailing (i.e. the façade masonry, window/door detailing etc.).	

		purposes, in which case compatible styling and materials must be used. New work should be sympathetic to, but not necessarily imitative of, the original form, detailing and materials.	There will be further modification of the already modified roof lantern above the barrel vault. Note that the above assessment makes recommendation for mitigating some possible impact upon significant interior detailing .	
Interior				
4.7	Ground floor form	The interior of the ground floor should be largely retained as existing, with the ability to read the original layout retained. Modification of the kitchen/toilets area may be possible and restoration of the larger volume of the main chamber is desirable.	The proposal removes the existing kitchen and toilet areas and creates a single space. Given the past modification of these areas and the rationalisation of this space, this is considered acceptable. Some internal wall removals are proposed, which are generally utilising previously opened and re-filled openings therefore have no appreciable impact. Note that the above assessment recommends some mitigating strategies to minimise impact. Some new openings can be justified as these assist in providing a usable floor plate but still retain the ability to discern the original layout of the building and individual spaces.	The intent is to remove the later additions in the northern corner of the ground floor and retain the volume of the main chamber. Internal wall removals have generally been limited to those which has already been modified previously.

			The proposal reinstates the large open main chamber through removal of modern partitions.	
4.8	Upper floor form	Adapt/refit the upper floor as desired (retain stairs landing and solar access to lightwells).	There will be further modification of the already modified roof lantern above the barrel vault.	As described elsewhere, the barrel vault is proposed to be built over – retained as a ceiling feature at ground level. The eastern roof lantern will be retained as a roof light.
4.9	Ground floor detailing	Retain all detailing in the front rooms and generally of that in the main chamber and stairs hall (elements identified of low/no significance may be removed/modified).	The proposal involves some modification to ground floor detailing. Note that the above assessment has recommended some mitigating strategies to minimise impact.	Original detailing in this area will be retained wherever possible.
4.10	Upper floor detailing	Fitout of the upper floor should respond to the utilitarian nature of the original fitout and take a minimal approach. Do not attempt to introduce 'period' detailing that is false to the context of the building.	The proposed upper floor detailing is modern and functional which is considered acceptable given the sparse original detailing in this area. The original flooring will be revealed.	
4.11	Services	Installation of modern services (e.g. kitchens, toilets, electrical, fire safety) etc. are likely to be possible without heritage detriment. Ideally larger service installations should be limited to the existing toilet/kitchen area and/or the upper floor.	The proposed service installations are considered to be in appropriate locations and subject to final detailing are likely to have little or no heritage impact.	

4.12	Access	If a lift is required in the future, this is likely to be acceptable given the low integrity of detailing of the rear portion of the interior. Options for an external lift that is discrete and sympathetic to the building may be considered.	Vertical circulation infrastructure is proposed to be installed behind the original rear wall of the building therefore avoiding impact upon the significant fabric of the building.	

5	The Forestry buildings		Commentary on proposal	Architect comment
Exterior				
5.1	The Forestry Dome	Although not considered a 'heritage building', given the prominence of the structure as well as the recognised design excellence in its execution, consideration should be given to retaining the dome in any future development as an entry statement to the heritage buildings and any new development at rear. Ideally plantings should be reinstated.	The proposal retains the overall tenor of the Forestry Dome with only minor alterations required for connectivity to the new development and resulting from a rationalised access plan. A 'winter garden' will be installed to interpret the intent of a garden/forest within the dome. Note that the scheme was developed in consultation with Prof. Robert Morris-Nunn the Architect of the dome.	
5.2	The rear 1997 building.	This building is not considered to have any heritage value and does not exhibit that same design excellence as the dome itself. Whilst it has an association with the dome, in the absence of that association it would not offer any remarkable qualities that warrant retention. Accordingly this building may be retained/modified/removed as desired.	The 1997 Forestry building will be substantially modified to provide for adaptive reuse. As per the significance assessment in Section 7 of this document, this part of the site is not considered to have any historic heritage significance.	

6	Maintenance of Curtilage, Streetscape Values and New Development Guidelines		Commentary on proposal	Architect comment
6.1	Curtilage of existing buildings	The important curtilage to the former Crisp and Gunn buildings are their streetscape presence, which is likely to endure any development rearward permissible under the planning scheme (i.e. is not necessarily a heritage issue). The site can sustain higher/larger-scale development internal to the site which retains the streetfront scale of the existing buildings. Overall height of any internalized development becomes more a wider-townscape planning issue rather than a site-specific heritage issue particularly if this maintains the existing heritage buildings as the main streetscape elements.	The proposal retains the curtilage and setting of the original Crisp and Gunn buildings. No substantial additional buildings are proposed. The proposal involves an increase in the rear portion of the former Crisp and Gunn Offices – heightening a storey that was added as part of the 1997 renovations. The rationale for this is to provide a usable floor plate which steps above the top of the roof lantern which lights the main chamber of the ground floor so as to avoid removing the significant fabric of that lantern on and just above the ground floor. This resulting additional height is considered acceptable as it is at the rear of the building, will be largely indiscernible from public vantage points and is on a part of the building that has previously been heightened.	
6.2	Style of new development	New development need not emulate any particular architectural style of any building on the subject site, however if	The proposed development is largely within the envelopes of existing buildings therefore the style of the new	

		desired architectural form/treatments may 'borrow' stylistic elements from the existing buildings.	development from an outward view is not a necessary consideration here.	

7	Archaeology		Commentary on proposal	Architect comment
7.1	Historical archaeology	Further to Section 8, any proposals for works in the areas of high archaeological potential must be accompanied by an archaeological impact assessment and, if necessary, an archaeological method statement consistent with the requirements of the Tasmanian Heritage Council's Practice Note 2 (archaeology) or other industry standard.	Given that the archaeological potential of the site is limited to the area covered by the footprint of the former Crisp and Gunn buildings and the Forestry Dome – these areas are not proposed to have any excavation undertaken as part of the development, therefore no archaeological impact will arise from the proposed development.	
7.2	Interpretation of archaeological values	Further to the statement of archaeological potential, opportunities to interpret the archaeological value (and results of any archaeological work) in any future development should be taken (whether by in-situ interpretation of archaeology, use of artifacts, and or other interpretive devices and publications.	It is anticipated that an interpretation plan will be formulated as part of the detailed fitout process (see also Policy 8.2). This may be firmed-up by a condition of any approvals.	

8	Other policies		Commentary on proposal	Architect comment
8.1	Subdivision	The subdivision pattern of the site is not considered significant, having been reconfigured several times, therefore any future subdivision/ consolidation is likely to be acceptable.	Not applicable. Whether the site is further subdivided or consolidated will have no heritage impact.	
8.2	Interpretation	Any development on site should include interpretation of heritage values, in particular the Crisp and Gunn occupation and Forestry occupation – both with wider links to the Tasmanian timber and building industries.	It is anticipated that an interpretation plan will be formulated as part of the detailed fitout process. This may be firmed-up by a condition of any approvals.	

10.6. COMPLIANCE WITH STATUTORY PROVISIONS

Further to the statutory heritage provisions detailed in Section 2, the following Clauses of the Hobart Interim Planning Scheme apply to the place and the proposed development. The commentary on the proposed development draws upon the heritage impact assessment formulated above and the summary of compliance with the conservation policies of this document. Those conservation policies were developed with the relevant statutory provisions in-mind.

The following assessment has been undertaken within the framework of the Hobart Interim Planning Scheme 2015 (noting the limited effect of the scheme – limited only to the footprint of the former Crisp and Gunn buildings). Note that as per Section 2, part of the subject site is listed on the Tasmanian Heritage Register, therefore subject to the provisions of the Historic Cultural Heritage Act 1995. That Act has less prescriptive provisions, however it is expected that the Tasmanian Heritage Council's assessment of the proposed development will utilise a similar approach and rely on the heritage impact assessment provided here (noting that the THR registered area is smaller than that to which the HIPS15 heritage provisions are applicable).

CLAUSE E.13.7 – DEVELOPMENT STANDARDS FOR HERITAGE PLACES

	Performance Criteria	Commentary on proposed development
E.13.7.1 Demolition	*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.*	The proposal generally retains the entire former Crisp and Gunn buildings and the tenor of the Forestry Dome. Some significant structural elements of the Crisp and Gunn buildings are proposed for demolition however, namely the floor between the semi-basement and ground level of the former warehouse/store, some elements of the roof lantern of the offices and the roof structure of the front bay of the office building. Please refer to the Woods Bagot design statement for a discussion on the rationale for this demolition and how it relates the overall scheme of the reinvigoration of these currently underutilised heritage buildings.
E.13.7.2 Building and Works other than Demolition	*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.*	a) It is considered that the proposal adequately meets this performance criterion in that the proposal largely retains interior detailing, forms and fabric and any new portions of the building(s) will not have an appreciable visual impact. New work will be recognisable as such and is considered to be sympathetic to the listed place. This site has a long history of evolution and redevelopment and the proposal is considered an appropriate response to the adaptive reuse of the building(s) which will perpetuate its significance. b) No significant streetscape elements will be lost.
	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.*	a) The only part of the development that constitutes an extension to a heritage building is the upward extension of the rear portion of the former Crisp and Gunn offices. This is of a restrained height (effectively adding only half a storey) and will be barely discernible from the street frontage. b) The proposed development of the heritage buildings is largely internal, with the only extension (as described above) being set behind the front bay of the heritage building.

		c) As per b. d) The proposed development, in relation to the listed portions of the site will be subservient in their siting and materiality and will allow the streetfront buildings to remain the dominant site elements.
	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.	As per P2
	P4. Extensions to existing buildings must not detract from the historic cultural heritage significance of the place.	As per P2.
	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.	No permanent new front fencing or gates are proposed.
	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.	Not applicable.
E.13.7.3- Subdivision	*P1. A proposed plan of subdivision must show that historic cultural heritage significance is adequately protected by complying with all of the following:* *(d) ensuring that sufficient curtilage and contributory heritage items (such as outbuildings or significant plantings) are retained as part of any title containing heritage values;* *(e) ensuring a sympathetic pattern of subdivision;* *(f) 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.*	No subdivision is proposed.

CLAUSE E.13.10.1 – DEVELOPMENT STANDARDS FOR PLACES OF ARCHAEOLGOCIAL POTENTIAL

			Commentary
E.13.10.1 Building and Works other than Demolition	*Acceptable Solution*	*A1. Building and works do not involve excavation or ground disturbance.*	It is unlikely that the proposal will involve any ground disturbance, however there *may* be minor disturbance arising from any necessary services to be retrofitted to the existing buildings (to be explored in the building permit application stage).
	Performance Criterion	*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; measures proposed to preserve significant archaeological evidence 'in situ'.*	In the event that any excavation is proposed within the area of archaeological potential as depicted on Figure 7.10, then this must be archaeologically monitored and in the event that any significant remains are encountered then these are to be managed in accordance with industry standard. Ideally mitigation by non-disturbance should occur, however if there is no prudent or feasible alternatives to impact then the remains are to be thoroughly recorded prior to impact.
E.13.10.2 Subdivision	Acceptable Solution	*A1. Subdivision provides for building restriction envelopes on titles over land defined as the Place of Archaeological Potential in Table E13.4.*	Not applicable – no subdivision is proposed.

	Performance Criterion	*P1. Subdivision must not impact on archaeological resources at Places of Archaeological Potential through demonstrating either of the following:* *(a) that no archaeological evidence exists on the land;* *that there is no significant impact upon archaeological potential.*	

CLAUSES 22.4.1 & 22.4.3 CENTRAL BUSINESS ZONE (AND CENTRAL BUSINESS ZONE HEIGHT AREA)

Noting that the proposal does not meet the Acceptable Solutions of these clauses, the following commentary is made against the relevant Performance Criteria:

	Performance Criteria	**Commentary on proposed development**
22.4.1 t Building Height tCentral Business Zo Height Area	*P5. Building height within 15m of a frontage and not separated from a place listed in the Historic Heritage Code by another building, full lot (excluding right of ways and lots less than 5m width) or road (refer figure 22.5 i), must:* *a) not unreasonably dominate existing buildings of cultural heritage significance; and* *b) not have a materially adverse impact on the historic cultural heritage significance of the heritage place;*	The proposed minor heightening of the central (1997 Forestry) building as well as the heightening of the rear (c1997) bay of the former Crisp and Gunn office building is not considered to dominate any building of cultural heritage significance, nor have any materially adverse impact upon the place of cultural heritage significance.

22.4.3 t Design: Central Business Zone	*P3. The facade of buildings constructed within 15m of a frontage and not separated from a place listed in the Historic Heritage Code by another building, full lot (excluding right of ways and lots less than 5m width) or road (refer figure 22.5 i), must:* *(a) be of a design sympathetic to the elevational treatment and materials of the existing heritage building; and* *(b) not unreasonably detract from the historic cultural heritage significance of the existing heritage place.*	

APPENDIX A: COMMENTARY ON THE DESIGN RATIONALE AND SIGNIFICANCE OF THE FORESTRY DOME, ADJ. PROFESSOR ROBERT MORRIS-NUNN AM.

circa morris-nunn architects

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August 3, 2021

Re: FORESTRY TAS – Statement of Significance

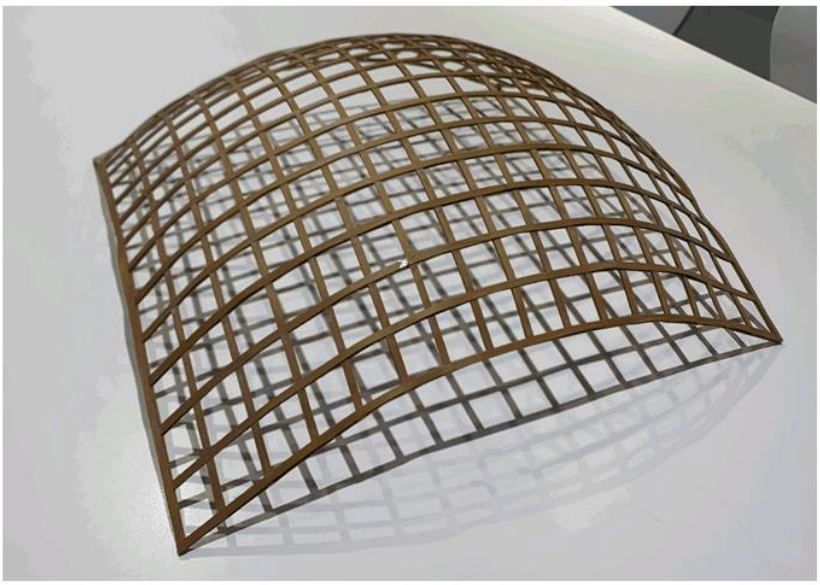
I am writing this note as a personal reflection in the importance of Forestry Tas. Headquarters both with regards to my own body of work, and also how after 20 or more years it fits within how I see the evolving cultural heritage of architecture in Tasmania.

RELATIONSHIP TO MY PERSONAL OEUVRE

Forestry Headquarters, which is the name that I associate with this project, was my first major project in Hobart. It came about not as a direct commission, but because over the decades the various governments of Tasmania have approached the problem of getting upgraded / updated accommodation for its various government agencies by an Expressions of Interest / Design Build tender process.

In 1995 this was a tender process where invited builders of a certain size were invited to submit a proposal which included an architectural design response, as well as a financial statement. My design for Forestry was the design which was included in the Laver submission. At the time of the bid being submitted, I was running a small architectural practice in Launceston, and I had worked previously with builders who were loosely affiliated with Laver (all were of Dutch extraction, as were Laver's own owners) with us winning smaller scale projects together. Laver had never previously won a major project because their designs were seen as being mundane, and the projects were always awarded to Fairbrother, who used Heffernan Nation Viney as their principal architectural ideas people. Laver desperately wanted this to change, and this was my opportunity to create innovative new architectural solutions.

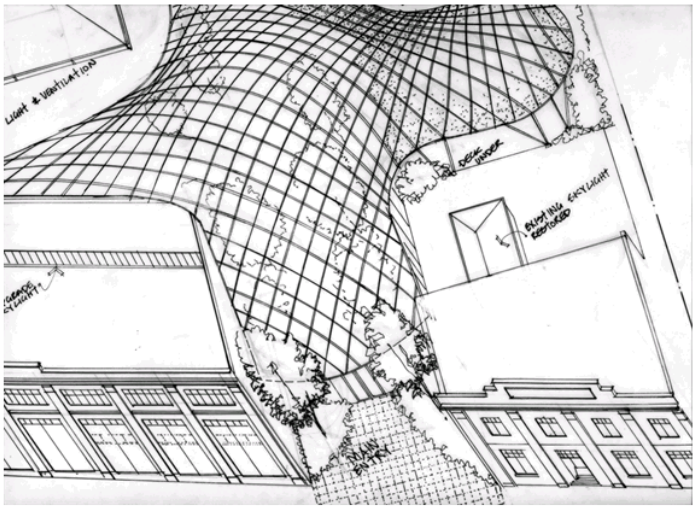
The design proposal always had a lightweight glass covered timber structure with a living forest below. If there was a single image of the overall idea that was in the back of my mind, it was the early medieval / Hindu illustrations of a turtle swimming through the universe with the world under a dome on its back.



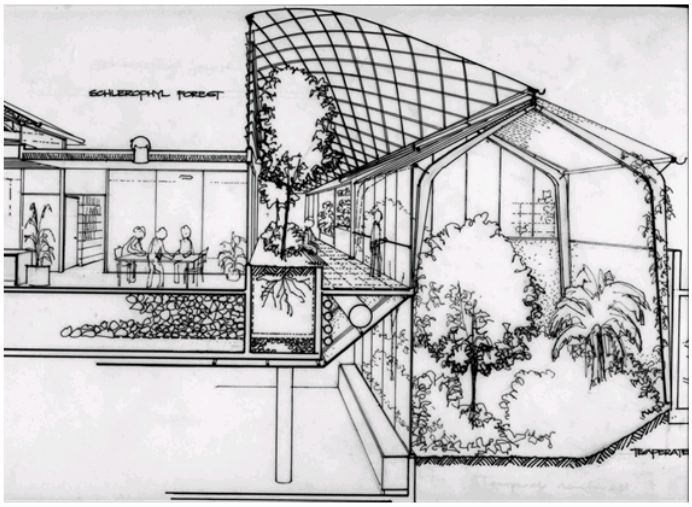
Initially the idea was to make a timber grid shell, similar to the undulating Mannheim structure designed by Buro Happold, very innovative English engineers, but this was 'rationalised' to become the dome that is there today.

Mannheim grid shell

My very first, original hand drawn sketch was indeed of a grid shell, a freeform curved vault that undulated and expanded out to move over all the new spaces required.



It even had a tail that extended out to Brisbane St.



Fundamental to the proposal was the inclusion of a 'living forest'. It was the aim from the outset to create the main public spaces as a conservatory, and the intent was always to work closely with Forestry to create a real forest environment which exemplified Forestry Tasmania's core business, managing forests.

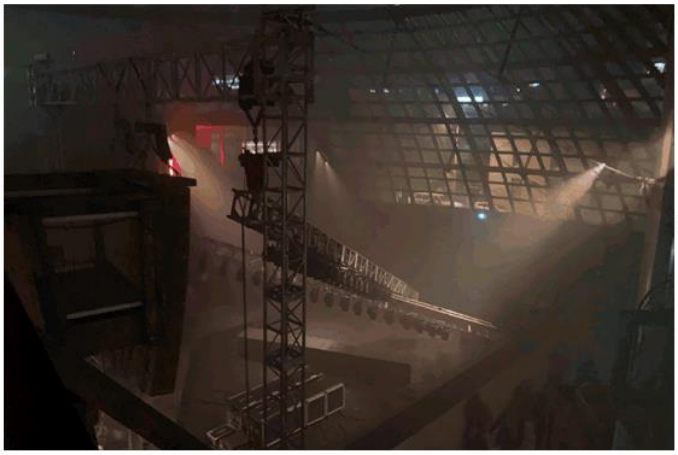
The final design became a portion of a sphere; a large circular 22m central element in order to get as much volume and height into the internal space as possible, with a 'tail' a curved extension that dropped down towards the front entry. The intention was to create a grand internal space that soared upwards above the trees and plants into the heavens. It was always intended to be symbolic of a 'heavenly orb'.

The structural design was the work of Jim Gandy, the most innovative structural engineer practicing in Tasmania at the end of the 20th century. The design is a mixture of primary curved timber ribs, interspersed with bracing rings in the form of steel plates. The timber arch segments were restrained by steel pipe struts and diagonal steel rod ties, transforming the dome from a series of radial bow trusses into a fully integrated structure. The timber prefabrication was undertaken by Tas. Timber Engineering, at that time the only timber fabricators in Tasmania capable of work of this standard. The finished structure arrived as large prefabricated wedge-shaped segments, and it was subsequently glazed after the entire structure was complete. A temporary steel prop acted as a central column until the erection was complete, and when it was removed the entire structure only dropped one mm, a significant engineering triumph. Jim was standing underneath at the time, as he often did when there were dramatic erection moments, completely trusting his theoretical calculations.

The dome was awarded the Australasian Lightweight Structures Award in 2000.

The temporary prop is visible in this photograph, taken after the erection of the dome segments.

The dome and its forest formed a single integral linked entity. They told the 'story' of Forestry, the managing of the state's forests and promoting the development of timber. It was therefore a truly tragic event when the forest was removed after it had died, when the water supply to the tree roots was turned off when the change of ownership occurred.



Dark Mofo in the treeless void

THE ARCHITECTURAL IMPORTANCE OF THE BUILDING

Forestry demonstrated that an important public building, in this case the headquarters of a major Tasmanian Government agency, could be created by recycling a somewhat unpretentious old building, the 1930's offices and warehouse of a traditional timber company, Crisp and Gunns.

Tasmania has pioneered the use of adapted buildings for important new uses, and Forestry was a very early important exemplar of that process. The visual importance of the dome, the only new architectural element that could be seen from the street, was that it needed to be a very dramatic intervention and it was important that the new architectural elements really expressed symbolically the new functions of the buildings.

A very major part of this transformation was the installation of a truly unique urban forest under the dome. To the best of my knowledge it was unprecedented in Australia. It represented Forestry in a way that no simple sign could ever do.

It was created by a team of Forestry staff working closely with two horticulturalists, John Dudley and Phill Parsons, in order to relocate advanced endemic Tasmanian flora from direct from the bush into their new urban setting. Transported from Forestry land near the Hartz Mountains on a low-loader which normally only carries a bulldozer, the process was able to keep all the crowns and root balls intact and thus significant specimen trees, including Huon Pines and Leatherwoods, were successfully transported and planted in pre-prepared sites inside the dome.

The visual power of the linking of the natural world and an innovative timber and glass dome was impressive and much loved by the general public. A couple, in no way related to Forestry. was given approval to hold their wedding in the forest soon after the building opened, not normally the thing that one would ever wish to do in the foyer of a standard office block! Unfortunately, so much confetti was thrown about which was well-nigh impossible to clean up that the event became a once-only occurrence, but the space has been subsequently used for a wide variety of other more non-intrusive activities.

The symbolism was very potent, and this translated itself into a very important piece of architecture. It was a continuity of forestry traditions, the living urban forest and the quality of the timber structure.

Yours sincerely,

Adj Prof. Robert Morris-Nunn AM
Principal / Architect

ELEMENT
TREE SERVICES

DEVELOPMENT IMPACT ASSESSMENT

79-83 Melville Street, Hobart

16/02/2022

For: ALASTAIR FLYNN
SENIOR ASSOCIATE
WOODS BAGOT
MEZZANINE
498 LITTLE COLLINS STREET
MELBOURNE

Alister Hodgman
Diploma (Hort/Arb)
QTRA Register User: 3743

Element Tree Services
alister@elementtree.com.au

1. Terms of Reference

Alastair Flynn, Senior Associate at Woods Bagot, requested this report to assess the impacts of proposed development at 79-83 Melville Street, Hobart. An assessment of the site was undertaken on the 16th of November 2021 and the 15th of February 2022. Contained in this report will be an assessment of the proposal on the established trees and recommendations to protect them during the development.

Fig. 1 – an aerial image of the site indicating the trees subject to this report. Image courtesy of listmap.

2. Site Findings

The current proposal has the potential to impact six trees growing on Brisbane and Melville Streets. All of the inspected individuals are of good vitality and form and in their present situation, likely to contribute to the landscape for many years to come.

The three London planes (*Platanus × acerifolia*) on Brisbane Street are located adjacent to the kerb within an asphalt footpath. Due their extensive buttress and root development, displacement of these hard surfaces is occurring.

It is unlikely that these trees are growing in structural soils or contained in tree pits. The assumption is that there will be limited root development within

Brisbane Street, with the majority influenced by the kerb and will be growing radially throughout the footpath.

On the Melville Street frontage, the silver birches (*Betula pendula*) are also growing within the footpath. It appears these trees may be a younger planting, and as a species, a less vigorous root system. There was no significant hard surface displacement around the base of this copse.

3. Development Impacts

As a result of infrastructure upgrades within Brisbane Street, the following table will contain information on tree protection zone (TPZ) and the incursions. The proposal includes a new stormwater and sewer lines to service the buildings. The design has ensured that there are no incursions into the structural root zones (SRZ).

3.1 Impacts Table

TREE	SPECIES	DAB	DBH	SRZ	TPZ	INCURSION m²	% INCURSION	RETAIN
1	P. × acerifolia	1.02	0.82	3.04	9.84	112.5	37%	YES
2	P. × acerifolia	1	0.81	3.31	9.72	46.9	16%	YES
3	P. × acerifolia	.59	.45	2.65	5.4	N/A	N/A	YES
4	B. pendula	.41	.27	2.28	3.24	N/A	N/A	YES
5	B. pendula	.39	.22	2.23	2.64	N/A	N/A	YES
6	B. pendula	.36	.22	2.15	2.64	N/A	N/A	YES

The incursions into the TPZ of trees 1 and 2 are both above minor (<10%), however this does not consider the current limitations imposed on the roots by the built environment. As the assumption is that there will be limited root development within the road, severance for tree 2 will be minimal.

Although root development may be limited in the road from tree 1, there may be severance on the northern side of the tree where the services head towards the forestry building. Disregarding the roots within the road as an incursion, this represents approximately 9%. As this species generally tolerates damage well, this incursion may not be as significant as the standard suggests.

The services running beneath tree 3 are all existing, and the water connection is outside the TPZ. Based on the current design it's unlikely that this tree will be negatively impacted.

All connections to existing services avoids the TPZ of tree 4 – 6 and no root damage is expected.

4. Tree protection

Prior to the commencement of works, all of the TPZ's should be fenced off and signs erected to indicate the purpose of the zone. Where works encroach on the TPZ, the fencing should be erected as close to the edge as possible.

Activities to avoid in this zone are:

- 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).

To reduce the potential impacts on these trees, ideally the work should be completed during dormancy. Additionally, the roots should be pruned with a sharp tool leaving a clean cut and not torn out by machinery. If the trench is to be left exposed for a continued period of time, the cut should be covered with hessian and kept wet.

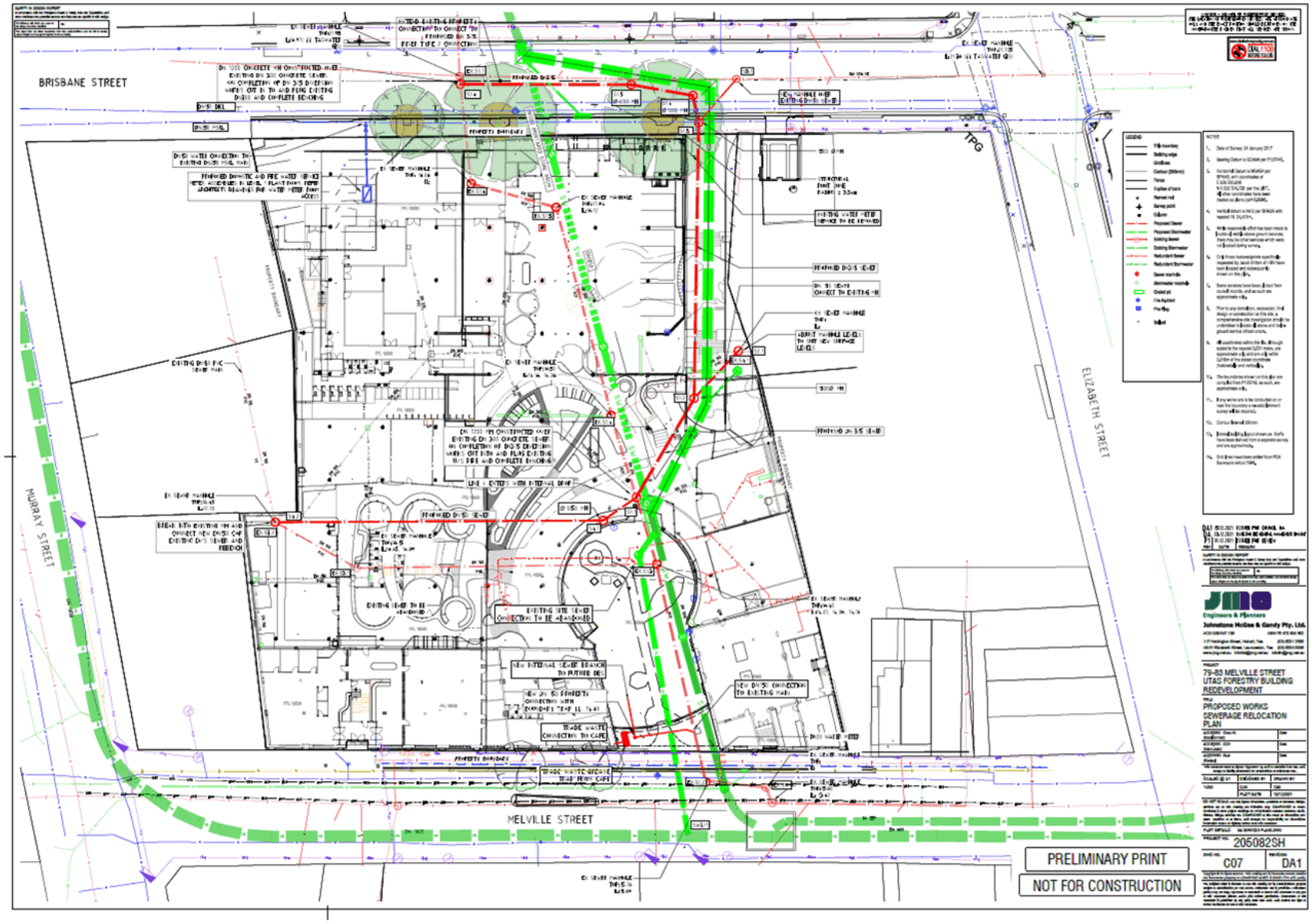
5. Conclusion

- The current proposal avoids severing the structural root zones of all trees and therefore stability should not be compromised.
- The incursions into the tree protection zones of trees 1 and 2 are above minor, but this assessment is made without a clear understanding of the roots' distribution.
- Given the species profile, it is likely that trees 1 and 2 will tolerate the works if correct tree protection measures are implemented.
- No tree protection zone incursions are evident for the balance of the trees, but these should be protected during development.

Yours sincerely,

Alister Hodgman

Appendix 1 – Referenced design (DWG C07 Rev. DA)



AllUrbanPlanning PTY LTD

11 February 2022

Michael McClenahan
Development Appraisal Planner
City Planning
City of Hobart
GPO Box 503
HOBART 7001

Dear Michael

Further Information – PLN-21-869

83 Melville Street & 80 Brisbane Street – Partial demolition, alterations, extension, change of use to Educational and Occasional care and associated works in road reserve

I refer to Council's request for further information 7 February 2022 for the above application for a planning permit and respond in relation to items PLN Fi1 and HER Fi as follows:

Planning

PLN Fi1 To enable the Council to assess the application against the Development Standards of the Central Business Zone of the *Hobart Interim Planning Scheme 2015*, please provide the following:

1. Frontage elevation to Brisbane Street highlighting area of window and door openings at ground floor level and demonstration that this amounts to no less than 40% of the surface area of the facade
2. Further details as to how the functionality of the proposed laneway from Brisbane Street avoids creating an entrapment space to the satisfaction of clause 22.4.1 A1 (d) or provides passive surveillance and external lighting illumination of the entire laneway to the satisfaction of 22.4.1 P1 (d)
3. If available, further details as to potential timber materiality on new external facade surfaces

Response

Item 1

The area of window and door openings to Brisbane Street is shown highlighted on the attached excerpt from the submitted drawing AR-13110 rev A prepared by project architects Woods Bagot. It confirms that the ground level facade to Brisbane Street has an open area of 50%, exceeding the 40% minimum. The proposal therefore satisfies Clauses 22.4.3 A1(b) and 22.4.4 A1 (b) of the planning scheme.

Although not specifically identified in Council's request, for the sake of completeness, we also confirm that the car parking facing facade that is setback in the vicinity of the existing carpark on the western side of the Brisbane Street frontage will have window and door openings applied to 30.22% of the area

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of that ground level façade meeting the 30% minimum under Clause 22.4.3 A1(c) and 22.4.4 A1(c) of the planning scheme.

Item 2

Please see the accompanying response prepared by Woods Bagot that shows details of sight lines, windows and lighting to ensure that the building design provides for passive surveillance of public spaces and the safety of the public. Specifically the proposal includes:

- Clear sight lines between the proposed lower level airlock and Brisbane Street
- Windows overlooking Brisbane Street and the pedestrian space
- External lighting to the pedestrian pathway

Having regard to these features it is considered that the proposal satisfies P1 of Clause 22.4.4 a)-g) and specifically criterion P1 d) noted in Council's RFI *to locate external lighting to illuminate any entrapment spaces around the building site*.

Item 3

Please see the accompanying response from Woods Bagot. The proposed treatment is described within the planning submission as '100x500 timber battens at 600 centres'. The intent is that these are vertical Glu-lam timber battens, in a size, species and finish to match the internal mass timber structure.

Some species currently under consideration by the design team are Victorian Ash, Tasmanian Oak, and Spruce. The timber species will be confirmed during the design development phase and could be confirmed as a condition on the planning permit prior to commencement of the building alterations on the Brisbane Street frontage of the site.

Heritage Code

HER Fi 1 To enable the Council to assess the application against the relevant provisions of the Historic Heritage Code of the Hobart Interim Planning Scheme 2015 please provide:

1. Clarify if there is any ground disturbance associated with the proposed works. If excavation is proposed submit a Statement of Archaeological Potential and an Archaeological Impact Assessment.
2. Clarify and include the names of the architects of the existing heritage listed buildings on Melville Street in the submitted Historic Heritage Management Plan by Praxis. Clarify the significance of the buildings in terms of the architect's work in Hobart as per criteria (d) of the HCHA 1995.
3. Clarify and provide specifications of the glazing in WD:01 which is described as "New Vision Glazing".

Response

Item 1

Section 7 of the document Historic Heritage Management Strategy, 79-83 Melville Street, Hobart Tasmania (Praxis Environment May 2021) provides a statement of historical archaeological potential for the site. That document was provided as Appendix D of the application documentation.

That document (p116) provides an archaeological zoning plan for the site which designates an area of archaeological potential limited to the Melville Street frontage of the site, beneath the existing heritage buildings and part of the dome structure.

The attached updated heritage assessment has considered some supplementary information confirming that excavation within that area is limited to:

- Upgrade of an existing sewer and stormwater line(s) that run through the centre of the Forestry Dome.
- Provision of footings for new stairs within the former Crisp and Gunn warehouse/store.

Note that proposed lift pits are outside the identified area of archaeological potential.

In terms of possible archaeological impact, the heritage practitioner considers the risk to be minor, given that the upgrade of sewer and stormwater lines will be mostly within lines previously excavated. He therefore expects that these will be mostly within disturbed ground however, any additional depth or width of those lines may have some impact.

The excavation required for stairs footings within the building will be in a limited area, with some potential for minor archaeological impact.

Accordingly, the heritage practitioner recommends that any excavation within the area of archaeological potential (i.e. the red shaded area on p116 of the Praxis report) be archaeologically monitored and if any significant remains are found that these be managed in accordance with the Tasmanian Heritage Council's Practice Note 2 (Managing Historical Archaeological Potential in the Works Process). A report on that monitoring will be provided to the Tasmanian Heritage Council and Hobart City Council (even if a nil finding).

Item 2

Brad Williams from Praxis confirms that the Architect of the buildings was George Stanley Crisp, as noted in the Tasmanian Heritage Register datasheet. Further discussion on Crisp's work is provided on page 45 of the revised historic heritage management strategy, and further included commentary in the statements of significance in that document (pp. 93-95).

Item 3

Please see the accompanying response from Woods Bagot that confirms that the extent of WD:01 glazing is shown highlighted on the attached excerpt from the submitted drawing AR-13110 rev A.

This is proposed as a new neutral coloured vision glazing within the existing timber window frames. The exact glazing type will be determined during the design development phase based on thermal and

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acoustic performance requirements. The intent is that the glass has a neutral appearance and is as clear as performance requirements will allow.

I would be pleased to discuss as necessary.

We expect to be able to respond to the remaining matters in your request shortly and will provide further responses as soon as possible.

Yours sincerely

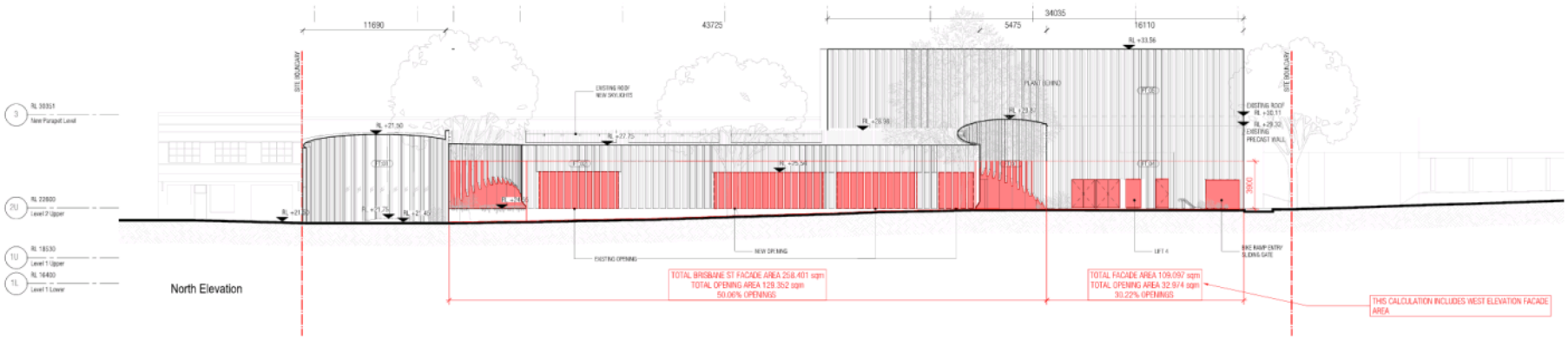
Frazer Read
Principal
All Urban Planning Pty Ltd

Planning: PLN Fi 1 Query 1

Query: 'Please provide frontage elevation to Brisbane Street highlighting area of window and door openings at ground floor level and demonstration that this amounts to no less than 40% of the surface area of the facade.'

Response: The area of window and door openings to Brisbane Street is shown highlighted below, in the excerpt from the submitted drawing AR-13110 rev A.

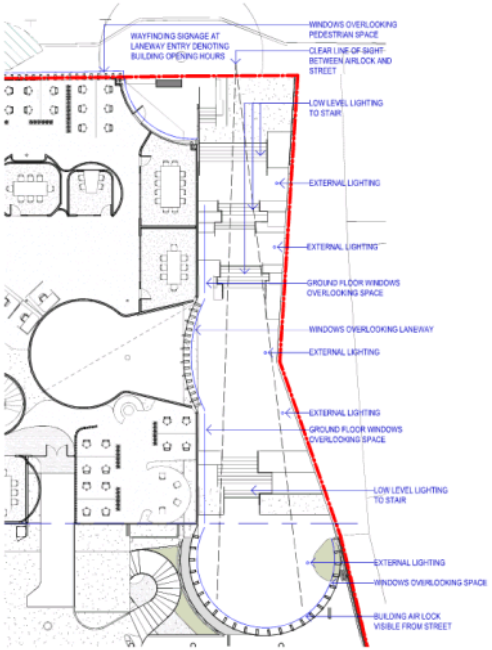
The street facing facade has an open area of 50%, exceeding the 40% minimum. The car parking facing facade has an open area of 30.22%, meeting the 30% minimum.



Planning: PLN Fi 1 Query 2

Query: 'Provide further details as to how the functionality of the proposed laneway from Brisbane Street avoids creating an entrapment space to the satisfaction of clause 22.4.4 A1 (d) or provides passive surveillance and external lighting illumination of the entire laneway to the satisfaction of 22.4.4 P1 (d)'

Response: The proposed laneway from Brisbane Street meets the requirements of 22.4.4 P1 (d), as well as the other items listed in this clause, as shown in the plan diagram below.



Planning: PLN Fi 1 Query 3

Query: 'Provide if available, further details as to potential timber materiality on new external facade surfaces'

Response: The proposed treatment is described within the planning submission as '100x500 timber battens at 600 centres'. The intent is that these are vertical Glu-lam timber battens, in a size, species and finish to match the internal mass timber structure.

Some species currently under consideration by the design team are Victorian Ash, Tasmanian Oak, and Spruce. The timber species will be confirmed during the design development phase.

Heritage: HER Fi 1 Query 3

Query: 'Clarify and provide specifications of the glazing in WD:01 which is described as "New Vision Glazing".'

Response: The extent of WD:01 glazing is shown highlighted below, in the excerpt from the submitted drawing AR-13110 rev A.

This is new neutral coloured vision glazing within the existing timber window frames. The exact glazing type will be determined during the design development phase based on thermal and acoustic performance requirements. The intent is that the glass has a neutral appearance and is as clear as performance requirements allow.

AllUrbanPlanning PTY LTD

17 February 2022

Michael McClenahan
Development Appraisal Planner
City Planning
City of Hobart
GPO Box 503
HOBART 7001

Dear Michael

Further Information – PLN-21-869

83 Melville Street & 80 Brisbane Street – Partial demolition, alterations, extension, change of use to Educational and Occasional care and associated works in road reserve

I refer to Council's request for further information 7 February 2022 for the above application for a planning permit and respond in relation to items PCL 1 and OSR Fi1 as follows:

PCL1

Please see attached an updated environmental report and cover letter from GHD.

OSR Fi1

Please see attached an updated assessment by Element Tree Services confirming no impact on the third street tree in Brisbane Street and three trees in Melville Street.

I would be pleased to discuss as necessary.

We expect to be able to respond to the remaining matters in your request shortly and will provide further responses as soon as possible.

Yours sincerely

Frazer Read
Principal
All Urban Planning Pty Ltd

19 Mawhera Ave, Sandy Bay Tasmania 7005 **Call** 0400 109 582 **Email** frazer@allurbanplanning.com.au **allurbanplanning.com.au**

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Johnstone McGee & Gandy Pty Ltd
ABN 76 473 834 852
ACN 009 547 139
as trustee for Johnstone McGee & Gandy Unit Trust

www.jmg.net.au

JMG Ref: J205082SH
Permit: PLN-21-869

25 February 2022

City of Hobart
GPO Box 503
HOBART TAS 7001

Dear Sir/Madam,

83 MELVILLE STREET & 80 BRISBANE STREET, HOBART - PLN-21-869

The clarifications responses are provided in response to Councils additional information request dated 2nd February 2022

Condition Requirement	Response
Sw 5 A concept stormwater treatment report, including associated plans and calculations/ model, demonstrating that the proposed stormwater system will incorporate Water Sensitive Urban Design such that it achieves the State Stormwater Strategy targets for the whole development. If this treatment cannot be achieved, demonstrate why it is not feasible.	As detailed in the 'Concept Services Report - University of Tasmania Forestry / Timber yards & Freedom Buildings Development' JMG Engineers & Planners February 2022, submitted with the planning application stormwater treatment is not required to satisfy section E7.7.1(A2) of the planning scheme as (a) The size of new impervious area is less than 600 m^2. (b) New car parking is not provided for more than 6 cars. The proposal is not for a subdivision for more than 5 lots.
Sw 6 A stormwater drainage design with supporting calculations, prepared by a suitable qualified engineer which demonstrates that the piped drainage system through the site (ie the diverted main) has capacity for the worst-case 20yr ARI event for a future fully-developed catchment.	Refer Sections 6,7 and 8 of the Flood Analysis and Stormwater Report. The flow for the worst-case 20yr ARI event including +17.9% CC for a future fully-developed catchment is 3.6m^3/s. Refer Tables 3,4 and 5. The minimum 'at grade' capacity of the proposed pipework through the Site is 6.1m^3/s . Refer Table 6.

Condition Requirement	Response
Sw 7 A designated overland flow path through the site prepared by a suitable qualified person which demonstrates compliance with the following: • Designed to accommodate a storm with an ARI of 100 years.	Refer Sections 6,7 and 8 of the Flood Analysis and Stormwater Report. The peak flow for 100yr ARI event that enters Brisbane St has been assessed as $6.7m^3/s$ ($6.1m^3/s + 0.6m^3/s$). Refer Tables 2 and 4. This flow is split between pipe flow and overland flow with peak overland flow rate totalling $3.1m^3/s$ (refer Table 5). The component overflowing into the property has been modelled using HEC-RAS as 740L/s. The overland flow pathway, depths, velocities and elevations for this flow are shown in Figures 10, 12,13,14,15,16 and Appendix C.

Condition Requirement	Response
IND 1 A site specific flood hazard report (as defined in Hobart Interim Planning Scheme 2015 Clause E15.3), inundation risk management plan and associated calculations prepared by a suitably qualified engineer in accordance with best practice guidelines that details: 1. The risk of inundation to the whole site, existing building, proposed buildings and building floor levels (based on a predicted 1% Annual Exceedance Probability flood event for the year 2100 including consideration of climate change. State the vertical clearance between the proposed finished floor level of any habitable rooms and the flood level; 2. The impact of the proposed development upon the risk of inundation of other land, buildings and infrastructure (including frequency, extent, depth, velocity, and hazard); 3. Any inundation control measures or design features proposed to be employed to reduce the risk, and the resultant level of risk; 4. Conclusions as to whether the use or development is likely to cause or contribute to the occurrence of flood on the site or on adjacent land and, as to whether the use or development can achieve and maintain a tolerable risk the intended life of the use or development; and All works included in the model (including but not limited to airlocks) and all assumptions used in the modelling.	Response to Item 1: Refer Section 9 of the Flood Analysis and Stormwater Report. Floor levels of habitable rooms have been adjusted if necessary to maintain an elevation above the peak flood level for the 1% AEP + CC storm event. Response to Item 2: Refer Section 8.2 of the Flood Analysis and Stormwater Report. All runoff generated by the site discharges into the piped system within the site. No additional runoff is generated by the development. There has been no alteration to the width or level of the entry that controls overland flow into the Site. Flow pathways that enter the Site from adjacent property have been maintained. Response to Item 3: Refer Section 9 of the Flood Analysis and Stormwater Report.for mitigation measures proposed for higher risk categories. Additionally, there is sufficient capacity in the proposed piped drainage system to accommodate flow that can potentially eliminate overland flow through the site.

Condition Requirement	Response
IND 2 Council notes the JMG "Flood Analysis and Stormwater Report" dated December 2021. The modelled flood extent differs from other flood studies in the area and Council's broadscale modelling. Please provide the flood model outputs (eg pre & post depth maps) for the catchment shown in Figure 4. Please address the following, including via amended model and/or sensitivity analysis: • The western catchment S1 overflow appears to have been based on excess from a DN1800 at full capacity. This piped rivulet is only DN1200 at its modelled surcharge location, and even smaller immediately upstream. Previous studies suggest only a small fraction of flow currently enters the piped system prior to Murray St. • The current modelled ponding 'detention' behind Mundy Meats relies upon conditions such as third-party solid walls constructed over mains/ flow paths and DN900 constriction which are unlikely to remain in a future fully-developed catchment. • Assumptions for the ponding behind 174 Elizabeth. • Levels supporting the drainage of flow down Brisbane St rather than down the driveway, particularly noting the road section Figure 12 has flow depths > back of footpath height. It is not clear Figure 12 is a typical section, or based on actual levels at the driveway. • Floor height of the Brisbane St building and how flood waters will be / are excluded. • Please clarify blockage factors used. • Council records state the pipe crossing Brisbane St is DN1500 - please clarify how the pipe size was confirmed. • Clear descriptions of an overland flow route through the developed site as per pre-development meetings, and associated risk. Clearly identify any habitable rooms.	Refer Sections 5,6,7 and 8 of the Flood Analysis and Stormwater Report.. The report and analysis have been changed to show the impact of a clear upstream pathway for flood from the 1% AEP storm event. The analysis assumes the upstream pipe network is capable of accepting the 5%AEP storm event. Dot point 1: Council have advised the pipe in Murray St is DN1800. It has been assumed this pipe takes the 5% AEP storm event and that flows above this enter the S_2 catchment that flows into Brisbane St above the Site. Dot points 2 and 3: All constraints to flow paths have been removed in the revised modelling. Dot point 4: Field survey has been carried out for the section of Brisbane St downstream of the Site. This surface has been used in the HEC-RAS hydraulic model apportioning flow down the driveway and Brisbane St. The levels and width of the driveway into the site have not been altered. Refer Section 8.2. Dot point 5: Floor heights facing Brisbane St remain unchanged and are significantly above flood levels with a FFL of 22.55 compared with a 1% AEP + CC WSE of 21.82. Lower floor levels of habitable rooms have been adjusted if necessary to be a minimum of 300mm above the 1% AEP + CC flood event. Dot point 6: The pits in Brisbane St are assumed to be totally blocked. Upstream pits are assumed to be sufficient in no. and size to allow entry of the 5% AEP storm flows.

Condition Requirement	Response
	Dot Point 7: CCTV showed the pipe in Brisbane St to be a stone arch. It is noted that Council consider this to be equivalent to a DN1500 pipe. Dot Point 8: Refer Section 8 which clearly identifies flow paths, depths and velocities for the impact of overland flows through the Site for the 1%AEP event. Habitable rooms are identified on the Architects Drawings. Refer Appendix A
IND 4 If buildings or works are proposed within the modelled flood area, provide evidence from a suitably qualified person that proposed buildings or works will be designed and constructed to resist hydrostatic and hydrodynamic forces as a result of inundation.	Notes have been added to drawing J205082SH-C14 to clarify that "All existing and new structures within the modelled overland flow path shall be designed to resist flood forces (hydrodynamic and hydrostatic) including debris which may impact the structure as a result of the overland flow depths and velocities modelled in the 'Flood Analysis and Stormwater Report - University of Tasmania Forestry / Timber yards & Freedom Buildings Development' JMG Engineers & Planners February 2022.

Condition Requirement	Response
INFsw1 Provide indicative plans and cross-sections, clearly indicating the relationship both vertically and horizontally between Council's stormwater infrastructure and easement and the proposed works (including overhang and footings). The plans must state the minimum setbacks from the works to the nearest external surface of the infrastructure. These drawings must demonstrate how an adequate overland flow path will be maintained, how adequate access to the main will be maintained, that no loading will be imposed on Council's infrastructure, and that the structure will be fully independent of the main and its trenching. 1. Show the width of the mains on the Level One plans; 2. State the clearance from the outside of the main from new and existing footings, and nature of the new structures over the mains (existing or proposed). 3. Provide an indicative cross-section showing the footing vs the main; 4. Discuss any stabilisation works required (particularly on third-party walls) for installation and/or replacement, given the size of the pipe and depth of the trench. 5. Demonstrate how future access to replace the main would be achieved given the size of the pipe, depth of the trench, heritage elements to protect and vertical clearance available. *Advice: The proposal shows works over and near Council's stormwater pipe. Council notes separate consent for all the works near the stormwater infrastructure will require separate consent under s73 of the Building Act 2016 and s13 of the Urban Drainage Act 2013.*	Drawings provided in the 'Concept Services Report - University of Tasmania Forestry / Timber yards & Freedom Buildings Development' JMG Engineers & Planners February 2022 have been updated to include the following details. • Cross Sections on drawing J205082SH-C14 at 4 No. critical locations through the site to show the location of the stormwater and sewer mains relative to the existing and proposed structures. Sections show the existing surface levels, proposed finished surface levels offsets to new and existing structures and easement widths. • Drawing J206082SH-C17 provides at a scale of 1:100 plan view of the main through the site and is location relative to existing and new structures. • Discussion with regard to stabilisation for installation and/or replacement is provided in the "Concept Services Report section 4.4 Discussion with regard to maintenance access and heritage elements including vertical clearances is provide in the amended Concept Services report section 4.4.

We will continue to forward documentation as it is finalised.

Please do not hesitate to contact us if you require any further information.

Yours faithfully
JOHNSTONE McGEE & GANDY PTY LTD

Chris Males
CIVIL DESIGN COORDINATOR

AllUrbanPlanning PTY LTD

25 February 2022

Michael McClenahan
Development Appraisal Planner
City Planning
City of Hobart
GPO Box 503
HOBART 7001

Dear Michael

Further Information – PLN-21-869

83 Melville Street & 80 Brisbane Street – Partial demolition, alterations, extension, change of use to Educational and Occasional care and associated works in road reserve

I refer to Council's updated request for further information 21 February 2022 for the above application for a planning permit.

The response to the Stormwater (Sw 5, Sw6, Sw7), Inundation items (IND 1, IND 2, IND 4) and Protection of Council Infrastructure - Stormwater (INF sw1) is provided in the accompanying documentation prepared by JMG and plans by Woods Bagot.

It is understood that all of Council's requests have now been responded to.

Yours sincerely

Frazer Read
Principal
All Urban Planning Pty Ltd

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as trustee for Johnstone McGee & Gandy Unit Trust

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JMG Ref: J205082SH
Permit: PLN-21-869

28 February 2022

City of Hobart
GPO Box 503
HOBART TAS 7001

Dear Sir/Madam,

83 MELVILLE STREET & 80 BRISBANE STREET, HOBART - PLN-21-869 & TWDA 2022/00056-HCC

The clarifications below are provided in response to TasWaters additional information request dated 21st of January 2022

Item 1

Access to Existing Manhole 3.2

a. Service vehicle parking is available in Melville Street adjacent the western building entry. Refer Concept Services Report section 2.3
b. The proposed hose path is in the vicinity of 55m. Refer Concept Services Report section 2.3
c. Architectural drawings and the Concept Services Reports have been updated to show the manhole fully located within the Utility Room. Refer Concept Services Report section 2.3
d. Surcharge of the manhole has been considered in the revised Concept Services Report. Refer Concept Services Report section 2.3

Item 2

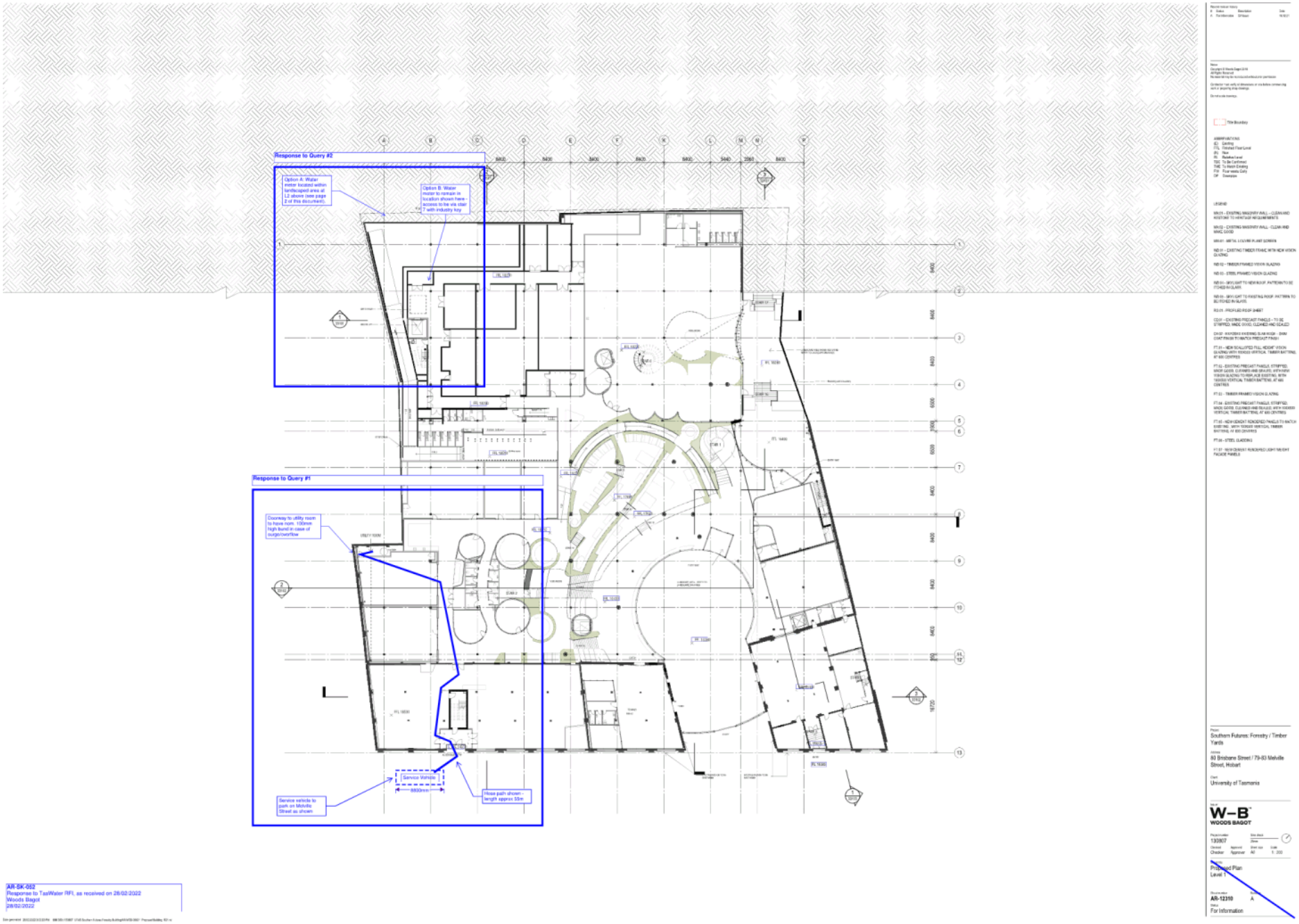
Water Meter Assembly Location

a. The water meter assembly location has been revised to be in the Brisbane Street carpark garden bed. Refer Concept Services Report section 3.3

Please do not hesitate to contact us if you require any further information.

Yours faithfully
JOHNSTONE McGEE & GANDY PTY LTD

Chris Males
DIRECTOR / CIVIL DESIGN COORDINATOR


Response to Query #2
Option A: Water meter located within landscaped area at L2 above (see page 2 of this document).
Option B: Water meter to remain in location shown here - access to be via door 7 with industry key
Response to Query #1
Doorway to utility room to have nom. 100mm high bund in case of surge/overflow
Service Vehicle
8800mm
Service vehicle to park on Melville Street as shown
Hose path shown - length approx 55m
Southern Futures: Forestry / Timber Yards
80 Brisbane Street / 79-83 Melville Street, Hobart
University of Tasmania
W–B
WOODS BAGOT
Proposed Plan
Level 1
AR-12310
A
For Information
AR-SK-052
Response to TasWater RFI, as received on 28/02/2022
Woods Bagot
28/02/2022

Response to Query #2
Option A: Water meter located within landscaped area. Bollards to be provided either end.
Option B: Water meter to remain at level 2 below, with access via fire egress corridor and stair 7 with industry key.
Southern Futures: Forestry / Timber Yards
80 Brisbane Street / 79-83 Melville Street, Hobart
University of Tasmania
W–B
WOODS BAGOT
Proposed Plan
Level 2
AR-12320
For Information

Submission to Planning Authority Notice

Council Planning Permit No.	PLN-21-869	**Council notice date**	18/01/2022
TasWater details			
TasWater Reference No.	TWDA 2022/00056-HCC	**Date of response**	10/03/2022
TasWater Contact	Al Cole	**Phone No.**	0439605108
Response issued to			
Council name	CITY OF HOBART		
Contact details	coh@hobartcity.com.au		
Development details			
Address	80 BRISBANE ST, HOBART	**Property ID (PID)**	2811771
Description of development	UTAS Forestry/Timber Yards & Freedom Buildings Development		

Schedule of drawings/documents

Prepared by	Drawing/document No.	Revision No.	Date of Issue
JMG	Concept Services Report Sections 2 and 3	4	28/02/2022

Conditions

Pursuant to the *Water and Sewerage Industry Act* 2008 (TAS) Section 56P(1) TasWater imposes the following conditions on the permit for this application:

CONNECTIONS, METERING & BACKFLOW

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.

   Advice: The water meter assembly shall be as per Option A in the Concept Services Report.

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.

ASSET CREATION & INFRASTRUCTURE WORKS

4. Plans submitted with the application for Engineering Design Approval must, to the satisfaction of TasWater show, all existing, redundant and/or proposed property services and mains.

5. Prior to applying for a Permit to Construct new infrastructure the developer must obtain from 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 for water and sewerage 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 water and sewerage infrastructure required to service the development, are to be completed generally as shown on, and in accordance with, the plans listed in the schedule of drawings/documents, and 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 applying to TasWater for 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. Work As Constructed drawings and documentation 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.

FINAL PLANS, EASEMENTS & ENDORSEMENTS

15. Prior to the issue of a 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) to cover existing/proposed TasWater infrastructure as required by condition 8. All costs and expenses related to the transfer of easement(s)/lots to TasWater are to be paid by the developer.

56W CONSENT

16. 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

17. The applicant or landowner as the case may be, must pay a development assessment fee of $699.36, 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 https://www.taswater.com.au/building-and-development/technical-standards

For application forms please visit https://www.taswater.com.au/building-and-development/development-application-form

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.

Boundary Trap Area

The proposed development is within a boundary trap area and the developer will need to provide a boundary trap that prevents noxious gases or persistent odours back venting into the property's sanitary drain. The boundary trap is to be be contained within the property boundaries and the property owner remains responsible for the ownership, operation and maintenance of the boundary trap.

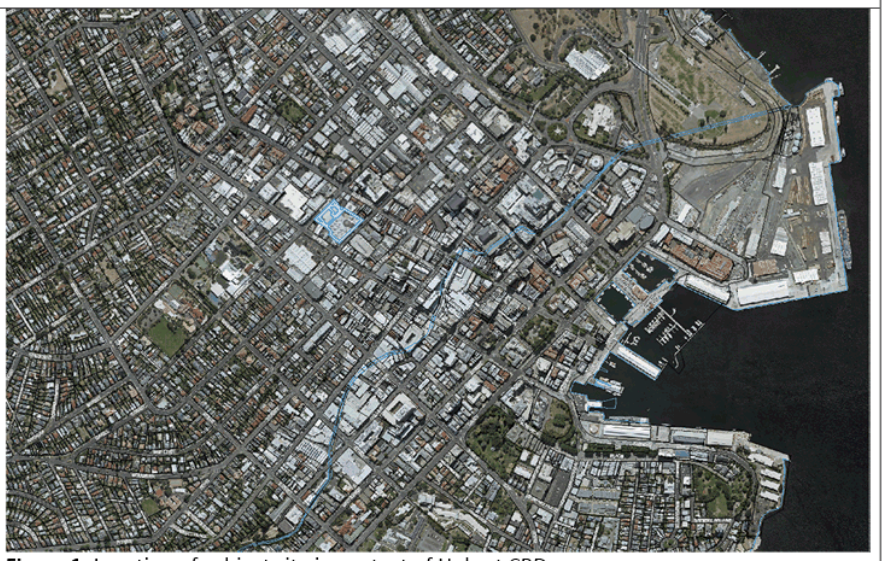
Declaration

The drawings/documents and conditions stated above constitute TasWater's Submission to Planning Authority Notice.

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

2.0	**Site Detail**
2.1	The subject site is located at 83 Melville Street, Hobart (also known as 79-83 Melville Street) and 80 Brisbane Street, Hobart and comprises a two strata lots and the parent title lot, with an area of approximately 7873m^2 in area in the Hobart Central Business District. The site spans the width of the block and has frontages to both Melville and Brisbane Streets. The site presently comprises of a large two storey building (Forestry Building) on the Melville Street frontage and a large furniture showroom with understorey parking on the Brisbane Street frontage. The approved uses on the site are Business and Professional Services, General Retail and Hire, and Bulky Goods Sales. The surrounding area is characterised by wide variety of uses including Business and Professional Services, General Retail and Hire, Residential, Vehicle Parking, and Community Meeting and Entertainment. The site has two vehicle crossovers, both on the Brisbane Street frontage including a driveway and laneway along the north eastern side boundary.
	 **Figure 1**: Location of subject site in context of Hobart CBD

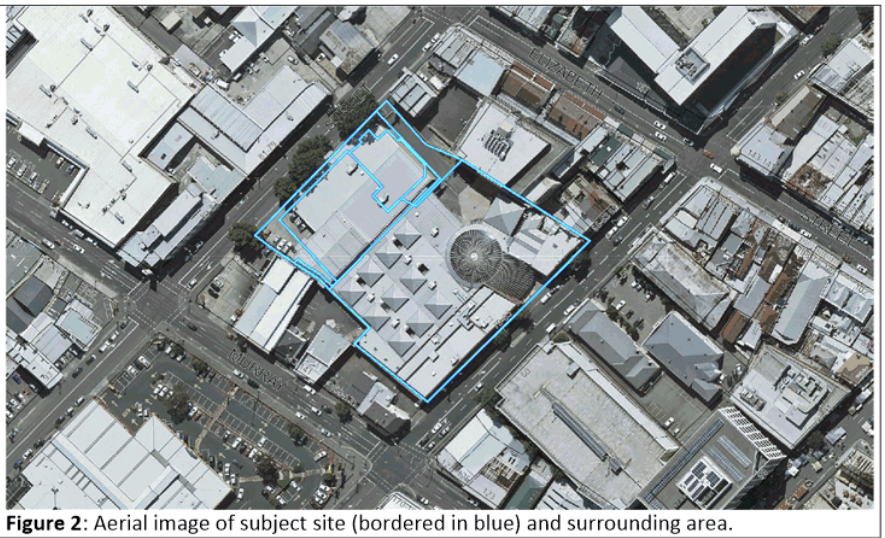


Figure 2: Aerial image of subject site (bordered in blue) and surrounding area.

Figure 3: The site is in the Central Business Zone (dark blue). The adjacent properties to the west and north are in the Commercial Zone (purple). The adjacent roads are zoned Utilities (yellow).

Figure 4: Heritage overlays on the subject site, the brown hatching indicates the area of archaeological potential. The red denotes individual heritage listing under the Hobart Interim Planning Scheme. The purple hatching denotes heritage listing under the Tasmanian Heritage Council.

Figure 5: Photograph of subject site from Brisbane Street frontage.

Figure 6: Photograph of subject site from Melville Street frontage.

Application Referral Cultural Heritage - Response

From:	Sarah Waight
Recommendation:	Proposal is acceptable subject to conditions.
Date Completed:	
Address:	83 MELVILLE STREET, HOBART 80 BRISBANE STREET, HOBART ADJACENT ROAD RESERVE
Proposal:	Partial Demolition, Alterations, Extension, Change of Use to Educational and Occasional Care, and Associated Works in Road Reserve
Application No:	PLN-21-869
Assessment Officer:	Michael McClenahan,

Referral Officer comments:

This application is for demolition and new work on a site that is heritage listed in Table E13.1 and also within a Place of Archaeological Potential as defined in Table E13.1 and shown in Figure E13.4.1 of the Historic Heritage Code of the *Hobart Interim Planning Scheme 2015*. Details of the applicable heritage listings from the Scheme are shown below. It is also described in the accompanying heritage report as buildings 1 and 2.

The Scheme defines the extent of the heritage listing in Figure E13.1.11 and it equates to the footprint of the buildings of the former Crisp and Gunn buildings from 1923. Rear extensions and other buildings on the site are not heritage listed, therefore demolition and work proposed elsewhere is not subject to the provisions of the Historic Heritage Code.

2061		83	MELVILLE STREET	149231/2	Former Crisp & Gunn buildings (Previously known as 79-85 Melville Street, also known as 80 Brisbane Street)	Refer to Figure E13.1.11

Heritage listing of site from Table E13.1. Source: *Hobart Interim Planning Scheme 2015*

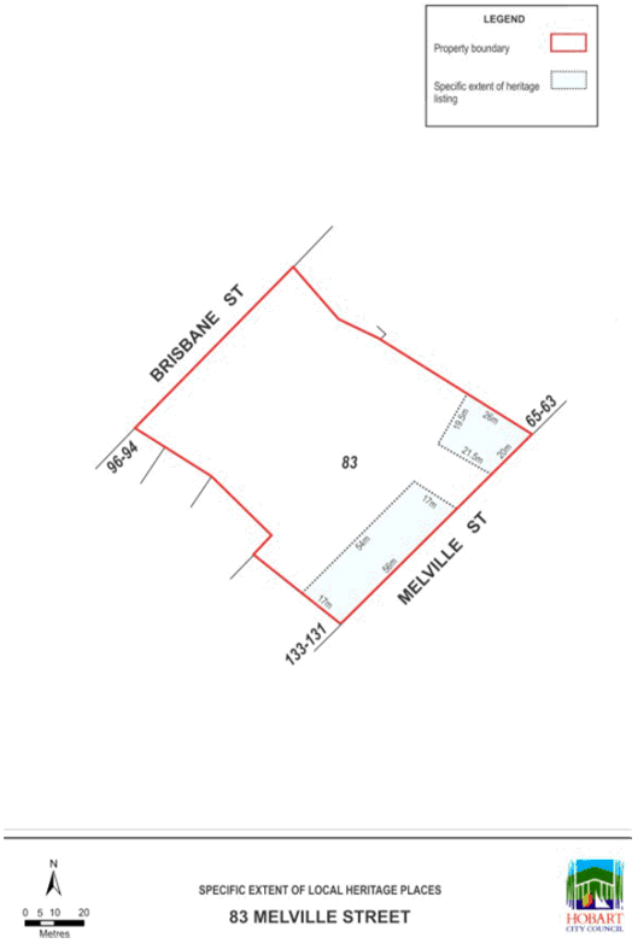


Figure E13.1.11 Specific Extent 83 Melville Street. Source: *Hobart Interim Planning Scheme 2015*

The proposal is for demolition and new work both within and outside the defined heritage specific extent of the subject site.

The following heritage provisions apply:
E13.7.1 P1 Demolition within a heritage place
E13.7.2 P1, P2, P3, P4 - New work within a heritage place
E13.10.1 P1 Development in a Place of Archaeological Potential
22.4.1 A4 - Development within the Central Business Zone on the same title as a place where the specific extent is described.

The application is supported by the following documentation: Historic Heritage Management Strategy by Praxis Environment, May 2021 with a Heritage Impact Assessment dated December 2021.

That document covers the following:
1. Detailed review and confirmation of heritage requirements,
2. An overview of the site history,
3. Statement of Archaeological Potential,

4. A Conservation Brief for the listed portion of the site,
5. Heritage Impact Assessment

The heritage listed parts of the site as described above in Table E13.1 and Figure E13.1.11 are known as the former Crisp and Gunn hardware store and workshop (a 3 and 2 storey 1923 building facing Melville Street respectively - Building 1) and the former Crisp and Gunn office (a 2 storey 1923 building facing Melville Street - Building 2). Both buildings were designed by architect George Stanley Crisp, the son of Alfred Crisp of Crisp Bros in brick after a fire destroyed all of the Crisp and Gunn's timber yards, mill and factory in May 1922. The original plans for the 2 and 3 storey buildings exist and are reproduced in the Praxis report. No original plans for the Crisp and Gunn office building (Building 2) have been found. Works occurred in 1972 to the Crisp and Gunn office building when the State Government took up occupancy of the building. Subsequent renovations were assessed in a heritage study in 1990 and 1995 in which it was concluded that the 1970s renovations were considered to detract from the significance of the building. In 1997 the site was redeveloped and the dome constructed and much of the 1972 works were removed. The Brisbane Street site was divested and the central part of the current site and Crisp and Gunn buildings in Melville Street were redeveloped for use by Forestry Tasmania, who operated from the building till 2017. The site was purchased by UTAS in 2018.

Works to the Forestry Dome (1997) are not assessed under the Historic Heritage Code of the Scheme, but are assessed separately under the *Historic Cultural Heritage Act 1995.*

Representations:
119 representations were received during the advertising period, 96 against and 23 for. The following heritage related comments were received:

- 'To protect the building fabric and ensure any damage caused by the building works at 83 Melville Street, Hobart, I believe UTAS should be required to conduct at their cost a Dilapidation survey of the property at 61, 63, 65 and 67 Melville Street, Hobart. This will allow for a property assessment report undertaken to provide a visual assessment of constructional and cosmetic fabric defects, which are or may be related to movement of the structure or fabric of the subject property evident on the day of the inspection prior to the commencement of neighbouring construction works at 83 Melville Street, Hobart.'
- 'I believe the proposed development ... represents a sympathetic adaptive reuse of buildings of heritage significance. ,.. is sympathetic to the streetscape, character of the area...'
- 'while it is good to have the Forestry building restored other uses may be more appropriate.'
- 'I have reviewed designs and understand the renovation is within the existing building envelope. It not only protects the heritage aspects of the Forestry Building but also enhances some of the core architectural features.'
- 'The building comfortably conforms with the relevant Development Standards for the Central Business Zone and will contribute positively to the streetscape and the heritage character of the site and surrounding area.'
- 'The proposal has been sensitively designed to conserve and enhance the heritage attributes of the site including the Crisp and Gunn buildings and the Forestry Dome and complies with the provisions of the Heritage Code of the planning scheme.'

Response:
Use or change of use is not a consideration under the Historic Heritage Code (see clause E13.2.2). The Code applies only to development.

The application is confined to the subject site as 83 Melville St, 80 Brisbane St, adjacent road reserve and as such Council is unable to impose a condition relating to land outside the subject land. However, it is recommended that advice be included if a permit were issued, that

UTAS look to including adjacent heritage listed sites in a Construction Management Plan for the subject site, and that it consider any impact from construction, vibration on neighbouring heritage listed properties.

Such advice could be:
Advice:
It is recommended that a Construction Management Plan address impacts on adjacent heritage listed buildings/foundations and structures to ensure that these structures are not negatively impacted on by vehicular movements, excavation, construction and vibration.

Relevant Provisions and Assessment/Response:
Demolition
Clause E13.7.1 P1 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

Response:
Demolition is proposed within the both heritage listed buildings of both original fabric and non-original fabric.

Crisp and Gunn Office (79 Melville St - Building 2):
There is no change to the facade (street elevation) of the building with demolition elsewhere relating largely, but not entirely, to non-significant, low significance or intrusive building and fabric. The description section in the Praxis report indicates the interior joinery as high quality and finely executed, recommending it be retained with the exception of the 1997 replica partitions. In addition, it identifies joinery which 'may' be removed or modified.

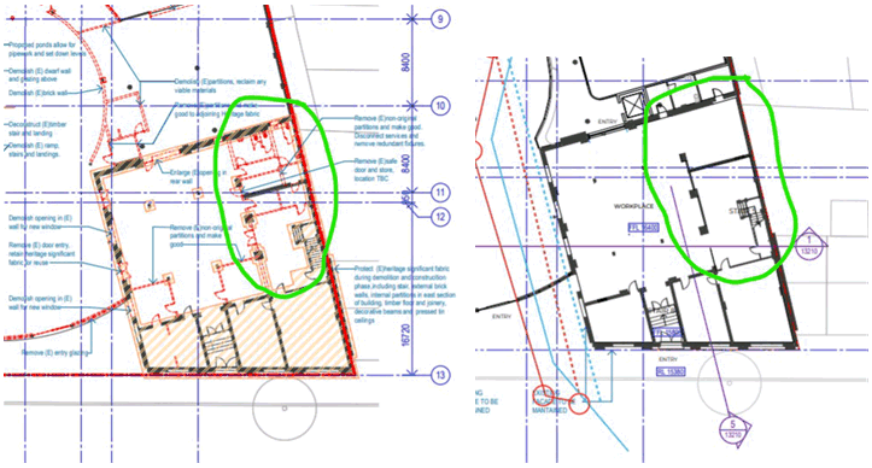
The architectural plans show the demolition of the safe door for storage and 'location TBC' and the demolition of the glazed double doors between the staircase and the main chamber, additional walls and elements within the space shown by the area circled in green. While the Praxis report explores each of the elements in this part of the building and identified some of these as being non-significant, low significance and intrusive, it is recommended that a condition be included should a permit be issued requiring the lodgement of additional assessment and clarification and design work done to the satisfaction of Council. Further physical exploratory investigations may be necessary to inform further design work. It is advised that retention of the safe door in situ and the walls/doors and joinery to the north east side of the main chamber be a high priority to ensure the characteristics and spatial qualities of the main chamber are retained.

The upper floor has been previously removed of walls and fitout from the 1970s. No changes to the lantern light over the barrel vault are proposed, although some additional clarification is required as there is also demolition shown, as well as a new roof over the existing. A condition of permit is required to clarify the details of demolition and new work, with the focus on the retention of historic fabric and the minimisation of demolition.

Externally, the flag pole on the Crisp and Gunn offices building is not shown on all of the drawings submitted as part of this application, although it is shown on the east elevation as 'retain flagpole structure and reinstate walkway.' While original drawings for the office building were not found during the historical research, the flag pole is shown in a photo of 1946

and again in 1995 documentation. It is therefore concluded that it is likely to be original given the Praxis report concludes that the exterior envelope largely retains its original 1923 form and the facade is wholly original. It is therefore recommended that in the absence of full details a condition be included to clarify the flag pole must be retained, conserved and protected. In addition, the 1995 report also concludes that the banner pediment may still retain the name of Crisp and Gunn behind the blue banner. Any future signage must take into account the potential for the original Crisp and Gunn signage to be in situ and again, further investigations may be necessary to inform this work.

The removal of the original door on the ground floor is contrary to heritage advice and is not supported. It is recommended that this not be approved. Further resolution of the use and configuration of the ground floor can work with the retention of this element.



Demolition plan and proposed floor plan of the Crisp and Gunn office building: area requiring further review is shown circled in green. source: Applicant's submission

Crisp and Gunn warehouse and hardware store (83 Melville St - Building 1):

Demolition within this part of the heritage listed site includes: internal partitions from the 1997 fitout and the demolition of the original timber floor between the ground and first floor in the 3 storey section described on the plans as Crisp and Gunn original hardware store 1923 to create a 'tenancy'. This is shown on plan level 1M Overall Plan Demolition, Sheet number AR-12210. The original timber truss frame within the roof is to be retained.

Original timber floor (to first floor) ceiling 9to ground floor) proposed to be demolished. Source: Council image

The Heritage Impact Assessment in the Praxis report examines the floor and states: 'The timber floors should be retained and preferably remain exposed/polished to highlight the use of timber in the building (associated with its long association with the timber industry). Remove the floating floor in the stairs hall and assess underlying flooring. Retain the tiled entry foyer.' and 'The timber floors in the front section should be retained and preferably remain exposed/polished to highlight the use of timber in the building (associated with its long association with the timber industry).' and identified as having high significance. and with the following policy 'Buildings deemed to be of high significance must be conserved, restored and maintained (namely the former Crisp and Gunn buildings). Significant fabric associated with those buildings must also be conserved, restored and maintained.' The proposed removal of the floor is in conflict with the identified significance and policy approach. The Praxis report states; 'This will have a heritage impact in terms of removal of a substantial amount of structural fabric and inhibiting the ability to discern the spatial layout of the original building', followed by a response by the architects which states: 'Removal of this floor allows for the creation of larger, continuous workspace areas and for the space to open up considerably. This area is currently significantly constrained.' Demolition is driven by architecture and an unclear use/tenancy, rather than guidance from the impact on heritage values. It is considered appropriate for advice to be included, should a permit be issued, advising the applicant the further resolution of the ground floor space and its currently unresolved use, could involve the retention/reduction in demolition of the existing timber floor.

Remainder of site:
The historic masonry walls in the basement area under the current Freedom Furniture shop are

shown to be retained even though these walls are not heritage listed under the Scheme and there is no statutory basis for their retention or conservation. Plan notation states: 'Inspect condition of masonry walls. Clean and repair where necessary.' Given, no demolition of historic fabric is proposed this component of the proposal is considered a positive heritage outcome.

Development and new work:
Clause E13.7.2 P1 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 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 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.

Clause E13.7.2 P4 states:
Extensions to existing buildings must not detract from the historic cultural heritage significance of the place.

Response:
The proposed development within the 83 Melville St retains and reveals the form, 'the bones' and character of the Crisp and Gunn store/warehouse. The removal of the original timber floor between the ground and first floor is not a desirable heritage outcome, but in terms of the proposed design of, scale, height as described in E13.7.2 P1, there is no over arching loss of heritage values through the new development. The new floor with 79 Melville St is an unfortunate outcome given it is doubled with the demolition of the roof lantern superstructure. While subservient in scale, a better resolution could be achieved to ensure it is complementary to the place in the sense of 'completes' or 'makes whole' the place. The level of detail within the mezzanine does not provide adequate detail, but could be acceptable with a condition should a permit be issued, that the detailing is to the satisfaction of Council. On this basis the proposal will satisfy E13.7.2 P2 and P3.

Under clause E13.7.2 P4, the roof top extension to 79 Melville St is the only part of the proposal that is assessed as the proposed extension to the heritage listed building (83 Melville St) is outside the footprint of the specific extent described in the Historic Heritage Code of the Scheme. The roof top extension or changed roof line sits over the significant roof lantern and barrel vault with the form and connection requiring further resolution. In general, the roof form is modest in scale and form, largely hidden behind the parapet of 79 Melville St. However, the proposed changes internally in floor levels around the barrel vault are a heritage outcome outcome that requires further resolution. A condition of permit would require this work to be detailed to the satisfaction of Council.

Archaeology:
Clause E13.10.1 P1 states:
Buildings, works and demolition must not unnecessarily impact on archaeological resources

at places of archaeological potential, having regard to:
(a) the nature of the archaeological evidence, either known or predicted;
(b) measures proposed to investigate the archaeological evidence to confirm predictive statements of potential;
(c) strategies to avoid, minimise and/or control impacts arising from building, works and demolition;
(d) where it is demonstrated there is no prudent and feasible alternative to impacts arising from building, works and demolition, measures proposed to realise both the research potential in the archaeological evidence and a meaningful public benefit from any archaeological investigation;
(e) measures proposed to preserve significant archaeological evidence 'in situ'.

Response:
The applicant responds to and addresses the fact that the site is located within a Place of Archaeological Potential as defined under the Scheme with a Statement of Archaeological Potential prepared by Praxis.

The Praxis report identifies areas of high archaeological potential, but notes that no excavation is proposed for within those part of the site. However, it also concludes that there is some excavation as part of the proposed bathroom and kitchen facilities, but notes that detailed building documentation will clarify the extent, location or need for excavation. In the event that excavation is required, the Praxis report recommends that it be archaeologically monitored. As such, with conditions of permit the proposal will satisfy E13.10.1 P1.

Building height on a site with a 'Specific Extent':
Clause 22.4.1 A4 states:
Building height of development on the same title as a place listed in the Historic Heritage Code, where the specific extent of the heritage place is specified in Table E13.1, and directly behind that place must:
(a) not exceed 2 storeys or 7.5m higher (whichever is the lesser) than the building height of any heritage building within the place, and be set back between 5m and 10m from the place (refer figures 22.4 i and 22.4 ii); and
(b) not exceed 4 storeys or 15m higher (whichever is the lesser) than the building height of any heritage building within the place, and be set back more than 10m from the place (refer figures 22.4 i and 22.4 ii);
or
(c) comply with the building height in clauses 22.4.1 A1 and A2;
whichever is the lesser.

Response:
There is no change to the building height to 83 Melville Street (building 1) and there is additional roof height to 79 Melville Street (building 2). It does not exceed 2 storeys (it is only 1 storey) and is between approximately 2 metres and 4.2 metres in height with a set back approximately 8 metres. The proposal satisfies the Acceptable Solution (Clause 22.4.1 A4).

Conclusion:
The proposal satisfies the relevant performance criteria of the Historic Heritage Code of the Scheme and the acceptable solution for the Central Business Zone - development standards for buildings and works within the specific extent of a heritage listed building. Conditions and Advice are appropriate should a permit be issued.

Sarah Waight
Senior Cultural Heritage Officer
14 April 2022

ATTACHMENT H

Application Referral Development Engineering - Response

From:	Eswaren Shanmugam
Recommendation:	Proposal is acceptable subject to conditions.
Date Completed:	
Address:	83 MELVILLE STREET, HOBART 80 BRISBANE STREET, HOBART ADJACENT ROAD RESERVE
Proposal:	Partial Demolition, Alterations, Extension, Change of Use to Educational and Occasional Care, and Associated Works in Road Reserve
Application No:	PLN-21-869
Assessment Officer:	Michael McClenahan,

Referral Officer comments:

OVERVIEW:
Redevelopment of existing subject site for change of use to Educational & Occasional Care, facilitating a new city campus for the *Southern Futures: Forestry / Timber Yards* project of the University of Tasmania. Note the construction of new in-ground public SW infrastructure, and civil works within the highway reservation, have been approved under GMC-21-84.

ASSESSMENT SUMMARY:

• E5.0 Road and railway access code - DOES NOT APPLY

• E6.0 Parking and Access Code - DOES APPLY

- Clause(s) E6.6's: Are all to do with parking number assessment - Acceptable Solution
- Clause E6.7.1: Number of vehicle accesses - Acceptable Solution
- Clause E6.7.2: Design of vehicle accesses - Not Applicable
- Clause E6.7.3: Vehicle passing area along an access - Not Applicable
- Clause E6.7.4: On-site turning - Not Applicable
- Clause E6.7.5: Layout of parking areas - Performance Criteria
- Clause E6.7.6: Surface treatment of parking areas - Not Applicable
- Clause E6.7.10: Design of bicycle parking areas - Acceptable Solution
- Clause E6.7.13: Facilities for commercial vehicles - Acceptable Solution
- Clause E6.7.14: Access to a road - Acceptable Solution
- Clause E6.7.15: Access to Niree Lane Sandy Bay - Not Applicable

COMMENTS:
In a Council related engineering context, Development Engineering can support this proposal in principal subject to the following conditions and advice.

GENERAL CONDITIONS:
ENG 1: Pay Costs
ENG 2a: Physical Controls
ENG 3b: P&A Design

ENG 4: Surface Treatment
ENG 5: Parking Delineation
ENG 9: DDA Delineation
ENG 11: Crossover Reinstatement
ENG 13: WMP
ENG sw1: SW Drainage
ENV 2: SWMP Design

ADVICE:

- Dial before you dig
- Fees and charges
- Building Permit
- Plumbing Permit
- General exemption (temporary) parking permits
- Occupation of the public highway
- Driveway surfacing over highway reservation
- Condition endorsement
- Redundant Crossover
- Work in the highway reservation
- CBD and high volume footpath closures
- New Service Connection
- Stormwater
- Permit To Construct Public Infrastructure
- Building Over An Easement
- Outward Doors Onto Highway Reservation
- Waste disposal

REPRESENTATIONS:

Comments made under the heading *Access for the Disabled* regarding the quantity & quality of off-street parking spaces for people with disabilities don't appear to be correct, furthermore detailed design of the parking area (prepared by a suitably qualified person) must be approved prior to the commencement of works or any approval being granted under the Building Act. Relevant comments made under the heading *Waste Storage and Collection* shall be sufficiently addressed with the condition endorsement of a waste management plan (prepared by a suitably qualified person), prior to commencement of works or any approval being granted under the Building Act.

DETAILED ASSESSMENT:

E5.0 Road and railway access code

E5.1 Purpose			E5.1.1 The purpose of this provision is to: (a) protect the safety and efficiency of the road and railway networks; and (b) reduce conflicts between sensitive uses and major roads and the rail network.
E5.2 Application of this 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)**
Clause E5.5.1: Existing road accesses and junctions NOT APPLICABLE			**Documentation submitted to date appears not to invoke clause E5.5.1.** **No intensification of existing road accesses and/or junctions proposed.**
Clause E5.5.2: Existing level crossings NOT APPLICABLE			**Documentation submitted to date appears not to invoke clause E5.5.2.** **No intensification of an existing level crossings proposed.**
Clause E5.6.1: Development adjacent to roads and railways NOT APPLICABLE			**Documentation submitted to date appears not to invoke clause E5.6.1.** **No development adjacent to category 1 or category 2 road proposed.**
Clause E5.6.2: Road accesses and junctions NOT APPLICABLE			**Documentation submitted to date appears not to invoke clause E5.6.2.** **No new accesses or access junctions proposed.**
Clause E5.6.3: New level crossings NOT APPLICABLE			**Documentation submitted to date appears not to invoke clause E5.6.3.** **No new level crossings proposed.**
Clause E5.6.4: Sight distance at accesses, junctions and level crossings NOT APPLICABLE			**Documentation submitted to date appears not to invoke clause E5.6.4.** **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;
		N/A	(g) recognise the complementary use and benefit of public transport and non-motorised modes of transport such as bicycles and walking;
	Yes		(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)**

Clause(s) 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. **ACCEPTABLE SOLUTION**			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 appears to satisfy the Acceptable Solution for clause E6.6.5** Acceptable solution - A1: - **COMPLIANT** The number of on-site car parking spaces must be: (a) No on-site parking is provided; or (b) on-site parking is provided at a maximum rate of space 1 per 200m2 of gross floor area for commercial uses. **Provision rate is 6.5 times less than the maximum acceptable, thus (1 per ≈1300m²) does not exceed 1 per 200m².** **Compliance response as per *GHD* Traffic Impact Statement dated 16 December 2021, page 7.**
Clause E6.7.1: Number of vehicle accesses **ACCEPTABLE SOLUTION**			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).* **Documentation submitted to date appears to be able to satisfy the Acceptable Solution for clause E6.7.1**. Acceptable solution: - **COMPLIANT** 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. **One (1x) crossover (80 Brisbane Street frontage) - Existing, no additional crossover(s) proposed, all remaining deemed redundant and are to be reinstated.**
Clause E6.7.2: Design of vehicle accesses **NOT APPLICABLE**			The design of the vehicle access must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015). **Documentation submitted to date appears not to invoke clause E6.7.2.** **Submitted documentation appears to indicate no changes proposed to the existing vehicle access.**

Clause E6.7.3: Vehicle passing area along an access NOT APPLICABLE			Vehicle passing must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015). **Documentation submitted to date appears not to invoke clause E6.7.4.** 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** **Submitted documentation appears to indicate no facility / requirement for vehicle passing.**
Clause E6.7.4: On-site turning NOT APPLICABLE			On-site turning must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015). **Documentation submitted to date appears not to invoke clause E6.7.4.** 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** **Although not a requirement, on-site turning is feasible given the manoeuvring provisions.**
Clause E6.7.5: Layout of parking areas **PERFORMANCE CRITERIA**			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.

Performance Criteria - P1: - **COMPLIANT**
The layout of car parking spaces, access aisles, circulation roadways and ramps must be safe and must ensure ease of access, egress and manoeuvring on-site.
- Acceptable, submitted documentation appears to satisfy the relevant standards for design

• Car Parking Space Dimensions (AS2890.1 Fig 2.2 = 2.4x5.4m Class 1A):
- Submitted design documentation appears able to satisfy this requirement, bays detailed in accordance

• Car Parking Space Design Envelope (AS2890.1 Fig 5.2 300mm clearance on side):
- Submitted documentation appears able to satisfy this requirement, not shown albeit achievable

• Headroom: (AS2890.1 Fig 5.3 = 2.2m clearance):
- N/A

• Parking Space Gradient (5%):
- Submitted documentation appears able to satisfy this requirement, existing parking area

• Aisle Width (AS2890.1 Fig 2.2 = 5.8m Class 1A):
- Submitted documentation appears able to satisfy this requirement, minimum 5.8m detailed

• Garage Door Width & Apron (AS2890.1 Fig 5.4 = 2.4m wide = >7m wide apron):
- N/A

• Parking Module Gradient (5% Acceptable, 10% Performance):
- Submitted documentation appears able to satisfy this requirement, existing parking area

• Driveway Gradient & Width (AS2890.1 Section 2.6 = 25% and 3m):
- Submitted documentation appears able to satisfy this requirement, existing parking area in accordance

• Transitions (AS2890.1 Section 2.5.3 = 12.5% summit, 15% sag = >2m transition):
- Submitted documentation appears able to satisfy this requirement, existing parking area

			• Vehicular Barriers (AS2890.1 Section 2.4.5.3 = 600mm drop, 1:4 slope): - **N/A** • Blind Aisle End Widening (AS2890.1 Fig 2.3 = 1m extra): - **N/A** • "Jockey Parking" (Performance Assessment): - **N/A** **Submitted design documentation appears to meet the parameters of a performance based solution that may be accepted by the City, this is primarily due to the layout essentially being a minor reconfiguration of an existing parking area without any major civil works being required or identified.**
Clause E6.7.6: Surface treatment of parking areas **NOT APPLICABLE**			The surface treatment must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015). **Documentation submitted to date appears not to invoke clause E6.7.6**. **Submitted documentation appears to indicate no new hard stand area(s) proposed or new development within a car parking area.**
Clause E6.7.7: Lighting of parking areas *(Planner and health unit to assess)*	—	—	Planner to assess
Clause E6.7.8: Landscaping of parking areas *(Planner to assess)*	—	—	Planner to assess

Clause E6.7.9: Design of motorcycle parking areas NOT APPLICABLE			The motor bike parking must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015). **Documentation submitted to date appears not to invoke clause E6.7.9.** Acceptable Solution A1 (E6.6.3): The number of on-site motorcycle parking spaces provided must be at a rate of 1 space to each 20 car parking spaces after the first 19 car parking spaces except if bulky goods sales, (rounded to the nearest whole number). Where an existing use or development is extended or intensified, the additional number of motorcycle parking spaces provided must be calculated on the amount of extension or intensification, provided the existing number of motorcycle parking spaces is not reduced. **NO REQUIREMENT** (<19 car parking spaces).
Clause E6.7.10: Design of bicycle parking areas **ACCEPTABLE SOLUTION**			The bicycle parking must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015). **Documentation submitted to date does appear to satisfy the Acceptable Solution for clause E6.7.10**. 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. 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. *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.* **Compliance with the relevant acceptable solutions is explicitly stated within *GHD* Traffic Impact Statement dated 16 December 2021, page 7.**

Clause E6.7.11: Bicycle end trip facilities *(Planner to assess)*	—	—	Planner to assess
Clause 6.7.12: Siting of car parking *(Planner to assess based on DE assessment of Clause 6.7.5 layout of parking area)*	—	—	Planner to assess
Clause E6.7.13: Facilities for commercial vehicles **ACCEPTABLE SOLUTION**			The facilities for commercial vehicles must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015). **Documentation submitted to date does appear to satisfy the Acceptable Solution for clause E6.7.13.** Acceptable Solution A1: - **COMPLIANT** Commercial vehicle facilities for loading, unloading or manoeuvring must be provided on-site in accordance with Australian Standard for Off-street Parking, Part 2 : Commercial. Vehicle Facilities AS 2890.2:2002, unless: (a) the delivery of all inward bound goods is by a single person from a vehicle parked in a dedicated loading zone within 50 m of the site; and (b) the use is not primarily dependent on outward delivery of goods from the site. **On-street loading zones are available within 50m along both the *Melville St.* and *Brisbane St.* street frontages, and the use is not primarily dependent on outbound goods.**
Clause E6.7.14: Access to a road **ACCEPTABLE SOLUTION**			The access to a road must satisfy the Acceptable Solutions of the Hobart Interim Planning Scheme 2015 (HIPS 2015). **Documentation submitted to date does appear to satisfy the Acceptable Solution for clause E6.7.14.** Acceptable Solution A1: - **COMPLIANT** Access to a road must be in accordance with the requirements of the road authority. Performance Criteria - P1: **No Performance Criteria** **Submitted plans indicate existing access to a road with no changes proposed.**

Clause E6.7.15: Access to Niree Lane Sandy Bay NOT APPLICABLE			The access to Niree Lane must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015). **Documentation submitted to date appears not to invoke clause E6.7.15.** **No development proposed within Niree Lane.**

PROTECTION OF COUNCIL INFRASTRUCTURE

Council infrastructure at risk	Why?
Yes - Stormwater	Developments proposed
Yes - Highway Reservation	Developments proposed

URBAN DESIGN ADVISORY PANEL

REPORT FROM MEETING OF THE URBAN DESIGN ADVISORY PANEL
HELD AT 9:30 AM ON WEDNESDAY 02 FEBRUARY 2022 VIA TEAMS

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83 MELVILLE STREET – PLN-21-869

Attending: Frazer Read – All Urban Planning
Bruno Mendes – Principal Architect Woods Bagot
Justin Hanlon - UTAS Project Manager
Phil Leersen - UTAS Executive Director Southern Campus
Brad Williams - Praxis Heritage

The Panel met to discuss the proposal in detail and the advice below is provided for the consideration of the proponents and officers.

Description:

The site comprises a large strata titled site with a combined area of 7873m2. The site includes two strata titles; the former Forestry Building, currently vacant, at 83 Melville Street as Lot 2 and the retail building currently occupied by Freedom Furniture at 80 Brisbane Street as Lot 1. The proposal is for the partial demolition and redevelopment of the existing buildings on Lot 1 and 2 for educational use by the University of Tasmania. The proposed works include two levels of teaching spaces, collaborative areas, meeting rooms, and staff office space. The works also include end of trip shower and change facilities, secure storage for 51 bicycles, and revitalisation of the existing glazed dome area and facilitation of a pedestrian link between Brisbane and Melville Streets.

More specifically the proposal includes

- Partial demolition of existing building at 80 Brisbane Street including removal of sections of Brisbane Street façade, existing driveway and steps, and internal demolition of stairs and partitions
- Partial demolition of existing building at 83 Melville Street including removal of internal partitions and walls, internal demolition of staircases and new openings in upper floors, and demolition of existing roof structure
- Level 01: Internal alterations and works including new entry and winter garden at Melville Street frontage, collaborative classrooms, project and meeting rooms, office space secure bicycle storage, end of trip facilities, utilities and services rooms, and a single tenancy space on Melville Street frontage

- Level 02: Internal alterations and works including collaborative classrooms, project and meeting rooms, office space, new façade at Brisbane street frontage and new vehicle and bicycle entry from Brisbane Street frontage

Comments:

The Panel felt it was necessary to provide the following disclosure statement with the applicant in attendance, regarding the potential for perceived conflicts of interest; Prior to the hearing, the applicant's representative advised the City of Hobart's Manager Development Appraisal the applicant did not see any conflicts with the Panel members. The Panel appreciated this, but independently were asked to consider and those with potential for perceived conflicts provided statements of past and current associations with the UTAS stated no actual conflict in providing advice to Council as a member of UDAP. The Panel has documented these associations for transparency and declarations of no actual conflict of interest for Panel members in attendance, in the Meeting Minutes prior to the applicant joining proceedings. In consultation with the City of Hobart's Manager Governance prior to the UDAP meeting, it was considered; for Scott Balmforth and Leigh Woolley it was the view that they can continue to participate in the UDAP meeting on this project. There were concerns Helen Norrie would have a perceived conflict of interest, as an employee of UTAS, therefore is not participating as a member of UDAP at this meeting.

The Panel noted that 83 Melville Street – PLN-21-869 is a lodged Planning Application but is in the very early stage of assessment. The proponents have sought advice from the Panel and the proposal will be treated as a hybrid between pre-application and planning application stages.

The Panel provide comments related to issues that could be requested as a RFI. The Panel acknowledged that although this is a Planning Application, the benefit of it being presented in the early stages of assessment allowed it to be treated as a pre-application with a scope for potential changes.

The Panel questioned the veracity of the through-site link created out of the existing access off Melville Street in and through the dome, connecting with the existing vehicle laneway on the side of the Brisbane Street building. The Panel noted there is great potential for a through-block link but were concerned with the public access it provided particularly after hours, due to the requirement to pass through internal University-controlled space and the absence of disabled access. The Panel were also concerned that the area may become an entrapment space within the lower area of the link off Brisbane Street. The proponent advised that the area would be locked down after-hours (post 10PM).

The Panel questioned whether the through-site link, identified as formative to site development intentions, has overshadowed the dome as the 'hero' of the block.

The Panel would like the public safety and disabled access issues to be addressed as an RFI. The Panel would also like clarification of potential entrapment space and the level of lighting to remove risk.
The Panel noted it is also important to understand the spaces around the site, in particular the role of footpaths and how the development can better contribute to the public realm.

The Panel were concerned about disability access within the building and levels. The proponent explained that accessibility through the building between Melville and Brisbane Streets would be via multiple lifts and ramps. The Panel noted that the interconnecting links between building levels were not considered from the user's experience.

The Panel were concerned with the external treatment of the existing buildings, including the edge of the existing 'Freedom' building on Brisbane Street. The proponent shared that they did not want to contradict themselves by demolishing everything so intended to strip back paint, reseal and restore as much as possible. The Panel were concerned about the under-developed plans for the external blades – in particular the proportionality and materiality. The Panel were concerned about the ambiguity around the timber sizes in the documents and noted that this needs to be addressed as an RFI or condition of the planning permit. On the information provided, the Panel were concerned with the perceived monolithic design of the building to Brisbane Street, especially when viewed at an angle. The Panel questions how the proposal could successfully relate to its surrounds instead of "walling it off". It was also noted that proposed blades, being 450 mm deep, were to be fixed to the existing building wall on the property boundary, thus reducing the public pedestrian space of the currently narrow footpath especially as the existing Plane trees are proposed to be retained.

The Panel were concerned that this project may be a major under-development of the site, especially given its central location. The Panel questioned why the project is only 1-2 storeys and whether the plans are utilising the space effectively. The proponent noted that although they were keeping it single/double storey, they were addressing the brief provided. The proponent explained that from a design point of view they wanted something that sat sympathetically with the existing untouched building and wanted to follow the same typology through the additions. Their priorities were to ensure they weren't designing a tall mass and instead of building up, wanted to speak to neighbouring buildings by utilising natural light on lower levels.

The Panel would have liked to see more public benefit from the proposal through opening the space up and merely using this as a “doorway to the university”. The Panel were concerned with the buildings feeling closed off and queried whether activity inside the buildings would be visible from the street.

In conclusion the Panel supports the development application from an urban design perspective, subject to further consideration of their concerns. The Panel is looking forward to future development and believes this is an important project that has the potential to revitalise existing buildings, reinstate the unique qualities of the extant Dome and force change through considered design with public benefit.

Tasmanian Heritage Council

Tasmanian Heritage Council
GPO Box 618 Hobart Tasmania 7000
Tel: 1300 850 332
enquiries@heritage.tas.gov.au
www.heritage.tas.gov.au

PLANNING REF: PLN-21-869
THC WORKS REF: 6812
REGISTERED PLACES: 2507 and 12028
APPLICANT: University of Tasmania
DATE: 20 April 2022

NOTICE OF HERITAGE DECISION

(*Historic Cultural Heritage Act 1995*)

Registered Places: Former Crisp and Gunn Buildings, 83 Melville Street, Hobart. (THR #2507)
Crisp & Gunn offices and workshop, and Forestry Tasmania dome, 79-83 Melville Street, 83 Melville Street and 80 Brisbane Street, Hobart. (THR #12028)

Proposed Works: Partial demolition, alterations and additions.

Under section 39(6)(b) of the *Historic Cultural Heritage Act 1995*, the Heritage Council gives notice that it consents to the discretionary permit being granted in accordance with the documentation submitted with Development Application PLN-21-869, advertised on 16/03/2022, subject to the following conditions:

1. **(i) An extant record of all the heritage buildings and structures must be completed, with reference to the Tasmanian Heritage Council's Practice Note No 3 (*Procedure for Recording a Heritage Place*).**

   (ii) This extant record must include photographic images that illustrate the form and detail of the buildings and structures both externally and internally, and these images must be clearly referenced to plans of the buildings and structures in a manner that clearly shows the camera location/orientation for each image.

   (iii) A high-resolution digital copy of the extant record must be provided to the Heritage Tasmania and must be to the satisfaction of the Works Manager prior to the commencement of any strip out or demolition works to the buildings and structures.

Reason for condition
To provide a record of the heritage buildings and structures prior to the proposed major redevelopment of the site.

2. **The heritage buildings and structures must be protected during the works. A detailed description of the proposed protective measures must be submitted to Heritage Tasmania and must be to the satisfaction of the Works Manager, prior to the commencement of works.**

Reason for condition
To ensure the heritage elements of the place are protected during the development works.

3. **(i) A communication protocol must be developed and implemented to ensure that all persons working on the site understand and appreciate the heritage values of the site and the obligations arising from the Tasmanian Heritage Register listing and this approval.**

   (ii) For all persons involved in excavation work or ground disturbance the protocol must include a briefing about the reporting requirements related to the discovery of any unanticipated archaeological remains, such as cesspits and building footings.

   (iii) Evidence that this communication protocol has been developed and that procedures are in place for its communication to all persons working on the site must be submitted to Heritage Tasmania and must be to the satisfaction of the Works Manager, prior to the commencement of works.

Reason for condition

To ensure that all persons working on the site are aware of the heritage values of the site and their responsibilities, and to ensure that heritage fabric is protected and conserved during the works.

4. **A detailed scope of all proposed conservation, alterations and demolition work to the heritage buildings and structures, must be prepared. The scope of work must reference the recommendations of the Praxis Environment *Historic Heritage Management Strategy* dated May 2021 (and *Heritage Impact Assessment* dated December 2021). Where there is any conflict between the Praxis Environment recommendations and the proposed work, a clear rationale for the variation must be provided by the applicant. The scope of work must be submitted to Heritage Tasmania and must be to the satisfaction of the Works Manager prior to the commencement of works to these buildings and structures.**

Reason for condition

To ensure that the proposed demolition, alterations and additions will be designed to mitigate impacts to the heritage fabric and values of the place.

5. **(i) Unless demonstratively unfeasible, historic fabric that is approved for removal or dismantling throughout the development site must be retained for reuse at the site.**

   (ii) A schedule of this material must be prepared that includes the proposed method and location for its reuse.

   (iii) For historic material that is proposed to be disposed of a rationale for this proposed approach must be provided.

   (iv) The schedule must be submitted to Heritage Tasmania and must be to the satisfaction of the Works Manager prior to the commencement of works.

Reason for condition

To ensure that historic material that is associated with this place is retained for reuse.

6. **A digital copy of all plans and specifications submitted in making applications for demolition and/or building approval relating to this development, including the identification by the applicant of any substantial variance from the works documented in PLN-21-869, must be provided to Heritage Tasmania and must be to the satisfaction of Heritage Tasmania's Works Manager prior to the commencement of works.**

Reason for condition

To ensure that works not adequately documented at the discretionary permit application stage can be assessed to ensure that the works will have an acceptable degree of impact on the

place's heritage values, and to assist in the early identification of works that will require a minor amendment to the permit or further Heritage Council approval.

7. **(i) All excavation in areas of high archaeological potential, as defined in Figure 7.10 of the Praxis Environment *Historic Heritage Management Strategy* dated May 2021 (and *Heritage Impact Assessment* dated December 2021), must be preceded by an archaeological impact assessment and, if warranted, an archaeological method statement which details measures to avoid or mitigate impacts upon the archaeological potential of the place. The method statement must be in accordance with the Tasmanian Heritage Council's Practice Note 2 (Managing Historical Archaeological Significance in the Works Process).**

   (ii) Within all other areas of the site designated as of low/no archaeological potential works must cease where unanticipated archaeological deposits are encountered. An archaeologist must be engaged to assess, record and make recommendations for the management of the deposits in consultation with Heritage Tasmania's Works Manager.

Reason for condition
To ensure that sub-surface heritage information is considered and appropriately managed.

8. **A strategy for the interpretation of the place's cultural heritage significance must be prepared. This strategy must be submitted to Heritage Tasmania and must be to the satisfaction of the Works Manager. All components of the approved strategy must be fully implemented within 6 months of occupancy of the site, or to an alternative timeframe as agreed to by the Works Manager.**

Reason for condition
To ensure that the heritage values and history of the site are communicated to users of the place, as a public benefit.

Advice
It is recommended that the University of Tasmania engages with the neighbours of the adjacent historic buildings on Melville Street and Murray Street, to ensure any concerns these neighbours may have about potential impacts to their properties are appropriately addressed.

Please note that no permanent signage is be erected or installed on the site without the approval of the Tasmanian Heritage Council. Proposals for new signs will require additional approval.

Should you require clarification of any matters contained in this notice, please contact Deirdre Macdonald at Heritage Tasmania, on 1300 850 332.

Brett Torossi
Chair
Tasmanian Heritage Council

7.1.2 156 NEW TOW ROAD, NEW TOWN - DEMOLITION, SUBDIVISION (LOT CONSOLIDATION), AND NEW BUILDING FOR 19 MULTIPLE DWELLINGS AND FITNESS CENTRE (SPORTS AND RECREATION) PLN-21-718 - FILE REF: F22/35175

Address:	156 New Town Road, New Town
Proposal:	Demolition, Subdivision (Lot Consolidation) and New Building for 19 Multiple Dwellings and Fitness Centre (Sports and Recreation)
Expiry Date:	6 May 2022
Extension of Time:	Not applicable
Author:	Adam Smee

RECOMMENDATION

That pursuant to the *Hobart Interim Planning Scheme 2015*, the Council refuse the application for demolition, subdivision (lot consolidation), and new building for 19 multiple dwellings and fitness centre (sports and recreation) at 156 New Town Road, New Town 7008, for the following reasons:

1. The proposal does not meet the acceptable solution A2 or the performance criterion P2 with respect to clause *15.4.2 Setback* of the *Hobart Interim Planning Scheme 2015* because building setback from the Inner Residential Zone would not be sufficient to prevent unreasonable adverse impacts on residential amenity by:

   (a) overshadowing and reduction of sunlight to habitable rooms and private open space on 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;
   (b) overlooking and loss of privacy;
   (c) visual impact when viewed from adjoining lots, taking into account aspect and slope.

2 The proposal does not meet the acceptable solution A1 or the performance criterion P2 with respect to clause *15.4.8 Residential Amenity* of the *Hobart Interim Planning Scheme 2015* because a dwelling (specifically, apartment 14) would not

be sited and designed to optimise sunlight to at least one habitable room (other than a bedroom).

Attachment A:	PLN-21-718 - 156 NEW TOWN ROAD NEW TOWN TAS 7008 - Planning Committee or Delegated Report ⇩
Attachment B:	PLN-21-718 - 156 NEW TOWN ROAD NEW TOWN TAS 7008 - CPC Agenda Documents ⇩
Attachment C:	PLN-21-718 - 156 NEW TOWN ROAD NEW TOWN TAS 7008 - Cultural Heritage Officer Report ⇩
Attachment D:	PLN-21-718 - 156 NEW TOWN ROAD NEW TOWN TAS 7008 - Urban Design Advisory Panel Report ⇩

City of HOBART

APPLICATION UNDER HOBART INTERIM PLANNING SCHEME 2015

Type of Report:	Committee
Council:	2 May 2022
Expiry Date:	6 May 2022
Application No:	PLN-21-718
Address:	156 NEW TOWN ROAD , NEW TOWN
Applicant:	Josh Crossin (LXN Architecture) 21a Cross Street
Proposal:	Demolition, Subdivision (Lot Consolidation), and New Building for 19 Multiple Dwellings and Fitness Centre (Sports and Recreation)
Representations:	Two representations.
Performance criteria:	Urban Mixed Use Zone: Setback and Residential Amenity. Potentially Contaminated Land Code: Excavation. Road and Railway Assets Code: Sight distance at accesses, junctions and level crossings. Parking and Access Code: Number of Car Parking Spaces, Design of Vehicular Accesses, and, Layout of Parking Areas. Stormwater Management Code: Stormwater Drainage and Disposal. Historic Heritage Code: Demolition, Buildings and Works other than Demolition, and, Subdivision.

1. Executive Summary

1.1 Planning approval is sought for Demolition, Subdivision (Lot Consolidation), and New Building for 19 Multiple Dwellings and Fitness Centre (Sports and Recreation) at 156 New Town Road, New Town.

1.2 More specifically the proposal is to demolish the existing building on the site and to construct a new building that would contain a fitness centre and 19 multiple dwellings.

- The new building would have three storeys and a basement. Car parking and storage is proposed in the basement. The fitness centre would be on the part of the ground floor of the building fronting onto New Town Road. The proposed apartment style dwellings would occupy the remaining parts of the development.
- The proposed building would have a maximum height of 10m and a total floor area of 2938m².
- Proposed external materials include face brickwork (sand and red), painted cement sheet (grey and light grey), powder-coated aluminium (white), pre-finished metal sheet (grey), and pre-cast concrete (natural finish).

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

1.3.1 15.0 Urban Mixed Use Zone - 15.4 Development Standards for Buildings and Works
1.3.2 E2.0 Potentially Contaminated Land Code - E2.6 Development Standards
1.3.3 E5.0 Road and Railway Assets Code - E5.6 Development Standards
1.3.4 E6.0 Parking and Access Code - E6.6 Use Standards and E6.7 Development Standards
1.3.5 E7.0 Stormwater Management Code - E7.7 Development Standards
1.3.6 E13.0 Historic Heritage Code - E13.8 Development Standards for Heritage Precincts

1.4 Two (2) representations objecting to the proposal were received within the statutory advertising period between 24 March and 7 April 2022.

1.5 The application was considered by the Urban Design Advisory Panel at its meeting of 29 March 2022. In the context of the provisions on which they were asked to comment, the Panel was broadly not supportive of the proposal.

1.6 The proposal is recommended for refusal.

1.7 The final decision is delegated to the Council because a major development application is proposed and it is recommended for refusal.

2. Site Detail

2.1 The site is a commercial property at the southern edge of the New Town commercial area. The property has an area of 1474m² and frontage to New Town Road on its north-eastern boundary. The existing building on the site was originally constructed as a service station, however, it has been used for various commercial uses in recent years, including the current uses as a cafe and laundrette. The building is setback from the site frontage allowing for a wide driveway with separate egress and entry points. The site is generally level although its south-western corner falls away.

2.2 The property is within the Urban Mixed Use Zone of the Hobart Interim Planning Scheme 2015. The site is surrounded by a mix of commercial and residential uses, consistent with this zoning. These uses include offices and other professional services uses on the adjoining land to the north-west and south-east and multiple dwellings on the adjoining land to the west and south. A variety of commercial uses occur to the north and east of the site, on the opposite side of New Town Road. The site is within the New Town 4 Heritage Precinct identified by the planning scheme's Historic Heritage Code.

2.3 A site visit was conducted upon 11 April 2022. The adjoining property at 18 Roope Street was also visited.

Figure 1: Locality Plan of site (outlined in blue) and surrounding area.

3. Proposal

3.1 Planning approval is sought for Demolition, Subdivision (Lot Consolidation), and New Building for 19 Multiple Dwellings and Fitness Centre (Sports and Recreation) at 156 New Town Road, New Town.

3.2 More specifically the proposal is to demolish the existing building on the site and to construct a new building that would contain a fitness centre and 19 multiple dwellings.

- The new building would have three storeys and a basement. Car parking and storage is proposed in the basement. The fitness centre would be on the part of the ground floor of the building fronting onto New Town Road. The proposed apartment style dwellings would occupy the remaining parts of the development.
- The proposed building would have a maximum height of 10m and a total floor area of 2938m².
- Proposed external materials include face brickwork (sand and red), painted cement sheet (grey and light grey), powder-coated aluminium (white), pre-finished metal sheet (grey), and pre-cast concrete (natural finish).

4. Background

4.1 Council issued a Planning Permit for alterations, extension, and an outbuilding associated with the existing laundromat use on the site in December 2019 (see PLN-19-705).

4.2 A partial change of use to food services (cafe) & signage was approved on the site in July 2015 (via PLN-15-00598-01). A laundrette appears to have been an established use on the site at the time that this application was approved (see planner's report). Council provided confirmation that planning approval was not required for a change of use to a shop on the site (see PLN-15-00056-01) in January 2015. A planning scheme amendment was lodged in 2009 that sought approval for a change in the planning scheme to allow the site to be used as a saleyard. This amendment was not supported by Council.

4.3 The application was considered by the Urban Design Advisory Panel at its meeting of 29 March 2022. In the context of the provisions on which they were asked to comment, the Panel was broadly not supportive of the proposal. The Panel's comments are included where relevant in section 6 of this report, and are discussed in section 7. The Panel's report is provided in full as an attachment to this report.

5. Concerns raised by representors

5.1 Two (2) representations objecting to the proposal were received within the statutory advertising period.

5.2 The following table outlines the concerns raised in the representations received. Those concerns which relate to a discretion invoked by the proposal are addressed in Section 6 of this report.

"My sunlight/natural light will be reduced in my kitchen/loungeroom windows due to the proposed dwelling being 10 metres high".
"The noise for the proposed dwellings it will make it very hard to hear the television or listen to music during the day. I will not be able to go out the back door into the garden or sit outside because the noise will be unbearable and also no privacy".
"I use my washing line daily expect when it is raining but if the proposed dwelling gets the go ahead, I will be not be able to use it due to reduced sunlight and dust".
"The unit at present is very quiet to live but with the proposed dwelling and fitness centre it will be very noisy due to the building being demolished and the new 19 multiple dwelling and fitness centre being built".
"The traffic in the area is all ready very buy and it gets congested a lot of the time due to buses, delivery vans, emergency vehicles and normal traffic. With the proposed dwelling this will create even more congestion due to tradesman parking their cars and finding somewhere to park".
"Where I live Roope Street is already full to the residents' cars outside their properties. There is not much parking around the proposed units/fitness centre site".
"we will lose privacy due to our backyards touching their backyards".
"The Heritage assessment prepared by Purcell submitted as part of documentation for this proposal does not identify the significant impact of the proposal on the heritage streetscape created by the Old Parsonage and Cross Street Church at this location".
"To reduce these impacts, we propose that the application be conditioned to require the reduction and redesign of the north-western corner of the building to reduce the impact on the visibility of the Old Parsonage and Cross Street Church".

"We contend that this development is contrary to 15.1.1.6 in that it does not respond to the character of the streetscape, historic areas and buildings".
"On this basis we contend that the set back of the overall proposal from New Town Road is insufficient. The building must have a larger setback from ground level to be consistent with the majority of buildings that are substantially set back from the street and not have a detrimental impact on the heritage streetscape vista".
"Further information is required on how the Assumed Natural Ground Level has been calculated".
"Car parking for the gym should be provided within the proposal".
"Three non-fruiting pears are located in garden beds between the Old Parsonage car park and the southern lot boundary next to 156 New Town Road. We request that conditions be applied to the permit that they show how these trees are to be protected during construction".

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 appears to be Educational and occasional care. The proposed use is Residential (multiple dwellings) and Sport and recreation (fitness centre). The existing use is a discretionary use in the zone. The proposed uses are permitted (Residential component) and discretionary (Sports and recreation component) uses in the zone. Clause *8.10.2* states that:

In determining an application for a permit for a discretionary use the planning authority must, in addition to the matters referred to in subclause 8.10.1, have regard to:

(a) the purpose of the applicable zone;
(b) any relevant local area objective or desired future character statement for the applicable zone;
(c) the purpose of any applicable code; and
(d) the purpose of any applicable specific area plan,

but only insofar as each such purpose, local area objective or desired future character statement is relevant to the particular discretion being exercised.

Therefore, the proposed discretionary use (i.e. the proposed fitness centre) must be considered with regard to the above matters. The proposed fitness centre is considered to be consistent with the purpose of the applicable zone, i.e. the Urban Mixed Use Zone, as the proposal would provide for the integration of residential and commercial activities on the site (see *15.1.1.1*). The fitness centre would also generate activity and pedestrian movement at street level (see *15.1.1.2*). The site is accessible by public transport as it is upon a Metro Tasmania bus route. The site is adjacent to residential areas so is also accessible by walking and cycling (see *15.1.1.5*). Given that the development would have mostly glazed walls within the ground level facade, its materials and openings are considered to contribute positively to the streetscape (see *15.1.1.8*), although the comments from UDAP regarding the covering of glazed surfaces with obscure film are noted (see attached report). The proposal is considered to provide an appropriate level of amenity for the proposed residential use proposed on the site (see *15.1.1.9*) by incorporating appropriate attenuation measures for the proposed fitness centre, although other aspects of the proposal are not considered to provide a reasonable level of residential amenity. There are no local area objectives or desired future character statements for the Urban Mixed Use Zone.

The proposal is considered to be consistent with the purpose of the applicable codes. The following codes are applicable:

- E2.0 Potentially Contaminated Land Code,
- E5.0 Road and Railway Assets Code,
- E6.0 Parking and Access Code,
- E7.0 Stormwater Management Code, and
- E13.0 Historic Heritage Code.

The proposal is considered to be consistent with the purpose of the Potentially Contaminated Land Code as it is supported by an Environmental Site Assessment which demonstrates that potential contamination on the site may be managed in a way such that it does 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 supported by a Traffic Impact Assessment which demonstrates that it would

maintain the safety and efficiency of the road network. The TIA also demonstrates that sufficient parking would be provided for the use and development on the site. The proposal is therefore consistent with the purpose of the Parking and Access Code. The proposal demonstrates that stormwater from the development would be managed in a way that furthers the State Stormwater Strategy. The proposal is therefore consistent with the purpose of the Stormwater Management Code. The proposal is consistent with the purpose of the Historic Heritage Code because the historic cultural heritage significance of the precinct surrounding the site would be protected.
There is no applicable specific area plan. The proposal is considered to comply with clause *8.10.2*.

6.4 The proposal has been assessed against:

6.4.1 15.0 Urban Mixed Use Zone

6.4.2 E2.0 Potentially Contaminated Land Code

6.4.3 E5.0 Road and Railway Assets Code

6.4.4 E6.0 Parking and Access Code

6.4.5 E7.0 Stormwater Management Code

6.4.6 E13.0 Historic Heritage Code

6.5 The proposal relies on the following performance criteria to comply with the applicable standards:

6.5.1 15.0 Urban Mixed Use Zone:

15.4.2 Setback P2, and,
15.4.8 Residential Amenity P1 and P3.

6.5.2 E2.0 Potentially Contaminated Land Code:

E2.6.2 Excavation.

6.5.3 E5.0 Road and Railway Assets Code:

E5.6.4 Sight distance at accesses, junctions and level crossings.

6.5.4 E6.0 Parking and Access Code:

E6.6.1 Number of Car Parking Spaces,
E6.7.2 Design of Vehicular Accesses, and,
E6.7.5 Layout of Parking Areas.

6.5.5 E7.0 Stormwater Management Code:

E7.7.1 Stormwater Drainage and Disposal P1 and P2.

6.5.6 E13.0 Historic Heritage Code:

E13.8.1 Demolition,
E13.8.2 Buildings and Works other than Demolition P1, and,
E13.8.3 Subdivision P1, P2, and P3.

6.6 The relevant performance criterion are assessed below.

6.7 *15.4.2 Setback* P2

6.7.1 The acceptable solution A2 at clause *15.4.2* requires building setback from the Inner Residential Zone to be no less than 3m or half the height of the wall.

6.7.2 The proposal includes a building setback that does not meet the above acceptable solution. The basement roof would extend beyond ground level at the south-western corner of the development and would be less than 3m from the boundary with the Inner Residential Zone land to the south and west. Several terraces which would provide private open space for the apartments proposed on the ground floor at the rear of the development would also be within this setback.

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 P2 at clause *15.4.2* provides as follows:

Building setback from the General Residential or Inner Residential Zone must be sufficient to prevent unreasonable adverse impacts on residential amenity by:

(a) overshadowing and reduction of sunlight to habitable rooms and private open space on 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;
(b) overlooking and loss of privacy;
(c) visual impact when viewed from adjoining lots,

taking into account aspect and slope.

6.7.5 With regard to sub-clause (a) for the above performance criterion, the application includes sun study diagrams that show the development's potential overshadowing impact upon the adjoining residential land to the south (18 Roope Street) and west (17-19 Cross Street). The diagrams suggest that the adjacent dwellings upon the latter property are currently almost completely overshadowed throughout the day upon 21 June. Given the extent to which these dwellings are already overshadowed, the proposal would not significantly decrease sunlight hours to habitable rooms or private open space on this property upon this day.

6.7.6 The sun study diagrams show the potential overshadowing of units 2, 3, and 4 upon the adjoining property at 18 Roope Street. Unit 5 is also shown on the diagrams although the diagrams indicate that overshadowing of this dwelling would not significantly change as a result of the proposal. The diagrams also suggest that the areas of private open space that are to the north of units 2, 3, and 4 are already overshadowed by the fence on the boundary with the proposed development site.

6.7.7 The sun study diagrams show the position of windows upon the property ta 18 Roope Street which face toward the site. A site visit confirmed that most of these windows (i.e. five of the six windows) are to habitable rooms such as open plan kitchen and living areas (see figure 2 below). A comparison between the existing hours of direct sunlight (i.e. when greater than 50% of the area of the respective window is in sunlight) to these rooms upon 21 June and the proposed hours of direct sunlight is provided below in Table 1. The table shows that all of the habitable rooms for units 2, 3, and 4 currently receive at least three hours of direct sunlight upon this day. The table shows that units 3 and 4 would receive no direct sunlight upon 21 June should the proposal proceed. Unit 2 would receive direct sunlight only at 11am and only to its living room window upon this day. Therefore, sub-clause (a) of the performance criterion is not met as the proposal would result in a reduction of sunlight to habitable rooms on an adjoining lot to less than three hours between 9am and 5pm upon 21 June. Taking into account aspect and slope, it is considered that these factors accentuate the overshadowing impact of the proposed development - i.e., as the land to the south of the site slopes downward, the overshadowing impact of the development upon this land is greater

than it would otherwise be on flat land.

6.7.8 With regard to sub-clause (b) of the above performance criterion, it is considered that there is potential for overlooking and loss of privacy upon an adjoining lot as a result of the proposal. The proposal includes several terraces which would provide private open space at the rear of the development which would be setback only 2m from boundary with the residential land to the south (i.e., 18 Roope Street). The elevation plans provided for the development indicate that the terraces would have a finished surface level of 40.4m. The site survey provided indicates that the ground level at the boundary with 18 Roope Street varies between 38m (at the south-western corner of the site) and 40m (at the south-eastern corner). Therefore, the terraces would be above the level of the adjacent POS on this adjoining lot. While the planning report submitted with the application suggests that a 2.1m high fence is proposed along the boundary with this lot, this may not be sufficient to prevent overlooking of the existing POS from the proposed terraces. For example, an individual standing upon the terraces would be able to see over this fence and into the existing POS.

6.7.9 Regardless of any potential for overlooking from the proposed terraces, their proximity to the existing POS on the adjoining lot is considered likely to cause a loss of privacy to the latter. Given this proximity (i.e. only a 2m minimum separation), an individual using the POS on the adjoining lot is likely to be aware of an individual upon the proposed terraces which would contribute to a loss of a sense of privacy for the former.

6.7.10 The areas of POS proposed on level 1 at the rear of the development may also cause overlooking and a loss of privacy to the adjacent areas of POS upon the property at 18 Roope Street. While these areas meet the 3m setback prescribed by the above acceptable solution, in this case this setback is not considered adequate to ensure that the potential privacy impacts of the development are minimised, given the aspect and slope of the site and surrounding land. Similarly to the earlier discussion regarding the overshadowing impact of the development, the aspect and slope of the site and surrounding land is considered to exacerbate the potential overlooking and privacy impact of the proposal. While the addition of screens along the edge of the POS facing toward 18 Roope Street may mitigate some overlooking impacts, as proposed, the development is not considered to adequately address these impacts. Therefore, it is considered that sub-clause (b) of the performance criterion is not met given the potential overlooking and privacy impacts of the areas of POS proposed at the rear of the development upon the adjoining residential lot

at 18 Roope Street.

6.7.11 With regard to sub-clause (c) for the above performance criterion, the proposal is considered likely to have a significant visual impact upon the adjoining residential lot at 18 Roope Street. As discussed above, there are areas of POS adjacent to the boundary with the site and habitable room windows that face toward it upon this property. The amenity of units 2 and 3 upon the property currently benefits from the sense of relative openness that is available to the north of these dwellings and associated POS. While this sense of openness is a result of the borrowed amenity provided by the relatively undeveloped area within the eastern part of the proposed development site, its loss would exacerbate the visual impact of the proposed development upon units 2 and 3.

6.7.12 The construction of a 2.1m high fence on the boundary with the site (which is considered necessary to address the overlooking impact of the development, as discussed above) at the northern edge of the POS provided for these dwellings and the proximity of the proposed building to this boundary are considered likely to create a sense of enclosure within the POS. While the walls of the building which would face toward this boundary generally meet the 3m setback required by the above acceptable solution, similarly to above, this setback is not considered adequate to mitigate the visual impact of the proposed development, given the aspect and slope of the site. Therefore, the proposal would replace the sense of openness which contributes to the amenity of units 2 and 3 with a sense of enclosure that would detract from this amenity. As a result, sub-clause (c) for the performance criterion is not met as the proposed development would have a significant visual impact when viewed from an adjoining lot that would have an unreasonable impact upon residential amenity.

6.7.13 The proposal does not comply with the above performance criterion.

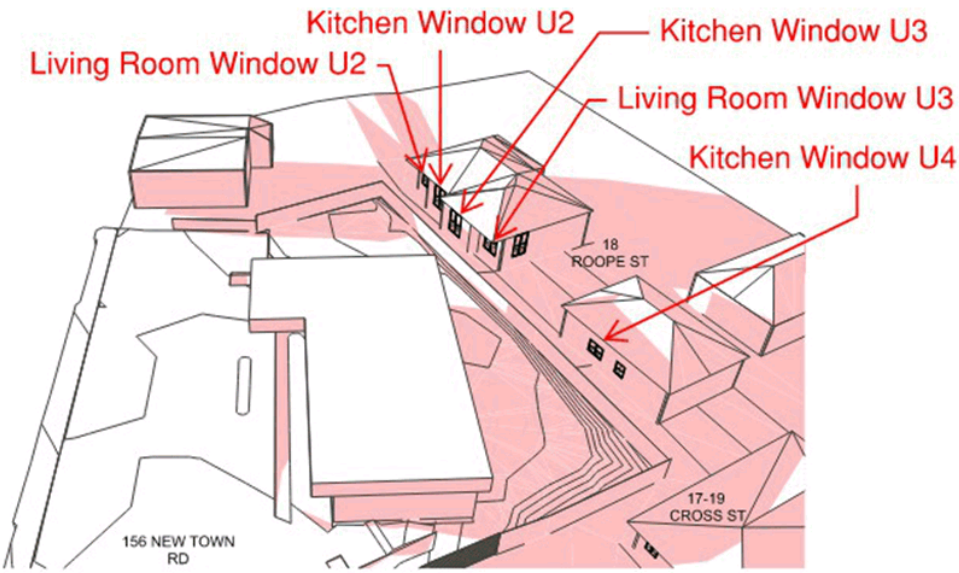


Figure 2: position of habitable room windows upon the adjoining property at 18 Roope Street which face toward the site.

	Existing hours of direct sunlight	**Proposed hours of direct sunlight**
Unit 2, 18 Roope Street	10am to 2pm	11am (living room only)
Unit 3, 18 Roope Street	10am to 3pm	Nil
Unit 4, 18 Roope Street	12pm to 3pm	Nil

Table 1: comparison of existing and proposed hours of direct sunlight to habitable rooms at 18 Roope Street upon 21 June .

6.8 *15.4.8 Residential Amenity* P1

6.8.1 The acceptable solution A1 at clause *15.4.8* requires a dwelling to have a habitable room window (other than a bedroom) that faces within 30 degrees of north.

6.8.2 The proposal includes several dwellings that would not have a habitable room window that would face within 30 degrees of north. Apartments 6 to 10 and apartments 14, 16, and 17 would not have a north facing habitable room window.

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 *15.4.8* 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 Apartments 7 to 10 and apartment 17 would have substantial glazed areas to living areas within the north-east elevation of proposed building. This arrangement would allow for sunlight to enter the living areas during morning periods and at midday. Apartment 6 would also have glazing to living areas that is orientated to the north-east, as well as a larger area of glazing to these areas that would be orientated to the north-west. This arrangement would allow for sunlight to enter the living area of this apartment throughout the day. Apartment 16 would have glazing to living areas that would be orientated to the north-west which would allow for sunlight to enter these areas during afternoon periods. Therefore, the siting and design of apartments 6 to 10 and apartments 16 and 17 is considered to provide a reasonable level of residential amenity by allowing sunlight to enter a habitable room.

6.8.6 The siting and design of apartment 14 is not considered likely to provide a reasonable level of residential amenity. The only external glazing for this apartment would face nearly due south. The apartment would therefore not receive any direct sunlight and its siting and design could not be said to optimise sunlight to a habitable room.

6.8.7 The proposal does not comply with the above performance criterion.

6.9 *15.4.8 Residential Amenity* P3

6.9.1 The acceptable solution A3 at clause *15.4.8* requires outdoor living space to be provided for a dwelling that has an area no less than 10m² and a width no less than 2m.

6.9.2 The proposal includes several dwellings that would not be provided with outdoor living space that would have the required width. Except for apartments 11 and 14, all of the apartments proposed on level 1 of the development (i.e., apartments 6 to 10 and 12, 13, and 15) would not be provided with outdoor living space that would have the required width.

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 P3 at clause *15.4.8* provides as follows:

Outdoor living space must be provided for a dwelling with dimensions sufficient for the projected requirements of the occupants.

6.9.5 Apartments 7 to 10 would have areas of outdoor living space with areas greater than 12m² and a minimum width of approximately 1.7m. These areas would be on the north-eastern side of the respective dwelling and would be adjacent to the respective living area. Therefore, these areas of outdoor living space are considered to provide for the projected requirements of the future occupants, such as outdoor dining and relaxation and some limited planting. Similarly, the outdoor living space proposed for apartment 6 would also be greater than 12m² and located adjacent to the living area proposed for this apartment. Therefore, this outdoor living space is also considered to provide for the projected requirements of the occupants.

6.9.6 While smaller areas of outdoor living space are proposed for apartments 12, 13, and 15 (i.e., these areas are only slightly above the minimum 10m² required by the acceptable solution), each of these spaces would include an area that would have dimensions of at least 2m x 3m. These areas are considered to provide for projected requirements such as outdoor dining for example, as they could accommodate a small outdoor dining setting and a BBQ. The remainder of the space provided for each of these apartments would be much narrower but would allow for other projected requirements such as storage or limited planting.

6.9.7 The proposal complies with the above performance criterion.

6.10 E2.5 Use Standards

6.10.1 The acceptable solution at clause *E2.5* requires the Director (as defined in EMPCA1994), or a person approved by the Director for the purpose of the Potentially Contaminated Land Code, to either certify that the land is suitable for an intended sensitive use, or, to approve a plan to manage contamination and associated risk to human health or the environment that will ensure that the land is suitable for the intended use.

6.10.2 The proposal does not include certification from either the Director or a person approved by the Director and does not include a plan approved by the Director.

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 at clause *E2.5* provides as follows:

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.

6.10.5 An Environmental Site Assessment was provided with the application. The ESA includes the following conclusions:

"There were no human health guideline exceedances for dermal contact, soil vapour intrusion or trench worker vapour risk. There were no HIL guideline exceedances for dust inhalation and ingestion at commercial land use class, but there were exceedances at residential and recreational land use for Benzo(a)pyrene and Lead. If developments include open space or residential apartments at ground level, the site will require a Contamination Management Plan (CMP) relating to human receptors prior to soil disturbance during construction, and including mitigation measures post construction".

Council's Environmental Health Officer has reviewed the above recommendation and recommended that a condition of approval require a Contamination Management Plan (CMP) to be submitted to Council, prior to construction of the development commencing.

6.10.6 The ESA also states that:

"There is potential for ecological impact from hydrocarbons and heavy metals entering the waterway or impacting other ecological receptors during excavation, and a Stormwater Management Plan (SWMP) is required, to control erosion of excavated soil that may have an ecological impact".

The standard condition of approval requiring a Stormwater Management Plan to be developed for the site and implemented prior to construction of the development commencing should be included upon any Planning Permit issued for the proposal, in accordance with this recommendation.

6.10.7 The proposal complies with the above performance criterion.

6.11 *E2.6.2 Excavation*

6.11.1 There is no acceptable solution for clause *E2.6.2* which applies where works involving excavation of potentially contaminated land are proposed.

6.11.2 The proposal includes excavation of potentially contaminated land.

6.11.3 As there is no acceptable solution for the above clause the proposal therefore relies upon assessment against the below performance criterion.

6.11.4 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.

6.11.5 As noted above, an ESA was provided with the application which includes recommendations regarding remediation and protection measures. A condition of approval is recommended that requires these measures to the be implemented, including the development and implementation of a CMP for the development.

6.11.6 The proposal complies with the above performance criterion.

6.12 *E5.6.4 Sight distance at accesses, junctions and level crossings*

6.12.1 The acceptable solution at clause *E5.6.4* requires sight distances at an access to comply with the Safe Intersection Sight Distance (SISD) shown in Table E5.1.

6.12.2 The proposal includes an access that does not comply with the SISD shown in Table E5.1.

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 at clause *E5.6.4* 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.

6.12.5 Council's Senior Development Engineer has assessed the sight distances at the proposed access against the above performance criterion and provided the following comments:

"enough information for assessment was provided by Gandy and Roberts and therefore can be supported under a performance based assessment and will be subject to design conditions".

6.12.6 The proposal complies with the above performance criterion.

6.13 *E6.6.1 Number of Car Parking Spaces*

6.13.1 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.

6.13.2 The proposal includes less than the number of on-site car parking spaces specified in Table E6.1. 42 car parking spaces are required for the proposed residential use (i.e. 36 spaces required for the 18 two/three bedroom dwellings proposed, one space required for the one bedroom dwelling, and five visitor spaces required). 26 car parking spaces are proposed for the residential use. 16 spaces are required for the proposed fitness centre (4.5 spaces required per 100m² of floor area, 360m² of floor area proposed for this use) but no on-site car parking would be provided for this use.

6.13.3 The proposal does not comply with the above acceptable solution and therefore relies upon assessment against the below performance criterion.

6.x.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.

6.13.5 Council's Senior Development Engineer has assessed the proposed number of car parking spaces against the above performance criterion and provided the following comments:

"Car parking is deficient by 16 car spaces for the residents which includes visitor car parking is supported based on the traffic impacts assessment stating the availability of on street parking in the surrounding areas has adequate capacity to absorb the deficiency.
The deficiency of car parking for the gym is supported based on the traffic impacts assessment stating the availability of on street parking in the surrounding areas has adequate capacity to absorb the deficiency".

6.13.6 The proposal complies with the above performance criterion.

6.14 *E6.7.2 Design of Vehicular Accesses*

6.14.1 The acceptable solution at clause *E6.7.2* requires a non-commercial vehicle access 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*.

6.14.2 The proposal includes a non-commercial access that does not comply with the above section of the Australian Standard.

6.14.3 The proposal does not comply with the above acceptable solution and therefore relies upon assessment against the below performance criterion.

6.14.4 The performance criterion at clause *E6.7.2* 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.

6.14.5 Council's Senior Development Engineer has assessed the proposed design of the vehicular access against the above performance criterion and provided the following comment:

"Queuing area exceeds the maximum 10% gradient required in the Australian Standard and no evidence that queuing will extend into the road".

6.14.6 The proposal complies with the above performance criterion.

6.15 *E6.7.5 Layout of Parking Areas*

6.15.1 The acceptable solution at clause *E6.7.5* requires the layout of car parking spaces 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*.

6.15.2 The proposal includes car parking spaces that do not comply with the above section of the Australian Standard.

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 *E6.7.5* provides as follows:

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

6.15.5 Council's Senior Development Engineer has assessed the proposed layout of parking areas against the above performance criterion and

provided the following comments:

"Multi Jockey parking proposed and can be supported and will be subject to design conditions".

6.15.6 The proposal complies with the above performance criterion.

6.16 *E7.7.1 Stormwater Drainage and Disposal* P1

6.16.1 The acceptable solution A1 at clause *E7.7.1* requires stormwater from new impervious surfaces to be disposed of by gravity to public stormwater infrastructure.

6.16.2 The proposal includes an arrangement in which stormwater from a new impervious surface would not be disposed of by gravity to public stormwater infrastructure. The basement of the proposed development and stormwater from other areas that cannot be drained via gravity would rely upon a pump system.

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 P1 at clause *E7.7.1* provides as follows:

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

(a) disposed of on-site with soakage devices having regard to the suitability of the site, the system design and water sensitive urban design principles

(b) collected for re-use on the site;
(c) disposed of to public stormwater infrastructure via a pump system which is designed, maintained and managed to minimise the risk of failure to the satisfaction of the Council.

6.16.5 Council's Technical Officer - Environmental has assessed the proposed stormwater management arrangements against the above performance criterion and advised that the proposed pump system is a "very low risk to others as contained in basement carpark".

6.16.6 The proposal complies with the above performance criterion.

6.17 *E7.7.1 Stormwater Drainage and Disposal* P2

6.17.1 The acceptable solution A2 at clause *E7.7.1* requires a stormwater system for a new development to incorporate water sensitive urban design principles for the treatment and disposal of stormwater if the size of new impervious area is more than 600m² and new car parking is provided for more than 6 cars.

6.17.2 The proposal includes more than 600m² of new impervious area and new car parking for more than 6 cars but does not incorporate water sensitive urban design principles.

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 *E7.7.1* 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.

6.17.5 Council's Technical Officer - Environmental has assessed the proposed stormwater management arrangements against the above performance criterion and advised that the "concept treatment design of Ocean Protect Stormfilters, Ocean Guards, and SPEL Hydrochannel has been proposed and modelled as achieving the treatment targets".

6.17.6 The proposal complies with the above performance criterion.

6.18 *E13.8.1 Demolition*

6.18.1 There is no acceptable solution for clause *E13.8.1* which applies where demolition is proposed on a site that is within a heritage precinct.

6.18.2 The proposal includes demolition and the site is within the New Town 4 Heritage Precinct.

6.18.3 As there is no acceptable solution for the above clause the proposal therefore relies upon assessment against the below performance criterion.

6.18.4 The performance criterion at clause *E13.8.1* provides as follows:

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.

6.18.5 Council's Cultural Heritage Officer has assessed the proposed demolition against the above performance criterion and provided the following comment:

"The site does not contain any buildings or works that possess historic cultural heritage value as defined in the statements of significance in Table E13.2. The loss of historic heritage values is not anticipated as a function of the proposed demolition. Clause *E13.8.1* P1 is satisfied".

The CHO's full report on the proposal is provided as an attachment.

6.18.6 The proposal complies with the above performance criterion.

6.19 *E13.8.2 Buildings and Works other than Demolition* P1

6.19.1 There is no acceptable solution A1 for clause *E13.8.2* which applies where buildings and works other than demolition are proposed on a site that is within a heritage precinct.

6.19.2 The proposal includes buildings and works other than demolition and the site is within the New Town 4 Heritage Precinct.

6.19.3 As there is no acceptable solution for the above clause the proposal therefore relies upon assessment against the below performance

criterion.

6.19.4 The performance criterion P1 at clause *E13.8.2* provides as follows:

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.

6.19.5 Council's Cultural Heritage Officer has assessed the proposed buildings and works against the above performance criterion and concluded that:

"Siting and design choices are logical and sensible rather than inspired, but are unlikely to result in detriment to the historic cultural heritage significance of the precinct. Extant period buildings would endure and continue to be able to be viewed from public spaces in New Town Road providing high quality examples of their respective architectural periods".

6.19.6 The proposal complies with the above performance criterion.

6.20 *E13.8.3 Subdivision* P1

6.20.1 There is no acceptable solution A1 for clause *E13.8.3* which applies where subdivision is proposed on a site that is within a heritage precinct.

6.20.2 The proposal includes subdivision (lot consolidation) and the site is within the New Town 4 Heritage Precinct.

6.20.3 As there is no acceptable solution for the above clause the proposal therefore relies upon assessment against the below performance criterion.

6.20.4 The performance criterion P1 at clause *E13.8.3* provides as follows:

Subdivision must not result in any of the following:

(a) detriment to the historic cultural heritage significance of the precinct, as listed in Table E13.2;
(b) a pattern of subdivision unsympathetic to the historic cultural heritage significance of the precinct;
(c) potential for a confused understanding of the development of the precinct;
(d) an increased likelihood of future development that is incompatible with the historic cultural heritage significance of the precinct.

6.20.5 Council's Cultural Heritage Officer has assessed the proposed subdivision (lot consolidation) against the above performance criterion and provided the following comments:

"The original lot of the now demolished Rose Cottage is thus being reformed. Therefore, the proposed subdivision (lot consolidation) would be consistent with historic patterns of development".

6.20.6 The proposal complies with the above performance criterion.

7. Discussion

7.1 Planning approval is sought for Demolition, Subdivision (Lot Consolidation), and New Building for 19 Multiple Dwellings and Fitness Centre (Sports and Recreation) at 156 New Town Road, New Town.

7.2 The application was advertised and received two representations. The representations raised concerns including the potential for a reduction in sunlight to habitable rooms and private open space on an adjoining property, noise impacts during construction of the development, traffic impacts, car parking impacts, privacy impacts, and heritage impacts. One of the representations suggests that an increase in the buildings setback from New Town Road is required in order for it to be consistent with nearby buildings and to not have a detrimental impact upon the "heritage streetscape". The representation suggests that further information is required on how the Assumed Natural Ground Level shown on the submitted plans has been calculated and that "Car parking for the gym should be provided within the proposal". Finally, the representation requests that a condition of approval be included upon any Planning Permit issued for the proposal that requires trees on an adjoining property to be protected during construction of the development. The issues raised in the representations are responded to below.

7.3 As detailed in the section of the report where the boundary setbacks of the proposed development are assessed (clause *15.4.2*), the proposal would have an unreasonable impact upon residential amenity as a result of its overshadowing, visual, and privacy impacts upon adjoining residential properties. The proposal would result in two of the adjoining dwellings losing all direct sunlight to living areas upon 21 June. Another adjoining dwelling would have its direct sunlight to living areas reduced to at best one hour upon this day. The proposal would have a significant visual impact upon the private open space of two adjoining dwellings. The proposal would replace a sense of openness within these spaces, that contributes to their amenity, with a sense of enclosure that would detract from amenity. The proximity of proposed areas of private open space on the site to existing areas of POS on adjoining properties would have a detrimental impact upon the privacy of the latter.

7.4 While noise impacts associated with the construction of a development are generally regulated by the *Environmental Management and Pollution Control Act 1994*, should the proposal be approved, it would be possible to place further controls upon construction via a Construction Management Plan. This plan may mitigate impacts upon adjoining residential properties associated with the construction of the development to some extent.

7.5 The proposal is supported by a Traffic Impact Assessment which concludes that its impact upon the local road network would be acceptable and that there is adequate on-street car parking available in the surrounding area to compensate for the shortfall in car parking that would be provided on the site. The proposal is also supported by a Heritage Impact Assessment and has been assessed by Council's Cultural Heritage Officer. Both assessments conclude that the proposal would not have an unacceptable impact upon heritage values.

7.6 It is standard practice for a designer to show an assumed natural ground level on proposal plans that is based upon the best available information, such as a site survey or existing ground level on the site or adjoining properties. It is noted that the assumed ground level shown on the submitted plans is below the existing ground level shown on the plans. The plans are considered to accurately show the height of the proposed development above natural ground level to the extent possible given the information that is available.

7.7 There is no justification within the planning scheme for Council to place a condition upon a Planning Permit that attempts to protect trees on an adjoining property that is not part of the application, particularly where those trees are not recognised in the Significant Trees Code.

7.8 The proposal has been assessed against the provisions of the planning scheme and is considered to not comply with all relevant provisions.

7.9 The proposal has been assessed by other Council officers, including the Council's Senior Development Engineer and its Cultural Heritage Officer. The officers have raised no objection to the proposal, subject to conditions.

7.10 The application was considered by the Urban Design Advisory Panel at its meeting of 29 March 2022. The Panel's comments are provided in full as an attachment to this report. In the context of the provisions on which they were asked to comment, the Panel was broadly not supportive of the proposal. The Panel made the following comments which are considered to be consistent with the comments made above at 7.3:

"The Panel support the development's intent to provide a variety of dwelling types but were concerned regarding the impact of the proposed development on residents of the neighbouring properties to the south. The proposal will present an overbearing presence, and overlook and overshadow these properties. The Panel felt the development was trying to put too much yield on the site, compounded by the approach to open up the space between apartments facing to New Town Road and to the south. Where the application has tried to meet development standards, and at times has not achieved compliance, it does so by failing to address the impact on the amenity of the neighbouring properties to the south".

The Panel also commented that:

"The Panel was also concerned with the public edge to the street including the window finish to the commercial tenancy. It was noted there was no awning to the commercial frontage, typical to the precinct. To reinforce the commercial character of ground floor activities in the precinct, the panel would like to see a condition on any potential permit that the glazing remained clear and not opaque or treated with vinyl, to maintain visibility between outside and inside".

It is agreed that a condition that seeks to limit or prevent the use of opaque glazing or film within the facade of the proposed commercial tenancy should be included upon any Planning Permit issued for the development, consistent with the above comments and clause *15.4.3 Design* of the planning scheme.

7.11 The proposal is recommended for refusal.

8. Conclusion

8.1 The proposed Demolition, Subdivision (Lot Consolidation), and New Building for 19 Multiple Dwellings and Fitness Centre (Sports and Recreation) at 156 New Town Road, New Town, does not satisfy the relevant provisions of the *Hobart Interim Planning Scheme 2015* and is recommended for refusal.

9. Recommendations

That: Pursuant to the *Hobart Interim Planning Scheme 2015*, the Council refuse the application for Demolition, Subdivision (Lot Consolidation), and New Building for 19 Multiple Dwellings and Fitness Centre (Sports and Recreation) at 156 New Town Road, New Town, for the following reason:

1 The proposal does not meet the acceptable solution A2 or the performance criterion P2 with respect to clause *15.4.2 Setback* of the *Hobart Interim Planning Scheme 2015* because building setback from the Inner Residential Zone would not be sufficient to prevent unreasonable adverse impacts on residential amenity by:

(a) overshadowing and reduction of sunlight to habitable rooms and private open space on 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;
(b) overlooking and loss of privacy;
(c) visual impact when viewed from adjoining lots,

taking into account aspect and slope.

2 The proposal does not meet the acceptable solution A1 or the performance criterion P2 with respect to clause *15.4.8 Residential Amenity* of the *Hobart Interim Planning Scheme 2015* because a dwelling (specifically, apartment 14) would not be sited and designed to optimise sunlight to at least one habitable room (other than a bedroom).

(Adam Smee)
Development Appraisal Planner

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

(Ben Ikin)
Senior Statutory Planner

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

Date of Report: 13 April 2022

Attachments:

Attachment B - CPC Agenda Documents

Attachment C - Cultural Heritage Officer Report

Attachment D - Urban Design Advisory Panel Report

PLN-21-718 - 156 NEW TOWN ROAD

Application Information

Application Details	PLN-21-718 Demolition, Subdivision (Lot Consolidation), and New Building for 19 Multiple Dwellings and Fitness Centre (Sports and Recreation) Submitted on: 25/10/2021 Accepted as Valid on: 25/10/2021 Target Time Frame: 42 Days. Elapsed Time: 144 Days *(Stopped: 135 Days)* = 9 Days Expiry date: 20/04/2022 Officer: Adam Smee

Have you obtained pre application advice?

Yes

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

Are you applying for permitted visitor accommodation as defined by the State Government Visitor 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, multi residential (19 Apartments), Commercial

Estimated cost of development *

7000000.00

Existing floor area (m2)	Proposed floor area (m2)	Site area (m2)
300.00	2938.00	1474

Carparking on Site

Total parking spaces	Existing parking spaces	N/A
29	10	☒ 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

Submission to Planning Authority Notice

Council Planning Permit No.	PLN-21-718	**Council notice date**	27/10/2021
TasWater details			
TasWater Reference No.	TWDA 2021/01873-HCC	**Date of response**	25/03/2022
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	156 NEW TOWN RD, NEW TOWN	**Property ID (PID)**	5516671
Description of development	Demolition, Title Consolidation, and New Building		

Schedule of drawings/documents

Prepared by	Drawing/document No.	Revision No.	Date of Issue
LXN Architecture	Site Olan / DA-04	A	11/10/2021
Gandy & Roberts	Concept Servicing Plan 1 & 2 / C020 & C021	A	08/10/2021
Gandy & Roberts	Concept Services Report	--	08/10/2021

Conditions

Pursuant to the *Water and Sewerage Industry Act* 2008 (TAS) Section 56P(1) TasWater imposes the following conditions on the permit for this application:

CONNECTIONS, METERING & BACKFLOW

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.

   Advice: *TasWater will not accept direct fire boosting from the network.*

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 use of the development, any water connection utilised for the development must have a backflow prevention device and water meter installed, to the satisfaction of TasWater.

DEVELOPMENT ASSESSMENT FEES

4. The applicant or landowner as the case may be, must pay a development assessment fee of $699.36 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 https://www.taswater.com.au/building-and-development/technical-standards

For application forms please visit https://www.taswater.com.au/building-and-development/development-application-form

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.

Boundary Trap Area

The proposed development is within a boundary trap area and the developer will need to provide a boundary trap that prevents noxious gases or persistent odours back venting into the property's sanitary drain. The boundary trap is to be be contained within the property boundaries and the property owner remains responsible for the ownership, operation and maintenance of the boundary trap.

Declaration

The drawings/documents and conditions stated above constitute TasWater's Submission to Planning Authority Notice.

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

FOLIO PLAN

RECORDER OF TITLES

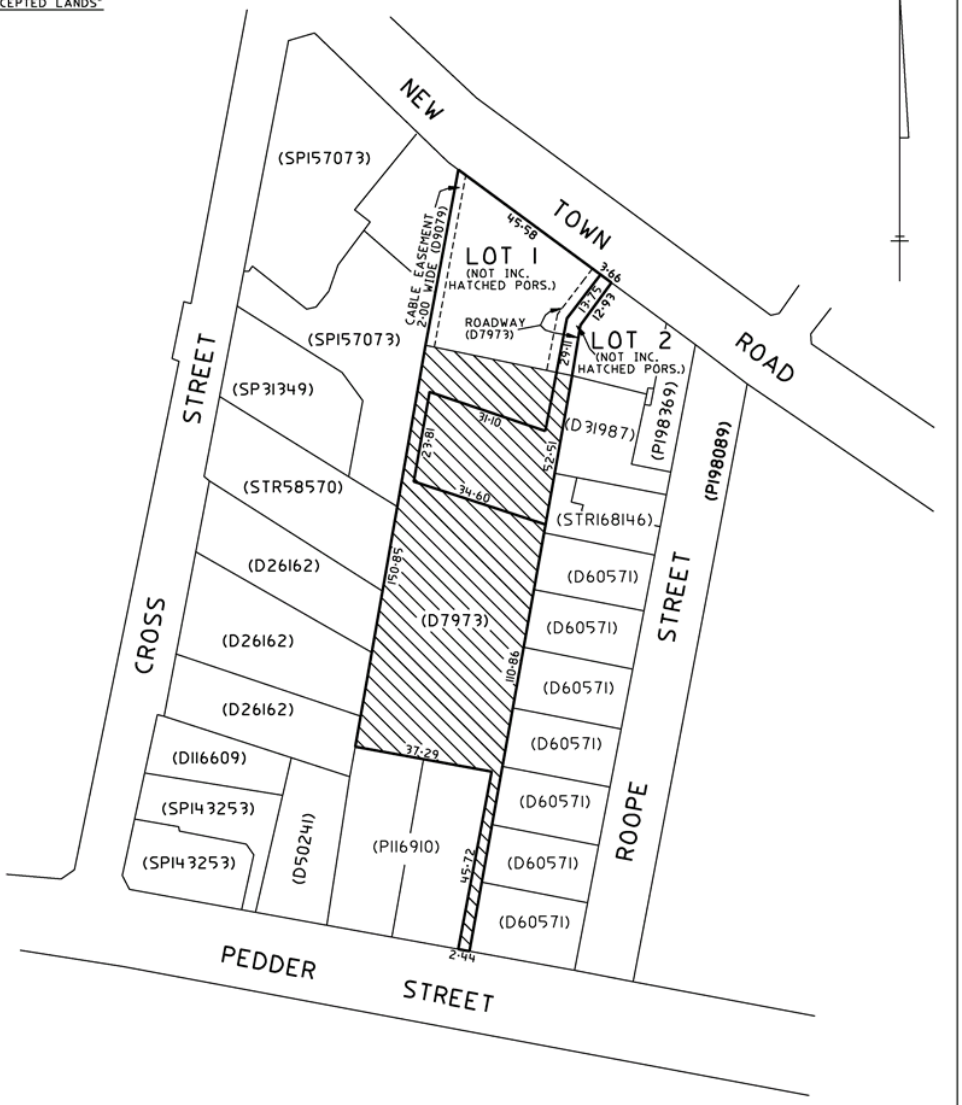
Issued Pursuant to the Land Titles Act 1980

FILE NUMBER A24725 GRANTEE PART OF (157A-1R-20P) GTD. TO CHARLES SWANSTON.	CONVERSION PLAN LOCATION CITY OF HOBART CONVERTED FROM 58/3310 (63/67DO) NOT TO SCALE LENGTHS IN METRES	Registered Number P.171514 APPROVED 20 MAY 2016 Alice Kawa Recorder of Titles

MAPSHEET MUNICIPAL CODE No. 114 (5225)	LAST UPI No.	ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN	DRAWN MG

SKETCH BY WAY OF ILLUSTRATION ONLY

"EXCEPTED LANDS"



RESULT OF SEARCH

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
171514	1
EDITION	DATE OF ISSUE
3	20-Sep-2017

SEARCH DATE : 20-Oct-2021
SEARCH TIME : 02.49 PM

DESCRIPTION OF LAND

City of HOBART
Lot 1 on Plan 171514
Being the land described in Conveyance No.58/3310
Derivation : Part of 157A-1R-20P Gtd.to Charles Swanston
Derived from A24725

SCHEDULE 1

M627844 TRANSFER to RENEWAL DEVELOPMENTS PTY LTD Registered 25-May-2017 at 12.01 PM

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
58/3310 BURDENING EASEMENT: Cable Right (appurtenant to Lot 1 on Diagram No.D7973) over the Cable Easement 2.00 wide shown on Plan No.171514
58/3310 BURDENING EASEMENT: Right of Carriageway (appurtenant to Lot 1 on Diagram No.D7973)over the Roadway shown on Plan No.171514
E106386 MORTGAGE to MyState Bank Limited Registered 20-Sep-2017 at noon

UNREGISTERED DEALINGS AND NOTATIONS

E229547 RELEASE of easement Lodged by SULTAN HOLDINGS on 16-Apr-2021 BP: E229547

FOLIO PLAN

RECORDER OF TITLES

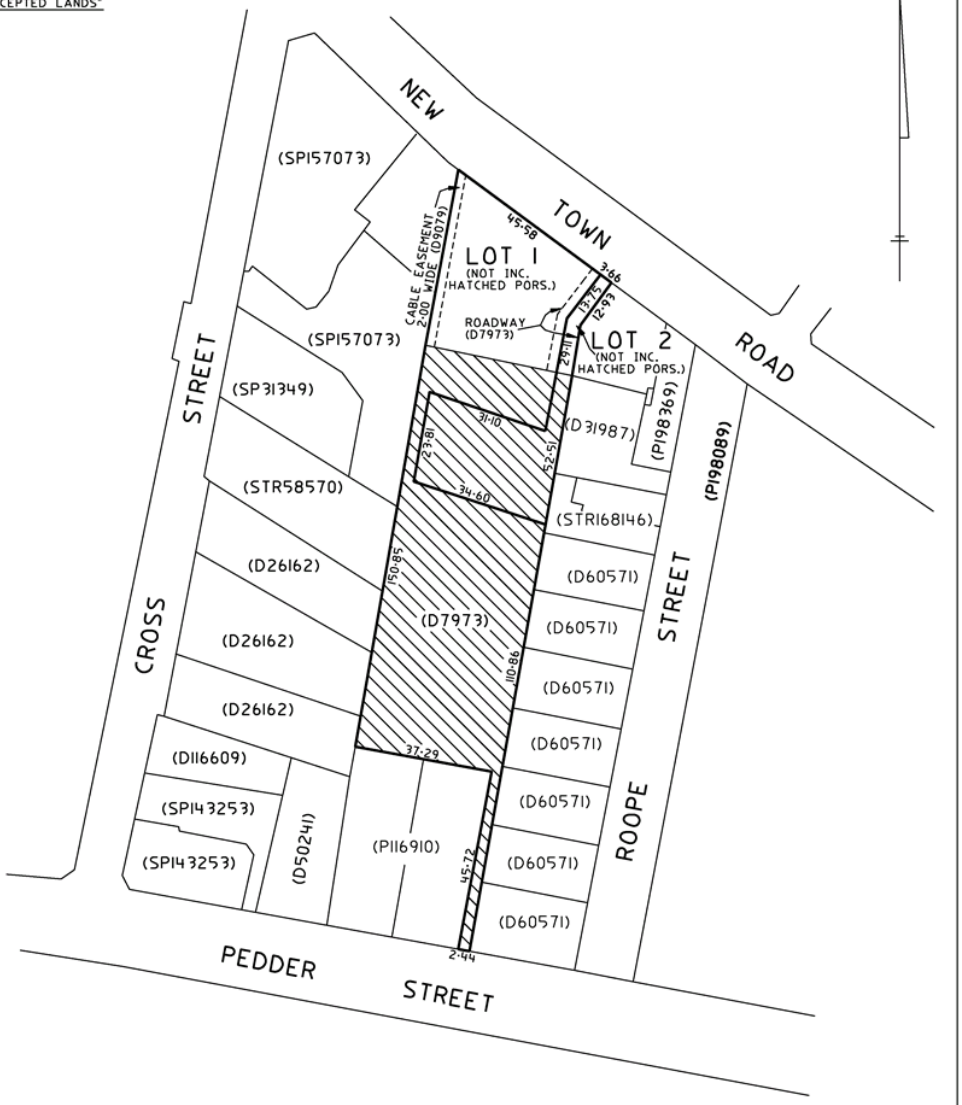
Issued Pursuant to the Land Titles Act 1980

FILE NUMBER A24725 GRANTEE PART OF (157A-1R-20P) GTD. TO CHARLES SWANSTON.	CONVERSION PLAN LOCATION CITY OF HOBART CONVERTED FROM 58/3310 (63/67DO) NOT TO SCALE LENGTHS IN METRES	Registered Number P.171514 APPROVED 20 MAY 2016 Alice Kawa Recorder of Titles

MAPSHEET MUNICIPAL CODE No. 114 (5225)	LAST UPI No.	ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN	DRAWN MG

SKETCH BY WAY OF ILLUSTRATION ONLY

"EXCEPTED LANDS"



RESULT OF SEARCH

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
171514	2
EDITION	DATE OF ISSUE
2	07-Aug-2020

SEARCH DATE : 20-Oct-2021
SEARCH TIME : 02.50 PM

DESCRIPTION OF LAND

City of HOBART
Lot 2 on Plan 171514
Being the land secondly described in Conveyance No.58/3310
Derivation : Part of 157A-1R-20P Gtd. to Charles Swanston
Derived from A24725

SCHEDULE 1

M627844 TRANSFER to RENEWAL DEVELOPMENTS PTY LTD Registered 25-May-2017 at 12.01 PM

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
50/2236 BURDENING EASEMENT: Right of Carriageway (appurtenant to Lot 1 on Diagram No.D7973)over the Roadway shown on Plan No.171514
M830517 MORTGAGE to MyState Bank Limited Registered 07-Aug-2020 at noon

UNREGISTERED DEALINGS AND NOTATIONS

E229547 RELEASE of easement Lodged by SULTAN HOLDINGS on 16-Apr-2021 BP: E229547

–
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

07.03.2022

Attention: Liz Wilson
City of Hobart
via City of Hobart Web Portal

Dear Liz,

As per City of Hobarts request for additional information dated 4th November

TW1:

1. Refer to attached correspondence to Mr. Peter White representing Communities Tasmania, satisfying the requirements of LUPPA Section 52.

PA1:

1. Refer to section 5.2, 5.3 and 8.2 of Hubble Traffic, Traffic Impact Assessment dated 'Update December 2021'.

PA2:

1. Refer amended Gandy and Roberts Consulting Engineers drawing CO10 (C), CO13 (C)

PA3:

1. At the meeting held to discuss the RFI received (4/11/21) it was agreed between COH Senior Development Engineer David Morley, Peter Hubble, CoH Planner Adam Smee and LXN Architecture, that the dimensions of carparking spaces and circulation spaces should be increased to "ensure safe and efficient vehicular manoeuvring".

2. At the meeting held to discuss the RFI received (4/11/21) it was agreed between Senior Development Engineer David Morley, Peter Hubble, Adam Smee and LXN Architecture, that only the B85 vehicle would be expected to "enter and exit each parking space in a single turn". It was also confirmed that B99 swept paths should be provided in accordance with LGAT "Urban roads and driveways" drawing TSD-R09-v3/.

3. Refer amended Gandy and Roberts Consulting Engineers drawing CO11 (C), and LXN Architecture drawing DA-05 (B)

PA4:

1. Please refer to amended LXN Architecture drawing DA-05 (B) and amended Gandy and Roberts Consulting Engineers drawing C010 (C), CO11 (C), C013 (C).

PA6:

1. Refer amended Gandy and Roberts Consulting Engineers drawing CO22 (C)

PA7:

1. At the meeting held to discuss the RFI received (4/11/21) it was agreed that the bicycle parking is located within a secure (resident only) storage area (the basement carpark).

PA8:

1. PA 8 - is no longer applicable, the bin store has been relocated to the ground floor.

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

2. Bins will be replaced as required by the service provide, rather than being washed on site.

SW1:

1. Refer amended Gandy and Roberts Consulting Engineers services report dated 03/03/2022.

SW6:

1. Refer amended Gandy and Roberts Consulting Engineers services report dated 03/03/2022.

SS FI1:

1. Please refer to the attached document entitled 'executed S108 Application'. The right of carriageway has been released.

HER FI1:

1. Please refer Architectural Drawings DA-31 & DA-32: The information in the streetscape elevation has been compiled based on survey data provided by PDA Surveyors refer PDA drawing 48747MD-1. PDA Surveyors provided spot heights at the ground level and ridge/ roof line of each property to allow the drawing to be accurately prepared. The elevation includes relevant buildings along New Town Road to provide accurate context for the proposal. As agreed by telephone conversation with CoH Heritage Officer Megan Baynes (16/11/21) the extent of the streetscape elevation is limited to #10-#24 Roope Street, New Town.

HER FI2:

1. This item is no longer applicable to the application. The tile has been replaced with the specified brick. Refer amended Architectural drawings DA-11, DA-19, DA-21.

Additional Documents:

- Correspondence to Mr. Peter White representing Communities Tasmania,
- 'executed S108 Application'

Revised Documents:

- Gandy and Roberts Consulting Engineers services report dated 03/03/2022,
- Traffic Impact Assessment dated 'Update December 2021'
- Planning Report dated 7/03/2022,
- Revised Architectural Drawings.

We trust the information provided will satisfy your request.

Sincerely,

……..
Sarah Lindsay
Director // Architect (TAS) RAIA

Re: Development Application - 156 New Town Road - Notification to Owner 18 Roope Street, New Town

From: **Tim Lucas** | tim@tslpropertydirections.com Wednesday, 8 Dec 2021, 12:34 PM

To: **peter.white@communities.tas.gov.au** | peter.white@communities.tas.gov.au

Cc: **Sarah Lindsay | LXN Architecture** | sarah@lxn.com.au, **Josh Crossin | LXN Architecture** | josh@lxn.com.au

To: Peter White
Deputy Secretary, Housing, Disability, Community Services
Department of Communities Tasmania

Hi Peter,

In accordance with a requirement by Taswater I am notifying you (as representative of the owner) that we have lodged a Development application for our site at 156 New Town Road that borders the Director of Housing's units situated at 18 Roope Street, New Town.

Attached is a Request for Additional Information that has been sent to our architect pursuant to our application lodged and I have included a second attachment to assist your understanding of the sewer connection that needs to be upgraded if our development application is successful and we seek to proceed with the same.

I have attached emails between myself and Taswater that may also assist in the background to this notification. We understand that some future consent from the current owner of 18 Roope Street will be required to allow Taswater to undertake the abovementioned works on its land and that this notification does not infer or claim any consent.

If possible can I ask that you or an officer within Communities Tasmania acknowledge receipt of this email.

Happy to discuss if required.

Thank you.

Tim Lucas
TSL Property Directions
E: tim@tslpropertydirections.com
P: 0439 313 569

The contents of this email and any attachments to it are confidential. If you receive this email in error, please accept my apologies and delete it. Thank you.

Development@taswater.com.au tim@tslpropertydirections.com 8:47 AM

Hi Tim,

Thank you for your email. You are correct, I think the exact wording in LUPAA is that to satisfy s52 only a declaration need be provided that the adjoining property owner has been informed of the developer's intention to make an application. This is something the Planning Authority administers but because Council is not always aware of TasWater's servicing requirements we advise them via an RAI to avoid the issue of an invalid permit.

Consent is not required at the planning stage however the wording used in the request is designed to make the developer aware that they should disclose to the owner that the development will require works on their land and if the adjoining owner refuses to provide consent at the time the works are required to be undertaken then those works cannot proceed and that owner may appeal the Planning Authority's decision to issue a planning permit.

Please note that this is a request for additional information not a permit condition so a copy of the proposed letter you describe in your email will be sufficient to satisfy my request. Please submit a copy of the letter as your formal response to Council and they will refer it to TasWater and I will issue a Submission containing TasWater conditions to be appended to the Council permit.

Regards

Phil Papps
Senior Assessment Officer

D (03) 6237 8246 / 0474 931 272
F 1300 862 066
A GPO Box 1393, Hobart TAS 7001
169 Main Road, Moonah, TAS 7009
E phil.papps@taswater.com.au
W www.taswater.com.au/

Have I been helpful? Please provide feedback by clicking here.

Proposed Service Connection – 156 New Town Road:

Image opposite shows the manhole the Development at 156 New Town Road intends to connect to presently on 18 Roope Street.

TASMANIAN LAND TITLES OFFICE

E229547

Instrument Releasing Easements or Profits a Prendre

Section 108 Land Titles Act 1980.

DESCRIPTION OF LAND			
Servient Folio of the Register		Dominant Folio of the Register	
Volume	Folio	Volume	Folio
171514	**1**	**7973**	**1**
171514	**2**		

DIRECTOR OF HOUSING of **GPO Box 44 Hobart Tasmania 7001** the registered proprietor/s of the land comprised in the above dominant folio of the Register Hereby Release unto **Renewal Developments Pty Ltd** of **level 5, 81 Elizabeth Street, Hobart in Tasmania 7000** the registered proprietor of the land comprised in the above servient folio of the Register the easement described as follows:-

Burdening Easement: a right of carriageway (appurtenant to Lot 1 on Diagram No 7973 over the Roadway shown on Plan No 171514.

Date: .....5.....January....2021.....

"SEE ANNEXURE PAGE FOR EXECUTION CLAUSE"

Land Titles Office Use Only

RPP Version 1

THE BACK OF THIS FORM MUST NOT BE USED

PIN OR STAPLE HERE
DO NOT GUM THIS
FORM TO THE INSTRUMENT

ANNEXURE PAGE

PAGE 2 OF 2 PAGES

Vol. **171514** Fol. **1**

SIGNED by Richard Robert Gilmour being and as
and pursuant to an
Instrument of delegation dated the 6th day of September 2018
In the presence of:-

DIRECTOR OF HOUSING TASMANIA

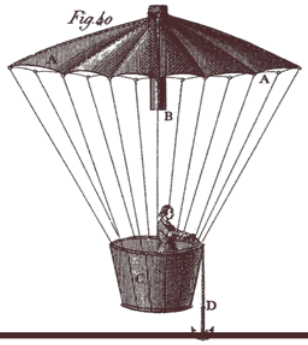
Signature of Witness
Full name of Witness Rebecca Thorpe
Address L5/22 Elizabeth St, Hobart
Occupation Home Ownership Consultant

NOTE:- Every annexed page shall be signed by the parties to the dealing, or where the party is a corporate body, be signed by the persons who have attested the affixing of the seal of that body to the dealing.

Version 1

THE BACK OF THIS PAGE MUST NOT BE USED

GANDY AND ROBERTS
159 DAVEY ST
HOBART TASMANIA
AUSTRALIA 7000
CONSULTING ENGINEERS



Concept Services Report

Planning Scheme Compliance & Existing Infrastructure Assessment

156 New Town Road

for Renewal Developments

03/03/2022

Version control

Revision	Description	Issue date	Issued by
A	Planning Approval	08/10/2021	Dale Hayers
B	Planning Approval	03/03/2022	Dale Hayers

PROJECT NUMBER **20.0457**
REPORT AUTHOR **Dale Hayers**
CHECKED BY **Simon Palmer**

Gandy and Roberts Consulting Engineers
STRUCTURAL CIVIL HYDRAULICS

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

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2 Development Locality 4
2.1 Development Site and Details 4
2.2 Adjacent Affected Properties 4

3 Existing Site Services 5
3.1 Site Sewer Connections 5
3.2 Site Water Connections 5
3.3 Site Stormwater Connections 5

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4.2 Site Water Connections 7
4.3 Site Stormwater Connections 8

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6.1.3 MUSIC Modelling 10

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1 Context

Gandy and Roberts Consulting Engineers have been engaged by LXN Architecture and Consulting to provide concept servicing documentation for the proposed Apartment Development at 156 New Town Road in New Town. This report has been prepared for the Development Application submission process and aims to discuss the methodology in which the sites sewer, water and stormwater infrastructure will be delivered to existing TasWater and Hobart City Council (HCC) owned infrastructure.

2 Development Locality

2.1 Development Site and Details

The proposed development is located at 156 New Town Road in New Town on a site currently used for coffee sales and a training centre.

2.2 Adjacent Affected Properties

To service development at this property, an upgrade to the existing sewer property connection is required. To undertake these works, access to the 18 Roope Street (CT7973/1) is required.

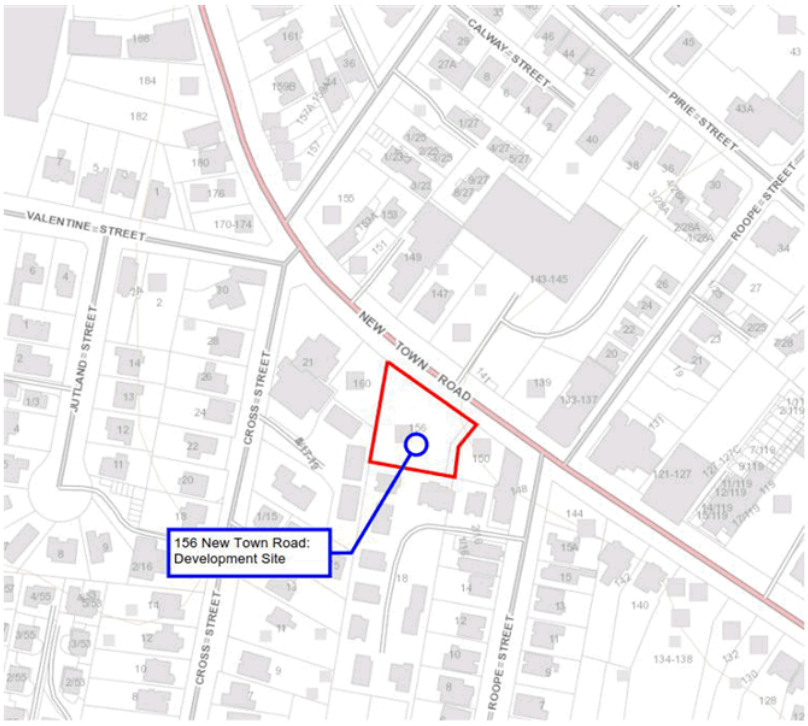


Figure 1: Development Locality

3 Existing Site Services

3.1 Site Sewer Connections

The site is currently serviced by an assumed DN100 sewer connection off a DN150 TasWater sewer main located on the adjacent title at the rear of the development site.

3.2 Site Water Connections

The site is currently serviced by a DN25 low hazard, in ground water connection off a DN100 CICL TasWater water main within New Town Road located on the same side of the road as the site.

3.3 Site Stormwater Connections

The site is currently serviced by a DN150 stormwater connection off a DN150 HCC main located on the adjacent title at the rear of the development site, whilst there is also an existing kerb adaptor delivering stormwater runoff to New Town Road.

Much of the carparking area is directed to the existing kerb outlet (approx. 830m²), along with all roof runoff from the existing building (approx. 280m²). The existing flow rate to the kerb is estimated at 24.4 L/s (5% AEP).

Flow to the rear connection is estimated at 5.9 L/s, this generated from part of the carparking area. Figure 2 provides an overview of the existing stormwater runoff from the site. It is evident that that rear lot connection was added as part of a historical carpark extension, whilst it is noted that the buildings roof drainage is connected to a concrete pipe in ground, suggesting that roof drainage has always been delivered to the kerb. Onsite review of this connection shows that it exits the sites via several DN150 bends and is shallow in nature. The HCC owned manhole at the rear of 18 Roope St was not visually located.

Figure 2: Existing Stormwater Run-Off Locality

4 Proposed Site Connections

4.1 Site Sewer Connections

Sewer flows have been calculated using both AS3500.2:2018 as well as the Taswater Supplement to the WSA 02-2014-3.1 the WSAA Gravity Sewerage Code of Australia.

Development Flows for the Buildings are shown in Table 1.

Table 1: Development Sewage Flows

Design Parameter	Unit
Fixture Units (AS3500.2:2018)	449
Equivalent Tenements	17.72
Average Dry Weather Flow (ADWF)	0.10 L/s
Peaking Factor 'd'	12.40
Peak Dry Weather Flow (PDWF)	1.19 L/s

Note: The listed sewage flows require the installation of DN150 private sewer drainage at a minimum grade of 1.00% in accordance with AS3500.2:2018

It is proposed that the existing connection to the site will be maintained but is required to be upgraded to DN150. These works are to be undertaken by TasWater at the developer's expense.

4.2 Site Water Connections

Domestic water pipework has been sized in accordance with AS3500.1:2018 for probable simultaneous demand, this on the basis that Equivalent Tenements for the development are < 100 in accordance with Taswater Supplement to the Water Supply Code of Australia WSA 3-2011.3.1 MRWA Editions V2.0.

Development Flows for the accommodation buildings are shown in Table 2.

The proposed development is likely Class 2 with Class 9b parts on the ground floor level in accordance with the National Construction Code (NCC). Fire compartments are likely to be under 500 m² and only 1 fire hydrant is required to operate and deliver 10 L/s @ 200 kPa in accordance with AS2419:2005.

Schematic design advice as provided by Pitt and Sherry Building Surveyors has suggested that it is unlikely that fire sprinklers are required to be installed the building.

Table 2: Development Water Flows

Design Flows	Unit
Domestic Water (AS3500.1:2018)	1.90 L/s @ 700 kPa
Fire Services	10.00 L/s @ 700 kPa

Note: The above listed domestic water flows require the installation of DN65 private water pipework in accordance with AS3500.1:201

TasWater confirmed via Service Inquiry TWSI 2021/00375-HCC on 27/5/2021 that the existing DN100 CICL main in New Town Road can deliver 49.9m (499kPa) under a 20 L/s fire demand and 27.8m (278kPa) under a 40 L/s demand.

It is proposed that a new DN100 fire and DN65 domestic water connection will be provided from the existing TasWater Main.

4.3 Site Stormwater Connections

Table 3: Development Stormwater Flows

Design Flows	Unit
Hardstand (Q_{20})	4.5 L/s
Landscape Zones (Q_{20})	2.1 L/s
Roof (Q_{20})	23.7 L/s

Where possible, all ground level landscape and hardstand zones will be directed to HCC infrastructure via gravity. A charged drainage system will be required to deliver roof drainage to the proposed treatment and site stormwater detention tank (see Section 5). A pump station will be sized during detailed building design in accordance with AS3500.3:2018 to service the basement area and zones where gravity and charged drainage systems are not practical.

The existing stormwater connection at the rear of the site is proposed to be abandoned as part of the development and all stormwater runoff delivered to an upgraded kerb connection in the same location as the existing kerb connection. Abandoning the existing rear lot connection is proposed due to the fact it will not be easily accessible under the proposed development and any stormwater treatment/detention infrastructure required at this location will not be easily maintained.

5 Planning Scheme Requirements

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

Acceptable Solution A1 of Clause E7.7.1 Stormwater Drainage and Disposal states:

Stormwater from new impervious surfaces must be disposed of by gravity to public stormwater infrastructure.

It is proposed that the existing site stormwater connection will be reused and therefore acceptable solution A1 is addressed.

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

A stormwater system for a new development must incorporate water sensitive urban design principles[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;

(b) new car parking is provided for more than 6 cars;

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

(c) a subdivision is for more than 5 lots.

This development meets criteria (b) of the clause and therefore water sensitive urban design principles must be incorporated into the design of stormwater management for the site. Water sensitive urban design strategies have been detailed in Section 6 of this report.

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

A minor stormwater drainage system must be designed to comply with all of the following:

(a) be able to accommodate a storm with an ARI of 20 years in the case of non-industrial zoned land and an ARI of 50 years in the case of industrial zoned land, when the land serviced by the system is fully developed;

(b) stormwater runoff will be no greater than pre-existing runoff or any increase can be accommodated within existing or upgraded public stormwater infrastructure.

This development meets criteria (b) of the clause and therefore stormwater is to be managed such that runoff from the site will be no greater than existing. The proposed stormwater detention design has been detailed in Section 7 of this report.

6 Water Sensitive Urban Design

6.1.1 Performance Criteria

Performance Criteria P2 of Clause E7.7.1 states:

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

The acceptable stormwater quality and quantity targets are:

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

6.1.2 Stormwater Treatment

A final treatment system design shall be confirmed during detailed design. A concept treatment system for the proposed development has been proposed, incorporating the following design elements:

- Ocean Protect Storm Filters
- Ocean Protect Ocean Guards
- SPEL Hydro-Channel

6.1.3 MUSIC Modelling

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

- Total Suspended Solids reduction of 81.1%
- Total Phosphorus reduction of 68.5%
- Total Nitrogen reduction of 46.8%
- Gross Pollutants reduction of 99.2%

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

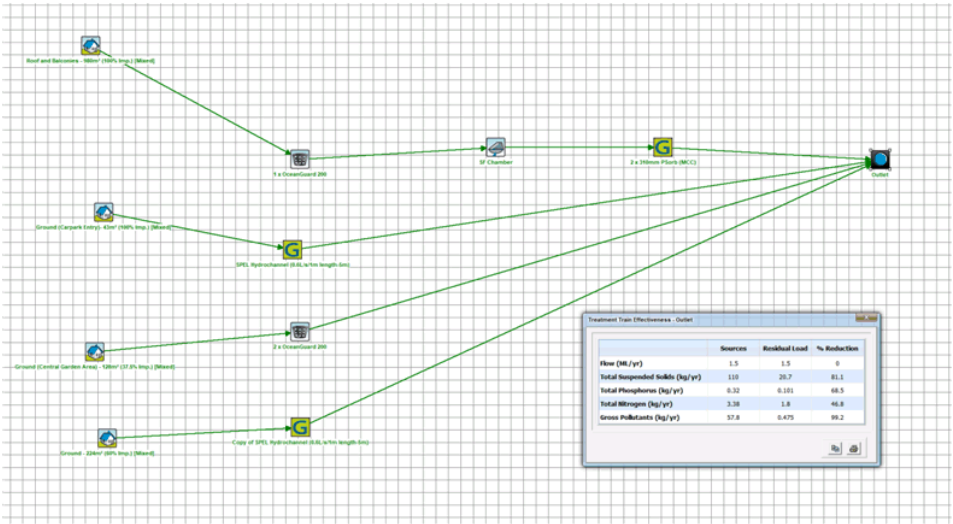


Figure 3: MUSIC Treatment Train

7 Stormwater Detention

The development title is 1475 m² in size and it is proposed that all stormwater runoff will be delivered to an upgraded kerb adaptor connection to New Town Road. Despite the existing runoff to the kerb adaptor having a higher runoff rate (see section 3.3), the maximum flow rate (5% AEP) is proposed to be limited to 13 L/s. Runoff from landscaped zones at the ground level through the central portion between the two building is proposed to discharge to the kerb un-detained, whilst runoff from upper-level roofs, balconies, driveway entry and rear landscaping zones are to be mitigated.

In order to determine the flow hydrograph for the site a hydrological analysis was undertaken in XP storm 2019 using the methods recommended by Australian Rainfall and Runoff (ARR) 2019. Rainfall data for the site was extracted from the Bureau of Meteorology (BOM) and temporal patterns were downloaded from the ARR Data Hub.

Storm durations from 10 minutes to 2 hours were considered in this analysis with the median storm for each rainfall duration identified. Analysis using XP storm indicates that a detention tank of 5600 L with an orifice-controlled outlet of size 75mm will sufficiently limit size discharge to under 13 L/s. Figure 3 shows the flow rate at the site discharge under the ensemble of median storms.

The 5600 L is proposed to be constructed as an above ground precast concrete tank of approx. size 5.9 x 1.2 x 0.85 m and to be formed within the central landscaping zone. The lid of this tank shall be formed to provide for landscaping with suitable access points to maintain filters and the orifice outlet.

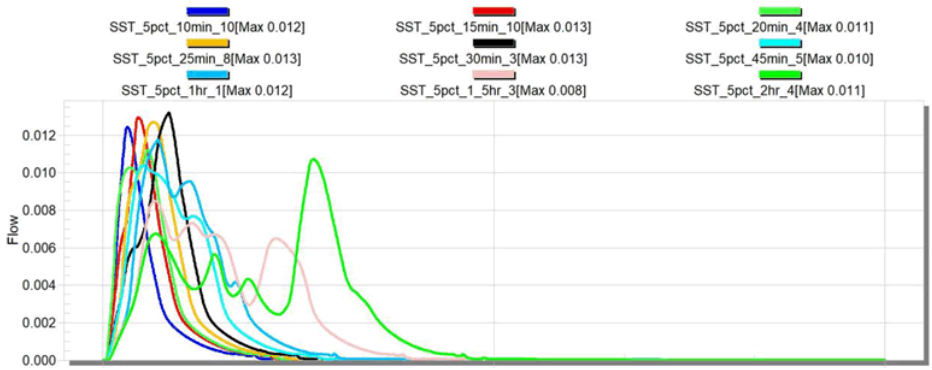
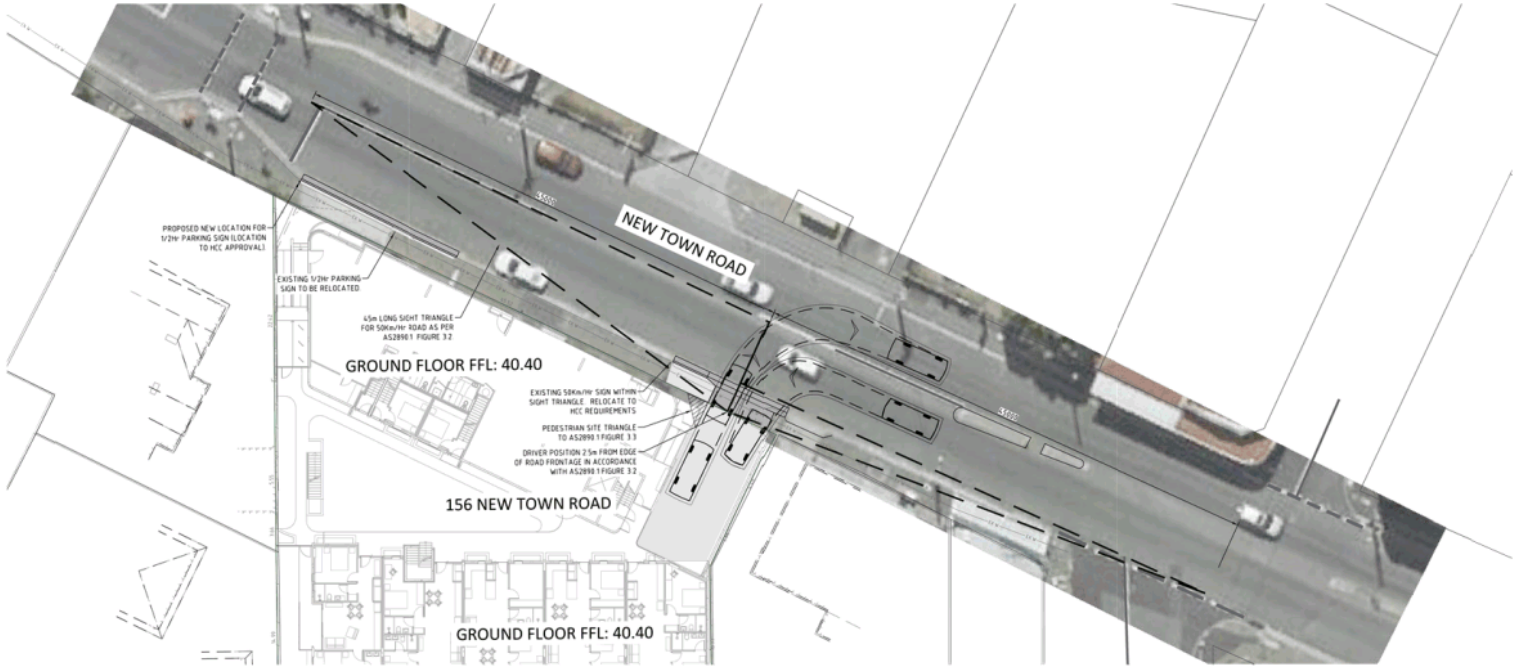


Figure 4: Flow rate to upgraded kerb connection

8 Appendix A: Concept Servicing Plans

The following drawings shall be read in conjunction with this report for a more detailed overview of the proposed development:

- C010 – Access Details
- C011 – Swept Paths 01
- C013 – Ramp Details
- C020 – Concept Serving Plan 01
- C021 – Concept Servicing Plan 02
- C022 – Concept Servicing Plan 03



SIGHT DISTANCE PLAN
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C	PLANNING APPROVAL	SP	03.03.2022
A	PLANNING APPROVAL	SP	08.10.2021

REV	DESCRIPTION	APP'D	DATE

THIS DRAWING HAS NOT BEEN APPROVED FOR CONSTRUCTION

North

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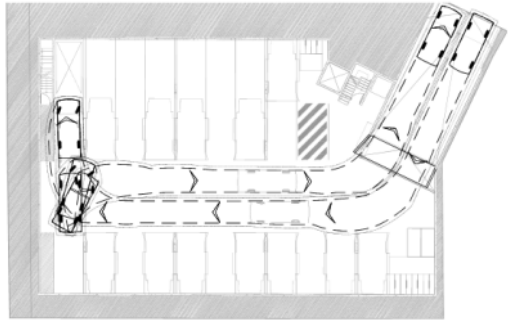
PROPOSED APARTMENT BUILDING
156 NEW TOWN ROAD
TASMANIA 7008
DRAWING TITLE
ACCESS DETAILS

0 50mm
SCALE 1:777@A1

DESIGNED	DRAWN	CHECKED
RB	RB	SP
PROJECT	DRAWING	REVISION
20.0457	C010	C



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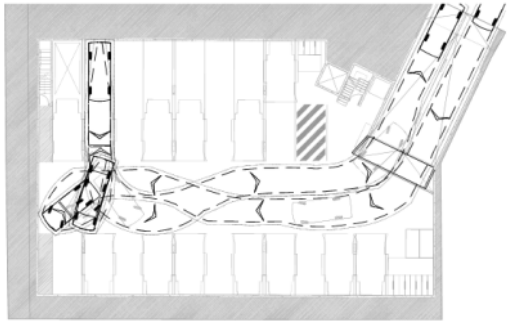

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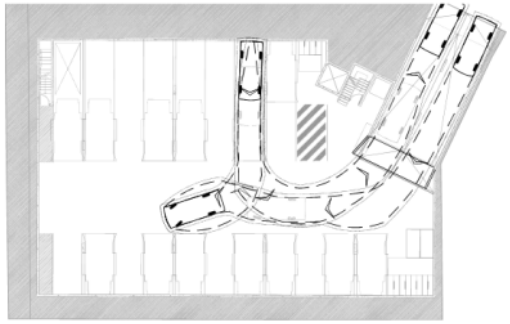

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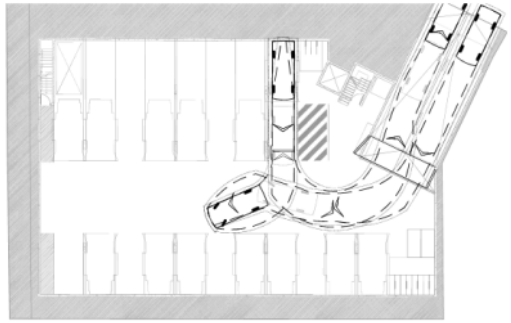

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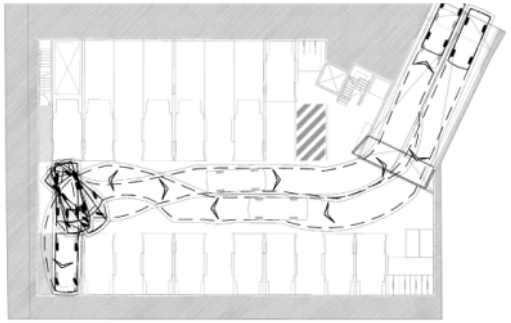
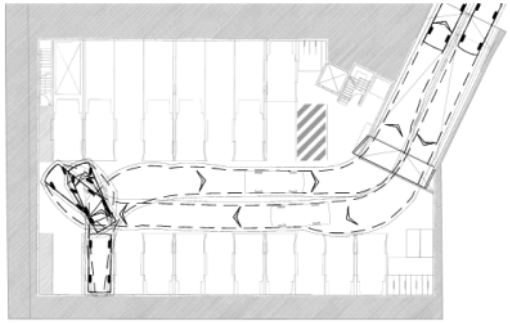


BASEMENT BAY 16 - FORWARD ENTRY



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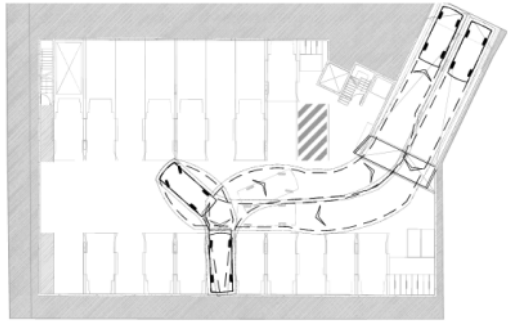

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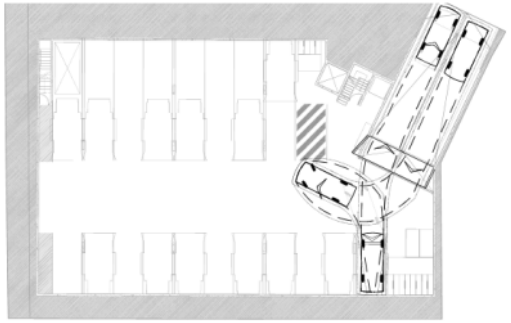

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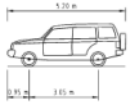

STANDARDS AUSTRALIA AS/NZS 2890.1:2004
B99 VEHICLE (REALISTIC MIN RADIUS)

OVERALL LENGTH	5.20 m
OVERALL WIDTH	1.94 m
OVERALL BODY HEIGHT	1.88 m
MIN BODY GROUND CLEARANCE	0.27 m
TRACK WIDTH	1.84 m
LOCK-TO-LOCK TIME	4.00 s
KERB TO KERB TURNING RADIUS	6.25 m

SWEPT PATHS GENERATED USING AUTODESK VEHICLE TRACKING 2018 SOFTWARE

DESIGN VEHICLE DETAILS
(STANDARD FOR ALL TEMPLATES)

REV	DESCRIPTION	APP'D	DATE
C	PLANNING APPROVAL	SP	03.03.2022
A	PLANNING APPROVAL	SP	08.10.2021

REV	DESCRIPTION	APP'D	DATE

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North

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PROPOSED APARTMENT BUILDING
156 NEW TOWN ROAD
TASMANIA 7008

DRAWING TITLE
SWEPT PATHS 01

0 50mm

SCALE	DESIGNED	DRAWN	CHECKED
1:200@A1	RB	RB	SP

PROJECT	DRAWING	REVISION
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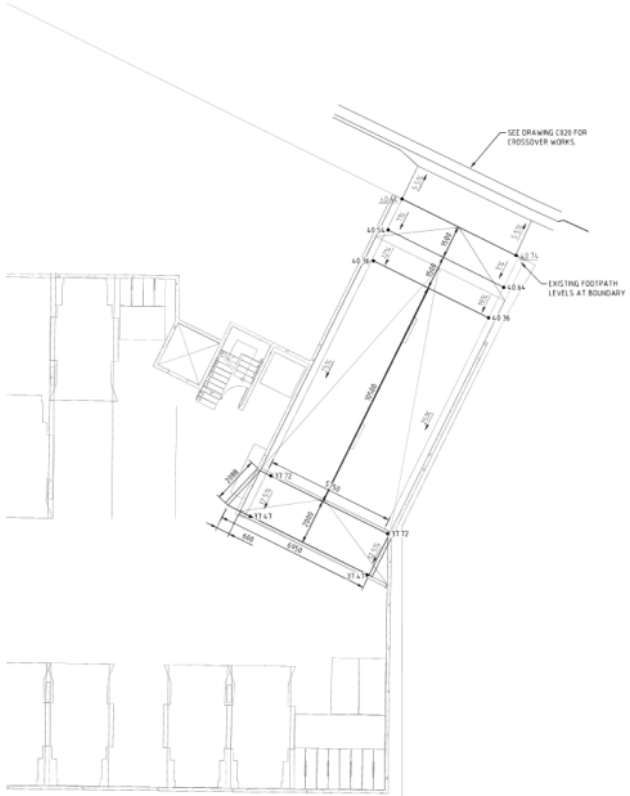
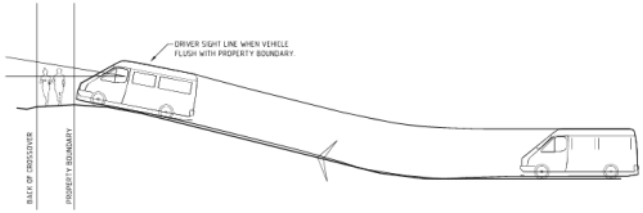
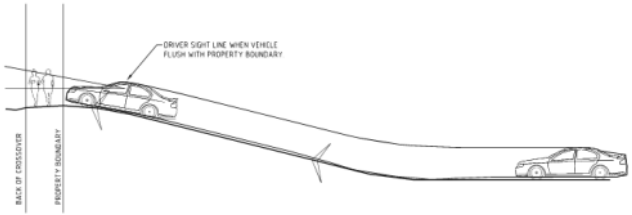
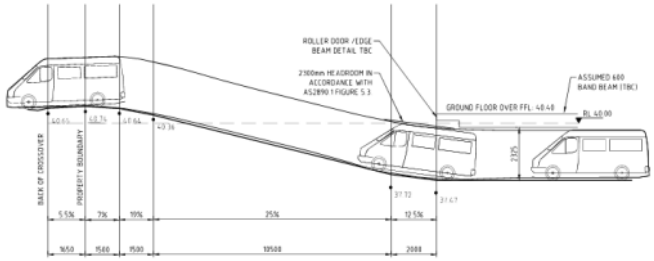




PEDESTRIAN SIGHT LINE (B99 VEHICLE)
SCALE 1:100



PEDESTRIAN SIGHT LINE (B85 VEHICLE)
SCALE 1:100



ENTRY RAMP DETAILS
SCALE 1:100

REV	DESCRIPTION	APP'D	DATE	REV	DESCRIPTION	APP'D	DATE
C	PLANNING APPROVAL	SP	03.03.2022				
A	PLANNING APPROVAL	SP	08.10.2021				

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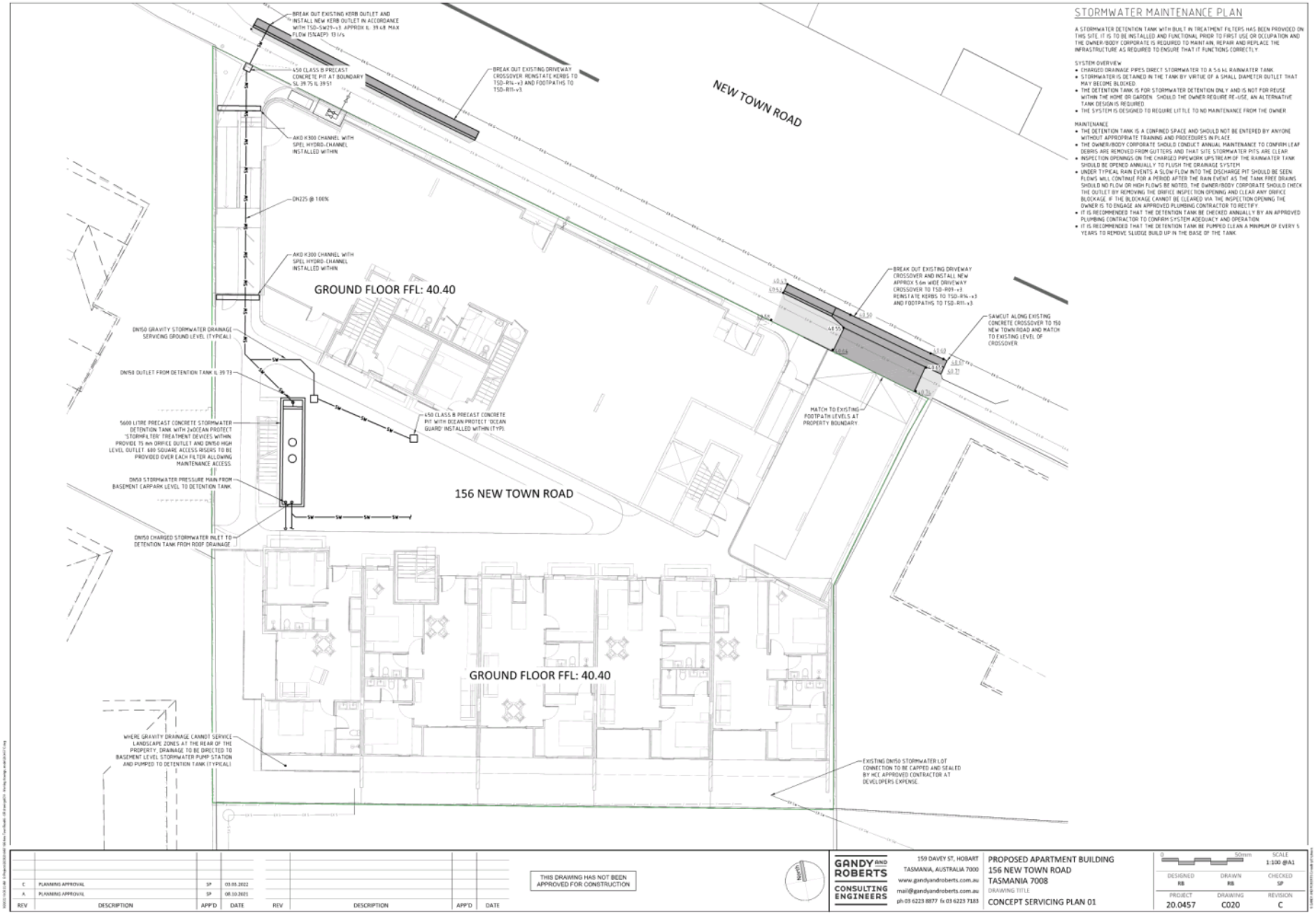
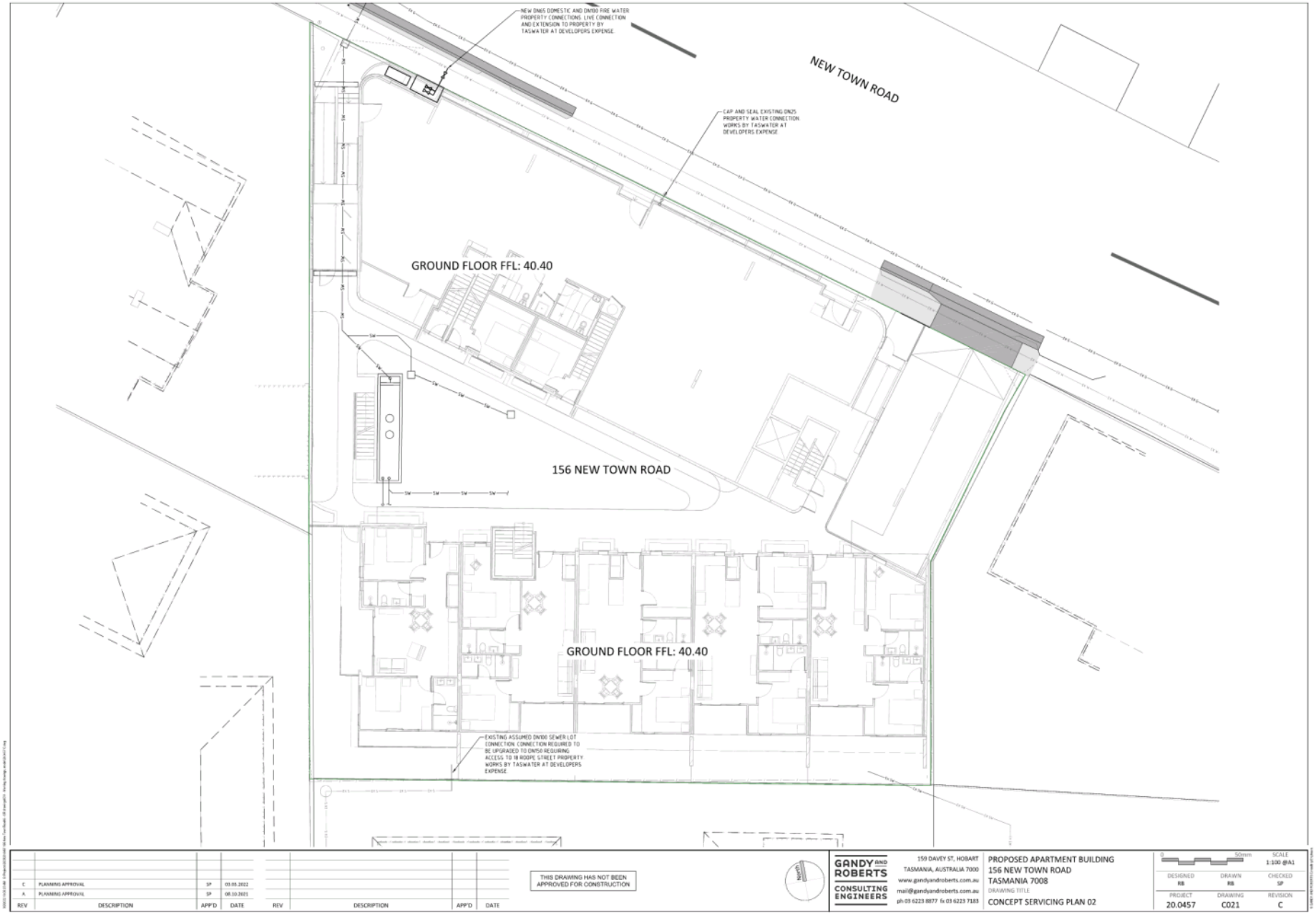
PROPOSED APARTMENT BUILDING
156 NEW TOWN ROAD
TASMANIA 7008
DRAWING TITLE
RAMP DETAILS

SCALE	DESIGNED	DRAWN	CHECKED
1:100 @ A1	RB	RB	SP
PROJECT	DRAWING	REVISION	
20.0457	C013	C	


BREAK OUT EXISTING KERB OUTLET AND INSTALL NEW KERB OUTLET IN ACCORDANCE WITH TSD-SW29-v3 APPROX IL 39.68 MAX FLOW (5%AEP) 19 l/s
450 CLASS B PRECAST CONCRETE PIT AT BOUNDARY SL 39.75 IL 39.51
BREAK OUT EXISTING DRIVEWAY CROSSOVER REINSTATE KERBS TO TSD-R14-v3 AND FOOTPATHS TO TSD-R15-v3
NEW TOWN ROAD
AKD K300 CHANNEL WITH SPEL HYDRO-CHANNEL INSTALLED WITHIN
DN225 @ 1.00%
AKD K300 CHANNEL WITH SPEL HYDRO-CHANNEL INSTALLED WITHIN
GROUND FLOOR FFL: 40.40
BREAK OUT EXISTING DRIVEWAY CROSSOVER AND INSTALL NEW APPROX 5.6m WIDE DRIVEWAY CROSSOVER TO TSD-R09-v3 REINSTATE KERBS TO TSD-R14-v3 AND FOOTPATHS TO TSD-R15-v3
SAWCUT ALONG EXISTING CONCRETE CROSSOVER TO 150 NEW TOWN ROAD AND MATCH TO EXISTING LEVEL OF CROSSOVER
DN150 GRAVITY STORMWATER DRAINAGE SERVICING GROUND LEVEL (TYPICAL)
DN150 OUTLET FROM DETENTION TANK IL 39.73
5600 LITRE PRECAST CONCRETE STORMWATER DETENTION TANK WITH 2xOCEAN PROTECT 'STORMFILTER' TREATMENT DEVICES WITHIN PROVIDE 75 mm ORIFICE OUTLET AND DN150 HIGH LEVEL OUTLET. 600 SQUARE ACCESS HOLES TO BE PROVIDED OVER EACH FILTER ALLOWING MAINTENANCE ACCESS.
450 CLASS B PRECAST CONCRETE PIT WITH OCEAN PROTECT 'OCEAN GUARD' INSTALLED WITHIN (TYP).
MATCH TO EXISTING FOOTPATH LEVELS AT PROPERTY BOUNDARY
DN50 STORMWATER PRESSURE MAIN FROM BASEMENT CARPARK LEVEL TO DETENTION TANK
156 NEW TOWN ROAD
DN150 CHARGED STORMWATER INLET TO DETENTION TANK FROM ROOF DRAINAGE
GROUND FLOOR FFL: 40.40
WHERE GRAVITY DRAINAGE CANNOT SERVICE LANDSCAPE ZONES AT THE REAR OF THE PROPERTY, DRAINAGE TO BE DIRECTED TO BASEMENT LEVEL STORMWATER PUMP STATION AND PUMPED TO DETENTION TANK (TYPICAL)
EXISTING DN150 STORMWATER LOT CONNECTION TO BE CAPPED AND SEALED BY HCC APPROVED CONTRACTOR AT DEVELOPERS EXPENSE.
STORMWATER MAINTENANCE PLAN
A STORMWATER DETENTION TANK WITH BUILT IN TREATMENT FILTERS HAS BEEN PROVIDED ON THIS SITE. IT IS TO BE INSTALLED AND FUNCTIONAL PRIOR TO FIRST USE OR OCCUPATION AND THE OWNER/BODY CORPORATE IS REQUIRED TO MAINTAIN, REPAIR AND REPLACE THE INFRASTRUCTURE AS REQUIRED TO ENSURE THAT IT FUNCTIONS CORRECTLY.
SYSTEM OVERVIEW
• CHARGED DRAINAGE PIPES DIRECT STORMWATER TO A 5.6 kL RAINWATER TANK.
• STORMWATER IS DETAINED IN THE TANK BY VIRTUE OF A SMALL DIAMETER OUTLET THAT MAY BECOME BLOCKED.
• THE DETENTION TANK IS FOR STORMWATER DETENTION ONLY AND IS NOT FOR REUSE WITHIN THE HOME OR GARDEN. SHOULD THE OWNER REQUIRE RE-USE, AN ALTERNATIVE TANK DESIGN IS REQUIRED.
• THE SYSTEM IS DESIGNED TO REQUIRE LITTLE TO NO MAINTENANCE FROM THE OWNER.
MAINTENANCE
• THE DETENTION TANK IS A CONFINED SPACE AND SHOULD NOT BE ENTERED BY ANYONE WITHOUT APPROPRIATE TRAINING AND PROCEDURES IN PLACE.
• THE OWNER/BODY CORPORATE SHOULD CONDUCT ANNUAL MAINTENANCE TO CONFIRM LEAF DEBRIS ARE REMOVED FROM GUTTERS AND THAT SITE STORMWATER PITS ARE CLEAR.
• INSPECTION OPENINGS ON THE CHARGED PIPEWORK UPSTREAM OF THE RAINWATER TANK SHOULD BE OPENED ANNUALLY TO FLUSH THE DRAINAGE SYSTEM.
• UNDER TYPICAL RAIN EVENTS A SLOW FLOW INTO THE DISCHARGE PIT SHOULD BE SEEN. FLOWS WILL CONTINUE FOR A PERIOD AFTER THE RAIN EVENT AS THE TANK FREE DRAINS. SHOULD NO FLOW OR HIGH FLOWS BE NOTED, THE OWNER/BODY CORPORATE SHOULD CHECK THE OUTLET BY REMOVING THE ORIFICE INSPECTION OPENING AND CLEAR ANY ORIFICE BLOCKAGE. IF THE BLOCKAGE CANNOT BE CLEARED VIA THE INSPECTION OPENING THE OWNER IS TO ENGAGE AN APPROVED PLUMBING CONTRACTOR TO RECTIFY.
• IT IS RECOMMENDED THAT THE DETENTION TANK BE CHECKED ANNUALLY BY AN APPROVED PLUMBING CONTRACTOR TO CONFIRM SYSTEM ADEQUACY AND OPERATION.
• IT IS RECOMMENDED THAT THE DETENTION TANK BE PUMPED CLEAN A MINIMUM OF EVERY 5 YEARS TO REMOVE SLUDGE BUILD UP IN THE BASE OF THE TANK.
C PLANNING APPROVAL SP 03.03.2022
A PLANNING APPROVAL SP 08.10.2021
REV DESCRIPTION APP'D DATE
THIS DRAWING HAS NOT BEEN APPROVED FOR CONSTRUCTION
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
PROPOSED APARTMENT BUILDING
156 NEW TOWN ROAD
TASMANIA 7008
DRAWING TITLE
CONCEPT SERVICING PLAN 01
SCALE 1:100 @A1
DESIGNED RB
DRAWN RB
CHECKED SP
PROJECT 20.0457
DRAWING C020
REVISION C


NEW DN65 DOMESTIC AND DN100 FIRE WATER PROPERTY CONNECTIONS. LIVE CONNECTION AND EXTENSION TO PROPERTY BY TASWATER AT DEVELOPERS EXPENSE.
NEW TOWN ROAD
CAP AND SEAL EXISTING DN25 PROPERTY WATER CONNECTION. WORKS BY TASWATER AT DEVELOPERS EXPENSE.
GROUND FLOOR FFL: 40.40
156 NEW TOWN ROAD
GROUND FLOOR FFL: 40.40
EXISTING ASSUMED DN100 SEWER LOT CONNECTION. CONNECTION REQUIRED TO BE UPGRADED TO DN150 REQUIRING ACCESS TO 18 RODPE STREET PROPERTY. WORKS BY TASWATER AT DEVELOPERS EXPENSE.
THIS DRAWING HAS NOT BEEN APPROVED FOR CONSTRUCTION
GANDY AND ROBERTS CONSULTING ENGINEERS
159 DAVEY ST, HOBART
TASMANIA, AUSTRALIA 7000
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PROPOSED APARTMENT BUILDING
156 NEW TOWN ROAD
TASMANIA 7008
DRAWING TITLE
CONCEPT SERVICING PLAN 02
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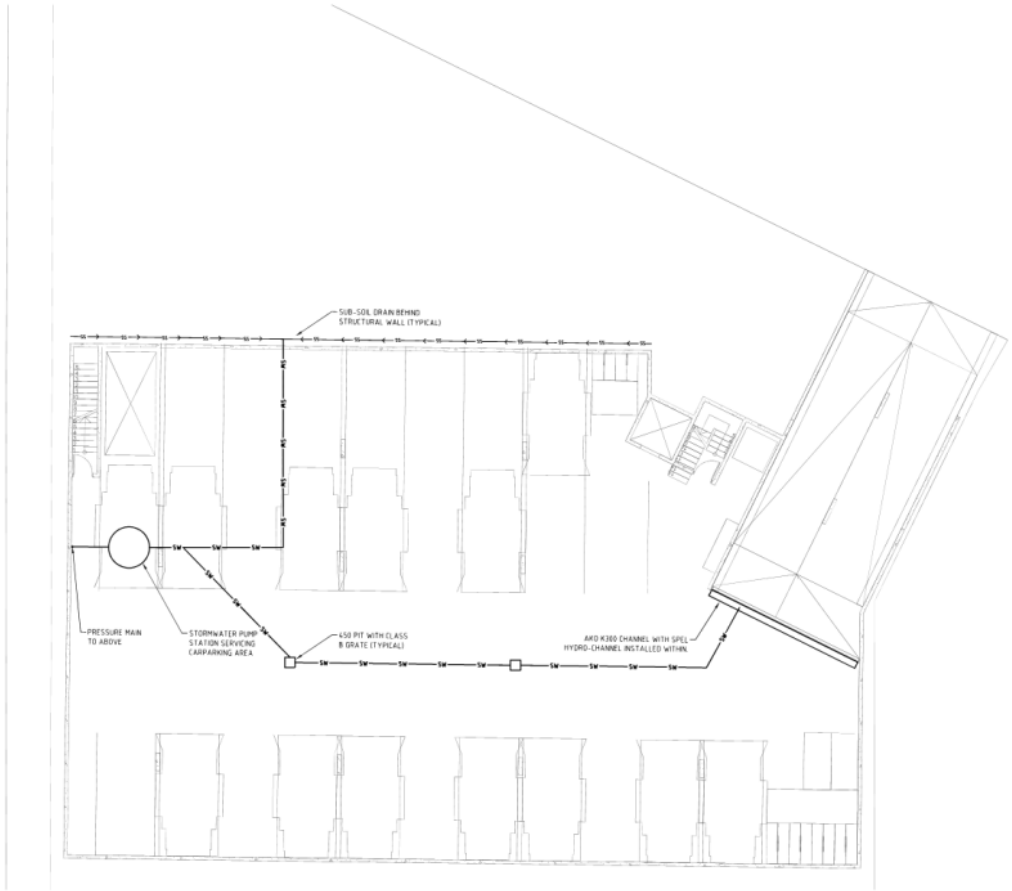

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PROPOSED APARTMENT BUILDING
156 NEW TOWN ROAD
TASMANIA 7008

DRAWING TITLE
CONCEPT SERVICING PLAN 03

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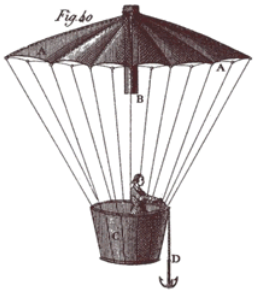
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APARTMENT BUILDING, 156 NEW TOWN ROAD NEW TOWN

TRAFFIC IMPACT ASSESSMENT

Hubble Traffic

UPDATE
DECEMBER 2021

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1. Introduction

The developer has engaged Hubble Traffic Consulting to prepare an independent Traffic Impact Assessment, to consider the traffic impacts of the construction of a multi-storey apartment building at 156 New Town Road, New Town (development site).

This report considers the amount of traffic the current site generates, the likely traffic generation of the proposed development, and how traffic movements will integrate into the surrounding road network.

The development site is currently operating as a drive-thru coffee establishment called Gioconda Coffee Roasters.

This report has been prepared to satisfy the requirements of Austroads, Guide to Traffic Management Part 12: Traffic Impacts of Developments, 2019. This assessment has referred to the following information and resources:

- City of Hobart Interim Planning Scheme (planning scheme)
- Road Traffic Authority NSW (RTA) Guide to Traffic Generating Developments
- Australian Standards 2890 parts 1, 2 and 6
- SIDRA 8 intersection modelling software
- Autoturn online vehicle swept path software
- Austroads series of Traffic Management and Road Design
    - Part 4: Intersection and crossings, General
    - Part 4a: Unsignalised and Signalised Intersections
    - Part 12: Traffic Impacts of Development
- Google Earth imagery
- LIST land information database

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2. Site Description

The development site is located at 156 New Town Road, the southern side of the road between Roope Street and Cross Street, New Town.

New Town is an inner city residential suburb, located about four kilometres north of the central business district of Hobart. The main arterial road through New Town is known as `New Town Road', and follows on from Elizabeth Street, connecting with the neighbouring city of Glenorchy.

The land-use along this section of New Town Road is zoned Urban Mixed Use, which permits business and professional services, food services, general retail and hire, and residential development, while directly behind this arterial road the land is zoned Inner Residential.

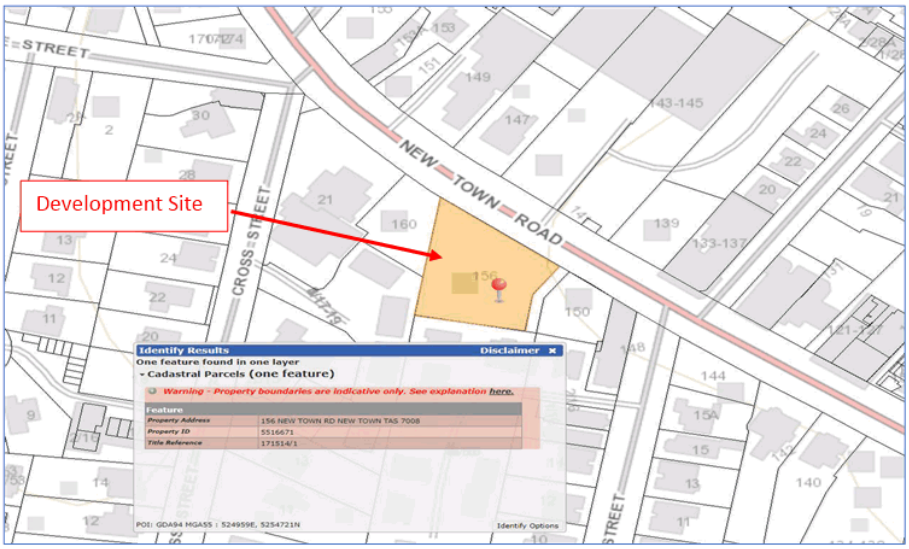
METRO Tasmania runs a high frequency bus service from Hobart to Glenorchy along New Town Road, with a bus operating every ten minutes between 7:00am to 7:00pm, Monday to Friday, every twenty minutes on Saturday, and every thirty minutes on Sunday.

The development site is within:

- 150 metres of a supermarket, local cafes, doctors, and pharmacy
- walking distance to the New Town Shopping Plaza, and recreational and cultural facilities
- 50 metres from public transport, with bus stops located on either side of New Town Road
- close proximity to two cycleways, the off-road intercity cycleway, and the on-road cycle network into the Hobart CBD.

With consideration to the site location and proximity to services, residents can substantially reduce their reliance upon private motor vehicle usage, and car parking requirements.

Diagram 2.0 – Site location (extract from the LIST land information database)



3. Development proposal

The developer has advised that the development proposal includes a multi-storey building to provide 19 residential apartments.

The ground floor will contain a single commercial tenancy, that will have direct pedestrian access to New Town Road. A pedestrian courtyard will provide street access to all apartments, consisting of five ground floor, ten first floor, and four second floor apartments.

On-site parking for the residential apartments will be located within the basement level, with vehicular access to New Town Road via a two-way ramp.

The commercial tenancy will be a gymnasium (Fitness Centre), which will complement the surrounding commercial uses and residential precinct.

Diagram 3.0 Ground floor layout

4. Trip generation by this development

A trip in this report is defined as a one way vehicular movement from one point to another excluding the return journey. Therefore, a return trip to and from a land use is counted as two trips.

To determine the number of trips likely to be generated by this development, reference has been taken from the RTA Guide to Traffic Generating Developments.

4.1 Medium density residential building

The RTA Guide specifies a medium density building is a building containing at least two, but less than 20 dwellings. This includes villas, town houses, flats, semi-detached houses, terrace or row houses, and other medium density developments.

Two bedroom units can generate 4 to 5 daily vehicle trips and 0.4 to 0.5 weekday peak hour trips.

While larger units (three or more bedrooms) can generate 5 to 6.5 daily vehicle trips and 0.5 to 0.65 weekday peak hour trips.

Table 4.1 Expected number of traffic movements generated by the apartments.

Number of bedrooms	Number of units	RTA generation rates for daily and peak hour	Expected daily trips	Expected peak hour trips
One	1	Daily vehicle trips of 4 to 5 per unit Peak hour trips of 0.4 to 0.5per unit	5	1
Two	12	Daily vehicle trips of 4 to 5 per unit Peak hour trips of 0.4 to 0.5per unit	60	6
Three	6	Daily vehicle trips of 5 to 6.5 per unit Peak hour trips of 0.5 to 0.65 per unit	39	4
Total	**19**		**104**	**11**

The 19 residential apartments are expected to generate 11 peak hour trips, and a total of 104 daily trips, leaving and entering New Town Road.

4.2 Commercial tenancy – Fitness Centre

The developer has advised the commercial tenancy will be a Fitness Centre, with facilities available to the public. It is expected the use could employ one staff member during weekdays.

The following operational times are expected to comply with the acceptable solution under the planning scheme:

- 7:00am to 9:00pm Monday to Friday
- 8:00am to 6:00pm Saturday, and
- 9:00am to 5:00pm Sunday and public holidays

To determine the likely amount of traffic generated by this Fitness Centre, reference has been taken from the RTA Guide to Traffic Generating Developments, section 3.8.2. This section provides two generation rates, metropolitan CBD areas and metropolitan sub-regional areas. The location of the development site fits in-between these two descriptions, and an average of the two generation rates has been used:

- Daily vehicle trips of 32 trips per 100m2 of gross floor area, and
- Evening peak hour of 6 trips per 100m2 of gross floor area.

The RTA guide indicates the above generation rates includes staff, delivery, service, and on-street movements such as taxis and pick-up/set-down activities. The RTA guide also indicates that peak generation generally occurs between 6:00pm to 7:00pm on a weekday evening.

With the gross floor area of the Fitness Centre is expected to be 360m2, the facility is expected to generate 115 daily vehicle trips, with 22 of these trips expected in the peak hour periods.

Table 4.2 – Expected number of trips generated by the Fitness Centre

Vehicle activity	Gross floor area	RTA trip generation rate	Expected number of vehicle trips	Expected number of vehicles
Daily	360m2	32 trips per 100m2 of gross floor area	115	58
Peak hour	360m2	6 trips per 100m2 of gross floor area	22	11

4.3 Existing trips generated from the current site

With the current site operating as a drive thru coffee establishment, it is important to calculate the current number of trips generated by this use, to determine the net difference in trips between the current and proposed land use.

To capture the number of trips generated by the current use, a traffic survey was conducted on Wednesday 21 April 2021. The survey collected traffic entering and leaving the development site, and the vehicle movements along New Town Road.

Table 4.3 – Number of trips generated by the current use and vehicles on New Town Road between 7:30am to 9:00am.

Time	Drive thru coffee establishment			New Town Road		
	Vehicles in	Vehicles out	Total	Northbound	Southbound	Total
7:30am to 7:45am	8	6	14	98	104	202
7:45am to 8:00am	13	13	26	104	168	272
8:00am to 8:15am	10	10	20	121	161	282
8:15am to 8:30am	8	8	16	135	168	303
8:30am to 8:45am	9	9	18	132	174	306
8:45am to 9:00am	11	11	22	146	140	286
Total	**59**	**57**	**116**	**736**	**915**	**1651**

Vehicles departing from the development site turned both left and right onto New Town Road, with sufficient gaps in the traffic stream for these manoeuvres to be undertaken efficiently and safely.

Estimation of daily trips from the current use

During the morning peak hour, Gioconda Coffee Roasters generates 80 vehicle trips into and out of the development site.

The coffee establishment operates from 6:00am to 2:00pm, with the estimated total daily trips shown in the following table.

Table 4.3A – Estimation of daily trips generated from the current use.

Time	Percentage of peak hour trips	Estimated number of trips
6:00am to 7:00am	70 %	56
7:00am to 8:00am	85%	68
8:00am to 9:00am	100 %	80
9:00am to 10:00am	85%	68
10:00am to 11:00am	70%	56
11:00am to 12:00pm	65%	52
12:00pm to 1:00pm	60%	48
1:00pm to 2:00pm	50%	40
Total		**468 trips**

4.4 Difference in trips generated from current and proposed use

The new use is expected to generate a reduced number of trips entering and leaving the development site, as the current use generates some 80 peak hour trips and an estimated 468 daily trips, while the new use is expected to generate 11 peak hour trips and 104 daily trips.

The new residential apartments are expected to generate approximately 90 percent less vehicle movements during the peak hour periods, and 80 percent less vehicle movements throughout the day than the current use. This means less vehicle movements entering and leaving New Town Road.

The Fitness Centre will not generate vehicle movements to and from New Town Road, however the centre is expected to generate additional vehicle movements to the area. Table 4.4 calculates the combined vehicle movements generated by the residential apartments and Fitness Centre, which is expected to be less than half of the current use.

Table 4.4 – Expected reduction in vehicle movements by the new use

Period	Current use	New use			Reduction in vehicle movements	
		Apartments	Fitness Centre	Total	Number	Percentage
Daily	468	104	115	219	249	53%
Peak Hour	80	11	22	33	47	59%

5. Parking requirements

5.1 Residential apartments

The planning scheme specifies the number of parking spaces that are required based on residential use, with table E6.1 indicating that for multiple dwellings containing two or more bedrooms, the development should provide two on-site parking spaces.

Reference on parking requirements is taken from the RTA Guidelines for medium residential buildings:

- *1 space per each unit, plus one space per each 5 x 2 bedrooms*
- *Additional 1 space for each 2 x 3 bedrooms*

The developer has considered the above requirements and has allocated the following parking spaces for the residential apartments.

Table 5.1 – Number of parking spaces for residential apartments

Number of bedrooms	Number of apartments	Planning scheme requirements	RTA requirements		Development proposal – actual number of spaces being provided	
				Spaces	Spaces	Total
1 bedroom	1	1	1 per unit	1	1	1
2 bedrooms	12	24	1 per unit plus 1 per 5 units	14	1 or 2	13
3 bedrooms	6	12	1 per unit plus 1 per 3 units	8	2	12
Total	**19**	**37**		**23**		**26**

Of the 12 two bedroom units, the developer has indicated one of the units will be allocated two parking spaces, while the other 11 units will be allocated with one parking space. The three bedroom units will be allocated two parking spaces, while the one bedroom unit allocated one parking space. This gives an allocation of 26 parking spaces to the 19 units.

With the development being within an inner city residential suburb, the reliance on private vehicles is reduced, particularly for two bedroom units requiring more than one vehicle.

5.2 Parking spaces for the Fitness Centre

Along the road frontage of New Town Road there is a range of mixed businesses, with many relying on the supply of on-street spaces for customer parking. The Fitness Centre will be another local business relying on the on-street parking supply, as the development will not provide off-street parking for this use.

Under the planning scheme, a Fitness Centre requires 4.5 car parking spaces per 100 square metres of floor area, and with the centre operating with 360 square metres, the parking requirement is 16 parking spaces.

It is common for a Fitness Centre to generate people movement throughout the opening hours, with the average duration of stay around an hour. A comprehensive survey of gymnasiums in Sydney was conducted in 2014, and found 73 percent of members arrive as the driver, with 16 percent arriving as a passenger, and 11 percent by walking. With the location of this Fitness Centre within close proximity to an inner residential catchment area, this mode of transport could be expected for this facility.

The RTA Guide indicates the peak demand for a Fitness Centre usually occurs between 6:00pm and 7:00pm weekdays, after the other businesses in area has finished. Based on the RTA data. This Fitness Centre is predicted to generate a peak hour demand of 11 vehicles, and on average four vehicles per hour outside of this peak period.

Sharing on-street parking takes advantage of the fact that most on-street parking areas are only used part time by a particular motorist group, and many spaces become vacant after that use has finished.

5.3 Availability of the supply of on-street car parking

To understand the availability of on-street parking spaces along the surrounding streets, a comprehensive parking supply and demand survey was conducted. The survey examined available spaces and parking demand within 150 metres of the development site.

Table 5.3 – On-street parking supply and demand

Street	Kerb restrictions	Number of spaces	Spaces available at survey time				
			7:30am	10:30am	1:30pm	4:30pm	8:00pm
New Town Road (Woolworths to Cross Street)	Unlimited	10	6	4	1	7	9
	15 minutes	3	2	2	1	1	
	30 minutes	5	5	5	4	5	
New Town Road (Cross St to 119 New Town road)	30 minutes	11	11	8	8	7	11
	120 minutes	2	2	1	1	1	
	Unlimited	5	5	1	2	2	
Valentine Street (New Town Rd to Montague St)	60 minutes	4	2	2	2	3	21
	Unlimited	29	15	18	18	19	
Cross Street (Pirie to Pedder)	15 minutes	4	3	2	1	3	11
	Unlimited	19	8	4	9	12	
Roope Street (Pirie to Pedder)	120 minutes	5	3	1	1	1	22
	15 minutes	2	2	0	1	0	
	Unlimited	28	17	3	2	7	
Total		**127**	**81**	**51**	**51**	**68**	**74**

The survey found at least 127 on-street parking spaces are available within 150 metres of the development site. The patrolled survey found between 7:30am and 4:30pm there was a minimum of 51 spaces available, and at 8:00pm there were 74 spaces available.

According to the planning scheme parking requirements, the visitors could generate an on-street parking demand of five spaces, with the Fitness Centre also generating an on-street parking demand of 16 spaces. Based on a worst case scenario of the two users creating a maximum demand at the same time, the development could generate an on-street parking demand of 21 vehicles. The patrolled parking survey has demonstrated there will be more than sufficient number of on-street spaces available (minimum of 51 spaces) to easily meet the demand, without causing adverse impact to other users.

6. Existing traffic Conditions

New Town Road within the surrounding road network operates as an urban collector, to carry substantial movement of traffic between Hobart and Glenorchy. The road supports one traffic lane in each direction, with parallel parking along both sides. The road operates under the 50 km/h urban default speed limit.

Adjacent properties have direct access to the road, and motorists travelling along New Town Road recognise the need to drive vigilantly, having consideration that vehicles regularly leave and enter the road.

There is a significant movement of pedestrians crossing the road, with pedestrian refuge islands located at high demand locations, to enable pedestrians to cross in two stages.

The road is sealed, with formed footpaths along both sides and street lighting.

6.1 Traffic activity along New Town Road

A survey of the morning traffic found a peak hour traffic flow of 1,655 vehicles, with 70 percent of these vehicles traveling in a southbound direction.

6.2 Traffic entering and leaving the development site

Currently the development site has a separate entry located at the northern boundary, with a separate exit located at the southern boundary. The entry is located immediately beyond a signalised pedestrian crossing, and a right turning vehicle entering the site can restrict the flow of through traffic.

6.3 Surrounding land-use

The surrounding land-use is mixed with commercial, retail, and residential properties.

The majority of the surrounding residential properties have off-street parking available. Many of the commercial and retail properties rely on on-street parking for customers, with a variety of parking restrictions to provide a high turnover of the available spaces.

7. Impact from traffic generated by this development

As determined in section 4.4 of this assessment, the new apartment complex is expected to significantly reduce the traffic movements to and from the site compared with the current use, with the development not expected to create any adverse traffic efficiency impact.

7.1 Traffic entering and leaving the development site

The current entry and exit to the development site will be converted to a single two-way access, located at the southern boundary of the property. The width of the new access will be wide enough to accommodate two-way traffic movements.

With the reduction in the number of traffic movements entering and leaving the development site, compared to the current use, the traffic efficiency along New Town Road is expected to improve.

7.2 Sight distance for vehicles leaving the development site

The speed limit along New Town Road is the urban 50 km/h speed limit.

Sight distance leaving the proposed development access has been measured on-site, with a driver leaving the site having at least 100 metres sight distance in both directions; this exceeds the Safe Intersection Sight Distance prescribed in the planning scheme and is sufficient for vehicles to enter the road in a safe manner without causing traffic disruption to current users.

Photograph 7.2A –Drivers view when leaving the site viewing left

Photograph 7.2B – Drivers view when leaving the site viewing right

7.3 Queuing area to the basement car park

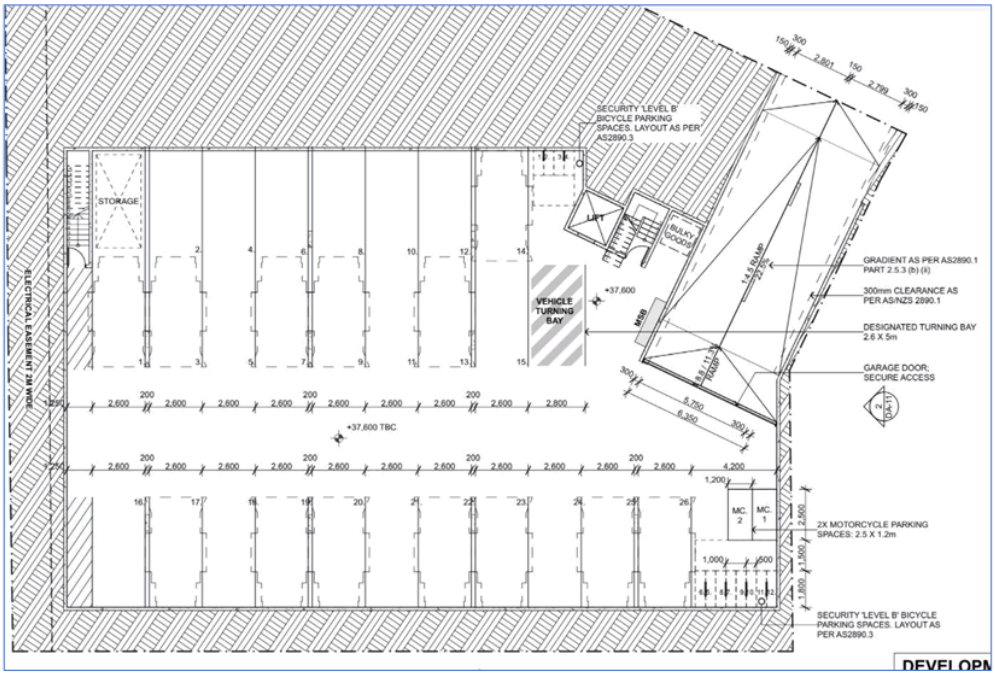
The entrance to the basement car park will be gated and controlled by a card reader or similar device, with the gate expected to be located 14 metres inside the property boundary, allowing storage for two entering vehicles.

The entrance storage length is expected to be ample to eliminate the risk of vehicles queuing back onto New Town Road. This is based on the peak hour demand of 11 trips, or on average, one vehicle arriving every five minutes, so the risk of more than two vehicles arriving to enter the basement car park is very low.

7.4 Layout of the basement car park access

The access to the basement car park is via a straight ramp from New Town Road, leading into a parking aisle, with ninety degree parking spaces located on either side.

Diagram 7.4 – Basement car park layout



7.5 Ramp layout

The straight ramp provides vehicular access between New Town Road and the basement car park.

With the ramp gradient being 1:4.5 or 22.5 percent, it will be supported with 2 metre transitional ramps with gradients of 1:8 (12.5 percent) or 1:8.8 (11.3 percent). The change in gradient for sag and crest curves complies with the Australian Standard AS 2890 requirements, to ensure there is sufficient ground clearance to minimise bottoming or scraping of vehicles, as they enter or leave.

The ramp width will have sufficient width to accommodate two-way traffic movements and include appropriate clearance to vertical obstructions to ensure the ramp provides convenient, accessible, efficient, and safe vehicle movements.

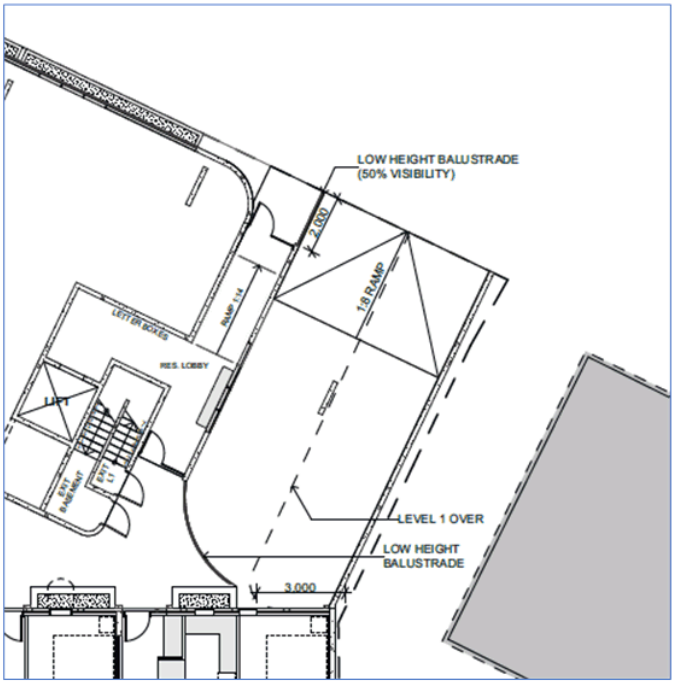
The ramp design will connect into the back of the existing public concrete footpath, to minimise any adverse impact to pedestrian movement along the footpath.

7.6 Pedestrian sight line for pedestrian safety

Along the western side of the vehicle ramp, a low height balustrade will provide a minimum of 50 percent visibility, ensuring adequate sight line between pedestrians walking along the footpath and drivers leaving the basement car park.

This balustrade method to achieve the required sight distance complies with the intent of both the planning scheme and the Australian Standards section 3.2.4

Diagram 7.6 – Sight line between pedestrian and driver



7.7 Pedestrian access

A pedestrian courtyard at street level will provide direct access to the apartments, with the Fitness Centre having direct access to the street.

7.8 Commercial vehicles

Commercial vehicles to service the development site, will not have access to the basement car park and will use on-street parking spaces, similar to other businesses in the area.

Waste collection

Waste collection will be arranged with a private collection service. A central waste collection will be established on the ground floor, and have access to the street frontage.

Deliveries to the Fitness centre

The number of deliveries to the Fitness Centre is expected to be less than one delivery per week, and use on-street parking, similar to other businesses in the area.

7.9 Headroom clearance

The Australian Standards 2890 section 5.3 specifies for both cars and light vans, the height between the floor and an overhead obstruction shall be a minimum of 2.2 metres. The basement car park will have a minimum headroom height of 2.4 metres, while the minimum headroom for the ramp will be 2.38 metres. At this height, the design will provide adequate headroom to accommodate residential vehicles.

7.10 Basement car park arrangements

The internal car park layout will incorporate a two-way parking aisle with the following characteristics:

- Parking bays will be user class 1A for residential parking, with the allowance for three-point turn entry and exit into ninety degree parking spaces.
- Parking bays will be 2.6 metres wide and 5.4 metres long.
- All parking spaces to be ninety degrees to the parking aisle.
- Seven tandem (jockey) parking spaces to be allocated to the six three bedroom apartments, and one two-bedroom apartment.
- The parking aisle will be a minimum of 6.4 metres wide and incorporate 300mm minimum clearance where necessary to cater for any vertical obstructions such as walls, to ensure adequate vehicle manoeuvrability.
- At the end of the blind aisle, 1.25 metre extension to the aisle will be provided to aid with vehicle manoeuvrability.
- The length of the aisle will be less than 40 metres, this will restrict operating speeds to an acceptable level of less than 30 km/h.

7.11 Tandem parking spaces

Tandem parking has become popular within apartment buildings, as they allow for more parking spaces in constrained sites. Mainland councils are allowing tandem parking for residential unit developments, as long as the arrangement can be accommodated without causing inconvenience, or congestion. Tandem parking for residential unit development is generally permitted on the following conditions:

- No small car space is allowed within a tandem parking arrangement.
- Tandem parking is not permitted for visitor parking.
- Each tandem parking arrangement must be allocated to the same residential unit.
- Shuffling of vehicles associated with tandem parking must be carried out wholly within the site.
- Minimum length of a tandem parking space is 10.4 metres long.

It is important that `shuffling' of vehicles associated with tandem parking can be done efficiently within the development site, so that residents do not choose to park on the street, and other users of the parking area are not inconvenienced. For these reasons, the width of the tandem parking space and adjacent parking aisle are important, to ensure shuffling manoeuvres can be undertaken efficiently.

The width of angle parking spaces is derived from the base dimension of the vehicle, and adding width to accommodate door opening. The standard 2890 part 1: specifies the minimum parking width is 2.6 metres wide to allow a B85 vehicle to fully open all doors. On the assumption that the adjacent vehicle is a B85 vehicle, there should be a 0.73 metres gap between vehicles. This gap allows for doors to open, and occupants to move freely between vehicles, which is critical for tandem parking. If B99 vehicles are parked in adjacent spaces, the gap between the vehicles reduces from 0.73 to 0.66 metres.

Swept path testing for a B85 vehicle has found that the new State-Wide planning scheme that prescribed parking spaces to be 2.6 metres wide, with parking aisle of 6.4 metres, provides a higher level of service for users, allowing a B85 vehicle to enter, and leave the parking space more efficiently, and would be suitable for tandem parking.

Having consideration to the residential use, the low turnover of the parking spaces, the provision of a designated vehicle turning bay within the basement, the width of the parking spaces and parking aisle, this layout is expected to provide a suitable level of service for tandem parking, without causing adverse impact to other uses, or traffic congestion.

7.12 Manoeuvrability of vehicles within the basement car park

Diagram 7.12A – Swept path of B85 vehicle entering the parking spaces

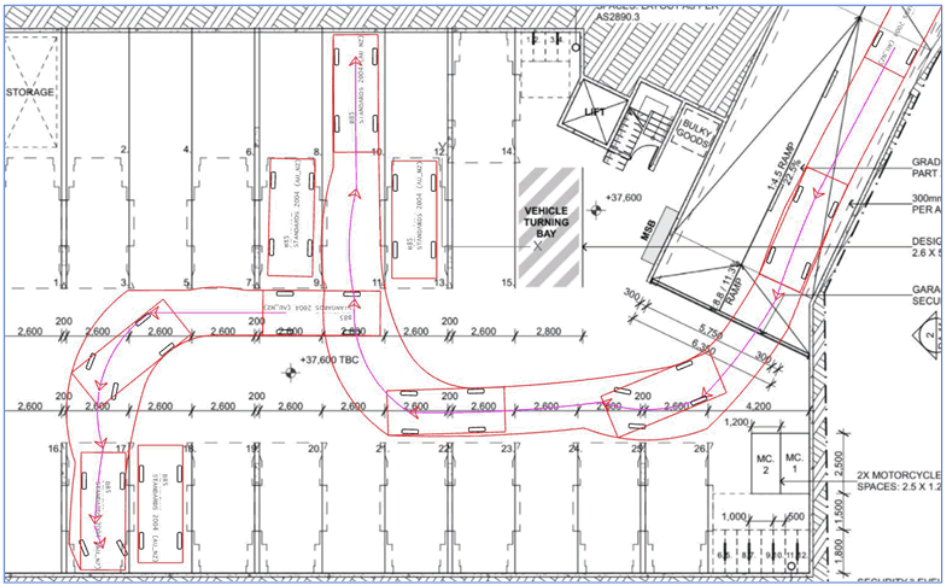


Diagram 7.12B – Swept path of B95 vehicle leaving the tandem parking spaces.

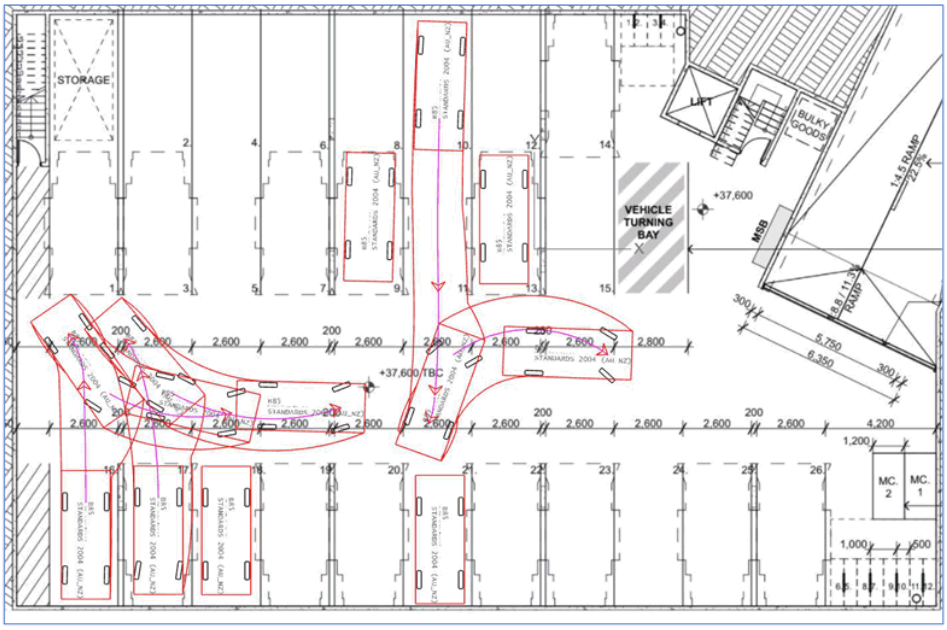
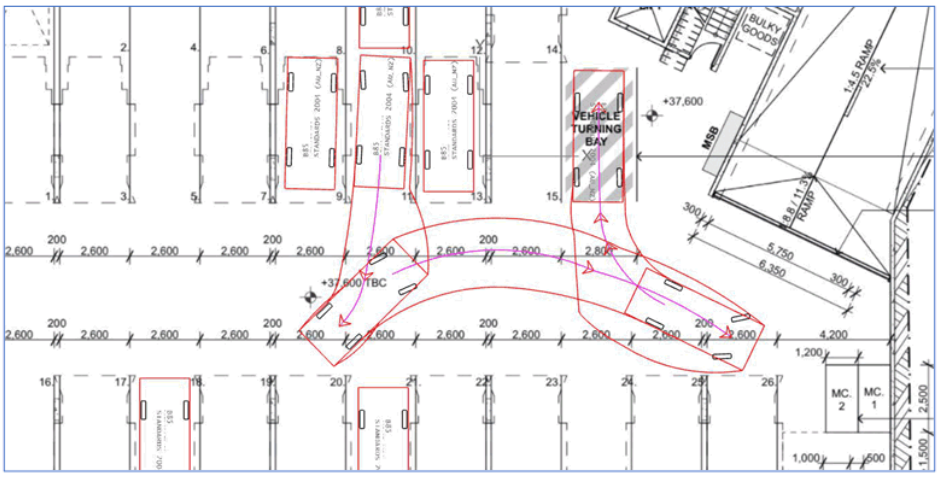


Diagram 7.12 C – Shuffling of vehicles using the designated turning bay



The wider parking spaces of 2.6 metres, combined with the parking aisle of 6.4 metres provides a higher level of service for users, and improves efficiency for vehicles entering and leaving the parking spaces.

7.13 Bicycle facilities

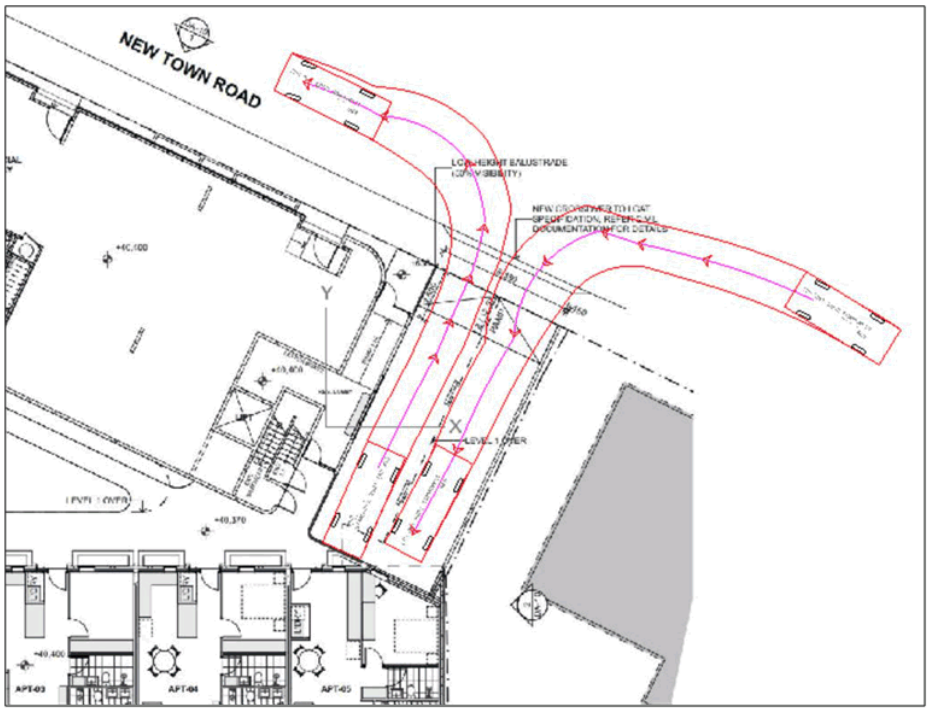
To promote the use of bicycles as a viable alternative to private vehicles, the development will provide:

- two bicycle racks for 12 bikes within the basement car park, which is consider a secure facility as only residents have access to the basement, and
- a bike wheel frame within the courtyard area for use by Fitness Centre members.

7.14 Vehicles entering and leaving the basement car park

Autoturn online vehicle turning swept path software has been used to ensure the basement car park arrangement accommodates B99 vehicles, arriving and departing simultaneously as shown in the diagram below.

Diagram 7.14 – Swept path for B99 vehicle entering and leaving simultaneously



8. Planning scheme

8.1 E5.0 Road and Railway Assets Code

E5.5.1 Existing access and junctions

The development sites current use is a drive thru coffee business (Gioconda Coffee Roasters) that operates between 6:00am and 2:00pm, with an existing entry and exit onto New Town Road. A recent traffic survey established this business can generate a peak hour traffic flow of 80 trips, and an estimated total of 468 daily trips.

The proposed development is expected to generate a reduced number of trips entering and leaving New Town Road, with 11 trips expected for peak hour, and a daily total of 104 trips.

A reduction of trips generated by this new use is expected to improve traffic efficiency along New Town Road and complies with the acceptable solution under the planning scheme.

E5.6.4 Sight distance at accesses, junction, and level crossings

This new development will convert the existing entry and exit into a single two-way access located on the southern boundary. Motorists leaving this access will have available sight distance, that exceeds the minimum Safe Intersection Sight Distance prescribed in the planning scheme for a 50 km/h speed limit.

This development will comply with the acceptable solution for Safe Intersection Sight Distance, and motorists will be able to enter New Town Road in a safe manner, without disrupting the current road users.

8.2 E6.0 Parking and Access Code

E6.6.1 Number of parking spaces for the residential apartments

The development will provide 26 on-site parking spaces, with these spaces allocated to the residential apartments.

The planning scheme indicates for multiple dwellings with two or more bedrooms, two parking spaces should be provided, and one visitor space per four dwellings.

The number of spaces required under the planning scheme is 38 spaces for the 19 apartments, which is considered excessive, as the planning scheme does not take into account the apartments inner-city residential location within four kilometres of the Hobart CBD, and location of the development on a high frequency public transport route.

The RTA Guide recognises that for medium density units located on a high frequency bus route, car space requirements are reduced, where a two-bedroom unit requires only one car space. As this Guide indicates for these apartments 23 spaces would be sufficient to meet the expected demand.

The number of parking spaces for the residential apartments must be considered under the performance criteria.

Performance criteria	Assessment
To ensure there is enough car parking to meet the reasonable needs of all users of a development, taking into account the level of parking available on or outside of the land and the access afforded of users by other modes of transport. The use or development does not detract from the amenity of users or the locality by preventing regular parking overspill and minimising the impact of car parking on heritage and local character.	
a) car parking demand;	The planning scheme specifies that 38 parking spaces are required for the 19 residential apartments, plus five spaces for visitors. The development is providing 26 spaces, based on one space for apartments with two bedrooms, and two spaces for apartments with three or more bedrooms. This number of parking spaces is considered reasonable to meet the expected demand. This number of spaces being provided is supported by the RTA Guide for medium density unit developments. In addition to the 26 spaces, two dedicated motorcycle parking spaces will be provided in the basement car park. Visitor parking will share the available supply of on-street spaces.
b) The availability of on-street and public car parking in the locality;	A recent parking supply and demand survey of the surrounding streets within 150 metres of the development site, found there is 127 spaces available. A patrolled survey found a minimum of 51 of these spaces were free during the day, and these could be used by visitors.
c) The availability and frequency of public transport within 400m walking distance of the site;	METRO Tasmania runs a high frequency bus service between Glenorchy and Hobart via New Town Road, with a bus operating every ten minutes between 7:00am to 7:00pm, Monday to Friday, every twenty minutes on Saturday, and every thirty minutes on Sunday. With bus stops located within 50 metres of the development site, this provides residents with a convenient and viable alternative transport mode.
d) the availability and likely use of other modes of transport;	The development site is located within four kilometres of the Hobart CBD, making bicycle riding a viable option, particularly with on-road cycle lanes operating along Argyle Street, extending into New Town Road. Also, the development site is located 1 kilometre from the inner-city cycle route.
e) the availability and suitability of alternative arrangements for car parking provisions;	The inner residential suburb provides residents with a range of commercial and retail businesses within walking distance, reducing the reliance on a car.

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;	The RTA guide for traffic generation developments is a nationally accepted document that provides advice on design criteria for new developments. For medium density residential units located on a high frequency bus route, one parking space is considered appropriate for a two bedroom unit, and two spaces for three or more bedrooms. The RTA Guide indicates 23 spaces would be suitable for this development.
g) Any car parking deficiencies or surplus associated with the existing use of the land;	None.
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 requirements, except in the case of substantial redevelopment of a site;	None.
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;	No financial contribution is considered necessary as the level of on-site parking spaces will more than meet the needs of the development, without any adverse impact to the surrounding road network.
j) Any verified prior payment of a financial contribution in lieu of parking for the land;	None required.
k) Any relevant parking plan for the area adopted by Council;	Not aware of any.
l) The impact on the historic cultural heritage significance of the site if subject to the Local Heritage Code;	None expected.
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.	None.

E6.6.1 Number of parking spaces for the Fitness Centre

The development will not provide on-site parking for the Fitness Centre, customers will share the supply of on-street parking spaces available within the surrounding streets.

On-street parking is a resource that belongs to the community, that can be shared between the various land-users, and short term parking restrictions ensures sufficient parking turnover to meet the land-use demand. The urban Mixed Use zoning along New Town Road permits commercial development, and many of the surrounding businesses currently share the current supply of on-street parking.

A recent parking supply and demand survey of the surrounding streets found there is sufficient supply of on-street parking that can be shared with this new use, without adversely impacting other land-uses.

Parking for the Fitness Centre must be considered under the performance criteria.

Performance criteria	Assessment
To ensure there is enough car parking to meet the reasonable needs of all users of a development, taking into account the level of parking available on or outside of the land and the access afforded of users by other modes of transport. The use or development does not detract from the amenity of users or the locality by preventing regular parking overspill and minimising the impact of car parking on heritage and local character.	
a) car parking demand;	Based on the total floor area of the Fitness Centre being 360m2, the planning scheme specifies 16 parking spaces. The RTA Guide estimates that the centre could generate a peak hour demand of 11 vehicles, and outside this peak period, the parking demand is expected to be much less. The centre opening hours are restricted to 7:00am to 9:00pm, with the average stay expected to be one hour. The peak hour demand is expected to occur between 6:00pm to 7:00pm, which occurs outside of the time when most of the surrounding commercial properties operate.
b) The availability of on-street and public car parking in the locality;	A recent parking supply and demand survey of on-street parking, found within 150 metres of the development site there is a supply of 127 on-street spaces. During the day there were a minimum of 51 spaces available, while at night this increased to 74 spaces available. There is a range of parking restrictions to ensure there is a high turnover of the spaces, and this parking survey demonstrates there is sufficient parking supply to meet the Fitness Centre on-street parking demand.
c) The availability and frequency of public transport within 400m walking distance of the site;	A high frequency public bus route operates past the development site, with bus stops located within 50 metres of the development.

d) the availability and likely use of other modes of transport;	The location is within an inner residential suburb, with the area being a mix of residential, commercial, and retail businesses, suggesting walking is a viable mode of transport.
e) the availability and suitability of alternative arrangements for car parking provisions;	A survey of Sydney Gymnasiums in 2014, found on average the transport mode of members using the facility, includes vehicle sharing of 16 percent and walking of 11 percent, and these modes reduce the demand of parking spaces required.
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;	None
g) Any car parking deficiencies or surplus associated with the existing use of the land;	None.
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 requirements, except in the case of substantial redevelopment of a site;	None.
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;	No financial contribution is considered necessary as the level of on-street parking spaces will more than meet the needs of the development.
j) Any verified prior payment of a financial contribution in lieu of parking for the land;	None required.
k) Any relevant parking plan for the area adopted by Council;	Not aware of any.
l) The impact on the historic cultural heritage significant of the site if subject to the Local Heritage Code;	None expected.
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.	None.

E6.7 Development standards

Development standards		Comment
6.7.1	number of vehicular access;	This development site will have a single two-way access.
6.7.2	design of vehicular access;	The vehicular access will be designed to conform with the Australian Standards 2890 part 1.
6.7.3	vehicular passing areas along an access;	The internal parking aisle will be 6.4 metres wide to cater for two-way traffic movements.
6.7.4	On-site turning;	There is a designated vehicle turning bay incorporated into the basement layout, and all vehicles will be able to enter and leave the development site in a forward driving direction.
6.7.5	Layout of parking areas;	Designed to conform with AS 2890 part 1.
6.7.6	Surface treatment of parking areas;	Concrete surface.
6.7.7	Lighting of parking areas;	Lighting will be provided to satisfy the acceptable solution.
6.7.8	Landscaping of parking areas;	No landscaping is planned for the basement parking area.
6.7.9	Design of Motorcycle parking areas;	Two dedicated motorcycle parking spaces are being provided in the basement car park.
6.7.10	Design of Bicycle Parking facilities;	Secured bicycle parking spaces will be provided within the basement car park, while a bicycle frame where wheels can be locked, will be provided on the ground level for use by the Fitness Centre users.
6.7.11	Bicycle end of trip facilities;	Not required for residential apartments.
6.7.12	Siting of car parking;	The on-site parking spaces will be accommodated on a basement level and not visible to New Town Road users.
6.7.13	Facilities for commercial vehicles;	Will need to share the on-street parking facilities, similar to other commercial businesses in the street.

9. Conclusion

This development site is an ideal location to create inner suburbia apartment living, close to public transport to reduce the use of private motor vehicles, and within walking distance to work, commercial, recreational, and cultural facilities. The Fitness Centre will benefit from the location being situated near other businesses and close to a large residential catchment area.

From a traffic engineering and road safety perspective, this development is expected to generate less traffic movements than the current land-use, and this will improve the safety and traffic efficiency along New Town Road.

Traffic entering and leaving the basement car park, is not expected to create any adverse safety or traffic efficiency impacts to pedestrians or existing road users, as there will be suitable sight distance, and entering vehicles are not expected to queue beyond the development site.

The number of on-site parking spaces located within the basement, is expected to meet the reasonable demand generated by residents of the apartments, with sufficient on-street parking supply to support visitor parking.

The basement parking layout includes tandem parking to increase the number of on-site car parking spaces, and this is considered appropriate for the residential use and the low parking turnover. The layout includes a designated vehicle turning bay for shuffling of tandem vehicles to occur within the site, the width of the parking spaces and parking aisle has been designed to ensure tandem parking can operate effectively, without adversely impacting other uses, or cause traffic congestion.

Users to the Fitness Centre will rely on the supply of on-street parking, similar to other commercial businesses along New Town Road. The recent parking supply and demand survey has demonstrated there is sufficient supply to support the new use, without causing impact to surrounding land-users. The peak demand for this new use is expected to occur outside of the operating times of most surrounding commercial businesses. Also, the opening hour of this new use is restricted to 7:00am to 9:00pm, to minimise amenity impact to surrounding residential properties.

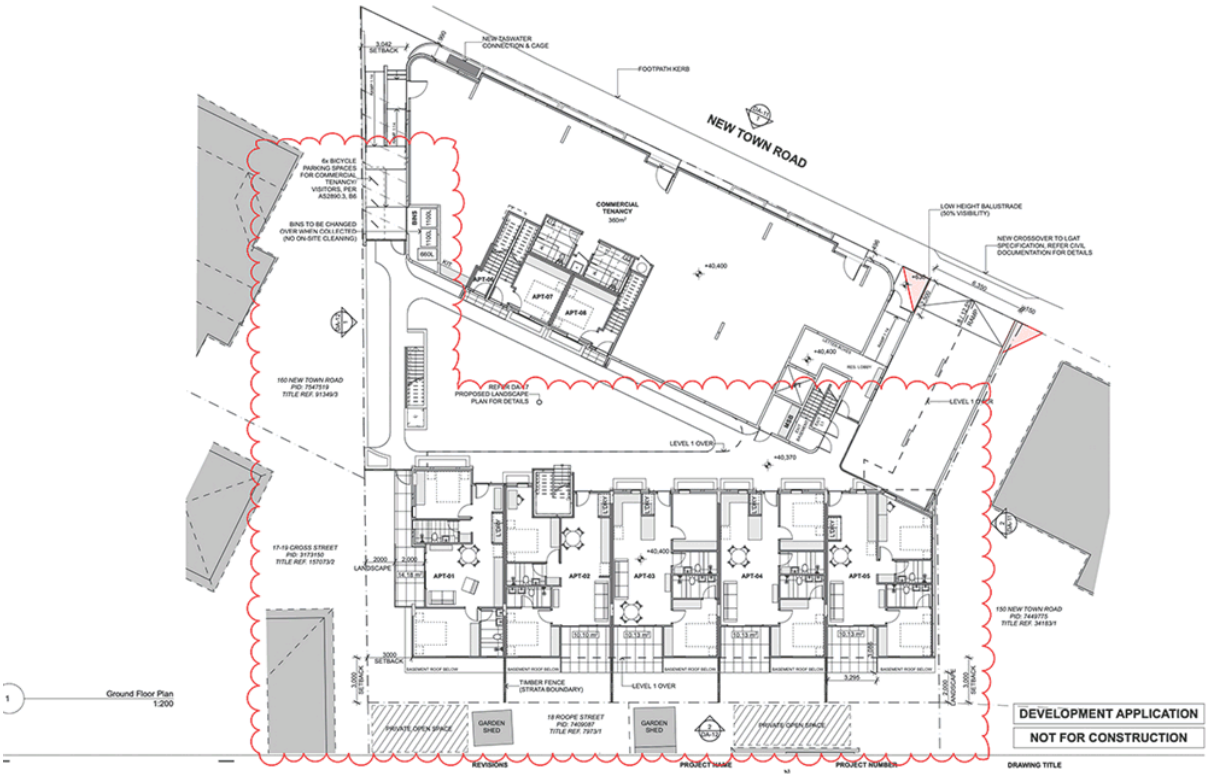
The development site will provide convenient, safe, and accessible access for pedestrians at street level.

The waste collection will be arranged through a private contractor and this operation is not expected to impede pedestrian activity along the footpath.

An examination of the geometric internal layout of the basement car park, found compliance with the planning scheme and the Australian Standards 2890.

This Traffic Impact Assessment found no reason for this development not to proceed.

10. Appendix A – Ground floor layout



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AllUrbanPlanning PTY LTD

Planning Report
156 New Town Road
Mixed Use Redevelopment

Date 7 March 2022

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1. Introduction

All Urban Planning Pty Ltd has been engaged by Alirenste Pty Ltd to prepare the following planning assessment for a new mixed use development at 156 New Town Road under the provisions of the *Hobart Interim Planning Scheme 2015* (planning scheme).

1.1Site & Surrounds

The proposal relates to 156 New Town Road, CT 171514/1 and CT 171514/2 on the southern side of New Town Road between Cross and Roope Streets. The site (both titles) has an area of 1474m^2.

The site is located adjacent to the east of the former parsonage heritage site at 160 New Town Road. It also adjoins the Cat Clinic at 150 New Town Road to the east and single storey residential units to the rear.

Figure 1– Site Plan (source annotated from theList)

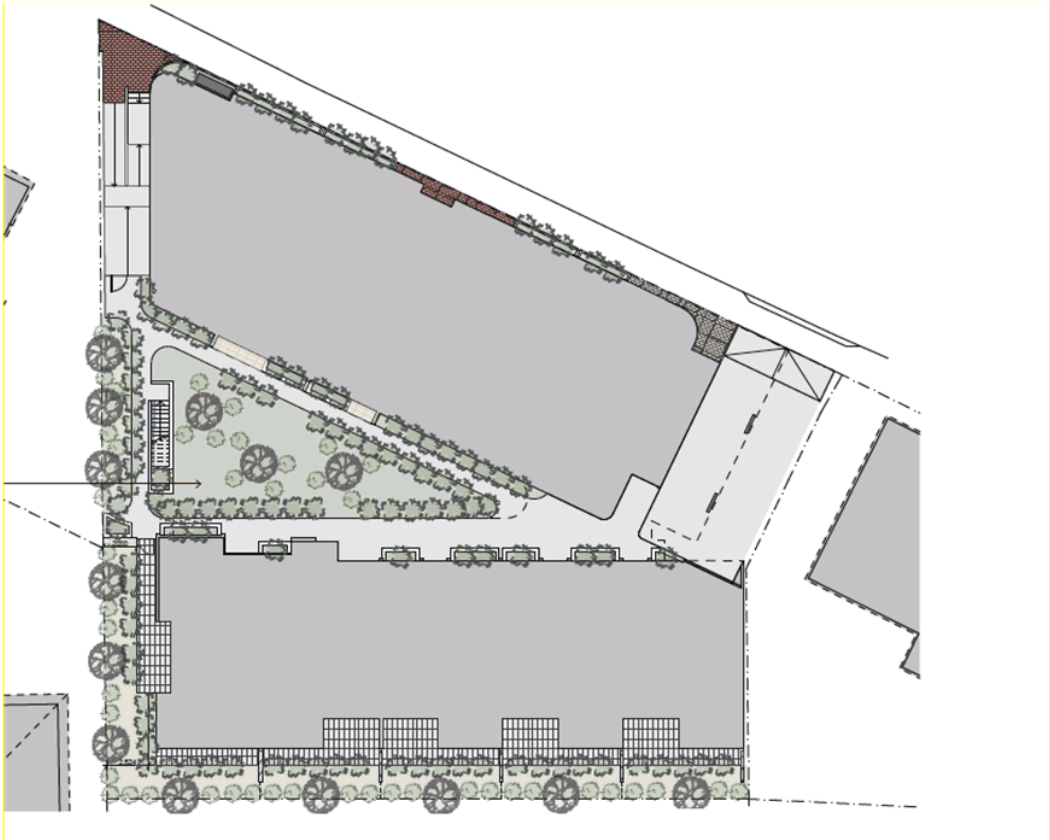

Figure 2 – proposed site plan (Source: LXN Architects)

2. Proposal

The proposal is for redevelopment of the site for a new 3 storey building plus carparking basement. It includes a ground level commercial tenancy and 19 apartments. The use and development is detailed as follows:

2.1Development

- Demolition of the existing former service station building
- A new 3 storey building with carparking basement with a single ground floor commercial tenancy and 19 residential apartments each with a private deck
- 26 basement carparking spaces and 12 bicycle spaces accessed from a ramp on the eastern end of the New Town Road frontage
- Consolidation of the two titles

2.2Use

Basement

- 26 carparking spaces including 7 jockey spaces, 12 secure bicycle parking spaces, 2 motorcycle spaces.

Ground Floor

- a commercial tenancy totalling 370m^2 to be used as a gym (fitness centre)
- 6 x bicycle parking spaces adjacent to the western side of the building
- 5 x 2 bedroom apartments
- 2 x access to apartment Nos. 7 and 8
- Landscaped triangular communal open space courtyard
- bin storage for 2 x 1100l 1x 660l wheelie bins.

Level 1

- 1 x 1 bed apartment, 6 x 2 bedroom apartments and 3 x 3 bedroom apartments

Level 2

- 1 x 2 bedroom apartment and 3 x 3 bedroom apartments

Fitness Centre - hours of operation

The fitness centre will operate between the hours of:

- 7am to 9pm Monday to Friday
- 8am to 6pm Saturday
- 9am to 5pm Sunday and public holidays.

The complex aims to reflect a contemporary ambition for sustainable inner city living.

The building has been designed and orientated for a high level of passive solar amenity with full width balconies with northerly aspect provided for most apartments. The apartments with a westerly aspect enjoy views to kunanyi/ Mt Wellington and across the New Town and Lenah Valley townscape.

Generous setbacks and central courtyard space deliver both light and natural cross ventilation to the apartments.

The site location allows reduced reliance on car travel.

A sense of community is provided with its New Town 'village' location, generous shared spaces including courtyard and landscaping.

3. The Planning Scheme

Under Clause 8.10.1 of the planning scheme the planning authority must, in addition to the matters required by ss51(2) of the Act, take into consideration:

(a) all applicable standards and requirements in this planning scheme; and

(b) any representations received pursuant to and in conformity with ss57(5) of the Act,

but in the case of the exercise of discretion, only insofar as each such matter is relevant to the particular discretion being exercised.

A standard is applicable if the site is within the relevant zone and the standard deals with a matter that could affect or be affected by the proposed development; cl.7.5.2.

A standard is defined to mean the objective for a particular planning issue and the means for satisfying that objective through either an acceptable solution or corresponding performance criterion.

Compliance with a standard is achieved by complying with either the acceptable solution or corresponding performance criterion; cl.7.5.3.

The objective of the standard may be considered to help determine whether the proposed use or development complies with the performance criterion of that standard; cl.7.5.4. The acceptable solution is not relevant to the assessment of the corresponding performance criteria.

Discretionary uses are to be determined with regard to the zone purpose and the purpose of any applicable code.

3.1 Urban Mixed Zone

The site is zoned Urban Mixed Use and adjoins the Inner Residential Zone to the rear including properties fronting Roope and Cross Streets.

Figure 3 - Zoning plan (Source: iplan)

The Zone Purpose Statements under Clause 15.1.1 are as follows:

15.1.1.1 To provide for integration of residential, retail, community services and commercial activities in urban locations.

15.1.1.2 To encourage use and development at street level that generates activity and pedestrian movement through the area.

15.1.1.3 To provide for design that maximises the amenity at street level including considerations of microclimate, lighting, safety, and pedestrian connectivity.

15.1.1.4 To ensure that commercial use are consistent with the activity centre hierarchy.

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

15.1.1.6 To provide for a diversity of uses at densities responsive to the character of streetscapes, historic areas and buildings and which do not compromise the amenity of surrounding residential areas.

15.1.1.7 To encourage the retention of existing residential uses and the greater use of underutilised sites as well as the reuse and adaptation of existing buildings for uses with a scale appropriate to the site and area.

15.1.1.8 To ensure that the proportions, materials, openings and decoration of building facades contribute positively to the streetscape and reinforce the built environment of the area in which the site is situated.

15.1.1.9 To maintain an appropriate level of amenity for residential uses without unreasonable restriction or constraint on the nature and hours of commercial activities.

15.1.1.10 To ensure that retail shopping strips do not develop along major arterial roads within the zone.

The proposal for integrated commercial and residential development of an underutilised site in this established urban location is consistent with Purpose Statements 15.1.1.1 and 15.15.1.1.7. The proposal is also considered to further Purpose Statements 15.1.1.5 for accessibility by multiple modes of transport as well as 15.1.1.2, 15.1.1.3, 15.1.1.6 and 15.1.1.8 that requiring that the design and amenity impacts from the proposal are responsive to the character of the area. These matters are discussed further below in relation to the detailed provisions of the planning scheme.

3.2 Local Area Objectives & Desired Future Character Statements

There are no Local Area Objectives or Statements of Desired Future Character.

3.3 Use Table

The proposal involves residential (multiple dwellings) and a ground floor gym (fitness centre) use.

- *Residential* is a Permitted Use in the Zone.
- The fitness centre falls within the *Sports and recreation* Use Class and is discretionary in the Zone.

Under Clause 8.10.2, in determining the proposed discretionary fitness centre 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.

Having regard to these considerations, in this case the ground level fitness centre use is considered acceptable in that:

- The fitness centre will be integrated into this mixed use proposal and provide a commercial activity to support this inner urban locality (15.1.1.1)
- The fitness centre use will generate ground floor activity and pedestrian movement throughout the day (15.1.1.2)
- It is anticipated that the fitness centre will be predominantly used by residents of the surrounding area or those travelling past the site on the way to and from the City. It will provide a valuable amenity to support the health and fitness of the community and will not undermine the activity centre hierarchy (15.1.1.4)
- The fitness centre is located on the New Town Road bus routes and will be accessible by public transport, walking from the surrounding areas of New Town, Lenah Valley and Moonah and includes bike storage for those travelling to the site by bicycle (15.1.1.5)
- The fitness centre contributes to a diversity of uses at a scale that is compatible with the uses along this section of New Town Road (15.1.1.6)
- The proposal forms part of a mixed use development on an underutilised site incorporating residential (15.1.1.7)
- The fitness centre tenancy will be designed and managed to ensure an appropriate level of amenity is retained for the upper level residents (15.1.1.9)
- The proposal is not a retail use (15.1.1.10)

There are no applicable Local Area Objectives or Desired Future Character Statements and there are otherwise no specific Code purposes that are particularly relevant to the assessment of the fitness centre use.

3.4 Use Standards

Non-Residential Use (15.3.1)

Use Standard	***Assessment***
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.	The proposal complies with A1. The fitness centre use complies with these hours of operation. A future tenant may make a separate application for a planning permit to Council to vary these hours if necessary.

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A2 *Noise emissions measured at the boundary of a residential zone must not exceed the following:* *(a) 55dB(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) (LAmax) 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.*	A fitness centre use can typically involve amplified music and associated noise emissions. In this case however there can be a high level of confidence that the proposed activity will not involve noise emissions that will exceed the levels specified in A2 in that: • The necessity to provide quiet enjoyment for these on-site residents will ensure that the impacts at the more distant boundary with the residential boundary will also be acceptable • a combination of attenuation measures including both, physical insulation incorporated into the tenancy construction, and formal tenancy agreement with the fitness centre to specify the hours and sound levels within the tenancy, will be adopted to ensure that the activity does not disturb the residential tenants on the site • the proposed fitness centre tenancy is located on the ground floor frontage of New Town Road and is well separated (both in distance and by the rear residential wing of the development) from the closest boundary with the Inner Residential Zone to the rear of the site. Subject to standard installation of any mechanical air conditioning plant the proposal will involve negligible other noise emissions. The proposal complies with A2.
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 outside the zone.*	The proposal complies with A3 in that it does not involve external lighting other than associated with the residential use or for security. All lighting will be orientated and/or baffled to avoid emission of light outside the Urban Mixed Use Zone.
A4 *Commercial vehicle movements, (including loading and unloading and garbage removal) to or from a site must be limited to within the hours of:*	The proposal does not involve commercial vehicle movements other than for garbage removal that will be managed within the permitted hours of A4. The proposal complies.

(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.*	

3.5 Development Standards for Buildings and Works

15.4.1 Building Height

Objective

To ensure that building height contributes positively to the streetscape and does not result in unreasonable impact on residential amenity of land in the General Residential Zone or Inner Residential Zone.

Acceptable Solutions	***Performance Criteria***
A1 *Building height must be no more than:* *10m*	The accompanying 3D drapes provided by LXN in Drawing DA-15 confirm that the proposal complies with the permitted height under A1.
A2 *Building height within 10 m of a residential zone must be no more than 8.5 m.*	As for A1 above, the accompanying 3D drapes confirm that the proposal also complies with the permitted 8.5m height within 10m of the residential zone under A2.

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15.4.2 Setback

Objective:

To ensure that building setback contributes positively to the streetscape and does not result in unreasonable impact on residential amenity of land in a residential zone.

Acceptable Solutions	***Performance Criteria***
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.*	The proposal is to be built to the New Town Road frontage and complies with A1.
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.*	As demonstrated in the detailed sections on Drawing DA-16 the building generally complies with the 3m setback or half the height of the wall requirement under A2. However the substantially subterranean basement level and the perpendicular privacy screens encroach to within 2m of the rear boundary with the General Residential Zone (see below). The proposal is therefore discretionary and to be assessed under P2.
P2 *Building setback from the General Residential or Inner Residential Zone must be sufficient to prevent unreasonable adverse impacts on residential amenity by:* *(a) overshadowing and reduction of sunlight to habitable rooms and private open space on 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;* *(b) overlooking and loss of privacy;* *(c) visual impact when viewed from adjoining lots,* *taking into account aspect and slope.*	In this case I consider that it is appropriate to have some regard to the impacts that would occur from a building that complies with A2. Considering the westerly aspect and slope at the rear of the site adjacent to the Residential Zone, in my assessment some overshadowing is inevitable. In my opinion the proposal will not have an unreasonable adverse impact on residential amenity in the General Residential and satisfies P2 in that: a) The upper levels of the building that will result in some increased overshadowing comply with the acceptable solution. The low level elements of the building (the basement and perpendicular privacy screens) that encroach within 3m will not have any tangible shadowing impact. For these reasons in my opinion the proposal will not result in unreasonable adverse overshadowing impacts. b) The proposed decks and windows either comply with the 3m/ half the height of the wall requirement or, in the case of the ground floor terrace areas that extend to within 2m of the rear boundary, will be

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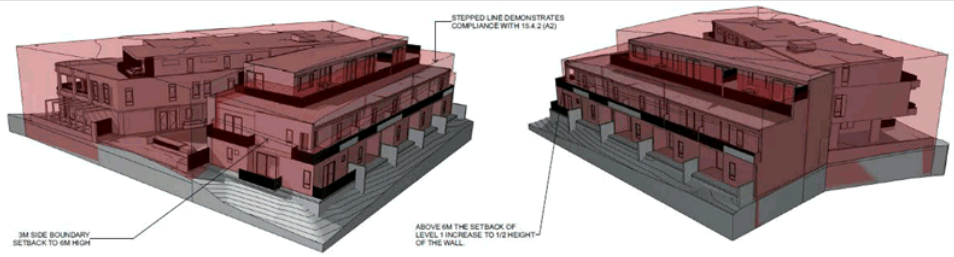
	screened by the proposed 2.1m high boundary fence and the proposed boundary landscaping required under Clause 15.4.5, A2. In my opinion the proposal will not result in any unreasonable overlooking or loss of privacy c) Similar to the reasons discussed above in relation to criteria a) and b), the lower elements of the building that are within the 3m permitted setback under A2 will be screened by the proposed 2.1m high (exempt) boundary fence and the proposed boundary landscaping. They will not be visible from off the site. I consider that the visual impact of the building otherwise reflects a compliant building and accordingly the visual impact when viewed from adjoining lot is therefore not unreasonable.
	

Design (15.4.3)

Objective

To ensure that building design for non-residential uses contributes positively to the streetscape, the amenity and safety of the public and adjoining land in a residential zone.

Development Standard	***Assessment***
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 ;*	The proposal complies with A1 as follows: a) The main pedestrian entries to the commercial tenancy and residential lobby will be direct to New Town Road b) The ground floor frontage is glazed in excess of 40% of the area c) There are no large areas of blank wall to the street d) No unscreened mechanical plant visible from the frontage or other public spaces

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(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.*	e) Any rooftop infrastructure will be incorporated within the design of the roof f) There are no pedestrian awnings on the site or adjoining lots g) No security shutters are proposed.
A2 *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.*	Complies. See the accompanying materials pallet on drawing DA-19.

Passive Surveillance (15.4.4)

Objective:

To ensure that building design for non-residential uses provides for the safety of the public.

Development Standard	***Assessment***
A1 *Building design for non-residential uses must comply with all of the following:* *(a) provide the main pedestrian entrance to the building so that it is clearly visible from the road or publicly accessible areas on the site;* *(b) for new buildings or alterations to an existing facade provide windows and door openings at ground floor level in the front façade which amount to no less than 40 % of the surface area of the ground floor level facade;* *(c) for new buildings or alterations to an existing facade provide windows and door openings*	The proposal satisfies A1 in that: a) the main pedestrian entrances to the site will be clearly visible from the street b) complies c) complies d) the proposal does not create concealed entrapment spaces e) the proposal will incorporate appropriate low level lighting to pathways to accepted standards f) the proposal does not include an external carpark. Not applicable.

at ground floor level in the façade of any wall which faces a public space or a car park which amount to no less than 30% of the surface area of the ground floor level facade; *(d) avoid creating entrapment spaces around the building site, such as concealed alcoves near public spaces;* *(e) provide external lighting to illuminate car parking areas and pathways;* *(f) provide well-lit public access at the ground floor level from any external car park.*	

Landscaping (15.4.5)

Development Standards	***Assessment***
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.*	The proposal extends across the frontage except for vehicle and pedestrian access and is setback no more than 1m from the frontage. The proposal therefore does not require landscaping along the frontage and complies with A1. Notwithstanding that landscaping along the frontage is not required, the proposal is accompanied by a concept landscaping including planter boxes across the frontage as shown on Drawing DA-10.
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.*	The landscaping plan DA-10 shows a 2m wide landscaped strip along the rear boundaries adjoining the residential zone. The proposal complies with A2.

Outdoor Storage Areas (15.4.6)

No outdoor storage areas are proposed.

Fencing (15.4.7)

Objective:

To ensure that fencing does not detract from the appearance of the site or the locality and provides for passive surveillance.

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Development Standards	***Assessment***
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;* *(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.*	Complies. a) No fences or walls greater than 1.5m are proposed on the frontage. b) No solid fences above 1.2m along the frontage; and c) The rear and side boundary fences with the residential zone will not exceed 2.1m.

Residential Amenity (15.4.8)

Objective:

To ensure that buildings for residential use provide reasonable levels of residential amenity and safety.

Development Standard	***Assessment***
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.*	Apartment 14 does not have a north facing window and the proposal is to be assessed under P1. All other apartments have north facing windows to habitable rooms other than a bedroom.
P1 *A dwelling must be sited and designed to optimise sunlight to at least one habitable room (other than a bedroom).*	The proposal is considered acceptable under P1 in that the development is designed to optimise direct northerly sunlight to the proposed dwellings. Apartment 14 is a modest sized 1 bedroom apartment that will receive good afternoon sunlight to the main living space. This coupled with the impressive views over Newtown/Lenah Valley and towards the kunanyi/Mount Wellington will ensure good levels of amenity for the residents of this dwelling.
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*	The proposal complies with A2 in that all windows will be setback a minimum of 3m from the side and rear boundaries as shown on drawings DA-06, 07 and 08.

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.*	
A3 *Outdoor living space must be provided for a dwelling that complies with all of the following:* *(a) be no less than 10 m2;* *(b) have a width no less than 2 m.*	The private open space areas for the dwellings do not all meet the minimum dimension of 2m. The proposal is therefore to be assessed under P3.
P3 *Outdoor living space must be provided for a dwelling with dimensions sufficient for the projected requirements of the occupants.*	The proposed outdoor living spaces for the each of the dwellings are considered acceptable for the projected requirements of the residents of these dwellings and to satisfy P3 in that: • Each dwelling will have an area of at least 10m^2 directly accessible from the living space with an area wide enough to accommodate a BBQ and an outdoor table and seats • The decks are orientated either for northerly solar access or afternoon sun and views towards the mountain • Narrower areas of the decks will be useful for pot plants, other seating or a clothes rack • The larger three bedroom dwellings all have larger than compliant decks • There is an additional communal landscaped space for exclusive use by the residents.
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).*	New Town Road carries more than 6000 vehicles per day and the proposal will therefore be designed to achieve internal noise levels no more than 45dBa in accordance with relevant Australian Standards for acoustic control. The project architect LXN confirms that with normal modern construction standards the residential apartments are likely to comfortably achieve this level.

Subdivision (15.5.1)

The proposed consolidation of the two titles is excluded from the definition of subdivision and these provisions to not apply.

4. Planning Scheme Codes

The site is within the New Town Road Heritage Precinct NT4. The proposal is considered in relation to the relevant codes below.

4.1 Potentially Contaminated land Code

The site is a former service station and is therefore potentially accommodated land for the purposes of the Code. The Code applies to the change to a sensitive use as well as the proposed excavation.

The accompanying Environmental Site Assessment November 2020 and addendum advice 7 August 2021 prepared by GES demonstrates that subject to the preparation of a Contamination management plan (CMP) the requirements of this Code are met.

Use Standards (E2.5)

Objective:

To ensure that potentially contaminated land is suitable for the intended use

Use Standard	***Assessment***
A1 *The Director, or a person approved by the Director for the purpose of this Code:* *(a) certifies that the land is suitable for the intended use; or* *(b) approves a plan to manage contamination and associated risk to human health or the environment that will ensure the land is suitable for the intended use.*	The proposed residential use is assessed under P1 below.
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*	Having regard to the conclusions and recommendations of the accompanying Environmental Site Assessment and addendum the proposal satisfies P1c). The environmental assessment report concluded that the site is suitable for the proposed development and there is no site contamination that would pose an undue risk to human health or the environment during or post the development subject to provision of a CMP. It is expected that the CMP would be provided prior to

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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.*	commencement of work as a condition on the planning permit.

Development Standards – Excavation (E2.6)

Objective:

To ensure that works involving excavation of potentially contaminated land does not adversely impact on human health or the environment.

Development Standard	***Assessment***
A1 *No acceptable solution.*	The proposal is to be assessed under P1.
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.*	Having regard to the accompanying Environmental Site Assessment the proposal satisfies P1b) providing the work is carried out in accordance with the CMP.

4.2 Road and Railway Assets Code

The traffic and access aspects of the proposal are assessed in the accompanying Traffic Impact assessment and satisfy the requirements of this Code.

Existing access and junctions (E5.5.1)

The development sites current use is a drive thru coffee business (Gioconda Coffee Roasters) that operates between 6:00am and 2:00pm, with an existing entry and exit onto New Town Road. A recent traffic survey established this business can generate a peak hour traffic flow of 80 trips, and an estimated total of 468 daily trips.

The proposed development is expected to generate a reduced number of trips entering and leaving New Town Road, with 12 trips expected for peak hour, and a daily total of 105 trips.

A reduction of trips generated by this new use is expected to improve traffic efficiency along New Town Road and complies with the acceptable solution under the planning scheme.

Sight distance at accesses, junction, and level crossings (E5.6.4)

This new development will convert the existing entry and exit into a single two-way access located on the southern boundary. Motorists leaving this access will have available sight distance, that exceeds the minimum Safe Intersection Sight Distance prescribed in the planning scheme for a 50 km/h speed limit.

This development will comply with the acceptable solution for Safe Intersection Sight Distance, and motorists will be able to enter New Town Road in a safe manner, without disrupting the current road users.

4.3 Parking and Access Code

The traffic and access aspects of the proposal are assessed in the accompanying Traffic Impact assessment and satisfy the requirements of this Code.

Number of parking spaces for the residential apartments (E6.6.1)

The development will provide 26 on-site parking spaces to be allocated to the residential apartments.

The planning scheme indicates for multiple dwellings with two or more bedrooms, two parking spaces should be provided, and one visitor space per four dwellings.

The number of spaces required under the planning scheme is 38 spaces for the 19 apartments, which is considered excessive, as the planning scheme does not take into account the apartments inner-city residential location within four kilometres of the Hobart CBD, and location of the development on a high frequency public transport route.

Customer demand for the fitness centre will share the supply of on-street parking spaces available within the surrounding streets.

The TIA concludes that the proposed parking provision will meet the reasonable needs of all users of the development and will satisfy the performance criteria P1 under E6.6.1 of the planning scheme.

Development standards (E6.7)

The TIA confirms that the proposal satisfies these standards.

4.4 Stormwater Management Code

The application is supported by an engineering assessment of the stormwater requirements of this code.

4.5 Historic Heritage Code

The requirements of this Code are addressed in the accompanying Heritage Impact Assessment (HIA) prepared by Purcell. The HIA concludes that the proposal continues the historic mix of residential and commercial buildings that are eclectic in style, 'form and scale' within the precinct. The Proposal provides a high-quality, considered, and contemporary architectural response to the surrounding heritage precincts' characters and values.

The Proposal's material palette references the materials used within the precinct in a contemporary way to ensure it fits within the streetscape without dominating or detracting from the heritage precinct's historic cultural heritage significance and values.

It is considered that the Proposal is sympathetic to the characteristics, and will not result in the loss, of the cultural heritage significance or values of the precinct.

4.6 Signage

No signage is proposed at this stage and will form a separate application if required.

5. Conclusion

The proposed mixed use development of an underutilised site demonstrates a high degree of compliance with the provisions of the planning scheme. It will provide an overwhelming positive impact on the character and amenity of New Town Road with its respectful scale and repair of the traditional street alignment.

The substantive building form complies with the height and siting standards of the planning scheme with only basement and ground level aspects encroaching within the 3m permitted setback to the rear/southern boundary. These components will be concealed behind the required boundary landscaping and therefore will have no impact on the adjoining residential properties within the Inner Residential Zone.

The proposal is supported by Traffic, heritage, environmental and engineering assessments to address the requirements of the relevant planning scheme codes.

The proposal is recommended for approval as a Section 57 application following public advertisement.

I would be pleased to discuss or clarify any aspects of the proposal as necessary.

Frazer Read

Principal

156 NEW TOWN ROAD, NEW TOWN

HERITAGE IMPACT ASSESSMENT

OCTOBER 2021

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HERITAGE IMPACT ASSESSMENT

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INTRODUCTION

BACKGROUND

This Heritage Impact Assessment (HIA) was prepared for LXN Architecture and Consulting, acting on behalf of their Client, Renewal Investments Pty Ltd, to review and assess the proposed development (Proposal) at 156 New Town Road, New Town (Site).

The Site is not registered as State significant on the Tasmanian Heritage Register (THR).[1] The Site is not identified as a Heritage Place in Table E13.1 of the *Hobart Interim Planning Scheme, 2015* (HIPS 2015). However, it is situated within the 'New Town' (NT4) Heritage Precinct.[2]

This assessment has reviewed the proposed works detailed in the following plans:

- 156 NTR Development Application 11/10/2021 Revision A, prepared by LXN Architecture and Consulting (See Appendix A for details).

Lucy Burke-Smith and Linda Mott of Purcell prepared this report. Lucy Burke-Smith inspected the exterior of the Place, as well as the streetscape and context on May 5, 2021, together with Frazer Reed of All Urban Planning and Sarah Lindsay of LXN Architecture and Consulting. Lucy Burke-Smith took all images at this site visit unless cited otherwise.

LIMITATIONS

This HIA is limited to an assessment of the potential built heritage impacts of the Proposal to the setting, context and significant fabric of the built features on the Site. Desk-based research and information provided to date form the basis of this report, no new archival research was undertaken. It is based on the current statutory heritage and development controls, and non-statutory guidelines applicable to the Site. It does not consider the responsiveness of the proposed works to the wider provisions of the *Hobart Interim Planning Scheme 2015*, beyond that of built heritage.

All references to heritage, or heritage impacts, are to built heritage only. This report does not consider other potential heritage impacts of the Proposal, including, without limitation, to landscape, vegetation, sub-surface, archaeological or indigenous heritage.

TERMINOLOGY

The conservation terminology used in this report is of a specific nature and is defined within the *Australia ICOMOS Charter for the Conservation of Places of Cultural Significance, 2013* (the Burra Charter).

REFERENCES

This HIA references the following:

- 'Design in Context – Guidelines for Infill Development in the Historic Environment', NSW Heritage Office & RAIA, 2005.
- 'Good Design + Heritage', Office of the Victorian Government Architect, 2017.
- GHD, 'New Town Heritage Review', Volumes 1-3, April 2008. Prepared for Hobart City Council.
- R Apperly, R Irving, and PL Reynolds, A pictorial guide to identifying Australian architecture: styles and terms from 1788 to the present, Angus & Robertson, Pymble NSW, 1994.

1 Tasmanian Heritage Register Datasheet, Tasmanian Heritage Council
2 Hobart Interim Planning Scheme, 2015, Tables E13.1 and E13.2

UNDERSTANDING THE SITE

LOCATION

The Site's address is 156 New Town Road, New Town (Title Reference 171514/1, and 171514/2). It is located just south of the 'Y' intersection formed where New Town Road meets Valentine and Cross Streets.

Figure 1 - Aerial image, the approximate Site boundary outlined in yellow dashes. (Source: ListMap, modified by Purcell)

DESCRIPTION

The Sites' New Town Road street frontage has a kerb crossing at each end, forming a one-way driveway with the entrance at the northeast end and exit at the southwest. The Site is a former service station currently used as commercial premises.

UNDERSTANDING THE SITE

Figure 2 - View from 139 New Town Road (Former New Town Town Hall).

Figure 3 - View from the north.

Figure 4 – View from the south.

STATUTORY LISTINGS AND OVERVIEW OF SIGNIFICANCE

Historic Cultural Heritage Act (TAS) 1995

The Site is not registered as State significant on the Tasmanian Heritage Register (THR).

UNDERSTANDING THE SITE

Hobart Interim Planning Scheme 2015

The Site is not identified as a Heritage Place in Table E13.1 of the HIPS 2015. However, it is situated within the 'New Town' (NT4) Heritage Precinct[3] (see Figure 5).

Table E13.2 of the HIPS 2015 notes that the New Town Heritage Precinct NT4 is significant for reasons including:

1. *It contains examples of Georgian, Victorian and Federation commercial and residential buildings that illustrate the growth of the area as a local service centre along a historically early main arterial road and transport route.*
2. *It contains individual high quality examples of architectural styles in a streetscape that is eclectic in form and scale.*
3. *The residences in close proximity to the main road contribute to an understanding of the historical pattern of its development and the tendency to reside in close proximity to commercial and community facilities.*

Figure 5 – NT4 - New Town Heritage Precinct shown hatched in purple, approximate Site boundary outlined in yellow dashes. (Source: ListMap, amended by Purcell).

NON-STATUTORY LISTINGS

The site is not included on the Register of the National Trust of Australia, nor the Register of the National Estate, (non-statutory archive).

3 *Hobart Interim Planning Scheme, 2015*, Tables E13.1 and E13.2

HERITAGE IMPACT ASSESSMENT

PROPOSED WORKS

The Proposal seeks approval to demolish the existing commercial premises and concrete hardstand and construct a three level residential apartment building with a commercial tenancy to the New Town Road frontage, and a single level basement carpark.

The Proposal's front setback is in keeping with other commercial premises on New Town Road which are built to the front boundary, and residential premises which are in close proximity to the road. However, the Proposal includes a small setback at street level with landscape planting boxes to deal with the footpath slope, soften the footpath interface, and reference the nearby residences' front gardens. The Proposal's side setback is 3.042m at the Site's northwest corner with stairs and a ramp to access bicycle parking and the commercial tenancy side entrance. Access from this ramp to the landscaped courtyard is secured by a fence and gate. The basement car park driveway is at the southeast boundary of the Site's New Town Road frontage. The setback to the proposed rear wall is 3 metres.

Commercial premises on New Town Road predominantly have awnings overhanging the footpath. Many also have a decorative pediment above and / or a second storey. The Proposal's Level 1 extends over the small, street-level setback to the roadside boundary, referencing these awnings and creating front balconies for the residential apartments above. Level 2 (the top storey) is articulated with projecting bays framing alternate sliding doors, a modern interpretation of the residential dormer windows. Level 2 has a significant setback from the northern corner of the building in deference to the adjacent historic parsonage.

The Architect's response to the Site's nonparallel boundaries is to create a triangular courtyard in the north-eastern envelope of the building for a communal landscaped area. The Proposal also includes landscaping to the northeast side and rear of the property.

Further details of the proposal are provided within the following:

- 156 NTR Development Application 11/10/2021 Revision A, prepared by LXN Architecture and Consulting.

GUIDANCE DOCUMENTATION

This assessment follows the best practice management framework for historic sites contained in:

- The Burra Charter: 'The Australia ICOMOS Charter for Places of Cultural Significance', 2013.
- Heritage Tasmania, 'Works Guidelines for Historic Heritage Places', for the Tasmanian Heritage Council, November 2015.

ASSESSMENT METHODOLOGY

This assessment follows the provision of preliminary heritage advice through an iterative design process, intended to mitigate potential impact to the significance and values of the place. It is based on observations made during a site visit and a review of the design proposal. The assessment considers the potential for detrimental impacts as a result of the proposal, as well as all mitigation measures proposed, within the context of the *Hobart Historic Heritage Code, 2015*. Proposed works have been assessed for their impact to the heritage values of the Heritage Precinct as identified in the Statement of Significance, and the place's setting and context. The Proposal has also been considered against non-statutory guidelines published by Australia ICOMOS.

HERITAGE IMPACT ASSESSMENT

ASSESSMENT AGAINST HISTORIC HERITAGE CODE PROVISIONS OF THE HOBART INTERIM PLANNING SCHEME 2015

The Site is listed in Table E13.2 as being within the 'New Town' (NT4) Heritage Precinct of the *Hobart Interim Planning Scheme 2015*. The following tables assess considers the responsiveness of the proposal against the Development Standards and specific Performance Criteria for Heritage Precincts in Table E13.8, of the Historic Heritage Code.

E13.8 DEVELOPMENT STANDARDS FOR HERITAGE PRECINCTS	
NT4 New Town Heritage Precinct is significant for reasons including: 1. It contains examples of Georgian, Victorian and Federation commercial and residential buildings that illustrate the growth of the area as a local service centre along a historically early main arterial road and transport route. 2. It contains individual high quality examples of architectural styles in a streetscape that is eclectic in form and scale. 3. The residences in close proximity to the main road contribute to an understanding of the historical pattern of its development and the tendency to reside in close proximity to commercial and community facilities.	
E13.8.1 DEMOLITION Objective: To ensure that demolition in whole or in part of buildings or works within a heritage precinct does not result in the loss of historic cultural heritage values unless there are exceptional circumstances.	
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.	The proposed demolition will not result in a loss of elements that contribute to the historic cultural heritage significance or values of the precinct. There are no buildings, works, fabric or landscape elements on the Site that contribute to the historic cultural heritage significance or values of the precinct. The existing building is not considered to be a high quality example of an architectural style defined by the statement of Historic Cultural Heritage Significance E13.2, nor is it a residence in close proximity to the road. The existing building also appears to be much modified from its original form.
E13.8.2 BUILDINGS AND WORKS OTHER THAN DEMOLITION Objective: To ensure that development undertaken within a heritage precinct is sympathetic to the character of the precinct.	
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.	The NT4 precinct '*contains individual high quality examples of architectural styles in a streetscape that is eclectic in form and scale*'. The design of the proposed residential building is a high quality, contemporary architectural style, sympathetic in character to the NT4 Statement of Significance. The Siting of the building is in keeping with the surrounding commercial and residential buildings that are set on, or close to their roadside boundaries. This being an enhancement to the place, the setback of which detracts from the pattern of street front alignment. The upper level is setback significantly from the northern corner of the building, which responds to, and acknowledges, the proximity of

	the adjacent historic parsonage. The mass and bulk of the New Town Road elevation is successfully reduced through the material selection and fenestration. The treatment of Level 2 is a modern interpretation of the residential dormer and gable end windows facing New Town Road, as well as the way the commercial building parapets are frequently broken into bays, without replicating historic details. The material palette chosen for the Proposal is drawn from and references the materials found in the wider heritage precinct and is considered to be complimentary and deferential to the historic cultural heritage significance of the precinct. The height of the proposal is responsive to its context, and together with the setback of the upper level of the northern corner, ensures that it does not detract from the presentation of the adjacent historic parsonage, nor those places to the north which directly contribute to the characteristics of the NT4 precinct. This is well demonstrated in Drawing DA-18 11/10/2021 Revision A, prepared by LXN Architecture and Consulting. It is considered that the design and siting of the building will 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.	N/A there are no relevant design criteria / conservation policy listed in Table E13.2.
P3 Extensions to existing buildings must not detract from the historic cultural heritage significance of the precinct.	N/A the Proposal is not an extension to an existing building.
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.	N/A the proposal does not have a front fence or gate. However, the proposed low brick plinth to New Town Road is consistent with the masonry wall to the Church's street boundary.
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.	There is no landscaping to the street that contributes to the historic cultural significance or the streetscape values and character of the precinct. Removal of the small area of grass between the footpath and the driveway will not result in a loss of the historic cultural significance or the streetscape values and character of the precinct.

HERITAGE IMPACT ASSESSMENT

SUMMARY OF ASSESSMENT

The proposed new residential building is of a high quality, contemporary architectural style and is supported. The Proposal does not include the demolition of any extant, significant built features or landscaping that contribute to the cultural heritage significance of the precinct.

CONCLUSION

The proposal is to replace the existing former service station currently in use as a commercial tenancy, with contemporary residential apartments set over a commercial tenancy to the New Town Road frontage. This is considered an appropriate use of the Site. The proposed design continues the historic mix of residential and commercial buildings that are eclectic in style, 'form and scale'[4] within the precinct. The Proposal provides a high-quality, considered, and contemporary architectural response to the surrounding heritage precincts' characters and values.

The Proposal's material palette references the materials used within the precinct in a contemporary way to ensure it fits within the streetscape without dominating or detracting from the heritage precinct's historic cultural heritage significance and values.

It is considered that the Proposal is sympathetic to the characteristics, and will not result in the loss, of the cultural heritage significance or values of the precinct.

4 *Hobart Interim Planning Scheme, 2015*, Table E13.2, Statement of Significance.

APPENDICES

APPENDIX A – ARCHITECTURAL DRAWING LIST

DWG NO	DRAWING NAME	REVISION	DATE
DA-01	COVER PAGE	A	11/10/2021
DA-02	SITE SURVEY	A	11/10/2021
DA-03	EXST. / DEMO PLAN	A	11/10/2021
DA-04	PROPOSED SITE PLAN	A	11/10/2021
DA-05	BASEMENT PLAN	A	11/10/2021
DA-06	GROUND FLOOR PLAN	A	11/10/2021
DA-07	LEVEL 1 PLAN	A	11/10/2021
DA-08	LEVEL 2 FLOOR PLAN	A	11/10/2021
DA-09	ROOF PLAN	A	11/10/2021
DA-10	LANDSCAPE PLAN	A	11/10/2021
DA-11	ELEVATIONS	A	11/10/2021
DA-12	ELEVATIONS	A	11/10/2021
DA-13	SECTIONS	A	11/10/2021
DA-14	SECTIONS	A	11/10/2021
DA-15	BUILDING HEIGHT ENVELOPE – 15.4.1	A	11/10/2021
DA-16	BUILDING SETBACK ENVELOPE = 15.4.2	A	11/10/2021
DA-17	SUN STUDIES	A	11/10/2021
DA-18	STREET ELEVATION	A	11/10/2021
DA-19	MATERIAL PALETTE / STREETSCAPE ANALYSIS	A	11/10/2021
DA-20	PHOTOMONTAGE SHEET 1	A	11/10/2021
DA-21	PHOTOMONTAGE SHEET 2	A	11/10/2021

GEO-ENVIRONMENTAL SOLUTIONS

17/08/21

Sarah Lindsay
LXN Architecture & Consulting
Sarah@lxn.com.au

RE: Amended Development Plans 156 New Town Road – Environmental Site Assessment

Sarah, this letter is to confirm I have reviewed the amened plans for the proposed development at 156 New Town Road as provided in your email dated the 16th of August 2021. As you are aware my company (Geo-Environmental Solutions Pty Ltd) provided an environmental site assessment for the property in November 2020. The environmental assessment report concluded that the site is suitable for the proposed development and there is no site contamination that would pose an undue risk to human health or the environment during or post the development provided the management recommendations were followed.

The revised plans include ground level apartments which differs from the earlier draft scheme for the project. The ESA report concluded that if there were to be ground level apartments or public open space with potential for human soil contact then a Contamination management Plan (CMP) would be required to manage the possible risk to health during and post construction. This conclusion in the ESA is therefore applicable and a CMP will be required as part of the development to manage the identified risk. I can confirm that the amended development plans do not change the rest of the conclusions and recommendations in the environmental assessment report that the development is compliant with clause E.5 P1 and clause E2.6.2 of the Hobart City Council Interim Planning Scheme.

Kind regards,

Dr John Paul Cumming B.Agr.Sc (hons) PhD CPSS GAICD
Director

GEO-ENVIRONMENTAL
SOLUTIONS

ENVIRONMENTAL SITE ASSESSMENT

156 New Town Road, New Town, Tasmania

NOVEMBER 2020

For Renewal Developments Pty Ltd

Geo-Environmental Solutions P/L 29 Kirksway Place, Battery Point, 7004. Ph 6223 1839 E: Office@geosolutions.net.au

DOCUMENT CONTROL

Title	Version	Date	Author	Reviewed By
Environmental Site Assessment: 156 New Town Road, New Town	Version 1	5th November 2020	Mark Downie	JP Cumming

EXECUTIVE SUMMARY

This report presents the findings of an Environmental Site Assessment (ESA) undertaken by Geo-Environmental Solutions Pty. Ltd. (GES) at 156 New Town Road, New Town, Tasmania - hereby referred to as 'The Site'. GES was commissioned Tim Lucas on behalf of Renewal Developments Pty Ltd, 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 investigate the site for contamination, we have done this by addressing E2.6.2 performance criteria under the *Hobart Interim Planning scheme 2015* for excavation. To assess the suitability and safety of the soil for excavation at a typical depth for foundation excavation, and any human or environmental risks of the soil present on site.

The following information was gathered during the desktop investigation:

- The Site is zoned *Urban Mixed Use* under the *Hobart Interim Planning Scheme of 2015*. The site slopes at around 7% to the North West, Maypole Rivulet is the nearest ecological receptor 500 m downgradient of the Site.
- The geology of the investigation area is Triassic aged sedimentary rocks (Rv), with our bore holes finding weathered sandstone at variable depths.
- Historical Aerial photographs and Dangerous Goods Records confirmed the following; an original building was present on the site since prior to 1946, with this building removed and the service station building erected prior to 1969. UPSS tanks were installed in 1962. The building was renovated between 1980 and 1989, which is likely to coincide with the service station being decommissioned around 1980 and Video Ezy operating on the site. More recently the site contains a coffee shop and laundry mat operations.
- The site is considered a potentially contaminated site due to past land use and the presence of UPSS. WorkSafe Tasmania Dangerous Goods Records indicate that petroleum fuels have been stored on site 1962-1980.
- Potential sources of contamination include the operations of a service station and workshop on the site, the presence of UPSS, and fill of undetermined origins on site.
- Contaminants Of Potential Concern (COPC) include the following: TPH/TRH; Mono Aromatic hydrocarbons: (BTEXN); PAH; and heavy metals.

From the soil assessment, it is concluded that:

- Environment: Benzo(a)pyrene and Total Recoverable Hydrocarbons Fraction 3 exceeded NEPM ASC 2013 ESL guideline limits. Zinc exceeded NEPM ASC 2013 EIL guideline limits. A Stormwater Management Plan (SWMP) will be required to account for the management and erosion of soil with ecological impacts, to prevent soil effecting nearby ecological receptors.
- Human Health: There were no human health guideline exceedances for dermal contact or vapour intrusion. There were no exceedances of NEPM ASC 2013 HIL guideline limits for dust inhalation and ingestion at commercial land use investigation limits, however there were exceedances for Benzo(a)pyrene and Lead at residential and recreational land use investigation limits. If the finalised designs indicate that the site is considered commercial operations at ground level, then there are no exceedances to guidelines and no risk to human health identified.
- Excavated Soil Management: In terms of *IB105* of the thirteen primary soil samples; Three samples are considered Level 3 Material (contaminated soil) due to Benzo(a)pyrene (in samples BH3 0.5-0.6, BH4 0.5-0.6 & BH5 0.5-0.6), and Sum of Polycyclic Aromatic Hydrocarbons (in sample BH3 0.5-0.6). Two samples are considered Level 2 Material (low level contaminated soil) due to metals and hydrocarbons. The remaining eight samples are considered Level 1 Material (clean fill). All of the samples taken at lower depths (0.85-0.90m and 1.5-1.6m) were considered Level 1 Material, suggesting that contamination is restricted to the shallow surface soil.

GES recommends the following:

- There were no human health guideline exceedances for dermal contact, soil vapour intrusion or trench worker vapour risk. There were no HIL guideline exceedances for dust inhalation and ingestion at commercial land use class, but there were exceedances at residential and recreational land use for Benzo(a)pyrene and Lead. If developments include open space or residential apartments at ground level, the Site will require a Contamination Management Plan (CMP) relating to human receptors prior to soil disturbance during construction, and including mitigation measures post construction. If the entirety of the site is considered commercial land use at ground floor level (this may include the apartments being above the basement car park, and the soil at the open space area being excavated and replaced with clean fill), then the CMP will not be required.
- There is potential for ecological impact from hydrocarbons and heavy metals entering the waterway or impacting other ecological receptors during excavation, and a Stormwater Management Plan (SWMP) is required, to control erosion of excavated soil that may have an ecological impact.
- For soil disposal, the soil on site is a mixture of Level 1 (clean fill), Level 2 (low level contaminated soil) and Level 3 (contaminated soil) according to IB105. Any disposal of soil off-site must be in accordance with IB105 and the controlled waste regulations. We recommend excavated material be stockpiled on-site where additional testing can better delineate the areas of contamination prior to soil disposal, noting that most of the contamination appears to be concentrated in the upper soil horizons.
- It is likely that inactive Underground Petroleum Storage Systems (UPSS) infrastructure is present on the site, and will require decommissioning and removal.

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ABREVIATIONS

AEC	Areas of Environmental Concern
AHD	Australian Height Datum
ALS	Analytical Laboratory Services
ANZECC	Australia and New Zealand Environment and Conservation Council
BGS	Below Ground Surface
BH	Borehole
BTEXN	Benzene Toluene Ethylbenzene Xylene Naphthalene
COA	Certificate of Analysis
COC	Chain of Custody
COPC	Contaminant of Potential Concern
CRC CARE	Corporative Research Centre for Contamination Assessment and Remediation of the Environment
CSM	Conceptual Site Model
DQO	Data Quality Objectives
EOH	End Of Hole
EIL	Ecological Investigation Levels
ESL	Ecological Screening Levels
EPA	Environmental Protection Authority
ESA	Environmental Site Assessment
GDA94	Geocentric Datum of Australia 1994
GES	Geo-Environmental Solutions Pty. Ltd.
HIL	Health Investigation Levels
HSL	Health Screening Levels
IL	Investigation Levels
LOR	Limits of Reporting
MDL	Mean Detection Limit
NATA	National Association of Testing Authorities
NEPM ASC	National Environmental Protection (Assessment of Site Contamination) Measure
NHMRC	National Health and Medical Research Council
NL	Non Limiting
NRMMC	Natural Resource Management Ministerial Council
PAH	Polynuclear Aromatic Hydrocarbons
PCP	Physio-Chemical Parameters
PHC	Petroleum Hydrocarbons
PID	Photo-Ionisation Detector
PPA	Preferential (PVI) Pathways Assessment
PVI	Petroleum Vapour Intrusion
TPH	Total Petroleum Hydrocarbons
TRH	Total Recoverable Hydrocarbons
USCS	Unified Soil Classification System

1 INTRODUCTION

1.1 General

This report presents the findings of an Environmental Site Assessment (ESA) undertaken by Geo-Environmental Solutions Pty. Ltd. (GES) at 156 New Town Road, New Town, Tasmania - 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 Tim Lucas of Renew Developments Pty Ltd, to conduct the site assessment.

The Site is located in a commercial/retail precinct, surrounded by residential properties, in New Town, approximately 2.5 km NNW of Hobart CBD. The ESA has been requested by the client prior to submitting a planning permit. The ESA will compare contamination against E2.6.2 Excavation code of the Potentially Contaminated Land Code which will account for any future potential contact or excavation of earth such as services trenches or digging for foundations.

This ESA has been prepared by a suitably qualified and experience practitioner in accordance with procedures and practices detailed in National Environmental Protection Measure [Assessment of Site Contamination] (NEPM ASC; 2013) guidelines and key regulations and policies identified in the References section of this document. Personnel engaged in preparing this ESA are listed in Appendix 1 along with their relevant qualifications and years of experience.

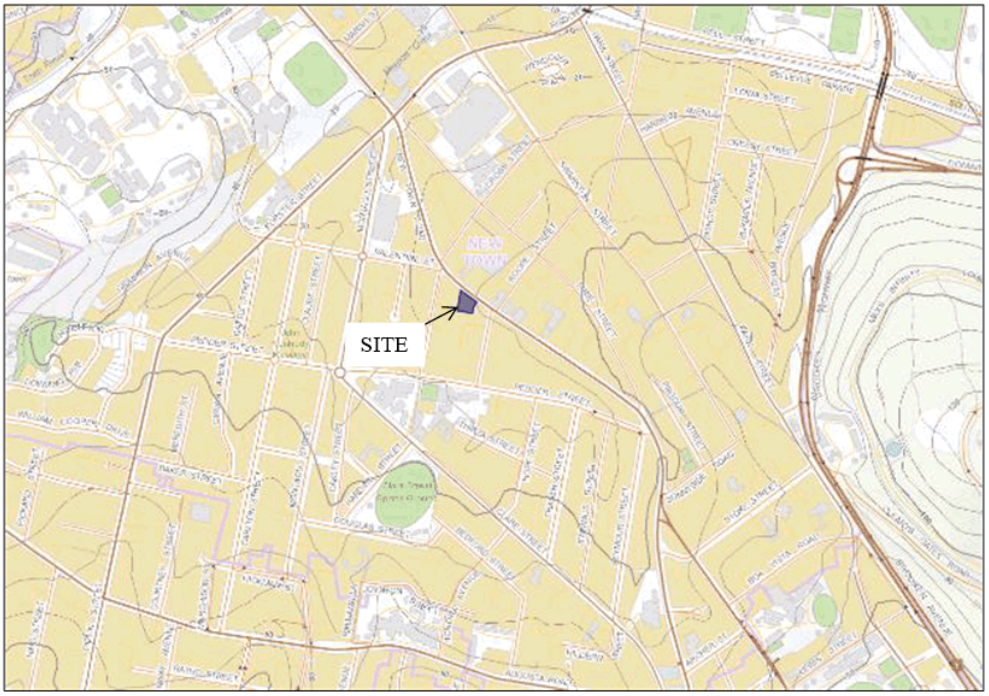

Figure 1 Site Location (Image C/O the LIST)

1.2 Site Layout

An aerial image of the existing site layout is presented in Figure 2.

Figure 2 Existing Site Layout (Image C/O Google Earth)

1.3 Site Details

Site details are presented in Table 1.

Table 1 Site Details

SITE LOCATION: 156 New Town Road, New Town, Tasmania, Australia
INVESTIGATION AREA The footprint of the site location
SITE ELEVATION & GRADIENT Approximately 38-40 m AHD, average slope around 7% to the WSW.
SITE SURFACING The site surface in the investigation area is predominantly sealed asphalt driveway and carparking areas and sealed concrete floor buildings, with natural soil (fill with disturbed appearance) present along the western and south western parts of the site.
TITLE REFERENCES PID 5516671, CT 171514/1
SITE OWNER Renewal Developments Pty Ltd
PREVIOUS LANDUSE Commercial operations; service station, workshop, residential (prior to 1962).
SITE SURROUNDING LAND ZONING *Hobart Interim Planning Scheme 2015 – Urban Mixed Use*
SITE LAND USE Commercial. Coffee shop and laundry mat.
PROPOSED LAND USE Construction of new residential apartments, with ground floor commercial operations and car parking basement.

1.4 Investigation Objectives

The objective of this ESA was to:

- To address E2.6.2 of the HCC Interim Planning Scheme 2015, through an invasive soil investigation.
- Report findings in an Environmental Site Assessment report, detailing specific onsite human health or environmental risk which may source from potentially detected contamination

1.5 Scope of Works

The scope of work for this ESA was to:

- Conduct a desktop investigation, and undertake an invasive soil investigation at the Site.
- Conduct a site walkover.
- Excavate seven (7) bore holes and collect thirteen (13) primary soil samples; the primary samples were sent for analysis of total recoverable hydrocarbons (TRH) Benzene Toluene Ethylbenzene Xylene Naphthalene (BTEXN), Polynuclear Aromatic Hydrocarbons (PAH), and a suit of fifteen (15) metals to a National Association of Testing Authorities (NATA) accredited laboratory.
- Soil samples were sent with quality assurance/ quality control (QA/QC) samples including one duplicate split sample and one rinsate blank sample.
- Determine the absence or presence and if present the level of site contamination and compare soil results against the relevant guidelines.
- Conduct a risk assessment, known as a Conceptual Site Model; and
- Report findings in an Environmental Site Assessment report, detailing specific onsite human health or environmental risk which may source from potentially detected contamination.

2 PLANNING

2.1 Overview

The client has requested an Environmental Site Assessment (ESA) of the Site in due diligence prior to submitting a Planning Permit with Hobart City Council (HCC) for a potential 3 storey building featuring commercial operations at ground floor level and a car parking basement. Draft designs are presented in Appendix 2 and are subject to change before final plans are submitted.

2.2 Interim Planning Scheme

2.2.1 Acceptable Solutions

As the history of the Site suggests that potentially contaminating activities may have taken place on and near the site, for any future potential ***excavation*** at the Site, there are no acceptable solutions to proposed works, and therefore E2.6.2 P1 performance criteria are to be addressed.

2.2.2 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.

2.2.3 Statement of Suitability

A statement based on the results of the Environmental Site Assessment that the excavation as part of the planned works will not adversely impact on human health or the environment is to be provided (subject to implementation of any identified remediation and/or protection measures as required).

3 DESKTOP STUDY

3.1 Site Zoning

The Site is zoned *Urban Mixed Use* under the Hobart Interim Planning Scheme of 2015. The land use surrounding the Site is *Urban Mixed Use* and *Inner Residential,* with New Town Road zoned *Utilities*. (Figure 3). The site is to be assessed against land use Class D for assumed ground floor commercial use, and also compared against land use classes A, B and C to account for the potential of ground floor residential use.

Figure 3 Hobart Interim Planning Scheme Zones (2015)

3.2 Site Walkover

A site walkover was completed by GES staff on the 2nd September 2020. No obvious signs of contamination such as staining or odour was observed, however it should be noted that most of the soil is covered by asphalt and concrete. Photographs from the site including excavated soil cores from the bore holes, are presented in Appendix 3.

3.3 MRT Geology Mapping

The 1:25,000 scale geology map of the Greater Hobart area (see excerpt in Figure 4) shows that the investigation area overlays Triassic sedimentary rocks (Rv). Nearby geological units include Jurassic dolerite to the north east and Quaternary alluvial deposits downgradient to the west and north west of the site. The following geological units are displayed in Figure 4:

Rv - Undifferentiated volcaniclastic, quartz-rich lithic and quartzose sandstone, siltstone, mudstone, carbonaceous beds and coal seams

Rvcq - Interbedded cross-bedded white quartzose sandstone, quartz-rich lithic sandstone, siltstone and mudstone

Rvcg - Thickly- to thinly-bedded volcanic lithic sandstone, siltstone, mudstone and coal seams, fossil plants on some horizons (Newtown Coal Measure)

Jd - Dolerite and related rocks

Qa - Alluvial gravel, sand and clay.

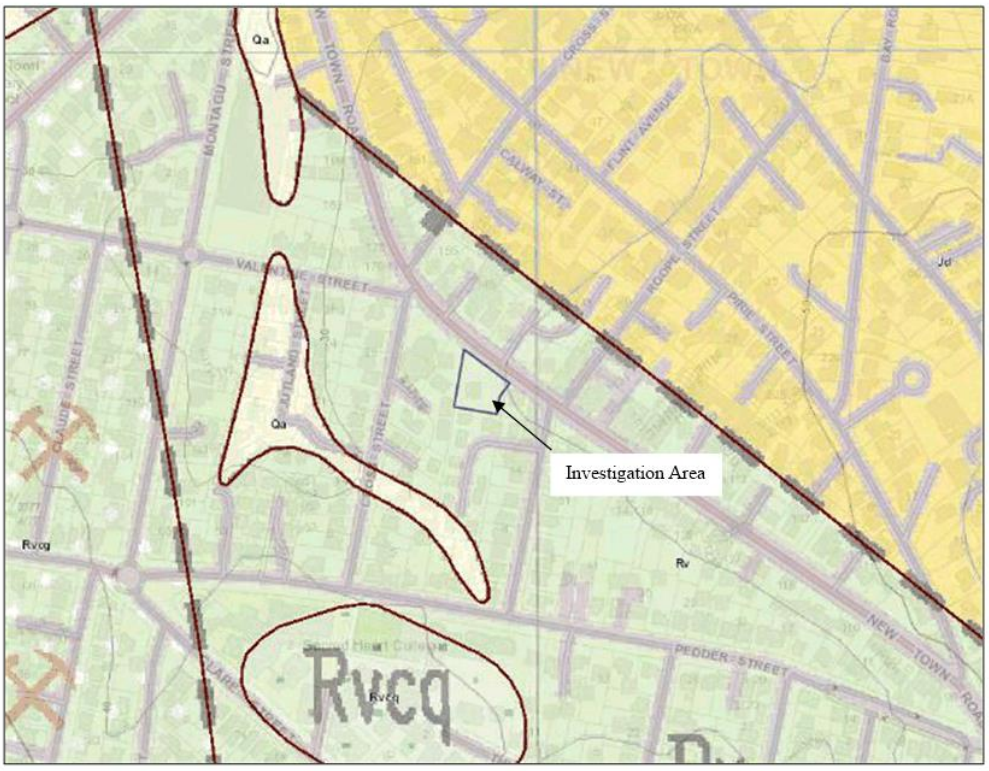

Figure 4 Mineral Resources Tasmania 1:25.000 Scale Mapping.

3.4 Historical Aerial Photography Interpretation

The 1946, 1957, 1969, 1977, 1980, 1989 historical aerial photographs and Google Earth images from 2003 to 2020 were viewed as part of this ESA. The photographs are presented in Appendix 4.

In summary the following observations can be made from the historical aerial photographs, historical photographs:

1946 & 1957 aerial photographs – A large house is present on the site, with gardens and shrubs at the road frontage.

1969 & 1977 & 1980 aerial photographs – The orioginal house has been demolished and the new service station structure is visible, with an awning covering the bowsers.

Note - the site is licenced to store dangerous goods (petrol and kerosine) from 1962 (Section 3.5).

1989 aerial photograph – The service station building has been renovated, with the awning over the bowsers removed, and an addition to the south east.

Note - real estate listing history has building construction date as 1980, which could coincide with the addition to the building, it may be around this time that the service station ceased operation and Video Ezy operated from the premises. The site was sold in 2017, which could coincide with the coffee shop and laundry mat operations commencing.

2003-2015 Google Earth images – the site is consistent with the 1989 aerial photograph.

2016-2020 Google Earth images – the blue ice dispenser machine is visible, and fresh road markings (arrows and parking bays) are visible.

3.5 WorkSafe Tasmania Dangerous Goods Records

WorkSafe Tasmania (WST) was contacted regarding the Site. Correspondence with WST is presented in Appendix 5. The information contained within the Dangerous Goods Records is summarised as follows:

Documents approving storage of dangerous goods for year "74/75"

Application for storage of petrol and kerosine dated "7 Dec 1962"

Approval of tank 31/8/1962, inspected 28/11/1962

Driveway Layout for Service Station, site plan 25/5/1962

3.6 Environment Protection Authority records

Environmental Protection Authority (EPA) Tasmania, Property Information Requests (PIR)s are currently unavailable while staff have been allocated other tasks relating to the COVID-19 pandemic. The EPA Regulated Premises layer on The LIST shows no regulated premises within a 1 km radius of the site, three decommissioned UPSS (black pin) and one active UPSS (green pin) as illustrated in Figure 5. The UPSS 120 m to the ESE (upgradient) at 119 New Town Road was decommissioned in 2016, with GES undertaking testing and reporting for this site in 2013 and 2016. The active UPSS is at 101-103 Augusta Road, Lenah Valley, which is an active Caltex Service Station. This site is 930 m from the site, and in a different groundwater catchment to the site.

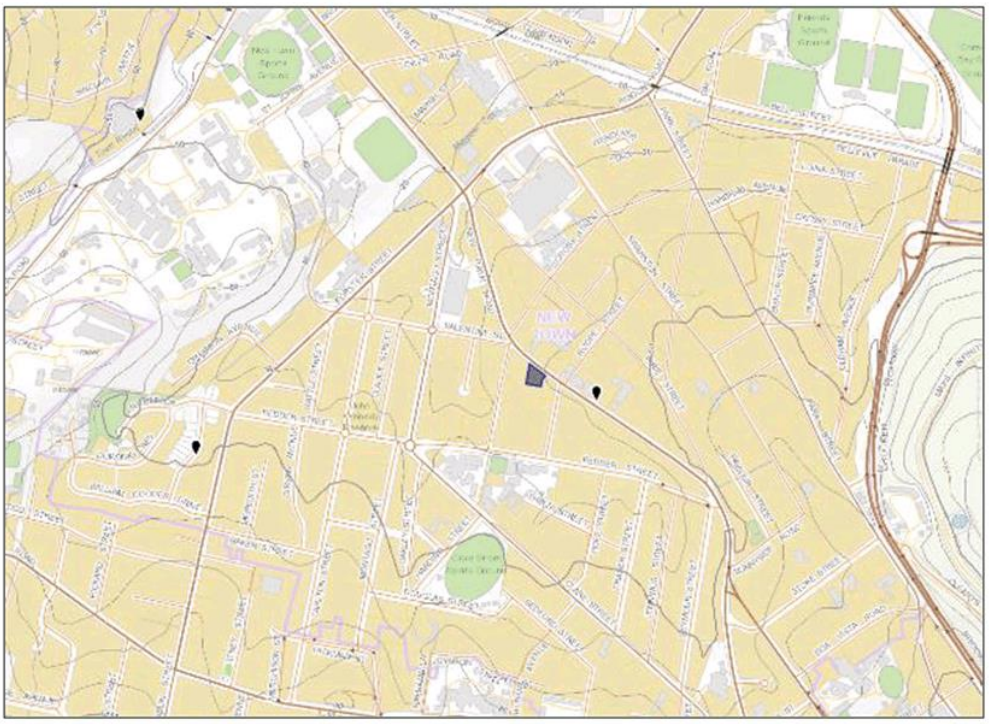

Figure 5 EPA regulated premises and registered UPSS

3.7 Site Topography, Drainage & Hydrogeology

The site has a gentle slope tending to a steeper bank of fill at the rear (south west) of the property, the average gradient of the area is 7%. Groundwater and surface water is expected to follow the topography and tend WSW around the Site to then follow a N trajectory around Montagu Street and then to Maypole Rivulet, which is the nearest ecological receptor approximately 500 m NNW of the site. Surface water is likely to enter stormwater infrastructure, and may discharge into Maypole Rivulet. Groundwater and surface water inferred flow directions are illustrated in Figure 6.

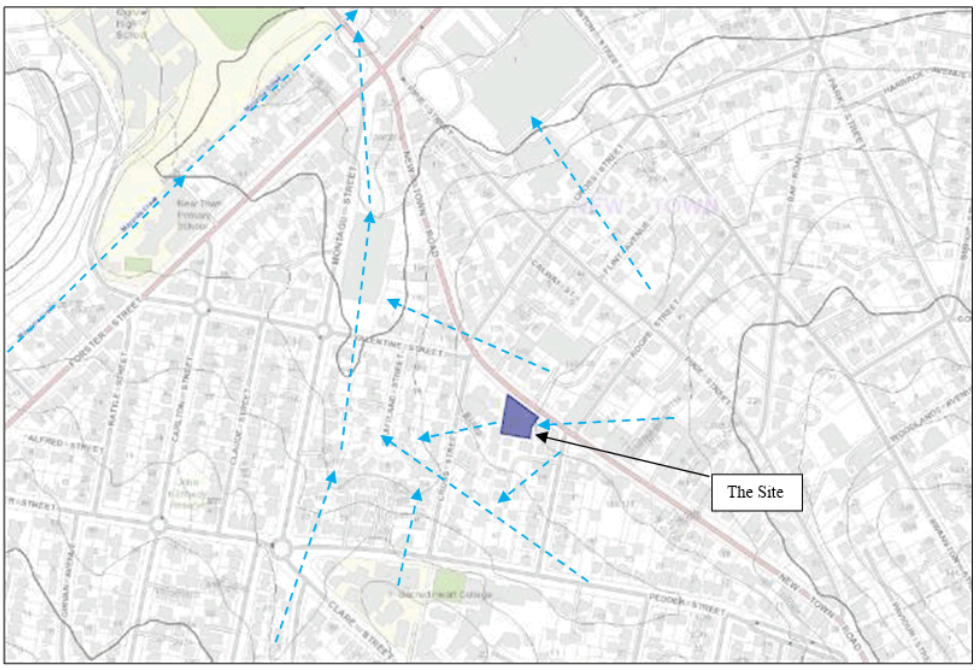

Figure 6 Contour Elevations and Inferred Surface and Groundwater Flow Direction

3.8 Groundwater

3.8.1 Potential Up-Gradient Contamination Sources

The majority of the land upgradient of the Site is residential, and not likely to feature contamination sources, with the exception of 119 New Town Road (former Mayne's Marine), where the UPSS was decommissioned and removed from the site.

3.8.2 Downgradient Ecosystem Receptors

Maypole Rivulet is present 500 m downgradient of the Site. Maypole Rivulet discharges into the River Derwent approximately 1.3 km to the NE of the Site.

3.8.3 Registered Water Bores

There are no downgradient water bores that could be effected by the Site, and no water bores directly upgradient of the Site. The nearest registered water bore is 1.9 km away to the East of the site, in a different catchment. (DPIPWE groundwater information access portal 2020).

3.8.4 Acid Sulfate soils

According to the Land Information Service Tasmania (LIST) database, the nearest Low Probability, Potentially Acid Sulfate Soils (ASS) are 550 m downgradient of the Site at Maypole Rivulet. We do not consider ASS to be a concern on the site.

3.9 Potential Contamination Issues

3.9.1 Areas of Potential Concern

The Site is considered an area of potential concern due to the following potential contamination pathways.

- Use of the site as a service station, with UPSS storing petroleum chemicals present on site approximately 1962-1980.
- Unknown decommissioning dates of UPSS infrastructure, with UPSS potentially remaining on site since 1980.
- Fill of undetermined origins present at the site in the south western corner.

3.9.2 Contaminants of Potential Concern

Contaminants of potential concern (COPC) that have been considered include the following:

- Total Petroleum/Recoverable Hydrocarbons (TPH/TRH);
- Mono Aromatic hydrocarbons: Benzene, Toluene, Ethylbenzene, Xylene, Naphthalene (BTEXN);
- Polynuclear Aromatic Hydrocarbons (PAHs);
- A suite of 15 Metals (south west part of the site); and
- Lead (entire site).

4 FIELD INVESTIGATION PROCEDURES

4.1 Works Summary

Site investigation works are summarised in Table 2, Figure 7, Figure 8 and Figure 9.

Table 2 Summary of Site Investigation Work Dates

Scope	Date	Lab Report	Details
Drilling/ Soil Sample Collection	2nd September 2020	EM2015530	13 primary soil samples, 1 duplicate sample and 1 Rinsate blank sample were collected from 7 bore holes.

Figure 7 Borehole Plan (Bore hole locations illustrated on aerial photograph with 1962 site plan overlaid)

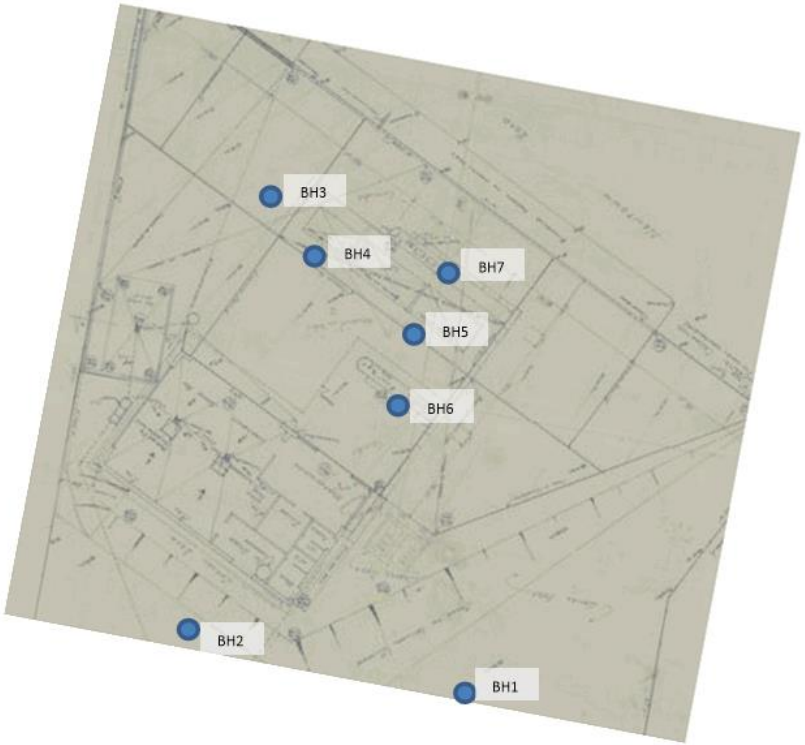

Figure 8 Borehole Plan (Bore hole locations illustrated on 1962 site plan)

Figure 9 Borehole Plan (Bore hole locations illustrated on aerial photograph)

4.2 Soil Investigation

4.2.1 Borehole Drilling

A total of seven holes were drilled for sampling for contamination impact. The bores were drilled by GES using the industry recognized Geoprobe direct push drilling system. The selected drilling method involved using a Geoprobe dual tube to retain wall integrity and eliminates risk of profile collapse whilst allowing extraction of 1.0 m length sample cores and allows for deployment of pre-packed well systems. The test holes were dug to depths of 2.0m or to refusal on underlying rock, to extract soil required for analysis, and to assess underlying geological conditions.

4.2.2 Soil Sampling

Soil sampling was conducted per the National Environmental Protection Measure (NEPM ASC 2013) and AS4482 sampling guidelines. Table 3 presents a summary of the soil assessment methodology adopted at the Site.

Table 3 Summary of Soil Sampling Methods

Activity	Details / Comments
Drilling Method	Geoprobe direct push drilling.
Soil Logging	Logging the soil was conducted in accordance with the unified soil classification system (USCS) as detailed in AS1726 (1993).
Decontamination of Sampling Equipment	Quantum Clean Laboratory Detergent (R213) was used to decontaminate reusable sampling equipment (hand auger) between each borehole sampling event.
Soil Screening	In accordance with AS4482.2. Individual soil samples were collected at 0.5 intervals below ground surface (bgs) and/or change in geology. Collected samples were deemed to not have odour associated with hydrocarbon contamination, and screening for volatile fractions using a photoionisation Detector (PID) was deemed not necessary.
Laboratory Soil Sample Collection	In accordance with AS4482.2. All samples were collected using disposable nitrile gloves. Samples were selected for laboratory analysis at; 0.5-0.6m below ground surface (BGS) (or 0.85-0.90m BGS in the case of BH7 due to deep concrete). and 1.5-1.6m BGS. A minimum number of samples were carefully selected which would provide enough information to delineate soil contamination.
Sample preservation	Samples were placed into a jar for laboratory analysis. Soil jars were placed in a pre-chilled cool box with ice bricks.
Sample holding times	Sample holding times exceeded acceptable range (based on NEPM ASC B3-2013), time 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 13 primary samples were selected for analysis. Chain of Custody (COC) documentation was completed and is provided in Appendix 6 along with the Sample Receipt Notification (SRN) for each batch. Table 4 presents a summary of the laboratory analyses undertaken.

Table 4 Overview of Soil Analysis and Quality Control

Analytes	Primary Samples	Duplicate[a]	Rinsate[c]
TPH	13	1	1
BTEX	13	1	1
PAH	13	1	1
Suite 15 Metals	13	1	1

Sampling Quality Control Standards (AS4482):
a – Duplicate one (1) in twenty (20) primary samples
b – Inter-lab duplicate split sample one (1) in twenty (20) primary samples
c – Single rinse sample per piece of equipment per day
d – Trip blank and Field blank where hydrocarbon odour is discernible

Given metals were analysed, there was a requirement to assess the following soil physical properties to determine soil threshold investigation levels: Soil grain class (sand/silt or clay); % Clay content; Cation exchange capacity (CEC); and Soil pH. The soil physical properties were based on knowledge of similar soil types encountered around the greater Hobart area.

5 QUALITY CONTROL

All Field and laboratory Quality Assurance and Quality Control (QA/QC) details and outputs are presented in Appendix 7.

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 and triplicate samples where applicable are calculated using the method outlined below.

The acceptance criteria used for the RPDs depend on the levels of contaminants detected and the laboratory's Method Detection Limits. 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 5

Table 5 Soil Field QA/QC procedures and Compliance

QA/QC Requirement	Compliance	Comments
Appropriate sampling strategy used and representative samples collected	Yes	Sampling program was undertaken in accordance with AS4482.1-2005
Appropriate and well documented sample collection, handling, logging and transportation procedures.	Yes	Appropriate and well documented
Decontamination	Yes	Appropriate decontamination such as cleaning tools before sampling and between sample locations was undertaken
Chain-of-custody documentation completed	Yes	COC were completed in accordance with NEPM ASC Schedule B2, Section 5.4.5 and transported under strict COC procedures. The signed COC documents are included in this report, which includes the condition report on arrival of samples to the Laboratory, cross checking of sample identification and paperwork and preservation method.
Required number of splits: Duplicate & inter-lab splits: 1 per 20 primary samples	No	One duplicate sample was collected and tested, for 13 primary samples, as per AS4482.1-2005. An inter-laboratory split sample was not collected.
QA/QC samples reported RPD's within indicated MDL guidelines.	No	For Duplicate and BH1 0.5-0.6 pairs, 90% of analytes complied. Non compliances include: an RPD of 43% for Lead where <15% was expected; Inconsistent Detection for C10 - C36 Fraction (sum) an RPD of 79% for >C16 - C34 Fraction where <50% was expected; an RPD of 79% for >C10 - C40 Fraction (sum) where <50% was expected;
Required numbers of rinse blank samples collected with no laboratory detections?	Yes	One rinse blank sample was collected as per AS4482.1-2005
Trip blanks collected with no laboratory detections?	NA	According to AS4482.2-1999, soil trip blanks are required where volatile hydrocarbons are discernible. This was not required.
Field blanks collected with no laboratory detections?	NA	According to Australian Standards, there is no requirement to collect field blanks, unless there is concern with cross contamination risks.
Samples delivered to the laboratory within sample holding times and with correct preservative	Yes	All samples were sent to the laboratory with correct preservative, and within required holding time.

5.2 Laboratory

Soil laboratory QA/QC procedures and compliance are summarised in Table 6.

Table 6 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 QCI report.
Laboratory Control Samples: 70% to 130% recovery for soil.	No	For EM2015530: Polynuclear Aromatic Hydrocarbons in sample QC-3253362-001, Benzo(a)pyrene, recovery greater than upper control limit.
Matrix spikes: 70% to 130% recovery for organics or 80%-120% recovery for inorganics	No	For EM2015530: Total Petroleum Hydrocarbons in sample EM2015530-003, C29-C26 Fraction, recovery greater than upper data quality objective. Total Recoverable Hydrocarbons (NEPM 2013) in sample EM2015530-003, >C34-C40 Fraction, recovery greater than upper data quality objective.
Duplicate Samples: 0% to <20% RPD.	Yes	There were no duplicate sample RPD outliers in the QCI report.
Surrogates: 70% to 130% recovery	Yes	There were no surrogate recovery outliers in the QCI report.
Analysis holding time outliers	Yes	There were no laboratory control outliers in the QCI report.
Quality Control Sample Frequency Outliers	No	For EM2015530: For NEPM 2013 B3 & ALS QC Standard; TRH – Semivolatile Fraction; Matrix Spikes 0, expected 5.

6 FIELD INVESTIGATION FINDINGS

6.1 Soil Bores

6.1.1 Geological Interpretation

The geology of the investigation area appears to be consistent with the Rv geological unit. Weathered sandstone rock was found at depths around 1.5m – 1.7m BGS. Some gravels and clay mineralogy of the soil suggest that upslope Jurassic dolerite may have influenced the soil in the profile, however the bedrock appears to be Triassic sandstone.

6.1.2 Grain & Depth Class Interpretation

Grain size classifications are applied to all soils at the Site to determine threshold screening level concentrations for hydrocarbons (and chromium) to assess soil ecological and human health risks.

Grain class threshold values are determined based on either the:

- sample grain size (in the case of ecological screening levels or chromium limits); or
- average grain class overlying the sample point (when assessing petroleum vapour screening levels) relative to the proposed finished floor level.

Table 7 provides a summary of the grain class averages for material overlying the sample.

Table 7 Summary of Grain Class Based on USCS Classification

Sample	Footing Excavation Depth^ - Red Fill Thickness^ - Green	Sample PVI Depth (m) Relative to Slab/Cut Depth	Soil Grain Size Class Averaging Above Soil Sample																	Attenuation			Petroleum Vapour Intrusion HSL Grain Class*	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	
BH1 0.5-0.6	3.0	0.5								0.4										NA	0.1	1.0	1.0	SAND	SC
BH1 1.5-1.6	3.0	1.5				0.1				0.9							0.4			NA	0.1	1.0	1.0	SAND	GC
BH2 0.5-0.6	3.0	0.5								0.4										NA	0.1	1.0	1.0	SAND	SC
BH2 1.5-1.6	3.0	1.5								1.4										NA	0.1	1.0	1.0	SAND	SC
BH3 0.5-0.6	0.4	0.5								0.4								0.0		NA	0.1	1.0	1.0	SAND	SC
BH3 1.5-1.6	0.4	1.5				0.2				0.7							0.5	0.0		NA	0.1	1.0	1.0	SAND	GC
BH4 0.5-0.6	0.4	0.5						0.3		0.1								0.0		NA	0.1	1.0	1.0	SAND	SC
BH4 1.5-1.6	0.4	1.5						0.3		0.4							0.7	0.0		NA	0.1	1.0	1.0	CLAY	GC
BH5 0.5-0.6	0.4	0.5						0.2		0.2								0.0		NA	0.1	1.0	1.0	SAND	SC
BH5 1.5-1.6	0.4	1.5						0.2		0.5							0.7	0.0		NA	0.1	1.0	1.0	CLAY	CI
BH6 0.5-0.6	0.4	0.5				0.4												0.0		NA	0.1	1.0	1.0	SAND	GC
BH7 0.85-0.95	0.4	0.8																0.7		NA	0.1	1.0	1.0	CLAY	CI
BH7 1.5-1.6	0.4	1.5															0.7	0.7		NA	0.1	1.0	1.0	CLAY	CI

Footnotes:
* Grain class is modified based on proposed building construction: concrete is interpreted to have similar vapour intrusion properties to clay and is therefore designated as CLAY within the grain size averaging assessment; backfill is inferred to comprise of gravel (GW)
< Sample has been collected from above the proposed excavation (base of slab or proposed ground level) and is not relevant in PVI risk assessment
^ Excavation depths are approximate and may vary due to change in services depths or overall building/footing construction design

6.1.3 Soil Contamination Observations

No staining or odour consistent with hydrocarbon contamination were observed in excavated soil during the site visit.

6.1.4 Land Use Class

For surrounding properties, the potential PVI risk is characterized through application of CRC CARE HSL's for each individual property based on their existing land use (NEPM 2013; Friebel & Nadebaum 2010). The CRC CARE guidelines have been referenced to ensure that the correct land use and density category has been adopted for surrounding land use to ensure health risks are consistent with the HSL models. Aspects considered include the:

- Sensitivity of the existing or potential land use;
- Percentage of paved area for defining potential vapour migration risk;
- Type of basement garage which may influence the confinement of PHC vapours;
- Presence of a slab or cavity for discerning vapour intrusion risk.

If hydrocarbon impacted soil is resulting in ambient vapours discerned at the site, consideration is given to downgradient receptors. Where applicable, land use class therefore considers:

- Downgradient receptors where onsite HSL exceedances have been identified in passive vapour investigations; and
- Variations in land use for different parts of the proposed development.

The following land use classes are applied:

- *HSL D for Commercial*

We consider this land use class most applicable. Pending finalisation of plans, some parts of the site that may be open space or residential apartments may be nearby to natural soil. For this reason, we have presented results against multiple land use classes, to account for several scenarios.

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 ESL and EIL limits presented in Table 8.

Table 8 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)

Selection of ESL threshold investigation limits are set out in the NEPM ASC (2013) guidelines and require classification of the soil according to:

- Land use sensitivity:
    - Areas of ecological significance
    - Urban residential and public open space; and
    - Commercial and industrial.

- Dominant particle size passing through a 2 mm sieve into:
    - Coarse – sand sizes and greater; and
    - Fine – clay and silt sizes.

Adopted NEPM ASC (2013) soil and land use classifications are presented below.

7.3.2 Ecological Investigation Levels

The following compounds were compared against Environmental Investigation Levels:

- Lead;
- Nickel;
- Chromium;
- Zinc;
- Copper;
- Arsenic; and
- Naphthalene.

There was a requirement to classify the soil according to physicochemical properties to develop investigation limits for the above listed compounds. Adopted physicochemical parameters are presented in the results tables.

Selection of EIL threshold investigation limits are set out in the NEPM ASC (2013) guidelines and require classification of the soil per specific soil and physicochemical properties which are presented in the results tables. The adopted land use scenarios presented in Table 9.

Table 9 Adopted Land Use Scenario for the Soil Bores

Land Use Scenario	Applicable Soil Bores
Areas of Ecological Significance	
Urban Residential & Public Open Space	*All soil bores*
Commercial & Industrial	*All soil bores*

Based on a preliminary assessment of site soil conditions, the following physicochemical properties are applied to assess guideline EIL's:

- Clay content consistent with field observations;
- A soil pH and cation exchange capacity (CEC) consistent with Table 10.

Table 10 Cation Exchange and Clay content, Adopted for the Site

Soil Physicochemical Properties			
USCS	Clay %	CEC	pH
R	100.00	10.00	4.5
GW	0.00	10.00	4.5
GP	0.00	10.00	4.5
GM	10.00	15.00	4.5
GC	30.00	20.00	4.5
SW	0.00	10.00	4.5
SP	0.00	10.00	4.5
SM	10.00	15.00	4.5
SC	20.00	20.00	4.5
ML	30.00	20.00	4.5
CL	100.00	35.00	4.5
OL	50.00	35.00	4.5
MH	30.00	35.00	4.5
CH	100.00	45.00	4.5
OH	100.00	60.00	4.5
PT	100.00	80.00	4.5
P	0.00	0.00	4.5
CM	100.00	35.00	4.5
CI	100.00	35.00	4.5
Rock	0.00	10.00	4.5

7.4 Findings

7.4.1 Ecological Screening Levels

Laboratory analytical results are presented in Appendix 8. Table 11 compares soil analytical results against relevant NEPM ASC (2013) ESL's. Concentrations which exceeded laboratory limit of reporting (LOR) are highlighted in bold, ESL exceedances are highlighted with a coloured cell, and samples within the proposed excavation zone would be marked with an X.

Benzo(a)pyrene was detected above ESL guideline limits for urban land use in four samples; 2-5x above ESL in BH1 0.5-0.6 & BH4 0.5-0.6, and 5-20x ESL in BH3 0.5-0.6 & BH5 0.5-0.6. Total Recoverable Hydrocarbons Fraction 3 was detected above ESL guideline limits for urban land use in four samples; 1-2x above ESL in BH1 0.5-0.6 & BH2 1.5-1.6, 2-5x above ESL in BH3 0.5-0.6, and 5-20 above ESL in BH2 0.5-0.6.

Table 11 Summary of Soil Analytical Results Compared with ESL's for urban/residential land use.

NEPM Ecological Screening Levels for Soil				BTEX				PAH	TRH			
Bold - Indicates LOR Exceedances X - Indicates Sample has been Excavated Colour Shading - Indicates ESL Exceedances: >1 x, * 2-5 x, ** 5-20 x, *** 20-50 x, **** >50 x				Benzene	Toluene	Ethylbenzene	Xylenes	Benzo(a)pyrene	F1 (C6 - C10)	F2 (>C10 - C16)	F3 (>C16 - C34)	F4 (>C34 - C40)
Sample ID	Sample Date	Soil Texture Class (fine / coarse)	Land Use	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
				LOR 0.2	LOR 0.5	LOR 0.5	LOR 0.5	LOR 0.5	LOR 10	LOR 50	LOR 100	LOR 100
BH1 0.5-0.6 X	2/9/20	C	URBAN	<0.2	<0.5	<0.5	<0.5	**2***	<10	<50	**370**	<100
BH1 1.5-1.6 X	2/9/20	C	URBAN	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH2 0.5-0.6 X	2/9/20	C	URBAN	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	**1910****	**1160**
BH2 1.5-1.6 X	2/9/20	C	URBAN	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	**330**	**220**
BH3 0.5-0.6	2/9/20	C	URBAN	<0.2	<0.5	<0.5	<0.5	**12.7****	<10	<50	**750***	**240**
BH3 1.5-1.6	2/9/20	C	URBAN	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH4 0.5-0.6	2/9/20	C	URBAN	<0.2	<0.5	<0.5	<0.5	**3.3***	<10	<50	**230**	<100
BH4 1.5-1.6	2/9/20	C	URBAN	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH5 0.5-0.6	2/9/20	C	URBAN	<0.2	<0.5	<0.5	<0.5	**3.6****	<10	<50	**260**	<100
BH5 1.5-1.6	2/9/20	F	URBAN	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH6 0.5-0.6	2/9/20	C	URBAN	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	**120**	<100
BH7 0.85-0.95	2/9/20	F	URBAN	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH7 1.5-1.6	2/9/20	F	URBAN	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100

7.4.2 Ecological Investigation Levels

Table 12 compares soil analytical results against relevant EIL's. Concentrations which exceeded laboratory LOR are reported in the table, EIL exceedances are highlighted with a coloured cell, and samples within the proposed excavation zone would be marked with an X. Metals were tested at BH2 due to that area containing fill of unknown origins. There were exceedances of EIL guidelines at commercial land use for Zinc in BH2 0.5-0.6.

Table 12 Soil Analytical Results Compared Against Ecological Investigation Levels at commercial land use

NEPM Ecological Investigation Levels for Soil

Bold - Indicates LOR Exceedances
X - Indicates Sample Within Inferred Excavation

Colour Shading - Indicates EIL Exceedances:
>1 x, * 2-5 x, ** 5-20 x, *** 20-50 x, **** >50 x

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
BH1 0.5-0.6 X	2/9/20	URBAN	20	4.5 (3)	C	----	----	----	----	----	718	----	<1
BH1 1.5-1.6 X	2/9/20	URBAN	20	4.5 (3)	C	----	----	----	----	----	11	----	<1
BH2 0.5-0.6 X	2/9/20	URBAN	20	4.5 (3)	C	47	47	11	260*	10	804	6	<1
BH2 1.5-1.6 X	2/9/20	URBAN	20	4.5 (3)	C	38	38	13	114	8	110	<5	<1
BH3 0.5-0.6	2/9/20	URBAN	20	4.5 (3)	C	----	----	----	----	----	227	----	<1
BH3 1.5-1.6	2/9/20	URBAN	20	4.5 (3)	C	----	----	----	----	----	6	----	<1
BH4 0.5-0.6	2/9/20	URBAN	20	4.5 (3)	C	----	----	----	----	----	89	----	<1
BH4 1.5-1.6	2/9/20	URBAN	20	4.5 (3)	C	----	----	----	----	----	12	----	<1
BH5 0.5-0.6	2/9/20	URBAN	20	4.5 (3)	C	----	----	----	----	----	97	----	<1
BH5 1.5-1.6	2/9/20	URBAN	35	4.5 (3)	F	----	----	----	----	----	11	----	<1
BH6 0.5-0.6	2/9/20	URBAN	20	4.5 (3)	C	----	----	----	----	----	16	----	<1
BH7 0.85-0.95	2/9/20	URBAN	35	4.5 (3)	F	----	----	----	----	----	<5	----	<1
BH7 1.5-1.6	2/9/20	URBAN	35	4.5 (3)	F	----	----	----	----	----	7	----	<1

pH Designation:
(1) Using 0.01M CaCl2 extract. Rayment, G.E. and Lyons, D.J. (2011). "Soil Chemical Methods – Australasia". 495+20 pp. CSIRO Publishing, Melbourne.
(2) pHF (1:5). Adjusted by subtracting 0.75 with +/- 0.25 error to calibrate to the CaCl2 method (per comm. ALS Brisbane Acid Sulphate Soils Laboartory). Methods in accordance with 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

8 SOIL HUMAN HEALTH DIRECT CONTACT ASSESSMENT

8.1 Guidelines

Guidelines presented are based on potential exposure of human receptors to soil impact which may include:

- Trench workers repairing or building services (typically to 1 m BGS). This classification is not dependent on the land use class.
- Onsite workers which may be exposed to potential shallow soil impact in non-paved areas of the site; and
- Onsite excavation works which may include 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 13. Land use class is based on the opportunity for soil access as per NEPM ASC 2013 guidelines. Soil access is anticipated to include current and future residents on site, and future potential construction workers, and trenchworks on site.

Table 13 Summary of Land Use Setting and Density for Determining Exposure Risk

Soil Bores	Construction Phase	Location	Land Use	Pathway	Land Use Class
All soil	During	Site	Construction workers and trench workers	ALL	D and trench worker specific
		Offsite	Neighbouring residential land users	DI	A
	Post	Site	Future trench workers	ALL	D and trench worker specific
			Future commercial workers	ALL	D
			Possible future open space users if soil is left remaining on the site	ALL	B

DC – Dermal Contact - Trench Worker Guidelines (CRC CARE 2013)
DI – Dust Inhalation - HIL Guidelines (NEPM ASC 2013)
SI – Soil Ingestion - HIL Guidelines (NEPM ASC 2013)
ALL – All of above

8.1.3 Health Investigation & Screening Levels

The main exposure pathways and methods for assessing heath risk from contaminated soils are presented in Table 14.

Table 14 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

8.2 Findings

8.2.1 Dermal Contact - Petroleum Hydrocarbons

Laboratory analytical results are presented in Appendix 8. Table 15 presents soil hydrocarbon analytical results compared against CRC CARE (Friebel & Nadebaum, 2011) HSL guidelines for assessing dermal contact risk. Concentrations which exceeded laboratory LOR are highlighted in bold, HSL exceedances would be highlighted with a coloured cell indicating the highest HSL land used class which is exceeded.

There were detections of TRH in seven samples, however there were no guideline exceedances for dermal contact and no dermal contact risk identified at any land use levels.

Table 15 Soil Analytical Results Compared Against CRC CARE (Friebel & Nadebaum, 2011) Guidelines for Dermal Contact

CRC CARE Health Screening Level Dermal Contact Hazard from Soil Hydrocarbons'		EP080: BTEXN					EP080/071: TRH			
		Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	C6 - C10 Fraction	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
Units		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR		0.2	0.5	0.5	0.5	1	10	50	100	100
HSL A Low 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 C Recreational		120	18000	5300	15000	1900	5100	3800	5300	7400
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									
2/09/2020	BH1 0.5-0.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	**370**	<100
2/09/2020	BH1 1.5-1.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
2/09/2020	BH2 0.5-0.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	**1910**	**1160**
2/09/2020	BH2 1.5-1.6 X	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	**330**	**220**
2/09/2020	BH3 0.5-0.6	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	**750**	**240**
2/09/2020	BH3 1.5-1.6	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
2/09/2020	BH4 0.5-0.6	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	**230**	<100
2/09/2020	BH4 1.5-1.6	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
2/09/2020	BH5 0.5-0.6	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	**260**	<100
2/09/2020	BH5 1.5-1.6	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
2/09/2020	BH6 0.5-0.6	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	**120**	<100
2/09/2020	BH7 0.85-0.95	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
2/09/2020	BH7 1.5-1.6	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100

8.2.2 Dust Inhalation & Soil Ingestion

Laboratory analytical results are presented in Appendix 8. Soil analytical results compared against combined dust inhalation and soil ingestion risk assessed through the application of NEPM ASC (2013) Health Investigation Levels (HILs) for exposure to soil contaminants are presented in Table 16. Concentrations which exceeded laboratory LOR are highlighted in bold (except for the metals), and HIL exceedances are highlighted with a coloured cell indicating the highest HIL land used class which is exceeded. There were no exceedances for dust inhalation and soil ingestion HIL guidelines at Commercial land class. Other land classes are presented as they may be relevant pending finalised designs of the development.

Lead exceeds Low Density Residential and Recreational land use classes at BH1 and BH2, however the material in these areas will be excavated and removed for the proposed car parking basement, hence this risk can be dismissed.

Benzo(a)pyrene exceeds Low Density Residential, High Density Residential and Recreational land use levels in BH3, BH4 & BH5, which represents the northern part of the site. The majority of the northern part of the site will feature commercial properties, and the majority of the open space will be overlying the basement and feature imported (clean fill) soil, so these exceedances may not be applicable. However they are presented pending the final development designs, in case soil from the northern part of the site will be in contact with either residential apartments or open space.

Environmental Site Assessment: 156 New Town Road, New Town

Table 16 Soil Analytical Results Compared Against NEPM ASC (2013) Health Investigation Levels Guidelines

Bold - Indicates LOR Exceedance in Non Metalic Compounds			EA055: Moisture Content	EG005T: Total Metals by ICP-AES														EG035T: Total Recoverable Mercury by FIMS	EP075(SIM)B: Polynuclear Aromatic Hydrocarbons																		
NEPM Health Investigation Levels (HIL's) Dust Inhalation and Soil Ingestion Assessment X - Indicates Sample Within Proposed Excavation Zone			Moisture Content	Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium Total	Cobalt	Copper	Lead	Manganese	Nickel	Selenium	Vanadium	Zinc	Mercury	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benz(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(1.2.3.cd)pyrene	Dibenz(a.h)anthracene	Benzo(g.h.i)perylene	PAHs	Benzo(a)pyrene TEQ (WHO)
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	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	☑	HIL A		100		60	4500	20		100	6000	300	3800	400	200		7400	40																	300	3
HIL B Medium/High Density Residential	☑	HIL B		500		90	40000	150		600	30000	1200	14000	1200	1400		60000	120																	400	4
HIL C Recreational	☑	HIL C		300		90	20000	90		300	17000	600	19000	1200	700		30000	80																	300	3
HIL D Commerial/Industrial	☑	HIL D		3000		500	300000	900		4000	240000	1500	60000	6000	10000		400000	730																	4000	40
HIDE ROW		D		3000		500	300000	900		4000	240000	1500	60000	6000	10000		400000	730																	4000	40
Sample date:	Sample ID																																			
2/09/2020	BH1 0.5-0.6 X		18.8	----	----	----	----	----	----	----	----	718	----	----	----	----	----	----	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	1.8	2.1	1.2	1.0	2.0	0.8	2.0	1.1	<0.5	1.5	**14**	**2.5**
2/09/2020	BH1 1.5-1.6 X		12.2	----	----	----	----	----	----	----	----	11	----	----	----	----	----	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2/09/2020	BH2 0.5-0.6 X		15.3	6	80	<1	<50	4	10	6	47	804	188	11	<5	27	260	<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	**1**	<0.5
2/09/2020	BH2 1.5-1.6 X		19.2	<5	80	<1	<50	<1	8	8	38	110	234	13	<5	26	114	0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2/09/2020	BH3 0.5-0.6		22.3	----	----	----	----	----	----	----	----	227	----	----	----	----	----	----	0.5	1.9	<0.5	0.5	7.7	1.8	18.5	19.5	9.3	9.0	13.3	3.7	12.7	6.3	2.1	8.3	**115**	**18**
2/09/2020	BH3 1.5-1.6		10.9	----	----	----	----	----	----	----	----	6	----	----	----	----	----	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2/09/2020	BH4 0.5-0.6		19.3	----	----	----	----	----	----	----	----	89	----	----	----	----	----	----	<0.5	0.6	<0.5	<0.5	1.1	<0.5	3.8	4.4	2.3	2.2	3.7	1.3	3.3	1.7	0.5	2.2	**27**	**4.7**
2/09/2020	BH4 1.5-1.6		24.3	----	----	----	----	----	----	----	----	12	----	----	----	----	----	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2/09/2020	BH5 0.5-0.6		21.1	----	----	----	----	----	----	----	----	97	----	----	----	----	----	----	<0.5	0.6	<0.5	<0.5	1.2	<0.5	4.1	4.7	2.5	2.5	3.7	1.4	3.6	1.8	0.6	2.4	**29**	**5.2**
2/09/2020	BH5 1.5-1.6		21.1	----	----	----	----	----	----	----	----	11	----	----	----	----	----	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2/09/2020	BH6 0.5-0.6		14.7	----	----	----	----	----	----	----	----	16	----	----	----	----	----	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2/09/2020	BH7 0.85-0.95		12.9	----	----	----	----	----	----	----	----	<5	----	----	----	----	----	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2/09/2020	BH7 1.5-1.6		22.5	----	----	----	----	----	----	----	----	7	----	----	----	----	----	----	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

9 INDOOR INHABITANT PVI ASSESSMENT – HSL's

This PVI assessment has been conducted in accordance with relevant CRC CARE Technical Documentation and NEPM 2013 guidelines presented in references section of this report. The HSL assessment approach is generally the first (Tier 1) investigation phase adopted for assessing PVI risk at petroleum hydrocarbon (PHC) impacted sites. HSL guidelines have been applied for samples collected from the site to account for risks that may be associated with volatile hydrocarbon vapour intrusion into confined spaces where there may be an inhalation risk through longer term exposure. This does not constitute a full vapour risk assessment but provides additional information from which to further quantify any risk.

A detailed investigation (Tier 2 to 3) is recommended over an HSL assessment where an acute risk has been identified at the site (CRC CARE 2013) because of:

- Migrating product on surface soils beneath buildings;
- Strong PHC odours;
- Flammable risk in confined spaces; and/or
- Health complaints from occupants.

Based on the site visits, none of the above conditions have been identified at the site. If the outcome of this Tier 1 assessment reveals HSL exceedances for hydrocarbon vapour intrusion, a more detailed (Tier 2) assessment will be required to further evaluate the human health risk.

PVI risk is initially interpreted through the development of HSL threshold limits from the following classifications:

- The geology and or hydrogeology of the investigation point; and
- Land use sensitivity:

The resulting HSL threshold limits are compared with laboratory analytical results.

9.1 Selected Media for Assessing PVI Risk

Table 17 presents a summary of the preferred HSL approach to assessing PVI risk. In this case Radiello Vapour Samplers were used to determine ambient vapour concentrations of selected chemicals. Concentrations of PHC in soil were calculated, and were below all investigation limits (data not presented).

Table 17 Preferred Methods for Determining Site PVI Risk

Media Analysed	Method	Limitations	Order of Preference
Soil Gas	Concentrations of a soil gas through a soil vapor sampler	This approach provides the most reliable data in interpreting PVI risk, although direct modelling should be applied if concentrations exceed HSL threshold limits.	Primary
Groundwater	Concentrations of PHC in groundwater through deployment of monitoring wells	More robust and reliable that soil in determining onsite and in particular, offsite risks. Determining PVI risk based on groundwater is inherently conservative when interpreting vapour risk to account for not readily discernible preferential pathways. Reference may be drawn to alternative assessment approaches: 1) Application of site-specific conditions to the CRC CARE model for assessing PVI risk 2) Soil gas interpretation for areas where a PVI risk is identified from groundwater analysis.	Secondary
Soil	Concentrations of PHC in soil	Concentrations in soil may be subject variability due to soil moisture, organic content and oxygen ingress all which create significant bias in threshold values. Reliance is place on utilizing groundwater analysis over soil. Soil results provide localised information.	Tertiary

9.2 Land Use Class

For surrounding properties, the potential PVI risk is characterized through application of CRC CARE HSL's for each individual property based on their existing land use (NEPM 2013; Friebel & Nadebaum 2010). The CRC CARE guidelines have been referenced to ensure that the correct land use and density category has been adopted for surrounding land use to ensure health risks are consistent with the HSL models. Aspects considered include the:

- Sensitivity of the existing or potential land use;
- Percentage of paved area for defining potential vapour migration risk;
- Type of basement garage which may influence the confinement of PHC vapors;
- Presence of a slab or cavity for discerning vapour intrusion risk.

If hydrocarbon impacted soil is discerned at the site, consideration is given to downgradient receptors. Where applicable, land use class therefore considers:

- Downgradient receptors where onsite HSL exceedances have been identified in soil; and
- Variations in land use for different parts of the proposed development.

The following land use classes are applied:

- *HSL D for Commercial*
- *HSL A for Residential*

Results are presented against HSL A to account for the potential of some residential space being at ground level, and also as it is the most conservative level to compare results against.

9.3 Soil Assessment

Laboratory analytical results are presented in Appendix 8. Table 18 presents the results against a potential indoor vapour risk at HSL class A. Concentrations which exceeded laboratory LOR would be highlighted in bold. HSL exceedances would be highlighted with a coloured cell. There were no exceedances of HSL Class A or HSL Class D guideline limits, and no indoor vapour risk identified.

Table 18 Soil Analytical Results Compared Against HSL A for Indoor Vapour Risk

Soil Hydrocarbon HSL's for Assessing Indoor Vapour Intrusion (NEPM 2013) **Soil Sample Analysis**					EP080: BTEXN					EP080/071: TRH	
Bold - Indicates LOR Exceedances Colour Shading - Indicates HSL Exceedances: >1 x, * 2-5 x, ** 5-20 x, *** 20-50 x, **** >50 x					Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	F1	F2
Sample ID	Sample Date	Depth Class	Grain Class	HSL	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
					LOR 0.2	LOR 0.5	LOR 0.5	LOR 0.5	LOR 1	LOR 10	LOR 50
BH1 0.5-0.6	2/09/2020	0 - 1	SAND	A	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH1 1.5-1.6	2/09/2020	1 - 2	SAND	A	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH2 0.5-0.6	2/09/2020	0 - 1	SAND	A	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH2 1.5-1.6	2/09/2020	1 - 2	SAND	A	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH3 0.5-0.6	2/09/2020	0 - 1	SAND	A	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH3 1.5-1.6	2/09/2020	1 - 2	SAND	A	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH4 0.5-0.6	2/09/2020	0 - 1	SAND	A	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH4 1.5-1.6	2/09/2020	1 - 2	CLAY	A	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH5 0.5-0.6	2/09/2020	0 - 1	SAND	A	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH5 1.5-1.6	2/09/2020	1 - 2	CLAY	A	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH6 0.5-0.6	2/09/2020	0 - 1	SAND	A	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH7 0.85-0.95	2/09/2020	0 - 1	CLAY	A	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH7 1.5-1.6	2/09/2020	1 - 2	CLAY	A	<0.2	<0.5	<0.5	<0.5	<1	<10	<50

10 TRENCH WORKER PVI ASSESSMENT – HSL's

10.1 Classification

The following Health Screening Assessment is based on hydrocarbon vapour intrusion risk to subsurface excavation workers within excavations. This is assessed through analysis of vapours from soil and soil vapours. Groundwater is generally not used to assess risk as threshold limits for all depth and grain classes are non-limiting. Land use classes are not applicable when assessing vapour intrusion into trenches.

Soil and soil vapour HSL's for assessing hydrocarbon risk to maintenance workers are based on CRC CARE Technical Report 10 guidelines (Friebel & Nadebaum 2011) and the following variables:

- Dominant grain size class of material at the soil sample depth or based on the dominant grain class of the backfill material based on US Agriculture Soil Classification System (SCS) and partitioning into either sand, silt or clay; and
- Classifying soil according to depth ranges: 0 to 2 m; 2 to 4 m; 4 to 8 m; and greater than 8 m;

10.2 Findings

Laboratory analytical results are presented in Appendix 8. Summary of Soil Analytical Results Compared against HSL's for Assessing PVI Risk to Trench Workers are presented in Table 19. Concentrations that exceeded laboratory LOR would be highlighted in bold, and if there were any HSL exceedances they would be highlighted with a coloured cell. There were no exceedances of the CRC CARE HSL guidelines for Assessing PVI Risk to Trench Workers and no risk identified.

Table 19 Summary of Soil Analytical Results Compared against HSL's for Assessing PVI Risk to Trench Workers

CRC CARE Health Screening Level Assessment for PHC Inhalation Risk To Trench Workers From Soil Sample Analysis				EP080: BTEXN					EP080/071: TRH	
Bold - Indicates LOR Exceedances										
Dark Grey Shading - Indicates HSL Exceedances: >1 x, * 2-5 x, ** 5-20 x, * 20-50 x, **** >50 x**				Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	C6 - C10 Fraction	>C10 - C16 Fraction
Sample ID	Sample Date	Depth Class	Grain Class	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
				LOR 0.2	LOR 0.5	LOR 0.5	LOR 0.5	LOR 1	LOR 10	LOR 50
BH1 0.5-0.6	2/09/2020	0 to 2m	SAND	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH1 1.5-1.6	2/09/2020	0 to 2m	SAND	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH2 0.5-0.6	2/09/2020	0 to 2m	SAND	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH2 1.5-1.6	2/09/2020	0 to 2m	SAND	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH3 0.5-0.6	2/09/2020	0 to 2m	SAND	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH3 1.5-1.6	2/09/2020	0 to 2m	SAND	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH4 0.5-0.6	2/09/2020	0 to 2m	SAND	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH4 1.5-1.6	2/09/2020	0 to 2m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH5 0.5-0.6	2/09/2020	0 to 2m	SAND	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH5 1.5-1.6	2/09/2020	0 to 2m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH6 0.5-0.6	2/09/2020	0 to 2m	SAND	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH7 0.85-0.95	2/09/2020	0 to 2m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH7 1.5-1.6	2/09/2020	0 to 2m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50

11 SOIL DISPOSAL ASSESSSMENT

11.1 Guidelines

Soil which is excavated from the Site for landfill disposal is to be assessed against Information Bulletin 105 (IB105) for Classification and Management of Contaminated Soil for Disposal. The EPA uses four categories to classify contaminated soil as per Table 20:

- (Level 1) Fill Material;
- (Level 2) Low Level Contaminated Soil;
- (Level 3) Contaminated Soil; and
- (Level 4) Contaminated Soil for Remediation.

Fixed numerical values are presented for soil concentrations and leachable fraction concentrations.

Table 20 Summary of IB105 Classification Guidelines

	Classification (with reference to Table 2)	Controlled Waste[1]	Comments
Fill Material[2] (Level 1)	Soil that exhibits levels of contaminants below the limits defined under *Fill Material* in Table 2.	Unlikely	Soil classified as *Fill Material* can still be a 'pollutant' under the *Environmental Management and Pollution Control Act 1994* and needs to be responsibly managed.
Low Level Contaminated Soil (Level 2)	Soil that exhibits levels of contaminants above the limits defined under *Fill Material* but below the limits defined under *Low Level Contaminated Soil* in Table 2.	Likely	Where leachable concentrations have not been prescribed, maximum total concentrations will be used to classify the soil.
Contaminated Soil (Level 3)	Soil that exhibits levels of contaminants above the limits defined under *Low Level Contaminated Soil* but below the limits defined under *Contaminated Soil* in Table 2.	Yes	Where leachable concentrations have not been prescribed, maximum total concentrations will be used to classify the soil.
Contaminated Soil for Remediation (Level 4)	Soil that exhibits levels of contaminants above the limits defined under *Contaminated Soil* in Table 2 (regardless of the maximum total concentrations) is generally ***not*** considered acceptable for 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 *Contaminated Soil*, are generally classified as *Contaminated Soil for Remediation*.

[1] Controlled Waste is defined in the *Environmental Management and Pollution Control Act 1994*.
[2] Criteria for *Fill Material* are the limits set by the Director for the purposes of R.9(2)(a)(ii) in the *Regulations*.

11.2 Findings

The soil samples have been compared against IB105 guidelines for potential future soil disposal, see Table 21. The following conclusions can be made:

- 3 of the 13 samples are considered IB105 Level 3 (Contaminated Soil), these being; sample BH3 0.5-0.6 for Benzo(a)pyrene and Sum of Polycyclic Aromatic Hydrocarbons, sample BH4 0.5-0.6 for Benzo(a)pyrene, and sample BH4 0.5-0.6 for Benzo(a)pyrene.
- 2 of the 13 samples are considered IB105 Level 2 (Low Level Contaminated Soil), these being BH1 0.5-0.6 and BH2 0.5-0.6, due to; Cadmium, Lead, Zinc and hydrocarbons.
- 8 of the 13 samples are considered IB105 Level 1 (Clean Fill)

The Level 2 and Level 3 material is identified in the upper horizon (0.5-0.6m BGS), and the samples from lower depths are all considered Level 1 material. The contamination levels across the site can be considered as.

- Natural soil at depth is free of contamination
- Fill material at the southern and south western parts of the site is considered Level 2 material due to heavy metals and hydrocarbons.
- Contaminated soil at IB105 Level 3 impacted from historical hydrocarbon use and storage is present in the surface horizons around the northern part of the site.

Table 21 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
2/09/2020	BH1 0.5-0.6 X	----	----	----	----	----	----	----	718	----	----	----	----	----	2	<10	430	14	<0.2	<0.5	<0.5	<0.5
2/09/2020	BH1 1.5-1.6 X	----	----	----	----	----	----	----	11	----	----	----	----	----	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
2/09/2020	BH2 0.5-0.6 X	6	80	<1	4	10	47	6	804	188	<0.1	11	<5	260	<0.5	<10	2450	0.5	<0.2	<0.5	<0.5	<0.5
2/09/2020	BH2 1.5-1.6 X	<5	80	<1	<1	8	38	8	110	234	0.2	13	<5	114	<0.5	<10	440	<0.5	<0.2	<0.5	<0.5	<0.5
2/09/2020	BH3 0.5-0.6	----	----	----	----	----	----	----	227	----	----	----	----	----	12.7	<10	900	115	<0.2	<0.5	<0.5	<0.5
2/09/2020	BH3 1.5-1.6	----	----	----	----	----	----	----	6	----	----	----	----	----	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
2/09/2020	BH4 0.5-0.6	----	----	----	----	----	----	----	89	----	----	----	----	----	3.3	<10	270	27.1	<0.2	<0.5	<0.5	<0.5
2/09/2020	BH4 1.5-1.6	----	----	----	----	----	----	----	12	----	----	----	----	----	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
2/09/2020	BH5 0.5-0.6	----	----	----	----	----	----	----	97	----	----	----	----	----	3.6	<10	300	29.1	<0.2	<0.5	<0.5	<0.5
2/09/2020	BH5 1.5-1.6	----	----	----	----	----	----	----	11	----	----	----	----	----	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
2/09/2020	BH6 0.5-0.6	----	----	----	----	----	----	----	16	----	----	----	----	----	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
2/09/2020	BH7 0.85-0.95	----	----	----	----	----	----	----	<5	----	----	----	----	----	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
2/09/2020	BH7 1.5-1.6	----	----	----	----	----	----	----	7	----	----	----	----	----	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5

12 CONCEPTUAL SITE MODEL

12.1 Potential Contaminants

The site is considered a potentially contaminated site due to the presence of UPSS.

Potential sources of contamination on site include; the use of the site as a service station, unknown decommissioning of UPSS infrastructure, and fill of undetermined origins present at the site in the south western corner.

Figure 10 illustrates potential risks that may be associated with potential site contamination. Potential pathways have been identified and ruled out in the Conceptual Site Model. The risks are considered to be potential risks rather than present risks as there were no exceedances of commercial land use investigation limits and the present land use is for commercial operations.

12.2 Potential Human Receptors

Potential human receptors considered during this investigation include; current and future commercial users of the site, any potential onsite constructions workers during any future potential site redevelopment and future trench workers (commercial land users / trench worker specific), the migration of dust off the site to nearby residential properties, and the possibility of open space or apartments being in contact with soil on the site (pending finalised designs).

12.3 Potential Ecological Receptors

The closest ecological receptor is the Maypole Rivulet, which is 500 m downgradient of the site.

12.4 Identified Receptors

12.4.1 Identified Human Receptors

No CRC CARE (2011) Health Screening Levels were found to be exceeded. NEPM ASC (2013) human Health Investigation Limits for dust ingestion and inhalation were not exceeded at commercial land use (HIL D), however Benzo(a)pyrene at bore holes 3, 4 & 5, and Lead at bore holes 1 & 2 exceed residential and recreational guidelines. This could affect future land users, pending the finalised designs of the proposed developments.

12.4.2 Identified Ecological Receptors

Exceedances of NEPM ASC (2013) Ecological Screening Levels were identified for Benzo(a)pyrene and Total Recoverable Hydrocarbons Fraction 3 (TRH F.3). Exceedances of NEPM ASC (2013) Ecological Investigation Levels were identified for Zinc. These identified contaminants could have an impact on ecological receptors if soil from the site is transported to ecological receptors.

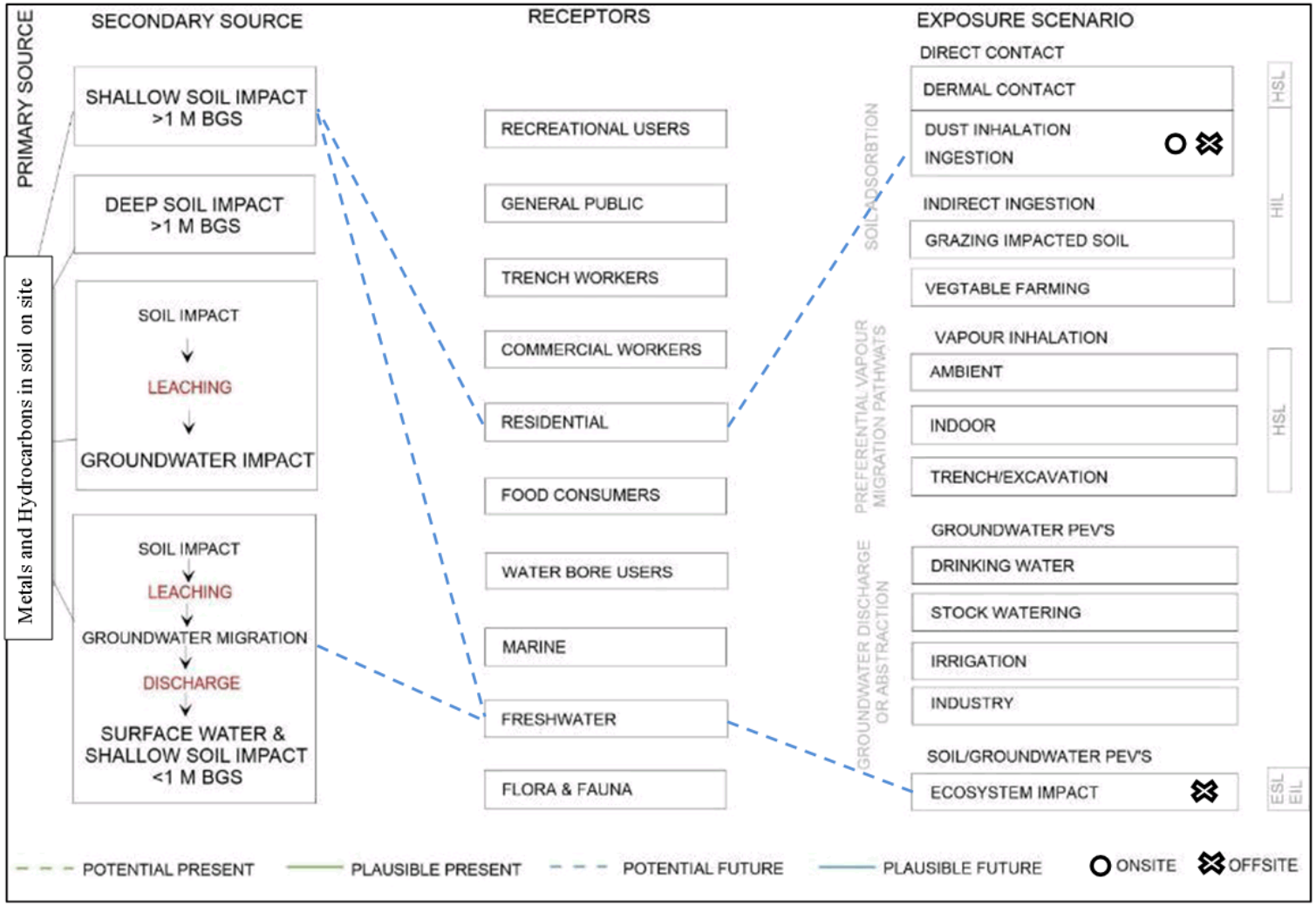

Figure 10 Conceptual Site Mode

13 CONCLUSIONS & RECOMMENDIATIONS

13.1 Desktop Assessment

The following information was gathered during the desktop investigation:

- The Site is zoned *Urban Mixed Use* under the *Hobart Interim Planning Scheme of 2015*. The site slopes at around 7% to the North West, Maypole Rivulet is the nearest ecological receptor 500 m downgradient of the Site.
- The geology of the investigation area is Triassic aged sedimentary rocks (Rv), with our bore holes finding weathered sandstone at variable depths.
- Historical Aerial photographs confirmed that an original building was present on the site since prior to 1946, with this building removed and the service station building erected prior to 1969. UPSS tanks were installed in 1962. The building was renovated between 1980 and 1989, which is likely to coincide with the service station being decommissioned around 1980 and Video Ezy operating on the site. More recently the site contains a coffee shop and laundry mat operations.
- The site is considered a potentially contaminated site due to past land use and the presence of UPSS. WorkSafe Tasmania Dangerous Goods Records indicate that petroleum fuels have been stored on site 1962-1980.
- Potential sources of contamination include the operations of a service station and workshop on the site, the presence of UPSS, and fill of undetermined origins on site.
- Contaminants Of Potential Concern (COPC) include the following: TPH/TRH; Mono Aromatic hydrocarbons: (BTEXN); PAH; and heavy metals.

13.2 Adopted Guideline Settings

The following investigation limits were adopted for the Site:

- Ecosystem receptor
  - Maypole Rivulet, freshwater ecosystem, Urban land use ESL and EILs
- Human Receptor
  - HSL D/ HSL D for soil direct contact risk to current and future site users (commercial) / Construction workers that may have access to the soil during developments
  - HIL D / HIL D for soil ingestion and dust inhalation risk to current and future site users (commercial) / Future construction workers soil direct contact risk
    - Note HIL land use classes A, B & C, are also compared in case open space or residential apartments at ground floor level are in contact with soil on the site.
  - HSL A/ HSL D indoor vapour risk to site users (residential) / Future potential trench workers

13.3 Soil Assessment

From the soil assessment, it is concluded that:

- Environment: Benzo(a)pyrene and Total Recoverable Hydrocarbons Fraction 3 exceeded NEPM ASC 2013 ESL guideline limits. Zinc exceeded NEPM ASC 2013 EIL guideline limits. A Stormwater Management Plan (SWMP) will be required to account for the management and erosion of soil with ecological impacts, to prevent soil effecting nearby ecological receptors, including Maypole Rivulet.
- Human Health: There were no human health guideline exceedances for dermal contact or vapour intrusion. There were no exceedances of NEPM ASC 2013 HIL guideline limits for dust inhalation and ingestion at commercial land use investigation limits, however there were exceedances for Benzo(a)pyrene and Lead at residential and recreational land use investigation limits. If the finalised designs indicate that the site is considered commercial operations at ground level, then there are no exceedances to guidelines and no risk to human health identified. However if areas of open space are placed on the soil found on site, or if apartments are placed at ground level, then a Contamination Management Plan (CMP) will be required to mitigate the risk to human health to residents post construction.
- Excavated Soil Management: In terms of *IB105* of the thirteen primary soil samples; Three samples are considered Level 3 Material (contaminated soil) due to Benzo(a)pyrene (in samples BH3 0.5-0.6, BH4 0.5-0.6 & BH5 0.5-0.6), and Sum of Polycyclic Aromatic Hydrocarbons (in sample BH3 0.5-0.6). Two samples are considered Level 2 Material (low level contaminated soil) due to Cadmium, Lead, Zinc and hydrocarbons. The remaining eight samples are considered Level 1 Material (clean fill). All of the samples taken at lower depths (0.85-0.90m and 1.5-1.6m) were considered Level 1 Material, suggesting that contamination is restricted to the upper horizons.

13.4 Conclusion Summary

GES recommends the following:

- There were no human health guideline exceedances for dermal contact, soil vapour intrusion or trench worker vapour risk. There were no HIL guideline exceedances for dust inhalation and ingestion at commercial land use class, but there were exceedances at residential and recreational land use for Benzo(a)pyrene and Lead. If developments include open space or residential apartments at ground level, the site will require a Contamination Management Plan (CMP) relating to human receptors prior to soil disturbance during construction, and including mitigation measures post construction. If the entirety of the site is considered commercial land use at ground floor level (this may include the apartments being above the basement car park, and the soil at the open space area being excavated and replaced with clean fill), then the CMP will not be required.
- There is potential for ecological impact from hydrocarbons and heavy metals entering the waterway or impacting other ecological receptors during excavation, and a Stormwater Management Plan (SWMP) is required, to control erosion of excavated soil that may have an ecological impact.
- For soil disposal, the soil on site is a mixture of Level 1 (clean fill), Level 2 (low level contaminated soil) and Level 3 (contaminated soil) according to IB105. Any disposal of soil off-site must be in accordance with IB105 and the controlled waste regulations. We recommend excavated material be stockpiled on-site where additional testing can better delineate the areas of contamination prior to soil disposal, noting that most of the contamination appears to be concentrated in the upper soil horizons. We also recommend leachate testing of excavated soil given Benzo(a)pyrene may be present in a less mobile state, hence retesting excavated soil could lead to lower IB105 contamination levels, reducing the costs of soil remediation and disposal to the client.
- It is likely that inactive Underground Petroleum Storage Systems (UPSS) infrastructure is present on the site, and will require decommissioning and removal. Soil testing around the area of the UPSS found mostly low levels of hydrocarbons, not exceeding human health guidelines at commercial land use investigation limits.

Given the past land use and presence of UPSS, localised areas of soil contamination may be present on the site not identified during this investigation. If during excavation, areas of hydrocarbon odour or staining are uncovered, we suggest that the developer contact GES or a suitably qualified environmental consultant immediately for assessment.

Yours faithfully,

Mark Downie B.Agr.Sci
Soil Scientist

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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 Renewal Developments Pty Ltd ('the Client'). To the best of GES's knowledge, the information presented herein represents the Client's requirements at the time of printing of the Report. However, the passage of time, manifestation of latent conditions or impacts of future events may result in findings differing from that described in this Report. In preparing this Report, GES has relied upon data, surveys, analyses, designs, plans and other information provided by the Client and other individuals and organisations referenced herein. Except as otherwise stated in this Report, GES has not verified the accuracy or completeness of such data, surveys, analyses, designs, plans and other information.

The scope of this study does not allow for the review of every possible soil and groundwater contaminant over the whole area of the site. Samples collected from the investigation area are assumed to be representative of the areas from where they were collected and indicative of the contamination status of the site at that point in time. The conclusions described within this report are based on these samples, the results of their analysis and an assessment of their contamination status.

This report does not purport to provide legal advice. Readers of the report should engage professional legal practitioners for this purpose as required.

No responsibility is accepted for use of any part of this report in any other context or for any other purpose by third party.

Appendix 1 GES Staff

Geo-Environmental Solutions (GES) is a specialist geotechnical and environmental consultancy providing advice on all aspects of soils, geology, hydrology, and soil and groundwater contamination across a diverse range of industries.

Geo Environmental Solutions Pty Ltd:

- ACN – 115 004 834
- ABN – 24 115 004 834

GES STAFF - ENGAGED IN SITE INVESTIGATION WORKS

Dr John Paul Cumming B.Agr.Sc (Hons) Phd CPSS GAICD

- Principle Author and Principle Environmental Consultant
- PhD in Environmental Soil Chemistry from the University of Tasmania in 2007
- 18 years' experience in environmental contamination assessment and site remediation.

Mr Mark Downie B.Agr.Sc

- Soil Scientist – 15 years' professional work experience
- 8 years' experience in contamination assessment and reporting of soils and groundwater.

Mr Aaron Plummer (Cert. IV)

- Soil Technician
- 6 years' experience in hydrocarbon and heavy metal contamination sampling of soils and groundwater.

Mr Grant McDonald (Adv. cert. hort.)

- Soil Technician
- 10 years' experience in hydrocarbon and heavy metal contamination sampling of soils and groundwater.

GES STAFF – CONTAMINATED SITES EXPERIENCE

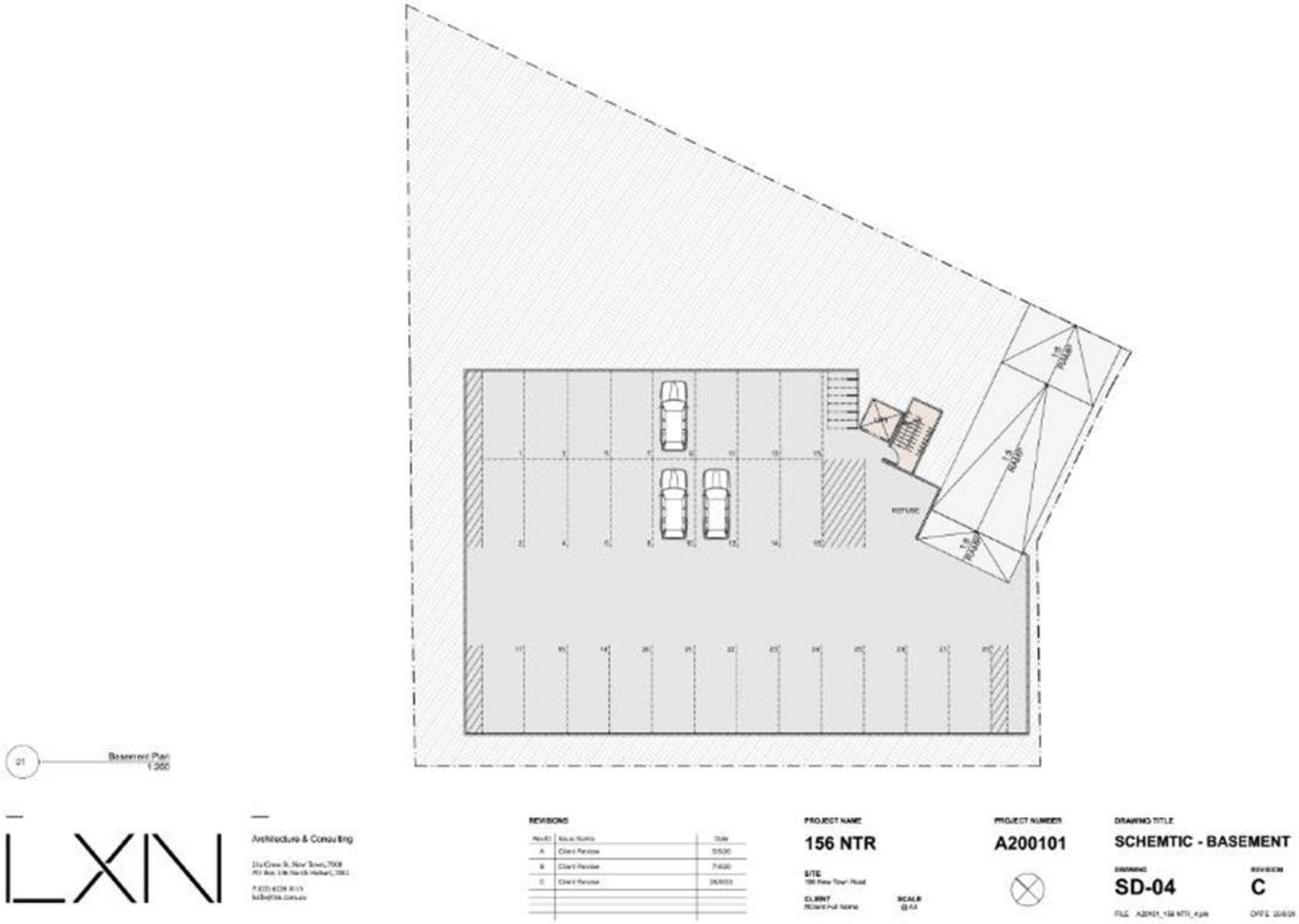
Ms Sarah Joyce BSc (Hons)

- 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)

Dr Sam Rees B.Agr.Sc (Phd)

- Soil & Environmental Scientist
- 6 years' experience in hydrocarbon and heavy metal contamination assessment and reporting of soils and groundwater.

Appendix 2 Plans for proposed development (source LXN Architecture)



Environmental Site Assessment: 156 New Town Road, New Town

01
GA Level 1 Plan
1:200
LXN
Architecture & Consulting
REVISIONS
PROJECT NAME
156 NTR
PROJECT NUMBER
A200101
DRAWING TITLE
SCHEMATIC - LEVEL 1
DRAWING
SD-06
REVISION
C

Environmental Site Assessment: 156 New Town Road, New Town

Environmental Site Assessment: 156 New Town Road, New Town

APARTMENT SCHEME REV C

Subject Site	1372 (sqm)	
Building Area (GFA)	3530 (sqm)	(excludes podium)

Building Area by Floor

	Carpark (sqm)	Circulation (sqm)	Apartments (incl balconies)	Commercial Tenancy (sqm)	Total GFA (sqm)
Basement	720	0	-	-	720
Ground Floor	-	40	539	340	919
Ground Floor Podium	-	225	0	0	225
Level 1* incl GF study	-	120	1030	0	1150
Level 2	-	60	456	0	516

* Circulation includes lift, stair and common zones

Apartments

Unit Number	TYPE	APT GFA	POS	COMMERCIAL TENANCY	Total GFA (sqm)
TEN-01	COMM	-	-	312	312
TEN-02	COMM	-	-	28	28
TEN-03	COMM	-	-		0
TEN-04	COMM	-	-		0
APT-01	2 BED	75	70	-	145
APT-02	2 BED	67	28	-	95
APT-03	2 BED	70	28	-	98
APT-04	2 BED	70	28	-	98
APT-05	2 BED	75	28	-	103
APT-06	4 BED	127	13	-	140
APT-07	4 BED	110	13	-	123
APT-08	2 BED	77	13	-	90
APT-09	2 BED	67	10	-	77
APT-10	2 BED	66	13	-	79
APT-11	2 BED	83	9	-	92
APT-12	2 BED	71	10	-	81
APT-13	2 BED	85	9	-	94
APT-14	2 BED	68	7	-	75
APT-15	2 BED	69	7	-	76
APT-16	3 BED	120	30	-	150
APT-17	2 BED	83	12	-	95
APT-18	3 BED	120	15	-	135
APT-19	3 BED	115	15	-	130

Car Parks

	Residential	Visitor	Commercial	Motocycle	Bicycle
Basement (28)	27	0	1	0	7

P.O.S - Private open space

LXN

Architecture & Consulting

REVISIONS

Rev ID	Issue Name	Date
A	Client Review	22/7/20
B	Client Review	7/8/20
C	Client Review	24/9/20

PROJECT NAME
156 NTR

SITE
156 New Town Road

CLIENT
#Client Full Name

SCALE
@ A3

PROJECT NUMBER
A200101

DRAWING TITLE
AREA SCHEDULES

DRAWING
SD-09

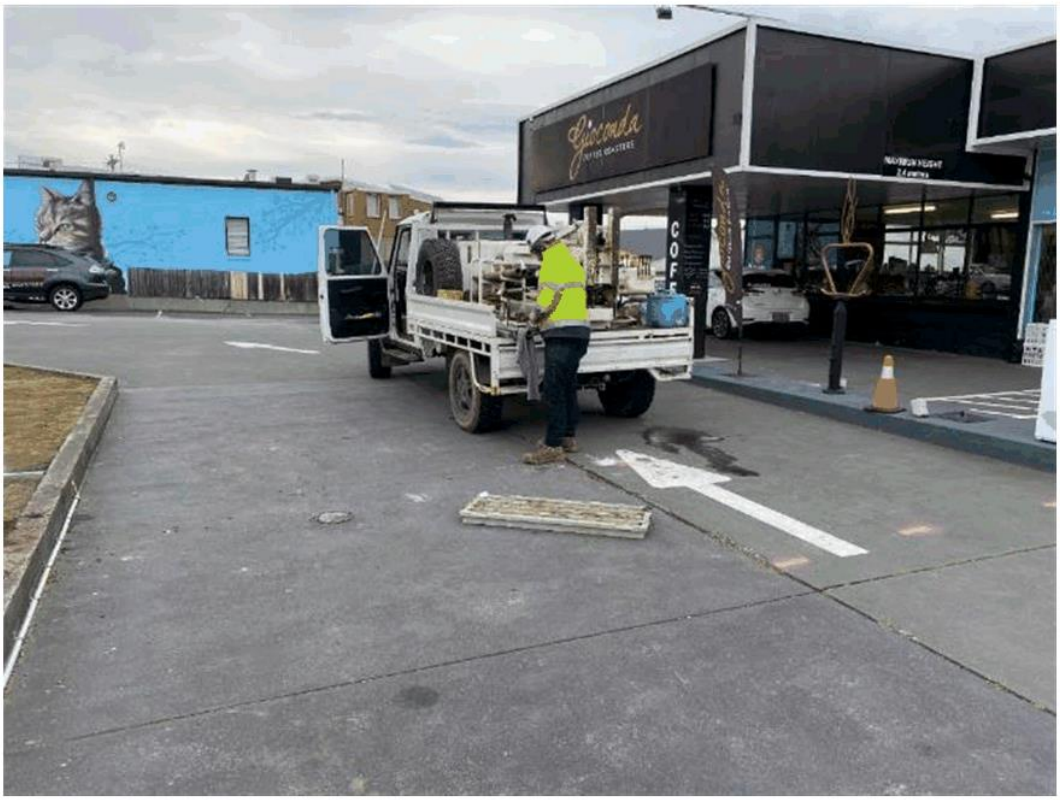
REVISION
C

FILE A200101_156 NTR_4.pln

DATE 26/8/20

Appendix 3 Site Photographs

LAUNDRY
156


Giacomo

"Fresh Today...Fresh Ice...Pure Water"
Takeaway
COFFEE

Appendix 4 Historical Aerial Photographs and Images

1946 – Source DPIPWE

1957 – Source DPIPWE

1969 – Source DPIPWE

1977 – Source DPIPWE

1980– Source DPIPWE

1989 – Source DPIPWE

October 2003 – Source Google Earth

March 2008 – Source Google Earth

January 2016 – Source Google Earth

April 2019 – Source Google Earth

Appendix 5 WorkSafe Tasmania Dangerous Goods Search

Search Results (Environmentally Relevant Activity)

Site ID: 215
Address: 156 New Town Rd
New Town 7008
File Number: B420
Held By: Workplace Standards Tasmania
File From: 1962 ***To:*** 1980
Location Status: Confirmed
PID: 5516671
Comments:
Activity:
Underground Storage Tank/s

Wednesday, 8 January 2020 *Page 1 of 1*

Search Results (Names Associated With Site)

Site ID: 215
Address: 156 New Town Rd
New Town 7008
File Number: B420
Held By: Workplace Standards Tasmania
File From: 1962 ***To:*** 1980
Location Status: Confirmed
PID: 5516671
Comments:
Names Associated With Site:
Boomerang Service Station
Shell
Albert William Walters

Wednesday, 8 January 2020 *Page 1 of 1*

File No. B420

DEPARTMENT OF MINES, TASMANIA

NAME OR SUBJECT: Boomerang Service Station
(A. G. Burton)

ADDRESS: 156 New Town Rd.

New Town

Doc/16/56305

Environmental Site Assessment: 156 New Town Road, New Town

34476 THE DANGEROUS GOODS ACT 1976 252 NAPP-199

DETAILS OF BULK STORAGE									INSTALLATIONS PENDING			
Approved	Pumps	Type	Tanks	Capacity	Total	Aggregate Storage	Company	Remarks	Approved	Installed	Company	Details
							Shell					

Package Storages:

CLASS A ..... kilolitres CLASS B ..... kilolitres ..... kg/tonnes

LICENSED QUANTITIES							LICENCES ISSUED					
Year	Class A	Class B	LPG	Fee $	c	Amended	Date	Year	Licence Number	Date	Year	Licence Number
74/75	25.00	2.28		22	00		19.5.71	79/80	6240			

Situation of Storage 156 New Town Rd.

Name: Boomerang S/ST. Address: 156 NEW TOWN ROAD, N/TOWN Ref No. B420

34476 THE DANGEROUS GOODS ACT 1976 NAPP-199

DETAILS OF BULK STORAGE									INSTALLATIONS PENDING			
Approved	Pumps	Type	Tanks	Capacity	Total	Aggregate Storage	Company	Remarks	Approved	Installed	Company	Details

Package Storages:

CLASS A ..... kilolitres CLASS B ..... kilolitres ..... kg/tonnes

LICENSED QUANTITIES							LICENCES ISSUED					
Year	Class A	Class B	LPG	Fee $	c	Amended	Date	Year	Licence Number	Date	Year	Licence Number

Environmental Site Assessment: 156 New Town Road, New Town

FORM 6

Inflammable Liquids Act 1929

RECEIVED - 7 DEC 1962
DEPT. OF MINES

APPLICATION FOR LICENCE IN RESPECT OF PREMISES FOR MANUFACTURE OF OR KEEPING INFLAMMABLE LIQUIDS OR DANGEROUS COMMODITIES

1. Applicant's Full Name ALBERT WILLIAM WATERS
2. Applicant's Occupation Service Station proprietor
3. Applicant's Postal Address 11 Hull St. Glenorchy
4. Situation of Premises to be Licensed 156 New Town Road
5. Name of Municipality and Town or Township within which, or within five miles of which, the Premises is situated New Town
6. Name and quantity to be manufactured / kept under this Application:—
   - Inflammable Liquid Class A (Petrol, &c.) 6,500
   - Inflammable Liquid Class B (Kerosene, &c.) 500.
   - Dangerous Commodity
7. Number of Tanks and ~~Package Storage Areas~~ under this Application 1x3,000, 1x3,000 & 2x500.
8. Name and Total Quantity to be kept:—
   - Inflammable Liquid Class A (Petrol, &c.) 6,500 (5,000 M/S 500 Pre-Mix).
   - Inflammable Liquid Class B (Kerosene, &c) 500 Kerosene
   - Dangerous Commodity —
9. Total Number of Tanks and ~~Package Storage Areas~~ installed 1x2,000 (~~[illegible]~~ not in use) 2x3,000 & 2x500.

I declare that the above statements and answers are true to the best of my knowledge and belief.

(Signed) A Waters

Dated this Sixth day of December, 1962

(This Application, with Licence Fee of ~~[illegible]~~ £11-0-0, to be forwarded to—
Director of Mines, Hobart)

(Scale of fees is shown on reverse hereof)

7257
28880
£11
7/12/62

SCALE OF FEES

Licence Fee for keeping Inflammable Liquids, Classes A and B:—

		£			£
	Up to 500 gallons	1	From	12,001 to 24,000 gallons	19
From	500 to 1,000 gallons	2	From	24,001 to 36,000 gallons	22
From	1,001 to 1,500 gallons	3	From	36,001 to 48,000 gallons	25
From	1,501 to 2,000 gallons	4	From	48,001 to 61,000 gallons	27
From	2,001 to 2,500 gallons	5	From	61,001 to 74,000 gallons	29
From	2,501 to 3,000 gallons	6	From	74,001 to 87,000 gallons	31
From	3,001 to 3,500 gallons	7	From	87,001 to 100,000 gallons	33
From	3,501 to 4,000 gallons	8	From	100,001 to 200,000 gallons	37
From	4,001 to 5,000 gallons	9	From	200,001 to 300,000 gallons	41
From	5,001 to 6,000 gallons	10	From	300,001 to 400,000 gallons	45
From	6,001 to 7,000 gallons	11	From	400,001 to 500,000 gallons	49
From	7,001 to 8,000 gallons	12	From	500,001 to 600,000 gallons	53
From	8,001 to 9,000 gallons	13	From	600,001 to 700,000 gallons	57
From	9,001 to 10,000 gallons	14	From	700,001 to 800,000 gallons	61
From	10,001 to 11,000 gallons	15	From	800,001 to 900,000 gallons	65
From	11,001 to 12,000 gallons	16			

every 300,000 gallons or part thereof in excess of 900,000 gallons £4

Department of Mines

Tasmania

Date 30 / 11 / 62.

MEMORNANDUM

For the Director of Mines, Hobart.
From the Inspector of Explosives,...Hobart.....

Record of Inspection of Installation

Premises of: Shell Oil Co. (Wiggins) 156 New Town Rd, Hobart.

Known as:

Oil Company: Shell.

Date of Approval: 31 Aug 62.

Date of inspection: 28/11/62

Finding: ~~Unsuitable~~ Suitable) for licensing

Pump Outfit ~~Package Storage Area~~:

Variation from Approval:

1 x 2000 gallon tank not in use.

Application Form: Left with occupier/~~Forwarded herewith.~~

Amount of Fee advised: Yes/~~No~~

.....

INSPECTOR OF EXPLOSIVES

(Regulation 78)

FORM 5

TASMANIA

Inflammable Liquids Act 1929 Nº 707

Fee, £1

Granted to The Shell Co of Aust. Ltd.,

Evans Street,

HOBART.

Approval of Site and Construction of Premises for Keeping Inflammable Liquids or Dangerous Commodities or the Alteration thereof.

Approval for the * ~~site and construction,/* alteration of the site and construction~~ as shown on he approved plans and specifications of a * ~~package storage area~~/* tank for the undermentioned inflammable liquids and dangerous commodities, subject to the provisions of the *Inflammable Liquids Act* 1929, and regulations being observed and subject to the undermentioned special con-tions, situate at 156 New Town Road, Hobart.

This approval is valid only for one year from the date of issue.

Date of issue 31st August, 19 62

Chief Inspector of Explosives.

Inspector of Explosives.

Inflammable liquid: Class A 8,500 Gallons.

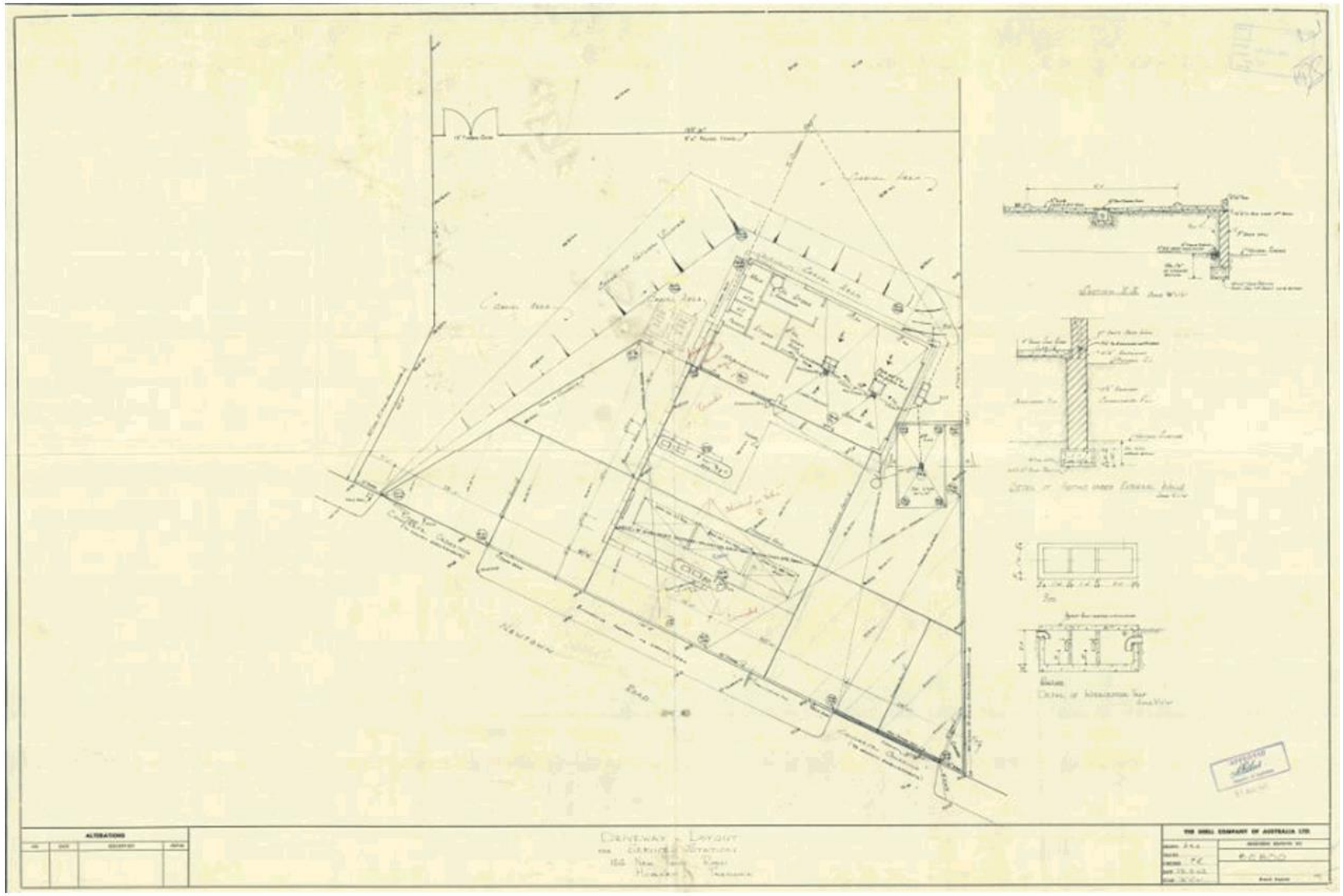
Class B 500 Gallons.

Dangerous commodities:

SPECIAL CONDITIONS.

2 x 3,000, 1 x 2,000 and 2 x 500 gallon U/G tanks connected to four S/E and 2 S/M pump.

* Strike out if inapplicable.



Appendix 6 Chain of Custody (COC) and Sample Receipt Notification (SRN)

ALS Environmental

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **EM2015530**

Client	: **GEO-ENVIRONMENTAL SOLUTIONS**	Laboratory	: Environmental Division Melbourne
Contact	: DR JOHN PAUL CUMMING	Contact	: Shirley LeCornu
Address	: 29 KIRKSWAY PLACE BATTERY POINT TASMANIA, AUSTRALIA 7004	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: jcumming@geosolutions.net.au	E-mail	: shirley.lecornu@Alsglobal.com
Telephone	: +61 03 6223 1839	Telephone	: +6138549 9630
Facsimile	: +61 03 6223 4539	Facsimile	: +61-3-8549 9626
Project	: New Town	Page	: 1 of 3
Order number	: ----	Quote number	: EB2017GEOENVSOL0001 (EN/222)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: JPC		

Dates

Date Samples Received	: 09-Sep-2020 13:30	Issue Date	: 09-Sep-2020
Client Requested Due Date	: 16-Sep-2020	Scheduled Reporting Date	: **16-Sep-2020**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Intact.
No. of coolers/boxes	: 2	Temperature	: 5.3°C - Ice Bricks present
Receipt Detail	:	No. of samples received / analysed	: 15 / 15

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Please direct any queries related to sample condition / numbering / breakages to Client Services.**
- Sample Disposal - Aqueous (3 weeks), Solid (2 months) from receipt of samples.
- **Analytical work for this work order will be conducted at ALS Springvale.**
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

RIGHT SOLUTIONS | RIGHT PARTNER

Issue Date	: 09-Sep-2020
Page	: 2 of 3
Work Order	: EM2015530 Amendment 0
Client	: GEO-ENVIRONMENTAL SOLUTIONS

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exists.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	Client sampling date / time	Client sample ID	SOIL - EA055-103 Moisture Content	SOIL - S-03 15 Metals (NEPM 2013 Suite - incl. Digestion)	SOIL - S-21 TRHBTEXNPAH + Pb
EM2015530-001	02-Sep-2020 00:00	BH1 0.5-0.6	✓		✓
EM2015530-002	02-Sep-2020 00:00	BH1 1.5-1.6	✓		✓
EM2015530-003	02-Sep-2020 00:00	BH2 0.5-0.6	✓	✓	✓
EM2015530-004	02-Sep-2020 00:00	BH2 1.5-1.6	✓	✓	✓
EM2015530-005	02-Sep-2020 00:00	BH3 0.5-0.6	✓		✓
EM2015530-006	02-Sep-2020 00:00	BH3 1.5-1.6	✓		✓
EM2015530-007	02-Sep-2020 00:00	BH4 0.5-0.6	✓		✓
EM2015530-008	02-Sep-2020 00:00	BH4 1.5-1.6	✓		✓
EM2015530-009	02-Sep-2020 00:00	BH5 0.5-0.6	✓		✓
EM2015530-010	02-Sep-2020 00:00	BH5 1.5-1.6	✓		✓
EM2015530-011	02-Sep-2020 00:00	BH6 0.5-0.6	✓		✓
EM2015530-012	02-Sep-2020 00:00	BH7 0.85-0.95	✓		✓
EM2015530-013	02-Sep-2020 00:00	BH7 1.5-1.6	✓		✓
EM2015530-014	02-Sep-2020 00:00	Duplicate	✓		✓

Matrix: **WATER**

Laboratory sample ID	Client sampling date / time	Client sample ID	WATER - W-21 TRHBTEXNPAHFiltered Pb
EM2015530-015	02-Sep-2020 00:00	Rinsate	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Issue Date	: 09-Sep-2020
Page	: 3 of 3
Work Order	: EM2015530 Amendment 0
Client	: GEO-ENVIRONMENTAL SOLUTIONS

Requested Deliverables

JOHN PAUL CUMMING		
- *AU Certificate of Analysis - NATA (COA)	Email	jcumming@geosolutions.net.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	jcumming@geosolutions.net.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	jcumming@geosolutions.net.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	jcumming@geosolutions.net.au
- A4 - AU Tax Invoice (INV)	Email	jcumming@geosolutions.net.au
- Chain of Custody (CoC) (COC)	Email	jcumming@geosolutions.net.au
- EDI Format - ENMRG (ENMRG)	Email	jcumming@geosolutions.net.au
- EDI Format - ESDAT (ESDAT)	Email	jcumming@geosolutions.net.au
- EDI Format - XTab (XTAB)	Email	jcumming@geosolutions.net.au
M IRAN		
- A4 - AU Tax Invoice (INV)	Email	miran@geosolutions.net.au
SARAH JOYCE		
- *AU Certificate of Analysis - NATA (COA)	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
- Chain of Custody (CoC) (COC)	Email	sjoyce@geosolutions.net.au
- EDI Format - ENMRG (ENMRG)	Email	sjoyce@geosolutions.net.au
- EDI Format - ESDAT (ESDAT)	Email	sjoyce@geosolutions.net.au
- EDI Format - XTab (XTAB)	Email	sjoyce@geosolutions.net.au

Environmental Site Assessment: 156 New Town Road, New Town

CHAIN OF CUSTODY

ALS Laboratory: please tick →

CLIENT:	Geoenvironmental Solutions
OFFICE:	29 Kirksway Place, Battery Point, 7004
PROJECT:	New Town
ORDER NUMBER:	
PROJECT MANAGER:	JP Cumming
SAMPLER:	JPC
COC emailed to ALS? (YES / NO)	
Email Reports to:	sjoyce@geosolutions.net.au jcumming@geosolutions.net.au
Email Invoice to:	jcumming@geosolutions.net.au; miran@geosolutions.net.au, sjoyce@geosolutions.net.au

TURNAROUND REQUIREMENTS: (Standard TAT may be longer for some tests e.g. Ultra Trace Organics)
★ Standard TAT (List due date):
☐ Non Standard or urgent TAT (List due date):

ALS QUOTE NO.: N/A

CONTACT PH: ~~0438250259~~ 0413 541 931

SAMPLER MOBILE:

EDD FORMAT (or default):

COC SEQUENCE NUMBER (Circle): 1 2 3 4 5 6 7 / 1 2 3 4 5 6 7

RELINQUISHED BY: JP Cumming DATE/TIME: 8/9/20 1pm

RECEIVED BY: DATE/TIME:

RELINQUISHED BY: DATE/TIME:

RECEIVED BY: Marvin DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	TPH/BTEX/PAH + Pb		15 metals						
1	BH1 0.5-0.6	2/2/20	Soil	Jar	1	✓								
2	BH1 1.5-1.6				1	✓		✓						
3	BH2 0.5-0.6				1	✓		✓						
4	BH2 1.5-1.6				1	✓								
5	BH3 0.5-0.6				1	✓								
6	BH3 1.5-1.6				1	✓								
7	BH4 0.5-0.6				1	✓								
8	BH4 1.5-1.6				1	✓								
9	BH5 0.5-0.6				1	✓								
10	BH5 1.5-1.6				1	✓								
11	BH6 0.5-0.6				1	✓								
12	BH7 0.85				1	✓								
				TOTAL	12									

Additional Information: Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.

Environmental Division Melbourne
Work Order Reference
EM2015530
Telephone : +61-3-8549 9600

Received: 9/9 13:30 Carrier: TAS FAST
C/note: 826363
Temp: 5.3 °C Seal: Y/N
Ice / Icebrick / NA

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic; V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag

Environmental Site Assessment: 156 New Town Road, New Town

ALS Environmental

BRISBANE 32 Shand Street Stafford QLD 4053 Ph: 07 3243 7222 E: samples.brisbane@alsglobal.com
GLADSTONE 46 Callemondah Drive Clinton QLD 4680 Ph: 07 4971 9600 E: gladstone@alsglobal.com
DARWIN 27 Sydney Road Manoora NSW 2650 Ph: 02 6372 6735 E: mudgee.mail@alsglobal.com
MELBOURNE 2-4 Westall Road Springvale VIC 3171 Ph: 03 8549 9600 E: samples.melbourne@alsglobal.com
PERTH 10 Hod Way Malaga WA 6090 Ph: 08 9250 2555 E: samples.perth@alsglobal.com
SYDNEY 277-289 Woodpark Road Smithfield NSW 2164 Ph: 02 8784 8555 E: samples.sydney@alsglobal.com
TOWNSVILLE 14-15 Desiree Court Bohle QLD 4818 Ph: 07 4796 0600 E: townsville.environmental@alsglobal.com
WOLLONGONG 99 Kenny Street Wollongong NSW 2500 Ph: 02 4225 3125 E: wollongong@alsglobal.com

CLIENT:	GEOENVIRONMENTAL SOLUTIONS	TURNAROUND REQUIREMENTS: (Standard TAT may be longer for some tests e.g. Ultra Trace Organics)	★ Standard TAT (List due date): ☐ Non Standard or urgent TAT (List due date):
OFFICE:	29 Kirksway Pl, Battery Point TAS 7004	ALS QUOTE NO.:	COC SEQUENCE NUMBER (Circle) COC: 1 2 3 4 5 6 7 SOF: 1 2 3 4 5 6 7
PROJECT	new town		
ORDER NUMBER:			
PROJECT MANAGER:	JP Cumming	CONTACT PH:	
SAMPLER:	Sarah Joyce	SAMPLER MOBILE: 0438 255 259	
COC emailed to ALS? (YES / NO)		EDD FORMAT: default plus AECOM EDAT EDD	
Email Reports to	jcumming@geosolutions.net.au; sjoyce@geosolutions.net.au		
Email Invoice to	jcumming@geosolutions.net.au; mram@geosolutions.net.au, sjoyce@geosolutions.net.au		

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
JPC			MRam
DATE/TIME: 8/8/22	DATE/TIME:	DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).

LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	TPH, BTEXN, PAH, Metals (Suite Code)	Tas EPA LB139 (Suite Code)	TOC (Suite Code)	TPH C6-C10	OCOC	Additional Information
13	BH7 1.5-1.6	2/8/22	Soil	Jar	1	✓					Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
14	Replicate			"	1	✓					
15	rinsate		Water	1 AG, 2 SAV, 1 P	4						
					6						
					7						
					12						
					18						
				TOTAL							

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

Environmental Site Assessment: 156 New Town Road, New Town

Appendix 7 Quality Assurance and Quality Control

Duplicate Comparrison	Sample	Lead	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benz(a)anthracene	Chrysene	Benzo(b+j)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3,cd)pyrene	Dibenz(a,h)anthracene	Benzo(g,h,i)perylene	Sum of polycyclic aromatic hydr	Benzo(a)pyrene TEQ (WHO)	Benzene	Toluene	Ethylbenzene	meta & para-Xylene	ortho-Xylene	Sum of BTEX	Total Xylenes	Naphthalene	C6 - C9 Fraction	C10 - C14 Fraction	C15 - C28 Fraction	C29 - C36 Fraction	C10 - C36 Fraction (sum)	C6 - C9 Fraction	F1	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	>C10 - C40 Fraction (sum)	F2	Benzo(a)pyrene TEQ (NEPM)	Benzo(a)pyrene TEQ (LOR)
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	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	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.5	0.5	0.5	0.5	0.2	0.5	1	10	50	100	100	50	10	10	50	100	100	50	50	0.5	0.5
2/09/2020	Duplicate	463	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	1.9	2.1	1.4	1.2	2	0.8	2	1	<0.5	1.4	14.4	2.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<1	<10	<50	<100	<100	<50	<10	<10	<50	160	<100	160	<50	2.8	3
2/09/2020	BH1 0.5-0.6	718	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	1.8	2.1	1.2	1	2	0.8	2	1.1	<0.5	1.5	14	2.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.2	<0.5	<1	<10	<50	250	200	450	<10	<10	<50	370	<100	370	<50	2.8	3
Relative Percentage Difference (RPD) %		43.2	NA	NA	NA	NA	18.2	NA	5.4	0.0	15.4	18.2	0.0	0.0	0.0	9.5	NA	6.9	2.8	0.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	79.2	NA	79.2	NA	0.0	0.0
RPD Compliance Limit %		15	NA	NA	NA	NA	NA	NA	50	50	50	50	50	NA	50	50	NA	50	80	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	50	NA	NA	NA	50	NA	50	NA	50	50
Method Detection Limit (MDL)		>500	NA	NA	NA	NA	NA	NA	10	10	10	10	10	NA	10	10	NA	10	50	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1000	NA	NA	NA	2000	NA	1000	NA	10	10
MDL Class		HIGH	NONE	NONE	NONE	NONE	NONE	NONE	LOW	LOW	LOW	LOW	LOW	NONE	LOW	LOW	NONE	LOW	MED	LOW	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	LOW	NONE	NONE	NONE	LOW	NONE	LOW	NONE	LOW	LOW
RPD Compliance With MDL?	38/42 (90%)	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	NO	YES	NO	YES	YES	YES

***Footnote: For Duplicate and BH1 0.5-0.6 pairs, 90% of analytes complied. Non compliances include: an RPD of 43% for Lead where <15% was expected; Inconsistent Detection for C10 - C36 Fraction (sum) an RPD of 79% for >C16 - C34 Fraction where <50% was expected; an RPD of 79% for >C10 - C40 Fraction (sum) where <50% was expected;**

Quality Control Blanks		Lead	Benzene	Toluene	Ethylbenzene	meta- & para-Xylene	ortho-Xylene	Total Xylenes	Sum of BTEX	Naphthalene	C6 - C9 Fraction	C10 - C14 Fraction	C15 - C28 Fraction	C29 - C36 Fraction	C10 - C36 Fraction (sum)	C6 - C10 Fraction	C6 - C10 Fraction minus BTEX (F1)	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction	>C10 - C40 Fraction (sum)	>C10 - C16 Fraction minus Naphthalene (F2)	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benz(a)anthracene	Chrysene	Benzo(b+j)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3,cd)pyrene	Dibenz(a,h)anthracene	Benzo(g,h,i)perylene	Sum of polycyclic aromatic hydrocarbons	Benzo(a)pyrene TEQ (zero)
Unit		mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR		0.001	1	2	2	2	2	2	1	5	20	50	100	50	50	20	20	100	100	100	100	100	1	1	1	1	1	1	1	1	1	1	1	0.5	1	1	1	0.5	0.5
Date	Sample																																							
2/09/2020	Rinsate	<0.001	<1	<2	<2	<2	<2	<2	<1	<5	<20	<50	<100	<50	<50	<20	<20	<100	<100	<100	<100	<100	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0	<0.5	<0.5

ALS Environmental

QUALITY CONTROL REPORT

Work Order	: EM2015530	Page	: 1 of 11
Client	: GEO-ENVIRONMENTAL SOLUTIONS	Laboratory	: Environmental Division Melbourne
Contact	: DR JOHN PAUL CUMMING	Contact	: Shirley LeCornu
Address	: 29 KIRKSWAY PLACE BATTERY POINT TASMANIA, AUSTRALIA 7004	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: +61 03 6223 1839	Telephone	: +6138549 9630
Project	: New Town	Date Samples Received	: 09-Sep-2020
Order number	: ----	Date Analysis Commenced	: 09-Sep-2020
C-O-C number	: ----	Issue Date	: 15-Sep-2020
Sampler	: JPC		
Site	: ----		
Quote number	: EN/222		
No. of samples received	: 15		
No. of samples analysed	: 15		

ilac-MRA NATA

Accreditation No. 825
Accredited for compliance with ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This 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
Diani Fernando	Senior Inorganic Chemist	Melbourne Inorganics, Springvale, VIC
Xing Lin	Senior Organic Chemist	Melbourne Organics, Springvale, VIC

RIGHT SOLUTIONS | RIGHT PARTNER

ALS

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the 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 for.
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-EN/38 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 sample ID	Client sample ID	Analyte/ Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report: Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 3251145)									
EM2015530-010	BH5 1.5-1.6	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	150	150	6.61	0% - 50%
		EG005T: Chromium	7440-47-3	2	mg/kg	7	7	0.00	No Limit
		EG005T: Cobalt	7440-48-4	2	mg/kg	7	7	0.00	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	11	12	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	<5	<5	0.00	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	11	13	14.0	No Limit
		EG005T: Manganese	7439-96-5	5	mg/kg	77	81	4.53	0% - 50%
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Vanadium	7440-62-2	5	mg/kg	12	12	0.00	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	46	46	0.00	No Limit
		EG005T: Boron	7440-42-8	50	mg/kg	<50	<50	0.00	No Limit
EM2015530-003	BH2 0.9-0.6	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	4	4	0.00	No Limit
		EG005T: Barium	7440-39-3	10	mg/kg	80	70	15.1	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	10	13	29.7	No Limit
		EG005T: Cobalt	7440-48-4	2	mg/kg	6	8	26.6	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	11	15	32.4	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	6	5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	47	52	9.99	0% - 50%
		EG005T: Lead	7439-92-1	5	mg/kg	804	798	0.697	0% - 20%
		EG005T: Manganese	7439-96-5	5	mg/kg	188	228	19.0	0% - 20%
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.00	No Limit

Environmental Site Assessment: 156 New Town Road, New Town

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Work Order: EM2015530
Client: GEO-ENVIRONMENTAL SOLUTIONS
Project: New Town

Sub-Matrix: SOIL

Laboratory sample ID	Client sample ID	Method / Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report: Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 3251145) - continued									
EM2015530-003	BH2 0.5-0.6	EG005T: Vanadium	7440-62-2	5	mg/kg	27	37	31.8	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	260	260	3.60	0% - 20%
		EG005T: Boron	7440-42-8	50	mg/kg	<50	<50	0.00	No Limit
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 3246612)									
EM2015500-005	Anonymous	EA055: Moisture Content	---	0.1	%	28.5	31.9	11.2	0% - 20%
EM2015530-005	BH3 0.5-0.6	EA055: Moisture Content	---	0.1	%	22.3	21.8	2.20	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3251148)									
EM2015530-003	BH2 0.5-0.6	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: 3253362)									
EM2015530-001	BH1 0.5-0.6	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	1.0	85.5	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	1.9	2.7	40.7	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	2.1	2.8	28.9	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	1.2	1.4	14.9	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	1.0	1.2	12.9	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	2.0	2.0	0.00	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	0.8	0.8	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	2.0	1.9	0.00	No Limit
		EP075(SIM): Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	1.1	1.1	0.00	No Limit
		EP075(SIM): Dibenz(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	1.5	1.5	0.00	No Limit
EM2015530-011	BH8 0.5-0.6	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+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		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

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Work Order: EM2015530
Client: GEO-ENVIRONMENTAL SOLUTIONS
Project: New Town

Sub-Matrix: SOIL

Laboratory sample ID	Client sample ID	Method / Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report: Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3253362) - continued									
EM2015530-011	BH8 0.5-0.6	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): Dibenz(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
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3248462)									
EM2015388-003	Anonymous	EP080: C6 - C9 Fraction	---	10	mg/kg	<10	<10	0.00	No Limit
EM2015530-005	BH3 0.5-0.6	EP080: C6 - C9 Fraction	---	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3253363)									
EM2015530-001	BH1 0.5-0.6	EP071: C15 - C28 Fraction	---	100	mg/kg	230	<100	77.8	No Limit
		EP071: C29 - C36 Fraction	---	100	mg/kg	200	<100	64.9	No Limit
		EP071: C10 - C14 Fraction	---	50	mg/kg	<50	<50	0.00	No Limit
		EP071: C10 - C36 Fraction (sum)	---	50	mg/kg	430	<50	158	No Limit
EM2015530-011	BH8 0.5-0.6	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 Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3248462)									
EM2015388-003	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
EM2015530-005	BH3 0.5-0.6	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: 3253363)									
EM2015530-001	BH1 0.5-0.6	EP071: >C16 - C34 Fraction	---	100	mg/kg	370	100	113	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	370	100	115	No Limit
EM2015530-011	BH8 0.5-0.6	EP071: >C16 - C34 Fraction	---	100	mg/kg	120	<100	20.8	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	120	<50	82.4	No Limit
EP080: BTEXN (QC Lot: 3248462)									
EM2015388-003	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	108-38-3 106-42-3	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
EM2015530-005	BH3 0.5-0.6	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

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Work Order EM2015530
Client GEO-ENVIRONMENTAL SOLUTIONS
Project New Town

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: BTEXN (QC Lot: 3248482) - continued									
EM2015530-005	BH3 2.5-0.6	EP080: meta- & para-Xylene	108-38-3 106-42-3	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

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
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: 3248526)									
EM2015235-001	Anonymous	EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.00	No Limit
EM2015520-003	Anonymous	EG020A-F: Lead	7439-92-1	0.001	mg/L	0.002	<0.001	0.00	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3247879)									
EM2015535-002	Anonymous	EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Naphthalene	91-20-3	1	µg/L	<1.0	<1.0	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	1	µg/L	<1.0	<1.0	0.00	No Limit
		EP075(SIM): Acenaphthene	83-32-9	1	µg/L	<1.0	<1.0	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	1	µg/L	<1.0	<1.0	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	1	µg/L	<1.0	<1.0	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	1	µg/L	<1.0	<1.0	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	1	µg/L	<1.0	<1.0	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	1	µg/L	<1.0	<1.0	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	1	µg/L	<1.0	<1.0	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	1	µg/L	<1.0	<1.0	0.00	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	1	µg/L	<1.0	<1.0	0.00	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	1	µg/L	<1.0	<1.0	0.00	No Limit
		EP075(SIM): Indeno(1,2,3-cd)pyrene	193-39-5	1	µg/L	<1.0	<1.0	0.00	No Limit
		EP075(SIM): Dibenz(a,h)anthracene	53-70-3	1	µg/L	<1.0	<1.0	0.00	No Limit
		EP075(SIM): Benzo(g,h,i)perylene	191-24-2	1	µg/L	<1.0	<1.0	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3247512)									
EM2015518-001	Anonymous	EP080: C6 - C9 Fraction	---	20	µg/L	<20	<20	0.00	No Limit
EM2015512-001	Anonymous	EP080: C6 - C9 Fraction	---	20	µg/L	<20	<20	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3247876)									
EM2015551-003	Anonymous	EP071: C15 - C28 Fraction	---	100	µg/L	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	---	50	µg/L	<50	<50	0.00	No Limit
		EP071: C29 - C36 Fraction	---	50	µg/L	<50	<50	0.00	No Limit
EM2015535-002	Anonymous	EP071: C15 - C28 Fraction	---	100	µg/L	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	---	50	µg/L	<50	<50	0.00	No Limit
		EP071: C29 - C36 Fraction	---	50	µg/L	<50	<50	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3247512)									
EM2015518-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.00	No Limit

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Work Order EM2015530
Client GEO-ENVIRONMENTAL SOLUTIONS
Project New Town

Sub-Matrix: WATER				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 Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3247512) - continued									
EM2015512-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3247876)									
EM2015551-003	Anonymous	EP071: >C10 - C16 Fraction	---	100	µg/L	<100	<100	0.00	No Limit
		EP071: >C16 - C34 Fraction	---	100	µg/L	<100	<100	0.00	No Limit
		EP071: >C34 - C40 Fraction	---	100	µg/L	<100	<100	0.00	No Limit
EM2015535-002	Anonymous	EP071: >C10 - C16 Fraction	---	100	µg/L	<100	<100	0.00	No Limit
		EP071: >C16 - C34 Fraction	---	100	µg/L	<100	<100	0.00	No Limit
		EP071: >C34 - C40 Fraction	---	100	µg/L	<100	<100	0.00	No Limit
EP080: BTEXN (QC Lot: 3247512)									
EM2015518-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.00	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.00	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.00	No Limit
EM2015512-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.00	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.00	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.00	No Limit

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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	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 3255145)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	100	78.5	107
EG005T: Barium	7440-39-3	10	mg/kg	<10	143 mg/kg	92.1	76.4	110
EG005T: Beryllium	7440-41-7	1	mg/kg	<1	5.63 mg/kg	100	85.4	114
EG005T: Boron	7440-42-8	50	mg/kg	<50	33.2 mg/kg	110	64.4	126
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	94.0	76.2	106
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	99.5	77.2	110
EG005T: Cobalt	7440-48-4	2	mg/kg	<2	16 mg/kg	97.1	78.1	112
EG005T: Copper	7440-50-8	5	mg/kg	<5	32 mg/kg	99.4	78.1	108
EG005T: Lead	7439-92-1	5	mg/kg	<5	40 mg/kg	104	78.4	106
EG005T: Manganese	7439-96-5	5	mg/kg	<5	130 mg/kg	100.0	80.8	110
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55 mg/kg	105	79.9	109
EG005T: Selenium	7782-49-2	5	mg/kg	<5	5.37 mg/kg	105	92.0	110
EG005T: Vanadium	7440-62-2	5	mg/kg	<5	29.6 mg/kg	95.9	76.5	106
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	110	79.1	110
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3251146)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.67 mg/kg	88.7	76.9	110
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3253362)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	3 mg/kg	114	84.6	128
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	3 mg/kg	112	76.9	127
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	3 mg/kg	113	85.3	128
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	3 mg/kg	110	82.1	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	3 mg/kg	114	85.4	133
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	3 mg/kg	117	88.7	136
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	3 mg/kg	115	83.4	136
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	3 mg/kg	119	85.1	140
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	3 mg/kg	107	82.7	130
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	3 mg/kg	120	85.2	141
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	3 mg/kg	102	68.5	120
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	3 mg/kg	126	80.1	132
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	3 mg/kg	# 122	67.4	120
EP075(SIM): Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	3 mg/kg	105	66.0	126
EP075(SIM): Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	3 mg/kg	101	65.4	127
EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	3 mg/kg	105	67.8	127

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Sub-Matrix: SOIL

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3248462)								
EP080: C6 - C9 Fraction	---	10	mg/kg	<10	35 mg/kg	94.2	41.2	127
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3253363)								
EP071: C10 - C14 Fraction	---	50	mg/kg	<50	900 mg/kg	97.2	71.8	129
EP071: C15 - C28 Fraction	---	100	mg/kg	<100	3030 mg/kg	100	83.9	125
EP071: C29 - C36 Fraction	---	100	mg/kg	<100	1520 mg/kg	95.5	77.9	119
EP071: C10 - C36 Fraction (sum)	---	50	mg/kg	<50	---	---	---	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3248462)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	45 mg/kg	95.3	58.5	125
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3253363)								
EP071: >C10 - C16 Fraction	---	50	mg/kg	<50	1160 mg/kg	96.6	72.2	128
EP071: >C16 - C34 Fraction	---	100	mg/kg	<100	4020 mg/kg	96.0	82.1	122
EP071: >C34 - C40 Fraction	---	100	mg/kg	<100	280 mg/kg	104	55.1	131
EP071: >C10 - C40 Fraction (sum)	---	50	mg/kg	<50	---	---	---	---
EP080: BTEXN (QCLot: 3248462)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	2 mg/kg	82.9	62.7	119
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	2 mg/kg	84.8	66.8	126
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2 mg/kg	82.8	66.3	124
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	4 mg/kg	86.4	67.5	128
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2 mg/kg	87.1	73.0	128
EP080: Naphthalene	91-20-3	1	mg/kg	<1	0.5 mg/kg	93.9	61.2	129

Sub-Matrix: WATER

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG020F: Dissolved Metals by ICP-MS (QCLot: 3249326)								
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	95.3	84.0	107
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3247879)								
EP075(SIM): Naphthalene	91-20-3	1	µg/L	<1.0	5 µg/L	90.6	41.1	116
EP075(SIM): Acenaphthylene	208-96-8	1	µg/L	<1.0	5 µg/L	94.7	47.2	121
EP075(SIM): Acenaphthene	83-32-9	1	µg/L	<1.0	5 µg/L	94.2	47.3	118
EP075(SIM): Fluorene	86-73-7	1	µg/L	<1.0	5 µg/L	94.3	49.4	121
EP075(SIM): Phenanthrene	85-01-8	1	µg/L	<1.0	5 µg/L	98.9	52.5	124
EP075(SIM): Anthracene	120-12-7	1	µg/L	<1.0	5 µg/L	98.1	52.3	125
EP075(SIM): Fluoranthene	206-44-0	1	µg/L	<1.0	5 µg/L	97.6	52.4	127
EP075(SIM): Pyrene	129-00-0	1	µg/L	<1.0	5 µg/L	97.3	51.3	130
EP075(SIM): Benz(a)anthracene	56-55-3	1	µg/L	<1.0	5 µg/L	101	50.0	130
EP075(SIM): Chrysene	218-01-9	1	µg/L	<1.0	5 µg/L	101	49.6	131

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Sub-Matrix: WATER

Method / Compound	CAS Number	LOR	Unit	Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low	Recovery Limits (%) High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3247875) - continued								
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	1	µg/L	<1.0	5 µg/L	105	51.5	132
EP075(SIM): Benzo(k)fluoranthene	207-08-9	1	µg/L	<1.0	5 µg/L	102	54.0	131
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	5 µg/L	104	52.3	133
EP075(SIM): Indeno(1,2,3-cd)pyrene	193-39-5	1	µg/L	<1.0	5 µg/L	107	50.4	127
EP075(SIM): Dibenz(a,h)anthracene	53-70-3	1	µg/L	<1.0	5 µg/L	107	50.0	127
EP075(SIM): Benzo(g,h,i)perylene	191-24-2	1	µg/L	<1.0	5 µg/L	108	50.8	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3247512)								
EP080: C6 - C9 Fraction	—	20	µg/L	<20	360 µg/L	97.9	65.9	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3247876)								
EP071: C10 - C14 Fraction	—	50	µg/L	<50	3330 µg/L	81.4	44.8	125
EP071: C15 - C28 Fraction	—	100	µg/L	<100	16500 µg/L	78.1	51.3	135
EP071: C29 - C36 Fraction	—	50	µg/L	<50	7800 µg/L	77.8	49.4	134
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3247512)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	450 µg/L	98.9	64.3	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3247876)								
EP071: >C10 - C16 Fraction	—	100	µg/L	<100	5690 µg/L	72.9	47.3	129
EP071: >C16 - C34 Fraction	—	100	µg/L	<100	20700 µg/L	78.9	50.4	133
EP071: >C34 - C40 Fraction	—	100	µg/L	<100	1510 µg/L	83.0	45.2	136
EP080: BTEXN (QCLot: 3247512)								
EP080: Benzene	71-43-2	1	µg/L	<1	30 µg/L	97.4	69.0	126
EP080: Toluene	108-88-3	2	µg/L	<2	30 µg/L	99.5	73.0	126
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	30 µg/L	101	72.0	126
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	40 µg/L	103	71.5	132
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	20 µg/L	106	76.5	132
EP080: Naphthalene	91-20-3	5	µg/L	<5	5 µg/L	102	70.5	127

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an laboratory 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

Laboratory sample ID	Client sample ID	Method / Compound	CAS Number	Matrix Spike (MS) Report Spike Concentration	Spike Recovery (%) MS	Recovery Limits (%) Low	Recovery Limits (%) High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 3251146)							
EM2015530-004	BH2 1.5-1.6	EG005T: Lead	7439-92-1	250 mg/kg	101	90.0	120
EM2015530-004	BH2 1.5-1.6	EG005T: Arsenic	7440-38-2	50 mg/kg	92.6	78.0	124

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Sub-Matrix: SOIL

Laboratory sample ID	Client sample ID	Method / Compound	CAS Number	Matrix Spike (MS) Report Spike Concentration	Spike Recovery (%) MS	Recovery Limits (%) Low	Recovery Limits (%) High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 3251146) - continued							
EM2015530-004	BH2 1.5-1.6	EG005T: Cadmium	7440-43-9	50 mg/kg	92.8	84.0	116
		EG005T: Chromium	7440-47-3	50 mg/kg	87.1	79.0	121
		EG005T: Copper	7440-50-8	250 mg/kg	86.2	80.0	120
		EG005T: Nickel	7440-02-0	50 mg/kg	87.8	78.0	120
		EG005T: Zinc	7440-66-6	250 mg/kg	89.4	80.0	120
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3251146)							
EM2015530-004	BH2 1.5-1.6	EG035T: Mercury	7439-97-6	0.5 mg/kg	81.2	76.0	116
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3253362)							
EM2015530-002	BH1 1.5-1.6	EP075(SIM): Acenaphthene	83-32-9	3 mg/kg	101	67.0	117
		EP075(SIM): Pyrene	129-00-0	3 mg/kg	109	52.0	148
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3249462)							
EM2015530-001	BH1 0.5-0.6	EP080: C6 - C9 Fraction	—	25 mg/kg	75.0	42.0	131
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3253363)							
EM2015530-003	BH2 0.5-0.6	EP071: C10 - C14 Fraction	—	900 mg/kg	93.8	53.0	123
		EP071: C15 - C28 Fraction	—	3030 mg/kg	103	70.0	124
		EP071: C29 - C36 Fraction	—	1520 mg/kg	# 125	54.0	116
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3249462)							
EM2015530-001	BH1 0.5-0.6	EP080: C6 - C10 Fraction	C6_C10	33 mg/kg	74.7	39.0	129
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3253363)							
EM2015530-003	BH2 0.5-0.6	EP071: >C10 - C16 Fraction	—	1160 mg/kg	95.8	65.0	123
		EP071: >C16 - C34 Fraction	—	4030 mg/kg	106	67.0	121
		EP071: >C34 - C40 Fraction	—	280 mg/kg	# 253	44.0	126
EP080: BTEXN (QCLot: 3249462)							
EM2015530-001	BH1 0.5-0.6	EP080: Benzene	71-43-2	2 mg/kg	90.7	50.0	136
		EP080: Toluene	108-88-3	2 mg/kg	94.0	56.0	139

Sub-Matrix: WATER

Laboratory sample ID	Client sample ID	Method / Compound	CAS Number	Matrix Spike (MS) Report Spike Concentration	Spike Recovery (%) MS	Recovery Limits (%) Low	Recovery Limits (%) High
EG020F: Dissolved Metals by ICP-MS (QCLot: 3246526)							
EM2015236-001	Anonymous	EG020A-F: Lead	7439-92-1	0.2 mg/L	109	75.0	133
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3247875)							
EM2015551-002	Anonymous	EP075(SIM): Acenaphthene	83-32-9	5 µg/L	82.4	42.0	122
		EP075(SIM): Pyrene	129-00-0	5 µg/L	85.6	40.0	136
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3247512)							
EM2015512-002	Anonymous	EP080: C6 - C9 Fraction	—	280 µg/L	51.2	43.0	125

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Sub-Matrix: WATER

				Matrix Spike (MS) Report			
				Spike	Spike Recovery (%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3247512)							
EM2015512-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	350 µg/L	54.4	44.0	122
EP080: BTEXN (QCLot: 3247512)							
EM2015512-002	Anonymous	EP080: Benzene	71-43-2	20 µg/L	68.6	68.0	130
		EP080: Toluene	108-88-3	20 µg/L	75.3	72.0	132

ALS 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	: +61386549 9630
Project	: New Town	Date Samples Received	: 09-Sep-2020
Site	: ----	Issue Date	: 15-Sep-2020
Sampler	: JPC	No. of samples received	: 15
Order number	: ----	No. of samples analysed	: 15

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **Laboratory Control outliers exist - please see following pages for full details.**
- **Matrix Spike outliers exist - please see following pages for full details.**
- **For all regular sample matrices, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **NO Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

- **Quality Control Sample Frequency Outliers exist - please see following pages for full details.**

RIGHT SOLUTIONS | RIGHT PARTNER

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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	Data	Limits	Comment
Laboratory Control Spike (LCS) Recoveries							
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons	QC-1053312-001	---	**Benzo(a)pyrene**	50-32-8	122 %	67.4-120%	**Recovery greater than upper control limit**
Matrix Spike (MS) Recoveries							
EP080/071: Total Petroleum Hydrocarbons	EM2015530-003	BH2 0.5-0.6	**C29 - C36 Fraction**	---	125 %	64.0-118%	**Recovery greater than upper data quality objective**
EP080/071: Total Recoverable Hydrocarbons - NEPM 2	EM2015530-003	BH2 0.5-0.6	**>C34 - C40 Fraction**	---	253 %	44.0-126%	**Recovery greater than upper data quality objective**

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type / Method	Count QC	Count Regular	Rate (%) Actual	Rate (%) Expected	Quality Control Specification
Matrix Spikes (MS)					
TRH - Semivolatile Fraction	0	18	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL** — Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample IDs	Sample Date	Extraction / Preparation: Date extracted	Extraction / Preparation: Due for extraction	Extraction / Preparation: Evaluation	Analysis: Date analysed	Analysis: Due for analysis	Analysis: Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055)							
BH1 0.5-0.6, BH2 0.5-0.6, BH3 0.5-0.6, BH4 0.5-0.6, BH5 0.5-0.6, BH6 0.5-0.6, BH7 1.5-1.6, BH1 1.5-1.6, BH2 1.5-1.6, BH3 1.5-1.6, BH4 1.5-1.6, BH5 1.5-1.6, BH7 0.85-0.95, Duplicate	**02-Sep-2020**	---	---	---	**10-Sep-2020**	16-Sep-2020	✓

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Matrix: **SOIL** — Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample IDs	Sample Date	Extraction / Preparation: Date extracted	Extraction / Preparation: Due for extraction	Extraction / Preparation: Evaluation	Analysis: Date analysed	Analysis: Due for analysis	Analysis: Evaluation
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
BH1 0.5-0.6, BH2 0.5-0.6, BH3 0.5-0.6, BH4 0.5-0.6, BH5 0.5-0.6, BH6 0.5-0.6, BH7 1.5-1.6, BH1 1.5-1.6, BH2 1.5-1.6, BH3 1.5-1.6, BH4 1.5-1.6, BH5 1.5-1.6, BH7 0.85-0.95, Duplicate	**02-Sep-2020**	**12-Sep-2020**	01-Mar-2021	✓	**12-Sep-2020**	01-Mar-2021	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
BH2 0.5-0.6, BH2 1.5-1.6	**02-Sep-2020**	**12-Sep-2020**	30-Sep-2020	✓	**14-Sep-2020**	30-Sep-2020	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM))							
BH1 0.5-0.6, BH2 0.5-0.6, BH3 0.5-0.6, BH4 0.5-0.6, BH5 0.5-0.6, BH6 0.5-0.6, BH7 1.5-1.6, BH1 1.5-1.6, BH2 1.5-1.6, BH3 1.5-1.6, BH4 1.5-1.6, BH5 1.5-1.6, BH7 0.85-0.95, Duplicate	**02-Sep-2020**	**14-Sep-2020**	16-Sep-2020	✓	**14-Sep-2020**	24-Oct-2020	✓
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080)							
BH1 0.5-0.6, BH2 0.5-0.6, BH3 0.5-0.6, BH4 0.5-0.6, BH5 0.5-0.6, BH6 0.5-0.6, BH7 1.5-1.6, BH1 1.5-1.6, BH2 1.5-1.6, BH3 1.5-1.6, BH4 1.5-1.6, BH5 1.5-1.6, BH7 0.85-0.95, Duplicate	**02-Sep-2020**	**11-Sep-2020**	16-Sep-2020	✓	**11-Sep-2020**	16-Sep-2020	✓
Soil Glass Jar - Unpreserved (EP071)							
BH1 0.5-0.6, BH2 0.5-0.6, BH3 0.5-0.6, BH4 0.5-0.6, BH5 0.5-0.6, BH6 0.5-0.6, BH7 1.5-1.6, BH1 1.5-1.6, BH2 1.5-1.6, BH3 1.5-1.6, BH4 1.5-1.6, BH5 1.5-1.6, BH7 0.85-0.95, Duplicate	**02-Sep-2020**	**14-Sep-2020**	16-Sep-2020	✓	**14-Sep-2020**	24-Oct-2020	✓

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Matrix: SOIL — Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample IDs	Sample Date	Extraction / Preparation: Date extracted	Extraction / Preparation: Due for extraction	Extraction / Preparation: Evaluation	Analysis: Date analysed	Analysis: Due for analysis	Analysis: Evaluation
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP080)							
BH1 0.5-0.6, BH1 1.5-1.6, BH2 0.5-0.6, BH2 1.5-1.6, BH3 0.5-0.6, BH3 1.5-1.6, BH4 0.5-0.6, BH4 1.5-1.6, BH5 0.5-0.6, BH5 1.5-1.6, BH6 0.5-0.6, BH7 0.85-0.95, BH7 1.5-1.6, Duplicate	02-Sep-2020	11-Sep-2020	16-Sep-2020	✓	11-Sep-2020	16-Sep-2020	✓
Soil Glass Jar - Unpreserved (EP071)							
BH1 0.5-0.6, BH1 1.5-1.6, BH2 0.5-0.6, BH2 1.5-1.6, BH3 0.5-0.6, BH3 1.5-1.6, BH4 0.5-0.6, BH4 1.5-1.6, BH5 0.5-0.6, BH5 1.5-1.6, BH6 0.5-0.6, BH7 0.85-0.95, BH7 1.5-1.6, Duplicate	02-Sep-2020	14-Sep-2020	16-Sep-2020	✓	14-Sep-2020	24-Oct-2020	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080)							
BH1 0.5-0.6, BH1 1.5-1.6, BH2 0.5-0.6, BH2 1.5-1.6, BH3 0.5-0.6, BH3 1.5-1.6, BH4 0.5-0.6, BH4 1.5-1.6, BH5 0.5-0.6, BH5 1.5-1.6, BH6 0.5-0.6, BH7 0.85-0.95, BH7 1.5-1.6, Duplicate	02-Sep-2020	11-Sep-2020	16-Sep-2020	✓	11-Sep-2020	16-Sep-2020	✓

Matrix: WATER — Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample IDs	Sample Date	Extraction / Preparation: Date extracted	Extraction / Preparation: Due for extraction	Extraction / Preparation: Evaluation	Analysis: Date analysed	Analysis: Due for analysis	Analysis: Evaluation
EG020F: Dissolved Metals by ICP-MS							
Clear Plastic Bottle - Filtered; Lab-acidified (EG020A-F)							
Rinsate	02-Sep-2020	—	—	—	10-Sep-2020	01-Mar-2021	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP075(SIM))							
Rinsate	02-Sep-2020	09-Sep-2020	09-Sep-2020	✓	12-Sep-2020	19-Oct-2020	✓
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071)							
Rinsate	02-Sep-2020	09-Sep-2020	09-Sep-2020	✓	12-Sep-2020	19-Oct-2020	✓
Amber VOC Vial - Sulfuric Acid (EP080)							
Rinsate	02-Sep-2020	09-Sep-2020	16-Sep-2020	✓	09-Sep-2020	16-Sep-2020	✓

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Matrix: WATER — Evaluation: × = Holding time breach ; ✓ = Within holding time

Method / Container / Client Sample IDs	Sample Date	Extraction / Preparation: Date extracted	Extraction / Preparation: Due for extraction	Extraction / Preparation: Evaluation	Analysis: Date analysed	Analysis: Due for analysis	Analysis: Evaluation
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber Glass Bottle - Unpreserved (EP071)							
Rinsate	02-Sep-2020	09-Sep-2020	09-Sep-2020	✓	12-Sep-2020	19-Oct-2020	✓
Amber VOC Vial - Sulfuric Acid (EP080)							
Rinsate	02-Sep-2020	09-Sep-2020	16-Sep-2020	✓	09-Sep-2020	16-Sep-2020	✓
EP080: BTEXN							
Amber VOC Vial - Sulfuric Acid (EP080)							
Rinsate	02-Sep-2020	09-Sep-2020	16-Sep-2020	✓	09-Sep-2020	16-Sep-2020	✓

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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		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Reqmnt	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	14	14.29	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	8	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	14	14.29	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)	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	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 Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	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)							
PAH/Phenols (SIM)	EP075(SIM)	1	14	7.14	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	20	10.00	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: **WATER** Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Reqmnt	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	13	15.38	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	9	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	18	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	16	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	13	7.69	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	9	11.11	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		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Reqmnt	Actual	Expected	Evaluation	
Laboratory Control Samples (LCS) - Continued							
TRH - Semivolatile Fraction	EP071	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	13	7.69	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	9	11.11	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	13	7.69	5.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	9	11.11	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	18	0.00	5.00	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	16	6.25	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 Schedule B(3).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3)
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015. Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM Schedule B(3).
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270. 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 Schedule B(3)
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM Schedule B(3) amended.
Dissolved Metals by ICP-MS - Suite A	EG020A-F	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020. ALS QWI-EN/EG020. 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.
TRH - Semivolatile Fraction	EP071	WATER	In house: Referenced to USEPA SW 846 - 8015. 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 Schedule B(3)
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	WATER	In house: Referenced to USEPA SW 846 - 8270. 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 Schedule B(3)
TRH Volatiles/BTEX	EP080	WATER	In house: Referenced to USEPA SW 846 - 8260. Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM Schedule B(3)
Preparation Methods	**Method**	**Matrix**	**Method Descriptions**

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Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion. 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM Schedule B(3).
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 - 3510. 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 Schedule B(3). ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for sparging.

Appendix 8 Certificate of Analysis

ALS Environmental

CERTIFICATE OF ANALYSIS

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Client	: GEO-ENVIRONMENTAL SOLUTIONS	Laboratory	: Environmental Division Melbourne
Contact	: DR JOHN PAUL CUMMING	Contact	: Shirley LeGonu
Address	: 29 KIRKSWAY PLACE BATTERY POINT TASMANIA, AUSTRALIA 7004	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: +61 03 6223 1839	Telephone	: +61386549 9630
Project	: New Town	Date Sample Received	: 09-Sep-2020 13:30
Order number	: —	Date Analysis Commenced	: 09-Sep-2020
C-O-C number	: —	Issue Date	: 15-Sep-2020 13:29
Sampler	: JPC		
Site	: —		
Quote number	: EN/222		
No. of samples received	: 15		
No. of samples analysed	: 15		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
Dilani Fernando	Senior Inorganic Chemist	Melbourne Inorganics, Springvale, VIC
Xing Lin	Senior Organic Chemist	Melbourne Organics, Springvale, VIC

RIGHT SOLUTIONS | RIGHT PARTNER

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ALS

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the 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 concentrations at or above the level of reporting
a = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EP075 (SIM): Where reported, Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1,2,3-cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1,2,3-cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero. For 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.8mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.
- EP071: EM2015531_033 higher than expected matrix spike recovery due to sample matrix. Confirmed by re-extraction and re-analysis.

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Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH1 0.5-0.6	BH1 1.5-1.6	BH2 0.5-0.6	BH2 1.5-1.6	BH3 0.5-0.6
			Client sampling date / time	02-Sep-2020 00:00	02-Sep-2020 00:00	02-Sep-2020 00:00	02-Sep-2020 00:00	02-Sep-2020 00:00
Compound	CAS Number	LOR	Unit	EM2015530-001	EM2015530-002	EM2015530-003	EM2015530-004	EM2015530-005
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	10.8	12.2	15.3	19.2	22.3
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	----	----	6	<5	----
Barium	7440-39-3	10	mg/kg	----	----	80	80	----
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	----	----	4	<1	----
Chromium	7440-47-3	2	mg/kg	----	----	10	8	----
Cobalt	7440-48-4	2	mg/kg	----	----	6	8	----
Copper	7440-50-8	5	mg/kg	----	----	47	38	----
Manganese	7439-96-5	5	mg/kg	----	----	188	234	----
Nickel	7440-02-0	2	mg/kg	----	----	11	13	----
Selenium	7782-49-2	5	mg/kg	----	----	<5	<5	----
Vanadium	7440-62-2	5	mg/kg	----	----	27	28	----
Zinc	7440-66-6	5	mg/kg	----	----	260	114	----
Lead	7439-92-1	5	mg/kg	718	11	804	110	227
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	----	----	<0.1	0.2	----
EP075(SIM)B: 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	1.8
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	0.5
Phenanthrene	85-01-8	0.5	mg/kg	0.6	<0.5	<0.5	<0.5	7.7
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	1.8
Fluoranthene	206-44-0	0.5	mg/kg	1.8	<0.5	<0.5	<0.5	18.5
Pyrene	129-00-0	0.5	mg/kg	2.1	<0.5	<0.5	<0.5	19.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	1.2	<0.5	<0.5	<0.5	9.3
Chrysene	218-01-9	0.5	mg/kg	1.0	<0.5	<0.5	<0.5	9.0
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	2.0	<0.5	<0.5	<0.5	13.3
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	0.8	<0.5	<0.5	<0.5	3.7
Benzo(a)pyrene	50-32-8	0.5	mg/kg	2.0	<0.5	<0.5	<0.5	12.7
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	1.1	<0.5	<0.5	<0.5	6.3
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	2.1

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Work Order : EM2015530
Client : GEO-ENVIRONMENTAL SOLUTIONS
Project : New Town

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH1 0.5-0.6	BH1 1.5-1.6	BH2 0.5-0.6	BH2 1.5-1.6	BH3 0.5-0.6
			Client sampling date / time	02-Sep-2020 00:00	02-Sep-2020 00:00	02-Sep-2020 00:00	02-Sep-2020 00:00	02-Sep-2020 00:00
Compound	CAS Number	LOR	Unit	EM2015530-001	EM2015530-002	EM2015530-003	EM2015530-004	EM2015530-005
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	1.5	<0.5	0.5	<0.5	8.3
* Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	14.0	<0.5	0.5	<0.5	115
* Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	2.5	<0.5	<0.5	<0.5	18.2
* Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	2.8	0.6	0.6	0.6	18.2
* Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	3.0	1.2	1.2	1.2	18.2
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	290	<100	790	130	460
C29 - C36 Fraction	----	100	mg/kg	290	<100	1700	310	440
* C10 - C36 Fraction (sum)	----	50	mg/kg	580	<50	2490	440	900
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	<10
* C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	370	<100	1910	330	750
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	1160	220	240
* >C10 - C40 Fraction (sum)	----	50	mg/kg	370	<50	3070	550	990
* >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<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
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
* Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
* Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	110	90.9	94.3	94.1	93.7
2-Chlorophenol-D4	93951-73-6	0.5	%	97.4	86.9	89.0	89.6	92.0
2,4,6-Tribromophenol	118-79-6	0.5	%	83.9	84.5	91.0	86.0	94.1

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Work Order : EM2015530
Client : GEO-ENVIRONMENTAL SOLUTIONS
Project : New Town

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH1 0.5-0.6	BH1 1.5-1.6	BH2 0.5-0.6	BH2 1.5-1.6	BH3 0.5-0.6
			Client sampling date / time	02-Sep-2020 00:00	02-Sep-2020 00:00	02-Sep-2020 00:00	02-Sep-2020 00:00	02-Sep-2020 00:00
Compound	CAS Number	LOR	Unit	EM2015530-001	EM2015530-002	EM2015530-003	EM2015530-004	EM2015530-005
				Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	104	101	104	103	106
Anthracene-d10	1719-06-8	0.5	%	111	107	100	107	107
4-Terphenyl-d14	1718-51-0	0.5	%	104	105	101	104	96.4
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.2	%	88.3	91.9	89.5	88.5	88.7
Toluene-D8	2037-26-5	0.2	%	83.2	85.4	85.2	84.4	78.8
4-Bromofluorobenzene	460-00-4	0.2	%	88.2	94.8	90.1	95.9	83.0

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Client : GEO-ENVIRONMENTAL SOLUTIONS
Project : New Town

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH3 1.5-1.6	BH4 0.5-0.6	BH4 1.5-1.6	BH5 0.5-0.6	BH5 1.5-1.6
			Client sampling date / time	02-Sep-2020 00:00	02-Sep-2020 00:00	02-Sep-2020 00:00	02-Sep-2020 00:00	02-Sep-2020 00:00
Compound	CAS Number	LOR	Unit	EM2015530-006	EM2015530-007	EM2015530-008	EM2015530-009	EM2015530-010
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	10.9	19.3	24.3	21.1	21.1
EG005(ED093)T: Total Metals by ICP-AES								
Lead	7439-92-1	5	mg/kg	6	89	12	97	11
EP075(SIM)B: 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	0.6	<0.5	0.6	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	1.1	<0.5	1.2	<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	3.8	<0.5	4.1	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	4.4	<0.5	4.7	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	2.3	<0.5	2.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	2.2	<0.5	2.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	3.7	<0.5	3.7	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	1.3	<0.5	1.4	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	3.3	<0.5	3.6	<0.5
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	1.7	<0.5	1.8	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	0.5	<0.5	0.6	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	2.2	<0.5	2.4	<0.5
* Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	27.1	<0.5	29.1	<0.5
* Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	4.7	<0.5	5.2	<0.5
* Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	4.7	0.6	5.2	0.6
* Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	4.7	1.2	5.2	1.2
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	130	<100	140	<100
C29 - C36 Fraction	----	100	mg/kg	<100	140	<100	160	<100
* C10 - C36 Fraction (sum)	----	50	mg/kg	<50	270	<50	300	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	<10
* C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10

Environmental Site Assessment: 156 New Town Road, New Town

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Client : GEO-ENVIRONMENTAL SOLUTIONS
Project : New Town

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH3 1.5-1.6	BH4 0.5-0.6	BH4 1.5-1.6	BH5 0.5-0.6	BH5 1.5-1.6
			Client sampling date / time	02-Sep-2020 00:00	02-Sep-2020 00:00	02-Sep-2020 00:00	02-Sep-2020 00:00	02-Sep-2020 00:00
Compound	CAS Number	LOR	Unit	EM2015530-006	EM2015530-007	EM2015530-008	EM2015530-009	EM2015530-010
				Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	230	<100	260	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
* >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	230	<50	260	<50
* >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<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
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 108-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
* Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
* Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	92.7	94.1	95.7	88.4	87.9
2-Chlorophenol-D4	93951-73-6	0.5	%	86.6	91.1	90.4	85.3	86.7
2,4,6-Tribromophenol	118-79-6	0.5	%	79.1	93.1	86.2	84.0	88.4
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	103.0	107	104	98.9	100
Anthracene-d10	1719-06-8	0.5	%	105	111	108	102	106
4-Terphenyl-d14	1718-51-0	0.5	%	102	105	107	97.0	103
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.2	%	93.0	90.4	92.2	91.2	91.2
Toluene-D8	2037-26-5	0.2	%	90.4	87.2	88.8	87.6	89.4
4-Bromofluorobenzene	460-00-4	0.2	%	101	94.7	96.6	96.0	102

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Client : GEO-ENVIRONMENTAL SOLUTIONS
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Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH6 0.5-0.6	BH7 0.85-0.95	BH7 1.5-1.6	Duplicate	---
			Client sampling date / time	02-Sep-2020 00:00	02-Sep-2020 00:00	02-Sep-2020 00:00	02-Sep-2020 00:00	---
Compound	CAS Number	LOR	Unit	EM2015530-011	EM2015530-012	EM2015530-013	EM2015530-014	------
				Result	Result	Result	Result	---
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	14.7	12.9	22.5	10.9	---
EG005(ED093)T: Total Metals by ICP-AES								
Lead	7439-92-1	5	mg/kg	16	<5	7	463	---
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	---
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	---
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	---
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	---
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	0.6	---
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	---
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	1.9	---
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	2.1	---
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	1.4	---
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	1.2	---
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	2.0	---
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	0.8	---
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	2.0	---
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	1.0	---
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	---
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	1.4	---
* Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	14.4	---
* Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	2.5	---
* Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	0.6	0.6	2.8	---
* Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	1.2	1.2	3.0	---
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	---

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Client : GEO-ENVIRONMENTAL SOLUTIONS
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Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH6 0.5-0.6	BH7 0.85-0.95	BH7 1.5-1.6	Duplicate	---
			Client sampling date / time	02-Sep-2020 00:00	02-Sep-2020 00:00	02-Sep-2020 00:00	02-Sep-2020 00:00	---
Compound	CAS Number	LOR	Unit	EM2015530-011	EM2015530-012	EM2015530-013	EM2015530-014	------
				Result	Result	Result	Result	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
>C10 - C16 Fraction	---	50	mg/kg	<50	<50	<50	<50	---
>C16 - C34 Fraction	---	100	mg/kg	120	<100	<100	160	---
>C34 - C40 Fraction	---	100	mg/kg	<100	<100	<100	<100	---
* >C10 - C40 Fraction (sum)	---	50	mg/kg	120	<50	<50	160	---
* >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	---
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	84.1	96.2	79.8	96.7	---
2-Chlorophenol-D4	93951-73-6	0.5	%	88.4	92.3	73.6	90.0	---
2,4,6-Tribromophenol	118-79-6	0.5	%	75.8	81.1	71.2	84.6	---
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	103	107	87.2	108	---
Anthracene-d10	1719-06-8	0.5	%	110	114	86.6	113	---
4-Terphenyl-d14	1718-51-0	0.5	%	106	111	87.2	109	---
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.2	%	94.9	89.1	98.0	83.6	---
Toluene-D8	2037-26-5	0.2	%	87.6	82.2	92.3	80.6	---
4-Bromofluorobenzene	460-00-4	0.2	%	91.5	86.5	104	83.6	---

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Client : GEO-ENVIRONMENTAL SOLUTIONS
Project : New Town

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	Rinsate	---	---	---	---
			Client sampling date / time	02-Sep-2020 00:00	---	---	---	---
Compound	CAS Number	LOR	Unit	EM2015530-015	------	------	------	------
				Result	---	---	---	---
EG020F: Dissolved Metals by ICP-MS								
Lead	7439-92-1	0.001	mg/L	<0.001	---	---	---	---
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+j)fluoranthene	205-99-2 205-82-3	1.0	µg/L	<1.0	---	---	---	---
Benzo(k)fluoranthene	207-08-9	1.0	µg/L	<1.0	---	---	---	---
Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	---	---	---	---
Indeno(1,2,3-cd)pyrene	193-39-5	1.0	µg/L	<1.0	---	---	---	---
Dibenz(a,h)anthracene	53-70-3	1.0	µg/L	<1.0	---	---	---	---
Benzo(g,h,i)perylene	191-24-2	1.0	µg/L	<1.0	---	---	---	---
* Sum of polycyclic aromatic hydrocarbons	---	0.5	µg/L	<0.5	---	---	---	---
* 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 - C28 Fraction	---	100	µg/L	<100	---	---	---	---
C29 - C36 Fraction	---	50	µg/L	<50	---	---	---	---
* 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	---	---	---	---
* C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L	<20	---	---	---	---
>C10 - C16 Fraction	---	100	µg/L	<100	---	---	---	---
>C16 - C34 Fraction	---	100	µg/L	<100	---	---	---	---
>C34 - C40 Fraction	---	100	µg/L	<100	---	---	---	---
* >C10 - C40 Fraction (sum)	---	100	µg/L	<100	---	---	---	---

Environmental Site Assessment: 156 New Town Road, New Town

Page : 11 of 12
Work Order : EM2015530
Client : GEO-ENVIRONMENTAL SOLUTIONS
Project : New Town

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	Rinsate	—	—	—	—
				Client sampling date / time	02-Sep-2021 00:00	—	—	—	—
Compound	CAS Number	LOR	Unit		EM2015530-015	—	—	—	—
					Result	—	—	—	—
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
* >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	—	—	—	—
* Total Xylenes	—	2	µg/L		<2	—	—	—	—
* 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	%		36.5	—	—	—	—
2-Chlorophenol-D4	93951-73-6	1.0	%		72.7	—	—	—	—
2,4,6-Tribromophenol	118-79-6	1.0	%		92.0	—	—	—	—
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	1.0	%		90.3	—	—	—	—
Anthracene-d10	1719-06-8	1.0	%		88.0	—	—	—	—
4-Terphenyl-d14	1718-51-0	1.0	%		88.1	—	—	—	—
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	2	%		92.7	—	—	—	—
Toluene-D8	2037-26-5	2	%		95.1	—	—	—	—
4-Bromofluorobenzene	460-00-4	2	%		103	—	—	—	—

Page : 12 of 12
Work Order : EM2015530
Client : GEO-ENVIRONMENTAL SOLUTIONS
Project : New Town

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	54	125
2-Chlorophenol-D4	93951-73-6	65	123
2,4,6-Tribromophenol	118-79-6	34	122
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	61	125
Anthracene-d10	1719-06-8	62	130
4-Terphenyl-d14	1718-51-0	67	133
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	51	129
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	33	104
2,4,6-Tribromophenol	118-79-6	20	130
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	36	114
Anthracene-d10	1719-06-8	51	119
4-Terphenyl-d14	1718-51-0	49	127
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	73	129
Toluene-D8	2037-26-5	70	125
4-Bromofluorobenzene	460-00-4	71	129

156 NTR
156 New Town Road, Hobart 7000

WASTE MANAGEMENT PLAN

Project Name: 156 NTR, 156 New Town Road, Hobart 7008.
Client: Renewal Developments
Project/Report Reference: A20121_WMP_156 NTR
File Path: smb://192.168.15.69/01_LXN Architecture/00_Projects/A20101_156 NTR/06_REPORTS/06_01_CURRENT/A20121_WMP_156 NTR

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Version: 01
Prepared By: Joshua Crossin Date:20/10/2021
Reviewed By: Sarah Lindsay Date:20/10/2021

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1.0 INTRODUCTION

LXN Architecture and Consulting has been engaged by Renewal Developments Pty Ltd to prepare a Waste Management Plan for a proposed 156 NTR Apartments located at 156 New Town Road, New Town 7008. 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 156 New Town Road, New Town 7008.
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: CoH TBC
Planning Scheme: Hobart Interim Planning Scheme 2015
Land Zone: 15.0 Urban Mixed Use Zone
Number of levels: 3
Number of Apartments: 19 total;

- 1 studio apartment,
- 13 off two-bedroom apartments, and
- 5 off three-bedroom apartments

Commercial Tenancy:

- 360m2 Commercial gymnasium

4.0 WASTE MANAGEMENT PLAN

4.1 Residential Waste Generation

Residential waste generation rates are shown in Table 1.
Calculations are based on 7 days per week occupancy.

* 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.*

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*

** 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	42	1,260L	1,050L	420L
Total Waste Generated per Week		**1,260L**	**1,050L**	**420L**

4.1.1 Residential 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

4.1.1 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.

To dispose of the waste from apartments, residents will need to take their waste to refuse themselves.

Garbage is to be disposed of bagged.

4.1.2 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.

To dispose of the waste from apartments, residents will need to take their waste to refuse themselves.

Comingled Recyclables are to be disposed of loosely.

4.1.3 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 contactor.

4.1.4 Bulky Goods

A minimum annual storage capacity of 14.63m^3 is required for the storage of Bulky Goods Waste. This has been calculated on a rate of 0.77m^3 of Bulky Waste generated per household per annum. A volume of 4.9m^3 with the minimum dimensions of 1500mmW x 1500mmD x 2300mmH has been allocated in the basement 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 Hobarts McRobbies transfer station that provides up to five free entry weekends for residents of the City and located 9.1km south west to the site.

The storage area would be clearly marked and accessed via the carpark. Refer appendix 1 for the location.

4.2 Commercial Waste Generation

Commercial waste generation rates are shown in Table 3.
Calculations are based on 7 days per week occupancy.

* 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*.

Table 3 Waste Generation Rates

Use	Garbage (L/10m2/week)	Recycling (L/10m2/week)	Organics (L/10m2/week)
Commercial – Retail greater than 100m2	6*	6*	0.3*

A commercial waste generation assessment is provided in Table 4.

Table 4 Waste Generation Assessment

Use	Waste Per Week		
	Garbage	Recycling	Organics
Commercial 360m2	216L	216L	10.8L
Total Waste Generated per Week	**216L**	**216L**	**10.8L**

4.2.1 Commercial Waste Systems

Waste would be sorted on-site (in gymnasium) by staff and clients as appropriate into the following streams:

- Garbage (General Waste),
- Comingled Recycling,
- Organics (CoH FOGO), and
- Bulky Waste

4.2.2 Garbage (General Waste)

The gymnasium will be furnished with plastic lined bins for the temporary holding of garbage waste, to have a minimum cumulative capacity of 30.9L. This capacity is based on the transfer of waste to the refuse occurring once per day.

Staff and cleaners will dispose of waste from these bins directly into the appropriate 1,100L bin provided in the refuse.

To dispose of the waste from gymnasium, staff will need to take their waste to refuse themselves.

Garbage is to be disposed of bagged.

4.2.3 Comingled Recycling

The gymnasium will be furnished with plastic lined bins for the temporary holding of comingled recycling, to have a minimum cumulative capacity of 30.9L. This capacity is based on the transfer of waste to the refuse occurring once per day.

Staff and cleaners will dispose of waste from these bins directly into the appropriate 1,100L bin provided in the refuse.

To dispose of the waste from gymnasium, staff will need to take their waste to refuse themselves.

Comingled Recyclables are to be disposed of loosely.

4.2.4 Organic Waste

The kitchenette will be furnished with bins lined with compostable bags for the temporary holding of organics. These bins will have the minimum cumulative capacity of 1.6L, based on the transfer of waste to the refuse once per day.

Organic Waste bin will be collected by private contactor.

4.2.5 Bulky Goods

There is a space allocated in the refuse for any bulky goods, should they be generated.

4.3 Bin Quantity, Size and Collection Frequency

The bin quantity, size and the frequency of collection are shown below in Table 5 and Table 6. Two garbage waste collections per week is recommended given the volume and nature of the waste generated in the proposed development.

Table 5 Waste Bin Size and Collection Frequency

Waste Stream	Collection per Week	Bin Size	No. Bins	Total weekly volume	Weekly capacity per bedroom	Weekly capacity Commercial (L/10m2)	Total weekly capacity
Garbage	2	1,100	1	1,476L	30L	6L	2,200L
Comingled Recycling	2	1,100	1	1,266L	25L	6L	2,200L
Organics	1	660	1	430.8L	10L	0.3L	500L

Table 6 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.

4.5 Waste Storage Area

Table 7 demonstrates the cumulative space requirements and provision of waste areas in the proposed development.

Please refer to scaled drawing shown in Appendix 1.

Table 7 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	2.25m^2	
Total	**5.89m^2**	**6.15m^2**

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

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, 660L 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

ARCHITECTURAL STATEMENT

—

NEW TOWN ROAD APARTMENTS

156 Newtown Rd, Hobart

–

LXN Architecture & Consulting

October 2021

LXN

PROJECT DESCRIPTION

The proposed development is located at 156 New Town Road (the site), on the Western side between Cross Street and Roope Street. The site neighbours the Former Methodist Church Parsonage to the North and the New Town Cat Clinic to the South.

The proposed development includes the demolition of existing structures and construction of a new three story mixed use building, accommodating; a basement carpark, communal courtyard, commercial tenancy and 19 residential apartments.

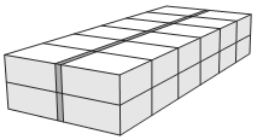
The inner urban suburb of New Town provides a high level of residential amenity and is conducive to infill projects of an increased residential density.

The design response to the site and client brief is summarised in the following moves:

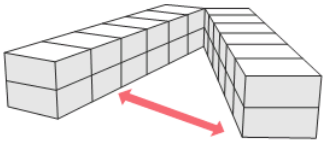
- Reinstate a built edge to the street,
- Pull back from the Former Methodist Parsonage and Church,
- Maximise the opportunity for natural light and ventilation to each apartment,
- Develop a material palette that is consistent with the New Town streetscape narrative; materials and colours.

LXN

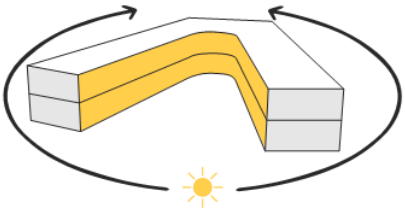
DESIGN APPROACH - SITE RESPONSE



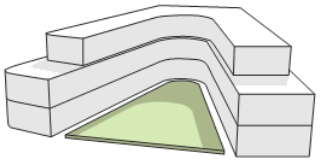
Traditional double stacked apartment plan.



The plan is opened in response to the wedge shaped site.



The floor plate is only one apartment deep, maximising opportunities for solar access and natural ventilation.



The negative space creates an opportunity for communal activities and landscaping and reduces the built edge against the neighbouring Heritage Buildings.

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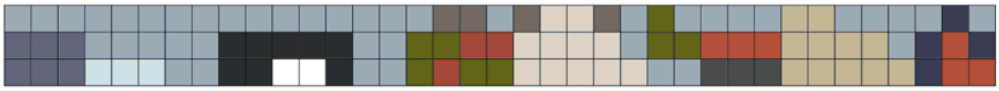
DESIGN APPROACH - STREET SCAPE ANALYSIS

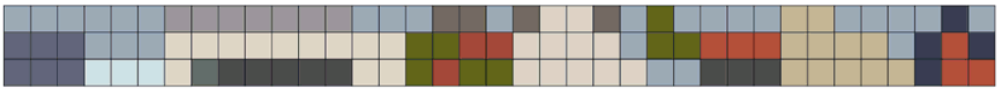
An study of the existing streetscape was undertaken, to analyse the predominant colours and building materials. This analysis informed the selection of the proposed materials and their composition.

Streetscape analysis of materials and colours

Application of grid to facilitate colour study



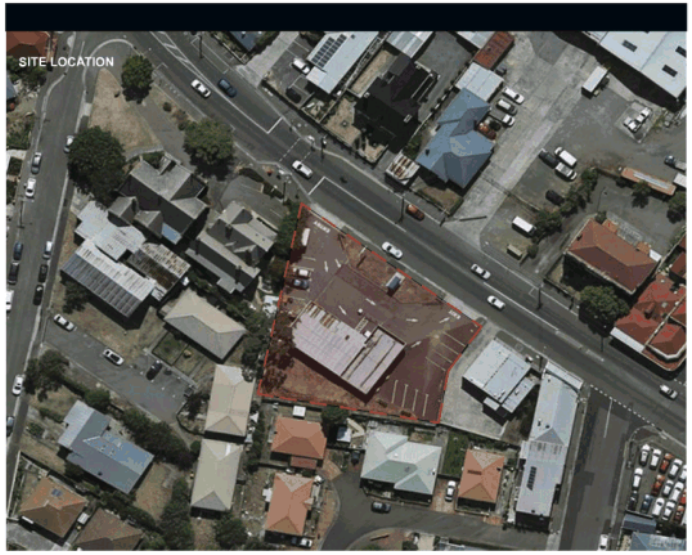
Colour Study of Existing Condition



Proposed colour palette

156 NTR

DEVELOPMENT APPLICATION



DRAWING SCHEDULE

DA-01	COVER PAGE
DA-02	SITE SURVEY
DA-03	EXST. / DEMO PLAN
DA-04	PROPOSED SITE PLAN
DA-05	BASEMENT PLAN
DA-06	GROUND FLOOR PLAN
DA-07	LEVEL 1 FLOOR PLAN
DA-08	LEVEL 2 FLOOR PLAN
DA-09	ROOF PLAN
DA-10	LANDSCAPE PLAN
DA-11	ELEVATIONS
DA-12	ELEVATIONS
DA-13	SECTIONS
DA-14	SECTIONS
DA-15	BUILDING HEIGHT ENVELOPE - 15.4.1
DA-16	BUILDING SETBACK ENVELOPE - 15.4.2
DA-17	SUN STUDIES
DA-18	STREET ELEVATION
DA-19	MATERIAL PALETTE / STREETSCAPE ANALYSIS
DA-20	PHOTOMONTAGE SHEET 1
DA-21	PHOTOMONTAGE SHEET 2
DA-22	SUN STUDY SHEET 1
DA-23	SUN STUDY SHEET 2
DA-24	SUN STUDY SHEET 3
DA-25	SUN STUDY SHEET 4
DA-26	SUN STUDY SHEET 5
DA-27	SUN STUDY SHEET 6
DA-28	SUN STUDY SHEET 7
DA-29	SUN STUDY SHEET 8
DA-30	ELEVATION
DA-31	ROOPE ST - EAST, STREETSCAPE ELEVATION
DA-32	ROOPE ST - WEST, STREETSCAPE ELEVATION

PROJECT INFORMATION

ADDRESS
156 New Town Road,
New Town, Tasmania

LAND TITLE REFERENCE
CT: 171514/1

MUNICIPALITY
City of Hobart

AREA SUMMARY

Site:	1474m²
Proposed Works (Total GFA):	2938m²
Basement:	*764m² GFA*
Ground Floor:	*837m² GFA*
Level 1:	*850m² GFA*
Level 2:	*487m² GFA*

WIND CLASSIFICATION:	TBC
SOIL CLASSIFICATION:	*Refer GES Report*
BUILDING CLASS:	2, 6, 7a
BAL RATING:	N/A
CLIMATE ZONE:	7
ALPINE AREA:	N/A
CORROSION ENVIRONMENT:	N/A
OTHER HAZARDS:	*Refer GES Report*

NOT FOR CONSTRUCTION

LXN

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REVISIONS

RevID	Issue Name	Date
A	Development Application	11/10/21
B	Development Application - RFI	3/3/22

PROJECT NAME
156 NTR

SITE
156 New Town Road

CLIENT
#Client Full Name

PROJECT NUMBER
A20101

SCALE
1:1 @ A3

STATUS
DEVELOPMENT APPLICATION

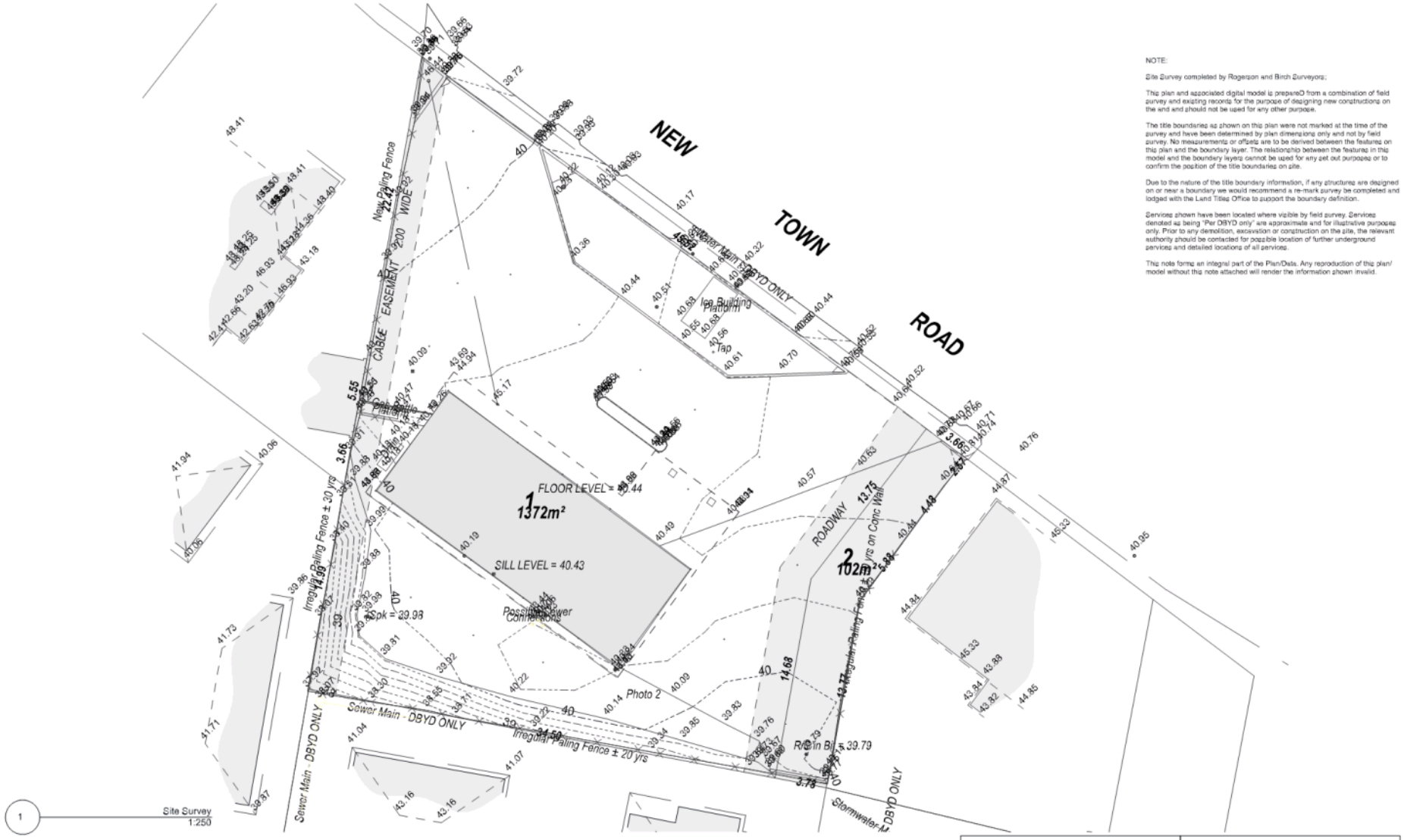
DRAWING TITLE
COVER PAGE

DRAWING
DA-01

REVISION
B

FILE A20101_156 NTR_DA RFI.pln

DATE 3/3/22



NOTE:

Site Survey completed by Rogerson and Birch Surveyors;

This plan and associated digital model is preparED from a combination of field survey and existing records for the purpose of designing new constructions on the land and should not be used for any other purpose.

The title boundaries as shown on this plan were not marked at the time of the survey and have been determined by plan dimensions only and not by field survey. No measurements or offsets are to be derived between the features on this plan and the boundary layer. The relationships between the features in this model and the boundary layers cannot be used for any set out purposes or to confirm the position of the title boundaries on site.

Due to the nature of the title boundary information, if any structures are designed on or near a boundary we would recommend a re-mark survey be completed and lodged with the Land Titles Office to support the boundary definition.

Services shown have been located where visible by field survey. Services denoted as being "Per DBYD only" are approximate and for illustrative purposes only. Prior to any demolition, excavation or construction on the site, the relevant authority should be contacted for possible location of further underground services and detailed locations of all services.

This note forms an integral part of the Plan/Data. Any reproduction of this plan/model without this note attached will render the information shown invalid.

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REVISIONS

RevID	Issue Name	Date
A	Development Application	11/10/21

PROJECT NAME
156 NTR

SITE
156 New Town Road

CLIENT
#Client Full Name

N

PROJECT NUMBER
A20101

SCALE
1:250 @ A3

STATUS
DEVELOPMENT APPLICATION

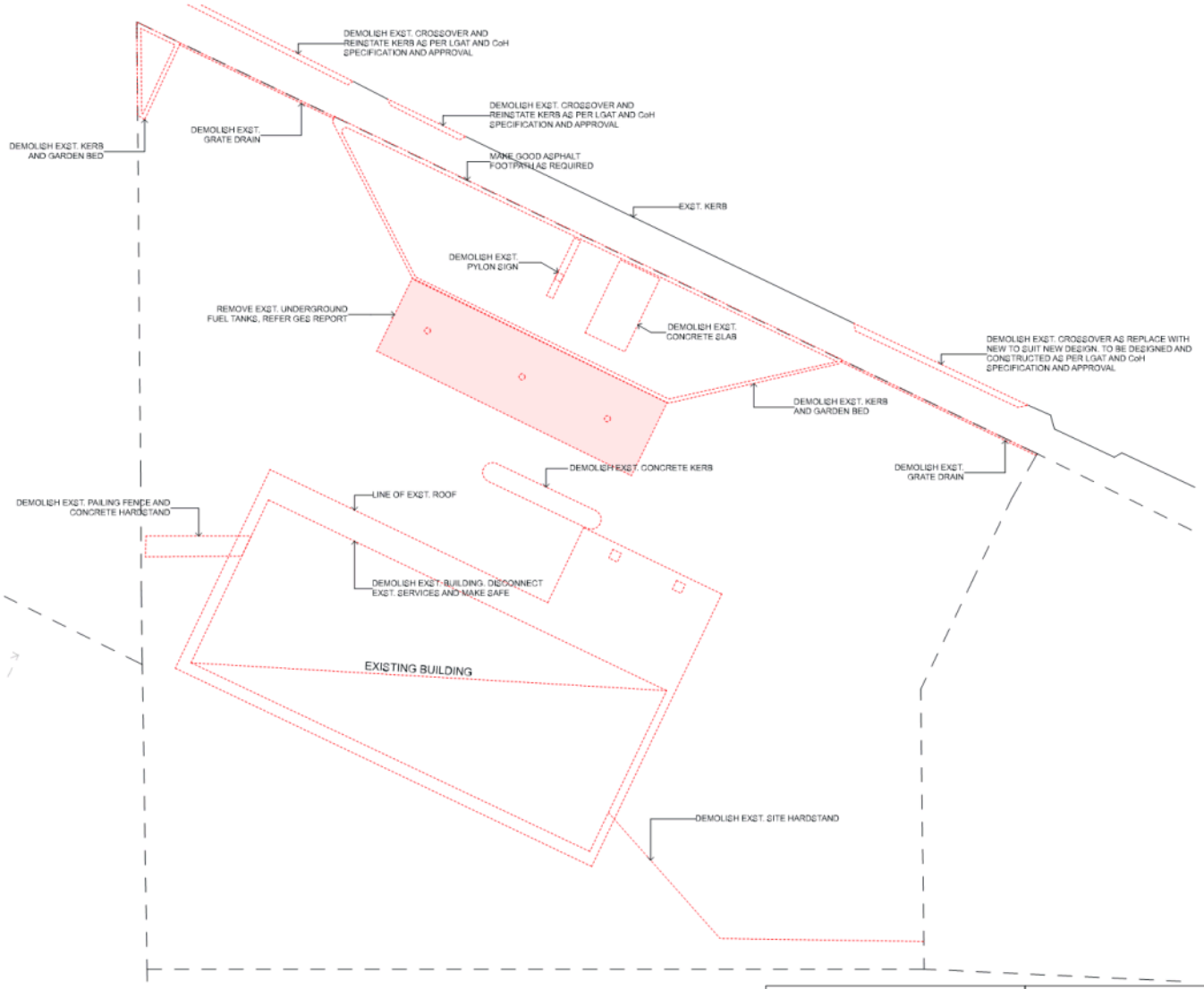
DRAWING TITLE
SITE SURVEY

DRAWING
DA-02

REVISION
A

FILE A20101_156 NTR_DA.pln

DATE 11/10/21



1 Demolition Plan
1:200

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RevID	Issue Name	Date
A	Development Application	11/10/21

PROJECT NAME
156 NTR

SITE
156 New Town Road

CLIENT
#Client Full Name

N

PROJECT NUMBER
A20101

SCALE
@ A3

STATUS
DEVELOPMENT APPLICATION

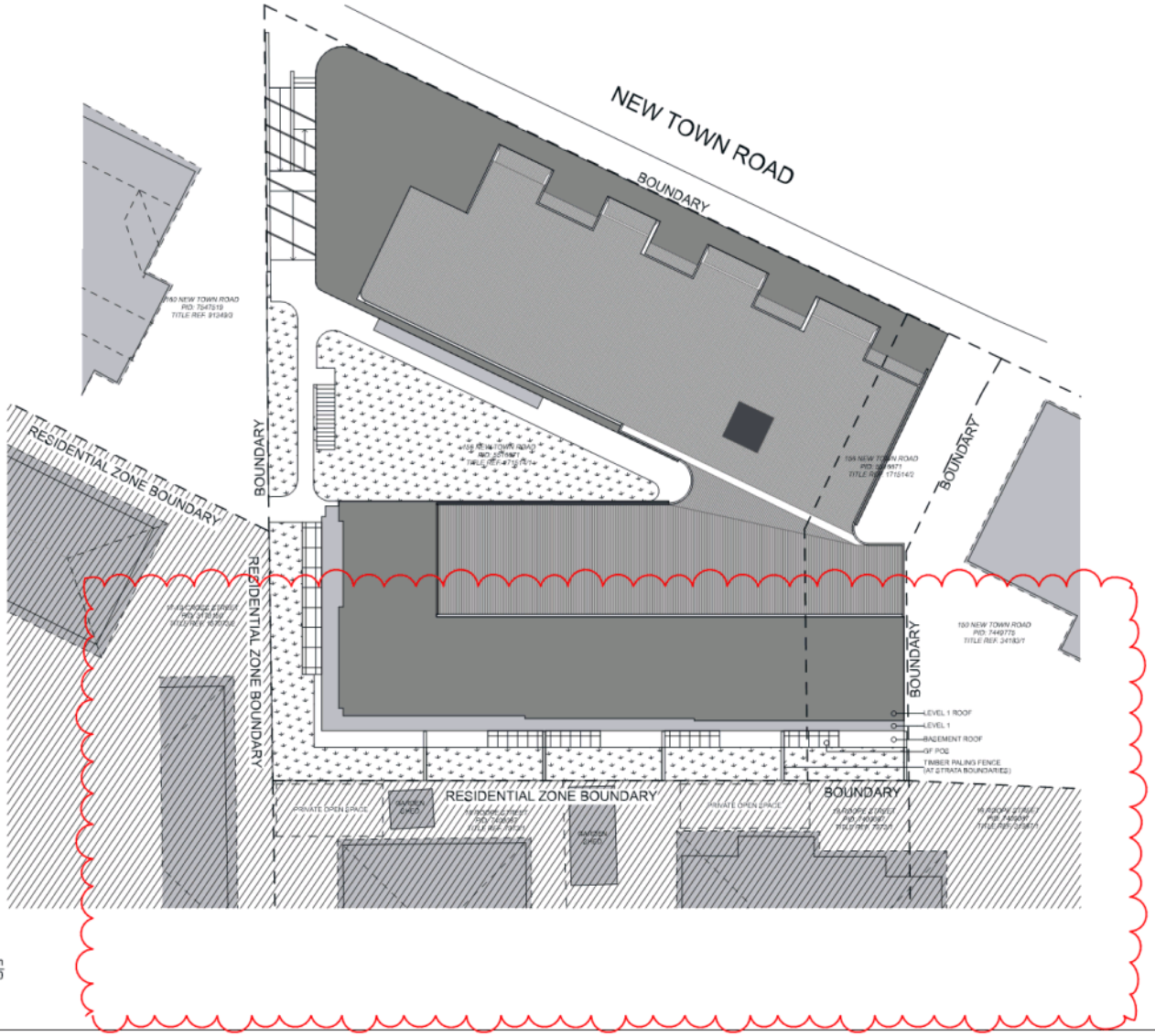
DRAWING TITLE
EXST. / DEMO PLAN

DRAWING
DA-03

REVISION
A

FILE A20101_156 NTR_DA.pln

DATE 11/10/21



1 Site Plan
1:250

DEVELOPMENT APPLICATION

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REVISIONS

RevID	Issue Name	Date
A	Development Application	11/10/21
B	Development Application - RFI	3/3/22

PROJECT NAME
156 NTR

SITE
156 New Town Road

CLIENT
#Client Full Name

N

PROJECT NUMBER
A20101

SCALE
1:250 @ A3

STATUS
DEVELOPMENT APPLICATION

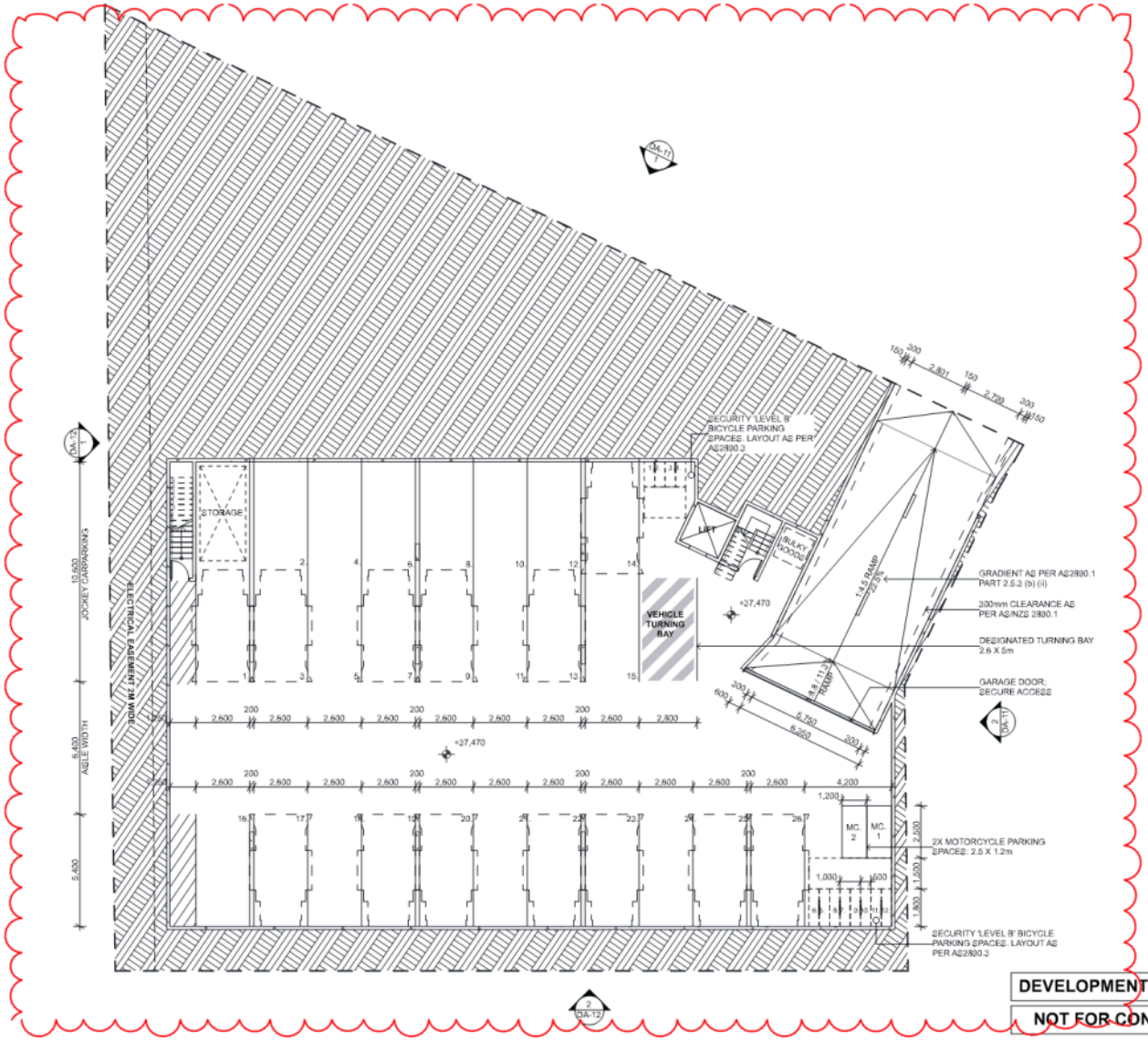
DRAWING TITLE
PROPOSED SITE PLAN

DRAWING
DA-04

REVISION
B

FILE A20101_156 NTR_DA RFI.pln

DATE 3/3/22



1 Basement Plan
1:200

DEVELOPMENT APPLICATION

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REVISIONS

RevID	Issue Name	Date
A	Development Application	11/10/21
B	Development Application - RFI	3/3/22

PROJECT NAME
156 NTR

SITE
156 New Town Road

CLIENT
#Client Full Name

PROJECT NUMBER
A20101

SCALE
1:200 @ A3

STATUS
DEVELOPMENT APPLICATION

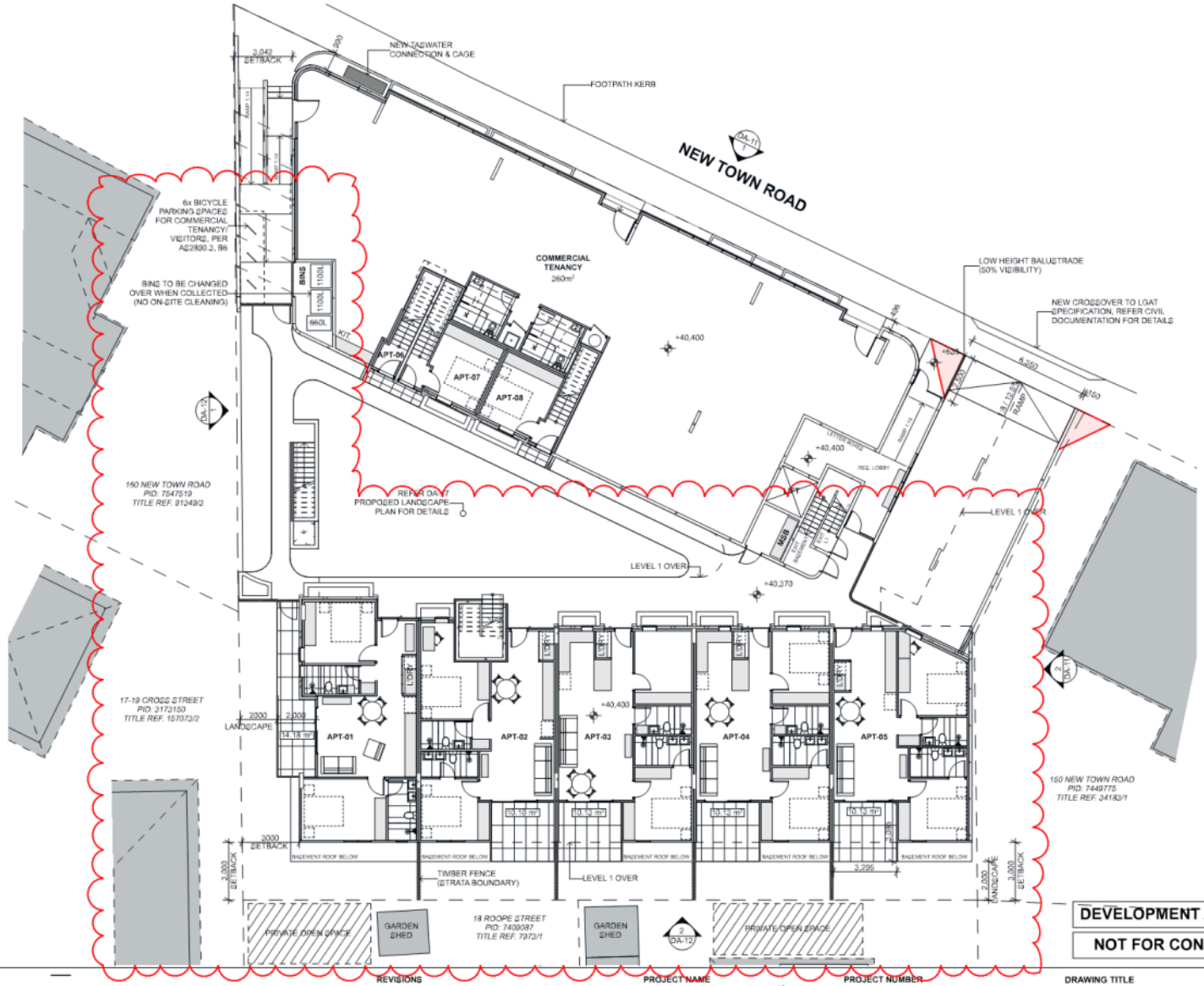
DRAWING TITLE
BASEMENT PLAN

DRAWING
DA-05

REVISION
B

FILE A20101_156 NTR_DA RFI.pln

DATE 3/3/22



1 Ground Floor Plan
1:200

DEVELOPMENT APPLICATION

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PROJECT NAME
156 NTR

SITE
156 New Town Road

CLIENT
#Client Full Name

N

PROJECT NUMBER
A20101

SCALE
1:200 @ A3

STATUS
DEVELOPMENT APPLICATION

DRAWING TITLE
GROUND FLOOR PLAN

DRAWING
DA-06

REVISION
B

FILE A20101_156 NTR_DA RFI.pln

DATE 3/3/22

1 Level 1 Floor Plan
1:200

DEVELOPMENT APPLICATION
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PROJECT NAME
156 NTR

SITE
156 New Town Road

CLIENT
#Client Full Name

PROJECT NUMBER
A20101

SCALE
1:200 @ A3

STATUS
DEVELOPMENT APPLICATION

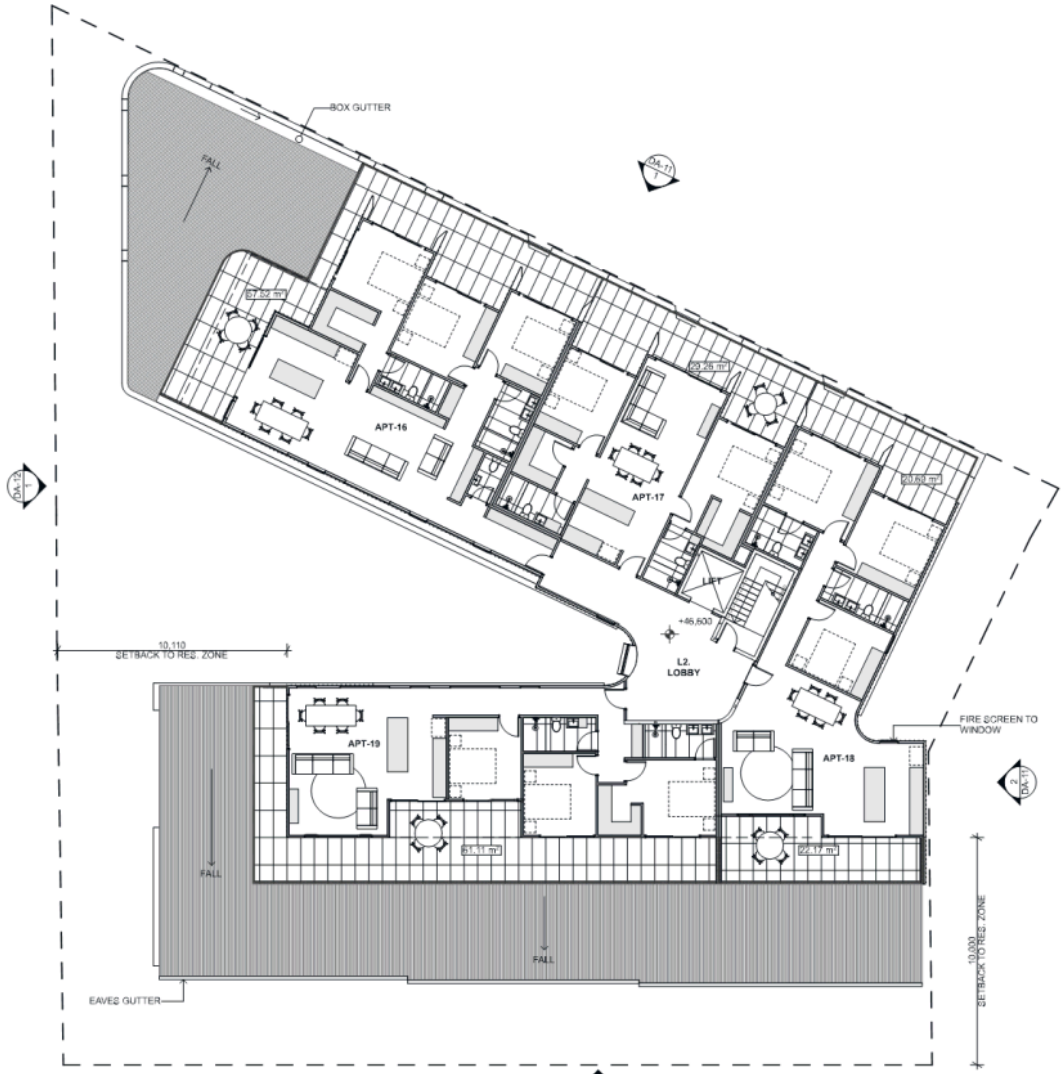
DRAWING TITLE
LEVEL 1 FLOOR PLAN

DRAWING
DA-07

REVISION
B

FILE A20101_156 NTR_DA RFI.pln

DATE 3/3/22



1 Level 2 Floor Plan
1:200

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REVISIONS

RevID	Issue Name	Date
A	Development Application	11/10/21

PROJECT NAME
156 NTR

SITE
156 New Town Road

CLIENT
#Client Full Name

N

PROJECT NUMBER
A20101

SCALE
1:200 @ A3

STATUS
DEVELOPMENT APPLICATION

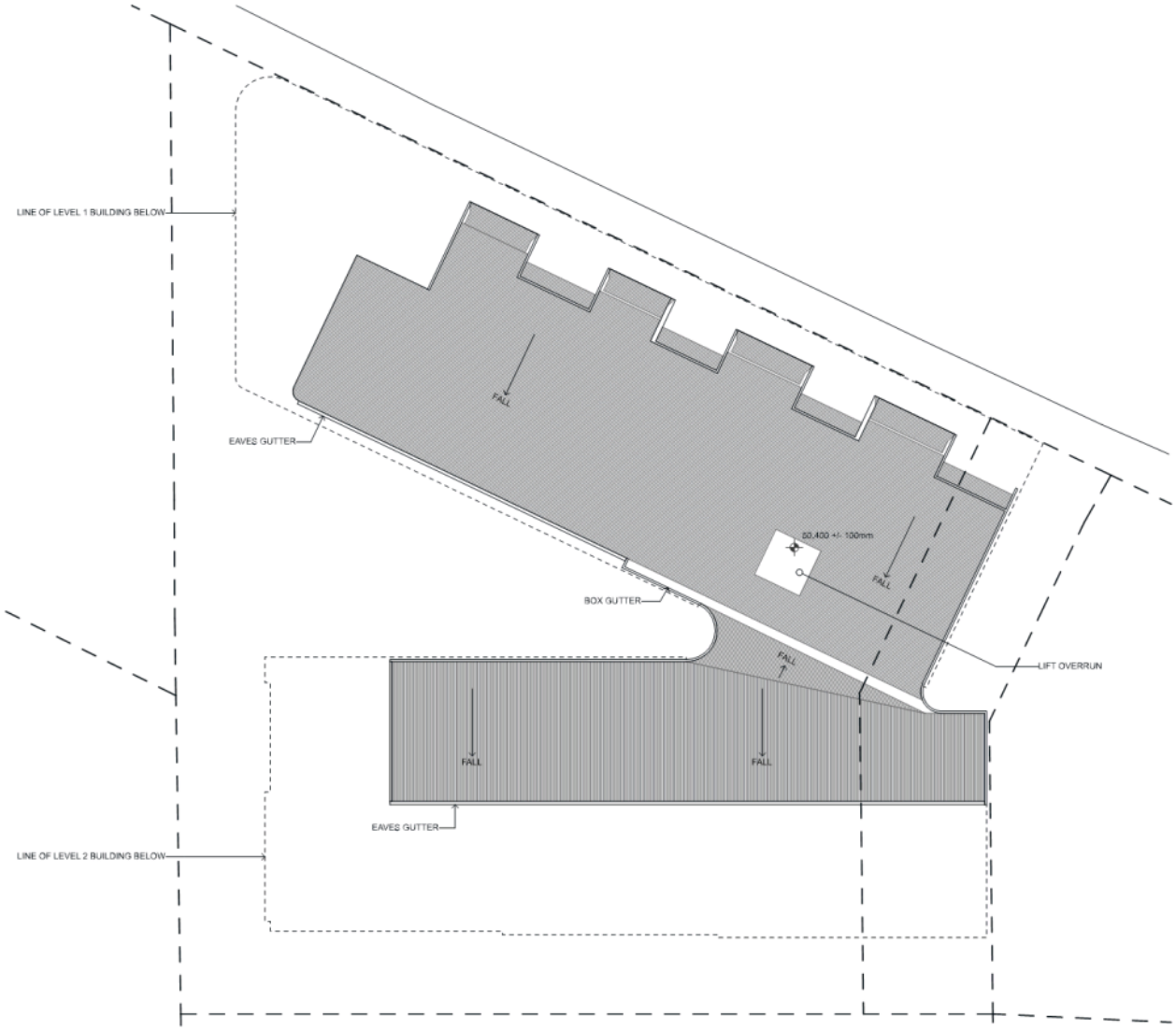
DRAWING TITLE
LEVEL 2 FLOOR PLAN

DRAWING
DA-08

REVISION
A

FILE A20101_156 NTR_DA.pln

DATE 11/10/21



1 Roof Plan
1:200

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REVISIONS

RevID	Issue Name	Date
A	Development Application	11/10/21

PROJECT NAME
156 NTR

SITE
156 New Town Road

CLIENT
#Client Full Name

N

PROJECT NUMBER
A20101

SCALE
1:200 @ A3

STATUS
DEVELOPMENT APPLICATION

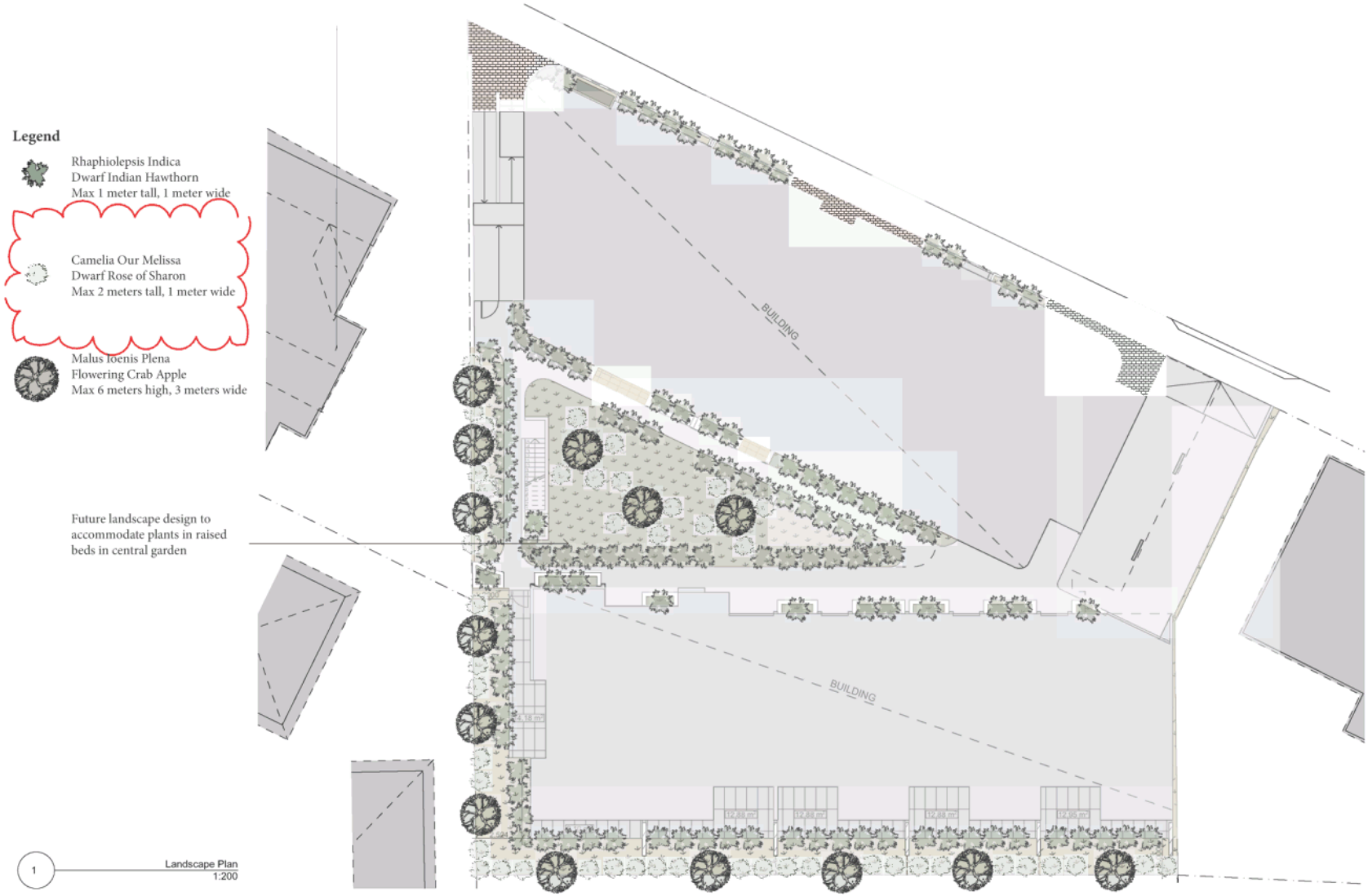
DRAWING TITLE
ROOF PLAN

DRAWING
DA-09

REVISION
A

FILE A20101_156 NTR_DA.pln

DATE 11/10/21



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REVISIONS

RevID	Issue Name	Date
A	Development Application	11/10/21
B	Development Application - RFI	22/12/21

PROJECT NAME
156 NTR

SITE
156 New Town Road

CLIENT
#Client Full Name

PROJECT NUMBER
A20101

SCALE
@ A3

STATUS
DEVELOPMENT APPLICATION

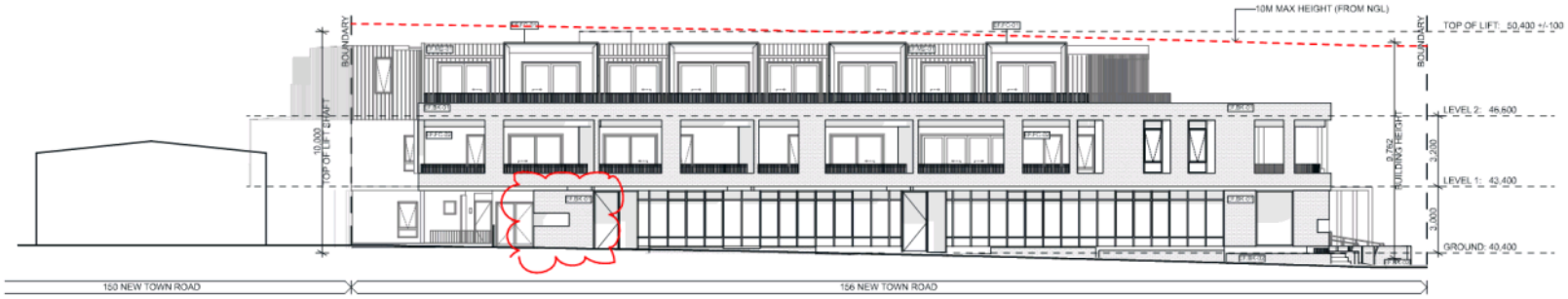
DRAWING TITLE
LANDSCAPE PLAN

DRAWING
DA-10

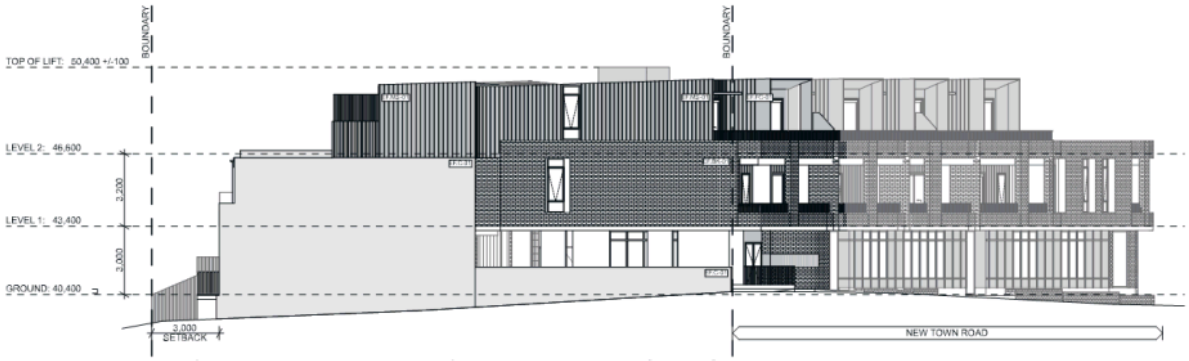
REVISION
B

FILE A20101_156 NTR_DA RFI.pln

DATE 22/12/21



1 East Elevation
1:200



2 South Elevation
1:200

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REVISIONS

RevID	Issue Name	Date
A	Development Application	11/10/21
B	Development Application - RFI	3/3/22

PROJECT NAME
156 NTR

SITE
156 New Town Road

CLIENT
#Client Full Name

PROJECT NUMBER
A20101

SCALE
1:200 @ A3

STATUS
DEVELOPMENT APPLICATION

DRAWING TITLE
ELEVATIONS

DRAWING
DA-11

REVISION
B

FILE A20101_156 NTR_DA RFI.pln

DATE 3/3/22

1 North Elevation
1:200

2 West Elevation
1:200

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REVISIONS

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PROJECT NAME
156 NTR

SITE
156 New Town Road

CLIENT
#Client Full Name

PROJECT NUMBER
A20101

SCALE
1:200 @ A3

STATUS
DEVELOPMENT APPLICATION

DRAWING TITLE
ELEVATIONS

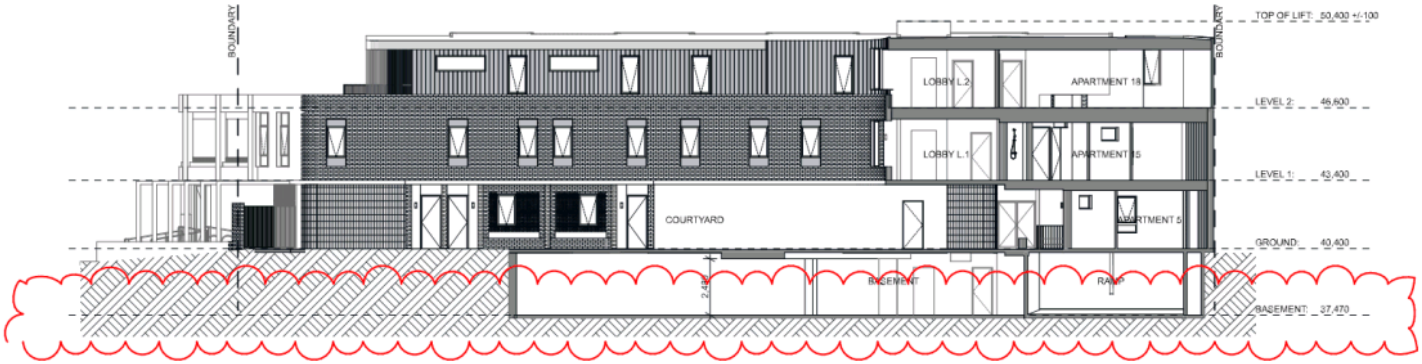
DRAWING
DA-12

REVISION
B

FILE A20101_156 NTR_DA RFI.pln

DATE 3/3/22

1 Section - Long
1:200



2 Section - Courtyard
1:200

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REVISIONS

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PROJECT NAME
156 NTR

SITE
156 New Town Road

CLIENT
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PROJECT NUMBER
A20101

SCALE
1:200 @ A3

STATUS
DEVELOPMENT APPLICATION

DRAWING TITLE
SECTIONS

DRAWING
DA-13

REVISION
B

FILE A20101_156 NTR_DA RFI.pln

DATE 3/3/22

1 Section - Ramp
1:100

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REVISIONS

RevID	Issue Name	Date
A	Development Application	11/10/21

PROJECT NAME
156 NTR

SITE
156 New Town Road

CLIENT
#Client Full Name

PROJECT NUMBER
A20101

SCALE
1:100 @ A3

STATUS
DEVELOPMENT APPLICATION

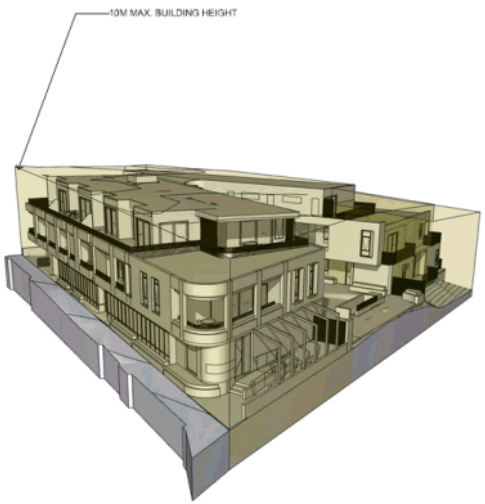
DRAWING TITLE
SECTIONS

DRAWING
DA-14

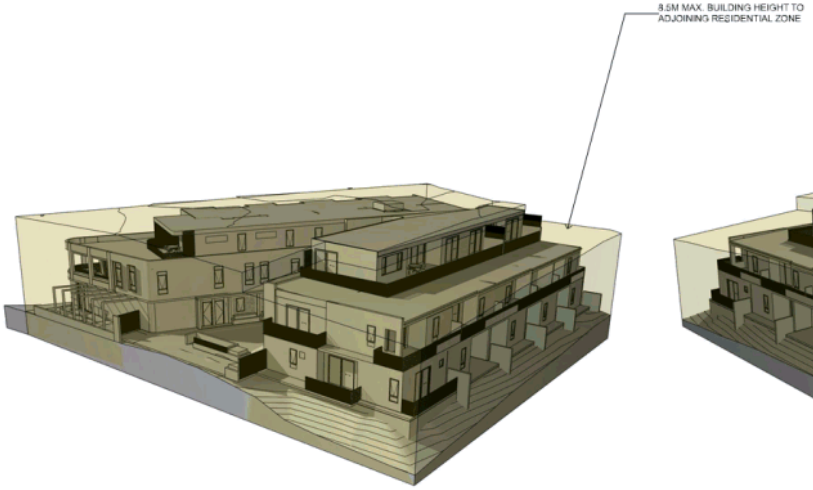
REVISION
A

FILE A20101_156 NTR_DA RFI.pln

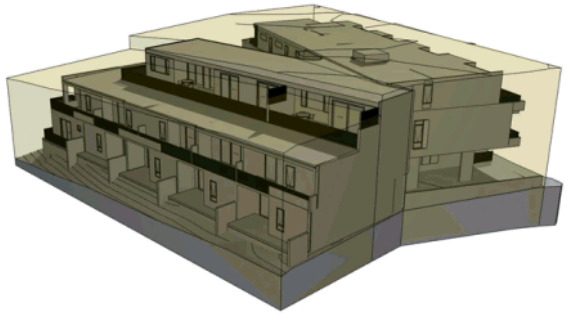
DATE 3/3/22



1 Building Height Envelope - Assumed NGL - North East View



2 Building Height Envelope - Assumed NGL - North West



3 Building Height Envelope - Assumed NGL - South West

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REVISIONS

RevID	Issue Name	Date
A	Development Application	11/10/21

PROJECT NAME
156 NTR

SITE
156 New Town Road

CLIENT
#Client Full Name

PROJECT NUMBER
A20101

SCALE
@ A3

STATUS
DEVELOPMENT APPLICATION

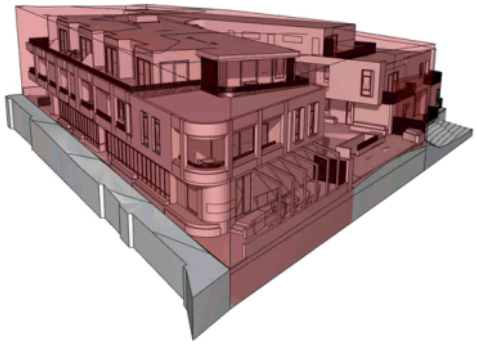
DRAWING TITLE
BUILDING HEIGHT ENVELOPE - 15.4.1

DRAWING
DA-15

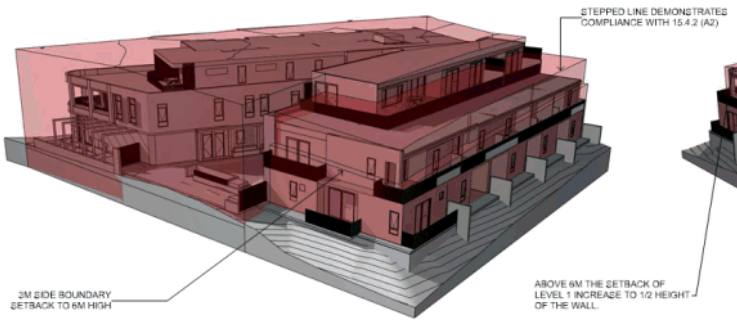
REVISION
A

FILE A20101_156 NTR_DA.pln

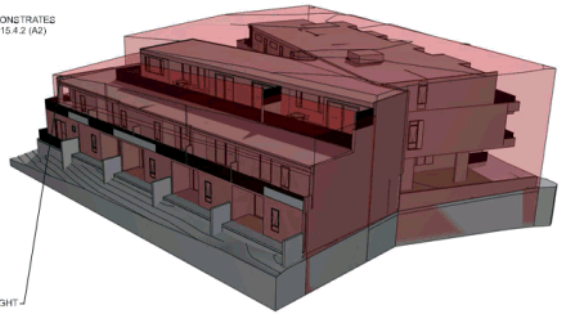
DATE 11/10/21



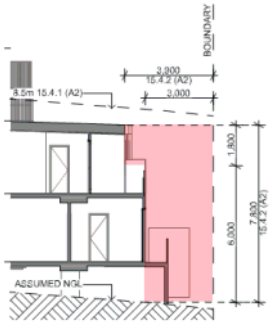
1 Setbacks - North East



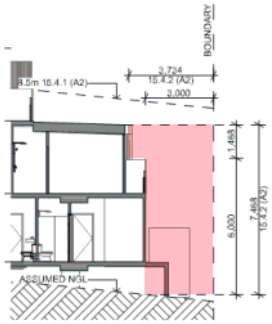
2 Setback - North West



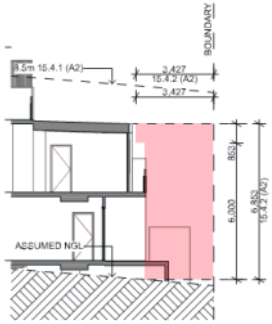
3 Setback - South West



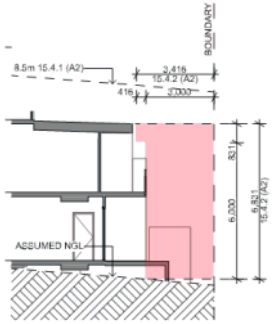
4 APT 11 - Western Boundary Section
1:200



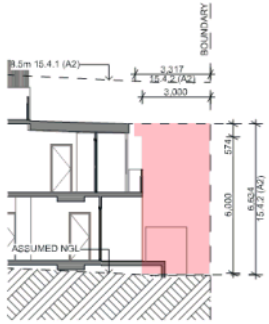
5 APT-12 - Western Boundary Section
1:200



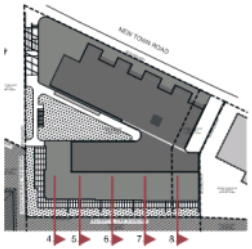
6 APT-13 - Western Boundary Section
1:200



7 APT-14 - Western Boundary Section
1:200



8 APT-15 - Western Boundary Section
1:200



Location Plan
1:1000

THE AREA SHOWN 'RED' ILLUSTRATES THE EXTENT OF REQUIRED BUILDING SETBACK AND DEMONSTRATES COMPLIANCE WITH 15.4.2 (A2). SECTIONS ARE TAKEN AT VARIOUS LOCATIONS ALONG THE WESTERN BOUNDARY.

*3m SETBACK APPLIED UPTO 6m HIGH, SETBACK OF "HALF THE HEIGHT OF THE WALL" APPLIED ABOVE 6m

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REVISIONS

RevID	Issue Name	Date
A	Development Application	11/10/21

PROJECT NAME
156 NTR

SITE
156 New Town Road

CLIENT
#Client Full Name

PROJECT NUMBER
A20101

SCALE
1:200, 1:1000 @ A3

STATUS
DEVELOPMENT APPLICATION

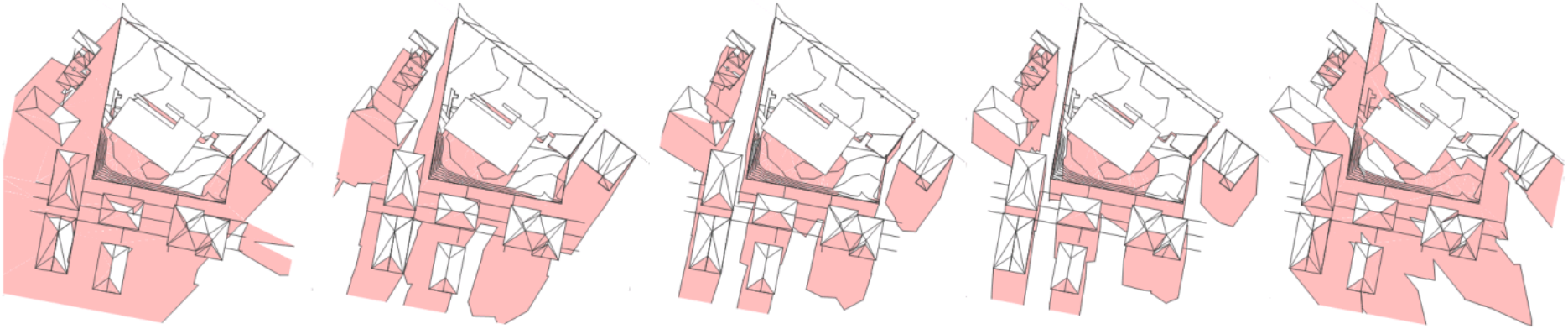
DRAWING TITLE
BUILDING SETBACK ENVELOPE - 15.4.2

DRAWING
DA-16

REVISION
A

FILE A20101_156 NTR_DA.pln

DATE 11/10/21



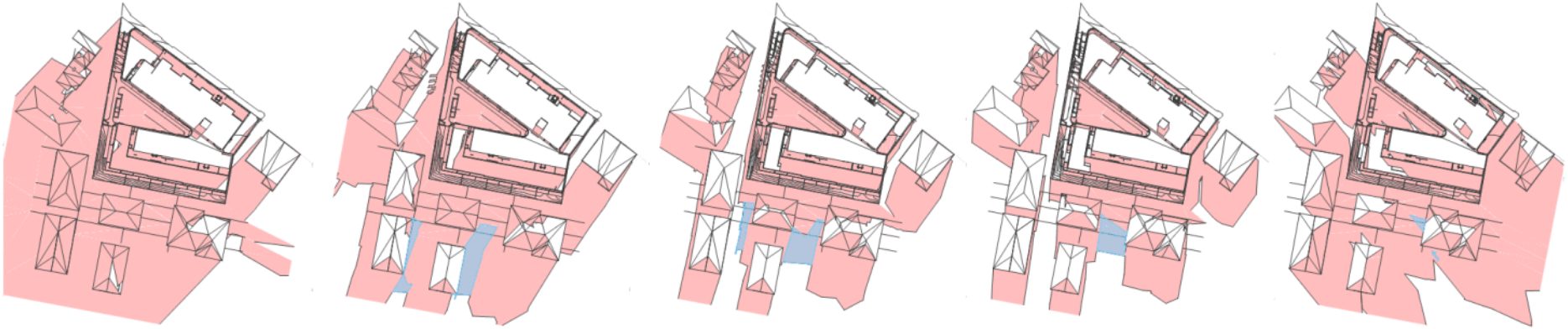
1 Existing - June 21 9am

2 Existing - June 21 10am

3 Existing - June 21 11am

4 Existing - June 21 12pm

5 Existing - June 21 3pm



6 Proposed - June 21 9am

7 Proposed - June 21 10am

8 Proposed - June 21 11am

9 Proposed - June 21 12pm

10 Proposed - June 21 3pm

ILLUSTRATES ADDITIONAL AREAS OF SHADOW TO GROUND SURFACES TO RESIDENTIAL ZONED LAND

DEVELOPMENT APPLICATION

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A	Development Application	11/10/21
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PROJECT NAME
156 NTR

SITE
156 New Town Road

CLIENT
#Client Full Name

N

PROJECT NUMBER
A20101

SCALE
@ A3

STATUS
DEVELOPMENT APPLICATION

DRAWING TITLE
SUN STUDIES

DRAWING
DA-17

REVISION
B

FILE A20101_156 NTR_DA RFI.pln

DATE 3/3/22

1 New Town Road Street Elevation
1:500

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PROJECT NAME
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SITE
156 New Town Road

CLIENT
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PROJECT NUMBER
A20101

SCALE
1:500 @ A3

STATUS
DEVELOPMENT APPLICATION

DRAWING TITLE
STREET ELEVATION

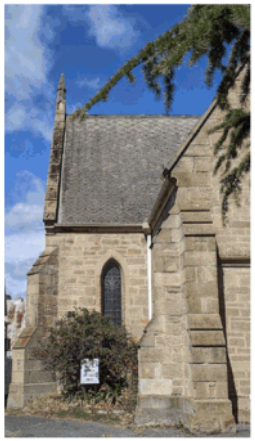
DRAWING
DA-18

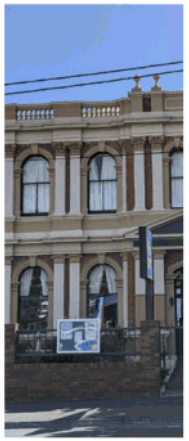
REVISION
A

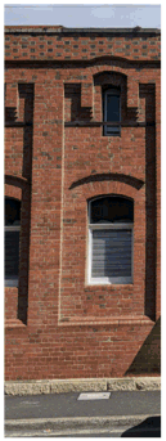
FILE A20101_156 NTR_DA.pln

DATE 11/10/21

Streetscape Analysis







An analysis of the existing streetscape condition has informed the proposed material palette. The prominant buildings in the surrounding streetscape largely consist of red brick, rendered brick, or sandstone. Where render has been used the colouring is predominantly white, cream or beige, which compliments the sandstone of the (fmr.) Methodist Church. The use of 'Sand' coloured brick (featured at L1 of the proposal) references this colouring, by contrast the red brick planterbox which forms a plinth to the street edge and the red-brick paving makes reference to the use of 'Hobart Red' bricks.

Proposed Material Palette

EF.BK-01
Face Brickwork
Mineral Contours,
Colour: 'Sand'

EF.FC-02
Painted Cement Sheet:
Axon 133, Smooth. Paint
Colour: Dulux 'Snowy
Mountains Half'

EF.AL-01
Powdercoated Aluminium
Dulux Duralloy, Colour:
'White' Satin Finish

EF.MS-01
Prefinished metal sheet
with ribbed profile, Colour:
'Woodland Grey'

EF.FC-01
Painted Cement Sheet:
Axon 133, Smooth. Paint
Colour: Dulux
'Woodland Grey'

EF.C-01
Precast Concrete
Panel, natural, clear
seal only

EF.BK-02
Face Brickwork
Bowral Satin,
Colour: 'Capitol Red'

DEVELOPMENT APPLICATION

NOT FOR CONSTRUCTION

LXN

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21a Cross St. New Town, 7008
PO Box 136 North Hobart, 7002

P. (03) 6228 0113
hello@lxn.com.au

REVISIONS

RevID	Issue Name	Date
A	Development Application	11/10/21
B	Development Application - RFI	25/2/22

PROJECT NAME
156 NTR

SITE
156 New Town Road

CLIENT
#Client Full Name

PROJECT NUMBER
A20101

SCALE
@ A3

STATUS
DEVELOPMENT APPLICATION

DRAWING TITLE
MATERIAL PALETTE / STREETSCAPE ANALYSIS

DRAWING
DA-19

REVISION
B

FILE A20101_156 NTR_DA RFI.pln

DATE 25/2/22

1 New Town Road - Cross St. Intersection Looking South

NOT FOR CONSTRUCTION | DEVELOPMENT APPLICATION

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Architecture & Consulting
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PO Box 136 North Hobart, 7002
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REVISIONS

RevID	Issue Name	Date
A	Development Application	11/10/21

PROJECT NAME
156 NTR

SITE
156 New Town Road

CLIENT
#Client Full Name

PROJECT NUMBER
A20101

SCALE
@ A3

STATUS
DEVELOPMENT APPLICATION

DRAWING TITLE
PHOTOMONTAGE SHEET 1

DRAWING
DA-20

REVISION
A

FILE A20101_156 NTR_DA.pln

DATE 11/10/21

1 New Town Road - Looking North

DEVELOPMENT APPLICATION

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REVISIONS

RevID	Issue Name	Date
A	Development Application	11/10/21
B	Development Application - RFI	3/3/22

PROJECT NAME
156 NTR

SITE
156 New Town Road

CLIENT
#Client Full Name

PROJECT NUMBER
A20101

SCALE
@ A3

STATUS
DEVELOPMENT APPLICATION

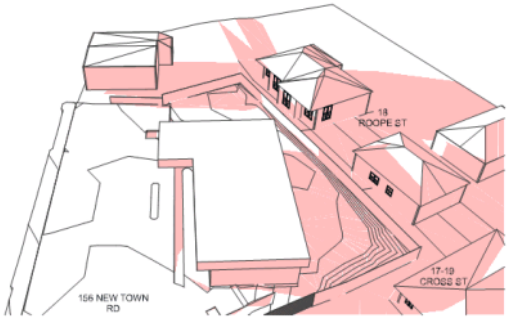
DRAWING TITLE
PHOTOMONTAGE SHEET 2

DRAWING
DA-21

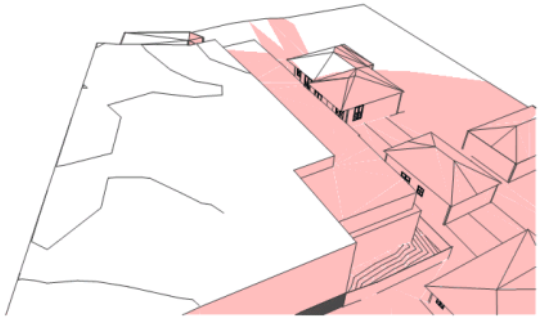
REVISION
B

FILE A20101_156 NTR_DA RFI.pln

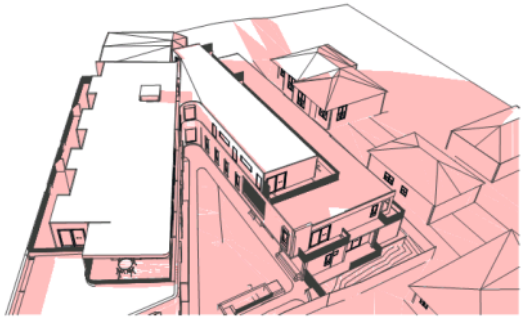
DATE 3/3/22



1 Existing - June 21, 9am



3 Compliant Setbacks - June 21, 9am



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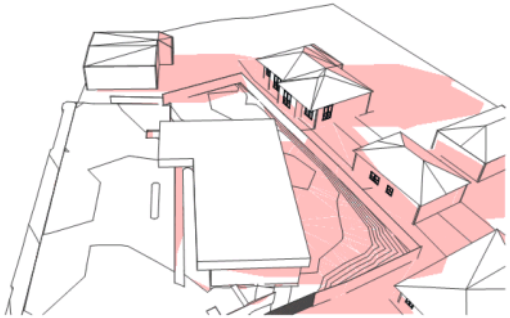

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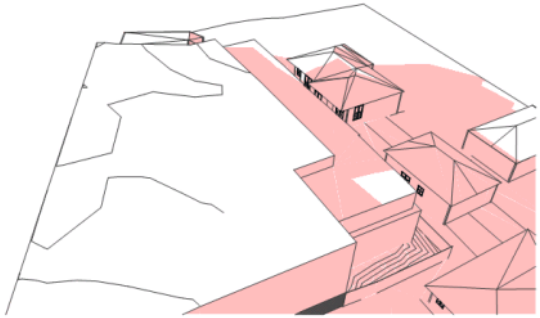
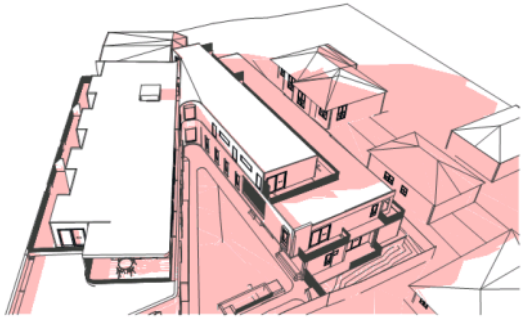


4 Compliant Setbacks - June 21, 10am



6 Proposed - June 21, 10am

DEVELOPMENT APPLICATION

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REVISIONS

RevID	Issue Name	Date
A	Development Application - RFI	3/3/22

PROJECT NAME
156 NTR

SITE
156 New Town Road

CLIENT
#Client Full Name

PROJECT NUMBER
A20101

SCALE
@ A3

STATUS
DEVELOPMENT APPLICATION

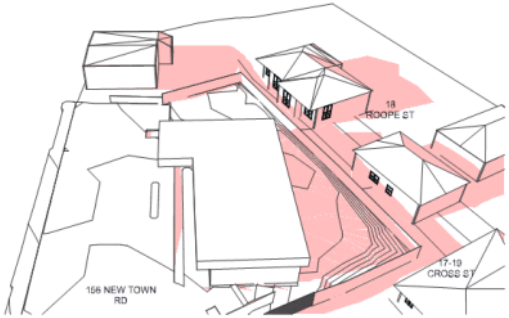
DRAWING TITLE
SUN STUDY SHEET 1

DRAWING
DA-22

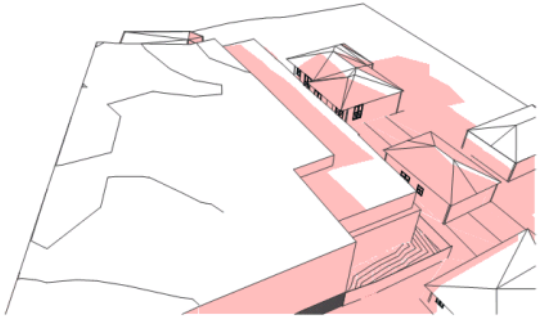
REVISION
A

FILE A20101_156 NTR_DA RFI.pln

DATE 3/3/22



1 Existing - June 21, 11am



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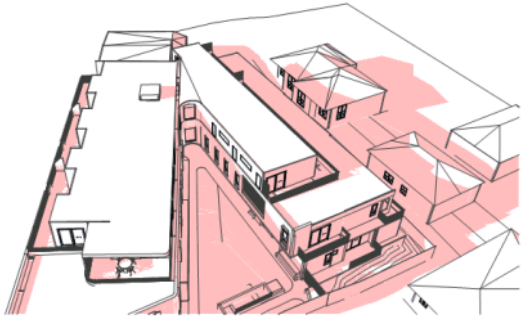
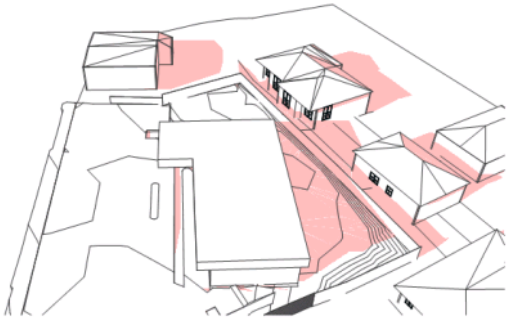
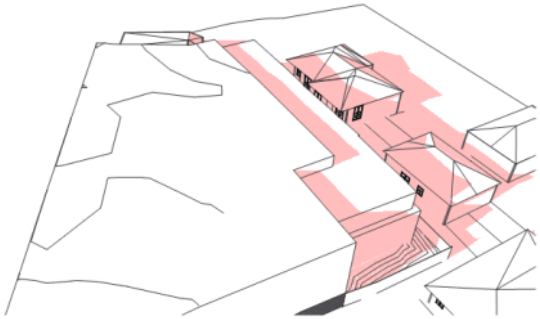


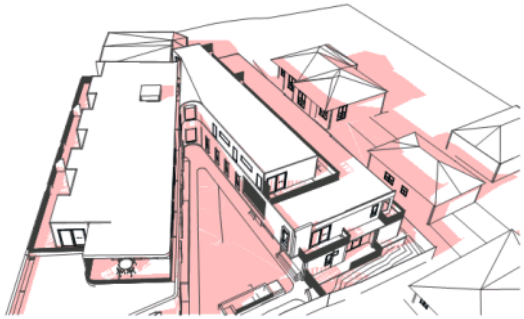
5 Proposed - June 21, 11am



2 Existing - June 21, 12pm



4 Compliant Setbacks - June 21, 12pm



6 Proposed - June 21, 12pm

DEVELOPMENT APPLICATION

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REVISIONS

RevID	Issue Name	Date
A	Development Application - RFI	3/3/22

PROJECT NAME
156 NTR

SITE
156 New Town Road

CLIENT
#Client Full Name

PROJECT NUMBER
A20101

SCALE
@ A3

STATUS
DEVELOPMENT APPLICATION

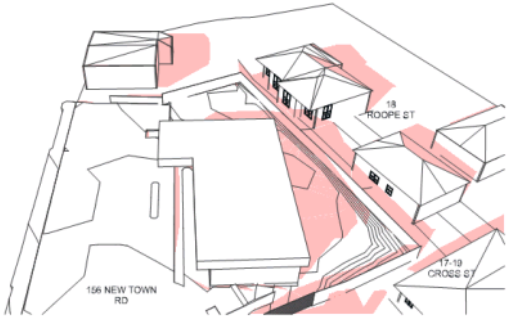
DRAWING TITLE
SUN STUDY SHEET 2

DRAWING
DA-23

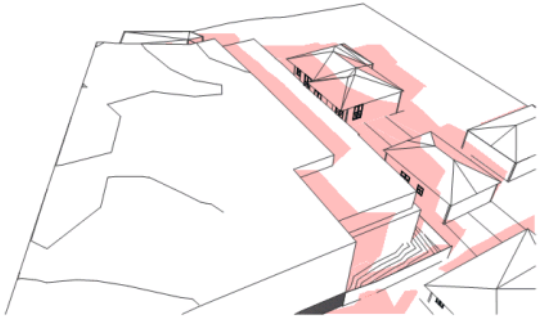
REVISION
A

FILE A20101_156 NTR_DA RFI.pln

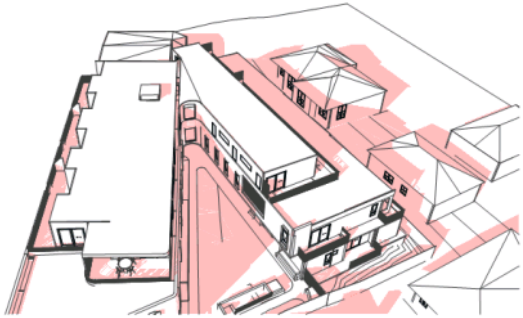
DATE 3/3/22



1 Existing - June 21, 1pm



3 Compliant Setbacks - June 21, 1pm



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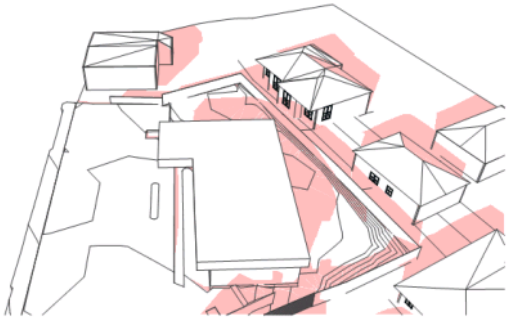

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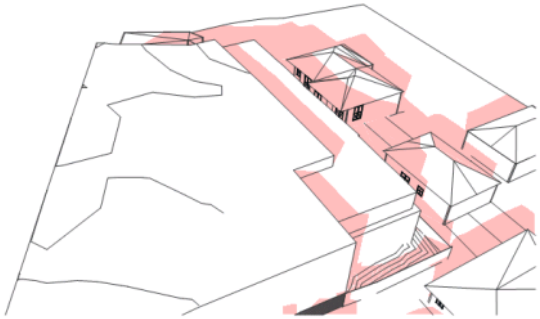
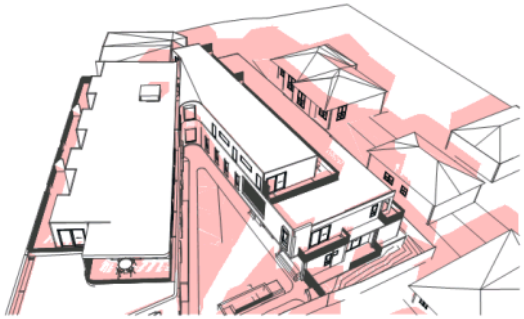


4 Compliant Setbacks - June 21, 2pm



6 Proposed - June 21, 2pm

DEVELOPMENT APPLICATION

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REVISIONS

RevID	Issue Name	Date
A	Development Application - RFI	3/3/22

PROJECT NAME
156 NTR

SITE
156 New Town Road

CLIENT
#Client Full Name

PROJECT NUMBER
A20101

SCALE
@ A3

STATUS
DEVELOPMENT APPLICATION

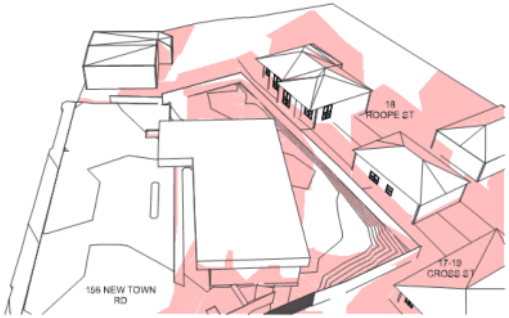
DRAWING TITLE
SUN STUDY SHEET 3

DRAWING
DA-24

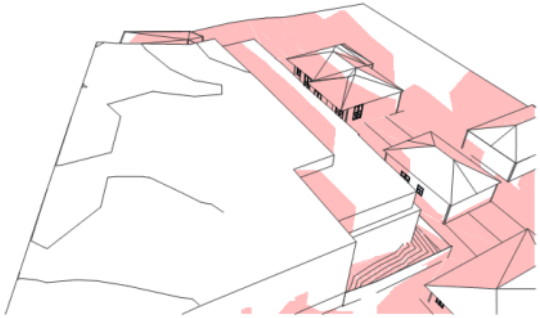
REVISION
A

FILE A20101_156 NTR_DA RFI.pln

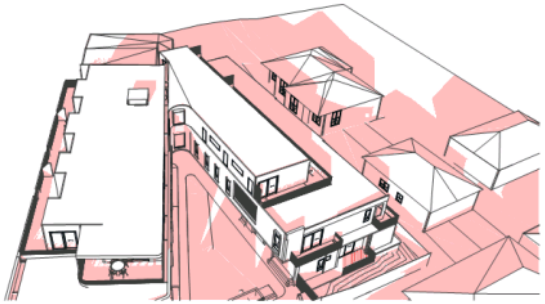
DATE 3/3/22



1 Existing - June 21, 3pm



2 Compliant Setbacks - June 21, 3pm



3 Proposed - June 21, 3pm

DEVELOPMENT APPLICATION

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PO Box 136 North Hobart, 7002

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REVISIONS

RevID	Issue Name	Date
A	Development Application - RFI	3/3/22

PROJECT NAME
156 NTR

SITE
156 New Town Road

CLIENT
#Client Full Name

PROJECT NUMBER
A20101

SCALE
@ A3

STATUS
DEVELOPMENT APPLICATION

DRAWING TITLE
SUN STUDY SHEET 4

DRAWING
DA-25

REVISION
A

FILE A20101_156 NTR_DA RFI.pln

DATE 3/3/22

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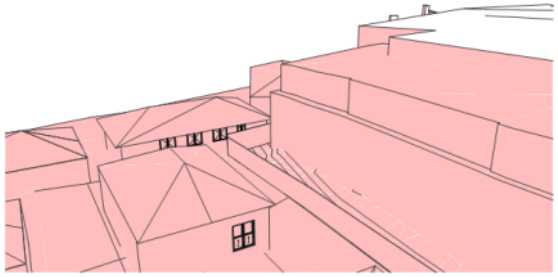
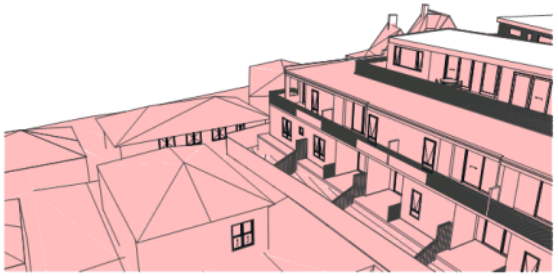
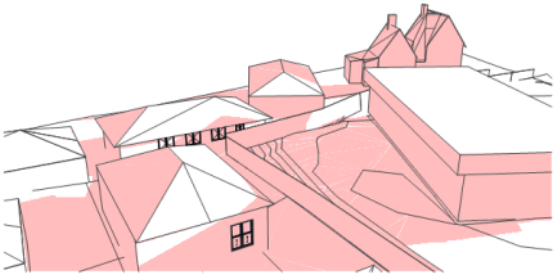


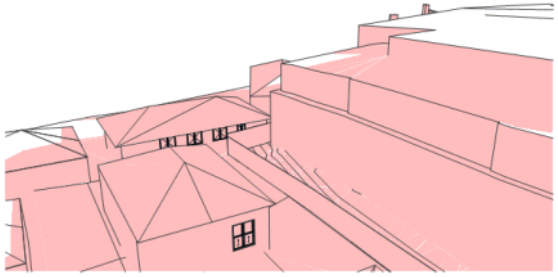
3 Compliant Setbacks - June 21, 9 am



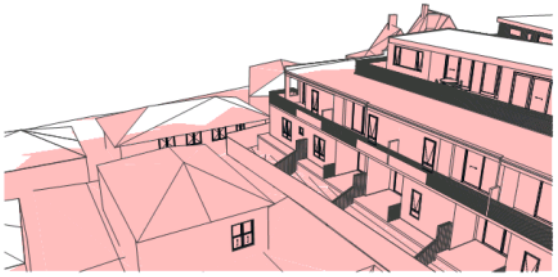
5 Proposed - June 21, 9 am



2 Existing - June 21, 10 am



4 Compliant Setbacks - June 21, 10 am



6 Proposed- June 21, 10 am

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hello@lxn.com.au

REVISIONS

RevID	Issue Name	Date
A	Development Application - RFI	3/3/22

PROJECT NAME
156 NTR

PROJECT NUMBER
A20101

DRAWING TITLE
SUN STUDY SHEET 5

SITE
156 New Town Road

CLIENT
#Client Full Name

SCALE
@ A3

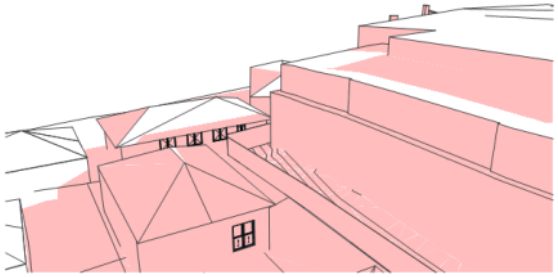
DRAWING
DA-26

REVISION
A

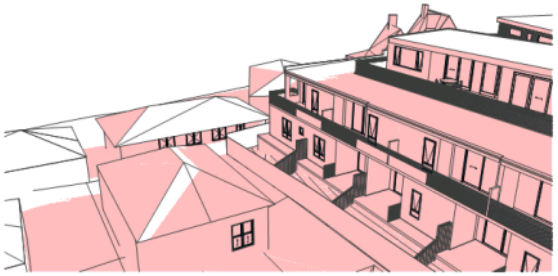
FILE A20101_156 NTR_DA RFI.pln

DATE 3/3/22

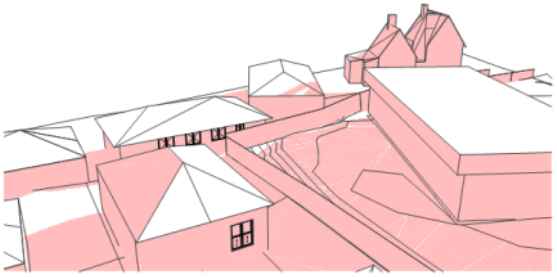
1 Existing - June 21, 11am



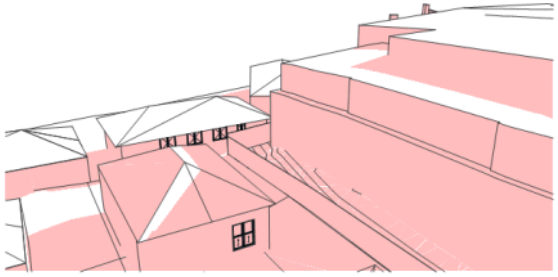
3 Compliant Setbacks - June 21, 11am



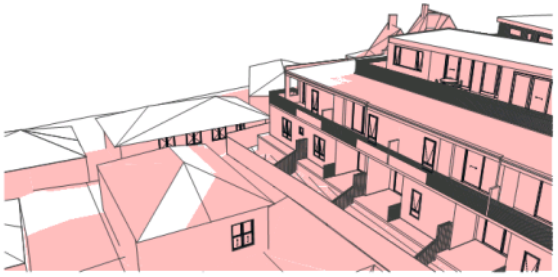
5 Proposed - June 21, 11am



2 Existing - June 21, 12pm



4 Compliant Setbacks - June 21, 12pm



6 Proposed - June 21, 12pm

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Architecture & Consulting

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PO Box 136 North Hobart, 7002

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REVISIONS

RevID	Issue Name	Date
A	Development Application - RFI	3/3/22

PROJECT NAME
156 NTR

PROJECT NUMBER
A20101

DRAWING TITLE
SUN STUDY SHEET 6

SITE
156 New Town Road

CLIENT
#Client Full Name

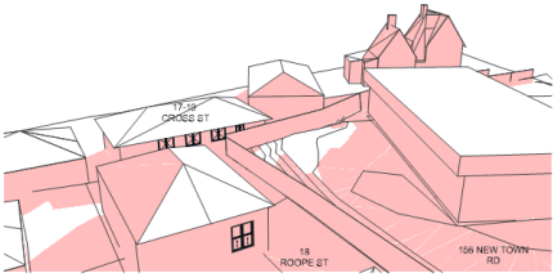
SCALE
@ A3

DRAWING
DA-27

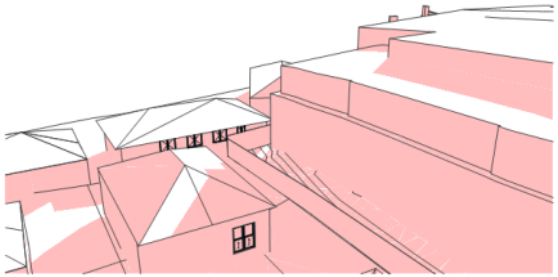
REVISION
A

FILE A20101_156 NTR_DA RFI.pln

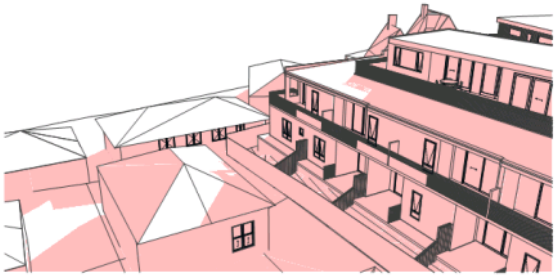
DATE 3/3/22



1 Existing - June 21, 1pm

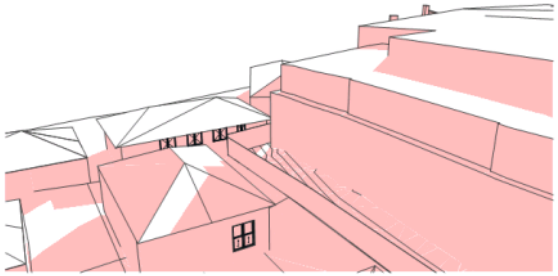


3 Compliant Setbacks - June 21, 1pm

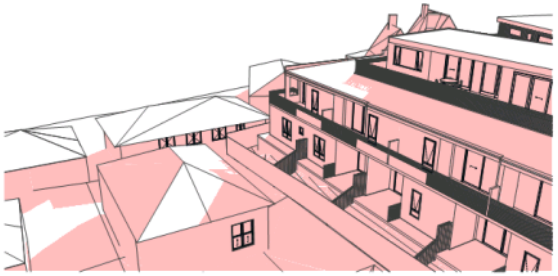


5 Proposed- June 21, 1pm

2 Existing - June 21, 2pm



4 Compliant Setbacks - June 21, 2pm



6 Proposed - June 21, 2pm

LXN

Architecture & Consulting

21a Cross St. New Town, 7008
PO Box 136 North Hobart, 7002

P (03) 6228 0113
hello@lxn.com.au

REVISIONS

RevID	Issue Name	Date
A	Development Application - RFI	3/3/22

PROJECT NAME
156 NTR

PROJECT NUMBER
A20101

DRAWING TITLE
SUN STUDY SHEET 7

SITE
156 New Town Road

CLIENT
#Client Full Name

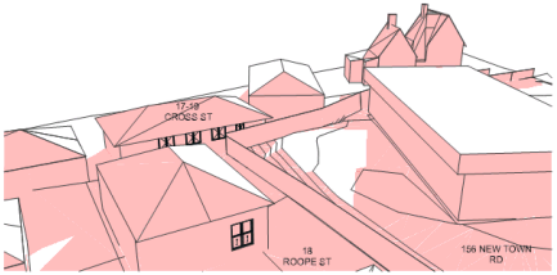
SCALE
@ A3

DRAWING
DA-28

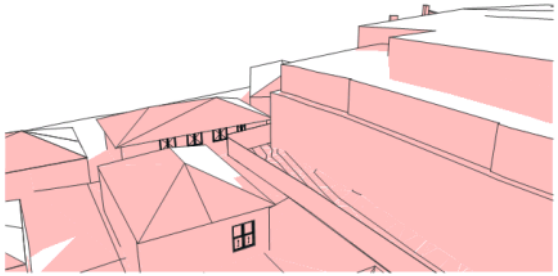
REVISION
A

FILE A20101_156 NTR_DA RFI.pln

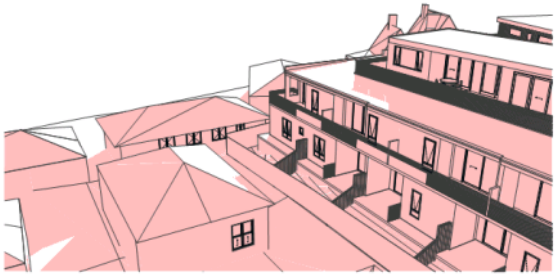
DATE 3/3/22



1 Existing - June 21, 3pm



2 Compliant Setbacks- June 21, 3pm



3 Proposed - June 21, 3pm

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REVISIONS

RevID	Issue Name	Date
A	Development Application - RFI	3/3/22

PROJECT NAME
156 NTR

PROJECT NUMBER
A20101

DRAWING TITLE
SUN STUDY SHEET 8

SITE
156 New Town Road

CLIENT
#Client Full Name

SCALE
@ A3

DRAWING
DA-29

REVISION
A

FILE A20101_156 NTR_DA RFI.pln

DATE 3/3/22

1 WEST ELEVATION - LANDSCAPING SHOWN
1:200

LXN

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REVISIONS

RevID	Issue Name	Date
A	Development Application - RFI	3/3/22

PROJECT NAME
156 NTR

SITE
156 New Town Road

CLIENT
#Client Full Name

SCALE
@ A3

PROJECT NUMBER
A20101

DRAWING TITLE
ELEVATION

DRAWING
DA-30

REVISION
A

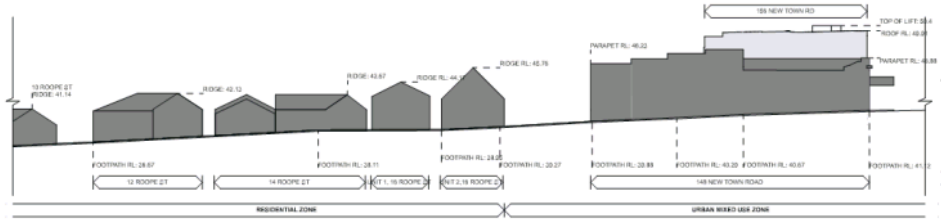
FILE A20101_156 NTR_DA RFI.pln

DATE 3/3/22

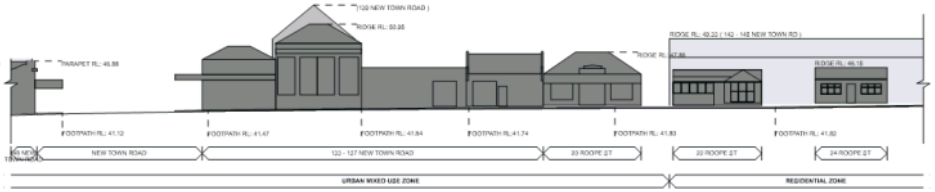
Streetscape Elevation prepared using height data provided by PDA Surveyors: Survey Drawing 48747MD-1 & 'Elevation Markup' Dated 17/12/2021. Relative Levels (RL) where shown on the elevations are taken from the PDA survey data, this data was combined with streetscape photos to assist with the preparation of the street elevations.

1A ELEVATION MARKER KEY (PDA Survey Plan)
1:1000

2A ELEVATION MARKER KEY (PDA Survey Plan)
1:1000



1B ROOPE ST EAST - STREETSCAPE ELEVATION
1:500



2B ROOPE ST EAST - STREETSCAPE ELEVATION
1:500

LXN

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REVISIONS

RevID	Issue Name	Date
A	Development Application - RFI	3/3/22

PROJECT NAME
156 NTR

SITE
156 New Town Road

CLIENT
#Client Full Name

SCALE
@ A3

PROJECT NUMBER
A20101

DRAWING TITLE
ROOPE ST - STREETSCAPE ELEVATION

DRAWING
DA-31

REVISION
A

FILE A20101_156 NTR_DA RFI.pln

DATE 7/3/22

Application Referral Cultural Heritage - Response

From:	Megan Baynes
Recommendation:	Proposal is acceptable subject to conditions.
Date Completed:	
Address:	156 NEW TOWN ROAD, NEW TOWN
Proposal:	Demolition, Subdivision (Lot Consolidation), and New Building for 19 Multiple Dwellings and Fitness Centre (Sports and Recreation)
Application No:	PLN-21-718
Assessment Officer:	Adam Smee,

Referral Officer comments:

Background/Description:
156 New Town Road is located in New Town 4 Heritage Precinct which is noted as significant for the reasons including:

1. It contains examples of Georgian, Victorian and Federation commercial and residential buildings that illustrate the growth of the area as a local service centre along a historically early main arterial road and transport route.
2. It contains individual high quality examples of architectural styles in a streetscape that is eclectic in form and scale.
3. The residences in close proximity to the main road contribute to an understanding of the historical pattern of its development and the tendency to reside in close proximity to commercial and community facilities.

As the name suggests, New Town was where wealthy people built a 'new town' away from Hobart Town at Sullivan's Cove which, with its convict activities and early industrial activity associated with the Hobart Rivulet, was considered to be a less than desirable address in the late 19th century.

The former Church (1866), Parsonage, Post Office (1891) and the old Town Hall (1897) are all now adapted for other uses. These buildings and many of the houses in the precinct provide a sense of the late 19th century/early 20th century public, domestic and commercial character and activity along this high street.

The property at 156 New Town Road was once the location of Rose Cottage, demolished in 1962 for a service station. The service station was decommissioned in about 1980. The subject site is currently 'a missing tooth' in the streetscape, as a mid 20th century building with hard stand to the front without soft landscaping. As is often the case, the demolition of a period house has weakened the spatial structure of the streetscape but presents an opportunity for development without the constraint of existing significant heritage assists on site.

The precinct extends across New Town Road and through adjacent streets, including Roope Street.

The subject site sits on rising land on a curving road and this means that development would be seen obliquely, particularly from the north and south.

The discretions are demolition and works and subdivision (lot consolidation) in a heritage precinct.

Assessment Provisions:
The following provisions apply:

E13.8.1 Demolition
Objective: To ensure that demolition in whole or in part of buildings or works within a heritage precinct does not result in the loss of historic cultural heritage values unless there are exceptional circumstances.

Clause E13.8.1 P1 states:
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.

E13.8.2 Buildings and Works other than Demolition
Objective: To ensure that development undertaken within a heritage precinct is sympathetic to the character of the precinct.

Clause E13.8.2 P1 states:
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.

E13.8.3 Subdivision
Objective: To ensure that subdivision within a Heritage Precinct is consistent with historic patterns of development and does not create potential for future incompatible development.

Clause E13.8.3 P1 states:
Subdivision must not result in any of the following:
(a) detriment to the historic cultural heritage significance of the precinct, as listed in Table E13.2;
(b) a pattern of subdivision unsympathetic to the historic cultural heritage significance of the precinct;
(c) potential for a confused understanding of the development of the precinct;
(d) an increased likelihood of future development that is incompatible with the historic cultural heritage significance of the precinct.

Representations:
Council has received two representations and both are in opposition to the development. One representation raises heritage as a concern. The issue of blocking and dominating views of significant historic buildings in a heritage streetscape is an articulated concern:

"The heritage assessment prepared by Purcell submitted as part of documentation for this proposal does not identify the significant impact of the proposal on the heritage streetscape created by the Old Parsonage and Cross Street Church at this location"
"The significance of this key heritage streetscape has been missed by the Purcell Heritage Assessment"

"To reduce these impact we propose that the application be conditioned to require the reduction and redesign of the north-western corner of the building to reduce the impact on the visibility of the Old Parsonage and Cross Street Church"

The representor has nominated a potential condition to assuage concerns, but the proposed condition (to redesign the northern end of the proposed development) is beyond the scope of what can legally be imposed.

Representations also raise the issue of the potential for damage to an adjacent garden in a heritage precinct. The removal of vegetation is not being proposed, but the impact of the proposed construction project on trees in the front garden of the adjacent former Parsonage is the concern. It may be possible to place advice for tree protection to safeguard trees both during and after construction.

Assessment:
The 1960s service station building and associated hard landscaping at 156 New Town Road is proposed to be demolished. The site does not contain any buildings or works that possess historic cultural heritage value as defined in the statements of significance in Table E 13.2. The loss of historic heritage values is not anticipated as a function of the proposed demolition. Clause E13.8.1 P1 is satisfied.

The applicant has commissioned an architect to prepare a design in response to the various regulated stipulations. The design appears to be a low risk strategy where planning discretions have been minimised.

The applicant is proposing a 2-3 storey building to be sited close to the street edge. The height of the proposed development would likely sit comfortably within the range of heights of existing buildings when viewed from New Town Road.

The setback of the proposed development would be minimal, approximately 0.5m and this appears to less generous than the historic setbacks on this side of New Town Road.

The adjacent former Parsonage and Church are set back 7.5m and 10m respectively and have gardens around them. They have archetypal Victorian era ecclesiastical details such as steeply pitched roofs and details including finials.

The heritage consultant has linked significant cultural heritage values with adjacent commercial and residential development, although this is questioned. A non-heritage building at 152 New Town has a 1.3m setback. The shop on the corner at 148 New Town Road has a 0m setback. The siting of proposed development is purported to acceptable because it abides by commercial setbacks such as the buildings at 148 and 152 New Town Road and beyond.

Significant heritage listed buildings are in the vicinity, including the former Church (c1866) and associated former Parsonage (Victorian era). The consultant's submission contains an aerial photograph from 1957 (Page 55 Appendix 4) which demonstrates how historically this part of New Town Road has been characterised by setbacks manifested as gardens.

As was previously noted, the garden at 156 New Town Road was demolished in 1962 and there is no requirement in the Historic Heritage Code to reinstate lost landscaping or garden.

The cultural heritage significance of Heritage Precinct New Town 4 is linked to the area being a late 19th century and early 20th century town centre along a main road. Various period buildings contribute to this this, but it is above all an urban ensemble, along a high street, a key transport route, surrounded by residential development. As such, buildings are the physical fabric which demonstrate what was of use and value to the local community.

For example, the former Church and Parsonage demonstrated the value placed by a Georgian and Victorian era community upon religion. The former Post Office was critical communications infrastructure in its day. The former Town Hall was the municipal seat of power and administration. Pubs and shops provided groceries and food & drink for locals and visitors. The things that the community needed or desired where available in this part of New Town Road. There has been a degree of visual change, the demolition of period buildings, the introduction of telegraphs and power poles and the introduction and removal of trams for example. The streetscape is robust and has evolved, rather than being completely static. Key period buildings have endured.

The Historic Heritage Code states that the design and siting of buildings within a heritage precinct 'must not result in detriment'. The primary visual experience of the precinct is from New Town Road. When doing so views are available of historic facades.

Streetscape views will no doubt change as a function of the proposed development.

Detriment means 'loss, damage, or injury'. Assuming that historic buildings endure in place, it is difficult to assert that significant cultural heritage values as described in the above statements of significance will be lost, damaged or injured.

The former Parsonage will appear 'hemmed in' by the proposed development, but because the actual removal of period buildings or landscapes is not being proposed, significant historic values are unlikely to be forgone.

The proposed development would be approximately the 'right' height to match the scale of existing buildings (at least those that can be considered in this statutory context – which means those visible from public spaces in the context of assessment at a heritage precinct). The former Town Hall at 139 New Town Road would exceed the height of proposed development.

The siting of the proposed development may fail to provide a dignified or respectful contextual setting for its historic neighbour, the former Parsonage, but there is no statutory requirement to do so. There are no adjacency clauses in relation to heritage listed places in this area in the *Hobart Interim Planning Scheme 2015*. Rather development 'must not result in detriment'. The placement of new things next to old things does not, in itself, equate to detriment. In fact, arguably, difference heightens appreciation of historic character by virtue of providing contrast.

Critically, the statement of significance use the word '*eclectic'*. This means a broad or wide. Diversity and variety are implied (as opposed to consistency, for example).

The heritage consultant report states that the architect's response to the adjacent Parsonage was to create a wedge shaped landscaped courtyard internal to the block. However, this courtyard will only be marginally visible from public space in the precinct and so would not have impacts, negative or positive, in the heritage streetscape.

It must be acknowledged that the former service station and associated hard landscaping fails to provide a dignified setting for the former Parsonage.

This returns us to the notion of detriment. Will the streetscape be diminished as a function of proposed development? Landscapes and planting can potentially contribute to cultural heritage significance. The gardens of the former Parsonage and Church are not listed specifically in Table E 13.1 and are not identified as Significant Trees in Table E 24.1. Front gardens are not identified in the statements of significance for NT 4. The Historic Heritage Code does not identify these gardens as being of historic heritage value.

The proposed 2-3 level development would be further from the former Parsonage, than the

space between the former Parsonage and the former Church. These distances have been measured as being approximately 8m and 2-3m respectively.

The bulk of proposed development would mean that the former Church and Parsonage would be less visible from certain footpaths and roadways in the precinct (from the south) however the former Parsonage and Church would remain visually available from New Town Road, albeit more acutely than is currently the case.

The siting and design of the proposed development, close to the street edge, is likely to be seen in the context of views of the historic streetscape (when viewed from the north).

The subdued tones of materials proposed would likely result in the proposed building appearing bland (visually recessive) relative to the visual complexity of historic facades which include the warm and rich tones of unpainted brickwork/stonework with intricate period details (which would remain visually prominent).

The advertised information contains some ambiguity in relation to primary façade design. The ground floor elevation is shown in some montages as a sandy coloured brick veneer and in other as glossy dark green tiles. The extent of glazing to solid ground floor façade is unclear. It is possible to place a condition should a permit be issued for colours and finishes to be resolved and clarified.

The decision to site a building forward of adjacent historic setbacks, and its sheer size, means that the proposed development would inevitably be clearly visible. In a heritage precinct described as eclectic, a 2-3 storey building sited approximately 0.5m from the street edge is likely to have an acceptable visual impact and the proposed building would be demonstrative of this period (2022).

That the architects have chosen to express the façade as a single horizontal entity ensures that the proposed development will not be confused with period buildings in the historic streetscape.

Siting and design choices are logical and sensible rather than inspired, but are unlikely to result in detriment to the historic cultural heritage significance of the precinct. Extant period buildings would endure and continue to be able to be viewed from public spaces in New Town Road providing high quality examples of their respective architectural periods.

E13.8.2 P1 is satisfied.

The consultant heritage report does not make reference to the subdivision (lot consolidation) provisions in relation to a Heritage Precinct. The proposed development triggers a land adhesion order to re-adhere a small area of land (now used as a carpark) which was created in the 1960s. The original lot of the now demolished Rose Cottage is thus being reformed. Therefore, the proposed subdivision (lot consolidation) would be consistent with historic patterns of development.

Clause E13.8.3 P1 (a)-(d) is satisfied.

Summary:
The proposal is for a 2-3 storey mixed use infill development on the site of a former service station in a historic local centre which is located within a heritage precinct.

The consultant's report asserts that the cultural heritage significance of the precinct is linked to period commercial and residential buildings and that the setback of proposed development would be consistent with nearby commercial and residential setbacks and therefore the visual impact of development would be acceptable in the precinct.

A representor asserts that the cultural heritage significance of the precinct is linked to views of a particular cluster of period buildings including a Georgian era Church, a Victorian era Parsonage and a Federation era Post Office. The median setback of nearby heritage listed buildings is greater than that which is being proposed. It is asserted that the visual impact would be unacceptable. The representor contends that views and settings of historic buildings would be compromised.

The cultural heritage significance for this Heritage Precinct includes references to period commercial and residential buildings and high quality examples of a range of architectural styles (which would include former public and ecclesiastical buildings). Gardens are not mentioned in the statements of significance for the precinct. The collection of period buildings strung along a local service centre on an early arterial route are the key heritage assets.

The demolition of Georgian, Victorian or Federation era buildings is not being proposed. The height of proposed development would not that exceed that of nearby historic buildings.

The Historic Heritage Code requires that development does not result in detriment to the stated significant cultural heritage values.

The use of the term 'eclectic' implies a wide range or diversity, rather than an expectation of conformity in relation to siting and design.

The proposed development will appear to be a new element in the streetscape. The proposed siting and design is unlikely to result in detriment to the historic cultural heritage significance of the precinct as defined in Table E 13.2 of the Historic Heritage Code of the *Hobart Interim Planning Scheme 2015*.

The proposed development satisfies E13.8.1 P1, (Demolition) E13.8.2 P1 (Buildings and Works) and E13.8.3 (a-d) (Subdivision) of the Historic Heritage Code of the Scheme. Advice and a condition in relation to tree protection and colours & finishes respectively is required.

MB
CHO
11
04
2022

Reviewed
SW
SCHO
12 April 2022

URBAN DESIGN ADVISORY PANEL

REPORT FROM THE MEETING OF THE URBAN DESIGN ADVISORY PANEL HELD AT 1:00 PM ON TUESDAY 29 MARCH 2022 IN THE LADY OSBORNE ROOM

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156 NEW TOWN ROAD – PLN-21-718

Attending: Josh Crossin – LXN Architecture
Sarah Lindsay – LXN Architecture
Megan Gale – Renewal Developments Pty Ltd

The Panel met to discuss the proposal in detail and the below report is a summary of the Panel's views and is provided for the consideration of the proponents and officers.

Description:
The proposal is to demolish the existing building on the site and to construct a new building that would potentially contain a fitness centre and 19 multiple dwellings. The new building would have three storeys and a basement. Car parking and storage is proposed in the basement. The fitness centre would be on the part of the ground floor of the building fronting onto New Town Road. The proposed apartment style dwellings would occupy the remaining parts of the development. The proposed building would have a maximum height of 10m and a total floor area of 2938m². Proposed external materials include face brickwork (sand and red), painted cement sheet (grey and light grey), powder-coated aluminium (white), prefinished metal sheet (grey), and precast concrete (natural finish).

Panel Report:
The Panel noted that 156 New Town Road – PLN-21-718 is a lodged planning application currently on public advertising. The following comments will be included in the Development Appraisal Planner's report.

The Panel support the development's intent to provide a variety of dwelling types but were concerned regarding the impact of the proposed development on residents of the neighbouring properties to the south. The proposal will present an overbearing presence, and overlook and overshadow these properties. The Panel felt the development was trying to put too much yield on the site, compounded by the approach to open up the space between apartments facing to New Town Road and to the south. Where the application has tried to meet development standards, and at times has not achieved compliance, it does so by failing to address the impact on the amenity of the neighbouring properties to the south. The Panel would also have

preferred to see a long section from the New Town Road side that included the neighbouring properties to the south, and feel that the application suffers from the lack of that information.

The Panel noted that the existing fence on the southern side will be retained, up to which there will be a steep bank and then private open space for units. The Panel had concerns with the resident's amenity of the south-facing recessed private open spaces, though noted the proponent's comment these would have views to kunanyi/Mount Wellington. The steep bank area, nominated by the proponents as a planted services corridor (to be managed by the body corporate?) should be a nuanced pleasant vegetated outlook that is well maintained and a positive contribution for residents' of the new development and all neighbours – balancing visual privacy, views to the mountain and summer western sun.

The proposal has created a courtyard space between New Town Road and south facing apartments, to achieve sunlight in to living spaces. The Panel questioned this interpretation and do not believe many apartments achieve this. The Panel noted that in winter, the courtyard will be in shade the whole day. The quality of the courtyard space is also questionable with bedrooms overlooking and close to passing residents. The applicant advised that the landscape design is at a conceptual stage, but the courtyard has an area that can achieve deep planting and a design will be chosen that can work for the whole year.

The Panel were concerned about the impact of the building on the streetscape. The design presents a uniform long building to the street edge that in the opinion of the Panel is not sympathetic with the character of this area. The Panel questioned if further modulation in the streetscape to creating stepping within the design, had been explored. They felt that modulation to the street frontage and street-edge detail were critical. In terms of the issues of the street modulation, the decision to make a linear building doesn't help. The Panel were also concerned with the design-approach to pixelate the streetscape to inform the composition and colour of the street façade, noting the streetscape context should also have regard to material, detail, form that is not considered in such a stylized approach to the façade.

The Panel was also concerned with the public edge to the street including the window finish to the commercial tenancy. It was noted there was no awning to the commercial frontage, typical to the precinct. To reinforce the commercial character of ground floor activities in the precinct, the panel would like to see a condition on any potential permit

that the glazing remained clear and not opaque or treated with vinyl, to maintain visibility between outside and inside.

The use of planters along New Town Road would require vegetation that is more substantial than the anticipated low plants suggested in the application. The Panel would be looking for an approach to planting that is compatible to the adjacent church building precinct.

The Panel also felt that the new cross-over and steep driveway would change the character of the footpath and public edge, though recognise there is limited scope for its placement.

Overall the Panel recognised that whilst the application is a DA review, they would like to have seen it as a pre-application. The Panel felt that whilst the proponents had sought to make design decisions to address the 'deemed to satisfy' provisions, development does fail to achieve some provisions in the view of the Panel, and the proposal presented shortcomings in terms of overlooking and overshadowing to adjacent dwellings. Though it is noted that had the proposal achieved the minimum required setback to the south boundary, the overshadowing impact would not be mitigated. The Panel also questioned the amenity to the south-facing apartments and were concerned about the impact of the building's long facade on the streetscape in relation to the streetscape and adjoining properties (such as the church grounds) and the street-level relationship between public and proposed commercial use(s).

7.1.3 2/324 DAVEY STREET, SOUTH HOBART AND COMMON LAND OF PARENT TITLE - PARTIAL DEMOLITION AND ALTERATIONS PLN-22-71 - FILE REF: F22/35143

Address:	2/324 Davey Street, South Hobart and Common Land of Parent Title
Proposal:	Partial Demolition and Alterations
Expiry Date:	6 May 2022
Extension of Time:	Not applicable
Author:	Victoria Maxwell

RECOMMENDATION

That pursuant to the *Hobart Interim Planning Scheme 2015*, the City Planning Committee, in accordance with the delegations contained in its terms of reference, approve the application for partial demolition & alterations at 324 Davey Street South Hobart TAS 7004 for the reasons outlined in the officer's report and a permit containing the following conditions be issued:

GEN
The use and/or development must be substantially in accordance with the documents and drawings that comprise PLN-22-71 324 DAVEY STREET SOUTH HOBART TAS 7004 - Final Planning Documents except where modified below.

Reason for condition
To clarify the scope of the permit.

PLN s1
Approval is limited to the retractable awning only. Nothing in this permit should be read as approving or legalising any other development on site.

Reason for condition
To clarify the scope of this permit.

PLN s2
Additional details of the proposed material for the retractable awning must be submitted and approved as a Condition Endorsement, prior to commencement of works. The additional details must include:

1. manufacturer's technical data that demonstrates the likely performance of the fabric/material for the mechanical awning.
2. The material must achieve light transmittance of between 30% and 40%.

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

Advice:

- *Marklux Perla 37009 is considered to meet this condition.*
- *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 order to ensure that the proposed development does not appear unreasonably bulky and sufficient sunlight reaching the gardens and habitable space of eastern neighbouring properties.

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.

As well, clause 23 of the Urban Drainage Act 2013 requires that an owner must ensure that stormwater is not discharged from a private stormwater system so that it causes or is likely to cause a nuisance to a neighbouring property or its residents. You are strongly advised to consider how rainwater and stormwater runoff will be managed when the awning is extended.

FEES AND CHARGES

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

DIAL BEFORE YOU DIG

Click here for dial before you dig information.

Attachment A:	PLN-22-71 - 2/324 DAVEY STREET SOUTH HOBART TAS 7004 - Planning Committee or Delegated Report ⇩
Attachment B:	PLN-22-71 - 2/324 DAVEY STREET SOUTH HOBART TAS 7004 - CPC Agenda Documents ⇩
Attachment C:	PLN-22-71 - 2/324 DAVEY STREET SOUTH HOBART TAS 7004 - Planning Referral Officer Report (Heritage) ⇩
Attachment D:	PLN-22-71 - 2/324 DAVEY STREET SOUTH HOBART TAS 7004 - CPC Supplementary Plans - Shadow Diagrams ⇩

City of HOBART

APPLICATION UNDER HOBART INTERIM PLANNING SCHEME 2015

Type of Report:	Committee
Committee:	26 April 2022
Expiry Date:	6 May 2022
Application No:	PLN-22-71
Address:	2 / 324 DAVEY STREET , SOUTH HOBART COMMON LAND OF PARENT TITLE
Applicant:	TAS BUILDING DESIGN PTY LTD PO BOX 2018
Proposal:	Partial Demolition & Alterations
Representations:	3 representations
Performance criteria:	Inner Residential zone - Building Envelope Historic Heritage Code - New works in Heritage Precinct

1. Executive Summary

1.1 Planning approval is sought for Partial Demolition & Alterations at 324 DAVEY STREET SOUTH HOBART TAS 7004.

1.2 More specifically the proposal is for:

- construction of a motorised fabric awning that can extend to cover the upper floor deck,
- the awning and motor will be affixed to the southern rear wall of the town house and when extended will attach to a masonry frame on the eastern edge of the deck,
- a sloping guide frame will be installed along the northern and southern sides of the deck to guide the fabric awning,
- the awning when fully extended will leave a gap of 800mm next to the external wall of the townhouse and 30mm on the eastern edge of the deck,
- the height of the frame of the awning on the eastern edge of the deck will be 2.47m above floor level and 440mm above the existing privacy screen structure.

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 Historic Heritage Code - New Works in Heritage Precinct

1.4 Three (3) representations objecting to the proposal were received within the statutory advertising period between 22nd February and 8th March 2022.

1.5 The proposal is recommended for approval subject to conditions.

1.6 The final decision is delegated to the City Planning Committee, because three (3) representations were received.

2. Site Detail

2.1 The site is located on the eastern side of Davey Street, near the intersection with Anglesea Street and Davey Place. Surrounding uses are residential with a mix of substantial grand residences and multiple dwellings.

Figure 1: Site Plan (Geo Cortex, 2022)

The site contains two x three bedroom townhouses. The subject lot is the northern strata lot, which extends to the rear boundary and gains access via a right of way onto Davey Place. The area of development is the roof deck over the double garage. It contains an existing deck with privacy screening on the east and northern elevations. The southern elevation, being more than 3 metres from a boundary has 1 metre high glass balustrades. On the day of inspection a temporary removable marquis was in place, covering approximately half of the deck.

Figure 2: View from Davey Place (South elevation) (Officer photo, 2022)

The glass privacy screening is approximately 1.86 metres high, with steel frame and approximately 10 cm gaps between glass sheets. As well, there is a gap of approximately 15cm below the bottom steel frame and the concrete floor of the deck.

Figure 2: View from North East (Officer photo, 2022)

3. Proposal

3.1 Planning approval is sought for Partial Demolition & Alterations at 324 DAVEY STREET SOUTH HOBART TAS 7004.

3.2 More specifically the proposal is for:

- construction of a motorised fabric awning that can extend to cover the upper floor deck,
- the awning and motor will be affixed to the southern rear wall of the town house and when extended will attach to a masonry frame on the eastern edge of the deck,
- a sloping guide frame will be installed along the northern and southern sides of the deck to guide the fabric awning,
- the awning when fully extended will leave a gap of 800mm next to the external wall of the townhouse and 30mm on the eastern edge of the deck,
- the height of the frame of the awning on the eastern edge of the deck will be 2.47m above floor level and 440mm above the existing privacy screen structure.

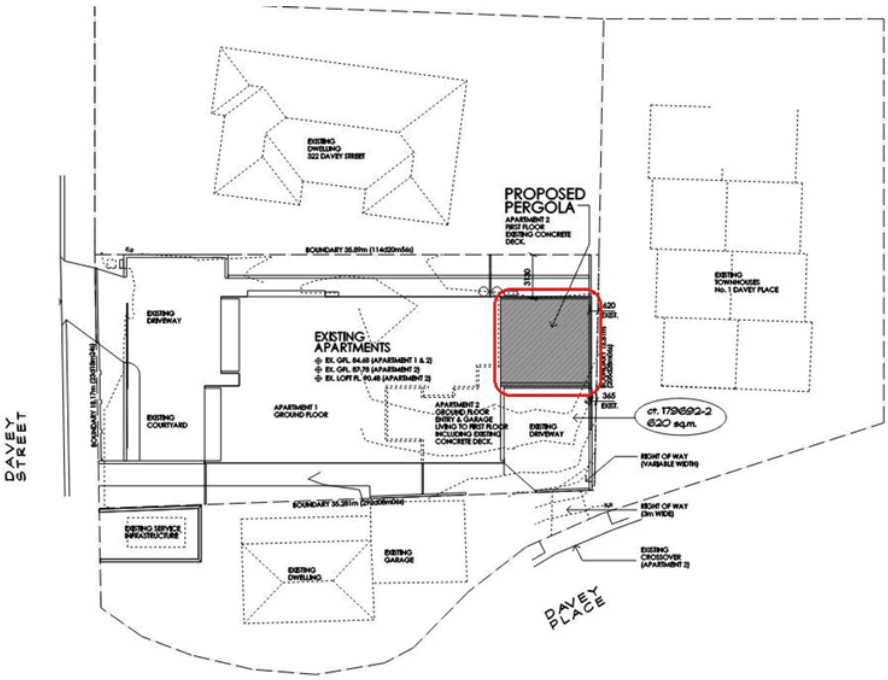

Figure 3: Applicant Site plan (Tas Building Design, 2022)

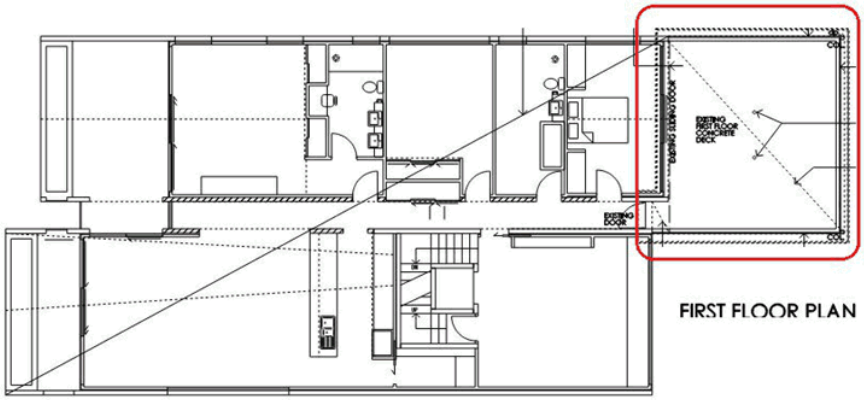

Figure 4: Floor Plan (Tas Building Design, 2022)

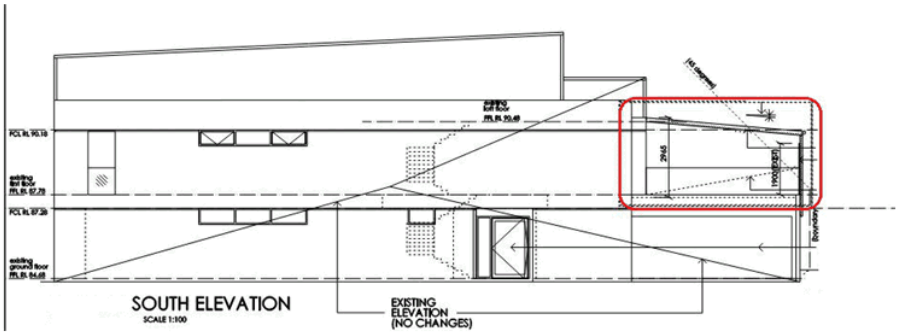

Figure 5: South Elevation (Tas Building Design, 2022)

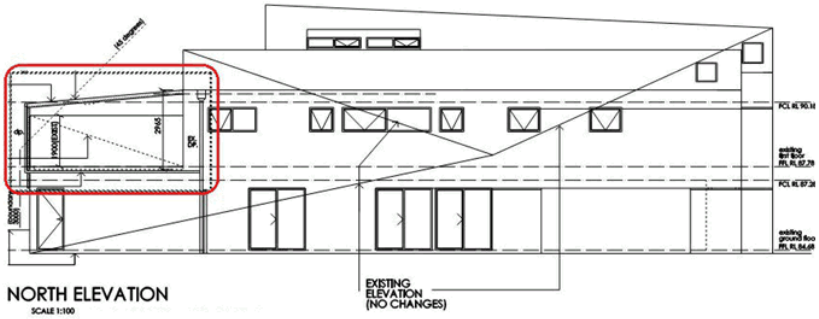

Figure 5: North Elevation (Tas Building Design, 2022)

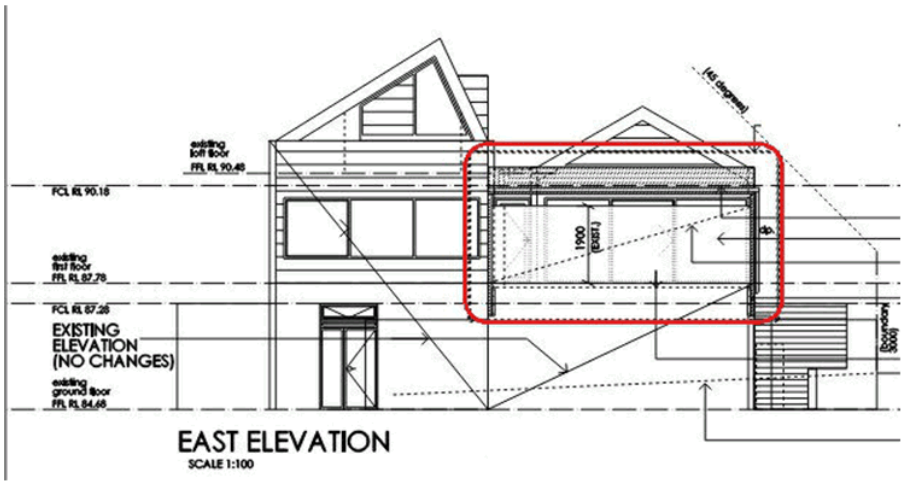

Figure 6: East Elevation (Tas Building Design, 2022)

4. Background

4.1 Previous Planning applications are listed below;

PLN-17-539 - Demolition, Multiple Dwellings and Front Fencing - Approved 1/9/2017
PLN-20-304 - Alterations (Deck) to Previously approved Development - Approved 21/7/20
BLD-18-255 - (amended with PAM-21-23, which included the changes approved in PLN-20-304) - Approved 14/7/21

5. Concerns raised by representors

5.1 Three (3) representations objecting to the proposal were received within the statutory advertising period between 22nd February and 8th March 2022.

5.2 The following table outlines the concerns raised in the representations received. Those concerns which relate to a discretion invoked by the proposal are addressed in Section 6 of this report.

Concern over the change from roof garden to enclosed deck, along with the increased height with the installation of the frosted glass panels.
The glass panels were proposed to be 1.8m, but appear to be 1.9m (photos included)
The installation of the glass panels create a large imposing block structure, virtually on the boundary and has caused a negative visual impact to neighbours to the south east.
The installation of a retractable motorised roof on top of this existing structure would further exacerbate the loss of visual amenity, sunshine and other impacts (detailed below).
The existing deck floor area is 30m2, which would lead to the proposed roof extending for 30m2 also.
The proposed retractable roof would be installed at a height of 2965mm at its highest point, with a 5 degree pitch, sloping down. This would create an increase to the current height above the garage roof by more than 1m (2965mm vs the current 1900mm).
The downpipe from the roof would be connected into the existing downpipe.
Given Hobart's weather, it is fair to assume that the roof would be extended for most of the time, which will impact on the south eastern neighbours' access to northern sunlight, overshadow the private open space and gardens.

If the roof is extended most of the time, this will effectively become another enclosed room and facilitate its more frequent use. The resultant noise and disturbance from people outside and so close will further negatively impact the residential amenity of neighbours to the south east.
The creation of another "room" is so far from what was originally approved, as a smaller open air roof garden, that it no longer complies with the original approval.
The original approval provided for a 3rd bedroom and adjoining roof garden. Given the size and scale of the current enclosed 30m2 deck and a request to now further increase and enclose it with a roof, this may indicate that the intended use of the 3rd bedroom is or will become a living area with a large outdoor area on the rear boundary.
The covering of the deck will no longer be private open space and may not meet the site coverage requirements for sufficient open space.
The existing bulk would be exacerbated if it were to be enclosed, by its size, the fact it is built right up to the boundary and there is no surrounding free open space to balance the bulk of the building structure.
There are no other similar structures built so close to the neighbouring properties in South Hobart and so the proposal is not consistent with existing established properties in the area. The roof installation will exacerbate this.
There is an existing pipe that juts out from the ground on the boundary and requires rectifying with a covering of dirt or in accordance with required standards to avoid injury
Does the existing building meet permitted setback and building envelope, site coverage and private open space requirements, given its size, bulk, proximity to boundary, etc?
Is the room behind the deck currently or intended to be used as a living space instead of a bedroom? If yes, is the deck with proposed roof on top consistent with approvals and requirements?
The site plan states that the existing glass balustrades are installed at a height of 1.9m, which exceeds the 1.8m approved in the 2020 permit.
The existing balustrades do not afford any privacy and may not confirm to requirements because of the baps at the bottom and between panels.
An onsite meeting with officers is requested.

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 - Multiple Dwelling. The proposed use is Residential - Multiple Dwelling. The existing use is a Permitted use in the zone. The proposed use is a Permitted use in the zone.

6.4 The proposal has been assessed against:

6.4.1 D 11.0 Inner Residential Zone

6.4.2 E 13.0 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 Envelope – Part D11.4.2 P3

6.5.2 Historic Heritage Code:

Building and Works in a Heritage Precinct - E13.8.2 P1-P5

6.6 Each performance criterion is assessed below.

6.7 Setback and Building Envelope Part D 10.4.2 P1

6.7.1 The acceptable solution at clause 11.4.2 A3 requires development to fit within a three dimensional building envelope.

6.7.2 The proposal includes a new masonry support on the eastern edge of the upper floor deck that extends outside the building envelope.

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;

(b) provide separation between dwellings on adjoining properties that is consistent with that existing on established properties in the area; and

(c) not cause an unreasonable reduction in sunlight to an existing solar energy installation on:

(i) an adjoining property; or
(ii) another dwelling on the same site.

6.7.5 The proposed awning structure will only slightly extend above the existing privacy screening, as shown in the annotated figure below. In response to the representator concerns, the applicant supplied shadow diagrams. These show that the structure will not significantly increase the area of shading caused by this new structure. The shadow diagrams are provided at Attachment D to this report.

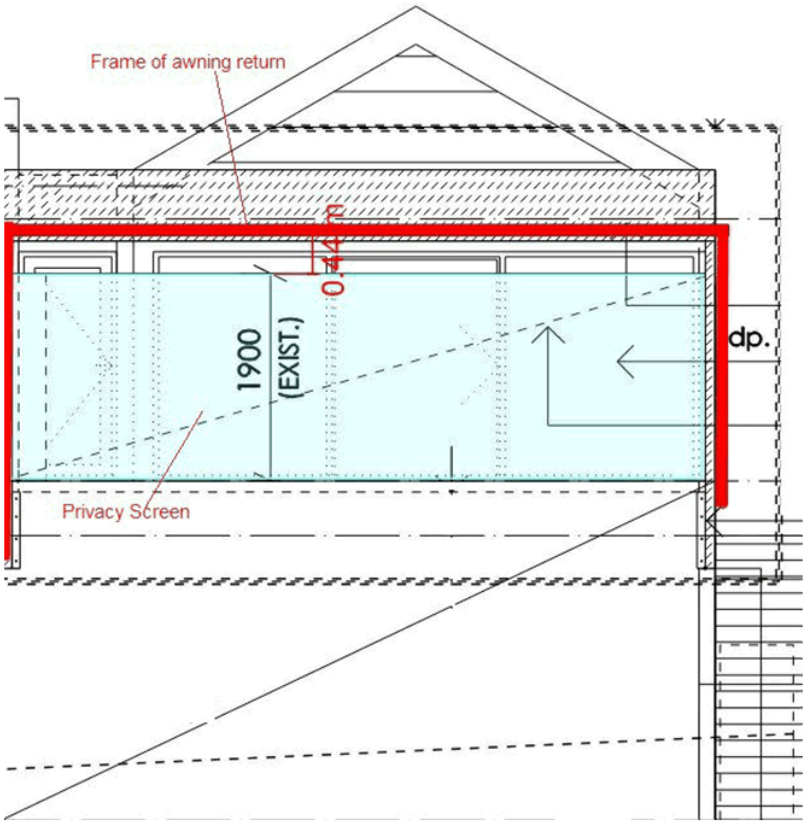

Figure 7: Annotated plan showing frame extension above the privacy screening.

The question of degree of impact becomes pertinent here. Whilst the extent of shading will not significantly increase, there is potential for more severe loss of sunlight intensity to habitable spaces and and private open space on an adjoining property. This will be affected by the type and colour of the material selected for the awning. Currently, whilst the physical bulk of the privacy screen is more than 5 metres virtually on the neighbours side boundary, the opaque glass still permits a fair amount of light through the screen. Should the awning material be a dark or heavy material, this will increase the affects of overshadowing on the neighbour by the further obscuring of sunlight to the eastern neighbour. The representors requested that this point be stressed to Council.

An assessment of the proposed awning impact on adjacent neighbours suggests that affected neighbours are Unit 1/ 324 Davey Street (the other

unit on site) and Units 31 to 33/1 Davey Place and Unit 35/1 Davey Place.

322 Davey Street is located to the north of the subject site and not affected. Neighbours across Davey Street, 313, 317 and 319 Davey Street are located on the western side of the building and the bulk of the existing units structure shields these properties from impact.

Unit 1 on the subject site is located on the southern side of the site and to the south west of the building area. Shadow diagrams indicate that there is no additional impact in June to existing shadowing to the living space of this dwelling. There is some shading of the upper floor living space and loft in September, however this is not considered of such importance as the shortest day when the sun is at its lowest azimuth. Most of the overshadowing occurs in the driveway space behind the unit, which is associated with Unit 2, the subject of this application. Because views from this dwelling are oblique to the proposed awning, it is considered that there is minimal impact on the visual bulk and scale of the awning. The separation between dwellings remains relatively intact as whilst the overall bulk of the deck (when the awning is extended) will be slightly increased when viewed from the side and rear, the footprint remains unchanged. Because the visual impact in minimal the potential impact is considered acceptable for this dwelling.

Unit 35/1 Davey Street is located to the south of the subject site, however the area affected by additional overshadowing is a driveway to the east of that dwelling and so there is no significant impact beyond existing for the overshadowing of living space or private open space. Because the bulk of the existing unit structure already screens that dwelling from the area of development on the north eastern corner of the site, there is no significant visual impact through apparent bulk or scale when viewed from the that dwelling. As mentioned above the separation between dwellings is considered acceptable in this case because there area affect on this property is driveway and not used as habitable or private open space.

Units 31 to 34/1 Davey Place are a terrace of four units. 34 and 33 /1 Davey Place, the two northern most units, are considered relatively unaffected by this proposal. Unit 34 is located some 10 metres from the structure and to the north east. There is vegetation screening along the rear of 322 Davey Street, which partially screens the structure and there will be no loss of sunlight to that dwelling by the proposal. The same applies to Unit 33/ 1 Davey Place, however the visual impact of the proposed awning will have a greater impact, being just over 7 metres from

that unit. The views of the proposed awning when extended will be completely side on for the northern Unit 34/ 1 Davey Place and mostly the same for 33/ 1 Davey Place. and set against the bulk of the existing structure and as such the impact on that unit is considered negligible.

Units 31 and 32 /1 Davey Place surround the elevated deck and will be affected by the proposal. The previous privacy screen was approved on the basis that the opaque glass privacy screen would still allow a degree of light passage through to the neighbouring properties. To now cover this area has the potential to significantly obstruct the passage of light to the southern couple of units in this neighbouring terrace. Given the orientation of the terrace, running in a NNE alignment, the southern couple of units very much rely on early morning sun on the eastern side and afternoon sun to the west. The proposed awning has the potential, even if a moveable structure, to significantly reduce sunlight to these units and their outdoor space.

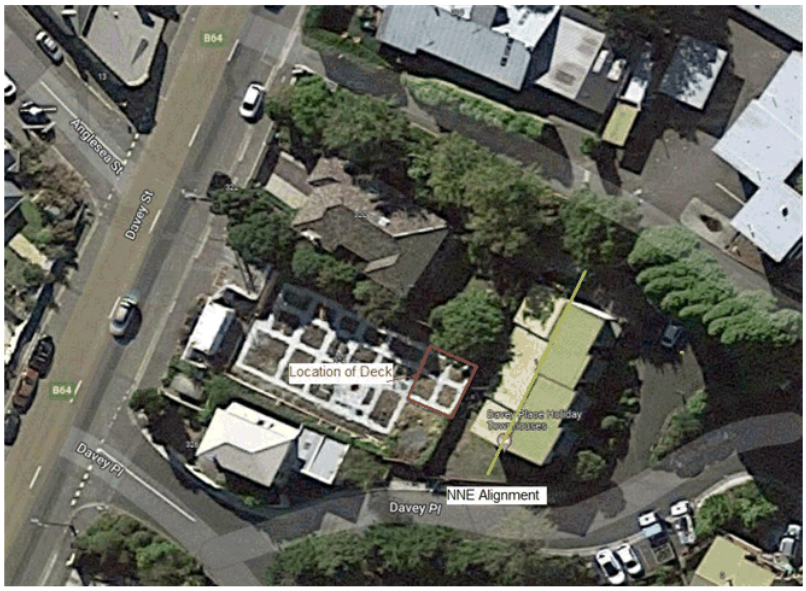

Figure 8: Relationship of 31 and 32/ 1 Davey Place to proposal (Annotated Google Maps, 2022)

Whilst shadow diagrams indicate that the increase in area of shadowing caused by the awning will be very minimal, the intensity of light accessing the units will change and has the potential to reduce the sunlight to habitable rooms. As well, the area of open space between these neighbouring units and deck contains washing lines, etc; clearly relying on some degree of sunshine for the residents.

The previous application for the extension of the deck and privacy screens was considered to be acceptable because the apparent bulk and scale of the dwelling was not so apparent, because of the glass screens, which lessened the perception of bulk from neighbouring properties. To shade this glazed area will effectively increase the apparent bulk by causing the opaque privacy screens to appear more solid because of the reduce sunlight penetrating through the structure.

The applicant was requested to provide details of the awning fabric colour and opacity to determine the degree of increased shading. The applicant advised that "the retractable pergola fabric will be of a lighter colour (similar to the house colour) and has a translucent factor. It's a new type of material which provides diffused light through similar to the obscure glass panels". Details of the likely fabric were provided which show a light colour with the highest light transmittance in that fabric range. The selection of fabric is crucial in complying with the Performance Criteria. Consequently, a condition will be included in the Permit to provide further detail of this prior to construction to ensure maximum light transmission to the neighbours and encourage use of the suggested or similar material that achieves a similar light transmittance.

The representations relating to bulk and scale and loss of sunlight are supported.

6.7.6 The proposal complies with the performance criterion.

6.8 Historic Heritage Code - New Works in Heritage Precinct - E 13.8.2 P1-P5

6.8.1 There is no acceptable solution for E 13.8.2.

6.8.2 The proposal includes new works in a heritage precinct.

6.8.3 There is no acceptable solution; therefore assessment against the performance criterion is relied on.

6.8.4 The performance criterion at clause E 13.8.2 provides as follows:

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.

6.8.5 The application was referred to Council's Cultural Heritage Officer, who advised the following;

This application is for a pergola over a rear deck to a new townhouse complex located in the South Hobart 7 Heritage Precinct.

The new works must be assessed against E13.8.2 P1 and E13.8.2 P3.

The precinct has the following ascribed Statements of Significance from Table E13.2 of the Historic Heritage Code of the Scheme.

This precinct is significant for reasons including:
1. The original and/or significant external detailing, finishes and materials demonstrating a high degree of integrity with a homogenous historic character.
2. The intactness of the streetscape and buildings.
3. The fine garden settings.
4. The street's continuing representation of the best housing and the social importance of this elevated street in Hobart.
The proposed pergola, while attached to an upper deck, is at the rear of the new townhouses and will not be visible from the streetscape.
Therefore the proposal will not be in conflict with the above clauses will no resultant detriment or detraction from the heritage values of the precinct.

The proposal satisfies the relevant provisions of the Historic Heritage Code of the Scheme.

6.8.6 The proposal complies with the performance criterion.

7. Discussion

7.1 Planning approval is sought for Partial Demolition & Alterations at 324 DAVEY STREET SOUTH HOBART TAS 7004.

7.2 The application was advertised and received three (3) representations. The representations raised concerns including visual bulk, loss of sunlight and intrusion into the enjoyment of neighbouring residential amenity.

The proposal is considered to have the potential to unreasonably reduce sunlight and cause a loss of amenity to adjacent neighbours through a perceived increase in visual bulk through the loss of transmitted light through the glass privacy panels. Conditions are imposed to minimise this through careful selection of fabric to maximise light transmission.

Other representations raised concerns over previous approvals and the affect that the development has on the enjoyment of neighbours' amenity. This application cannot address these concerns, being previously assessed in the 2020 permit.

An advisory note is included to ensure that rainwater runoff is captured and directed to appropriate infrastructure to avoid impact on neighbours, as required by the Urban Drainage Act.

Concerns over the effective creation of another "room" by the opportunity to cover this deck are not able to be addressed under the current planning provisions. The use of the deck, including the inherent additional noise and light shed permitted by the glass privacy screening, are not considered under the planning scheme. These representation grounds cannot be supported.

The existing pipe exposed on the south east corner of the subject lot appears to be a stormwater line and appeared during the site inspection to be intact and operational. No action is considered necessary for this in this permit.

Concerns over the increased height of the privacy screen and gaps between panels, contrary to approved plans are not considered in this application. The application was only for the retractable awning. Approval is therefore limited to this by condition on the permit. The representation grounds are not supported.

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 Cultural Heritage Officer. The officers have raised no objection to the proposal, subject to conditions.

7.5 The proposal is recommended for approval.

8. Conclusion

8.1 The proposed Partial Demolition & Alterations at 324 DAVEY STREET SOUTH HOBART TAS 7004 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 Partial Demolition & Alterations at 324 DAVEY STREET SOUTH HOBART TAS 7004 for the reasons outlined in the officer's report and a permit containing the following conditions be issued:

GEN

The use and/or development must be substantially in accordance with the documents and drawings that comprise PLN-22-71 324 DAVEY STREET SOUTH HOBART TAS 7004 - Final Planning Documents except where modified below.

Reason for condition

To clarify the scope of the permit.

PLN s1

Approval is limited to the retractable awning only. Nothing in this permit should be read as approving or legalising any other development on site.

Reason for condition

To clarify the scope of this permit.

PLN s2

Additional details of the proposed material for the retractable awning must be submitted and approved as a Condition Endorsement, prior to commencement of works. The additional details must include:

1. **manufacturer's technical data that demonstrates the likely performance of the fabric/material for the mechanical awning.**
2. **The material must achieve light transmittance of between 30% and 40%.**

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

Advice:

- *Marklux Perla 37009 is considered to meet this condition.*
- *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 order to ensure that the proposed development does not appear unreasonably bulky and sufficient sunlight reaching the gardens and habitable space of eastern neighbouring properties.

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.

As well, clause 23 of the Urban Drainage Act 2013 requires that an owner must ensure that stormwater is not discharged from a private stormwater system so that it causes or is likely to cause a nuisance to a neighbouring property or its residents. You are strongly advised to consider how rainwater and stormwater runoff will be managed when the awning is extended.

FEES AND CHARGES

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

DIAL BEFORE YOU DIG

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(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: 8 April 2022

Attachment(s):

Attachment B - CPC Agenda Documents

Attachment C - Planning Referral Officer Report (Heritage)

Attachment D - CPC Supplementary Plans - Shadow Diagrams

Planning: #250358

Property

324 DAVEY STREET SOUTH HOBART TAS 7004

People

Applicant *	TAS BUILDING DESIGN PTY LTD 0408 882 283 tas.buildingdesign@bigpond.com
Owner *	Roger and Michelle Burdon Apartmetn 2 - 324 Davey Street SOUTH HOBART TAS 7004 0408160213 michelle.burdon@13cabs.com.au
Entered By	TAS BUILDING DESIGN PTY LTD 0408 882 283 tas.buildingdesign@bigpond.com

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)? *

Existing strata apartment

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

Proposed motorised fabric pergola

Estimated cost of development *

10000.00

Existing floor area (m2)

0.00

Proposed floor area (m2)

0.00

Site area (m2)

620

Carparking on Site

Total parking spaces

4

Existing parking spaces

4

N/A

☒ 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) *	FolioText-179692-2.pdf
Title (Folio text and Plan and Schedule of Easements) *	FolioPlan-179692-2.pdf
Title (Folio text and Plan and Schedule of Easements) *	FolioTextCommonLot-179692-2.pdf
Plans (proposed, existing) *	sk01-apartment2-324daveyst-040222.pdf
Plans (proposed, existing) *	sk02-apartment2-324daveyst-040222.pdf
Plans (proposed, existing) *	sk03-apartment2-324daveyst-040222.pdf
Covering Letter	planningletter-apartment2-324daveyst.pdf

From: Kevin Roberts <tas.buildingdesign@bigpond.com>
Sent: Thursday, 17 February 2022 10:03 AM
To: Victoria Maxwell
Subject: TRIM: RE: Additional Information Request - PLN-22-71 - 2/324 DAVEY STREET SOUTH HOBART TAS 7004

HP TRIM Record Number: F22/15455

CAUTION: This email originated from outside of the organisation. Do not click links or open attachments unless you recognise the sender and know the content is safe.

Hi Victoria,

I have received the RFI for 324 Davey St.
I believe the drawings are clear in stating that there is an existing first floor concrete deck with existing glass balustrades.
The pergola is hatched and is a motorised fabric pergola that opens and closes therefore the private open space is not affected.
Could you clarify what you require as I thought the drawings are clear. Thanks.

Regards,

Kevin Roberts
TAS BUILDING DESIGN
p. 0408 882283
tas.buildingdesign@bigpond.com

From: maxwellv@hobartcity.com.au [mailto:maxwellv@hobartcity.com.au]
Sent: Thursday, 17 February 2022 8:50 AM
To: tas.buildingdesign@bigpond.com
Subject: Additional Information Request - PLN-22-71 - 2/324 DAVEY STREET SOUTH HOBART TAS 7004

Dear Sir/Madam

Additional information is required for Council to assess your planning application.

Please download the letter formally requesting the additional information at the following link:

https://HobartCityCouncil.sharefile.com/d/sd360b06c41644fa8b92353d86ad80940

Note: The above link will expire in 14 days. Please download and save the documents within

this time frame.

Please submit your additional information through the Hobart City Council online services e-planning. Additional information submitted in any other way will not be accepted.

Kind regards

Victoria Maxwell
Development Appraisal Planner | City Planning

16 Elizabeth Street, Hobart, Tasmania, Australia, 7000 | http://hobartcity.com.au
Telephone (03) 6238 2810

This communication and any files transmitted with it are intended for the named addressee, are confidential in nature and may contain legally privileged information.

The copying or distribution of this communication or any information it contains, by anyone other than the addressee or the person responsible for delivering this communication to the intended addressee, is prohibited.

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You will be reimbursed for reasonable costs incurred in notifying us.

Please consider the environment - Do you really need to print this email?

Planning Department
Hobart City Council
16 Elizabeth Street
Hobart 7001

Dear Sir/Madam,

Proposed Pergola at No. Apartment 2- 324 Davey Street, South Hobart for Mr. R. & Mrs. M. Burdon

Please find attached the proposed pergola for the above property.

The pergola will be located on an existing first floor concrete deck area. The existing apartments were built recently in approximately 2015 and the first floor deck was approved with obscure compliant screening.

The proposed structure is a motorised fabric cover that opens and closes therefore the private open space is retained as the open space.

The rear or side setback is slightly over the setback along with the existing screening. The impact is very minimal and would not shade the neighbouring open space as the pergola is located on the south-west area from the neighbouring land.

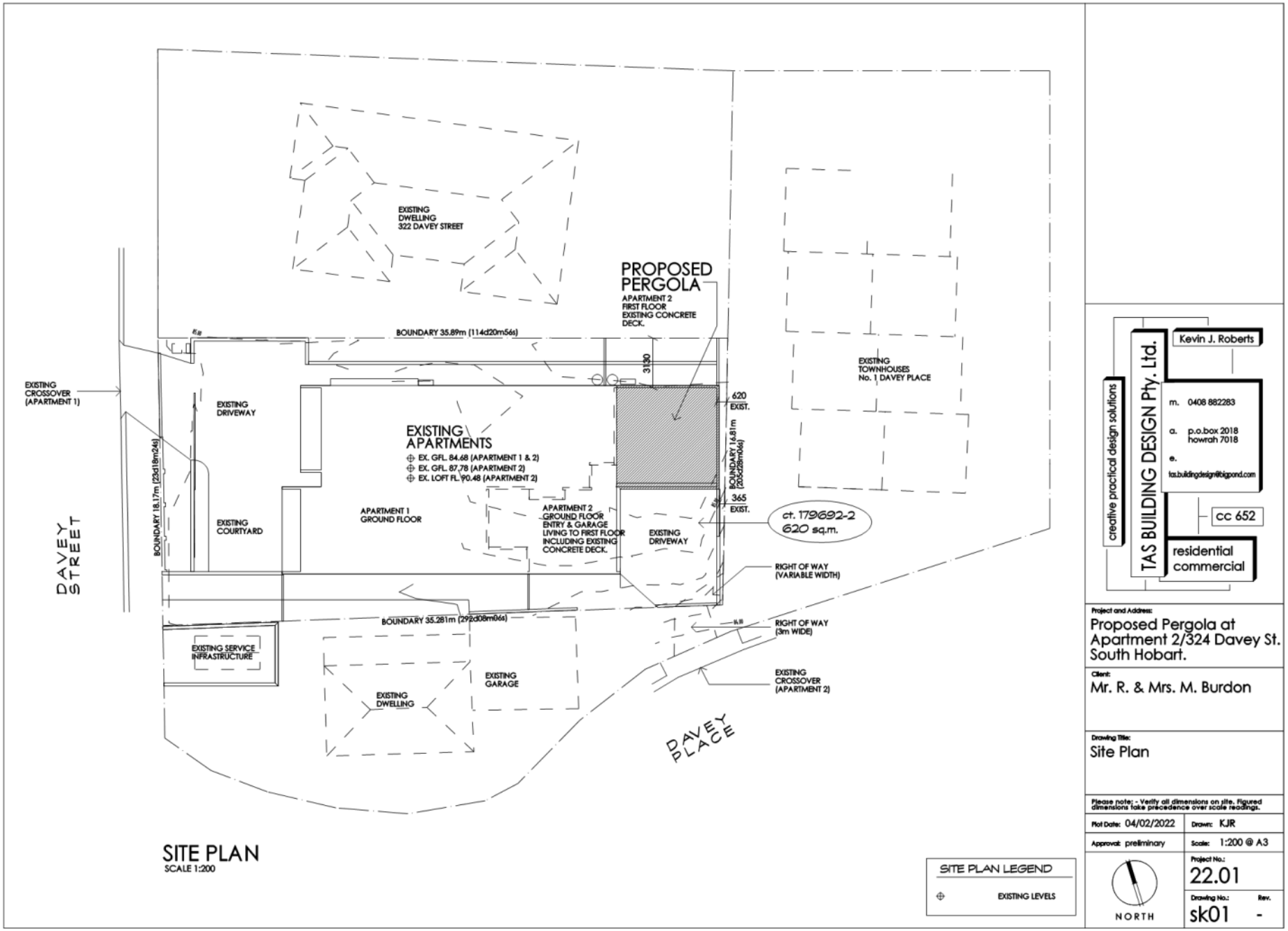
The structure is within the outline of the main building and is a suitable addition that can be utilized when its raining or hot sun.

I will await councils direction.

Kind Regards,

Kevin Roberts
TAS BUILDING DESIGN Pty Ltd
Date: 04/02/2021

TAS BUILDING DESIGN
m. 0408 882 283
e. tas.buildingdesign@bigpond.com
a. po box 2018
howrah 7018
residential
commercial



Kevin J. Roberts
TAS BUILDING DESIGN Pty. Ltd.
creative practical design solutions
m. 0408 882283
a. p.o.box 2018 howrah 7018
e. tas.buildingdesign@bigpond.com
cc 652
residential commercial

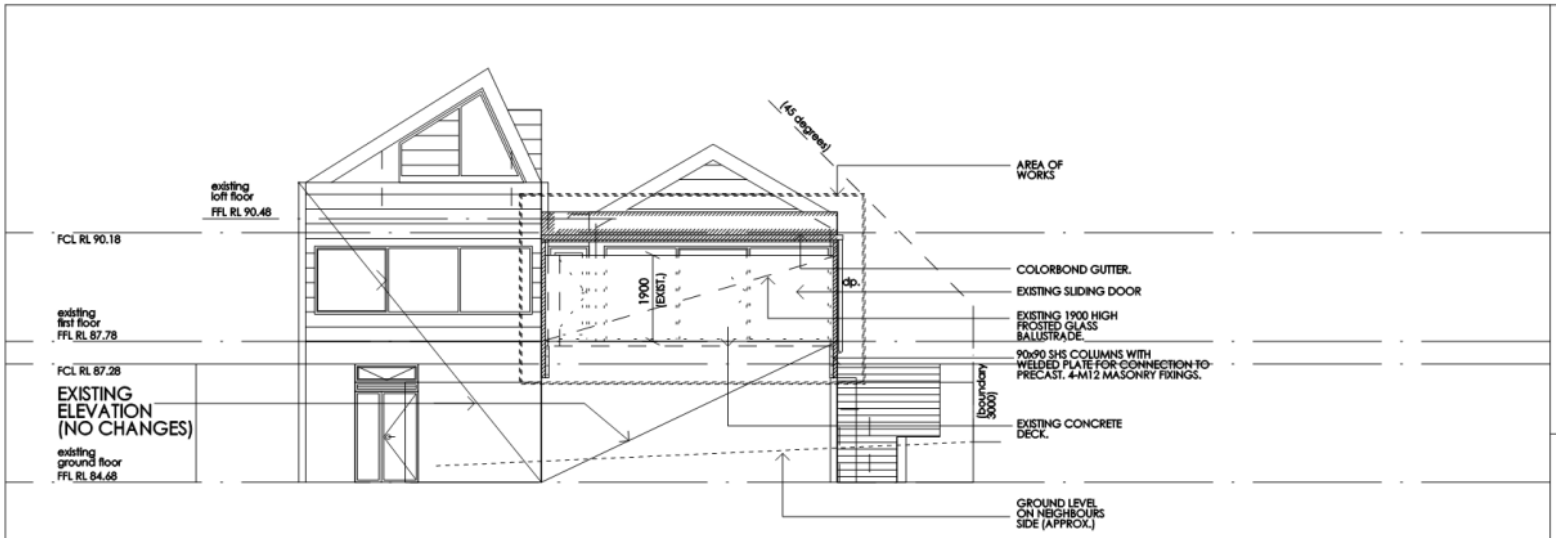
Project and Address:
Proposed Pergola at Apartment 2/324 Davey St. South Hobart.

Client:
Mr. R. & Mrs. M. Burdon

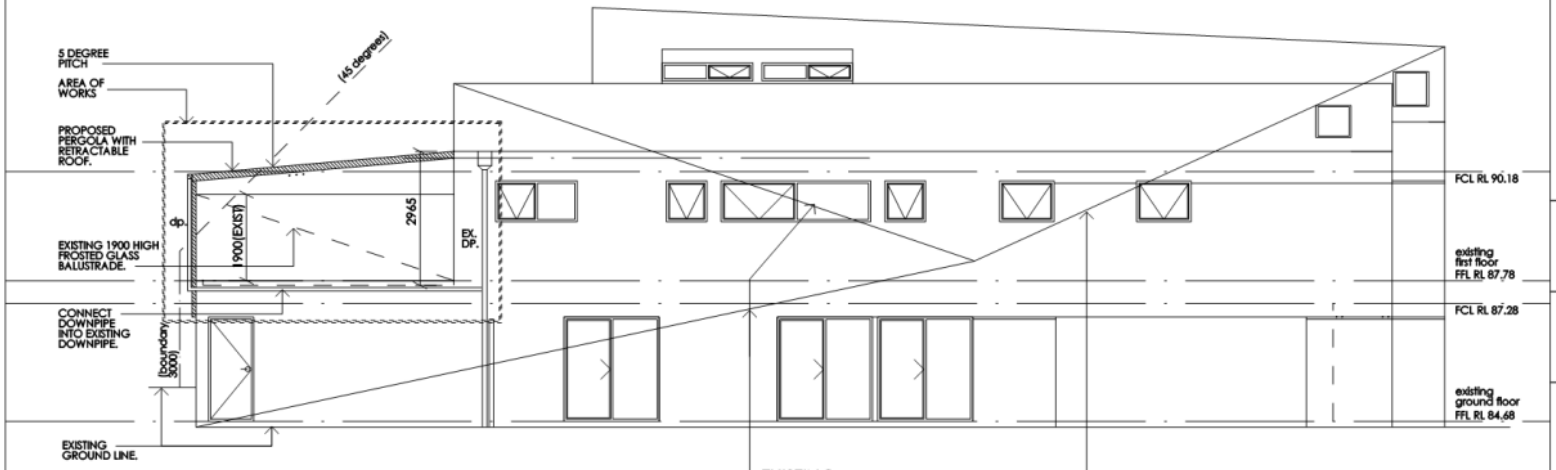
Drawing Title:
Site Plan

Please note: - Verify all dimensions on site. Figured dimensions take precedence over scale readings.

Plot Date: 04/02/2022	Drawn: KJR
Approval: preliminary	Scale: 1:200 @ A3
	Project No.: 22.01
	Drawing No.: sk01 Rev. -



EXISTING EAST ELEVATION
SCALE 1:100



EXISTING NORTH ELEVATION
SCALE 1:100

Kevin J. Roberts
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creative practical design solutions
m. 0408 882283
a. p.o.box 2018
howrah 7018
e.
tas.buildingdesign@bigpond.com
CC 652
residential
commercial

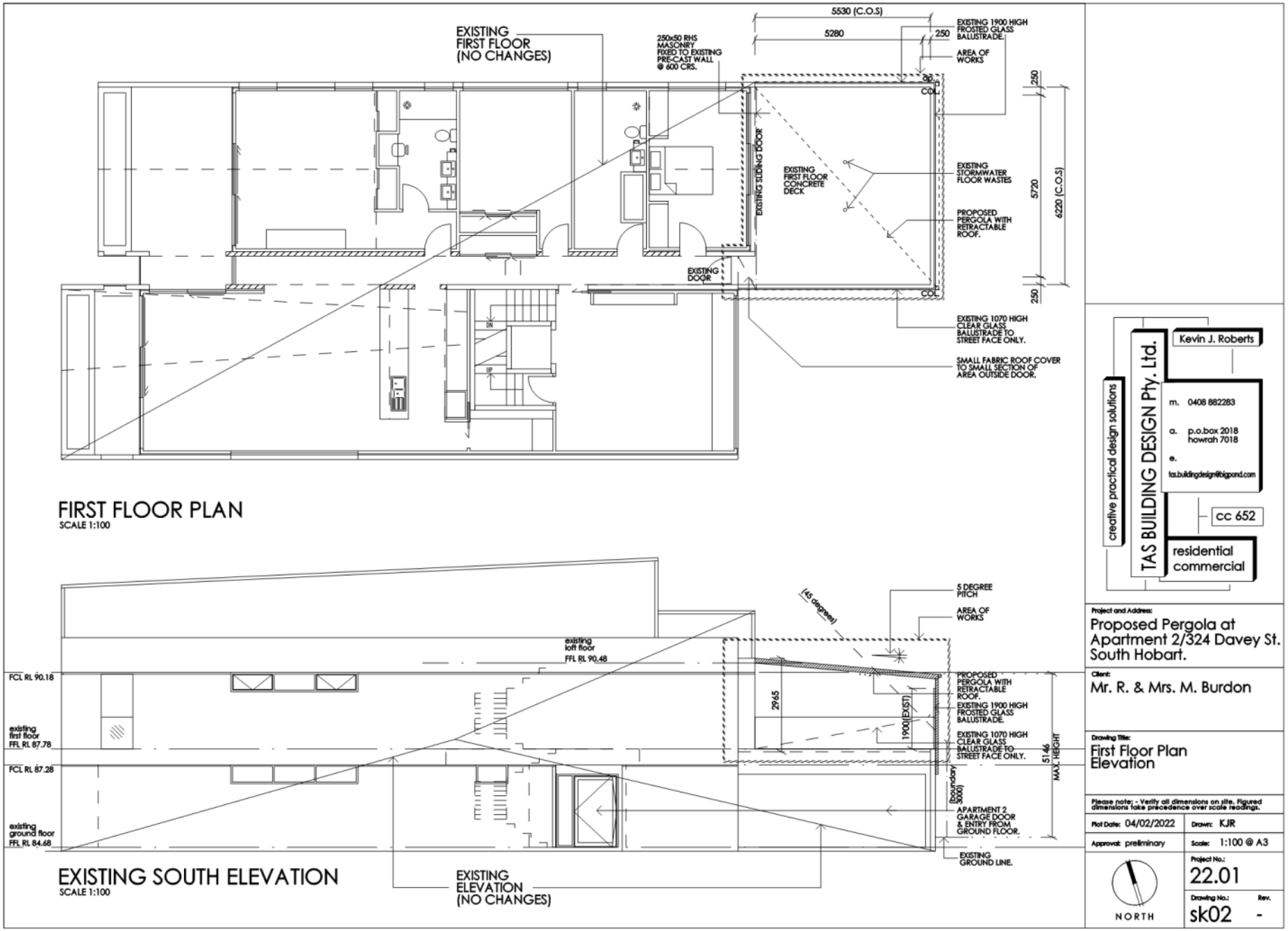
Project and Address:
Proposed Pergola at Apartment 2/324 Davey St. South Hobart.

Client:
Mr. R. & Mrs. M. Burdon

Drawing Title:
Elevations

Please note: - Verify all dimensions on site. Figured dimensions take precedence over scale readings.

Plot Date: 04/02/2022	Drawn: KJR
Approval: preliminary	Scale: 1:100 @ A3
	Project No.: 22.01
	Drawing No.: sk03 Rev. -


EXISTING FIRST FLOOR (NO CHANGES)
250x50 RHS MASONRY FIXED TO EXISTING PRE-CAST WALL @ 600 CRS.
5530 (C.O.S)
5280
250
EXISTING 1900 HIGH FROSTED GLASS BALUSTRADE.
AREA OF WORKS
COL
EXISTING SLIDING DOOR
EXISTING FIRST FLOOR CONCRETE DECK
EXISTING STORMWATER FLOOR WASTES
PROPOSED PERGOLA WITH RETRACTABLE ROOF.
5720
6220 (C.O.S)
EXISTING DOOR
EXISTING 1070 HIGH CLEAR GLASS BALUSTRADE TO STREET FACE ONLY.
SMALL FABRIC ROOF COVER TO SMALL SECTION OF AREA OUTSIDE DOOR.
DN
UP
FIRST FLOOR PLAN
SCALE 1:100
(45 degrees)
5 DEGREE PITCH
AREA OF WORKS
existing loft floor
FFL RL 90.48
FCL RL 90.18
existing first floor
FFL RL 87.78
FCL RL 87.28
existing ground floor
FFL RL 84.68
2965
1900(EXIST)
PROPOSED PERGOLA WITH RETRACTABLE ROOF.
EXISTING 1900 HIGH FROSTED GLASS BALUSTRADE.
EXISTING 1070 HIGH CLEAR GLASS BALUSTRADE TO STREET FACE ONLY.
5146
MAX. HEIGHT
(boundary 3000)
APARTMENT 2 GARAGE DOOR & ENTRY FROM GROUND FLOOR.
EXISTING GROUND LINE.
EXISTING SOUTH ELEVATION
SCALE 1:100
EXISTING ELEVATION (NO CHANGES)
Kevin J. Roberts
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a. p.o.box 2018 howrah 7018
e. tas.buildingdesign@bigpond.com
cc 652
residential commercial
Project and Address:
Proposed Pergola at Apartment 2/324 Davey St. South Hobart.
Client:
Mr. R. & Mrs. M. Burdon
Drawing Title:
First Floor Plan Elevation
Please note: - Verify all dimensions on site. Figured dimensions take precedence over scale readings.
Plot Date: 04/02/2022
Drawn: KJR
Approval: preliminary
Scale: 1:100 @ A3
NORTH
Project No.: 22.01
Drawing No.: sk02
Rev. -

RESULT OF SEARCH

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
179692	2
EDITION	DATE OF ISSUE
2	05-Jan-2022

SEARCH DATE : 26-Jan-2022
SEARCH TIME : 11.10 PM

DESCRIPTION OF LAND

City of HOBART
Lot 2 on Strata Plan 179692 and a general unit entitlement operating for all purposes of the Strata Scheme being a 10 undivided 1/20 interest
Derived from Strata Plan 179692
Derivation : Part of 2A-1R-37P Gtd. to George MacKillop

SCHEDULE 1

E194328 TRANSFER to ROGER LEWIN BURDON and MICHELLE BURDON
Registered 05-Jan-2022 at noon

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 179692 folio 0
55/2410 GRANT: BURDENING EASEMENT: Right of Carriageway (appurtenant to the lands comprised in Certificate of Title Volume 3769 Folios 70, 71, 72 and 73) over the Right of Way shown on Diagram 102938
BENEFITING EASEMENT: Right of Carriageway over the land marked Right of Way 3.00 wide on Diagram 102938.
E290904 MORTGAGE to Bendigo and Adelaide Bank Limited
Registered 05-Jan-2022 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

Tasmanian Government

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
179692	0
EDITION	DATE OF ISSUE
1	29-Jul-2021

SEARCH DATE : 26-Jan-2022
SEARCH TIME : 11.10 PM

DESCRIPTION OF LAND

City of HOBART
The Common Property for Strata Scheme 179692
Derivation : Part of 2A-1R-37P Gtd. to George MacKillop
Prior CT 102938/2

SCHEDULE 1

STRATA CORPORATION NUMBER 179692, 324 DAVEY STREET, SOUTH HOBART

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
55/2410 GRANT: BURDENING EASEMENT: Right of Carriageway (appurtenant to the lands comprised in Certificate of Title Volume 3769 Folios 70, 71, 72 and 73) over the Right of Way shown on Diagram 102938
BENEFITING EASEMENT: Right of Carriageway over the land marked Right of Way 3.00 wide on Diagram 102938.

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

FOLIO PLAN

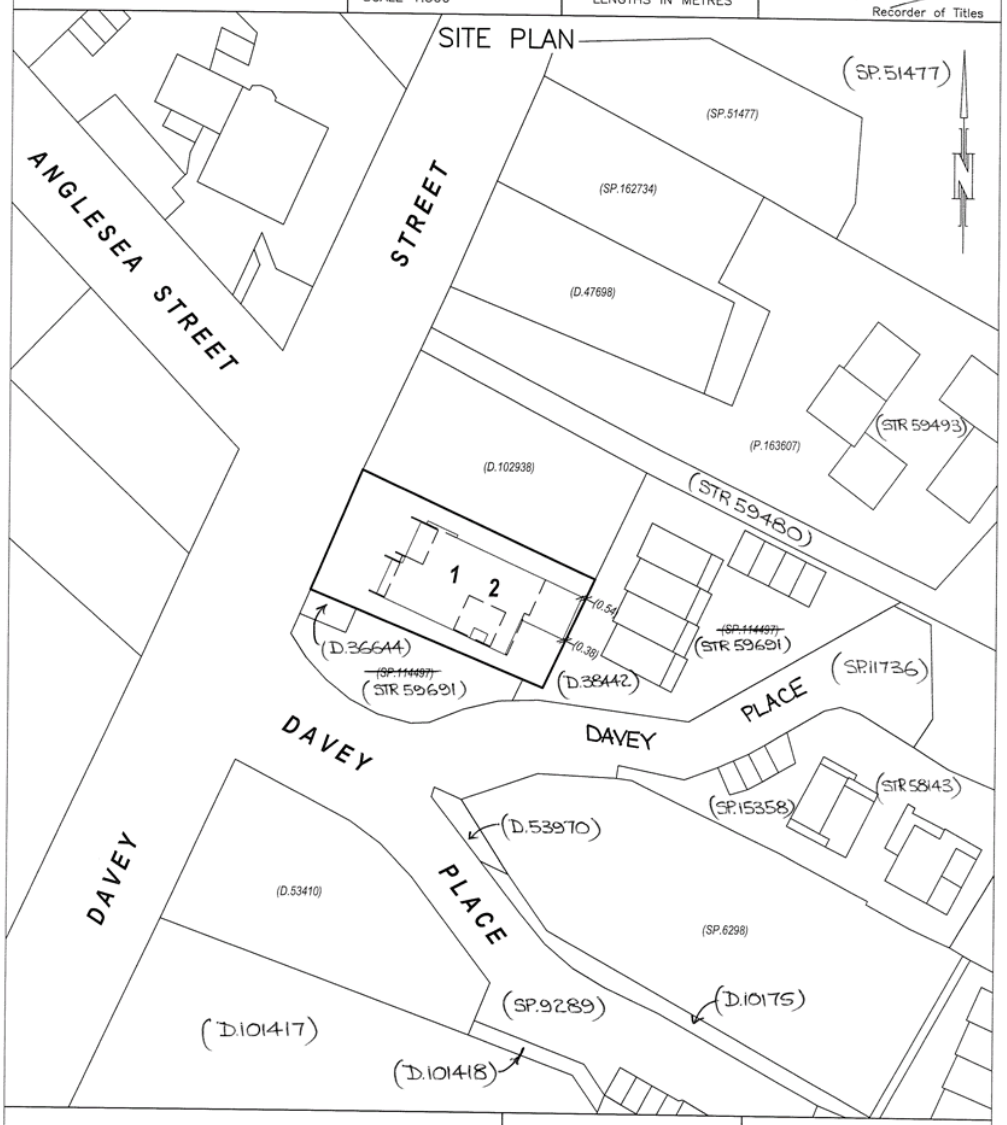
RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

CITY/TOWN HOBART SUBURB/LOCALITY SOUTH HOBART FOLIO REFERENCE C.T.102938/2 SITE COMPRISES THE WHOLE OF LOT 2 ON PLAN No. D.102938	STRATA PLAN SHEET 1 OF 5 SHEETS NAME OF STRATA SCHEME 324 DAVEY STREET, SOUTH HOBART SCALE 1:500 LENGTHS IN METRES	Registered Number 179692 STRATA TITLES ACT 1998 REGISTERED 29 JUL 2021 Recorder of Titles

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.	M. Anderson 15-7-2021 Council Delegate Date	3/08/2020 Registered Land Surveyor Date
STAGED/COMMUNITY DEVELOPMENT. SCHEME No. (IF APPLICABLE)	LODGED BY BROOKS LARK & CARRICK SURVEYORS	

FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

STRATA PLAN

SHEET 2 OF 5 SHEETS

STRATA TITLES ACT 1998

M. Anderson — Council Delegate — 15-7-2021 — Date

Registered Number

179692

THE HORIZONTAL LOT BOUNDARIES ARE SHOWN BY HEAVY UNBROKEN LINES DEFINED BY:

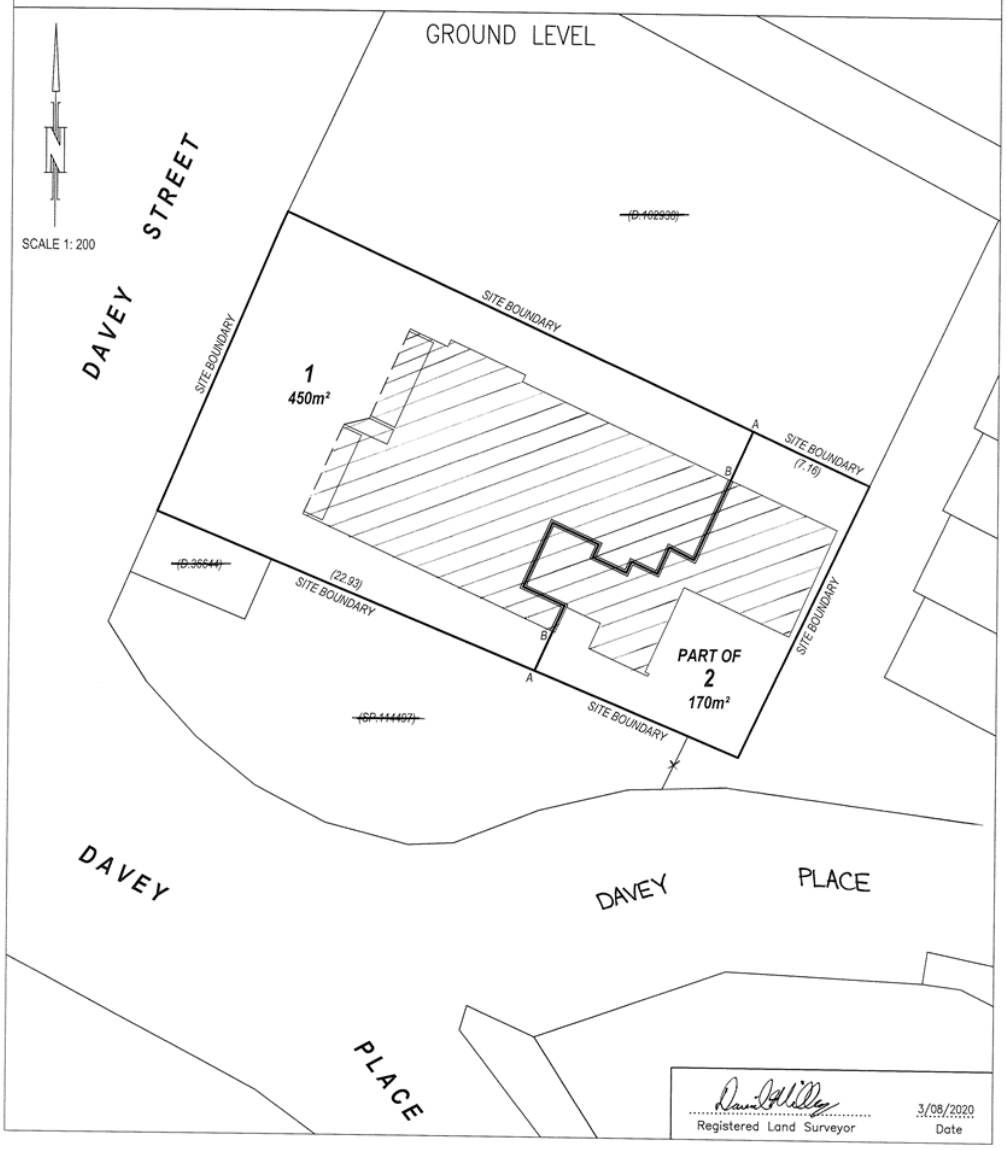
SITE BOUNDARIES
CENTRELINE OF FENCE LABELLED A - B
CENTRELINE OF WALL LABELLED B - B

MEASUREMENTS IN BRACKETS ARE FOR BOUNDARY FIXATION ONLY

THE VERTICAL LOT BOUNDARIES EXTEND FROM 2.00 METRES BELOW GROUND LEVEL TO 10.00 METRES ABOVE GROUND LEVEL EXCEPT FOR THE PORTION SHOWN ▨ WHICH EXTENDS FROM 2.00 METRES BELOW GROUND LEVEL TO THE CENTRE OF CEILING ABOVE OR PROLONGATION THEREOF

LOT No	GROUND FLOOR AREA	FIRST FLOOR AREA	SECOND FLOOR AREA	TOTAL AREA
2	170m²	290m²	30m²	490m²

* Amendments made to strata sheets. See plan-related documents for consent.



Registered Land Surveyor — 3/08/2020 — Date

FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

STRATA PLAN

SHEET 3 OF 5 SHEETS

STRATA TITLES ACT 1998

M. Anderson ..... 15.1.2021.
Council Delegate Date

Registered Number

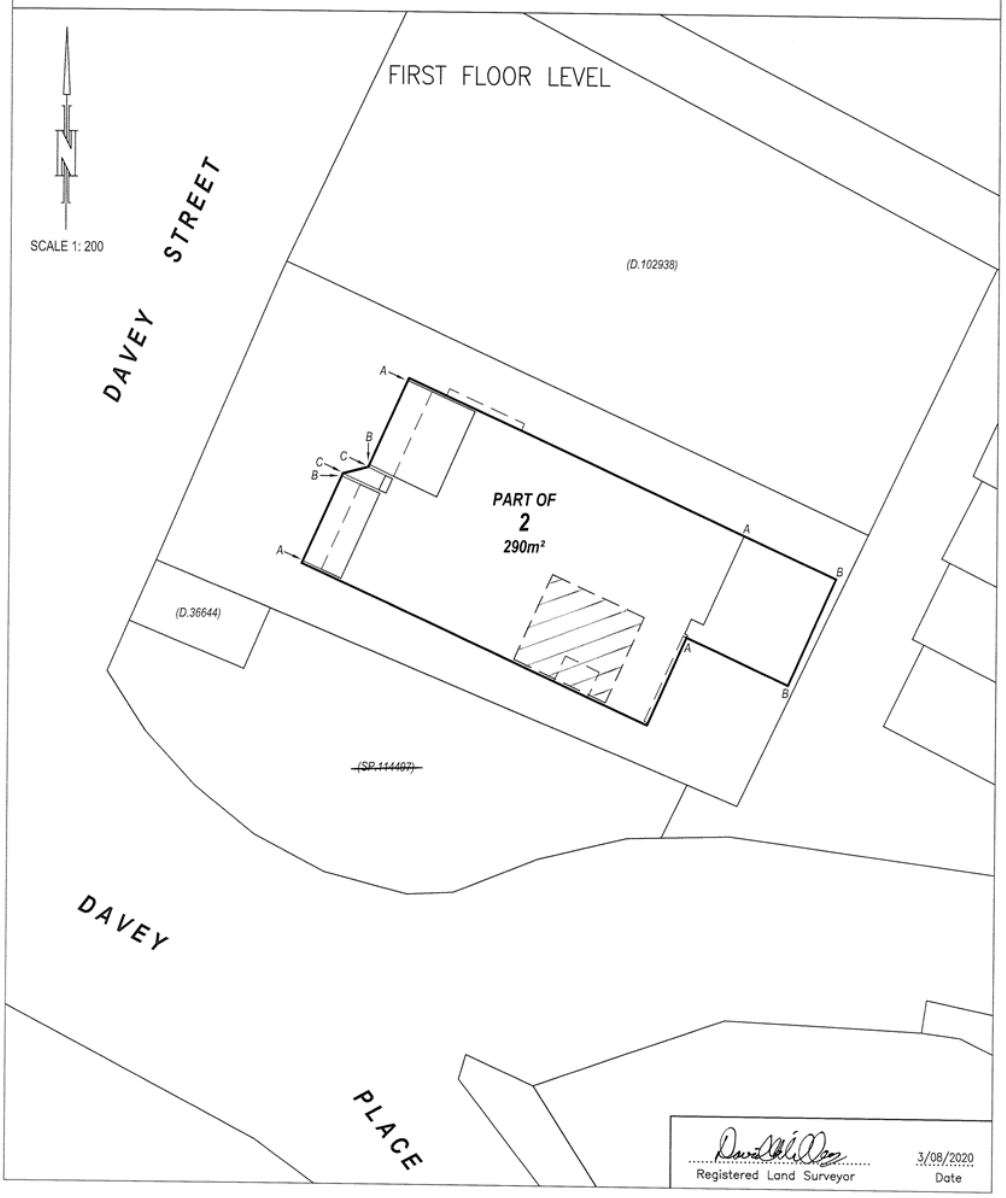
179692

THE HORIZONTAL LOT BOUNDARIES ARE SHOWN BY HEAVY UNBROKEN LINES DEFINED BY:

FACE OF WALL LABELLED A - A, B - C
EDGE OF DECK LABELLED A - B, B - B, C - C

THE VERTICAL LOT BOUNDARIES EXTEND FROM THE CENTRE OF THE FLOOR BELOW OR PROLONGATION THEREOF TO 10.00 METRES ABOVE THE GROUND LEVEL EXCEPT FOR THE PORTION SHOWN ▨ WHICH EXTENDS FROM THE CENTRE OF THE FLOOR BELOW TO THE CENTRE OF THE CEILING ABOVE

LOT No	GROUND FLOOR AREA	FIRST FLOOR AREA	SECOND FLOOR AREA	TOTAL AREA
2	170m²	290m²	30m²	490m²



FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

STRATA PLAN

SHEET 4 OF 5 SHEETS

STRATA TITLES ACT 1998

M. Anderson 15-7-2021
Council Delegate Date

Registered Number

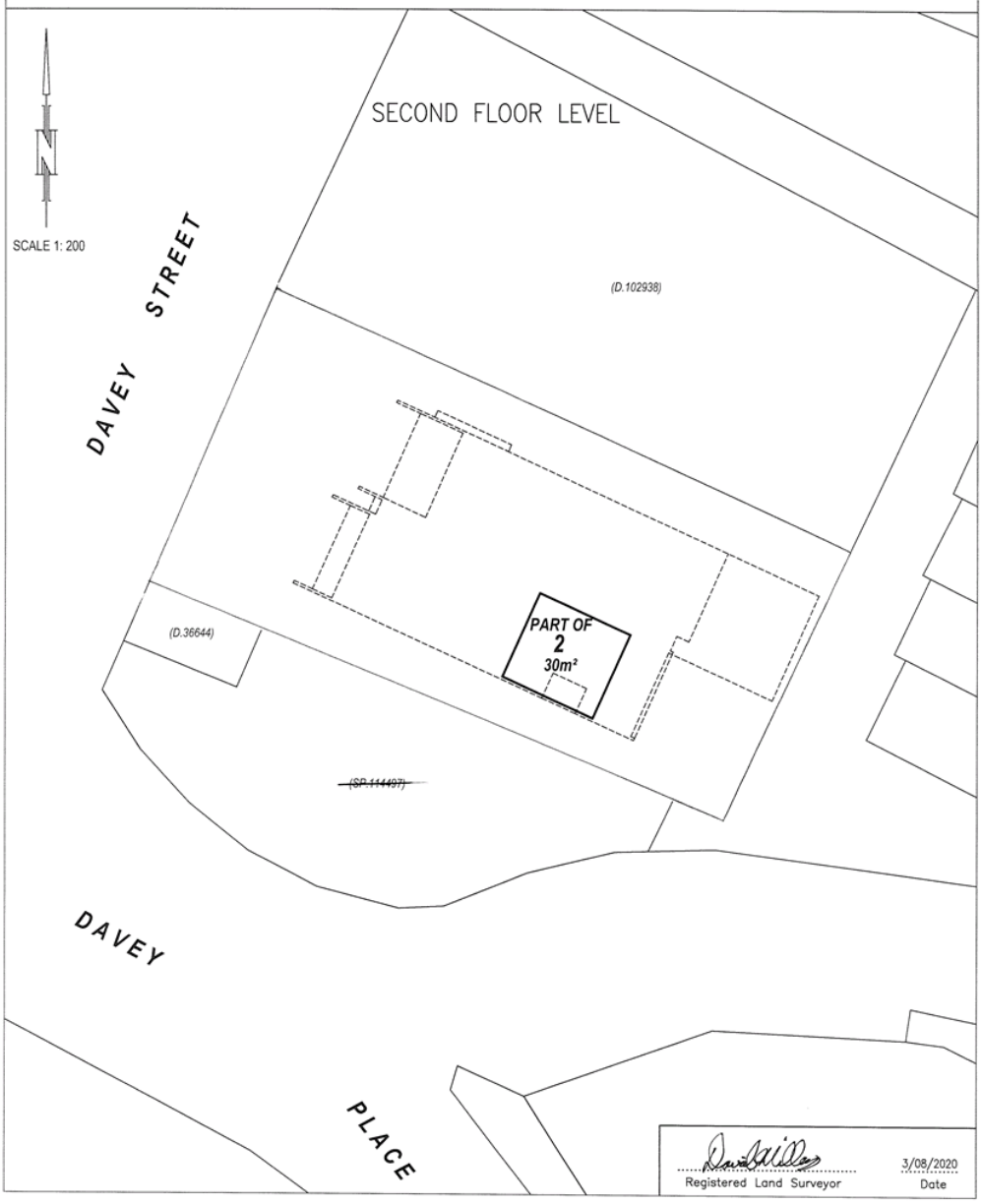
179692

THE HORIZONTAL LOT BOUNDARIES ARE SHOWN BY HEAVY UNBROKEN LINES DEFINED BY:

THE FACE OF WALL

THE VERTICAL LOT BOUNDARIES EXTEND FROM THE CENTRE OF THE FLOOR BELOW OR PROLONGATION THEREOF TO 10.00 METRES ABOVE GROUND LEVEL

LOT No	GROUND FLOOR AREA	FIRST FLOOR AREA	SECOND FLOOR AREA	TOTAL AREA
2	170m²	290m²	30m²	490m²



Registered Land Surveyor 3/08/2020 Date

FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

STRATA PLAN

SHEET 5 OF 5 SHEETS

STRATA TITLES ACT 1998

Registered Number

179692

NAME OF BODY CORPORATE: STRATA CORPORATION No. 179692 — 324 DAVEY STREET, SOUTH HOBART

ADDRESS FOR THE SERVICE OF NOTICES: 324 DAVEY STREET, SOUTH HOBART TAS 7004

SURVEYORS CERTIFICATE

I, DAVID BRUCE MILLER of BELLERIVE

a surveyor registered under the Surveyors Act 2002 certify that the building or buildings erected on the site and drawn on sheet 1 of this plan are within the site boundaries of the folio stated on sheet 1 and any encroachment beyond those boundaries is properly authorised according to law.

Registered Land Surveyor	Date	Ref No.
	3/08/2020	VOSSS05

COUNCIL CERTIFICATE

I certify that the HOBART CITY Council has:

(a) approved the lots shown in this plan and

(b) issued this certificate of approval in accordance with section 31 of the Strata Titles Act 1998

Council Delegate	Date	Ref No.
M. Anderson	15-7-2021	STR-20-43

GENERAL UNIT ENTITLEMENTS

LOT	UNIT ENTITLEMENT
1	10
2	10
TOTAL	20

Application Referral Cultural Heritage - Response

From:	Sarah Waight
Recommendation:	Proposal is acceptable without conditions.
Date Completed:	
Address:	2 / 324 DAVEY STREET, SOUTH HOBART COMMON LAND OF PARENT TITLE
Proposal:	Partial Demolition & Alterations
Application No:	PLN-22-71
Assessment Officer:	Victoria Maxwell,

Referral Officer comments:

This application is for a pergola over a rear deck to a new townhouse complex located in the South Hobart 7 Heritage Precinct.

No demolition is proposed.

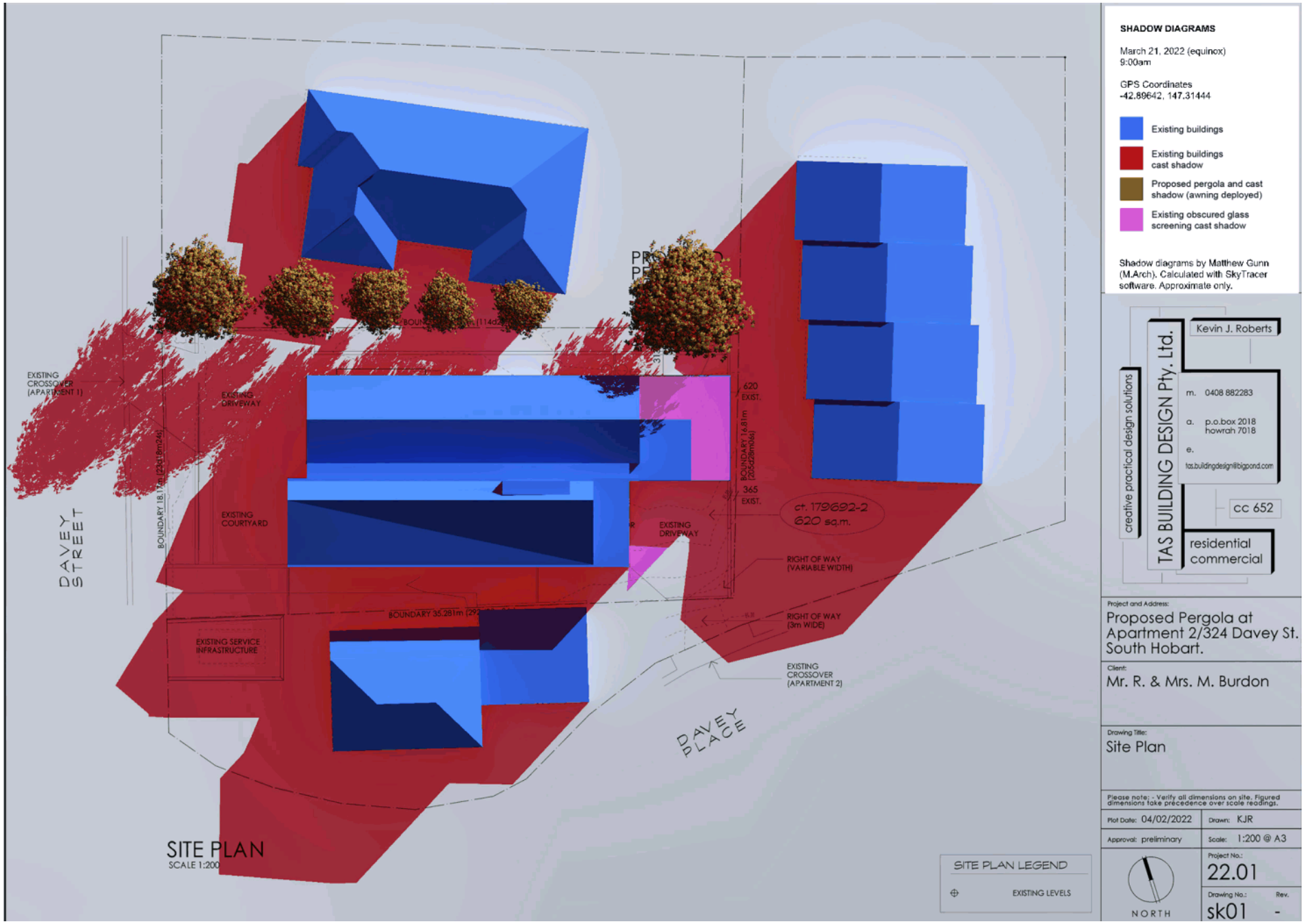
The new works must be assessed against E13.8.2 P1 and E13.8.2 P3.

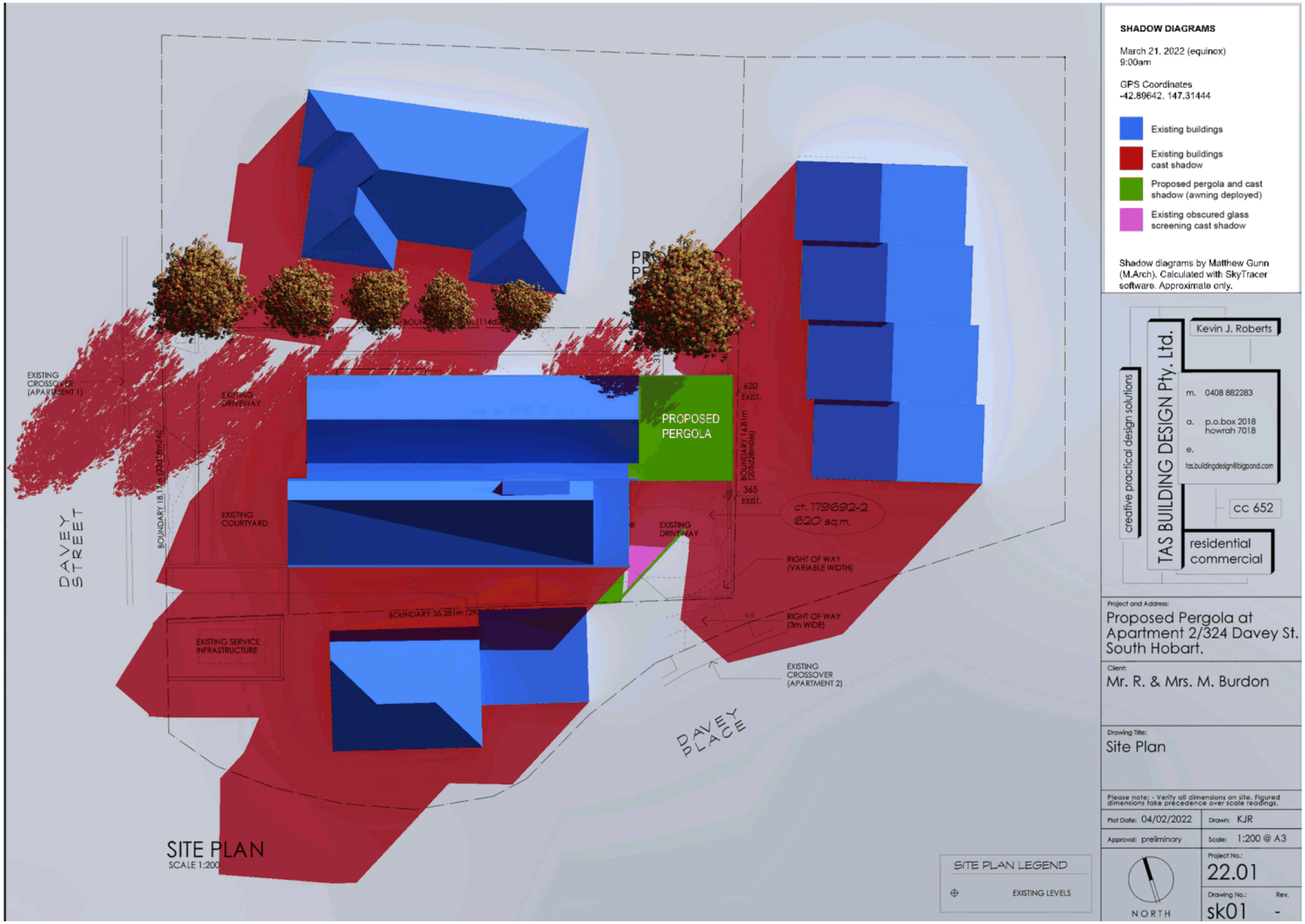
The precinct has the following ascribed Statements of Significance from Table E13.2 of the Historic Heritage Code of the Scheme.

This precinct is significant for reasons including:
1. The original and/or significant external detailing, finishes and materials demonstrating a high degree of integrity with a homogenous historic character.
2. The intactness of the streetscape and buildings.
3. The fine garden settings.
4. The street's continuing representation of the best housing and the social importance of this elevated street in Hobart.
The proposed pergola, while attached to an upper deck, is at the rear of the new townhouses and will not be visible from the streetscape. Therefore the proposal will not be in conflict with the above clauses will no resultant detriment or detraction from the heritage values of the precinct.

The proposal satisfies the relevant provisions of the Historic Heritage Code of the Scheme.

Sarah Waight
Senior Cultural Heritage Officer
23 Feb 2022


SHADOW DIAGRAMS
March 21, 2022 (equinox)
9:00am
GPS Coordinates
-42.89642, 147.31444
Existing buildings
Existing buildings cast shadow
Proposed pergola and cast shadow (awning deployed)
Existing obscured glass screening cast shadow
Shadow diagrams by Matthew Gunn (M.Arch). Calculated with SkyTracer software. Approximate only.
Kevin J. Roberts
creative practical design solutions
TAS BUILDING DESIGN Pty. Ltd.
m. 0408 882283
a. p.o.box 2018 howrah 7018
e. tas.buildingdesign@bigpond.com
cc 652
residential commercial
Project and Address:
Proposed Pergola at Apartment 2/324 Davey St. South Hobart.
Client:
Mr. R. & Mrs. M. Burdon
Drawing Title:
Site Plan
Please note: - Verify all dimensions on site. Figured dimensions take precedence over scale readings.
Plot Date: 04/02/2022
Drawn: KJR
Approval: preliminary
Scale: 1:200 @ A3
Project No.: 22.01
Drawing No.: sk01
Rev. -
NORTH
SITE PLAN LEGEND
EXISTING LEVELS
EXISTING CROSSOVER (APARTMENT 1)
EXISTING DRIVEWAY
EXISTING COURTYARD
EXISTING SERVICE INFRASTRUCTURE
EXISTING DRIVEWAY
620 EXIST.
365 EXIST.
ct. 179692-2
620 sq.m.
RIGHT OF WAY (VARIABLE WIDTH)
RIGHT OF WAY (3m WIDE)
EXISTING CROSSOVER (APARTMENT 2)
DAVEY STREET
DAVEY PLACE
SITE PLAN
SCALE 1:200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EXISTING DRIVEWAY
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EXISTING SERVICE INFRASTRUCTURE
PROPOSED PERGOLA
620 EXIST.
365 EXIST.
ct. 179692-2
620 sq.m.
RIGHT OF WAY (VARIABLE WIDTH)
RIGHT OF WAY (3m WIDE)
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DAVEY STREET
DAVEY PLACE
SITE PLAN
SCALE 1:200
SITE PLAN LEGEND
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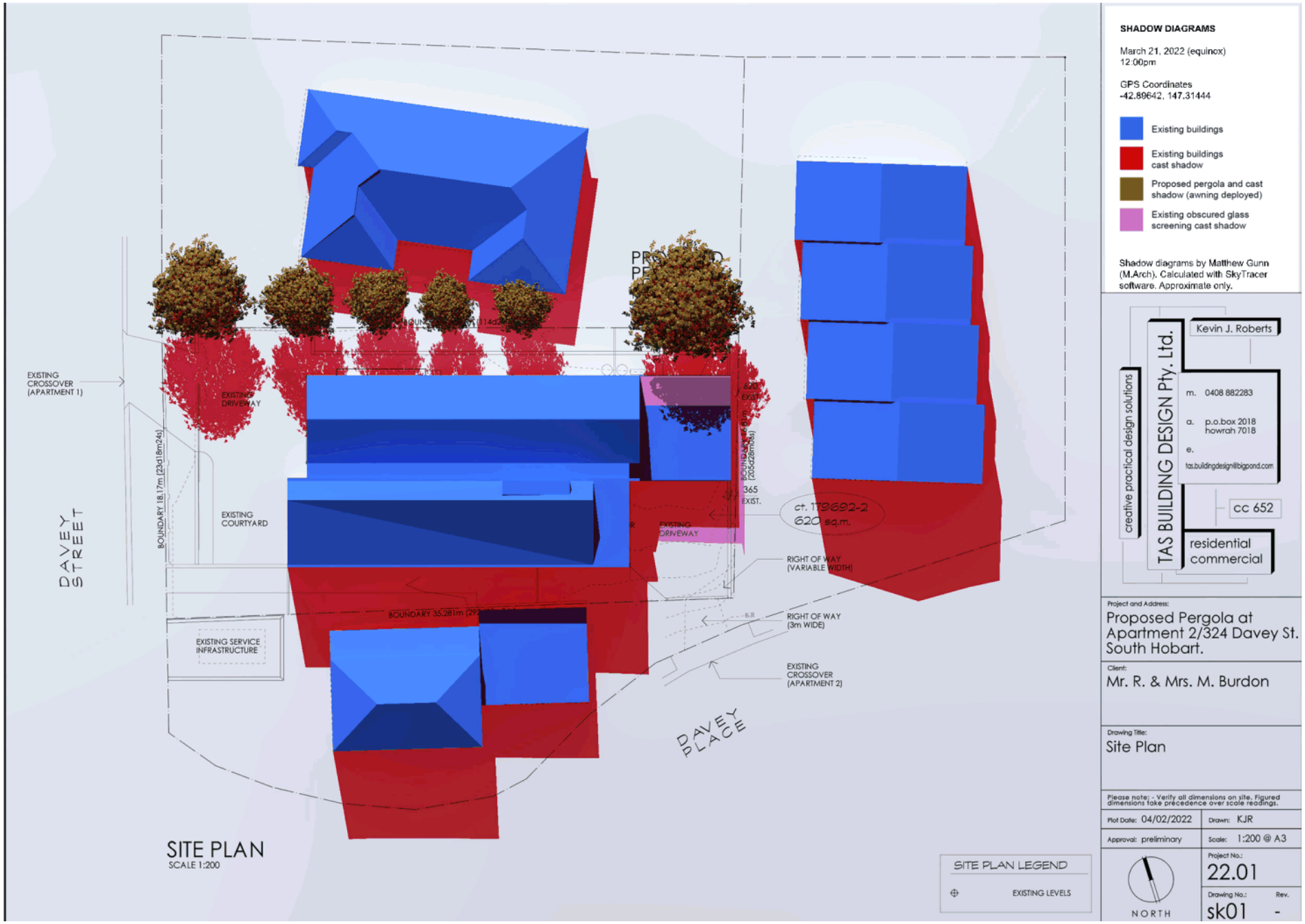
NORTH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March 21, 2022 (equinox)
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Shadow diagrams by Matthew Gunn (M.Arch). Calculated with SkyTracer software. Approximate only.
EXISTING CROSSOVER (APARTMENT 1)
EXISTING DRIVEWAY
EXISTING COURTYARD
DAVEY STREET
BOUNDARY 18.17m (23d18m24s)
BOUNDARY 35.281m (29
EXISTING SERVICE INFRASTRUCTURE
EXISTING DRIVEWAY
365 EXIST.
ct. 179692-2
620 sq.m.
RIGHT OF WAY (VARIABLE WIDTH)
RIGHT OF WAY (3m WIDE)
EXISTING CROSSOVER (APARTMENT 2)
DAVEY PLACE
SITE PLAN
SCALE 1:200
SITE PLAN LEGEND
EXISTING LEVELS
NORTH
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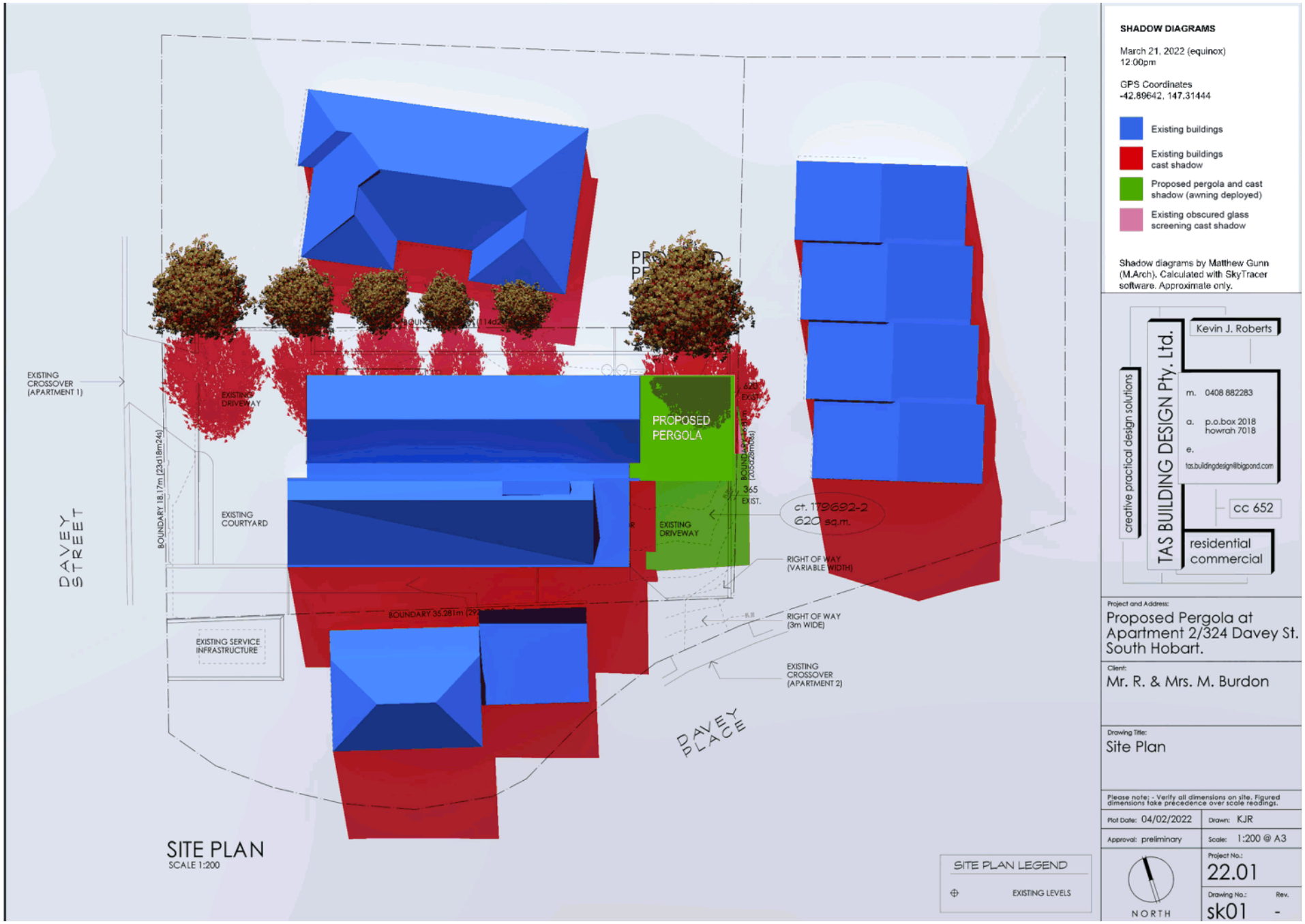
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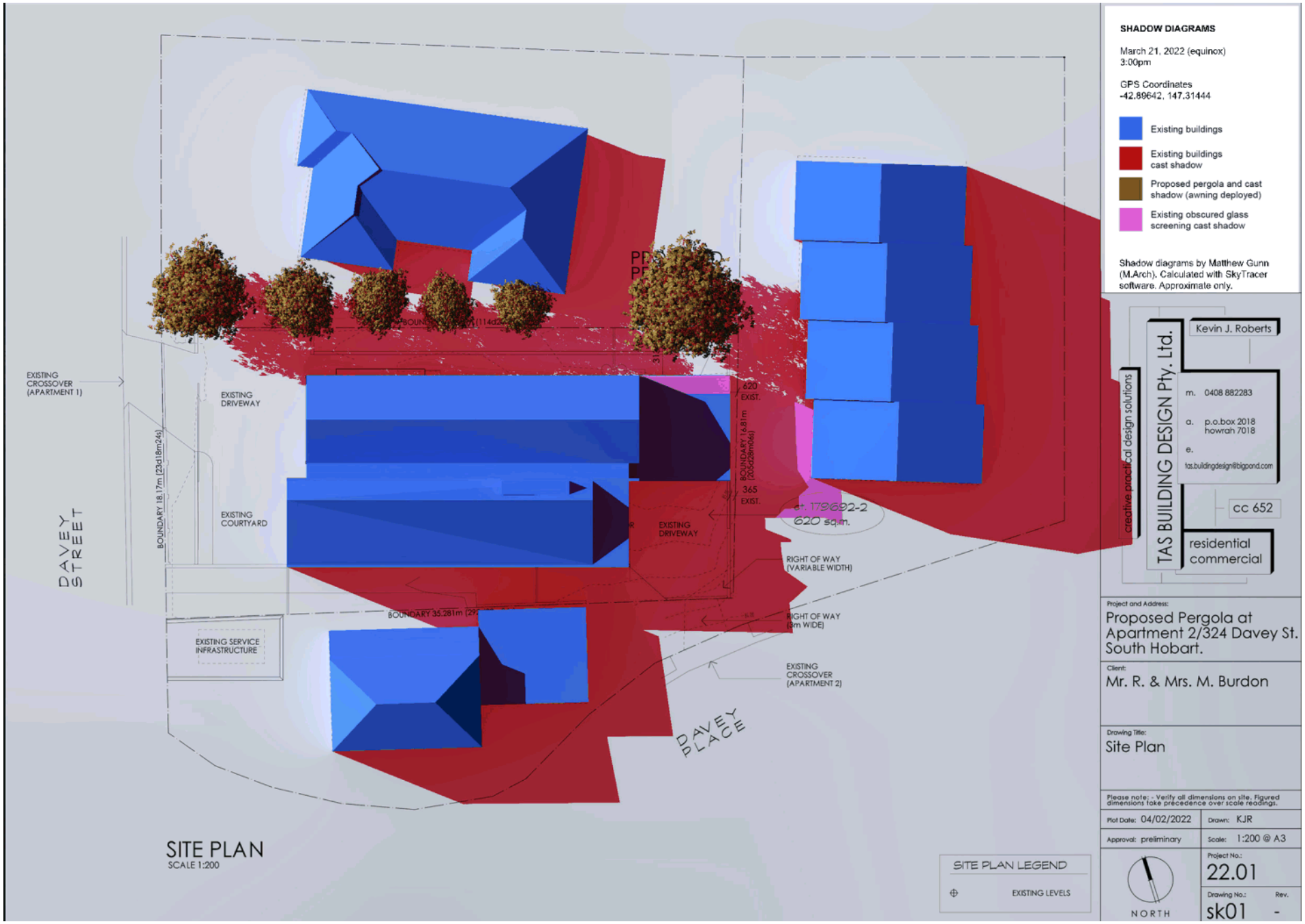
EXISTING DRIVEWAY
DAVEY STREET
BOUNDARY 18.17m (23d18m24s)
BOUNDARY 35.281m (29
EXISTING SERVICE INFRASTRUCTURE
ct. 179692-2
620 sq.m.
RIGHT OF WAY (VARIABLE WIDTH)
RIGHT OF WAY (3m WIDE)
EXISTING CROSSOVER (APARTMENT 2)
DAVEY PLACE
SITE PLAN
SCALE 1:200
SITE PLAN LEGEND
EXISTING LEVELS
NORTH
Kevin J. Roberts
TAS BUILDING DESIGN Pty. Ltd.
creative practical design solutions
m. 0408 882283
a. p.o.box 2018 howrah 7018
e. tas.buildingdesign@bigpond.com
cc 652
residential commercial
Project and Address:
Proposed Pergola at Apartment 2/324 Davey St. South Hobart.
Client:
Mr. R. & Mrs. M. Burdon
Drawing Title:
Site Plan
Please note; - Verify all dimensions on site. Figured dimensions take précedence over scale readings.
Plot Date: 04/02/2022
Drawn: KJR
Approval: preliminary
Scale: 1:200 @ A3
Project No.: 22.01
Drawing No.: sk01
Rev. -


SHADOW DIAGRAMS
March 21, 2022 (equinox)
3:00pm
GPS Coordinates
-42.89642, 147.31444
Existing buildings
Existing buildings cast shadow
Proposed pergola and cast shadow (awning deployed)
Existing obscured glass screening cast shadow
Shadow diagrams by Matthew Gunn (M.Arch). Calculated with SkyTracer software. Approximate only.
EXISTING CROSSOVER (APARTMENT 1)
EXISTING DRIVEWAY
EXISTING COURTYARD
DAVEY STREET
BOUNDARY 18.17m (23d18m24s)
BOUNDARY 16.81m (205d28m06s)
620 EXIST.
365 EXIST.
EXISTING DRIVEWAY
RIGHT OF WAY (VARIABLE WIDTH)
RIGHT OF WAY (3m WIDE)
BOUNDARY 35.281m
EXISTING SERVICE INFRASTRUCTURE
EXISTING CROSSOVER (APARTMENT 2)
DAVEY PLACE
SITE PLAN
SCALE 1:200
SITE PLAN LEGEND
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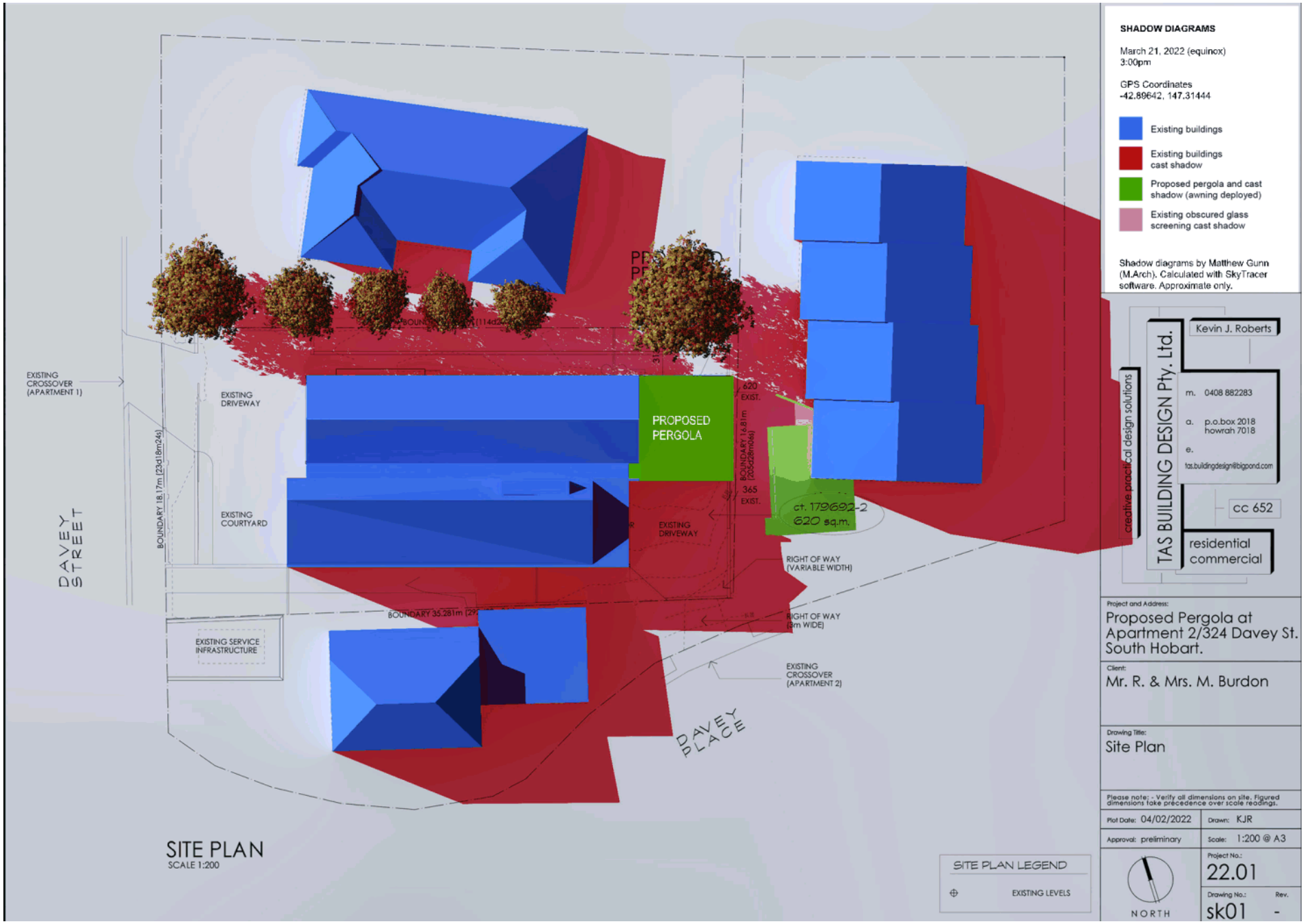
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EXISTING COURTYARD
PROPOSED PERGOLA
620 EXIST.
365 EXIST.
BOUNDARY 16.81m (205d28m0s)
BOUNDARY 18.17m (23d18m24s)
DAVEY STREET
ct. 179692-2
620 sq.m.
EXISTING DRIVEWAY
RIGHT OF WAY (VARIABLE WIDTH)
RIGHT OF WAY (3m WIDE)
BOUNDARY 35.281m
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SITE PLAN LEGEND
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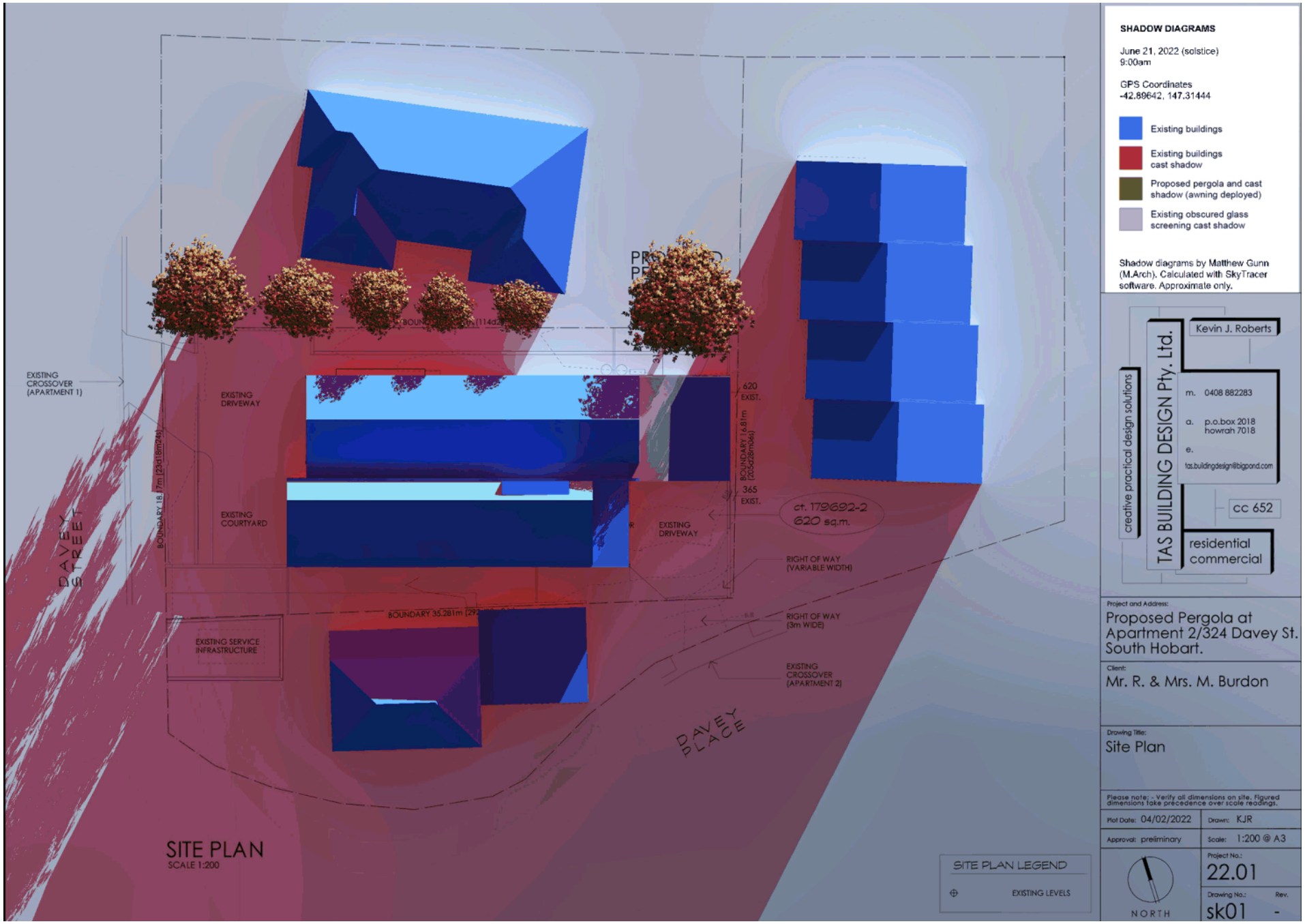
SHADOW DIAGRAMS
June 21, 2022 (solstice)
9:00am
GPS Coordinates
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EXISTING CROSSOVER (APARTMENT 1)
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EXISTING COURTYARD
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EXISTING SERVICE INFRASTRUCTURE
BOUNDARY 18.17m
BOUNDARY 16.81m
BOUNDARY 35.281m
620 EXIST.
365 EXIST.
ct. 179692-2
620 sq.m.
RIGHT OF WAY (VARIABLE WIDTH)
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DAVEY PLACE
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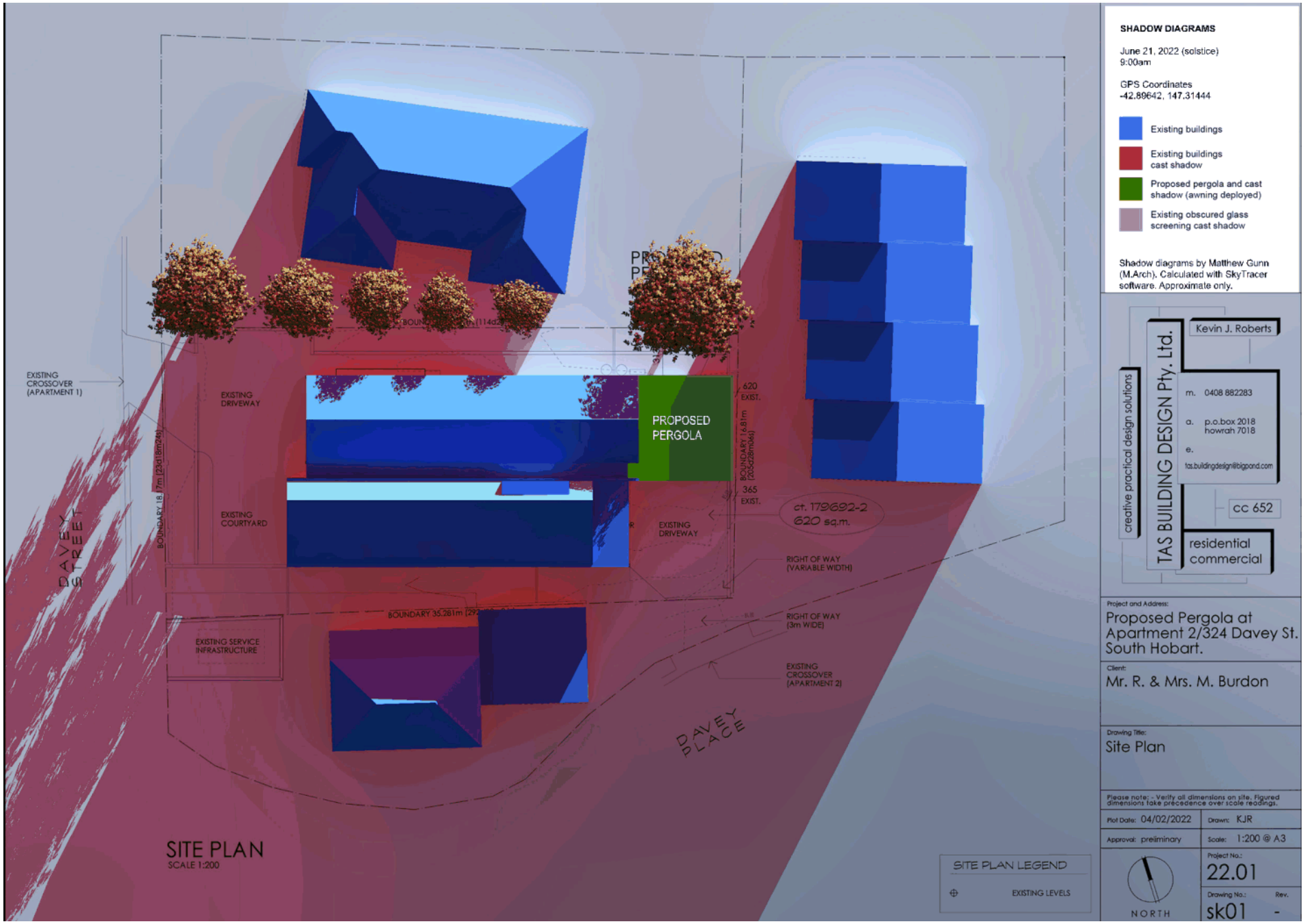
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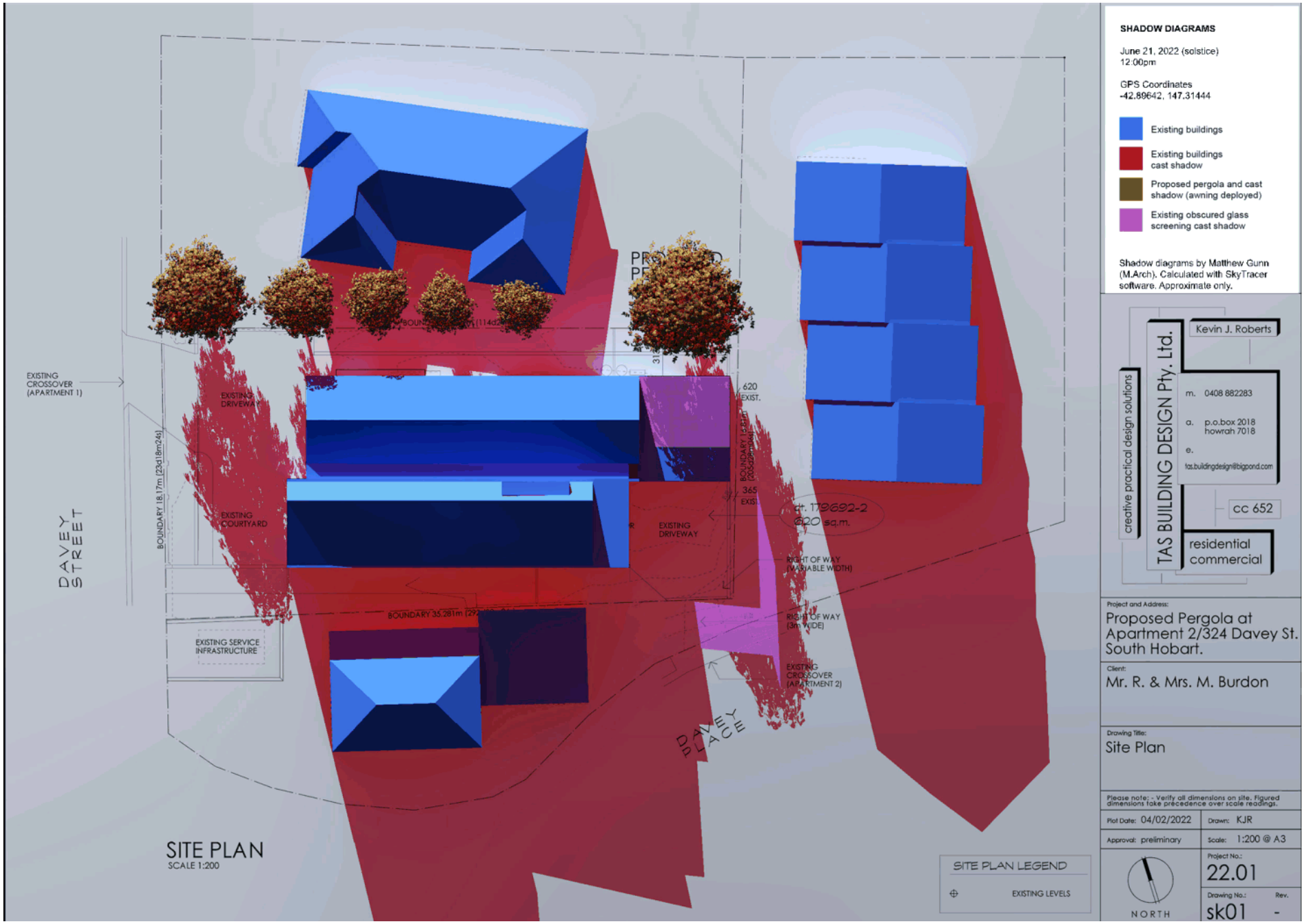
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EXISTING DRIVEWAY
EXISTING COURTYARD
BOUNDARY 18.17m (23d18m24s)
DAVEY STREET
EXISTING SERVICE INFRASTRUCTURE
BOUNDARY 35.281m
620 EXIST.
365 EXIST.
EXISTING DRIVEWAY
RIGHT OF WAY (VARIABLE WIDTH)
RIGHT OF WAY (3m WIDE)
EXISTING CROSSOVER (APARTMENT 2)
DAVEY PLACE
SITE PLAN
SCALE 1:200
SITE PLAN LEGEND
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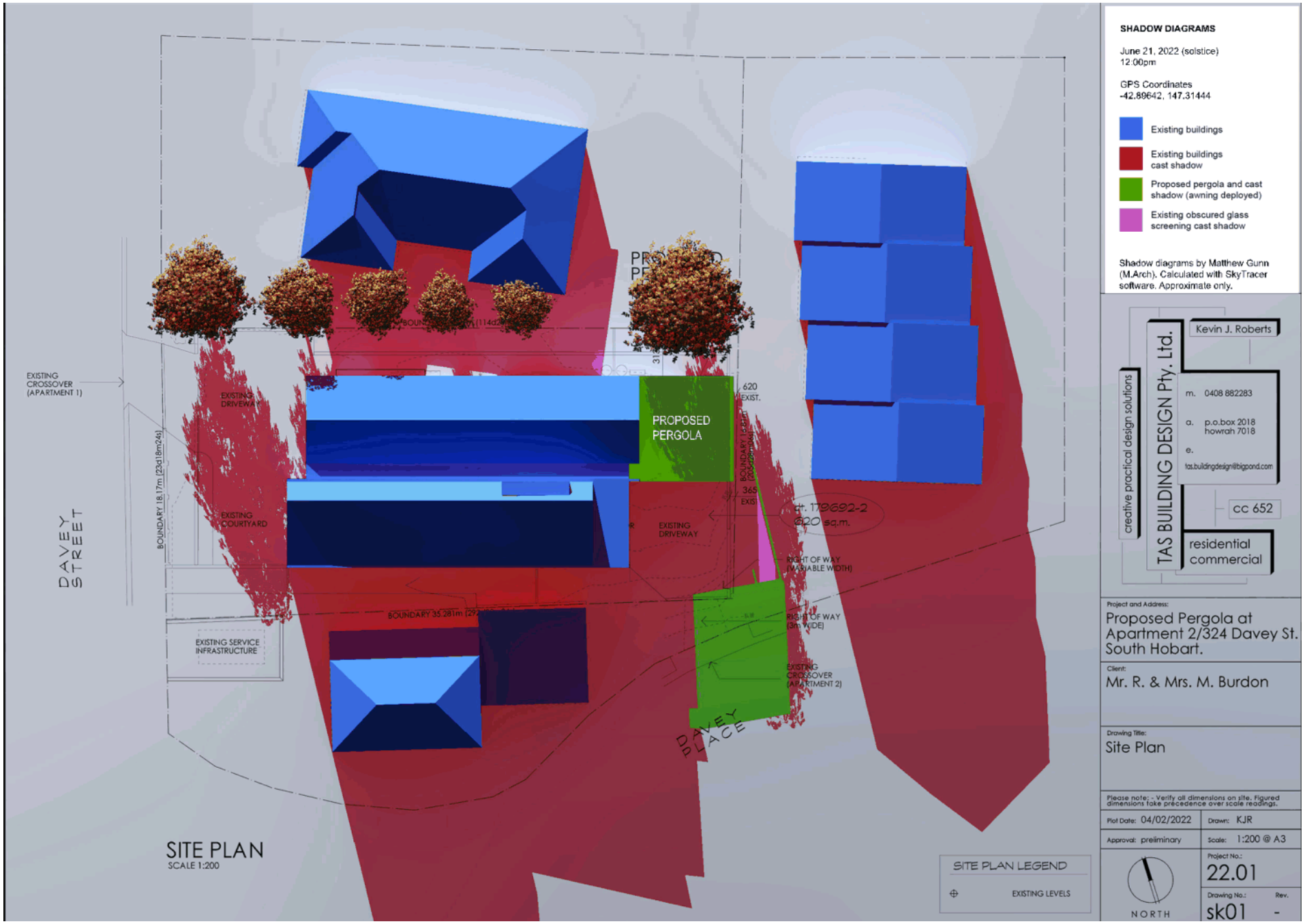
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620 sq.m.
RIGHT OF WAY (VARIABLE WIDTH)
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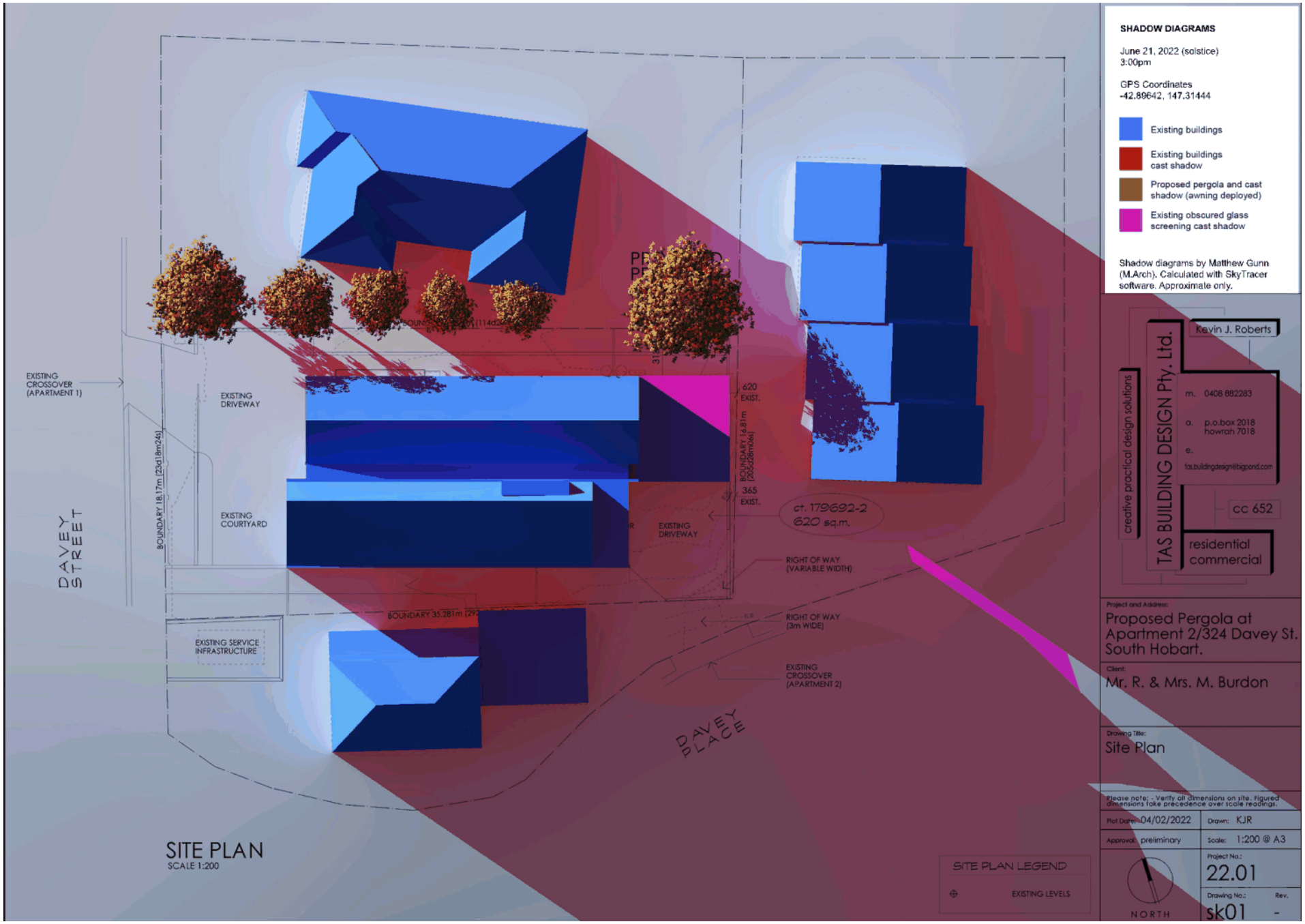
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ct. 179692-2
620 sq.m.
RIGHT OF WAY (VARIABLE WIDTH)
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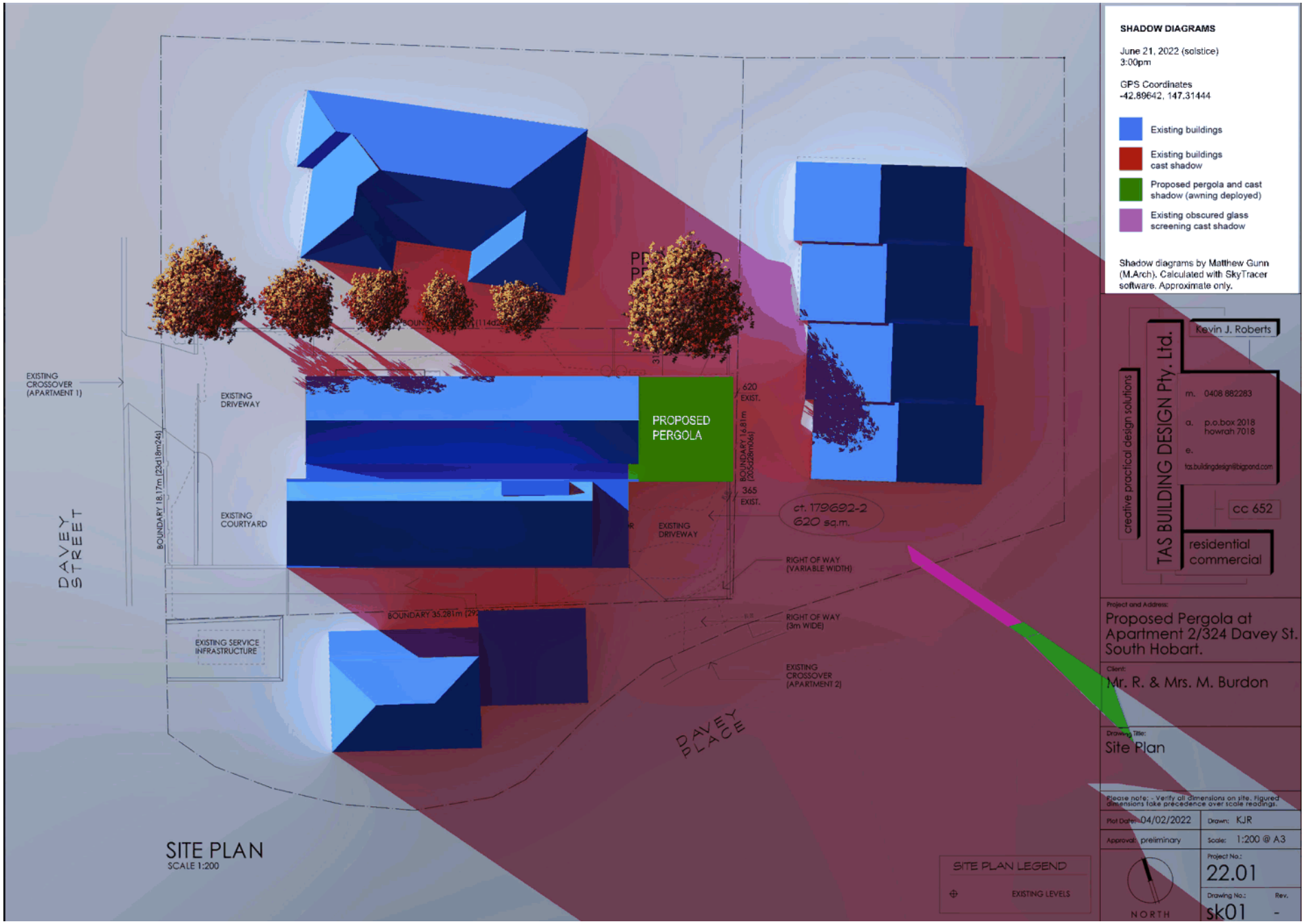
Rev. -
NORTH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365 EXIST.
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DAVEY STREET
ct. 179692-2
620 sq.m.
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RIGHT OF WAY (VARIABLE WIDTH)
RIGHT OF WAY (3m WIDE)
BOUNDARY 35.281m
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DAVEY PLACE
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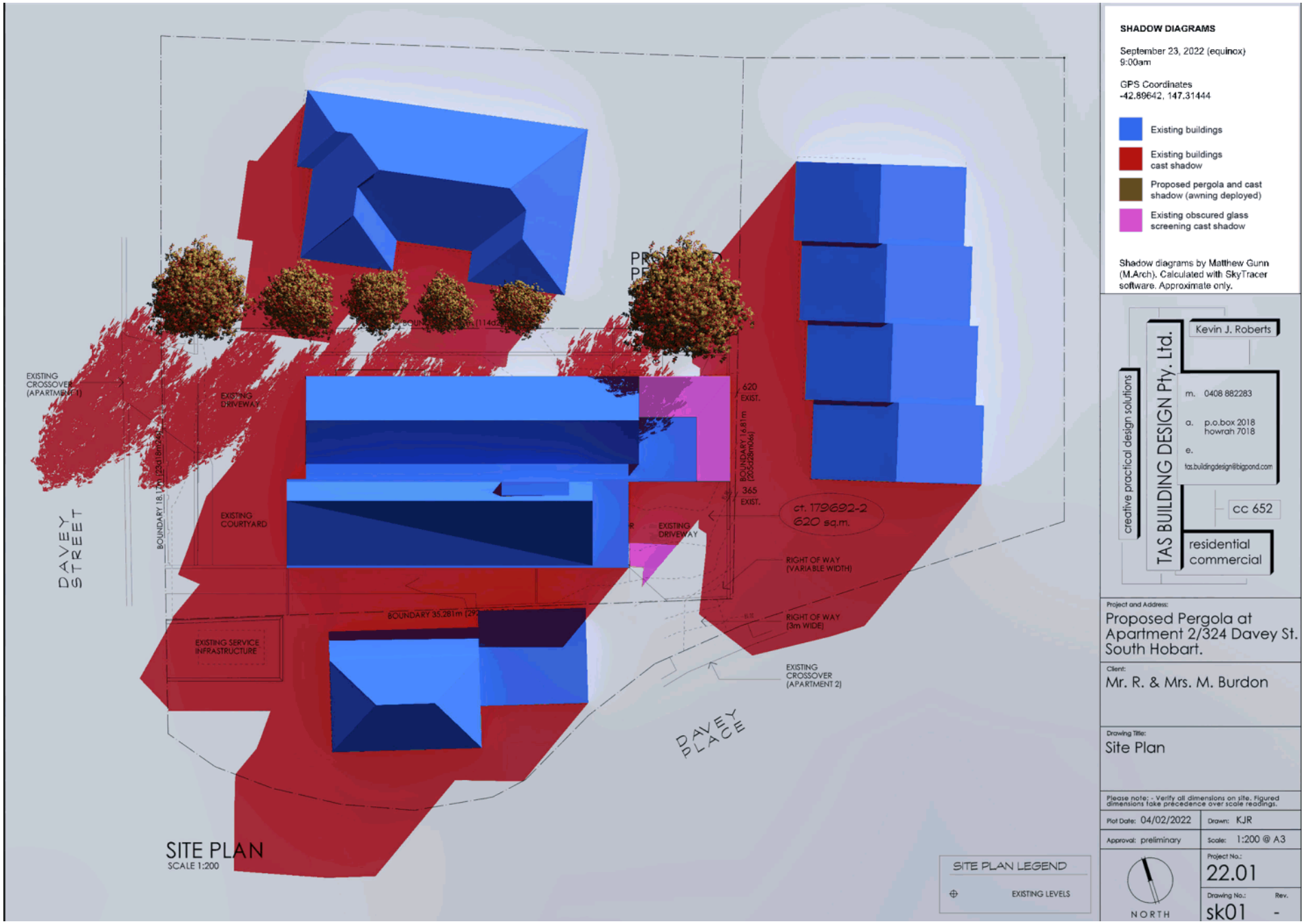
SHADOW DIAGRAMS
September 23, 2022 (equinox)
9:00am
GPS Coordinates
-42.89642, 147.31444
Existing buildings
Existing buildings cast shadow
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Shadow diagrams by Matthew Gunn (M.Arch). Calculated with SkyTracer software. Approximate only.
EXISTING CROSSOVER (APARTMENT 1)
EXISTING DRIVEWAY
EXISTING COURTYARD
EXISTING SERVICE INFRASTRUCTURE
DAVEY STREET
BOUNDARY 35.281m
620 EXIST.
365 EXIST.
BOUNDARY 16.81m
ct. 179692-2
620 sq.m.
RIGHT OF WAY (VARIABLE WIDTH)
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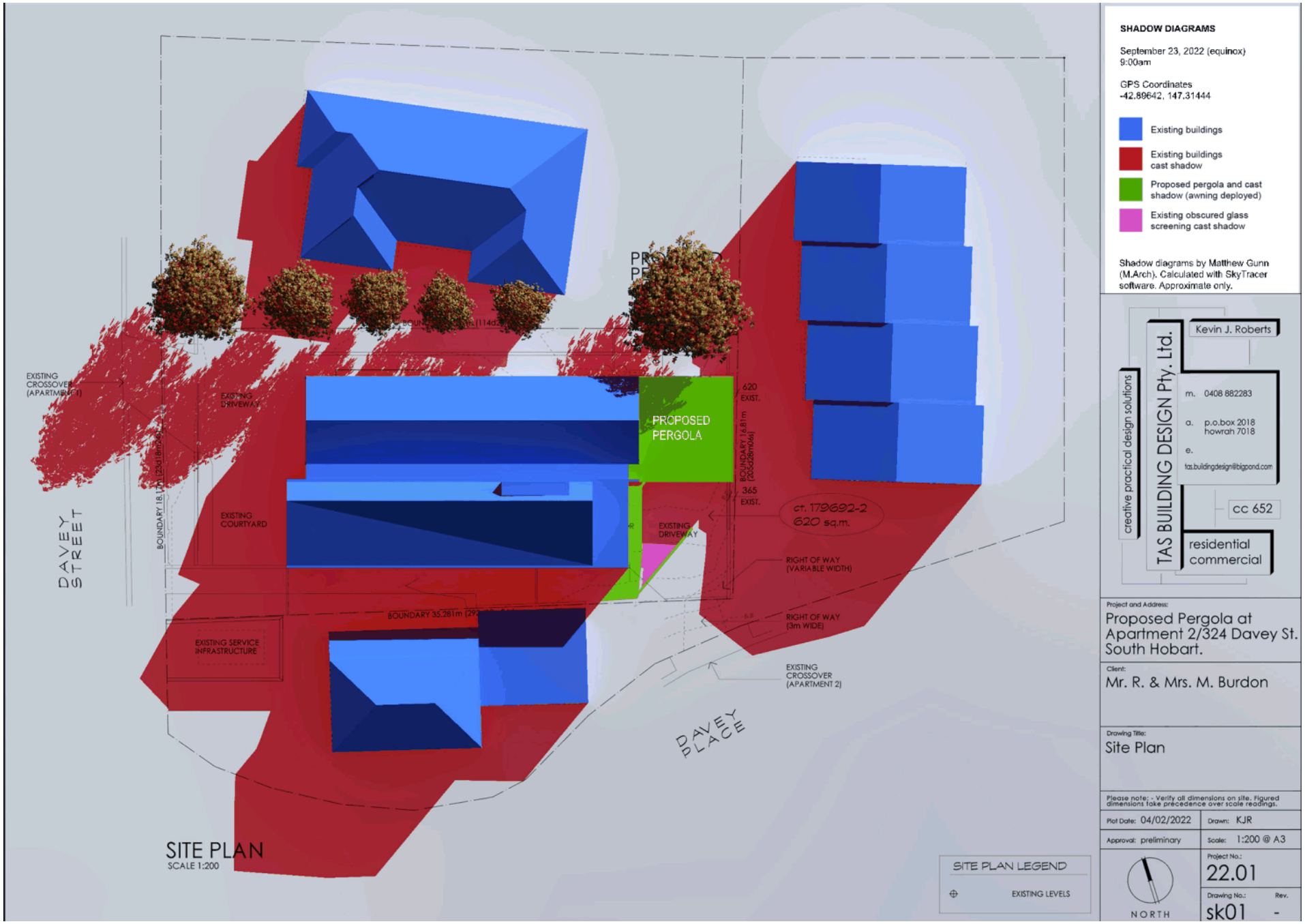
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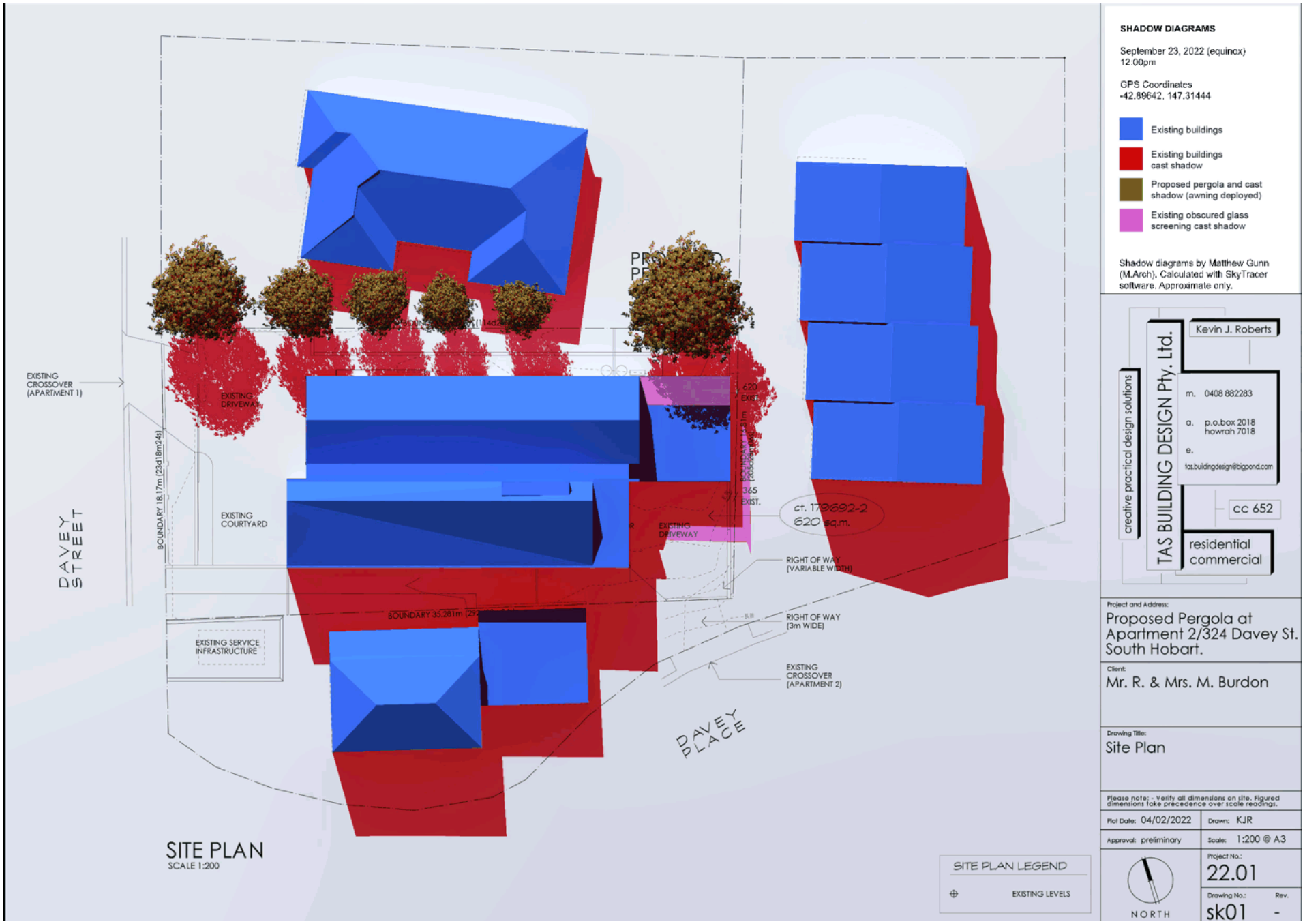
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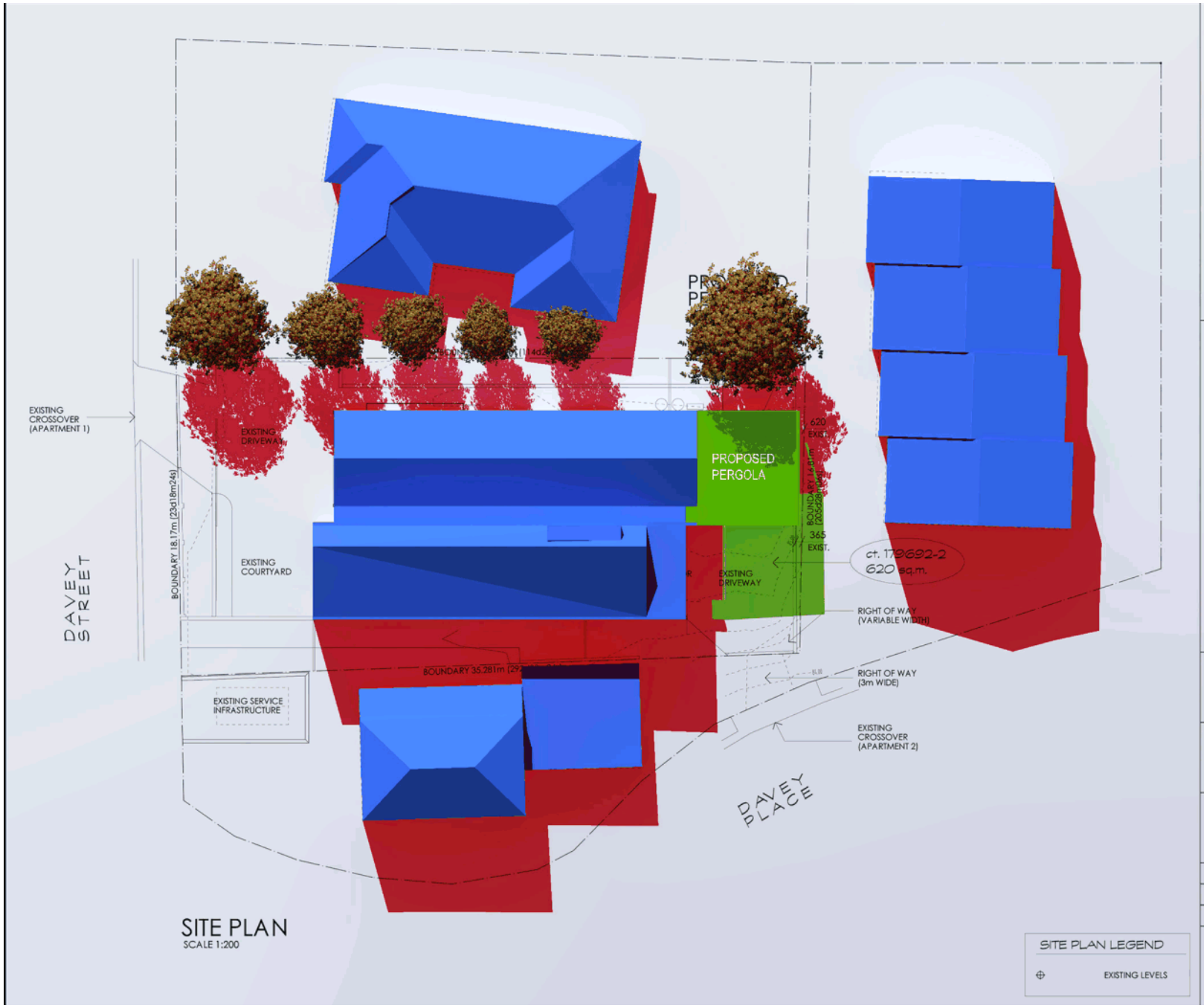

SHADOW DIAGRAMS

September 23, 2022 (equinox)
12:00pm

GPS Coordinates
-42.89642, 147.31444

- Existing buildings
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- Proposed pergola and cast shadow (awning deployed)
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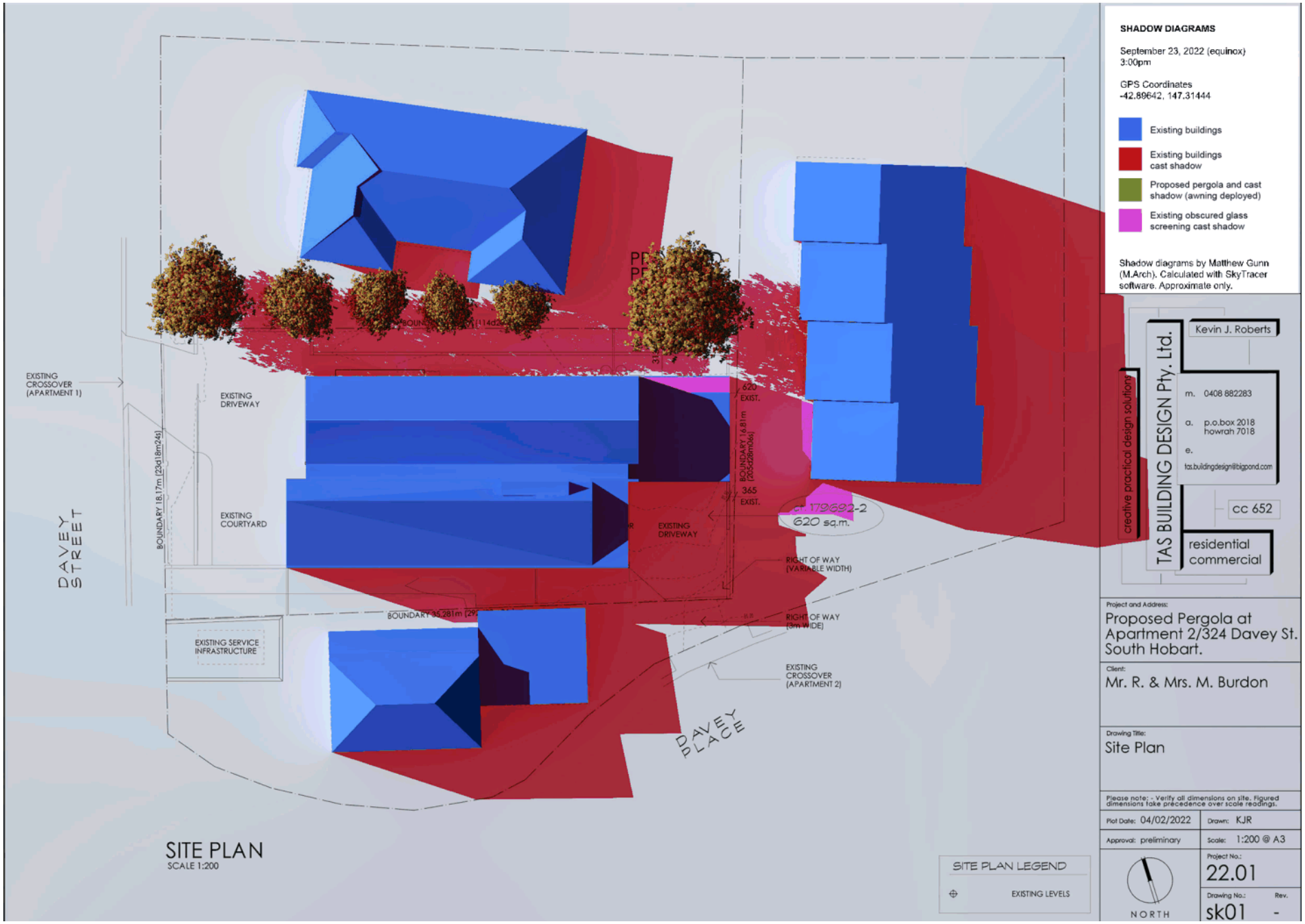
Plot Date: 04/02/2022	Drawn: KJR
Approval: preliminary	Scale: 1:200 @ A3

NORTH

Project No.: 22.01

Drawing No.: sk01 Rev. -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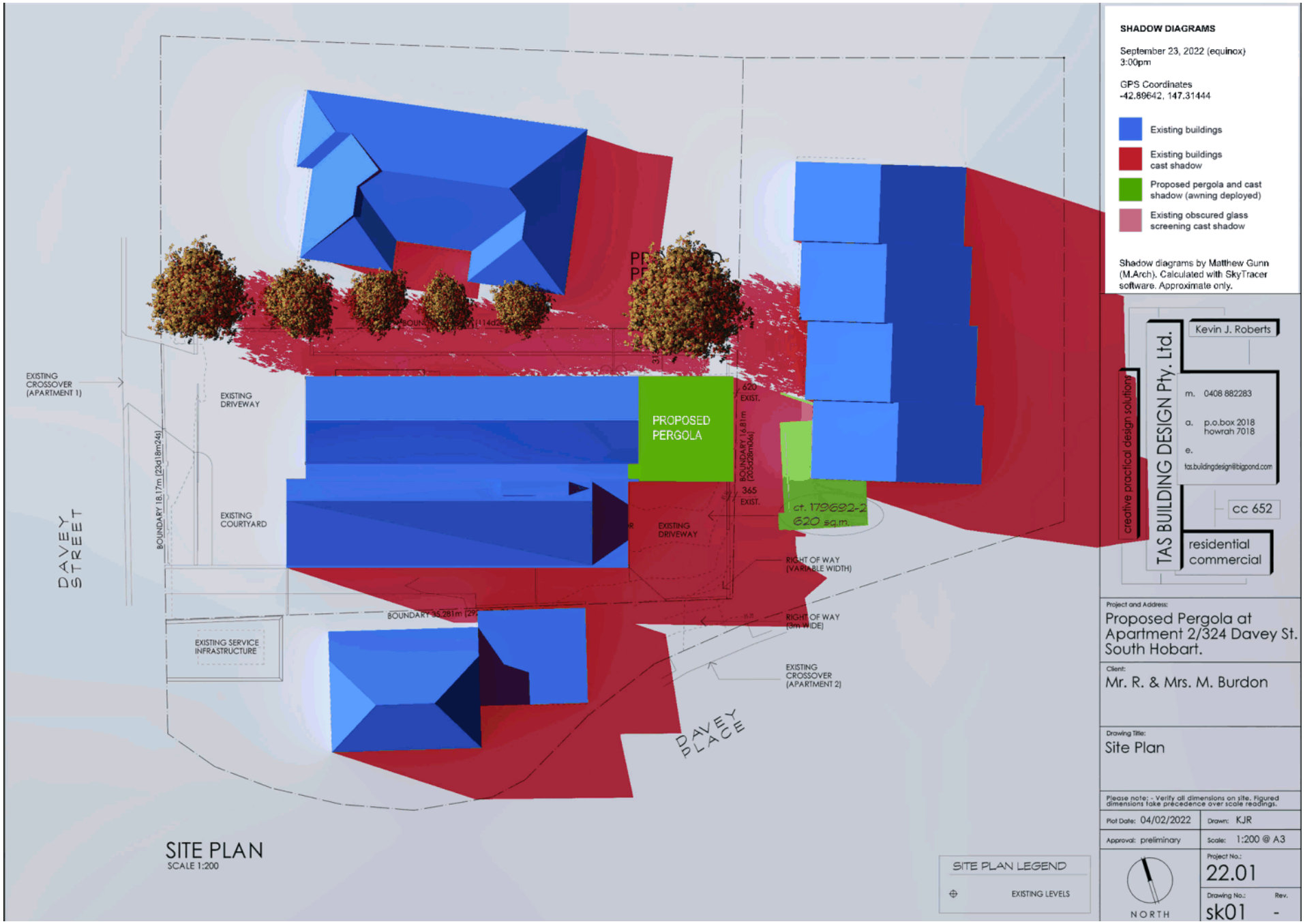
EXISTING DRIVEWAY
EXISTING COURTYARD
BOUNDARY 18.17m (23d18m24s)
DAVEY STREET
EXISTING SERVICE INFRASTRUCTURE
BOUNDARY 35.281m (29
BOUNDARY 16.81m (205d28m06s)
620 EXIST.
365 EXIST.
EXISTING DRIVEWAY
CT 179692-2
620 sq.m.
RIGHT OF WAY (VARIABLE WIDTH)
RIGHT OF WAY (3m WIDE)
EXISTING CROSSOVER (APARTMENT 2)
DAVEY PLACE
SITE PLAN
SCALE 1:200
SITE PLAN LEGEND
EXISTING LEVELS
NORTH
Kevin J. Roberts
TAS BUILDING DESIGN Pty. Ltd.
creative practical design solutions
m. 0408 882283
a. p.o.box 2018 howrah 7018
e. tas.buildingdesign@bigpond.com
cc 652
residential commercial
Project and Address:
Proposed Pergola at Apartment 2/324 Davey St. South Hobart.
Client:
Mr. R. & Mrs. M. Burdon
Drawing Title:
Site Plan
Please note: - Verify all dimensions on site. Figured dimensions take precedence over scale readings.
Plot Date: 04/02/2022
Drawn: KJR
Approval: preliminary
Scale: 1:200 @ A3
Project No.: 22.01
Drawing No.: sk01
Rev. -


SHADOW DIAGRAMS
September 23, 2022 (equinox)
3:00pm
GPS Coordinates
-42.89642, 147.31444
Existing buildings
Existing buildings cast shadow
Proposed pergola and cast shadow (awning deployed)
Existing obscured glass screening cast shadow
Shadow diagrams by Matthew Gunn (M.Arch). Calculated with SkyTracer software. Approximate only.
EXISTING CROSSOVER (APARTMENT 1)
EXISTING DRIVEWAY
EXISTING COURTYARD
PROPOSED PERGOLA
620 EXIST.
365 EXIST.
BOUNDARY 16.81m (205d28m06s)
BOUNDARY 18.17m (23d18m24s)
DAVEY STREET
EXISTING DRIVEWAY
ct. 179692-2
620 sq.m.
RIGHT OF WAY (VARIABLE WIDTH)
RIGHT OF WAY (3m WIDE)
BOUNDARY 35.281m
EXISTING SERVICE INFRASTRUCTURE
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Drawn: KJR
Approval: preliminary
Scale: 1:200 @ A3
Project No.: 22.01
Drawing No.: sk01
Rev. -
NORTH

7.1.4 23 MARIEVILLE ESPLANADE, SANDY BAY - REPLACEMENT OF EXISITNG PONTOON AND JETTY, AND INSTALLATION OF NEW FLOATING PONTOON AND JETTY PLN-22-78 - FILE REF: F22/35073

Address:	23 Marieville Esplanade, Sandy Bay
Proposal:	Replacement of Existing Pontoon and Jetty, and Installation of New Floating Pontoon and Jetty
Expiry Date:	3 May 2022
Extension of Time:	Not applicable
Author:	Richard Bacon

RECOMMENDATION

That pursuant to the *Hobart Interim Planning Scheme 2015*, the Council approve the application for a replacement of existing pontoon and jetty, and installation of new floating pontoon and jetty at 23 Marieville Esplanade 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-22-78 - 23 MARIEVILLE ESPLANADE SANDY BAY TAS 7005 - Final Planning Documents except where modified below.

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 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 2
An approved demolition and construction environmental management plan must be implemented.

Prior to the commencement of works, a demolition and construction environmental management plan must be submitted and approved as a Condition Endorsement. The demolition and construction environmental management plan must:

- detail the proposed demolition and construction methodology (particularly where works may have environmental impacts);
- identify all potential environmental impacts associated with the works including (as relevant) noise, odours, air pollution, water pollution, land contamination, erosion, land instability, changes to hydrology, habitat degradation and impacts upon flora and fauna; and
- include measures to adequately avoid or mitigate all identified environmental risks.

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

Reason for condition
To minimise the potential for environmental impacts from the demolition and construction works

ADVICE

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

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

CONDITION ENDORSEMENT

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

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

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

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

BUILDING PERMIT

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

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

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.

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

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

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

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

DIAL BEFORE YOU DIG
Click here for dial before you dig information.

Attachment A:	PLN-22-78 - 23 MARIEVILLE ESPLANADE SANDY BAY TAS 7005 - Planning Committee or Delegated Report ⇩
Attachment B:	PLN-22-78 - 23 MARIEVILLE ESPLANADE SANDY BAY TAS 7005 - CPC Agenda Documents ⇩

City of HOBART

APPLICATION UNDER HOBART INTERIM PLANNING SCHEME 2015

Type of Report:	Committee
Council:	2 May 2022
Expiry Date:	3 May 2022
Application No:	PLN-22-78
Address:	23 MARIEVILLE ESPLANADE , SANDY BAY
Applicant:	KHISHENDRAN MAHENDRAN 287 MACQUARIE STREET
Proposal:	Replacement of Existing Pontoon and Jetty, and Installation of New Floating Pontoon and Jetty
Representations:	One
Performance criteria:	Development Standards, Inundation Prone Areas Code

1. Executive Summary

1.1 Planning approval is sought for a replacement of existing pontoon and jetty, and installation of new floating pontoon jetty at 23 Marieville Esplanade Sandy Bay TAS 7005.

1.2 More specifically the proposal includes:

- replacement of existing pontoon and jetty with new floating pontoon and jetty.

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

1.3.1 Environmental Management Zone - Rear Setback
1.3.2 Inundation Prone Areas Code - Development Dependent on a Coastal Location

1.4 One representation supporting the proposal was received within the statutory advertising period between the 28th March and the 11th April 2022.

1.5 The proposal is recommended for approval subject to conditions.

1.6 The final decision is delegated to the Council, because the proposal involves Council land.

2. Site Detail

2.1 The site is within the Open Space Zone 19, and the Environmental Management Zone 29.

2.2 The site was visited dated the 28th March 2022.

Figure 1 above: location plan with site marked X.

Figure 2 above: aerial photograph. The specific site is in the centre of the image.

Figure 3 above: site view in the direction of the proposed works.

Figure 4 above: further site view, showing area of proposed works.

3. Proposal

3.1 Planning approval is sought for a replacement of existing pontoon and jetty, and installation of a new floating pontoon and jetty at 23 Marieville Esplanade Sandy Bay TAS 7005.

3.2 More specifically the proposal is for:

- replacement of existing pontoon and jetty with new floating pontoon and jetty.

4. Background

4.1 A previous application elsewhere on the site under PLN-19-889 for a partial demolition, extension and alterations, was approved by Council dated the 11th February 2020.

4.2 Council General Manager Consent under GMC-22-15 was approved on 22 March 2022. Council owns the land that is the subject site (23 Marieville Esplanade).

5. Concerns raised by representors

5.1 One representation supporting the proposal was received within the statutory advertising period between the 28th March and the 11th April 2022.

6. Assessment

6.1 The *Hobart Interim Planning Scheme 2015* is a performance based planning scheme. To meet an applicable standard, a proposal must demonstrate compliance with either an acceptable solution or a performance criterion. Where a proposal complies with a standard by relying on one or more performance criteria, the Council may approve or refuse the proposal on that basis. The ability to approve or refuse the proposal relates only to the performance criteria relied on.

6.2 The site is located within the Open Space Zone and the Environmental Management Zone of the *Hobart Interim Planning Scheme 2015*.

6.3 The existing Pleasure Boat Facility and Sports and Recreation uses of the site are permitted uses in the zones where a reserve management plan exists. No such plan exists in this case which elevates these uses to discretionary status in the zone. The proposal continues these uses however as the development does not change or substantially intensify the existing use, the overall proposal can be considered as a permitted use in accordance with the Special Provisions found in Part C 9.2.1 of the Hobart Interim Planning Scheme 2015.

6.4 The proposal has been assessed against:

6.4.1 Part D - 19 Open Space Zone and 29 Environmental Management Zone.

6.4.2 E6.0 Parking and Access Code

6.4.3 E7.0 Stormwater Management Code

6.4.4 E2.0 Potentially Contaminated Land Code

6.4.5 E11.0 Waterway and Coastal Protection Code

6.4.6 E15.0 Inundation Prone Areas Code

6.4.7 E16.0 Coastal Erosion Hazard Code

6.5 The proposal relies on the following performance criteria to comply with the applicable standards:

6.5.1 Environmental Management Zone:

Rear Setback – Part D 29.4.2 P2

6.5.2 Inundation Prone Areas Code:

Development Dependent on a Coastal Location - E 15.7.6 P1

6.6 Each performance criterion is assessed below.

6.7 Rear Setback Part D 29.4.2 P2

6.7.1 The acceptable solution at clause 29.4.2 A2 requires a rear building setback of 30 metres.

'Building' is defined under the Act as including a structure and a boat or a pontoon which is permanently moored or fixed to the land.

6.7.2 The proposal includes a nil rear 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 clause 29.4.2 P2 provides as follows:

Building setback from side and rear boundaries must satisfy all of the following:
(a) be consistent with any Desired Future Character Statements provided for the area or, if no such statements are provided, have regard to the landscape;
(b) be sufficient to prevent unreasonable adverse impacts on residential amenity on adjoining lots by:
(i) overlooking and loss of privacy;
(ii) visual impact, when viewed from adjoining lots, through building bulk and massing.

6.7.5 Assessment of the performance criterion follows.

The proposal is for a comparatively minor removal and replacement of longstanding marine infrastructure. Numerous jetties and the substantial marinas of both the Derwent Sailing Squadron and the Royal Yacht Club of Tasmania extend for a substantial distance seaward of the specific site. Impact on the character and amenity of intensive boatyard surroundings is not considered likely to be excessive.

The proposal is considered acceptable in terms of rear setback provisions under the Planning Scheme.

6.7.6 The proposal complies with the performance criterion.

6.8 Inundation Prone Areas Code - E 15.7.6 P1

6.8.1 The acceptable solution at clause E15.7.6 A1 is not met as the proposal is not an extension to an existing boat ramp, jetty or marina.

6.8.2 The proposal includes the removal and re-installation of an existing facility.

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 E 15.7.6 P1 provides as follows:

Buildings and works must satisfy all of the following:
(a) need for a coastal location is demonstrated;
(b) new facilities are grouped with existing facilities, where reasonably practical;
(c) building design responds to the particular size, shape, contours or slope of the land and minimises the extent of cut and fill;
(d) waste, including from cleaning and repairs of vessels and other maritime equipment and facilities, solid waste, is managed to ensure waste is safe from inundation events;
(e) risk from inundation is acceptable, taking into account the nature of the development and its users.

6.8.5 Assessment of the performance criterion by Council's Environmental Development Planner follows.

Assessment:

The proposal seeks the removal and replacement of an existing jetty that was damaged during previous storm events. The landside works include a new concrete access ramp and garden beds inside the waterway protection area and inundation prone area.

The application is supported by an environmental assessment by Marine Solutions Tasmania, which concludes that the proposal will have negligible impact on water quality and is highly unlikely to have a detrimental impact on aquatic fauna.

The proposed work is demolition of an existing pontoon and fixed jetty, and replacement with a new floating pontoon and fixed gangway, connected to a new abutment on the foreshore of 23 Marieville Esplanade...

The floating pontoon will be connected to driven steel piles to allow for rise and fall of tides and structural fixity. The floating jetty will be connected by a hinged aluminium gangway to the existing foreshore...

The landside works within HCC property includes:
• New concrete accessibility ramp to new concrete abutment
• New concrete abutment connecting to aluminium gangway to pontoon
• New garden beds to match existing..

The new pontoon jetty footprint is substantially smaller than then existing jetties as noted below in the summary table which highlights a significant reduction on jetty footprint with the new proposed pontoon.

Inundation Prone Areas Code

The Code applies because development is proposed within a Coastal Inundation Hazard Area. No exemptions apply.

The relevant standards are under clause E15.7.6. The application does not comply with acceptable solution A1. Performance criterion P1 states the following:

Buildings and works must satisfy all of the following:

(a) need for a coastal location is demonstrated;
(b) new facilities are grouped with existing facilities, where reasonably practical;
(c) building design responds to the particular size, shape, contours or slope of the land and minimises the extent of cut and fill;
(d) waste, including from cleaning and repairs of vessels and other maritime equipment and facilities, solid waste, is managed to ensure waste is safe from inundation events;
(e) risk from inundation is acceptable, taking into account the nature of the development and its users.

The proposed development satisfies the performance criterion.

A condition is recommended requiring the implementation of a Council-approved Demolition and Construction Environmental Management Plan.

6.8.6 The proposal complies with the performance criterion.

Performance Criteria are met.

7. Discussion

7.1 Planning approval is sought for a replacement of existing pontoon and jetty, and installation of new floating pontoon jetty at 23 Marieville Esplanade Sandy Bay TAS 7005.

7.2 The application was advertised and received one representation in support of the proposal.

7.3 The proposal has been assessed against the relevant provisions of the planning scheme and is considered acceptable.

7.4 The proposal has been assessed by other Council officers, including the Council's Senior Development Engineer, Environmental Development Planner, Environmental Health Officer and Park Planner. The officers have raised no objection to the proposal, subject to conditions.

7.5 Council General Manager Consent was granted under GMC-22-15 dated the 22nd March 2022.

7.6 The proposal is recommended for approval.

8. Conclusion

8.1 The proposed replacement of existing pontoon and jetty, and installation of new floating pontoon jetty at 23 Marieville Esplanade 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 a replacement of existing pontoon and jetty, and installation of new floating pontoon and jetty at 23 Marieville Esplanade 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-22-78 - 23 MARIEVILLE ESPLANADE SANDY BAY TAS 7005 - Final Planning Documents except where modified below.

Reason for condition

To clarify the scope of the permit.

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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.

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- **include measures to adequately avoid or mitigate all identified environmental risks.**

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

Reason for Condition

To minimise the potential for environmental impacts from the demolition and construction works

ADVICE

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

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BUILDING PERMIT

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NOISE REGULATIONS

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

WASTE DISPOSAL

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

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

FEES AND CHARGES

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

DIAL BEFORE YOU DIG

Click here for dial before you dig information.

(Richard Bacon)

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: 12 April 2022

Attachment(s):

Attachment B - CPC Agenda Documents

Burbury CONSULTING
Project Management & Engineering

13/01/2022

Hobart City Council

16 Elizabeth Street,
Hobart, Tasmania, 7001
Australia.

Attention: General Manager & Development Services (Planning) ,

23 Marieville Esplanade, Sandy Bay
Development Application – DSS Accessibility Pontoon Jetty

Burbury Consulting has been engaged by the Derwent Sailing Squadron Inc (DSS) to assist them in the assessment, design and Development Application for a replacement accessibility jetty within the DSS site.

The accompanying Development Application (DA) and associated documentation and drawings for the proposed DSS Accessibility Pontoon Project has been prepared to meet the requirements of the Hobart Interim Planning Scheme 2015.

The proposed project work area covers across both the water side, DSS lease with Crown Land Services (CLS), and the land side, DSS lease with Hobart City Council (HCC). The attached drawings clearly highlight both lease areas and the proposed works.

Please accept and review the proposed DA package including the following documents;

- Application for a Planning Permit to Hobart City Council – being completed and submitted online with the HCC;
- Crown Letter consent.
- A signed consent letter from Proponent for Burbury Consulting to act as their agent – DSS general manager Shaun Thiedemann;
- Project DA Drawings (including location plan);
- Reference document - DSS Jetty Storm Damage Assessment (2018);
- Title of property;
- Covering letter (this document) and
- Marine Solutions Ecological Assessment and Supporting Letter.

Please contact; Burbury Consulting if you require any further information to process the DA.

If you have any queries, please do not hesitate to call or contact me.

Khishendran Mahendran 03 6223 8007

kmahendran@burburyconsulting.com.au

1. Proposal

1.1 Description of Proposed Development & Operation

The proposed work is demolition of an existing pontoon and fixed jetty, and replacement with a new floating pontoon and fixed gangway, connected to a new abutment on the foreshore of 23 Marieville Esplanade.

The new pontoon jetty will be designed an accessibility structure in accordance with AS 3962 to provide accessibility access for Sailability Tasmania Sailing programme and replacing the existing ramp and launch facility on site.

The floating pontoon will be connected to driven steel piles to allow for rise and fall of tides and structural fixity. The floating jetty will be connected by a hinged aluminium gangway to the existing foreshore.

The location of the site as defined in Figure 1-1 below. The proposal is located at 23 Marieville Esplanade and adjoining waterway leased by the Derwent Sailing Squadron (DSS) from Hobart City Council (HCC) and Crown Land Services respectively.

Figure 1-1: Location of the site

The landside works within HCC property includes:

- New concrete accessibility ramp to new concrete abutment
- New concrete abutment connecting to aluminium gangway to pontoon
- New garden beds to match existing

The marine works within Crown Lease area includes:

- Demolition and removal of floating and fixed jetty structures
- New floating pontoons fixed and secured with driven steel circular hollow poles

The new pontoon jetty footprint is substantially smaller than then existing jetties as noted below in the summary table which highlights a significant reduction on jetty footprint with the new proposed pontoon.

Table 1-1: Areas of Existing to New Footprint

	Existing footprint	**New footprint**
Accessibility pontoon	82 sqm	68 sqm
Jetty / Jetties / ramp pontoon	72 sqm	22 sqm
Total footprint	**154 sqm**	**90 sqm**

The general arrangement and layout of the development is detailed in the attached drawings.

The development fits within the existing DSS Crown Land Lease.

A key initiative of the proposed project is to minimise the impact of the existing stormwater outfall on the jetties as highlighted in the attached report from the 2018 food where the existing timber jetty was significant damaged from flood debris. This report initiated the project for a replacement pontoon as well as improvement for accessibility for Sailability Tasmanian sailing and general disabled access to a floating pontoon at the DSS.

1.2 Construction Methodology

The proposed construction works for the Project will be completed by a contractor, whom will have experience with marine construction particularly within sensitive marine environments and applying appropriate safety measures and documentation required. The majority of new works can be constructed off site reducing the construction works on land and in the waterway.

Works sequence is anticipated to be as follows:

- Site mobolise;
- Installation security fences around all access areas, inclosing the work areas;
- Demolition of timber jetty and floating ramp pontoon by marine barge and landside cranes;
- Supply, delivery and installation of all new steel piles and polyethylene sleeves, by floating barge to install the piles to secure the new pontoons;
- Supply and delivery of pontoons, floated off existing slipway, installed by commercial vessels;
- Construction of a concrete ramp, steps and gangway abutment;
- Construction of a topping screed on existing jetty approach;

- Supply and installation of aluminium articulating gangways to access the pontoons;
- Supply and installation of compliant handrail system to AS 1428 for the landside concrete ramp;
- Planting of new landside garden areas with plants to match existing;
- Site clean-up and demobilisation.

2. Accessibility Floating Pontoon

The DSS is the Hobart base for Sailability Tasmania. Sailability is a voluntary non-profit organisation that aims to provide a safe and friendly environment where people of all abilities are accepted and encouraged to participate in the sport of sailing.

The Development Proposal incorporates a new concrete ramp and concrete abutment for connection of an aluminum gangway onto the floating pontoons that will enable safe launching and retrieval of sailability vessels and users.

The access from the existing grassed area to the pontoon will be achieved by a maximum slope of 1:14 (1 vertically, 14 horizontally) from Mean Sea Level to the highest tides.

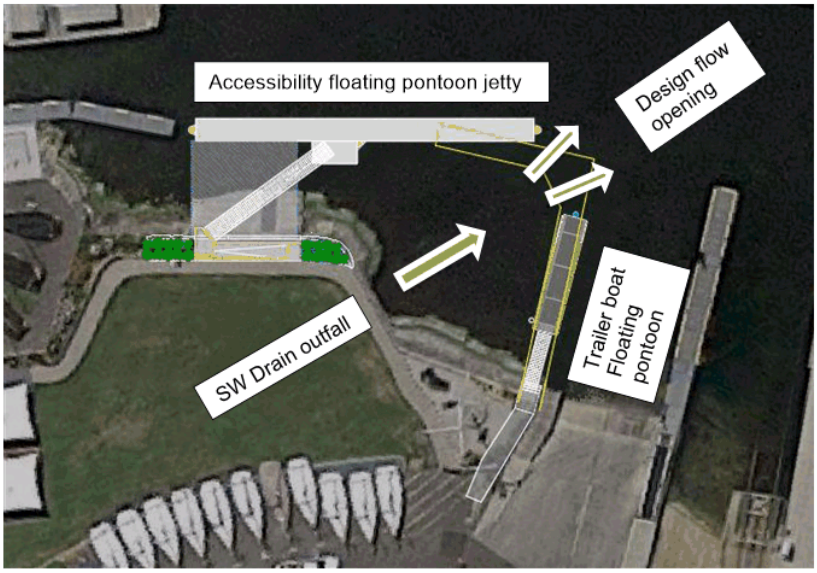
The completion of this Accessibility Pontoon will enable uses of all abilities easier access onto the Sailability Dinghies and access to the pontoons and vessels.

3. Design Solution

The advantage of a floating pontoon structure in a flood situation is they minimise piles which can cause floating debris to be unable to disperse and can cause damage to piles. Also, the floating structure has some flexibility during tidal flows & stormwater flows.

To decrease the flood damage situation in the future, the proposal removes the existing timber jetty across the stormwater flood pathway.

Figure 3-1: Proposed New Structures (stormwater outflow pathways)



4. Use Class

The use of the development is:

Pleasure boat facility - use of land to provide facilities for boats operated primarily for pleasure or recreation, including boats operated commercially for pleasure or recreation. An example is a marina.

5. Zoning and Overlays

The land subject to the proposal is zoned:

- 19.0 Open Space - Hobart Interim Planning Scheme 2015 (landside abutment and pathway).
- 29.0 Environmental Management – Hobart Interim Planning Scheme 2015 (pontoon jetties).

6. Applicable Codes & Standards

The below Table 6-1 indicates the applicable sections of the Interim Planning Scheme Code and how they have been satisfied by either consideration of this supporting information letter or applicable documentation. If Codes are not identified below, they are to be considered not applicable.

Table 6-1 Applicable sections of the planning Code and compliance

Applicable CODE Clause	Discussion/Conclusion	Compliance Confirmed
E.15.0 **Coastal Inundation Hazard Area**	The abutment works for the proposed pontoon is highlighted as a medium risk area for coastal inundation. The proposal abutment height is designed for accessibility use in current tides and sea level. If can be adapted to raise the level with sea level rise as an adaptation measure. The structures are non-habitable and replace an existing use of the site. If the ramp is raised for the current proposal to allow for future sea level rise of 0.8m, it will cause the slope of the aluminium gangway to be steeper from the current 1:7.3 (1 vertically, 7.3 horizontally) during Lowest Astronomical Tide (LAT), refer to Drawings attached. The proposal satisfies all applicable development standards of this Code.	YES

7. Environmental Management

The DSS have recently completed a marina extension and during those works had extensive marine investigations and management procedures in place for these works. They are familiar with the controls needed in works on the site and have a long association with Marine Solutions in supporting marine investigations for any marine natural values assessments.

Whilst the proposal is a replacement pontoon of existing jetties the DSS have received the accompanying advices from Marine Solutions.

Marine solutions have undertaken an environmental assessment in the vicinity of this development and have provided Burbury Consulting a summary letter of environmental impact on the proposed development, refer to Marine Solutions Letter attached.

This supporting letter indicate there is no reason to believe conditions have changed since the assessment was undertaken and with suitable environmental management control measures the development will not significantly impact on the existing environment.

It is proposed, (should Crown or Council require it) through the mechanism of a Construction Environmental Management Plan/Procedure (CEMP), could effectively manage and control potential impacts to the receiving environment.

The proposal also

8. Summary

The above assessment demonstrates that the proposed development is able to satisfy the Scheme requirements. The proposal is considered appropriate and does not result in any land use conflicts.

A sound understanding of current environmental conditions, confirms that the proposal has a low risk profile that results in manageable environmental impacts and improves the existing .

Having regard to the above, the application is considered consistent with the requirements of the Hobart Interim Planning Scheme 2015, consequently this proposed development should be deemed to be acceptable.

If you have any queries or would like to discuss the above further let me know.

Yours faithfully

Khishendran Mahendran
Project Engineer
Burbury Consulting Pty Ltd
kmahendran@burburyconsulting.com.au

Attachments:

- Crown Letter consent.
- A signed consent letter from Proponent for Burbury Consulting to act as their agent – DSS general manager Shaun Thiedemann;
- Project DA Drawings (including location plan);
- Reference document - DSS Jetty Storm Damage Assessment (2018);
- Title of property;
- Covering letter (this document) and
- Marine Solutions Ecological Assessment and Supporting Letter.

DERWENT SAILING SQUADRON ACCESSIBILITY PONTOON

DRAWING LIST:

1620 - SK01	DRAWING LIST, LOCATION PLAN & NOTES
1620 - SK02	INNER PONTOON GENERAL ARRANGEMENT

GENERAL NOTES:

1. UNLESS NOTED OTHERWISE ON A PARTICULAR DRAWING THESE NOTES APPLY TO ALL DRAWINGS IN THIS SET.
2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
3. ALL LEVELS ARE TO CHART DATUM.
4. DRAWINGS ARE NOT TO BE TENDERED, QUOTED OR USED FOR CONSTRUCTION.

LOCATION PLAN
NTS

FOR APPROVAL

REVISIONS				
Rev No	Revision note	Date	Checked	Approved
A	FOR DA APPROVAL	31/03/21	DU	JB

Burbury
ABN 73 146 719 959
P.O. BOX 394
SOUTH HOBART, TAS 7004
P: (03) 6223 8037
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E: admin@burburyconsulting.com.au

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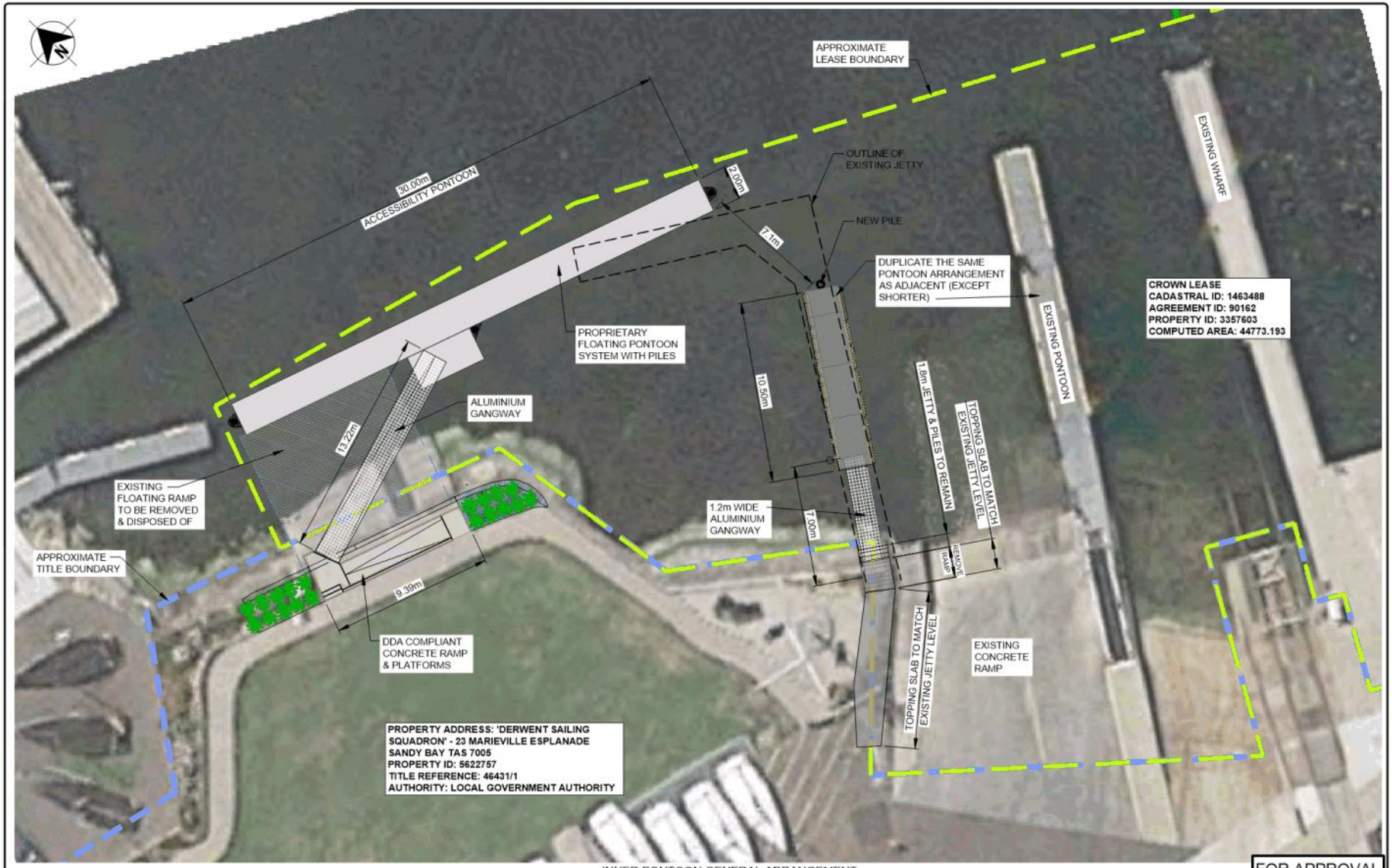
Drawn By: R.PARKER	Date: MARCH 2021	Client: DERWENT SAILING SQUADRON	
Designed By: J.BURBURY	Date: MARCH 2021	Project: ACCESSIBILITY PONTOON	
Checked By:	Date:	Title: DRAWING LIST, LOCATION PLAN & NOTES	
Approved By:	Date:	Scale: NTS	A3
		Drawing No: 1620 - SK01	Rev: A



INNER PONTOON GENERAL ARRANGEMENT
1:200

REVISIONS	Rev No	Revision note	Date	Checked	Approved
	A	FOR DA APPROVAL	31/03/21	DU	JB

Burbury

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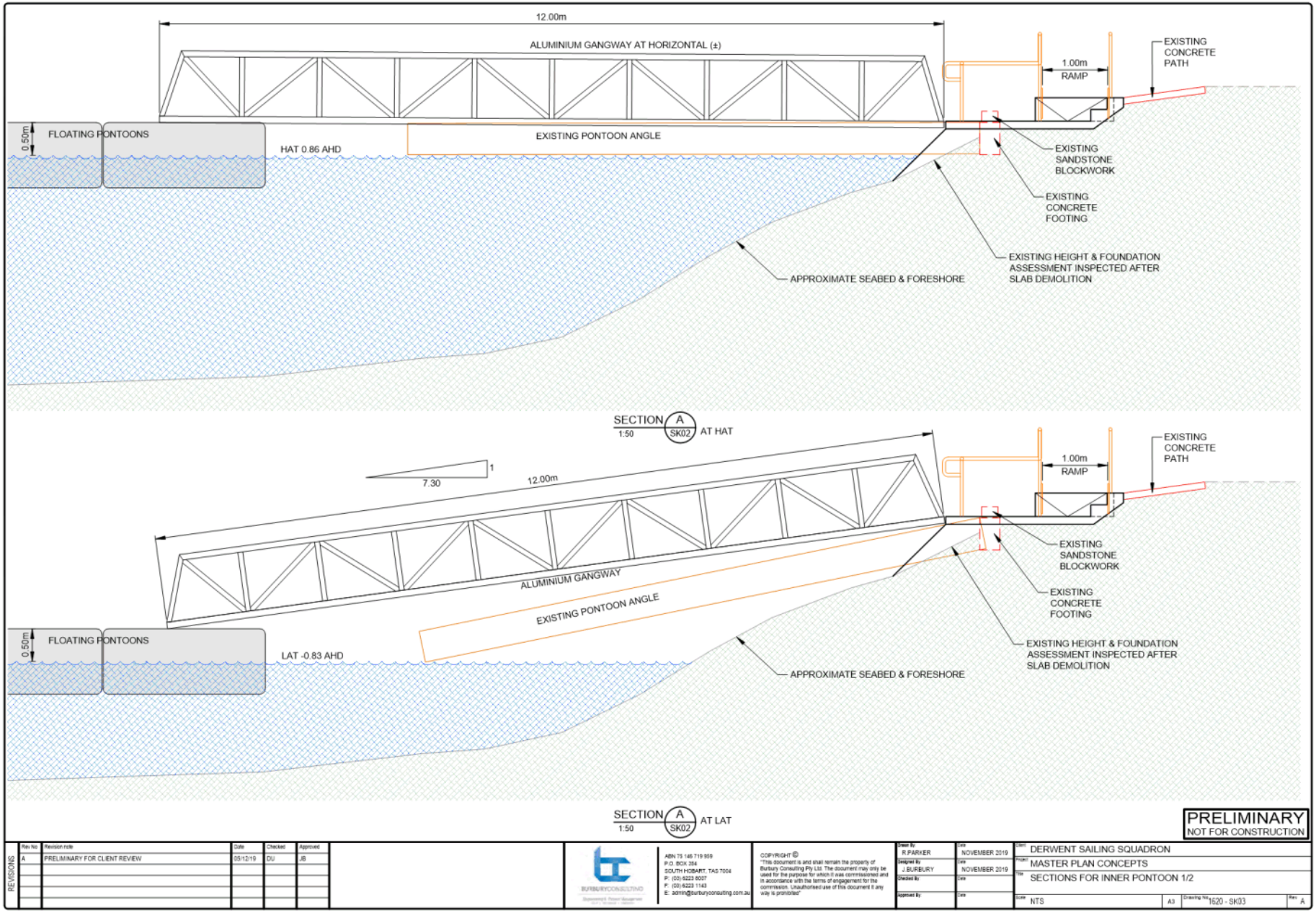
Drawn By	R.PARKER	Date	MARCH 2021
Designed By	J.BURBURY	Date	MARCH 2021
Checked By		Date	
Approved By		Date	

Client: DERWENT SAILING SQUADRON
Project: ACCESSIBILITY PONTOON
Title: INNER PONTOON GENERAL ARRANGEMENT
Scale: NTS | A3 | Drawing No. 1620 - SK02 | Rev A


12.00m
ALUMINIUM GANGWAY AT HORIZONTAL (±)
1.00m
RAMP
EXISTING CONCRETE PATH
0.50m
FLOATING PONTOONS
HAT 0.86 AHD
EXISTING PONTOON ANGLE
EXISTING SANDSTONE BLOCKWORK
EXISTING CONCRETE FOOTING
EXISTING HEIGHT & FOUNDATION ASSESSMENT INSPECTED AFTER SLAB DEMOLITION
APPROXIMATE SEABED & FORESHORE
SECTION A
1:50
SK02
AT HAT
7.30
1
12.00m
1.00m
RAMP
EXISTING CONCRETE PATH
ALUMINIUM GANGWAY
EXISTING PONTOON ANGLE
EXISTING SANDSTONE BLOCKWORK
EXISTING CONCRETE FOOTING
0.50m
FLOATING PONTOONS
LAT -0.83 AHD
EXISTING HEIGHT & FOUNDATION ASSESSMENT INSPECTED AFTER SLAB DEMOLITION
APPROXIMATE SEABED & FORESHORE
SECTION A
1:50
SK02
AT LAT
PRELIMINARY
NOT FOR CONSTRUCTION
REVISIONS
Rev No | Revision note | Date | Checked | Approved
A | PRELIMINARY FOR CLIENT REVIEW | 05/12/19 | DU | JB
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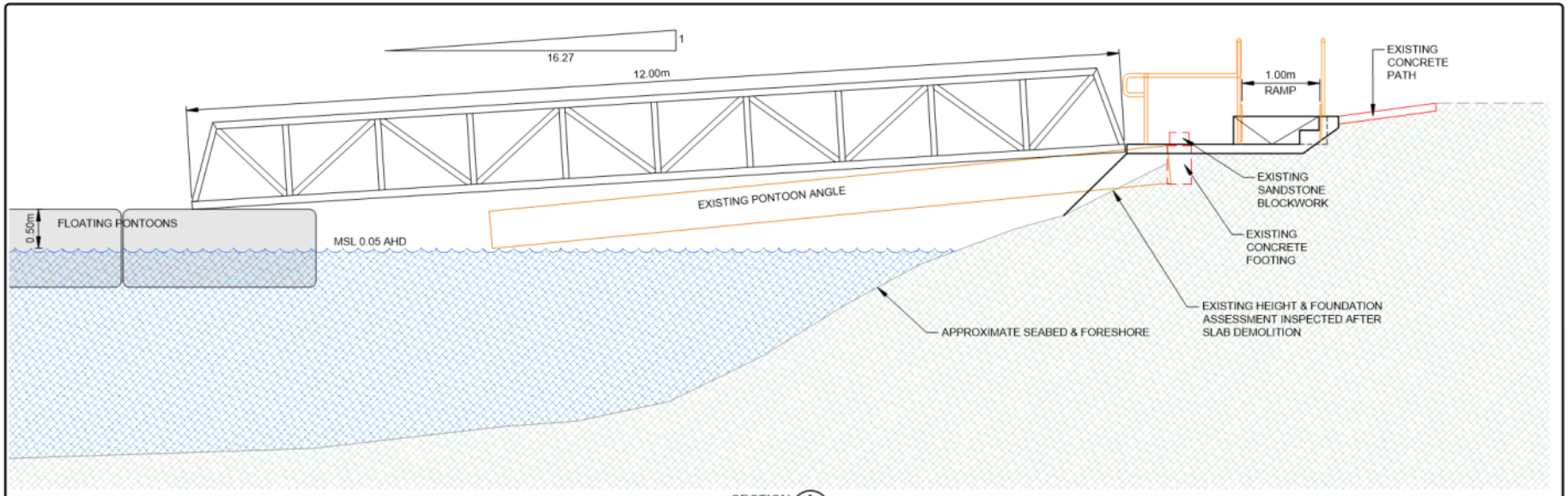
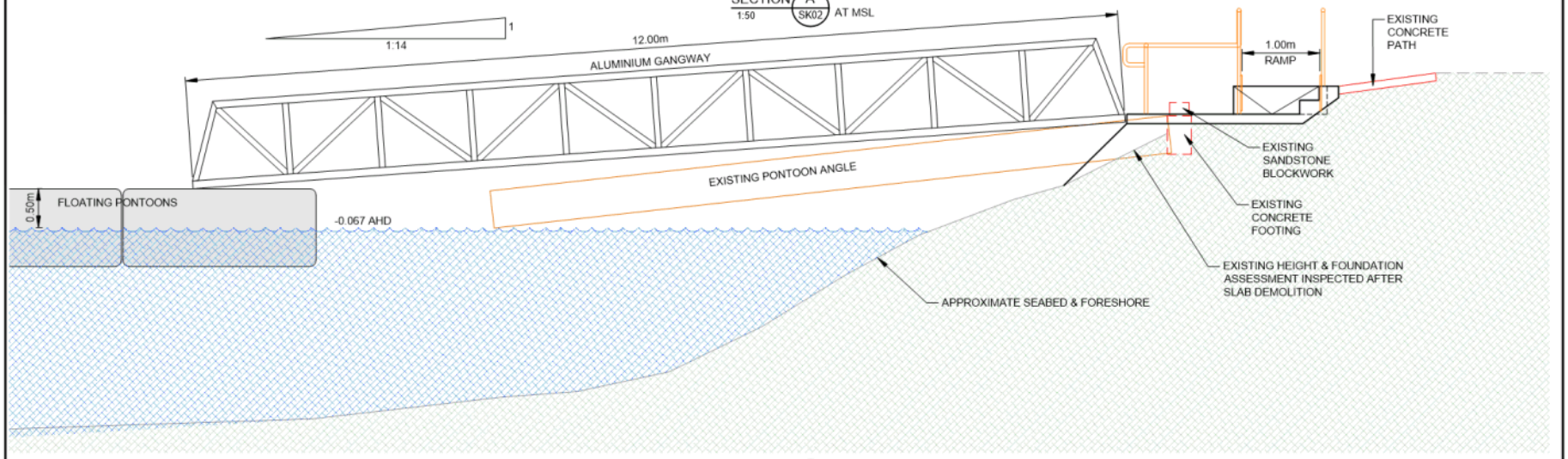
Drawn By: R.PARKER
Designed By: J.BURBURY
Checked By:
Approved By:
Date: NOVEMBER 2019
Date: NOVEMBER 2019
Client: DERWENT SAILING SQUADRON
Project: MASTER PLAN CONCEPTS
Title: SECTIONS FOR INNER PONTOON 1/2
Scale: NTS
A3
Drawing No: 1620 - SK03
Rev: A



SECTION A SK02 1:50 AT MSL



SECTION A SK02 1:50 AT 1:14 SLOPE

PRELIMINARY
NOT FOR CONSTRUCTION

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	A	PRELIMINARY FOR CLIENT REVIEW	05/12/19	DU	JB

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Drawn By: R.PARKER	Date: NOVEMBER 2019	Client: DERWENT SAILING SQUADRON	
Designed By: J.BURBURY	Date: NOVEMBER 2019	Project: MASTER PLAN CONCEPTS	
Checked By:	Date:	Title: SECTIONS FOR INNER PONTOON 2/2	
Approved By:	Date:	Scale: NTS A3	Drawing No: 1620 - SK04 Rev: A

Marine SOLUTIONS TASMANIA PTY LTD

A.C.N. 165 838 755 A.B.N. 71165 838 755
110 Swanston Street New Town Tasmania 7008
Tel: 03 6228 5906 Mobile: 0400 697 175
Email: info@marinesolutions.net.au
Web: www.marinesolutions.net.au

25/11/2021

To Whom It May Concern,

The Derwent Sailing Squadron (DSS) has proposed an alteration to their jetty structure at their Sandy Bay Premises. This proposal requires the removal of the existing timber ramp and layup jetty including piles (cutting off top of deck and piles at seabed unless otherwise shallow for extracting as rock is generally shallow), the removal of the existing floating accessibility pontoon and then installation of new accessibility pontoon with piles, disabled access gangway, new boat ramp pontoon with piles and access gangway. The proposed development will result in a net reduction of jetty footprint (Table 1). The existing jetty portion has 8 piles which are to be removed with the replacement installation to include 2 piles as per the design provided. Further, whaling boards to the seabed will be removed; these acted as a barrier for turbid storm outflows causing the heavier particles to settle in the immediate vicinity. The new floating section will allow the heavier particles to disperse more effectively (Shaun Tiedemann, pers comm.).

Table 1 Areas of existing to new footprints, showing a net 64 sqm reduction in footprint (provided by Burbury Consulting).

	Existing footprint	**New footprint**
Accessibility pontoon	82 sqm	68 sqm
Jetty/jetties/ramp pontoon	72 sqm	22 sqm
Total footprint	**154 sqm**	**90 sqm**

Due to the location of this jetty and its close proximity to an outfall system for stormwater, the concerns regarding sediment disturbance from these works is a primary mitigation matter. The other potential impact is that of the works on Spotted Handfish *(Brachionichthys hirsutus)* habitat.

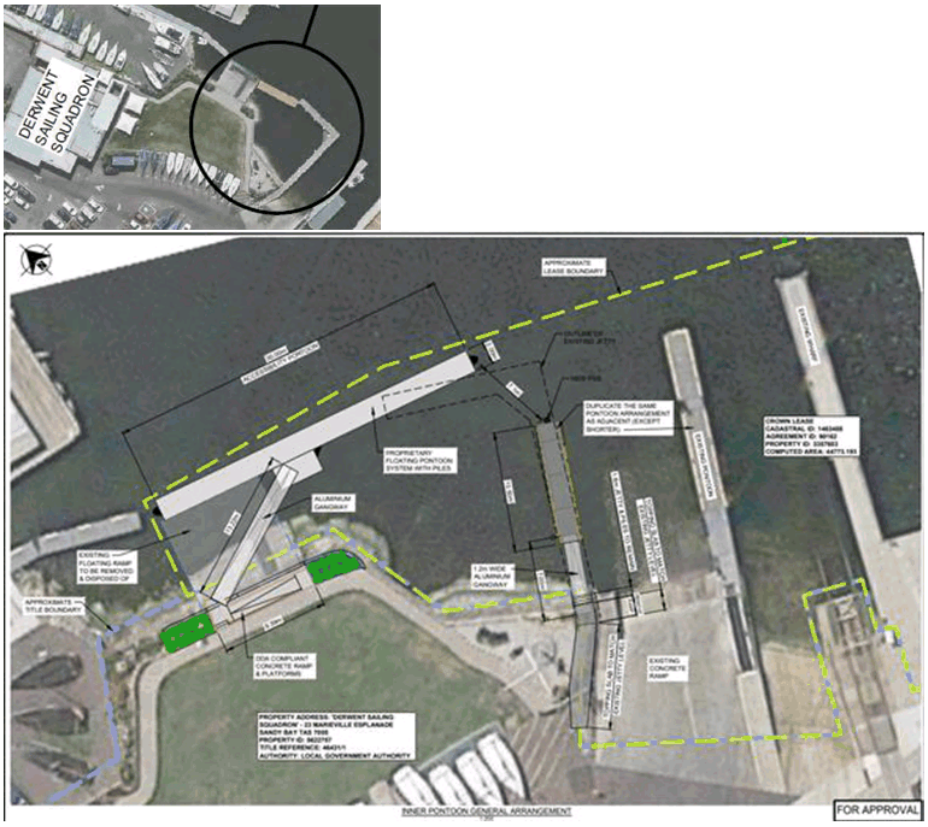


Figure 1 location of new jetty proposal at Sandy Bay Yacht Club, Tasmania.

The stormwater outfall system adjacent to the current jetty experiences high volumes of storm water and sediment flow into the area directly behind the existing infrastructure. This makes the immediate area highly variable in terms of salinity, turbidity, nutrient content, and water movement. Sediments throughout the Derwent Estuary are known to carry relatively high contaminant loads, especially around industrial areas and slipways. Minimising and/or mitigating any sediment disturbance is of high priority for any proposed new development. The sediment disturbance from the pile works will likely be low impact comparative to current sediment movement in the area from natural water movement and vessel disturbance. To aid in reducing sediment disturbance, the existing piles will not be removed in their entirety, but rather the top section above the sediment cut off. Installing new piles creates very low sediment disturbance, as shown in previous surveys including *Impacts of Pile Driving on Sediments, Siltation and Underwater Noise* (Marine Solutions 2012), and we anticipate that any impacts caused by piling activities will be negligible.

The Spotted Handfish is known to inhabit areas of unconsolidated substrata, including well-sorted coarse sand, shell grit, fine sand and silt. Spotted Handfish have not been observed within sites that experience sediment and freshwater input levels as high as has been observed at the proposed development site. A significant number of surveys at this site and the surrounding marina have previously been conducted by Marine Solutions in 2012, 2013, 2014, 2015, 2018 and 2021. During these surveys, the nearest handfish were sighted over 200 m to the ESE, in deeper water spatially removed from the high degree of freshwater influence present within the current proposed development area. No Spotted Handfish were observed with the proposed development area. Therefore, it is our professional opinion that Spotted Handfish are highly unlikely to occur in the development footprint of the jetty (Figure 1).

Based on the very low likelihood of handfish occurring within the proposed development footprint, and given that the proposed development causes negligible water quality impacts beyond the footprint, it is deemed highly unlikely that the proposed development will have any detrimental impact on spotted handfish.

Kind Regards,

Laura Smith
Marine Solutions

BURBURYCONSULTING

23 May 2018
Shaun Tiedemann
Derwent Sailing Squadron
Marieville Esplanade
Battery Point TAS 7005

Dear Shaun,

Derwent Sailing Squadron Jetty – Storm Damage Assessment
Preliminary Assessment and Advice

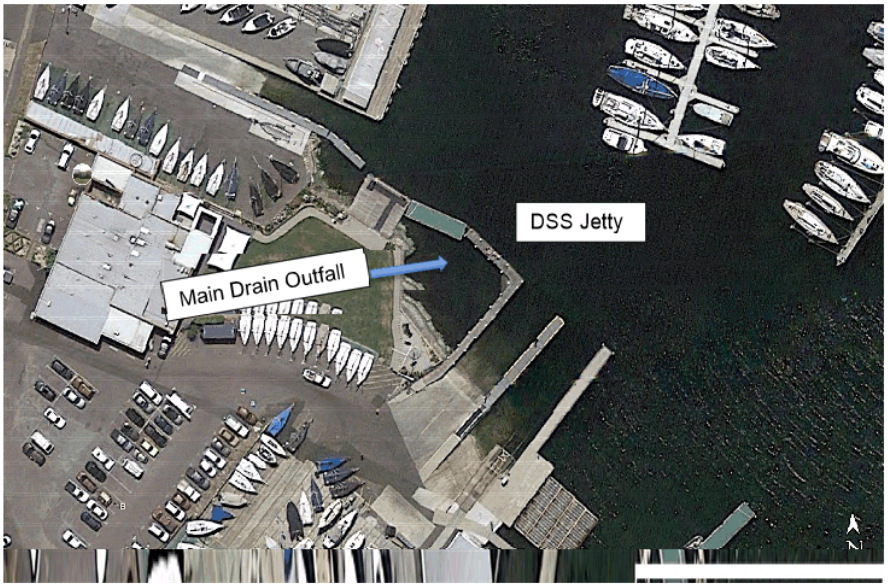
1. Introduction

At the request of the Derwent Sailing Squadron (DSS), we have undertaken a preliminary site inspection and assessment of the timber jetty structure that sustained damage in association with the storm on 10-11 May 2018. The jetty currently supports the boat ramp for vessel access as well as temporary vessel berthing for visitors and members.

A significant rainfall event combined with very high winds and large swells were recorded and observed across south east Tasmania during the evening of Thursday 10th May and the morning of Friday 11th May 2018. The rivulets and stormwater systems around Sandy Bay and Marieville Esplanade flooded resulting in wide spread damage from overland flows, debris and blockage of drains. The DSS jetty was heavily inundated due to the flooding and debris from the main stormwater rivulet sustaining damage to the substructure.

We conducted a site visit on Tuesday 15th May 2018 and this letter provides a summary of the site observations, preliminary structure assessment and short-term recommendations.

Figure 1 - Location Plan



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2. Background Information

The timber jetty provides service to DSS members utilising both the boat ramp and requiring access to vessels from the main DSS building and car park area. The jetty is located directly adjacent to a large stormwater drain and anecdotally it has sustained localised damaged in previous high fall rain events from debris flowing out the stormwater main drain as well as restrictions to water depths due to sedimentation. The Hobart City Council has from time to time been on site to clean out the area adjacent to the drain.

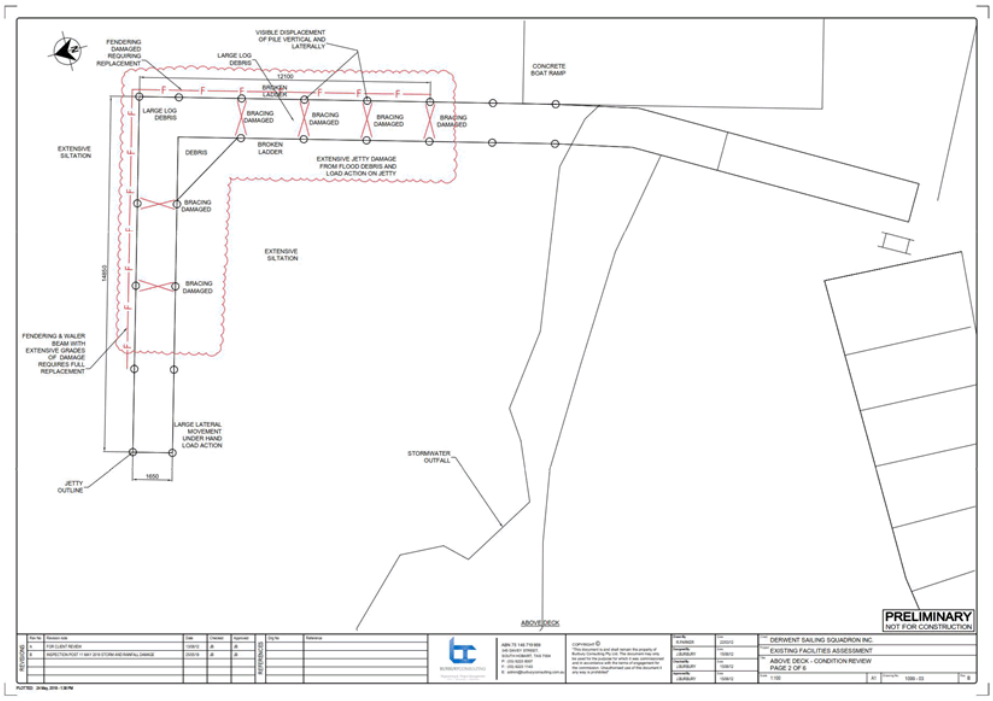
As previously noted a significant weather event impacted the south-east Tasmanian coast on the evening of Thursday 10th May with wind gusts of 119km/h from a SSE direction recorded at Tasman Island and large seas also recorded as well as significant rain fall (129mm) in Hobart and upper catchment areas of Mount Wellington (236mm) and Mount Nelson. The Hobart main rivulet broke its banks in Hobart resulting in widespread flood damage as well as Lambert Creek (flooding Sandy Bay Road and lower Queenborough) and Proctors Creek which flooded University of Tasmania and outfall is located at the DSS directly adjacent to the jetty.

We understand large amount of debris was witnessed flowing out the drain during the storm collecting against the jetty resulting in significant damage to the jetty substructure, bracing, piles and fendering.

Burbury Consulting attended site on Tuesday 15th May and assessed the condition of the structure, with observations and recommendations presented below.

Figure 2 – Jetty Structure

Figure 3 - Jetty drawing & defects



The figure below is attached in A3 drawing and provides a summary of the defects observed on site. The extent of defects was consistent with significant flood flows discharging from the storm water drain and combined with likely large debris actions inducing load on to the structure. Further specific defects are provided below in the site observations.

3. Site Observations

We noted the following observations were noted with regards to the jetty structure:

General:

- Variable timber branch debris across substructure, fenders and low landing decking (refer photos);
- Structure closed for access to small and large vessel usage;

Critical observations:

- Connection loss of majority of lower waler beams that support fenders and resultant fender damage at top connection;
- Loss of connections and a number of fender boards;
- Loss and damage to both ladder access (Figure 6);

- Bracing connection and beam failures along majority of piles;
- Lateral movement of piles away from the stormwater outlet indicating extensive lateral load on the structure of inner access jetty (refer Figure 5);
- Vertical movement noted on the decking (sagging) indicating displacement of the pile foundations or failure of the pile itself (refer Figure 4 below);

Figure 4 – Vertical displacement of jetty decking

Figure 5 – Lateral displacement of jetty away from flood and debris on to fenders

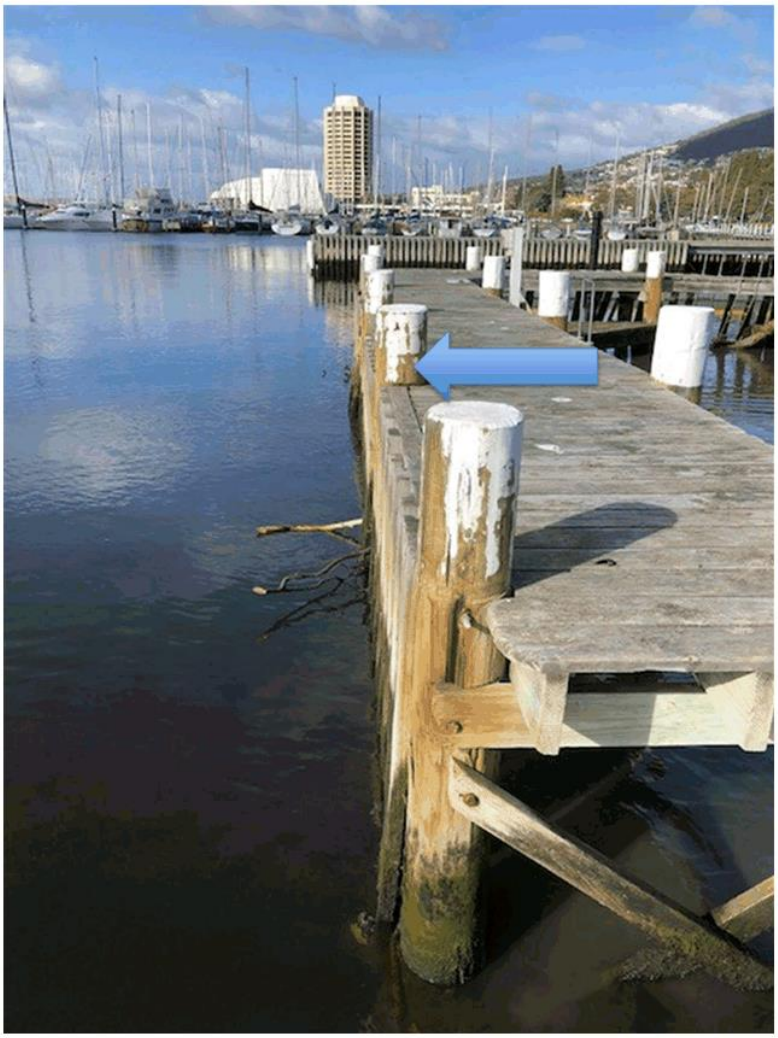
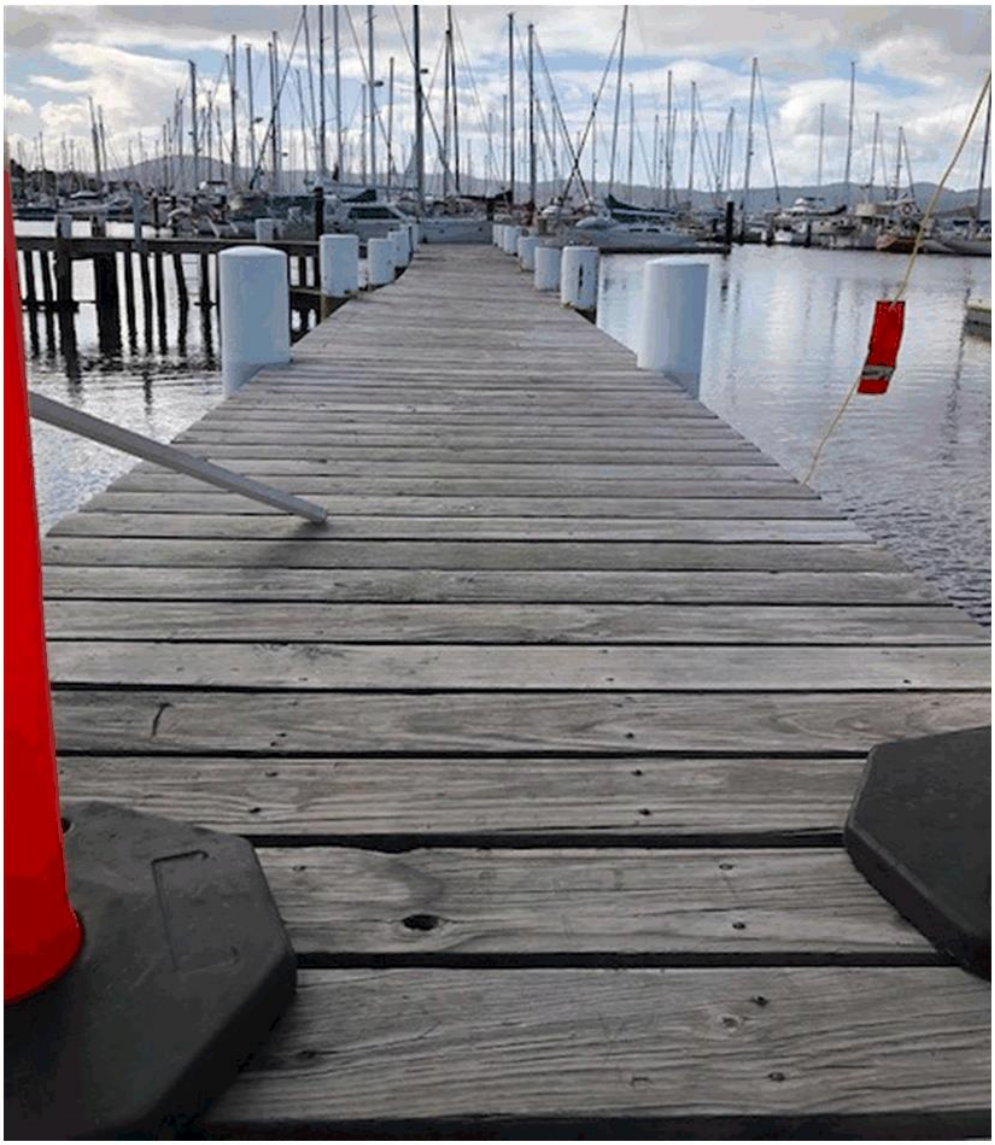


Figure 6 – Large debris and damage to ladder, bracing and decking lateral movement

Figure 7 – Damage and loss of connection to fenders typical

Figure 8 – Vertical and lateral displacement observed (note pile level and away movement from drain)



4. Summary and Recommendations

4.1 Damage and Causes

We can confirm that in our opinion that the primary cause of the damage to the jetty was caused by flood and debris loading on the structure during the storm event on Thursday evening. We have not attempted to categorize this event in terms of an Annual Probability of Exceedance classification (e.g. 1-in-100 year event) however the jetty was observed to contain extensive lateral damage in the direction of force exerted by the drain resulting in damage to substructure and lateral movement of the jetty both away from the drain and vertically.

Whilst there was noted defects in the substructure and fendering that requires relatively simple replacement the evidence of lateral and vertical displacement of the jetty is consistent with the likely force and load on the jetty in the location of lateral movement (in direction of flow) and cannot be remediated without either testing of the adequacy of pile support or complete replacement.

The discharge flows from the stormwater drain would have been significant and result in both immediate scour of sediment around the jetty through the peak flows then filled with siltation and debris in the reduced flows. We cannot rule out at this stage that the pile foundation conditions have been significantly affected by the flood loading and or pile has failed resulting in vertical movement of the pile and observable in the decking and hence recommend that either additional testing of the piles be undertaken or new piling of the most extensive damaged areas be undertaken as highlighted in the attached drawing.

The vertical movement of the jetty and pile tops is easily observed on site and whilst we didn't measure precisely was in the order of up to 100mm at the maximum point. DSS could not confirm whether the movement observed was previously noted however it would be highly unusual for the construction of a jetty to have sagging along the length.

The siltation of the jetty is also a significant operational issue and DSS should consider reviewing the changes in seabed and request Hobart City Council to review management of silt, rocks and debris in the stormwater system to prevent additional damage in future storms.

4.2 Recommendations

Based on the condition of the jetty, our short-term recommendations are:

- Undertake replacement of all major elements noted in the extensive damaged zone including bracing, fendering, walers and piles; or
- Likely to be more cost effective to replace the entire structure across the damaged zone.

4.3 Repair Works Cost Estimate

Preliminary costings to undertake the recommendations outlined above are as follows:

- Replacement of existing jetty structure (45sq.m) including demolition, removal and replacement to similar condition = **$140,000 ex GST;**
- Replacement of existing structure and install as floating pontoon jetty = **$95,000 ex GST;**
- Remediation of the structure, **$105,000 ex GST** including:
    - Installation of new timber piles (16) including mobilisation of barge to site = $80,000;
    - Replacement of all fendering and waler - $10,000;

- New ladders = $3,500;
- New bracing to piles = $6,000;
- Jacking of decking to remove sagging = $5,000;

We are experienced marine engineering consultants and have previously provided condition review on the structure in 2012 as part of the DSS marina upgrade and expansion and hence are qualified to comment with respect to the structure and condition. Our advices on the above constructions amounts are estimated based on our experience with market rates and have been provided on the basis of advice to DSS and their insurers of the likely budget estimate for the repair works or jetty replacement.

Yours faithfully

James Burbury
Managing Director
Burbury Consulting Pty Ltd

COUNCIL CERTIFICATE

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

46431

APPROVAL BY LOCAL AUTHORITY

The subdivision shown in this Plan is approved

Insert here any qualification to the approval under section 468(12), section 472 or section 477B of the Local Government Act 1962. Rule through any blank space.

Seal

In witness whereof the common seal of THE LORD MAYOR, ALDERMEN AND THE CITIZENS OF THE CITY OF HOBART

has been hereunto affixed, ~~*pursuant to a resolution of the Council of the said municipality passed*~~ *the* 10th *day of* September 1990, *in* ~~*the*~~ my *presence* ~~*of us*~~

..... } *Members*

..... *Acting* Town ~~*Council*~~ *Clerk*

COUNCILS REFERENCE 70-010-062

TO BE COMPLETED AND SIGNED BY COUNCIL CLERK OR OWNER

For the purposes of section 464 of the Local Government Act 1962, the owner has nominated/I nominate

As his/my solicitor N. D. HEATH

As his/my surveyor G. L. KING

..... *Acting* Town ~~*Council*~~ *Clerk/*~~*Owner*~~

TO BE FILLED IN BY SURVEYOR

Survey commenced 21/3/1990

Survey finished 23/3/1990

Error of Close SEE CALCS

OFFICE EXAMINATION

Plot Checked 22/10/90

Mathematically Checked 22/10/90

Examined as to boundaries 24/10/90

Entered on Card .....

DS D 464

Surveyor's Certificate

I, PETER SPENCER FLEMING

of HOBART

in Tasmania, registered surveyor, hereby certify that this plan:

Requires the approval of the local authority, which has been obtained (~~*or does not require the approval of any local authority*~~*)*

Dated this 9th *day of* April 1990

..... *Registered Surveyor*

SURVEYOR'S REFERENCE S-844-186

RESULT OF SEARCH

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
46431	1
EDITION	**DATE OF ISSUE**
2	30-Jun-2015

SEARCH DATE : 18-Feb-2022
SEARCH TIME : 09.02 AM

DESCRIPTION OF LAND

City of HOBART
Lot 1 on Sealed Plan 46431
Derivation : For grantees see plan
Prior CT 4391/78

SCHEDULE 1

HOBART CITY COUNCIL

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
B384280 LEASE to DERWENT SAILING SQUADRON INC of a leasehold estate for the term of Sixty Five Years from 13th March 1989 Registered 02-Dec-1992 at noon
Leasehold Title(s) issued: 46431B/1

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

SCHEDULE OF EASEMENTS

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

SCHEDULE OF EASEMENTS

PLAN NO. SP46431

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.

EASEMENTS AND PROFITS

Each lot on the plan is together with:—

(1) such rights of drainage over the drainage easements shewn on the plan (if any) as may be necessary to drain the stormwater and other surplus water from such lot; and

(2) any easements or profits à prendre described hereunder.

Each lot on the plan is subject to:—

(1) such rights of drainage over the drainage easements shewn on the plan (if any) as passing through such lot as may be necessary to drain the stormwater and other surplus water from any other lot on the plan; and

(2) any easements or profits à prendre described hereunder.

The direction of the flow of water through the drainage easements shewn on the plan is indicated by arrows.

NIL SCHEDULE.

THE COMMON SEAL of THE LORD)
MAYOR ALDERMEN AND CITIZENS)
OF THE CITY OF HOBART was)
hereunto affixed in the)
presence of:)

LORD MAYOR

ACTING TOWN CLERK

SCHEDULE OF EASEMENTS

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

46431

This is the schedule of easements attached to the plan of THE LORD MAYOR ALDERMEN AND
(Insert Subdivider's Full Name)

CITIZENS OF THE CITY OF HOBART affecting land in

CERTIFICATE OF TITLE VOLUME 4391 FOLIO 78
(Insert Title Reference)

Sealed by THE CORPORATION OF THE CITY OF HOBART on 10 · 9 1990

Solicitor's Reference

Acting ~~Comm Clerk~~/Town Clerk

FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Owner:
THE LORD MAYOR ALDERMEN AND CITIZENS OF THE CITY OF HOBART

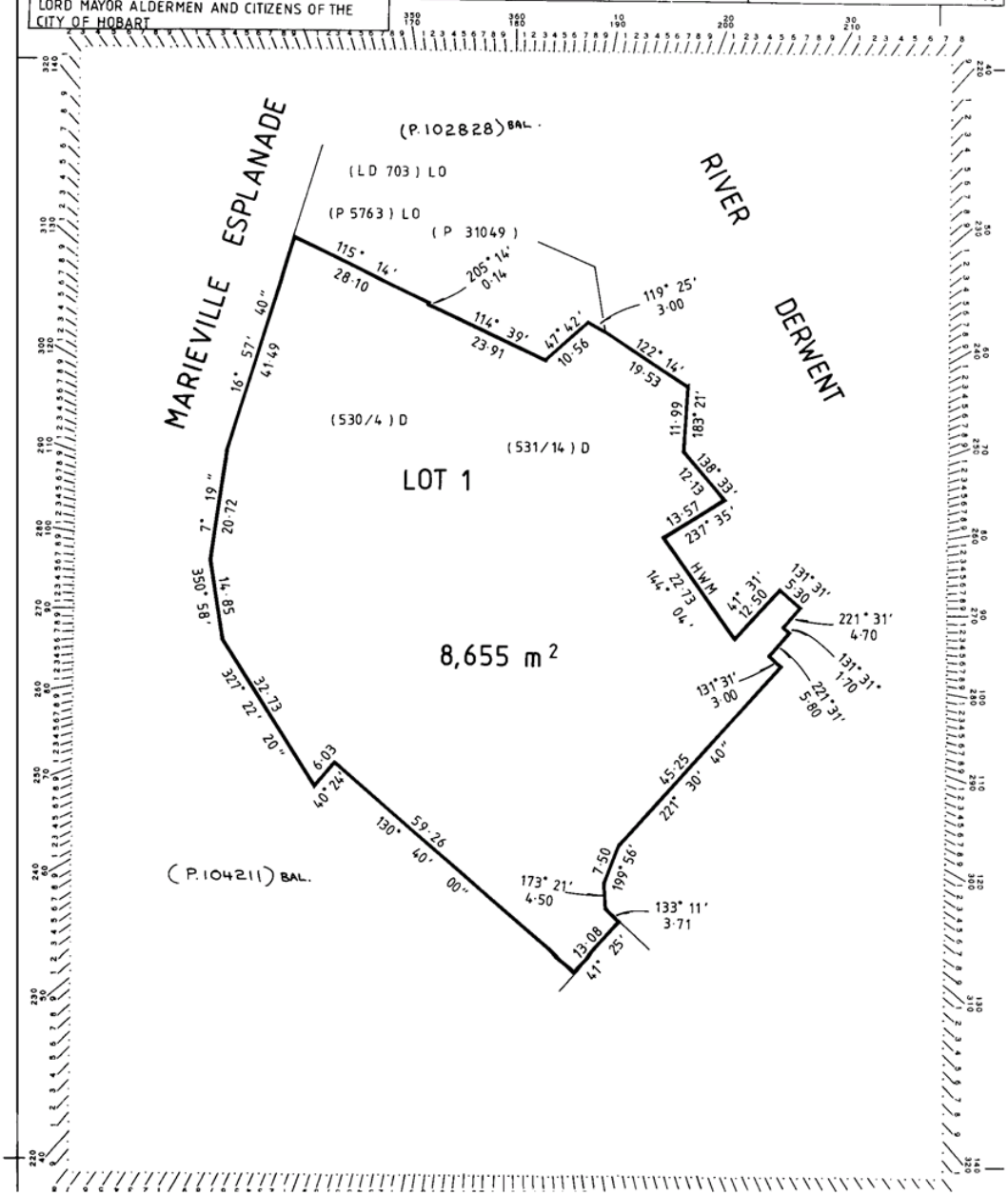
Title Reference: CT 4391 / 78

Grantee: WHOLE OF 28½ PERCHES VESTED IN THE LORD MAYOR ALDERMEN AND CITIZENS OF THE CITY OF HOBART
PART OF LOTS 38883 & 31995 GRANTED TO THE LORD MAYOR ALDERMEN AND CITIZENS OF THE CITY OF HOBART

PLAN OF SURVEY
by Surveyor P S FLEMING
of land situated in the
CITY OF HOBART
SCALE 1:750 MEASUREMENTS IN METRES

Registered Number: SP 46431

Approved
Effective from: 2 DEC 1992
Recorder of Titles



General Manager Consent Checklist

The City of Hobart recommends the use of this checklist by applicants when you are seeking the consent of the General Manager pursuant to section 52(1B) of the *Land Use Planning and Approvals Act 1993* to make a planning application.

PARTICULARS OF APPLICATION	
PLN:	Only if applicable
Site address:	23 Marieville Esplanade
Council land:	23 Marieville Esplanade
Proposal:	Installation of a small concrete pathway ramp for accessibility and abutment for new gangway and pontoon jetties.
Applicant:	Derwent Sailing Squadron Inc.

REASON FOR APPLICATION	
Roads:	
Identify any roads or road reservations which will be impacted	Not applicable.
Identify any works within private property that will indirectly result in works within road reservation e.g. lowering of internal floor level resulting in changes to footpath levels to match new building level	Not applicable.
Identify the removal or relocation of an existing infrastructure owned by 3rd parties eg TasNetworks, Telstra – or intended new 3rd party infrastructure	Not applicable.
Identify any new non–standard crossover (6m+ wide) or crossovers to be removed	Not applicable.
Identify any temporary or permanent underground works (e.g. soil nails / sheet pile) in the road reservation	Not applicable.
Identify any protrusions on the road reservation – awnings, doors, fire escapes, fire equipment storage	Not applicable.

Stormwater:	
Identify any public stormwater infrastructure on Council land which may be directly impacted (except the existing stormwater connection aligned to the application) – or indirectly impacted (ie within 1m of the infrastructure)	Not impacted.
Identify any temporary or permanent underground works (e.g. soil nails / sheet pile) which may impact on stormwater infrastructure on Council land	Not applicable.
Open Space:	
Identify any street trees (including root protection zone) which may be impacted, including via soil nails	Not applicable.
Bushland:	
Identify the land and how it will be impacted by the proposal eg lost car parks, possible impact on tree root protection zones	Not applicable.
Mobility:	
Identify any on–street car parks which are proposed to be removed or altered	Not applicable.
Identify any new non–standard crossover (6m+ wide) or crossovers to be removed	Not applicable.

Note that there may be other circumstances in which General Manager Consent is required.

DERWENT SAILING SQUADRON
Marieville Esplanade, Sandy Bay, Hobart, Tasmania, Australia, 7005
Ph +61 3 6223 1977 | Fax +61 3 6223 7765 I admin@dssinc.org.au | www.dssinc.org.au
ABN 12 296 996 704
learn • cruise • race • relax

31/03/21

To whom it may concern,

The Derwent Sailing Squadron at 23 Marieville Esplanade, Sandy Bay is proposing to complete works on site and have engaged Burbury Consulting (BC) to act as our agent to prepare a Development Application (DA) for a proposed Floating Access Pontoon & Gangway at the above-mentioned address.

As the General Manager of the Derwent Sailing Squadron, I have given BC, through Richard Parker or James Burbury, permission to act on our behalf with the submission of the proposed documentation for the request consent from Crown Land – Property Services and for the DA to Hobart City Council.

Yours Sincerely

Shaun Tiedemann

General Manager
Derwent Sailing Squadron

Tasmanian Government

Department of Primary Industries,
Parks, Water and Environment

GPO Box 1751, Hobart, TAS 7001 Australia
Ph 1300 TAS PARKS / 1300 827 727 Fax 03) 6223 8308
www.parks.tas.gov.au

Enquiries: Tony Ryan
Phone: 03 6165 3027
Email: Tony.Ryan@parks.tas.gov.au
Our ref: 21/4072

15 October 2021

Mr Richard Parker
Burbury Consulting Pty Ltd
obo Derwent Sailing Squadron Inc

E: Richard.parker@burburyconsulting.com.au

Dear Mr Parker,

LODGEMENT OF PLANNING APPLICATION
DERWENT SAILING SQUADRON – ACCESSIBILTY JETTY PONTOON

This letter, issued pursuant to section 52(1B) of the *Land Use Planning and Approvals Act 1993*, is to confirm that the Crown consents to the making of the enclosed Planning Permit Application, insofar as the proposed development relates to Crown land managed by the Department of Primary Industries, Parks, Water and Environment.

Crown consent is only given to the lodgement of this application. Any variation will require further consent from the Crown.

The Department's preliminary desktop assessment idenfified the following matters which may warrant further detailed consideration:

a) The presence of the spotted handfish (*Brachionichthys hirsutus*) within proximity of the proposed development. The species is listed as endangered under the *Threatened Species Protection Act 1995* (Tas) and critically endangered under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

b) The potential for mobilisation of sediments (possibly mobilising heavy metals etc.) which may require mitigation strategies.

This letter does not constitute, nor imply, any approval to undertake works, or that any other approvals required under the *Crown Lands Act 1976* have been granted. If planning approval is given for the proposed development, your client will be required to obtain separate and distinct consent from the Crown before commencing any works on Crown land.

If you require any further information please contact the officer nominated at the head of this correspondence.

Yours sincerely,

Jesse Walker
Crown Land Services (Unit Manager, Policy & Projects)

Jesse Walker's position of "Team Leader, Crown Land Services (Unit Manager, Policy and Projects) (position no. 334958)" is listed in this instrument.

Notice of Termination of Authority and Instrument of Delegation

DELEGATION OF THE DIRECTOR-GENERAL OF LANDS' FUNCTIONS UNDER THE *LAND USE PLANNING AND APPROVALS ACT 1993*

I, DEIDRE WILSON, being and as the Acting Director-General of Lands by virtue of a direction under section 21A of the *Acts Interpretation Act 1931*, acting pursuant to section 23AA(5A) of the *Acts Interpretation Act*, hereby give notice that the authority of the holders of the offices of Deputy Secretary (Parks & Wildlife Service) (position number 700451), Manager - Crown Land Services (position number 707556), Team Leader - Crown Land Services (Unit Manager, Leases & Licences) (position number 340697) and Team Leader - Crown Land Services (Unit Manager, Policy & Projects) (position number 334958) to perform the functions conferred on the Director-General of Lands, as delegated on 6 August 2019 by John Whittington, then Director-General of Lands, is terminated with immediate effect.

Further, acting pursuant to section 52(1E) of the *Land Use Planning and Approvals Act 1993* ("the Act"), I hereby delegate the functions described (by reference to the relevant provision of the Act and generally) in Schedule 1, to the persons respectively holding the offices of Deputy Secretary (Parks & Wildlife Service) (position number 700451), Manager - Crown Land Services (position number 707556) and Team Leader - Crown Land Services (Unit Manager, Policy & Projects) (position number 334958) in accordance with the functions delegated to the Director-General of Lands by the Minister for Environment and Parks, being and as the Minister administering the *Crown Lands Act 1976*, by instrument dated 4 December 2020.

SCHEDULE 1

Provision	**Description of Functions**
Section 52(1B)	Signing, and providing written permission for, applications for permits in relation to Crown land.

Dated at HOBART this 20th day of December 2020

.....

Deidre Wilson
ACTING DIRECTOR-GENERAL OF LANDS

Department of Primary Industries, Parks, Water and Environment

Tasmania

CROWN LANDS ACT 1976

WORKS AND/OR DEVELOPMENT APPLICATION REQUEST

IMPORTANT INFORMATION

- Lodge this form to apply to Property Services to:
  1. undertake works on Crown land, and/or
  2. obtain Crown consent to lodge a Development Application.
- If adequate information is not provided this application may be delayed or declined.
- If insufficient space is provided please attach a separate page.
- Where the works result in a change to your lease/licence area, you may need to also complete a new application form and pay the relevant fees, you will be advised.

***Mandatory fields**

1. APPLICANT DETAILS

(circle) Mr/Mrs/Miss/Ms	APPLICANT (Full Name, Company or Business Name)*: Richard Parker	
Daytime contact number: 6223 8007		
Email Address: Richard.parker@burburyconsulting.com.au		
Residential Address: 2/2 Gore Street, South Hobart	Post Code	7004
Postal Address: 2/2 Gore Street, South Hobart	Post Code	7004

Who should be contacted about this request? *(If different to above).*

Name*:	
Organisation*:	
Position Title:	
Daytime contact number:	
Email Address: *(This is the preferred method of contact)*	
Postal Address*	Post Code:

2. LOCATION OF THE CROWN LAND

Property Identification Number (PID) or Title Reference: (PID) 3357603

Address*: 23 Marieville Esplanade, Sandy Bay Post Code: .....7005.....

Describe **where** the works will be undertaken. Include the location of the works in relation to surrounding structures and land features such jetties, fences, rivers, and foreshore. Mark the location on maps, diagrams, photos or other forms of illustration to add detail and clarification.

Refer to attached Drawings

3. DETAILS ABOUT THE WORKS

Describe **what** work is proposed. Include the design, size, orientation and layout of structures or vegetation and the materials to be used. Attach plans, diagrams, photos and other illustrations that add detail and clarification*.

Refer to attached Drawings

Describe **how** the works will be undertaken. Detail the processes, techniques and equipment. Arrangements such as site settings, engineering and/or work management, maps, diagrams, photos and other illustrations would add detail and clarification*.

Refer attached Drawings

The majority of the project infrastructure will be manufactured off site within controlled manufacturing plants and yards.

The proposed construction works for the site will be built by a contractor, whom will have experience with marine construction, particularly within sensitive marine environments.

Works to include:

- ☐ Site embolise;
- ☐ Installing security fences around all public areas, inclosing the work areas;
- ☐ Supply, delivery and installation of all new steel piles and polyethylene sleeves, by floating barge;
- ☐ Supply and delivery of pontoons, floated off existing slipway, installed by vessels;
- ☐ Construction of a concrete ramp, steps and gangway abutments;
- ☐ Construction of a topping screed on existing jetty approach;
- ☐ Supply and installation of aluminium articulating gangways;
- ☐ Supply and installation of compliant handrail system to AS1428;
- ☐ Planting of plants, match existing;
- ☐ Site clean-up and demobilisation.

Will heavy machinery and equipment be required to cross public spaces? Yes No x
If yes, identify the route from the public road to the site on Crown land. Mark the route on maps, diagrams, photos or other forms of illustration.

4. LEASE/LICENCE DETAILS *(where known)*

Lease/Licence Number:	File Number:
Date on which the current lease/licence will expire*:	

5. COUNCIL REQUIREMENTS*

Before lodging this Application seek advice from Council Planning regarding Council requirements. *This application cannot proceed without this advice.*

Are there any Council requirements? Yes x No ☐ If Yes, answer a) and b) below.

a) Is Crown consent to a Development Application required? Yes x No ☐

If yes, supply a copy of the complete and final Development Application package. The complete package includes the Council Development Application form and any documents, reports and plans that will be lodged for Council's consideration.

b) Is Crown consent to a Building or Plumbing Application required? Yes ☐ No x

If yes, supply a copy of the complete and final Building or Plumbing Application package. The complete package includes the Council Application form and any documents, reports and plans that will be lodged for Council's consideration.

6. TIMEFRAMES

What dates do you intend to undertake the work:

Start Date: June 2021	End Date: August 2021
If there is an important deadline state, the date	
Explain why the deadline is important:	

7. SIGNATURE OF APPLICANT

Name: Richard Parker.....

Signed: .....
15/03/2021
Date: .....

PS Office Use Only

Received Doc ONE ID: .....

Folder ID: .....

CLAIMS: .....

8. CHECKLIST

- ☐ Documents that describe **what** work is proposed e.g. plans, diagrams.
- ☐ Documents that illustrate **how** the work will be undertaken e.g. management plans, diagrams.
- ☐ Illustrations, maps that identify **where** the work will be undertaken.
- ☐ Illustrations, maps that **identify the route** from the public road to the works site on Crown land.
- ☐ The complete Development, Building and/or Plumbing Application package if required by council.
- ☐ A copy of Public Liability insurance covering the proposed works.

Where there is an agreement holder for the leased/licensed Crown land, attach:

- ☐ A copy of their Public Liability insurance
- ☐ A letter from the agreement holder supporting this Works Application
- ☐ The agreement holders contact details

- ☐ If you are acting on behalf of a client, please submit a copy of authorisation to do so.

Privacy Statement
Personal information is collected for the purpose of processing, assessing and determining this application and may be disclosed to local government, Forestry Tasmania, Mineral Resources Tasmania, adjoining landowners, agents of the Property Services, law enforcement agencies, courts and other organisations authorised to collect it. It may be disclosed to other public sector bodies where necessary for the efficient storage and use of the information. It is managed in accordance with the Right to Information and may be accessed by the individual to whom it relates on request to the Department of Primary Industries, Parks, Water & Environment. A fee may be charged for this service.

Applications can be lodged at	**Contact**
PropertyServices@parks.tas.gov.au OR Property Services GPO Box 44, Hobart TAS 7001	Property Services Message Service 6169 9015 (leave message and calls are returned within two business days) www.parks.tas.gov.au/ps

Updated February 2019

City of HOBART

GMC-22-15

15 March 2022

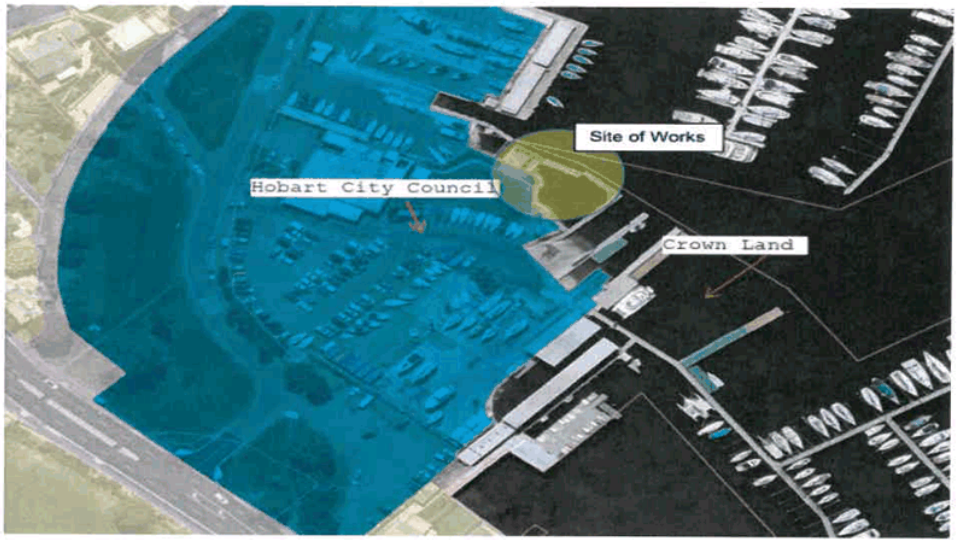
MEMORANDUM: HEAD OF CITY PROJECTS

REQUEST TO GRANT LAND OWNER CONSENT TO LODGE A PLANNING APPLICATION

Site Address:	**23 Marieville Esplanade, Sandy bay**
Description of Proposal:	**Replacement of existing pontoon and jetty, and installation of new floating pontoon jetty / Works on Council Land**
Applicant Name:	**Khishendran Mahendran** **Burbury Consulting**
Planning Ref:	**PLN-22-78**

The development proposal is for the replacement of an existing pontoon and jetty and construction of a new floating pontoon and fixed gangway.

Landowner Consent has been received from the Crown for the works over water. The land operations are managed under lease by the Derwent Sailing Squadron.



The City recommends the Head of City Projects grant consent for the lodgement of the development application.

RECOMMENDATION

That pursuant to Section 52 of the Land Use Planning and Approvals Act 1993, the General Manager grant consent on behalf of the Hobart City Council as the owner/administrator of the above land to allow the applicant to make application to the City for a planning permit for the development described above and as per the attached documents.

(Glenn Doyle)
HEAD OF CITY PROJECTS

Approved / ~~Not Approved~~ 15 March 2022

Attachments: DA-22-7701, DA-22-7702, DA-22-7703, DA-22-7704, DA-22-7705

City of HOBART

Enquiries to: City Life
Phone: (03) 6238 2711
Email: coh@hobartcity.com.au

22 March 2022

KHISHENDRAN MAHENDRAN
287 MACQUARIE STREET
HOBART TAS 7000

mailto: kmahendran@burburyconsulting.com.au

Dear Sir/Madam

23 MARIEVILLE ESPLANADE, SANDY BAY - WORKS ON COUNCIL LAND NOTICE OF LAND OWNER CONSENT TO LODGE A PLANNING APPLICATION - GMC-22-15

Site Address:

23 Marieville Esplanade, Sandy Bay

Description of Proposal:

Replacement of existing pontoon and jetty, and installation of new floating pontoon jetty / Works on Council land

Applicant Name:

Khishendran Mahendran
Burbury Consulting

PLN *(if applicable)*:

PLN-22-78

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

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

as the statutory planning authority.

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

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

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

Yours faithfully

(Glenn Doyle)
HEAD OF CITY PROJECTS

Relevant documents/plans:

DA-22-7701 - Plans SK01, SK02, SK03 & SK04 by Burbury Consulting
DA-22-7702 - Reference Letter from Burbury Consulting dated 13/01/2022
DA-22-7703 - Crown Consent dated 15/10/2021
DA-22-7704 - Supporting Letter from Marine Solutions dated 25/11/2021
DA-22-7705 - Report by Burbury Consulting dated 23/05/2018

City of Hobart

INSTRUMENT OF DELEGATION

General Delegation

Head of Intergovernmental Relations and Partnerships

Section 64 of the Local Government Act 1993

I, Kelly Grigsby, Chief Executive Officer, being the General Manager as appointed by Council pursuant to Section 61 of the *Local Government Act 1993 (Tas)* ("the Act") hereby delegate pursuant to Section 64 of the Act, the following powers and functions to the Head of City Projects:

1. to sign an application; and
2. to provide written permission to make an application;

pursuant to section 52(1B) of the *Land Use Planning and Approvals Act 1993*, except where an application pursuant to that section is recommended for refusal by Council officers.

Dated this 24th day of February 2022

SIGNED
Kelly Grigsby
(Chief Executive Officer)
Being the General Manager as appointed by Council pursuant to section 61 of the *Local Government Act 1993* (Tas)

Approved - General Manager Consent Only
City of HOBART GMC-22-15 22/03/2022

DERWENT SAILING SQUADRON ACCESSIBILITY PONTOON

DRAWING LIST:

1620 - SK01	DRAWING LIST, LOCATION PLAN & NOTES
1620 - SK02	INNER PONTOON GENERAL ARRANGEMENT

GENERAL NOTES:

1. UNLESS NOTED OTHERWISE ON A PARTICULAR DRAWING THESE NOTES APPLY TO ALL DRAWINGS IN THIS SET.
2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
3. ALL LEVELS ARE TO CHART DATUM.
4. DRAWINGS ARE NOT TO BE TENDERED, QUOTED OR USED FOR CONSTRUCTION.

LOCATION PLAN
NTS

FOR APPROVAL

REVISIONS	Rev No	Revision note	Date	Checked	Approved
	A	FOR DA APPROVAL	31/03/21	DU	JB

Burbury

ABN 75 146 719 869
P.O. BOX 394
SOUTH HOBART, TAS 7004
P: (03) 6223 6037
F: (03) 6223 1143
E: admin@burburyconsulting.com.au

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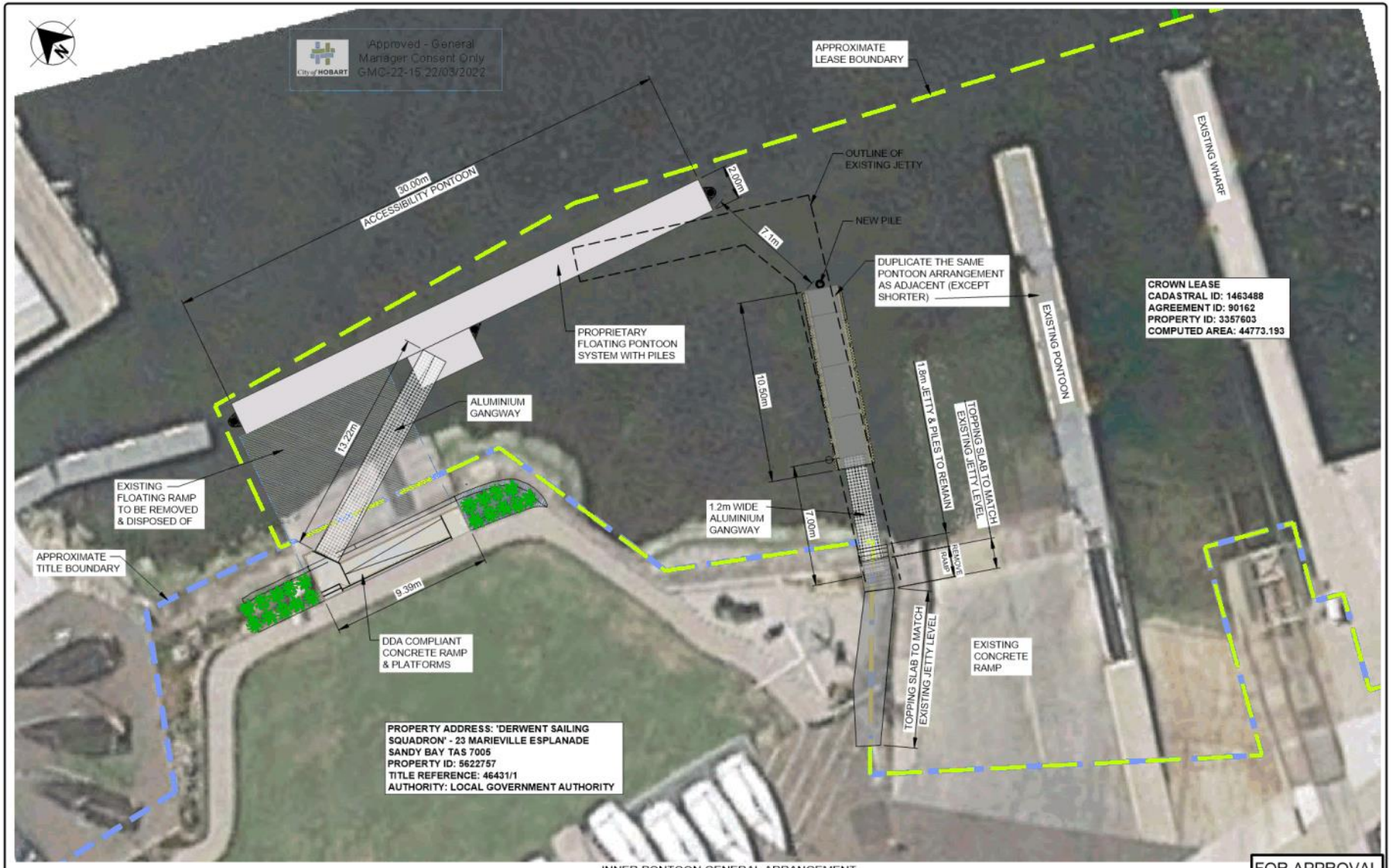
Drawn By:	R.PARKER	Date	MARCH 2021
Designed By:	J.BURBURY	Date	MARCH 2021
Checked By:		Date	
Approved By:		Date	

Client: DERWENT SAILING SQUADRON
Project: ACCESSIBILITY PONTOON
Title: DRAWING LIST, LOCATION PLAN & NOTES
Scale: NTS | A3 | Drawing No: 1620 - SK01 | Rev: A


Approved - General Manager Consent Only GMC-22-15 22/03/2022
City of HOBART
APPROXIMATE LEASE BOUNDARY
EXISTING WHARF
OUTLINE OF EXISTING JETTY
30.00m
ACCESSIBILITY PONTOON
2.00m
NEW PILE
7.1m
DUPLICATE THE SAME PONTOON ARRANGEMENT AS ADJACENT (EXCEPT SHORTER)
CROWN LEASE
CADASTRAL ID: 1463488
AGREEMENT ID: 90162
PROPERTY ID: 3357603
COMPUTED AREA: 44773.193
EXISTING PONTOON
PROPRIETARY FLOATING PONTOON SYSTEM WITH PILES
10.50m
1.8m JETTY & PILES TO REMAIN
TOPPING SLAB TO MATCH EXISTING JETTY LEVEL
ALUMINIUM GANGWAY
13.22m
EXISTING FLOATING RAMP TO BE REMOVED & DISPOSED OF
1.2m WIDE ALUMINIUM GANGWAY
7.00m
REMOVE RAMP
APPROXIMATE TITLE BOUNDARY
9.39m
DDA COMPLIANT CONCRETE RAMP & PLATFORMS
TOPPING SLAB TO MATCH EXISTING JETTY LEVEL
EXISTING CONCRETE RAMP
PROPERTY ADDRESS: 'DERWENT SAILING SQUADRON' - 23 MARIEVILLE ESPLANADE
SANDY BAY TAS 7005
PROPERTY ID: 5622757
TITLE REFERENCE: 46431/1
AUTHORITY: LOCAL GOVERNMENT AUTHORITY
INNER PONTOON GENERAL ARRANGEMENT
1:200
FOR APPROVAL
REVISIONS
Rev No | Revision note | Date | Checked | Approved
A | FOR DA APPROVAL | 31/03/21 | DU | JB
Burbury
ABN 73 146 719 909
P.O. BOX 394
SOUTH HOBART, TAS 7004
P: (03) 6223 6037
F: (03) 6223 1143
E: admin@burburyconsulting.com.au
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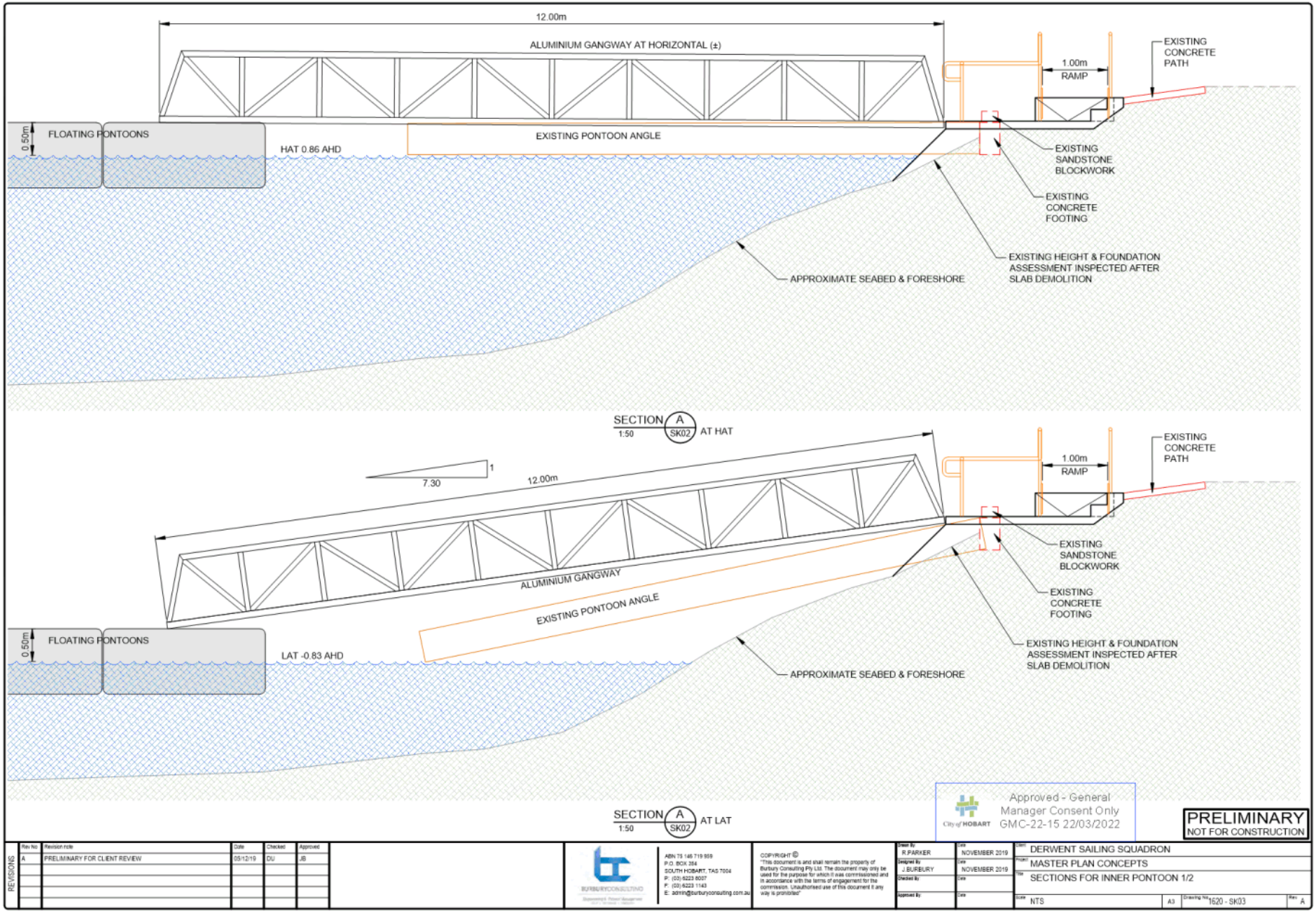
Drawn By: R.PARKER | Date: MARCH 2021
Designed By: J.BURBURY | Date: MARCH 2021
Checked By: | Date:
Approved By: | Date:
Client: DERWENT SAILING SQUADRON
Project: ACCESSIBILITY PONTOON
Title: INNER PONTOON GENERAL ARRANGEMENT
Scale: NTS | A3 | Drawing No: 1620 - SK02 | Rev: A


12.00m
ALUMINIUM GANGWAY AT HORIZONTAL (±)
1.00m
RAMP
EXISTING CONCRETE PATH
0.50m
FLOATING PONTOONS
HAT 0.86 AHD
EXISTING PONTOON ANGLE
EXISTING SANDSTONE BLOCKWORK
EXISTING CONCRETE FOOTING
EXISTING HEIGHT & FOUNDATION ASSESSMENT INSPECTED AFTER SLAB DEMOLITION
APPROXIMATE SEABED & FORESHORE
SECTION A
1:50
SK02
AT HAT
7.30
1
12.00m
1.00m
RAMP
EXISTING CONCRETE PATH
ALUMINIUM GANGWAY
EXISTING PONTOON ANGLE
EXISTING SANDSTONE BLOCKWORK
EXISTING CONCRETE FOOTING
0.50m
FLOATING PONTOONS
LAT -0.83 AHD
EXISTING HEIGHT & FOUNDATION ASSESSMENT INSPECTED AFTER SLAB DEMOLITION
APPROXIMATE SEABED & FORESHORE
SECTION A
1:50
SK02
AT LAT
Approved - General Manager Consent Only
GMC-22-15 22/03/2022
City of HOBART
PRELIMINARY
NOT FOR CONSTRUCTION
REVISIONS
Rev No | Revision note | Date | Checked | Approved
A | PRELIMINARY FOR CLIENT REVIEW | 05/12/19 | DU | JB
ABN 75 146 719 909
P.O. BOX 384
SOUTH HOBART, TAS 7004
P: (03) 6223 8007
F: (03) 6223 1143
E: admin@burburyconsulting.com.au
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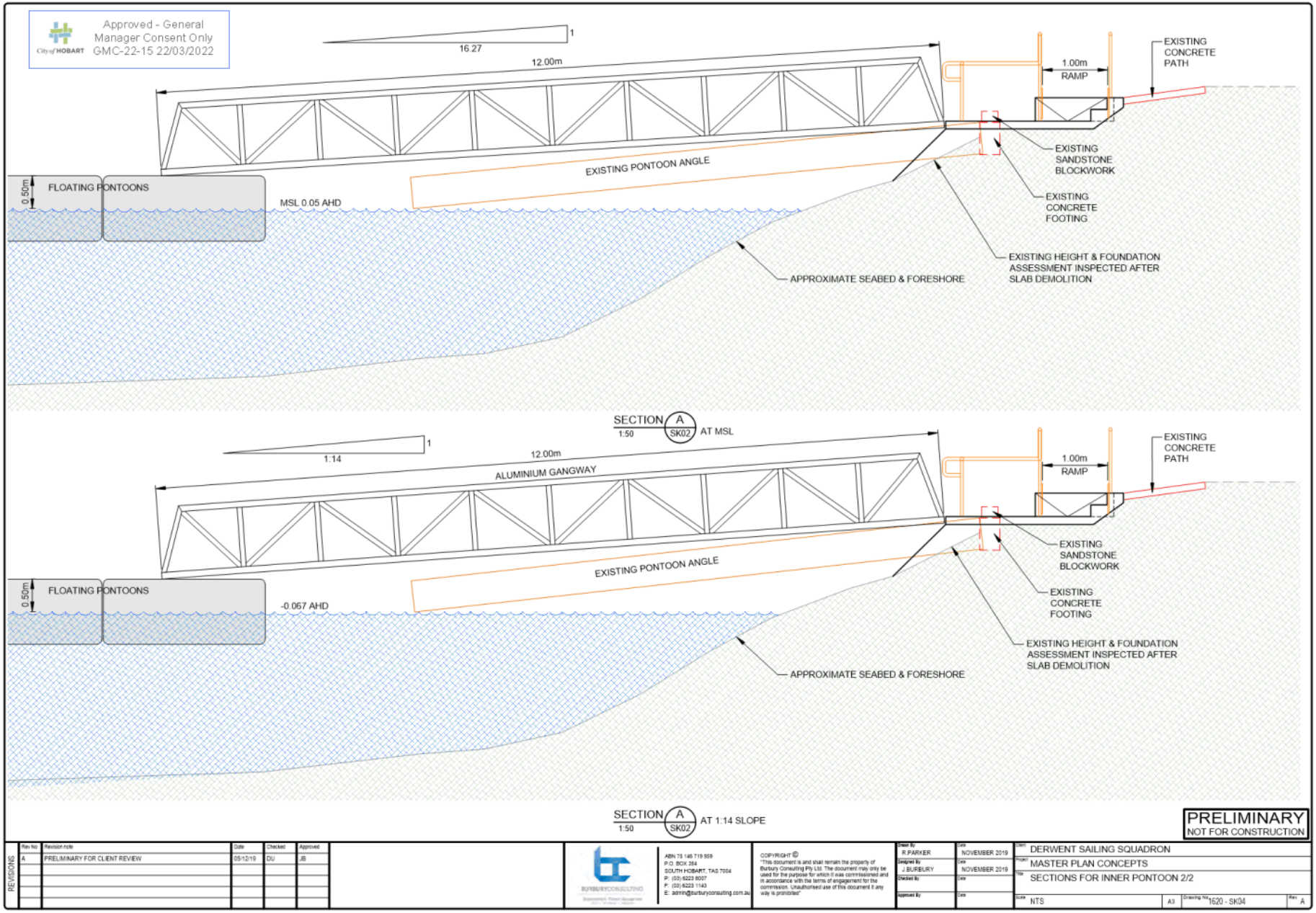
Drawn By: R.PARKER
Designed By: J.BURBURY
Checked By:
Approved By:
Date: NOVEMBER 2019
Date: NOVEMBER 2019
Client: DERWENT SAILING SQUADRON
Project: MASTER PLAN CONCEPTS
Title: SECTIONS FOR INNER PONTOON 1/2
Scale: NTS
A3
Drawing No: 1620 - SK03
Rev: A


Approved - General Manager Consent Only GMC-22-15 22/03/2022
City of HOBART
16.27
1
12.00m
1.00m RAMP
EXISTING CONCRETE PATH
EXISTING PONTOON ANGLE
EXISTING SANDSTONE BLOCKWORK
EXISTING CONCRETE FOOTING
0.50m
FLOATING PONTOONS
MSL 0.05 AHD
EXISTING HEIGHT & FOUNDATION ASSESSMENT INSPECTED AFTER SLAB DEMOLITION
APPROXIMATE SEABED & FORESHORE
SECTION A SK02 1:50 AT MSL
1:14
1
12.00m
ALUMINIUM GANGWAY
1.00m RAMP
EXISTING CONCRETE PATH
EXISTING PONTOON ANGLE
EXISTING SANDSTONE BLOCKWORK
EXISTING CONCRETE FOOTING
0.50m
FLOATING PONTOONS
-0.067 AHD
EXISTING HEIGHT & FOUNDATION ASSESSMENT INSPECTED AFTER SLAB DEMOLITION
APPROXIMATE SEABED & FORESHORE
SECTION A SK02 1:50 AT 1:14 SLOPE
PRELIMINARY
NOT FOR CONSTRUCTION
REVISIONS
Rev No | Revision note | Date | Checked | Approved
A | PRELIMINARY FOR CLIENT REVIEW | 05/12/19 | DU | JB
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Drawn By: R.PARKER | Date: NOVEMBER 2019
Designed By: J.BURBURY | Date: NOVEMBER 2019
Checked By: | Date:
Approved By: | Date:
Client: DERWENT SAILING SQUADRON
Project: MASTER PLAN CONCEPTS
Title: SECTIONS FOR INNER PONTOON 2/2
Scale: NTS | A3 | Drawing No: 1620 - SK04 | Rev: A

Approved - General Manager Consent Only
City of HOBART GMC-22-15 22/03/2022

Burbury CONSULTING
Project Management & Engineering

13/01/2022

Hobart City Council

16 Elizabeth Street,
Hobart, Tasmania, 7001
Australia.

Attention: General Manager & Development Services (Planning) ,

23 Marieville Esplanade, Sandy Bay
Development Application – DSS Accessibility Pontoon Jetty

Burbury Consulting has been engaged by the Derwent Sailing Squadron Inc (DSS) to assist them in the assessment, design and Development Application for a replacement accessibility jetty within the DSS site.

The accompanying Development Application (DA) and associated documentation and drawings for the proposed DSS Accessibility Pontoon Project has been prepared to meet the requirements of the Hobart Interim Planning Scheme 2015.

The proposed project work area covers across both the water side, DSS lease with Crown Land Services (CLS), and the land side, DSS lease with Hobart City Council (HCC). The attached drawings clearly highlight both lease areas and the proposed works.

Please accept and review the proposed DA package including the following documents;

- Application for a Planning Permit to Hobart City Council – being completed and submitted online with the HCC;
- Crown Letter consent.
- A signed consent letter from Proponent for Burbury Consulting to act as their agent – DSS general manager Shaun Thiedemann;
- Project DA Drawings (including location plan);
- Reference document - DSS Jetty Storm Damage Assessment (2018);
- Title of property;
- Covering letter (this document) and
- Marine Solutions Ecological Assessment and Supporting Letter.

Please contact; Burbury Consulting if you require any further information to process the DA.

If you have any queries, please do not hesitate to call or contact me.

Khishendran Mahendran 03 6223 8007

kmahendran@burburyconsulting.com.au

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1. Proposal

1.1 Description of Proposed Development & Operation

The proposed work is demolition of an existing pontoon and fixed jetty, and replacement with a new floating pontoon and fixed gangway, connected to a new abutment on the foreshore of 23 Marieville Esplanade.

The new pontoon jetty will be designed an accessibility structure in accordance with AS 3962 to provide accessibility access for Sailability Tasmania Sailing programme and replacing the existing ramp and launch facility on site.

The floating pontoon will be connected to driven steel piles to allow for rise and fall of tides and structural fixity. The floating jetty will be connected by a hinged aluminium gangway to the existing foreshore.

The location of the site as defined in Figure 1-1 below. The proposal is located at 23 Marieville Esplanade and adjoining waterway leased by the Derwent Sailing Squadron (DSS) from Hobart City Council (HCC) and Crown Land Services respectively.

Figure 1-1: Location of the site

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The landside works within HCC property includes:

- New concrete accessibility ramp to new concrete abutment
- New concrete abutment connecting to aluminium gangway to pontoon
- New garden beds to match existing

The marine works within Crown Lease area includes:

- Demolition and removal of floating and fixed jetty structures
- New floating pontoons fixed and secured with driven steel circular hollow poles

The new pontoon jetty footprint is substantially smaller than then existing jetties as noted below in the summary table which highlights a significant reduction on jetty footprint with the new proposed pontoon.

Table 1-1: Areas of Existing to New Footprint

	Existing footprint	**New footprint**
Accessibility pontoon	82 sqm	68 sqm
Jetty / Jetties / ramp pontoon	72 sqm	22 sqm
Total footprint	**154 sqm**	**90 sqm**

The general arrangement and layout of the development is detailed in the attached drawings.

The development fits within the existing DSS Crown Land Lease.

A key initiative of the proposed project is to minimise the impact of the existing stormwater outfall on the jetties as highlighted in the attached report from the 2018 food where the existing timber jetty was significant damaged from flood debris. This report initiated the project for a replacement pontoon as well as improvement for accessibility for Sailability Tasmanian sailing and general disabled access to a floating pontoon at the DSS.

1.2 Construction Methodology

The proposed construction works for the Project will be completed by a contractor, whom will have experience with marine construction particularly within sensitive marine environments and applying appropriate safety measures and documentation required. The majority of new works can be constructed off site reducing the construction works on land and in the waterway.

Works sequence is anticipated to be as follows:

- Site mobolise;
- Installation security fences around all access areas, inclosing the work areas;
- Demolition of timber jetty and floating ramp pontoon by marine barge and landside cranes;
- Supply, delivery and installation of all new steel piles and polyethylene sleeves, by floating barge to install the piles to secure the new pontoons;
- Supply and delivery of pontoons, floated off existing slipway, installed by commercial vessels;
- Construction of a concrete ramp, steps and gangway abutment;
- Construction of a topping screed on existing jetty approach;

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- Supply and installation of aluminium articulating gangways to access the pontoons;
- Supply and installation of compliant handrail system to AS 1428 for the landside concrete ramp;
- Planting of new landside garden areas with plants to match existing;
- Site clean-up and demobilisation.

2. Accessibility Floating Pontoon

The DSS is the Hobart base for Sailability Tasmania. Sailability is a voluntary non-profit organisation that aims to provide a safe and friendly environment where people of all abilities are accepted and encouraged to participate in the sport of sailing.

The Development Proposal incorporates a new concrete ramp and concrete abutment for connection of an aluminum gangway onto the floating pontoons that will enable safe launching and retrieval of sailability vessels and users.

The access from the existing grassed area to the pontoon will be achieved by a maximum slope of 1:14 (1 vertically, 14 horizontally) from Mean Sea Level to the highest tides.

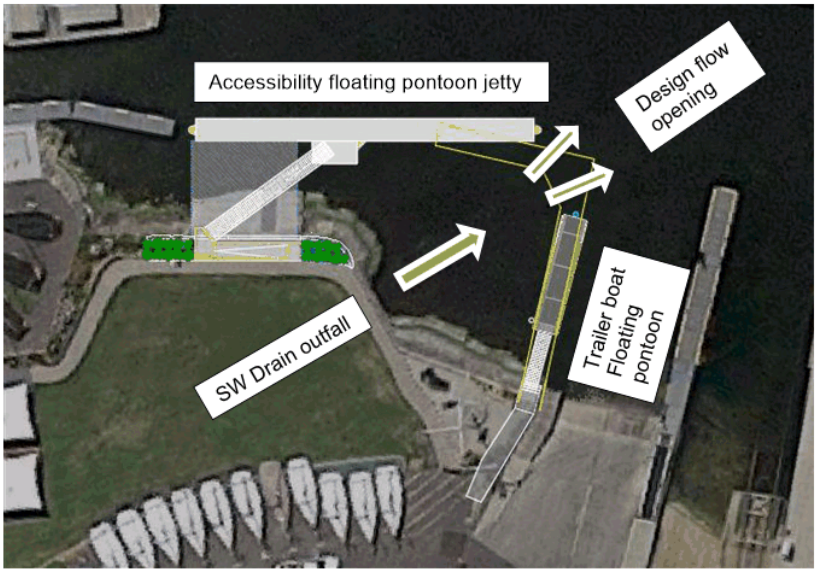
The completion of this Accessibility Pontoon will enable uses of all abilities easier access onto the Sailability Dinghies and access to the pontoons and vessels.

3. Design Solution

The advantage of a floating pontoon structure in a flood situation is they minimise piles which can cause floating debris to be unable to disperse and can cause damage to piles. Also, the floating structure has some flexibility during tidal flows & stormwater flows.

To decrease the flood damage situation in the future, the proposal removes the existing timber jetty across the stormwater flood pathway.

Figure 3-1: Proposed New Structures (stormwater outflow pathways)



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4. Use Class

The use of the development is:

Pleasure boat facility - use of land to provide facilities for boats operated primarily for pleasure or recreation, including boats operated commercially for pleasure or recreation. An example is a marina.

5. Zoning and Overlays

The land subject to the proposal is zoned:

- 19.0 Open Space - Hobart Interim Planning Scheme 2015 (landside abutment and pathway).
- 29.0 Environmental Management – Hobart Interim Planning Scheme 2015 (pontoon jetties).

6. Applicable Codes & Standards

The below Table 6-1 indicates the applicable sections of the Interim Planning Scheme Code and how they have been satisfied by either consideration of this supporting information letter or applicable documentation. If Codes are not identified below, they are to be considered not applicable.

Table 6-1 Applicable sections of the planning Code and compliance

Applicable CODE Clause	Discussion/Conclusion	Compliance Confirmed
E.15.0 **Coastal Inundation Hazard Area**	The abutment works for the proposed pontoon is highlighted as a medium risk area for coastal inundation. The proposal abutment height is designed for accessibility use in current tides and sea level. If can be adapted to raise the level with sea level rise as an adaptation measure. The structures are non-habitable and replace an existing use of the site. If the ramp is raised for the current proposal to allow for future sea level rise of 0.8m, it will cause the slope of the aluminium gangway to be steeper from the current 1:7.3 (1 vertically, 7.3 horizontally) during Lowest Astronomical Tide (LAT), refer to Drawings attached. The proposal satisfies all applicable development standards of this Code.	YES

7. Environmental Management

The DSS have recently completed a marina extension and during those works had extensive marine investigations and management procedures in place for these works. They are familiar with the controls needed in works on the site and have a long association with Marine Solutions in supporting marine investigations for any marine natural values assessments.

Whilst the proposal is a replacement pontoon of existing jetties the DSS have received the accompanying advices from Marine Solutions.

Marine solutions have undertaken an environmental assessment in the vicinity of this development and have provided Burbury Consulting a summary letter of environmental impact on the proposed development, refer to Marine Solutions Letter attached.

This supporting letter indicate there is no reason to believe conditions have changed since the assessment was undertaken and with suitable environmental management control measures the development will not significantly impact on the existing environment.

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It is proposed, (should Crown or Council require it) through the mechanism of a Construction Environmental Management Plan/Procedure (CEMP), could effectively manage and control potential impacts to the receiving environment.

The proposal also

8. Summary

The above assessment demonstrates that the proposed development is able to satisfy the Scheme requirements. The proposal is considered appropriate and does not result in any land use conflicts.

A sound understanding of current environmental conditions, confirms that the proposal has a low risk profile that results in manageable environmental impacts and improves the existing .

Having regard to the above, the application is considered consistent with the requirements of the Hobart Interim Planning Scheme 2015, consequently this proposed development should be deemed to be acceptable.

If you have any queries or would like to discuss the above further let me know.

Yours faithfully

Khishendran Mahendran
Project Engineer
Burbury Consulting Pty Ltd
kmahendran@burburyconsulting.com.au

Attachments:

- Crown Letter consent.
- A signed consent letter from Proponent for Burbury Consulting to act as their agent – DSS general manager Shaun Thiedemann;
- Project DA Drawings (including location plan);
- Reference document - DSS Jetty Storm Damage Assessment (2018);
- Title of property;
- Covering letter (this document) and
- Marine Solutions Ecological Assessment and Supporting Letter.

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City of HOBART GMC-22-15 22/03/2022

Tasmanian Government

Department of Primary Industries, Parks, Water and Environment

GPO Box 1751, Hobart, TAS 7001 Australia
Ph 1300 TAS PARKS / 1300 827 727 Fax 03) 6223 8308
www.parks.tas.gov.au

Enquiries: Tony Ryan
Phone: 03 6165 3027
Email: Tony.Ryan@parks.tas.gov.au
Our ref: 21/4072

15 October 2021

Mr Richard Parker
Burbury Consulting Pty Ltd
obo Derwent Sailing Squadron Inc

E: Richard.parker@burburyconsulting.com.au

Dear Mr Parker,

LODGEMENT OF PLANNING APPLICATION
DERWENT SAILING SQUADRON – ACCESSIBILTY JETTY PONTOON

This letter, issued pursuant to section 52(1B) of the *Land Use Planning and Approvals Act 1993*, is to confirm that the Crown consents to the making of the enclosed Planning Permit Application, insofar as the proposed development relates to Crown land managed by the Department of Primary Industries, Parks, Water and Environment.

Crown consent is only given to the lodgement of this application. Any variation will require further consent from the Crown.

The Department's preliminary desktop assessment idenfified the following matters which may warrant further detailed consideration:

a) The presence of the spotted handfish (*Brachionichthys hirsutus*) within proximity of the proposed development. The species is listed as endangered under the *Threatened Species Protection Act 1995* (Tas) and critically endangered under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

b) The potential for mobilisation of sediments (possibly mobilising heavy metals etc.) which may require mitigation strategies.

This letter does not constitute, nor imply, any approval to undertake works, or that any other approvals required under the *Crown Lands Act 1976* have been granted. If planning approval is given for the proposed development, your client will be required to obtain separate and distinct consent from the Crown before commencing any works on Crown land.

If you require any further information please contact the officer nominated at the head of this correspondence.

Yours sincerely,

Jesse Walker
Crown Land Services (Unit Manager, Policy & Projects)

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Jesse Walker's position of "Team Leader, Crown Land Services (Unit Manager, Policy and Projects) (position no. 334958)" is listed in this instrument.

Notice of Termination of Authority and Instrument of Delegation

DELEGATION OF THE DIRECTOR-GENERAL OF LANDS' FUNCTIONS UNDER THE *LAND USE PLANNING AND APPROVALS ACT 1993*

I, DEIDRE WILSON, being and as the Acting Director-General of Lands by virtue of a direction under section 21A of the *Acts Interpretation Act 1931*, acting pursuant to section 23AA(5A) of the *Acts Interpretation Act*, hereby give notice that the authority of the holders of the offices of Deputy Secretary (Parks & Wildlife Service) (position number 700451), Manager - Crown Land Services (position number 707556), Team Leader - Crown Land Services (Unit Manager, Leases & Licences) (position number 340697) and Team Leader - Crown Land Services (Unit Manager, Policy & Projects) (position number 334958) to perform the functions conferred on the Director-General of Lands, as delegated on 6 August 2019 by John Whittington, then Director-General of Lands, is terminated with immediate effect.

Further, acting pursuant to section 52(1E) of the *Land Use Planning and Approvals Act 1993* ("the Act"), I hereby delegate the functions described (by reference to the relevant provision of the Act and generally) in Schedule 1, to the persons respectively holding the offices of Deputy Secretary (Parks & Wildlife Service) (position number 700451), Manager - Crown Land Services (position number 707556) and Team Leader - Crown Land Services (Unit Manager, Policy & Projects) (position number 334958) in accordance with the functions delegated to the Director-General of Lands by the Minister for Environment and Parks, being and as the Minister administering the *Crown Lands Act 1976*, by instrument dated 4 December 2020.

SCHEDULE 1

Provision	**Description of Functions**
Section 52(1B)	Signing, and providing written permission for, applications for permits in relation to Crown land.

Dated at HOBART this 20th day of December 2020

.....

Deidre Wilson
ACTING DIRECTOR-GENERAL OF LANDS

Approved - General Manager Consent Only
CITY OF HOBART DATE: 24-Mar-2022 DOC: 2

Department of Primary Industries, Parks, Water and Environment

Tasmania

CROWN LANDS ACT 1976

WORKS AND/OR DEVELOPMENT APPLICATION REQUEST

IMPORTANT INFORMATION

- Lodge this form to apply to Property Services to:
  1. undertake works on Crown land, and/or
  2. obtain Crown consent to lodge a Development Application.
- If adequate information is not provided this application may be delayed or declined.
- If insufficient space is provided please attach a separate page.
- Where the works result in a change to your lease/licence area, you may need to also complete a new application form and pay the relevant fees, you will be advised.

***Mandatory fields**

1. APPLICANT DETAILS

(circle) Mr/Mrs/Miss/Ms

APPLICANT (Full Name, Company or Business Name)*:

Richard Parker

Daytime contact number: 6223 8007

Email Address: Richard.parker@burburyconsulting.com.au

Residential Address: 2/2 Gore Street, South Hobart Post Code 7004

Postal Address: 2/2 Gore Street, South Hobart Post Code 7004

Who should be contacted about this request? *(If different to above).*

Name*:

Organisation*:

Position Title:

Daytime contact number:

Email Address: *(This is the preferred method of contact)*

Postal Address* Post Code:

2. LOCATION OF THE CROWN LAND

Property Identification Number (PID) or Title Reference: (PID) 3357603

Address*: 23 Marieville Esplanade, Sandy Bay Post Code: .....7005.....

Describe **where** the works will be undertaken. Include the location of the works in relation to surrounding structures and land features such jetties, fences, rivers, and foreshore. Mark the location on maps, diagrams, photos or other forms of illustration to add detail and clarification.

Refer to attached Drawings

3. DETAILS ABOUT THE WORKS

Describe **what** work is proposed. Include the design, size, orientation and layout of structures or vegetation and the materials to be used. Attach plans, diagrams, photos and other illustrations that add detail and clarification*.

Refer to attached Drawings

Describe **how** the works will be undertaken. Detail the processes, techniques and equipment. Arrangements such as site settings, engineering and/or work management, maps, diagrams, photos and other illustrations would add detail and clarification*.

Refer attached Drawings

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The majority of the project infrastructure will be manufactured off site within controlled manufacturing plants and yards.

The proposed construction works for the site will be built by a contractor, whom will have experience with marine construction, particularly within sensitive marine environments.

Works to include:

- ☐ Site embolise;
- ☐ Installing security fences around all public areas, inclosing the work areas;
- ☐ Supply, delivery and installation of all new steel piles and polyethylene sleeves, by floating barge;
- ☐ Supply and delivery of pontoons, floated off existing slipway, installed by vessels;
- ☐ Construction of a concrete ramp, steps and gangway abutments;
- ☐ Construction of a topping screed on existing jetty approach;
- ☐ Supply and installation of aluminium articulating gangways;
- ☐ Supply and installation of compliant handrail system to AS1428;
- ☐ Planting of plants, match existing;
- ☐ Site clean-up and demobilisation.

Will heavy machinery and equipment be required to cross public spaces? Yes No x
If yes, identify the route from the public road to the site on Crown land. Mark the route on maps, diagrams, photos or other forms of illustration.

4. LEASE/LICENCE DETAILS *(where known)*

Lease/Licence Number:	File Number:
Date on which the current lease/licence will expire*:	

5. COUNCIL REQUIREMENTS*

Before lodging this Application seek advice from Council Planning regarding Council requirements. *This application cannot proceed without this advice.*

Are there any Council requirements? Yes x No ☐ If Yes, answer a) and b) below.

a) Is Crown consent to a Development Application required? Yes x No ☐

If yes, supply a copy of the complete and final Development Application package. The complete package includes the Council Development Application form and any documents, reports and plans that will be lodged for Council's consideration.

b) Is Crown consent to a Building or Plumbing Application required? Yes ☐ No x

If yes, supply a copy of the complete and final Building or Plumbing Application package. The complete package includes the Council Application form and any documents, reports and plans that will be lodged for Council's consideration.

6. TIMEFRAMES

What dates do you intend to undertake the work:

Start Date: June 2021	End Date: August 2021
If there is an important deadline state, the date	
Explain why the deadline is important:	

7. SIGNATURE OF APPLICANT

Name: Richard Parker.....

Signed: .....
15/03/2021

Date: .....

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CLAIMS: .....

8. CHECKLIST

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- ☐ Documents that describe **what** work is proposed e.g. plans, diagrams.
- ☐ Documents that illustrate **how** the work will be undertaken e.g. management plans, diagrams.
- ☐ Illustrations, maps that identify **where** the work will be undertaken.
- ☐ Illustrations, maps that **identify the route** from the public road to the works site on Crown land.
- ☐ The complete Development, Building and/or Plumbing Application package if required by council.
- ☐ A copy of Public Liability insurance covering the proposed works.

Where there is an agreement holder for the leased/licensed Crown land, attach:

- ☐ A copy of their Public Liability insurance
- ☐ A letter from the agreement holder supporting this Works Application
- ☐ The agreement holders contact details

- ☐ If you are acting on behalf of a client, please submit a copy of authorisation to do so.

Privacy Statement
Personal information is collected for the purpose of processing, assessing and determining this application and may be disclosed to local government, Forestry Tasmania, Mineral Resources Tasmania, adjoining landowners, agents of the Property Services, law enforcement agencies, courts and other organisations authorised to collect it. It may be disclosed to other public sector bodies where necessary for the efficient storage and use of the information. It is managed in accordance with the Right to Information and may be accessed by the individual to whom it relates on request to the Department of Primary Industries, Parks, Water & Environment. A fee may be charged for this service.

Applications can be lodged at	**Contact**
PropertyServices@parks.tas.gov.au OR Property Services GPO Box 44, Hobart TAS 7001	Property Services Message Service 6169 9015 (leave message and calls are returned within two business days) www.parks.tas.gov.au/ps

Updated February 2019

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Marine SOLUTIONS TASMANIA PTY LTD
A.C.N. 165 838 755 A.B.N. 71165 838 755
110 Swanston Street New Town Tasmania 7008
Tel: 03 6228 5906 Mobile: 0400 697 175
Email: info@marinesolutions.net.au
Web: www.marinesolutions.net.au

25/11/2021

To Whom It May Concern,

The Derwent Sailing Squadron (DSS) has proposed an alteration to their jetty structure at their Sandy Bay Premises. This proposal requires the removal of the existing timber ramp and layup jetty including piles (cutting off top of deck and piles at seabed unless otherwise shallow for extracting as rock is generally shallow), the removal of the existing floating accessibility pontoon and then installation of new accessibility pontoon with piles, disabled access gangway, new boat ramp pontoon with piles and access gangway. The proposed development will result in a net reduction of jetty footprint (Table 1). The existing jetty portion has 8 piles which are to be removed with the replacement installation to include 2 piles as per the design provided. Further, whaling boards to the seabed will be removed; these acted as a barrier for turbid storm outflows causing the heavier particles to settle in the immediate vicinity. The new floating section will allow the heavier particles to disperse more effectively (Shaun Tiedemann, pers comm.).

Table 1 Areas of existing to new footprints, showing a net 64 sqm reduction in footprint (provided by Burbury Consulting).

	Existing footprint	**New footprint**
Accessibility pontoon	82 sqm	68 sqm
Jetty/jetties/ramp pontoon	72 sqm	22 sqm
Total footprint	**154 sqm**	**90 sqm**

Due to the location of this jetty and its close proximity to an outfall system for stormwater, the concerns regarding sediment disturbance from these works is a primary mitigation matter. The other potential impact is that of the works on Spotted Handfish *(Brachionichthys hirsutus)* habitat.

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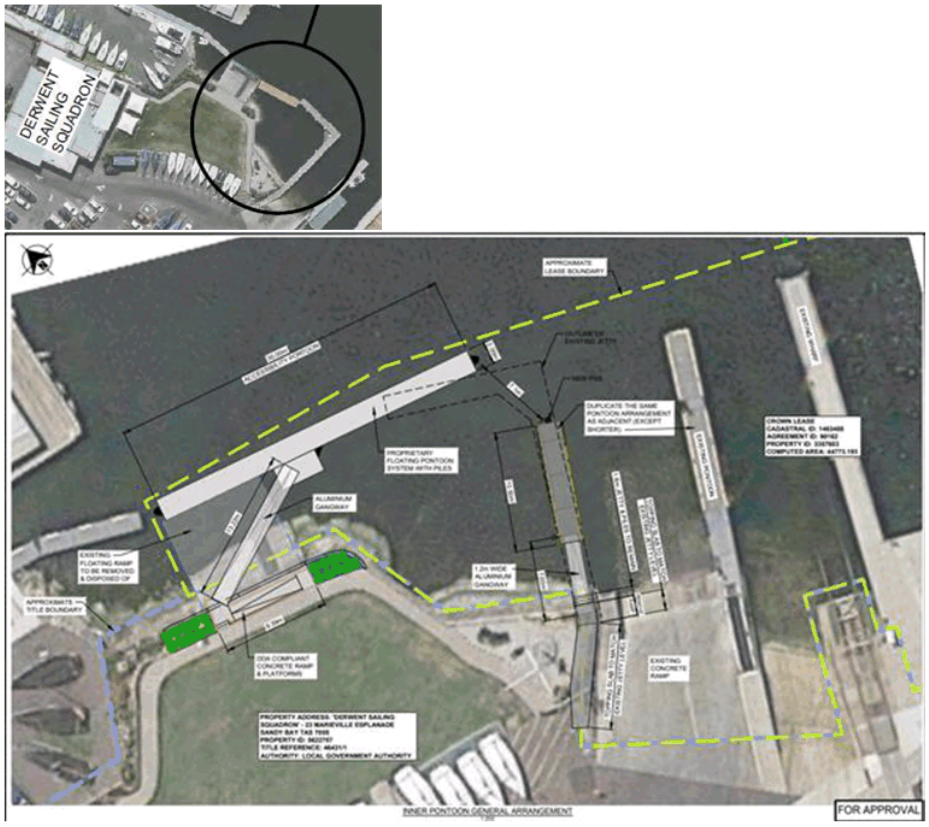

Figure 1 location of new jetty proposal at Sandy Bay Yacht Club, Tasmania.

The stormwater outfall system adjacent to the current jetty experiences high volumes of storm water and sediment flow into the area directly behind the existing infrastructure. This makes the immediate area highly variable in terms of salinity, turbidity, nutrient content, and water movement. Sediments throughout the Derwent Estuary are known to carry relatively high contaminant loads, especially around industrial areas and slipways. Minimising and/or mitigating any sediment disturbance is of high priority for any proposed new development. The sediment disturbance from the pile works will likely be low impact comparative to current sediment movement in the area from natural water movement and vessel disturbance. To aid in reducing sediment disturbance, the existing piles will not be removed in their entirety, but rather the top section above the sediment cut off. Installing new piles creates very low sediment disturbance, as shown in previous surveys including *Impacts of Pile Driving on Sediments, Siltation and Underwater Noise* (Marine Solutions 2012), and we anticipate that any impacts caused by piling activities will be negligible.

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The Spotted Handfish is known to inhabit areas of unconsolidated substrata, including well-sorted coarse sand, shell grit, fine sand and silt. Spotted Handfish have not been observed within sites that experience sediment and freshwater input levels as high as has been observed at the proposed development site. A significant number of surveys at this site and the surrounding marina have previously been conducted by Marine Solutions in 2012, 2013, 2014, 2015, 2018 and 2021. During these surveys, the nearest handfish were sighted over 200 m to the ESE, in deeper water spatially removed from the high degree of freshwater influence present within the current proposed development area. No Spotted Handfish were observed with the proposed development area. Therefore, it is our professional opinion that Spotted Handfish are highly unlikely to occur in the development footprint of the jetty (Figure 1).

Based on the very low likelihood of handfish occurring within the proposed development footprint, and given that the proposed development causes negligible water quality impacts beyond the footprint, it is deemed highly unlikely that the proposed development will have any detrimental impact on spotted handfish.

Kind Regards,

Laura Smith
Marine Solutions

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BURBURYCONSULTING

23 May 2018
Shaun Tiedemann
Derwent Sailing Squadron
Marieville Esplanade
Battery Point TAS 7005

Dear Shaun,

Derwent Sailing Squadron Jetty – Storm Damage Assessment
Preliminary Assessment and Advice

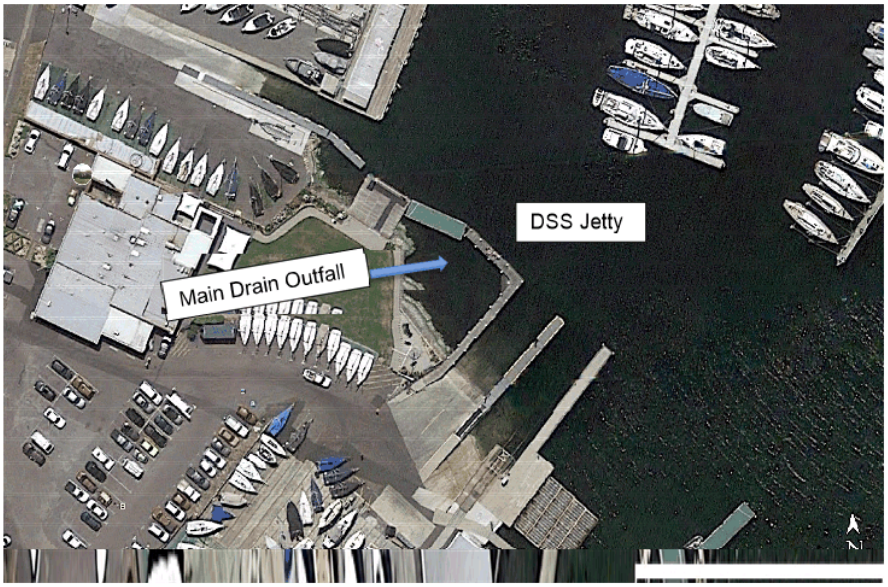
1. Introduction

At the request of the Derwent Sailing Squadron (DSS), we have undertaken a preliminary site inspection and assessment of the timber jetty structure that sustained damage in association with the storm on 10-11 May 2018. The jetty currently supports the boat ramp for vessel access as well as temporary vessel berthing for visitors and members.

A significant rainfall event combined with very high winds and large swells were recorded and observed across south east Tasmania during the evening of Thursday 10th May and the morning of Friday 11th May 2018. The rivulets and stormwater systems around Sandy Bay and Marieville Esplanade flooded resulting in wide spread damage from overland flows, debris and blockage of drains. The DSS jetty was heavily inundated due to the flooding and debris from the main stormwater rivulet sustaining damage to the substructure.

We conducted a site visit on Tuesday 15th May 2018 and this letter provides a summary of the site observations, preliminary structure assessment and short-term recommendations.

Figure 1 - Location Plan



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2. Background Information

The timber jetty provides service to DSS members utilising both the boat ramp and requiring access to vessels from the main DSS building and car park area. The jetty is located directly adjacent to a large stormwater drain and anecdotally it has sustained localised damaged in previous high fall rain events from debris flowing out the stormwater main drain as well as restrictions to water depths due to sedimentation. The Hobart City Council has from time to time been on site to clean out the area adjacent to the drain.

As previously noted a significant weather event impacted the south-east Tasmanian coast on the evening of Thursday 10th May with wind gusts of 119km/h from a SSE direction recorded at Tasman Island and large seas also recorded as well as significant rain fall (129mm) in Hobart and upper catchment areas of Mount Wellington (236mm) and Mount Nelson. The Hobart main rivulet broke its banks in Hobart resulting in widespread flood damage as well as Lambert Creek (flooding Sandy Bay Road and lower Queenborough) and Proctors Creek which flooded University of Tasmania and outfall is located at the DSS directly adjacent to the jetty.

We understand large amount of debris was witnessed flowing out the drain during the storm collecting against the jetty resulting in significant damage to the jetty substructure, bracing, piles and fendering.

Burbury Consulting attended site on Tuesday 15th May and assessed the condition of the structure, with observations and recommendations presented below.

Figure 2 – Jetty Structure

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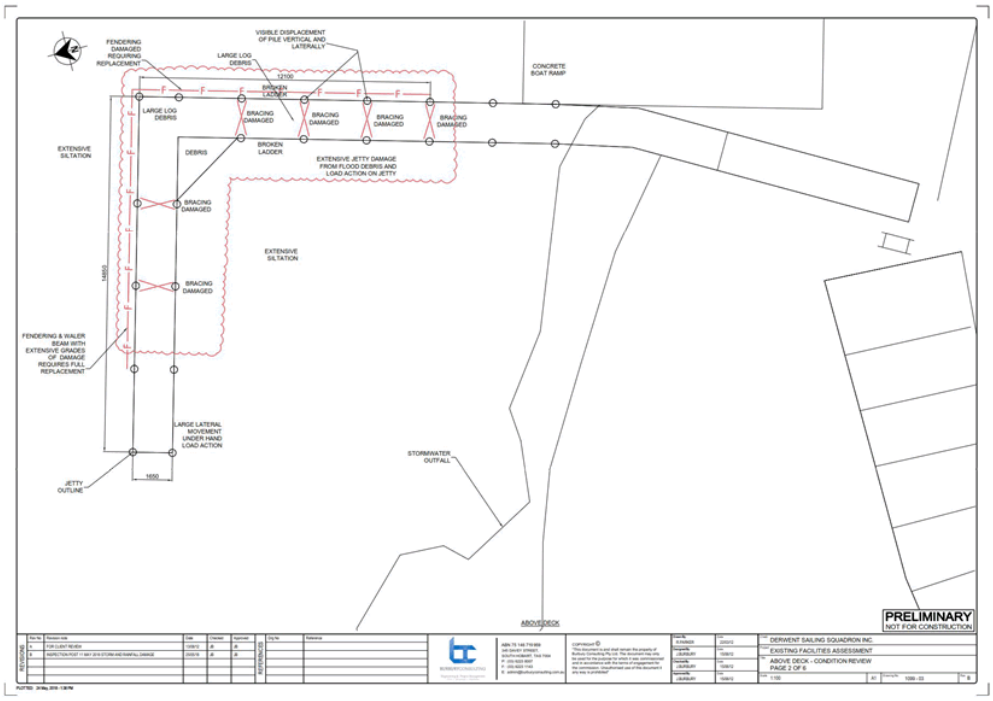
Figure 3 - Jetty drawing & defects



The figure below is attached in A3 drawing and provides a summary of the defects observed on site. The extent of defects was consistent with significant flood flows discharging from the storm water drain and combined with likely large debris actions inducing load on to the structure. Further specific defects are provided below in the site observations.

3. Site Observations

We noted the following observations were noted with regards to the jetty structure:

General:

- Variable timber branch debris across substructure, fenders and low landing decking (refer photos);
- Structure closed for access to small and large vessel usage;

Critical observations:

- Connection loss of majority of lower waler beams that support fenders and resultant fender damage at top connection;
- Loss of connections and a number of fender boards;
- Loss and damage to both ladder access (Figure 6);

City of HOBART
Approved - General Manager Consent Only
GMC-22-15 22/03/2022

- Bracing connection and beam failures along majority of piles;
- Lateral movement of piles away from the stormwater outlet indicating extensive lateral load on the structure of inner access jetty (refer Figure 5);
- Vertical movement noted on the decking (sagging) indicating displacement of the pile foundations or failure of the pile itself (refer Figure 4 below);

Figure 4 – Vertical displacement of jetty decking

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GMC-22-15 22/03/2022

Figure 5 – Lateral displacement of jetty away from flood and debris on to fenders

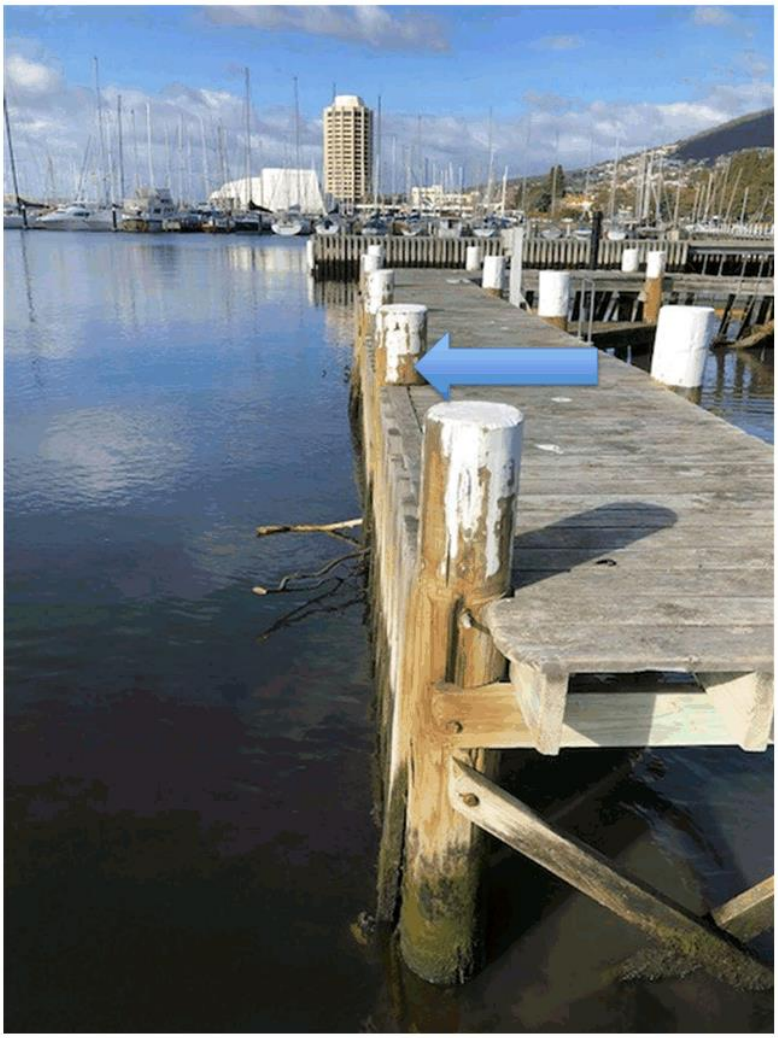

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Figure 6 – Large debris and damage to ladder, bracing and decking lateral movement

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Figure 7 – Damage and loss of connection to fenders typical

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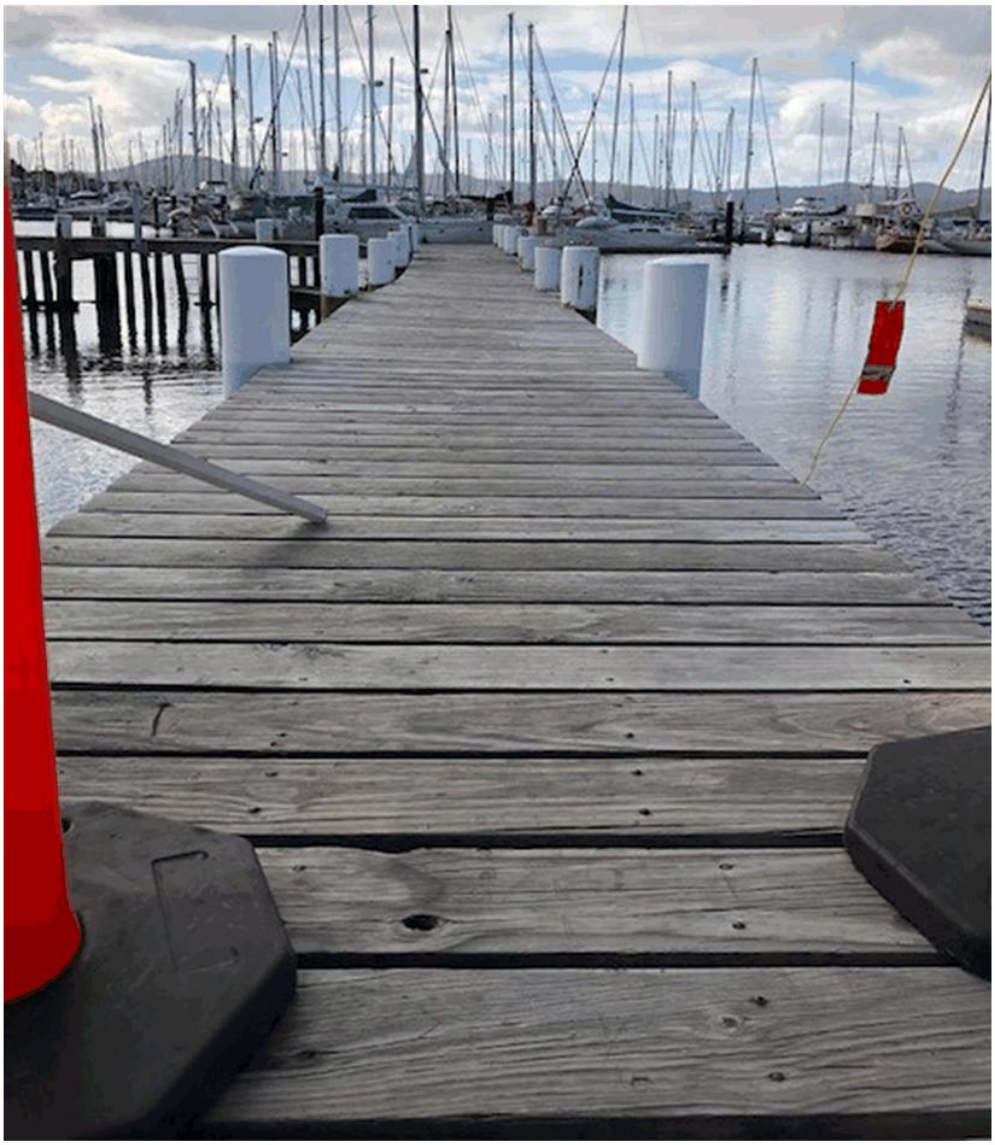
Figure 8 – Vertical and lateral displacement observed (note pile level and away movement from drain)



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4. Summary and Recommendations

4.1 Damage and Causes

We can confirm that in our opinion that the primary cause of the damage to the jetty was caused by flood and debris loading on the structure during the storm event on Thursday evening. We have not attempted to categorize this event in terms of an Annual Probability of Exceedance classification (e.g. 1-in-100 year event) however the jetty was observed to contain extensive lateral damage in the direction of force exerted by the drain resulting in damage to substructure and lateral movement of the jetty both away from the drain and vertically.

Whilst there was noted defects in the substructure and fendering that requires relatively simple replacement the evidence of lateral and vertical displacement of the jetty is consistent with the likely force and load on the jetty in the location of lateral movement (in direction of flow) and cannot be remediated without either testing of the adequacy of pile support or complete replacement.

The discharge flows from the stormwater drain would have been significant and result in both immediate scour of sediment around the jetty through the peak flows then filled with siltation and debris in the reduced flows. We cannot rule out at this stage that the pile foundation conditions have been significantly affected by the flood loading and or pile has failed resulting in vertical movement of the pile and observable in the decking and hence recommend that either additional testing of the piles be undertaken or new piling of the most extensive damaged areas be undertaken as highlighted in the attached drawing.

The vertical movement of the jetty and pile tops is easily observed on site and whilst we didn't measure precisely was in the order of up to 100mm at the maximum point. DSS could not confirm whether the movement observed was previously noted however it would be highly unusual for the construction of a jetty to have sagging along the length.

The siltation of the jetty is also a significant operational issue and DSS should consider reviewing the changes in seabed and request Hobart City Council to review management of silt, rocks and debris in the stormwater system to prevent additional damage in future storms.

4.2 Recommendations

Based on the condition of the jetty, our short-term recommendations are:

- Undertake replacement of all major elements noted in the extensive damaged zone including bracing, fendering, walers and piles; or
- Likely to be more cost effective to replace the entire structure across the damaged zone.

4.3 Repair Works Cost Estimate

Preliminary costings to undertake the recommendations outlined above are as follows:

- Replacement of existing jetty structure (45sq.m) including demolition, removal and replacement to similar condition = **$140,000 ex GST;**
- Replacement of existing structure and install as floating pontoon jetty = **$95,000 ex GST;**
- Remediation of the structure, **$105,000 ex GST** including:
    - Installation of new timber piles (16) including mobilisation of barge to site = $80,000;
    - Replacement of all fendering and waler - $10,000;

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- New ladders = $3,500;
- New bracing to piles = $6,000;
- Jacking of decking to remove sagging = $5,000;

We are experienced marine engineering consultants and have previously provided condition review on the structure in 2012 as part of the DSS marina upgrade and expansion and hence are qualified to comment with respect to the structure and condition. Our advices on the above constructions amounts are estimated based on our experience with market rates and have been provided on the basis of advice to DSS and their insurers of the likely budget estimate for the repair works or jetty replacement.

Yours faithfully

James Burbury
Managing Director
Burbury Consulting Pty Ltd

Planning: #250534

Property

23 MARIEVILLE ESPLANADE SANDY BAY TAS 7005

People

Applicant *	KHISHENDRAN MAHENDRAN 287 MACQUARIE STREET HOBART TAS 7000 0421 883 337 kmahendran@burburyconsulting.com.au
Owner *	Derwent Sailing Squadron Inc. Shaun Tiedemann 23 Marieville Esplanade SANDY BAY TAS 7005 03 6223 1977 admin@dssinc.org.au
Entered By	KHISHENDRAN MAHENDRAN 287 MACQUARIE STREET HOBART TAS 7000 0421 883 337 kmahendran@burburyconsulting.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)? *

club house, restaurant, bar, marina, fuel dock, slip, dry dock, training and sail racing

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

replacement of existing pontoon and jetty and install new floating pontoon jetty

Estimated cost of development *

95000.00

Existing floor area (m2)

0.00

Proposed floor area (m2)

Site area (m2)

8655

Carparking on Site

Total parking spaces

Existing parking spaces

N/A

☒ 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 of property.pdf
Plans (proposed, existing) *	Project DA drawings.pdf
GM or Crown consent	crown letter consent.pdf
GM or Crown consent	general manager consent DSS.pdf
GM or Crown consent	general-manager-consent-checklist_DSS Accessibility Pontoon Jetty.pdf
Covering Letter	1747-LET-DSS Accessibility Pontoon DA Report.pdf

Supporting Documents

Planning Report	1747-LET-DSS Accessibility Pontoon DA Report.pdf
Flora and Fauna Report	2021_11 DSS pontoon upgrade - Marine Solutions.pdf
Reference Document	LET_DSS Jetty Storm Damage Assessment.pdf

City of HOBART

Hobart City Council
16 Elizabeth Street, Hobart 7000

Tax Invoice
Official Receipt

ABN: 39 055 343 428

11/02/2022 Receipt No: 21239480288

To: KHISHENDRAN MAHENDRAN
287 MACQUARIE STREET
HOBART TAS 7000

Description	Reference	Amount
Planning Permit Fee		$ 500.00
Planning Permit Advertising Fee*		$ 400.00
Transaction Total*:		**$ 900.00**
Includes GST of:		**$ 36.36**

Cheque payments subject to bank clearance

City of HOBART

Enquiries to: City Planning
Phone: (03) 6238 2711
Email: coh@hobartcity.com.au

PAYMENT SUMMARY

ABN: 39 055 343 428

PLEASE NOTE: Payments can **only** be made via Council's online development portal payment gateway or by calling Customer Services on (03) 6238 2190.

16/02/2022

YOUR REFERENCE ONLY: 1760

To: KHISHENDRAN MAHENDRAN
287 MACQUARIE STREET
HOBART TAS 7000

Description	Amount
Planning Permit Fee	**$ 500.00**
Planning Permit Advertising Fee*	**$ 400.00**
Total*:	**$ 900.00**
Includes GST of:	**$ 36.36**

Tax Receipt will be issued on payment.

8. REPORTS

8.1 Monthly Building Statistics - 1 March - 31 March 2022
File Ref: F22/34644

Memorandum of the Director City Life of 14 April 2022 and attachments.

Delegation: Council

City of HOBART

MEMORANDUM: CITY PLANNING COMMITTEE

Monthly Building Statistics - 1 March - 31 March 2022

Attached is the Building Permit Statistics for the period 1 March – 31 March 2022.

RECOMMENDATION

That:

The Director City Life reports:

Building Statistical Report:

During the period 1 March 2022 to 31 March 2022, 44 permits were issued to the value of $20,640,708 which included:

(i) 24 for extensions/alterations to dwellings to the value of $2,473,190;

(ii) 4 new dwellings to the value of $2,549,600

(iii) 13 new multiple dwellings to the value of $4,850,000; and

(iv) 2 major projects:

(a) 48 Liverpool Street, Hobart - Commercial Internal Alterations - $6,500,000;
(b) 14 Kooyong Glen, South Hobart - 11 Multiple Dwellings - $4,200,000;

During the period 1 March 2021 to 31 March 2021, 68 permits were issued to the value of $26,243,586 which included:

(i) 42 for extensions/alterations to dwellings to the value of $5,359,380;

(ii) 8 new dwellings to the value of $5,359,380; and

(iii) 0 new multiple dwellings; and

(iv) 3 major projects:

(a) 40 Melville Street, Hobart - Commercial Internal Alterations -

$5,614,500;

(b) 23 Commercial Road, North Hobart - New Commercial Building - $3,500,000;

(c) 284A-284B Argyle Street, North Hobart - Commercial Internal Alterations - $2,000,000;

In the twelve months ending March 2022, 583 permits were issued to the value of $255,830,101; and

In the twelve months ending March 2021, 630 permits were issued to the value of $182,055,284

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

Neil Noye
DIRECTOR CITY LIFE

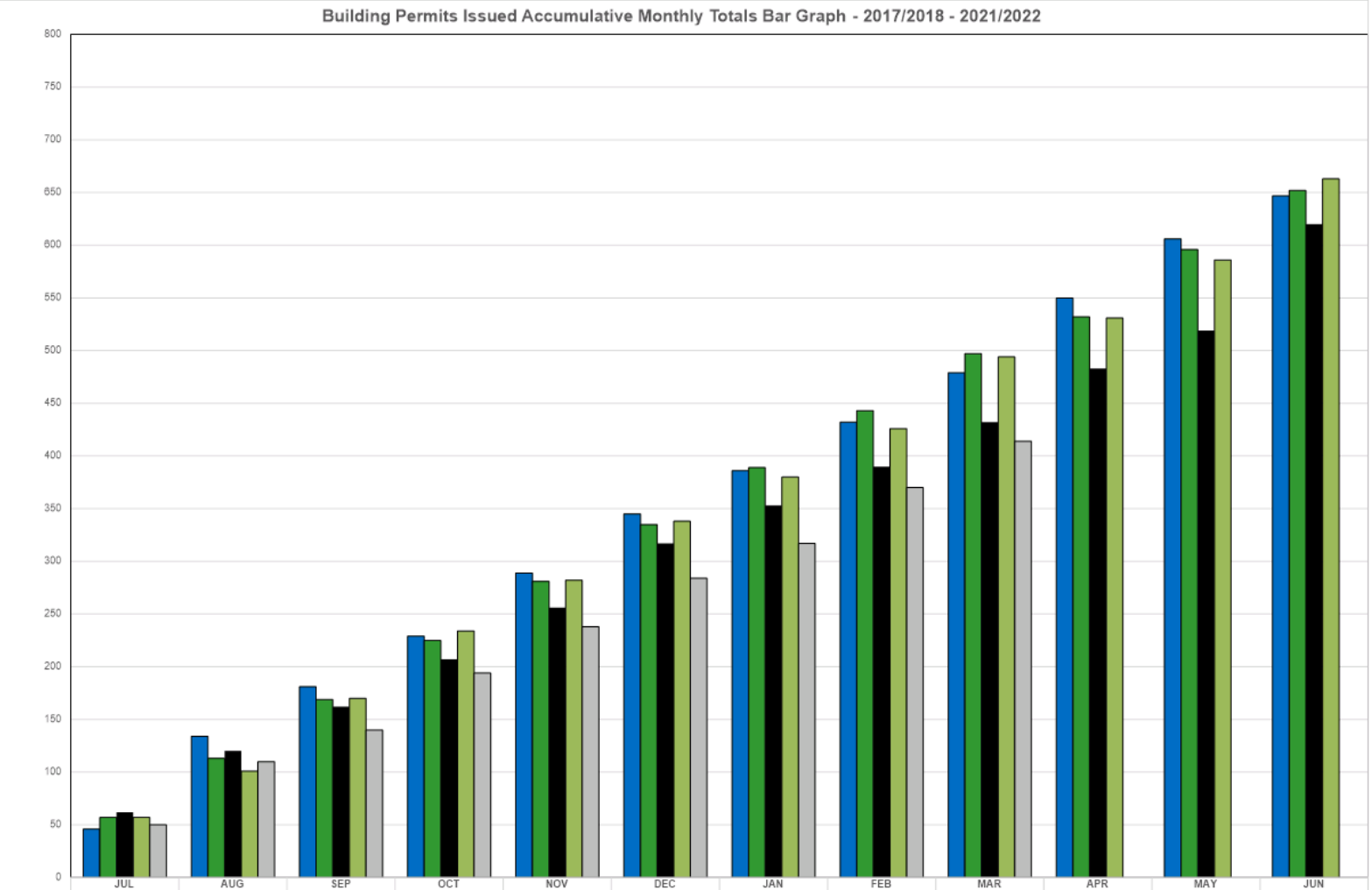
Date: 14 April 2022
File Reference: F22/34644

Attachment A: Building Permits Issued Accumulative Monthly Totals Bar Graph - Mar 2022 ⇩

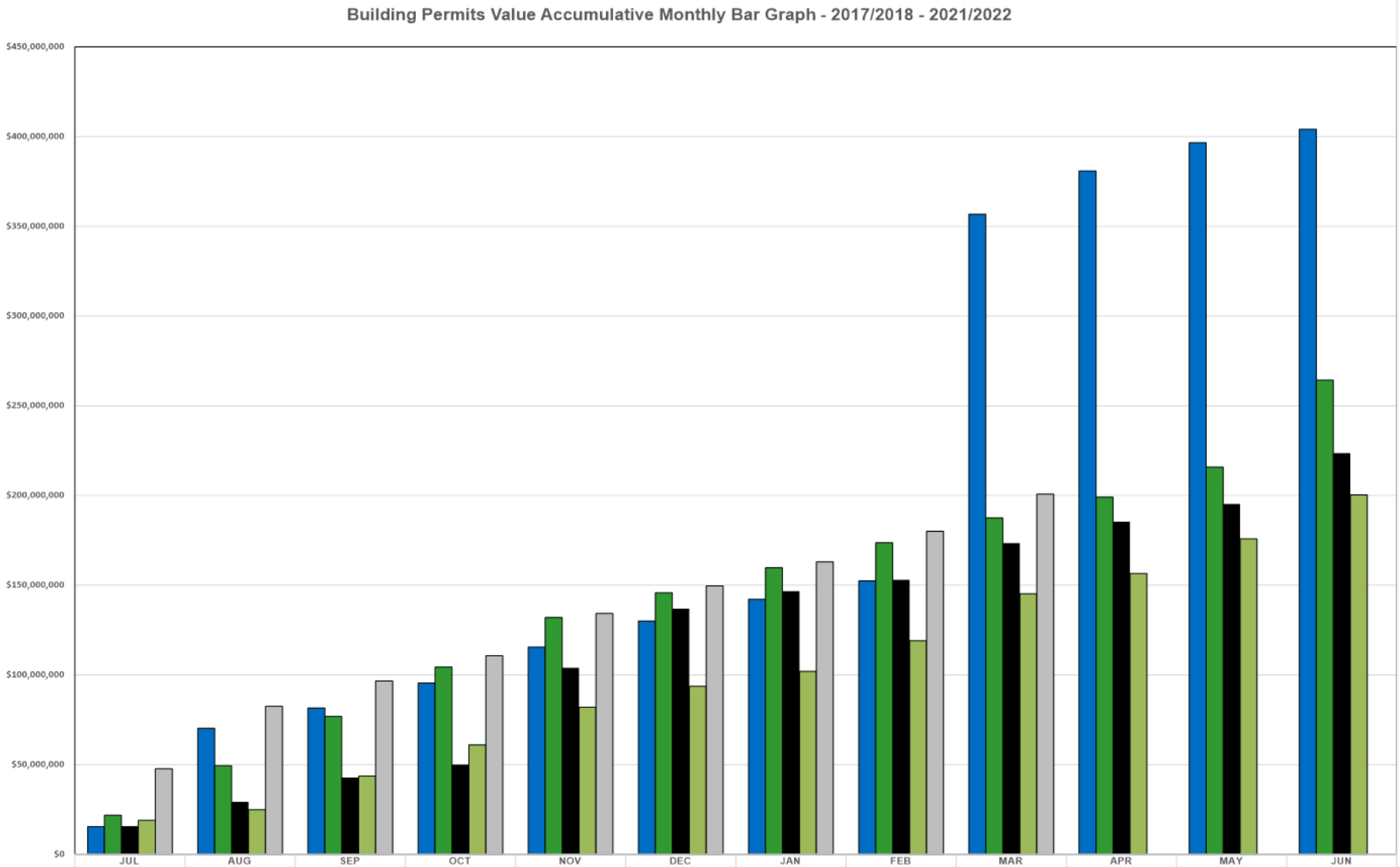
Attachment B: Building Permits Value Accumulative Monthly Bar Graph - Mar 2022 ⇩

Attachment C: Monthly Building Permits Issued Line Graph - Mar 2022 ⇩

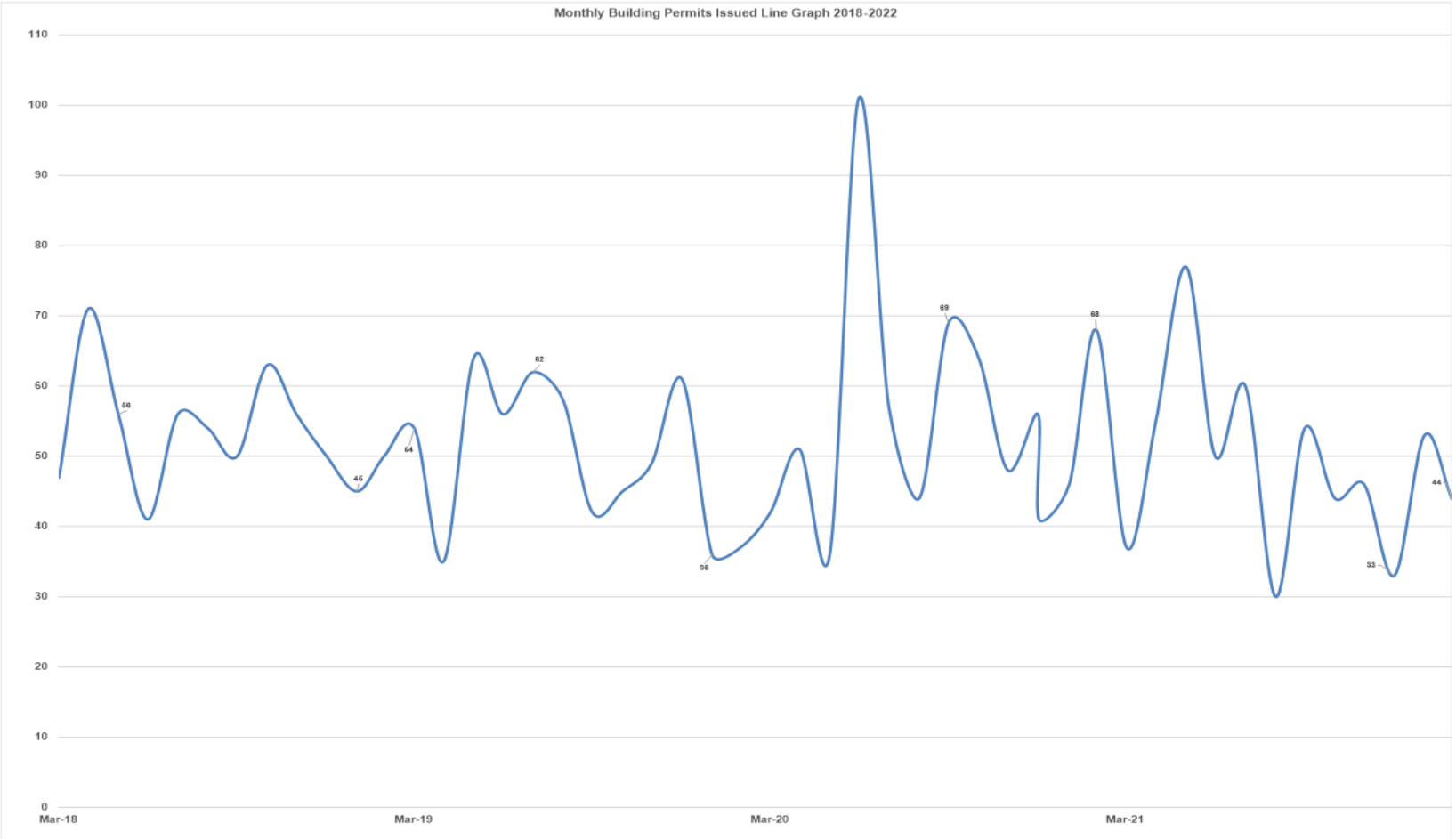
Attachment D: Value of Monthly Building Permits Issued Line Graph - Mar 2022 ⇩

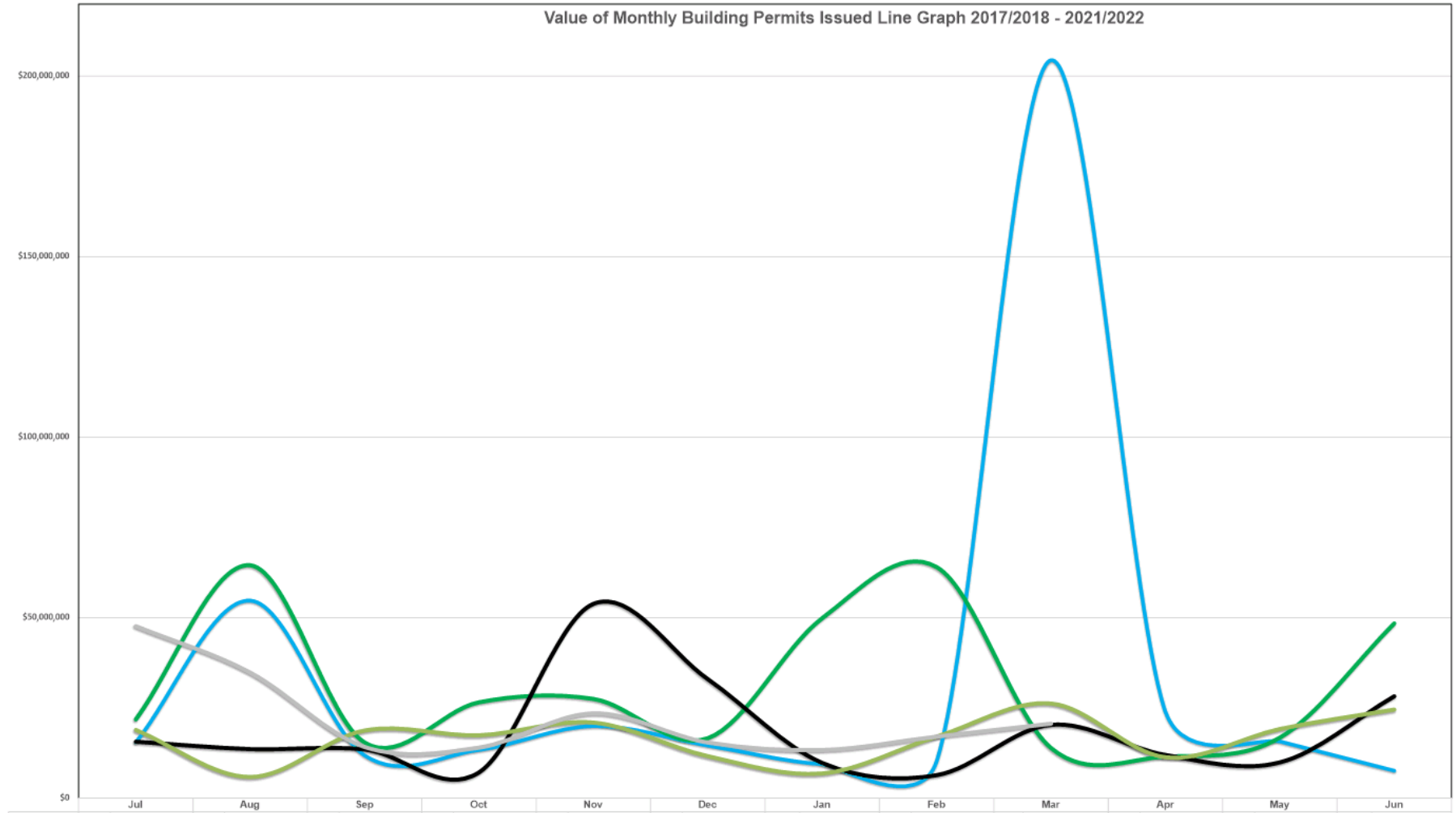


	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
2017/2018	46	134	181	229	289	345	386	432	479	550	606	647
2018/2019	57	113	169	225	281	335	389	443	497	532	596	652
2019/2020	62	120	162	207	256	317	353	390	432	483	519	620
2020/2021	57	101	170	234	282	338	380	426	494	531	586	663
2021/2022	50	110	140	194	238	284	317	370	414			



	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
2017/2018	$15,485,684	$70,232,963	$81,521,760	$95,501,122	$115,506,625	$130,108,667	$142,141,420	$152,449,826	$356,836,990	$380,853,859	$396,591,049	$404,209,241
2018/2019	$21,840,010	$49,365,867	$76,891,724	$104,417,581	$131,943,438	$145,844,470	$159,745,502	$173,646,534	$187,547,566	$199,090,897	$215,895,568	$264,345,999
2019/2020	$15,677,986	$29,299,421	$42,843,016	$50,003,725	$103,866,589	$136,844,014	$146,618,662	$153,024,487	$173,380,897	$185,379,592	$195,326,787	$223,597,790
2020/2021	$18,938,311	$24,830,586	$43,598,155	$61,043,760	$82,002,989	$93,652,468	$101,930,858	$118,993,503	$145,237,089	$156,592,621	$175,780,119	$200,357,830
2021/2022	$47,662,084	$82,474,124	$96,674,516	$110,696,478	$134,211,178	$149,638,560	$162,998,914	$180,068,652	$200,709,360			


Monthly Building Permits Issued Line Graph 2018-2022
110
100
90
80
70
60
50
40
30
20
10
0
Mar-18
Mar-19
Mar-20
Mar-21
66
46
64
62
36
69
68
33
44



	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
2017/2018	$15,485,684	$54,747,279	$11,864,887	$13,403,272	$20,005,503	$14,602,042	$9,425,503	$10,308,406	$204,387,164	$24,016,869	$15,737,190	$7,618,192
2018/2019	$21,840,009	$64,533,121	$15,430,289	$26,573,560	$27,525,857	$16,640,681	$49,887,762	$64,030,867	$13,901,032	$11,543,331	$16,804,671	$48,450,431
2019/2020	$15,677,986	$13,621,435	$13,543,595	$7,160,709	$53,862,864	$32,977,425	$9,774,648	$6,405,825	$20,356,410	$11,998,695	$9,947,195	$28,271,003
2020/2021	$18,938,311	$5,892,275	$18,767,569	$17,445,605	$20,959,229	$11,649,479	$6,878,390	$17,062,645	$26,243,586	$11,355,532	$19,187,498	$24,577,711
2021/2022	$47,662,084	$34,812,040	$14,200,392	$14,021,962	$23,514,700	$15,427,382	$13,360,354	$17,069,738	$20,640,708			

8.2 Monthly Planning Statistics - 1 March - 31 March 2022
File Ref: F22/34662

Memorandum of the Director City Life of 14 April 2022 and attachments.

Delegation: Council

City of HOBART

MEMORANDUM: CITY PLANNING COMMITTEE

Monthly Planning Statistics - 1 March - 31 March 2022

Attached is the Planning Permit statistics for the period 1 March 2022 – 31 March 2022.

RECOMMENDATION

That:

The Director City Life reports:

Planning Statistical Report:

During the period 1 March 2022 to 31 March 2022, 58 permits were issued to the value of $30,149,300 which included:

(i) 9 new single dwellings to the value of $5,690,100

(ii) 17 multiple dwellings to the value of $10,750,000;

(iii) 25 extensions/alterations to dwellings to the value of $4,736,580

(iv) 6 extensions/alterations to commercial properties to the value of $8,668,000;

(v) 2 major projects;

(a) 2 Sayer Crescent, Sandy Bay - Demolition, New Building for 14 Multiple Dwellings, and Associated Works - $10,000,000;
(b) 111-115 Macquarie Street, Hobart - Partial Demolition, Alterations and Extension and Signage - $4,000,000

During the period 1 March 2021 to 31 March 2021, 82 permits were issued to the value of $80,184,807 which included:

(i) 8 new single dwellings to the value of $3,969,482;

(ii) 9 multiple dwellings to the value of $2,470,000;

(iii) 36 extensions/alterations to dwellings to the value of $5,555,250;

(iv) 15 extensions/alterations to commercial properties to the value of $8,863,075;

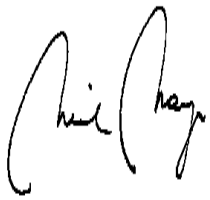
(v) 2 major projects;

(a) 46 New Town Road, New Town - Demolition, New Building for Hospital Services, Business and Professional Services, and General Retail and Hire, Signage, and Associated Works - $60,000,000;
(b) 10 Edward Street (Also known as 2 Edward Street), Glebe - Partial Demolition, Alterations and Change of Use to Educational and Occasional Care - $5,500,000

In the twelve months ending March 2022, 709 permits were issued to the value of $255,778,083; and

In the twelve months ending March 2021, 785 permits were issued to the value of $333,402,852.

 # This report includes permits issued, exempt and no permit required decisions.
As signatory to this report, I certify that, pursuant to Section 55(1) of the Local Government Act 1993, I hold no interest, as referred to in Section 49 of the Local Government Act 1993, in matters contained in this report.

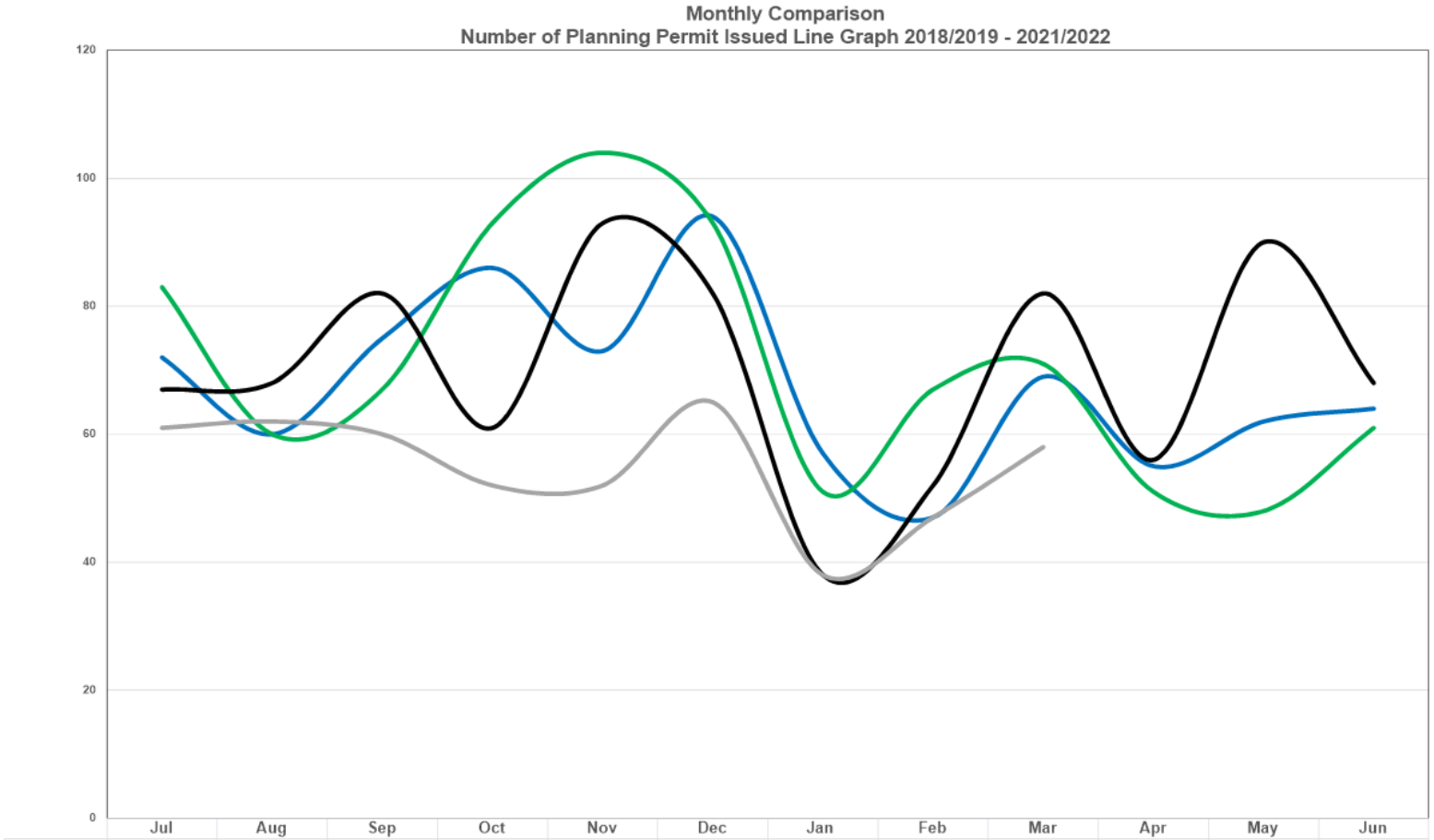


Neil Noye
DIRECTOR CITY LIFE

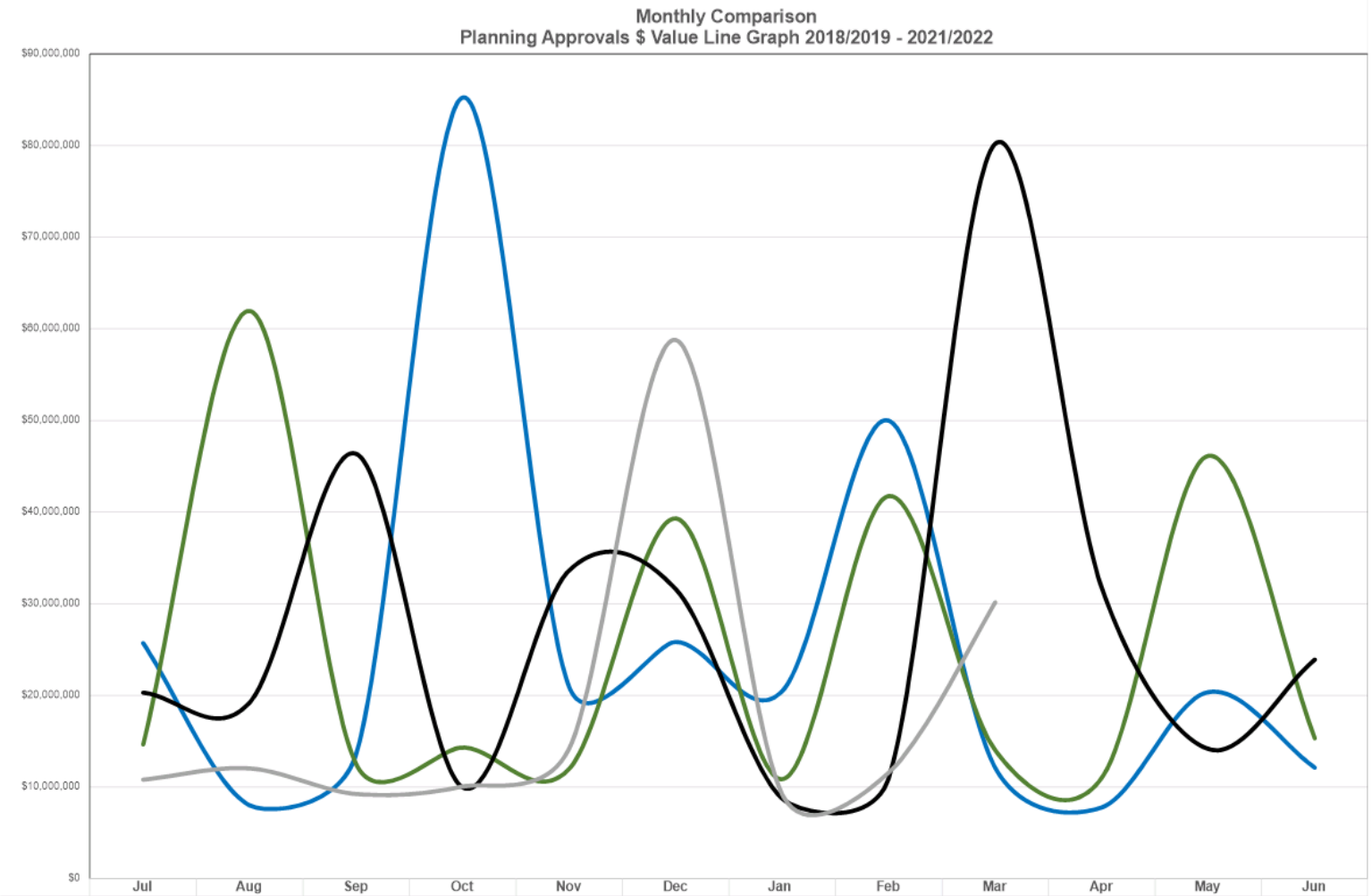
Date: 14 April 2022
File Reference: F22/34662

Attachment A: Monthly Comparison Number of Planning Permit Issued Line Graph Mar 2022 ⇩
Attachment B: Monthly Comparison Planning Approvals Value Line Graph Mar 2022 ⇩
Attachment C: Number of Planning Permit Issued Accumulative Monthly Comparison Bar Graph Mar 2022 ⇩

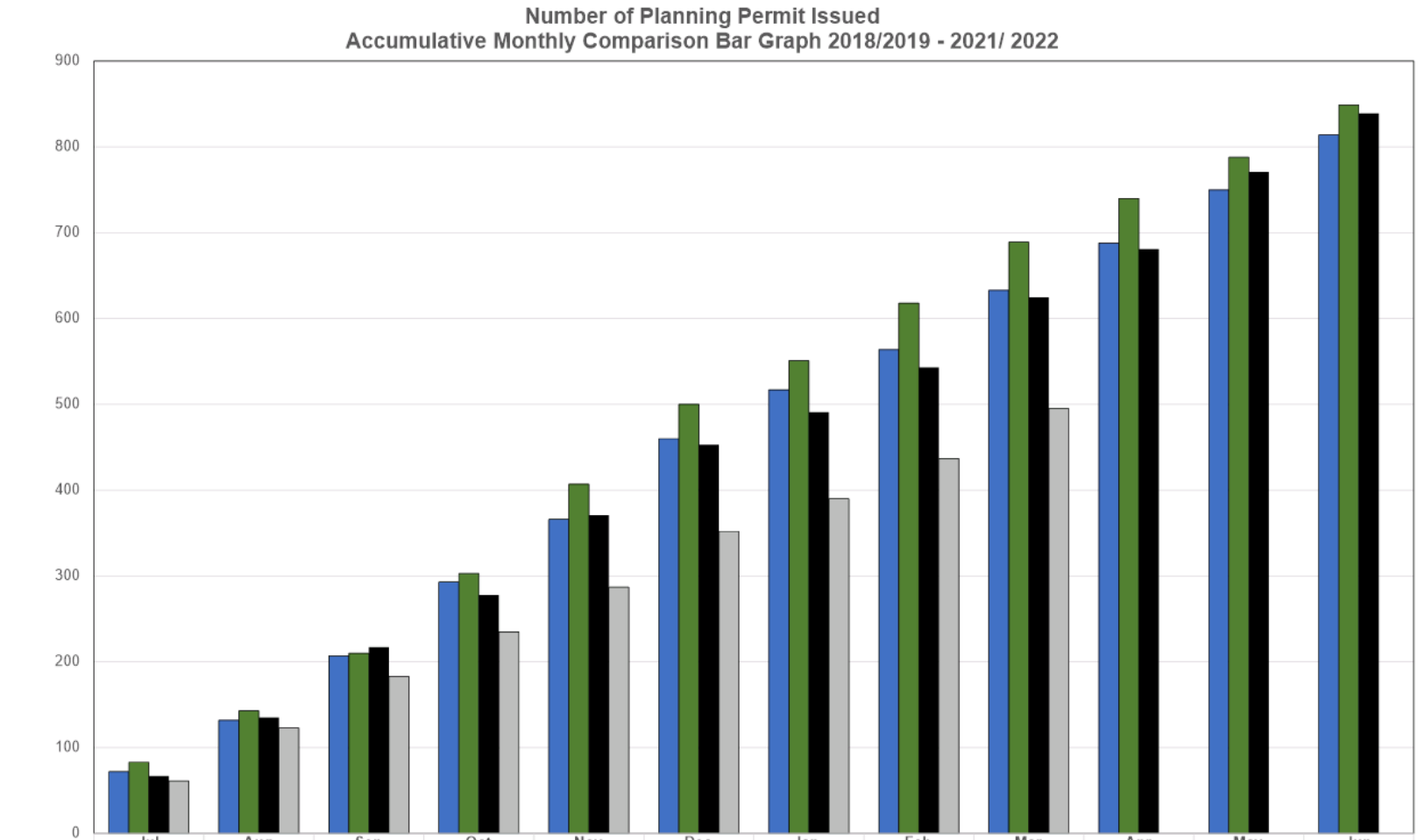
Attachment D: Value of Planning Permit Issued Bar Graph Mar 2022 ⇩



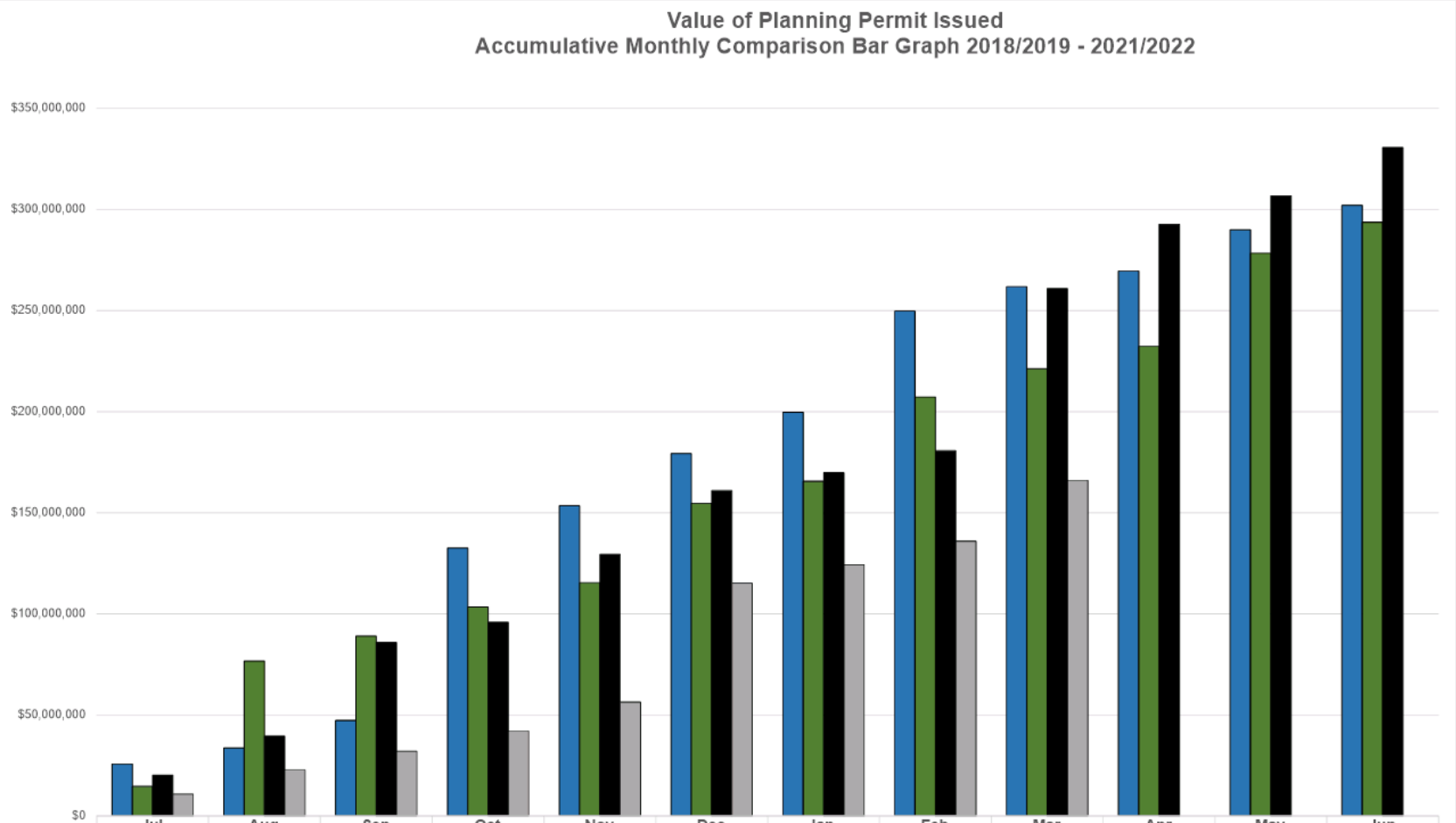
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
2018/2019	72	60	75	86	73	94	57	47	69	55	62	64
2019/2020	83	60	67	93	104	93	51	67	71	51	48	61
2020/2021	67	68	82	61	93	82	38	52	82	56	90	68
2021/2022	61	62	60	52	52	65	38	47	58			



	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
2018/2019	$25,704,519	$7,991,946	$13,607,534	$85,236,845	$20,894,807	$25,836,162	$20,454,000	$49,974,500	$12,099,600	$7,772,406	$20,353,976	$12,103,722
2019/2020	$14,638,209	$61,943,626	$12,465,100	$14,324,895	$11,989,263	$39,301,145	$10,858,195	$41,737,040	$14,000,573	$10,982,600	$46,131,446	$15,312,758
2020/2021	$20,301,927	$19,228,200	$46,353,725	$9,955,300	$33,647,300	$31,591,689	$8,726,000	$10,987,100	$80,184,807	$31,718,510	$14,148,684	$23,893,387
2021/2022	$10,800,580	$12,028,590	$9,234,226	$10,060,235	$14,204,050	$58,775,140	$9,202,311	$11,562,440	$30,149,930			



	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
2018/2019	72	132	207	293	366	460	517	564	633	688	750	814
2019/2020	83	143	210	303	407	500	551	618	689	740	788	849
2020/2021	67	135	217	278	371	453	491	543	625	681	771	839
2021/2022	61	123	183	235	287	352	390	437	495			



	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
2018/2019	$25,704,519	$33,696,465	$47,303,999	$132,540,844	$153,435,651	$179,271,813	$199,725,813	$249,700,313	$261,799,913	$269,572,319	$289,926,295	$302,030,017
2019/2020	$14,638,209	$76,581,835	$89,046,935	$103,371,830	$115,361,093	$154,662,238	$165,520,433	$207,257,473	$221,258,046	$232,240,646	$278,372,092	$293,684,850
2020/2021	$20,301,927	$39,530,127	$85,883,852	$95,839,152	$129,486,452	$161,078,141	$169,804,141	$180,791,241	$260,976,048	$292,694,558	$306,843,242	$330,736,629
2021/2022	$10,800,580	$22,829,170	$32,063,396	$42,123,631	$56,327,681	$115,102,821	$124,305,132	$135,867,572	$166,017,502			

8.3 City Planning - Advertising Report
File Ref: F22/32335

Memorandum of the Director City Life of 6 April 2022 and attachment.

Delegation: Committee

City of HOBART

MEMORANDUM: CITY PLANNING COMMITTEE

City Planning - Advertising Report

Attached is the advertising list for the period 23 March 2022 to 4 April 2022.

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 LIFE

Date: 6 April 2022
File Reference: F22/32335

Attachment A: City Planning - Advertising Report ⇩

Application	Street	Suburb	Development	Works Value	Expiry Date	Referral	Proposed Delegation	Advertising Period Start	Advertising Period End
PLN-22-78	23 MARIEVILLE ESPLANADE	SANDY BAY	Replacement of Existing Pontoon and Jetty, and Installation of New Floating Pontoon Jetty	$95,000	03/05/2022	baconr	Council (Council Land)	28/03/2022	11/04/2022
PLN-22-159	3 / 37 REGENT STREET	SANDY BAY	Change of Use to Visitor Accommodation	$0	06/05/2022	baconr	Council (Called In)	31/03/2022	14/04/2022
PLN-22-31	1 / 19 MACFARLANE STREET	SOUTH HOBART	Partial Demolition, Alterations, Extension and New Car Parking Spaces and Outbuilding	$200,000	03/05/2022	baconr	Director	01/04/2022	16/04/2022
PLN-22-154	2 / 5 - 7 EDWARD STREET	GLEBE	Partial Change of Use to Visitor Accommodation	$2,000	17/05/2022	langd	Council (Called In)	29/03/2022	12/04/2022
PLN-22-155	3 / 5 - 7 EDWARD STREET	GLEBE	Partial Change of Use to Visitor Accommodation	$2,000	17/05/2022	langd	Council (Called In)	29/03/2022	12/04/2022
PLN-22-103	20 DAVENPORT STREET	GLEBE	Partial Demolition, Alterations, and Extension	$300,000	13/05/2022	langd	Director	01/04/2022	16/04/2022
PLN-21-873	7 NORFOLK CRESCENT	SANDY BAY	Partial Demolition, Alterations, Extension, Carport and Workshop	$500,000	25/04/2022	maxwellv	Director	23/03/2022	06/04/2022

Application	Street	Suburb	Development	Works Value	Expiry Date	Referral	Proposed Delegation	Advertising Period Start	Advertising Period End
PLN-22-124	369 HUON ROAD	SOUTH HOBART	Partial Demolition, Alterations, and Swimming Pool	$50,000	19/04/2022	maxwellv	Director	28/03/2022	11/04/2022
PLN-22-91	98 - 102 ELIZABETH STREET	HOBART	Alterations & Partial Change of Use to Business and Professional Services	$20,000	13/04/2022	mcclenahanm	Director	23/03/2022	06/04/2022
PLN-22-123	2 BEALEY AVENUE	LENAH VALLEY	Partial Demolition Alterations and Extension	$100,000	27/04/2022	mcclenahanm	Director	24/03/2022	07/04/2022
PLN-21-869	83 MELVILLE STREET	HOBART	Partial Demolition, Alterations, Extension, Change of Use to Educational and Occasional Care, and Associated Works in Road Reserve	$85,900,000	03/05/2022	mcclenahanm	Council (Major Development)	27/03/2022	10/04/2022
PLN-22-152	41 LOCHNER STREET	WEST HOBART	Change of Use to Visitor Accommodation	$0	10/05/2022	mcclenahanm	Council (Called In)	31/03/2022	14/04/2022
PLN-22-37	220 CAMPBELL STREET	NORTH HOBART	Carport	$10,000	14/04/2022	ockendenl	Director	24/03/2022	07/04/2022
PLN-22-94	378 PARK STREET	NEW TOWN	Extension and Alterations	$150,000	29/04/2022	ockendenl	Director	28/03/2022	11/04/2022

Application	Street	Suburb	Development	Works Value	Expiry Date	Referral	Proposed Delegation	Advertising Period Start	Advertising Period End
PLN-22-134	1 POWELL STREET	SANDY BAY	Partial Demolition, Alterations, and Extension	$400,000	26/04/2022	ockendenl	Director	31/03/2022	14/04/2022
PLN-21-734	1 MCVILLY DRIVE	HOBART	Partial Demolition, Extension, Alterations and Associated Works for Partial Change of Use to Light Industry (Whisky Distillery), Eating Establishment, Function Centre, Hotel and Shop	$15,000,000	05/05/2022	sherriffc	Council (Council Land)	28/03/2022	11/04/2022
PLN-21-718	156 NEW TOWN ROAD	NEW TOWN	Demolition, Subdivision (Lot Consolidation), and New Building for 19 Multiple Dwellings and Fitness Centre (Sports and Recreation)	$7,000,000	06/05/2022	smeea	Council (Major Development)	24/03/2022	07/04/2022
PLN-22-105	649 B NELSON ROAD	MOUNT NELSON	Dwelling and Associated Works	$120,000	21/04/2022	smeea	Council (Council Land)	31/03/2022	14/04/2022
PLN-22-156	72 KING STREET	SANDY BAY	Partial Demolition, Alterations, and Extension	$35,000	04/05/2022	smeea	Director	01/04/2022	16/04/2022
PLN-21-667	1 LONGVIEW AVENUE	SANDY BAY	Alterations, Retaining Wall, and Fencing	$70,000	20/04/2022	smeea	Director	04/04/2022	21/04/2022

Application	Street	Suburb	Development	Works Value	Expiry Date	Referral	Proposed Delegation	Advertising Period Start	Advertising Period End
PLN-20-651	209 - 213 HARRINGTON STREET	HOBART	Demolition, New Building for Food Services, Signage, Subdivision (Lot Consolidation), and Associated Works	$1,500,000	28/04/2022	widdowsont	Director	31/03/2022	14/04/2022
PLN-22-147	117 WARWICK STREET	WEST HOBART	Change of Use to Visitor Accommodation	$0	09/05/2022	widdowsont	Director	04/04/2022	21/04/2022

8.4 Delegated Decision Report (Planning)
File Ref: F22/35365

Memorandum of the Director City Life of 14 April 2022 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 28 March 2022 to 14 April 2022.

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 LIFE

Date: 14 April 2022
File Reference: F22/35365

Attachment A: Delegated Decision Report (Planning) ⇩

14 April 2022

Delegated Decisions Report (Planning)

37 applications found.

Approved All

Planning Description	Address	Works Value	Decision	Authority
PLN-21-153 Outbuilding (Garage)	6 FREDERICK STREET WEST HOBART TAS 7000	$ 15,000	Approved	Delegated
PLN-21-543 Swimming Pool	12 BOA VISTA ROAD NEW TOWN TAS 7008	$ 80,000	Approved	Delegated
PLN-21-621 Dwelling	41 HILLCREST ROAD TOLMANS HILL TAS 7007	$ 900,000	Approved	Delegated
PLN-21-630 Dwelling	8 WOODCUTTERS ROAD TOLMANS HILL TAS 7007	$ 400,000	Approved	Delegated
PLN-21-632 Change of Use to Visitor Accommodation	207 BRISBANE STREET WEST HOBART TAS 7000	$ 5,000	Approved	Delegated
PLN-21-657 Dwelling	21 BEAUMONT ROAD LENAH VALLEY TAS 7008	$ 290,000	Approved	Delegated
PLN-21-732 Dwelling	9 HEARTWOOD ROAD LENAH VALLEY TAS 7008	$ 371,000	Approved	Delegated
PLN-21-814 Partial Demolition, Alterations and Extension	21 LOCHNER STREET WEST HOBART TAS 7000	$ 310,000	Approved	Delegated
PLN-22-101 Partial Demolition, Alterations and Extension	182 BRISBANE STREET WEST HOBART TAS 7000	$ 120,000	Approved	Delegated
PLN-22-104 Partial Demolition and Alterations	2/54 RIALANNAH ROAD MOUNT NELSON TAS 7007	$ 20,000	Approved	Delegated
PLN-22-110 Front Fencing	8 QUORN STREET SANDY BAY TAS 7005	$ 15,000	Approved	Delegated
PLN-22-113 Swimming Pool	19 FARADAY STREET WEST HOBART TAS 7000	$ 100,000	Approved	Delegated
PLN-22-116 Signage	60 LIVERPOOL STREET HOBART TAS 7000	$ 0	Approved	Delegated
PLN-22-121 Outbuildings (Garage and Shed)	10-12 BRAMBLE STREET RIDGEWAY TAS 7054	$ 20,000	Approved	Delegated
PLN-22-122 Partial Demolition, Alterations, and Extensions	650 HUON ROAD FERN TREE TAS 7054	$ 450,000	Approved	Delegated
PLN-22-123 Partial Demolition Alterations and Extension	2 BEALEY AVENUE LENAH VALLEY TAS 7008	$ 100,000	Approved	Delegated
PLN-22-136 Partial Demolition, Alterations, and Extension	19 MCCANN CRESCENT LENAH VALLEY TAS 7008	$ 200,000	Approved	Delegated
PLN-22-14 Partial Demolition, Alterations, Extension, Swimming Pool and Front Fencing	171 BATHURST STREET HOBART TAS 7000	$ 275,000	Approved	Delegated
PLN-22-148 Change of Use to Visitor Accommodation (Three Units)	183 MELVILLE STREET WEST HOBART TAS 7000	$ 0	Approved	Delegated
PLN-22-150 Partial Demolition, Alterations, and Partial Change of Use to Business and Professional Services	98-102 ELIZABETH STREET HOBART TAS 7000	$ 20,000	Approved	Delegated
PLN-22-164 Change of Use to Visitor Accommodation	240 MACQUARIE STREET HOBART TAS 7000	$ 0	Approved	Delegated
PLN-22-165 Change of Use to Visitor Accommodation	86 NEW TOWN ROAD NEW TOWN TAS 7008	$ 0	Approved	Delegated
PLN-22-187 Alterations	2/7 CHESSINGTON COURT SANDY BAY TAS 7005	$ 12,250	Approved	Delegated
PLN-22-199 Change of Use to Visitor Accommodation	117 HILL STREET WEST HOBART TAS 7000	$ 0	Approved	Delegated
PLN-22-39 Extension (deck)	2/17 SUSAN PARADE LENAH VALLEY TAS 7008	$ 5,000	Approved	Delegated

Planning Description	Address	Works Value	Decision	Authority
PLN-22-47 Dwelling	14 WOODCUTTERS ROAD TOLMANS HILL TAS 7007	$ 500,000	Approved	Delegated
PLN-22-57 Partial Demolition, Alteration, Extension and Carport	36 PROCTORS ROAD DYNNYRNE TAS 7005	$ 250,000	Approved	Delegated
PLN-22-67 Change of Use to Visitor Accommodation	228 BATHURST STREET WEST HOBART TAS 7000	$ 0	Approved	Delegated
PLN-22-7 Partial Demolition, Alterations and Extension	486 SANDY BAY ROAD SANDY BAY TAS 7005	$ 200,000	Approved	Delegated
PLN-22-72 Partial Demolition, Alterations and Extension	368 MACQUARIE STREET SOUTH HOBART TAS 7004	$ 175,000	Approved	Delegated
PLN-22-73 Partial Demolition, Alterations and Signage	527 SANDY BAY ROAD SANDY BAY TAS 7005	$ 48,000	Approved	Delegated
PLN-22-74 Extension	4 ALFRED STREET NEW TOWN TAS 7008	$ 70,000	Approved	Delegated
PLN-22-8 Partial Demolition, Alterations and Extension	7 WYNYARD STREET SOUTH HOBART TAS 7004	$ 150,000	Approved	Delegated
PLN-22-85 Partial Demolition, Alterations and Change of Use to Two Multiple Dwellings and Two Home-Based Businesses	187-195 SANDY BAY ROAD SANDY BAY TAS 7005	$ 45,000	Approved	Delegated
PLN-22-86 Change of Use to Visitor Accommodation	8/9 SACKVILLE STREET HOBART TAS 7000	$ 0	Approved	Delegated
PLN-22-89 Partial Demolition, Alterations and Extension	14 SHORT STREET GLEBE TAS 7000	$ 150,000	Approved	Delegated
PLN-22-94 Extension and Alterations	378 PARK STREET NEW TOWN TAS 7008	$ 150,000	Approved	Delegated

9. 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.

10. CLOSED PORTION OF THE MEETING

That the Committee resolve by majority that the meeting be closed to the public pursuant to regulation 15(1) of the *Local Government (Meeting Procedures) Regulations 2015* because the items included on the closed agenda contain the following matters:

- Confirm the minutes of the Closed portion of the meeting
- Questions without notice in the Closed portion

The following items were discussed: -

Item No. 1	Minutes of the last meeting of the Closed Portion of the Committee Meeting
Item No. 2	Consideration of supplementary items to the agenda
Item No. 3	Indications of pecuniary and conflicts of interest
Item No. 4	Questions Without Notice