



CITY OF HOBART

AGENDA

Planning Committee Meeting
Open Portion
Wednesday, 15 February 2023
at 5:00 pm
Council Chamber, Town Hall



City of **HOBART**

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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Planning Committee Meeting (Open Portion) held Wednesday, 15 February 2023 at 5:00 pm in the Council Chamber, Town Hall.

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

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

COMMITTEE MEMBERS

Alderman S Behrakis (Chairman)
Lord Mayor Councillor A M Reynolds
Deputy Lord Mayor Councillor H Burnet
Alderman M Zucco
Councillor W F Harvey
Councillor M Dutta
Councillor Dr Z Sherlock
Councillor J Kelly
Councillor L Elliot
Alderman L Bloomfield
Councillor R Posselt
Councillor B Lohberger

Apologies:

Leave of Absence: Nil.

1. CONFIRMATION OF MINUTES

The minutes of the Open Portion of the Planning Committee meeting held on [Wednesday, 1 February 2023](#), are submitted for confirming as an accurate record.

2. 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.

3. 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.

4. 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?

5. 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.

6. 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.

6.1 APPLICATIONS UNDER THE HOBART INTERIM PLANNING SCHEME 2015

6.1.1 4-10 ST JOHNS AVENUE, NEW TOWN - PARTIAL DEMOLITION, ALTERATIONS, FENCING AND TWO NEW NETBALL COURTS PLN-21-809 - FILE REF: F23/12576

Address: 4-10 St Johns Avenue, New Town

Proposal: Partial Demolition, Alterations, Fencing and Two New Netball Courts

Expiry Date: 21 February 2023

Extension of Time:

Author: Deanne Lang

RECOMMENDATION

That pursuant to the *Hobart Interim Planning Scheme 2015*, the Planning Committee, in accordance with the delegations contained in its terms of reference, approves the application for Partial Demolition, Alterations, Fencing and Two New Netball Courts at 4-10 St Johns Avenue, New Town for the reasons outlined in the officer's report and a permit containing the following conditions be issued:

GEN

The use and/or development must be substantially in accordance with the documents and drawings that comprise PLN-21-809 - 4-10 ST JOHNS AVENUE NEW TOWN TAS 7008 - Final Planning Documents except where modified below.

Reason for condition

To clarify the scope of the permit.

ENG sw1

All stormwater from the proposed development (including but not limited to: roofed areas, ag drains 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 7

Prior to occupancy or the commencement of the use (whichever occurs first), any alterations to the existing connections required by the final design must be constructed and existing redundant connection(s) be abandoned and sealed at the owner's expense.

Prior to the issuing of any approval under the *Building Act 2016* or commencement of works (whichever occurs first), detailed engineering drawings must be submitted and approved. The detailed engineering drawings must include:

- 1. the location of the proposed connections and all existing connections;**
- 2. the size and design of the connection such that it is appropriate to safely service the development;**
- 3. clearances from any nearby obstacles (eg services, crossovers, trees, poles, walls)**
- 4. long-sections of the proposed connection clearly showing cover, size, grade, material and delineation of public and private infrastructure;**
- 5. connections which are free-flowing gravity driven.**
- 6. be in general accordance with Council's departures from the LGAT Tasmanian Standard Drawings, available from [our website](#)**

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

Advice:

Upgraded or new connections can be approved either via the CEP process or via the Application for New Connection form available from [here](#). The approved stormwater connection documents must be included in your plumbing permit application document set and listed in accompanying forms.

SW 9

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

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

- 1. include detailed design of the proposed treatment train, including final estimations of contaminant removal;**
- 2. include detailed design and supporting calculations of the detention tank showing:**
 - 1. detention tank sizing such that there is no increase in flows from the developed site up to 5% AEP event and no worsening of flooding;**
 - 2. the layout, the inlet and outlet (including long section), outlet size, overflow mechanism and invert level;**
 - 3. the discharge rates and emptying times; and**
 - 4. all assumptions must be clearly stated;**
- 3. include a supporting maintenance plan, which specifies the required maintenance measures to check and ensure the ongoing effective operation of all systems, such as: inspection frequency; cleanout procedures; descriptions and diagrams of how the installed systems operate; details of the life of assets and replacement requirements.**

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

Advice:

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 runoff from the site enters the New Town Rivulet, and all cleaning chemicals etc used on the courts must be chosen accordingly.

Council accepts the proposed detention and treatment designs in principle, however notes it may be more efficient if equivalent treatment / detention were installed elsewhere on the site.

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, 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.

ADVICE

The following advice is provided to you to assist in the implementation of the planning permit that has been issued subject to the conditions

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

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

BUILDING PERMIT

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

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

PLUMBING PERMIT

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

NOISE REGULATIONS


Click [here](#) for information with respect to noise nuisances in residential areas.


FEES AND CHARGES


Click [here](#) for information on the Council's fees and charges.

DIAL BEFORE YOU DIG

Click [here](#) for dial before you dig information.

Attachment A: PLN-21-809 - 4-10 ST JOHNS AVENUE NEW TOWN TAS 7008 - Planning Committee or Delegated Report ↓ 

Attachment B: PLN-21-809 - 4-10 ST JOHNS AVENUE NEW TOWN TAS 7008 - Attachment B - Planning Committee Agenda Documents ↓ 

Attachment C: PLN-21-809 - 4-10 ST JOHNS AVENUE NEW
TOWN TAS 7008 - Attachment C - Planning
Referral Officer Cultural Heritage Report ↓ 

**APPLICATION UNDER HOBART INTERIM PLANNING SCHEME 2015**

Type of Report: Committee
Council: 15 February 2023
Expiry Date: 21 February 2024
Application No: PLN-21-809
Address: 4 - 10 ST JOHNS AVENUE , NEW TOWN
Applicant: Dean Jackson (STNA)
Cnr Creek Road and New Town Road
Proposal: Partial Demolition, Alterations, Fencing and Two New Netball Courts
Representations: Nil
Performance criteria: E7.0 Stormwater Management Code, E13.0 Historic Heritage Code

1. Executive Summary

- 1.1 Planning approval is sought for Partial Demolition, Alterations, Fencing and Two New Netball Courts, at 4 -10 St Johns Avenue New Town.
- 1.2 More specifically the proposal includes:
- Conversion of one of the bowling greens to two netball courts;
 - Excavation and re-grading of the bowling green to be converted to 2 netball courts to approximately 150mm depth;
 - Installation of new base, grated drain, asphalt and Plexipave surface to the proposed netball courts;
 - Erection of a 3.0m high galvanised chain wire fence with a top rail and two gates on the property's frontage to New Town Road;
 - Installation of four netball posts;
 - Replacement of existing grass with artificial grass on existing bowling green 2; and
 - Installation of 3 2.2m x 36m shading structures along three side of bowling green 2.
- 1.3 The proposal relies on performance criteria to satisfy the following standards and codes:
- 1.3.1 E7.0 Stormwater Management Code
1.3.2 E13.0 Historic Heritage Code - Heritage Place

- 1.4 No representations were received during the statutory advertising period between 10-24 January 2023.
- 1.5 The proposal is recommended for approval subject to conditions.
- 1.6 The final decision is delegated to the Council, because the development is proposed on Council owned land.

2. Site Detail

- 2.1 The subject site is the bowling green at 4-10 St Johns Avenue, fronting onto New Town Road.



Fig. 1. Subject site, 4-10 New Town Road. Source: HCC GIS.



Fig. 2 - existing bowling green which is proposed to be converted to two (2) netball courts - note the existing netball courts in the back ground - photo taken by the Development Appraisal Planner

3. Proposal

- 3.1 Planning approval is sought for Partial Demolition, Alterations, Fencing and Two New Netball Courts, at 1-4 St Johns Avenue New Town.

3.2 More specifically the proposal includes:

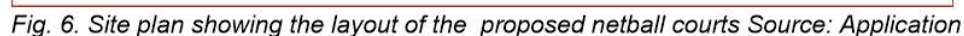
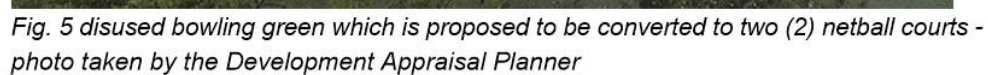
- Conversion of one of the bowling greens to two netball courts;
- Excavation and re-grading of bowling green to be converted to 2 netball courts to approximately 150mm depth;
- Installation of new base, grated drain, asphalt and Plexipave surface to the proposed netball courts;
- Erection of a 3.0m high galvanised chain wire fence with a top rail and two gates on the property's frontage to New Town Road;
- Installation of four netball posts;
- Replacement of existing grass with artificial grass on existing bowling green 2; and
- Installation of 3 2.2m x 36m shading structures along three side of bowling green 2.



Fig. 3. Site plan showing the bowling green to be converted to two netball courts, and the location of the proposed galvanised chain wire fence. Source: Application documents.



Fig. 4- disused bowling green (no. 3) is proposed to be converted to two (2)) netball courts. Bowling green (2) is proposed to be resurfaced with artificial turf -Source: Application Documents



documents.



Fig. 7 - Existing bowls green 2 which will be resurfaced with artificial turf - photo taken by the Development Appraisal Planner



Fig. 8- Existing/proposed vehicle access to the existing and proposed netball courts photo taken by the Development Appraisal Planner

4. Background

- 4.1 General Manager Consent to the making of the planning application has been granted (GMC-21-66).

5. Concerns raised by representors

- 5.1 No representations were received during the statutory advertising period between 10-24 January 2023.

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 Recreation Zone of the *Hobart Interim Planning Scheme 2015*.

6.3 The existing and proposed use is Sports and Recreation, which is a no permit required use in the zone.

6.4 The proposal has been assessed against:

6.4.1 Part D - 18.0 Recreation Zone Standards

6.4.2 Part E - 6.0 Parking and Access Code

6.4.3 Part E - 7.0 Stormwater Management Code

6.4.4 Part E - 13.0 Historic Heritage Code

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

6.5.2 Stormwater Management Code Code:

Stormwater Drainage and Disposal- E7.7.1P2

6.5.3 Historic Heritage Code:

Building and Works on a Listed Place - E13.7.1 P1

6.6 Each performance criterion is assessed below.

6.7 E7.0 Stormwater Management Code Part E7.7.1P2

6.7.1 The acceptable solution at clause E7.7.1A1 requires that any new impervious area over 600sqm must incorporate a stormwater system which include water sensitive urban design principles for the treatment and disposal of stormwater.

6.7.2 The proposal includes a new impervious area of approximately 1500sqm in area which does not incorporate a stormwater system which includes water sensitive urban design principles for the treatment and disposal of stormwater.

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 E7.7.1P2 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.

6.7.5 The objective of the standards of stormwater drainage and disposal requirements within the scheme are to ensure that stormwater quality and quantity is managed appropriately.

The application was referred to Council's Environmental Engineering Unit who assessed the proposal and advised that the proposal meets and can be supported under the relevant performance criteria.

6.7.6 The proposal complies with the performance criterion.

6.8 Historic Heritage Code - Building and Works on a Listed Place - Clause E.13.7.1 P1, E.13.7.2 P1, P2, P3 and P5

6.8.1 There are no acceptable solutions for partial demolition or works to a listed place.

6.8.2 The proposal includes the conversion of the existing bowling green to two new netball courts, minor excavation and fencing.

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

6.8.4 The relevant performance criteria provide as follows:

E.13.7.1 P1:

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

(a) there are, environmental, social, economic or safety reasons of

greater value to the community than the historic cultural heritage values of the place;

(b) there are no prudent and feasible alternatives;

(c) important structural or façade elements that can feasibly be retained and reused in a new structure, are to be retained;

(d) significant fabric is documented before demolition.

E.13.7.2 P1

Development must not result in any of the following:

(a) loss of historic cultural heritage significance to the place through incompatible design, including in height, scale, bulk, form, fenestration, siting, materials, colours and finishes;

(b) substantial diminution of the historic cultural heritage significance of the place through loss of significant streetscape elements including plants, trees, fences, walls, paths, outbuildings and other items that contribute to the significance of the place.

E.13.7.2 P2

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

(a) scale and bulk, materials, built form and fenestration;

(b) setback from frontage;

(c) siting with respect to buildings, structures and listed elements;

(d) using less dominant materials and colours.

E.13.7.3 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.

- 6.8.5 The objective of the heritage provisions under the scheme is to ensure that development to a heritage place is undertaken in a sympathetic manner, which does not cause a loss of historic cultural heritage significance and is subservient to the historic cultural values of the place.

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

This application is for works to a place heritage listed in Table E13.1 of

the Historic Heritage Code of the Scheme. The listing in Table E13.1 (No. 3003) describes the site as the St John's Bowling Club, however this is not correct as that bowls club is located within and covered by the St John's Park site listing in Table E13.1 (No. 3002) in the Historic Heritage Code of the Scheme.

That aside, the subject site (No. 3003) was identified in the New Town and Lenah Valley Significant Garden Study and the datasheet (Ref G81) prepared as part of the study specifically describes the collective nature of the landscapes within the St John's Park site, avenues of trees, planting associated with the John Edis centre and the bowls club including its 'prominent fence and concrete retaining wall.' It can therefore be confirmed that the heritage listed site is that defined as having the title 149031/1, but also the elements described and those of within the larger St John's Park site on other titles.

The proposal is for the conversion of one of the three bowling greens associated with the Buckingham Bowls Club into netball courts. The site is shown in the image below. The bowling green to be developed is the one closest to the existing netball courts located on the corner of Creek Road and New Town Road.



Subject site for the proposed netball court shown by red line with masonry heritage fence to the left.

The adjacent (or middle) bowling green is to be resurfaced and have new shade structures.

The heritage listed land parcel identified by the Scheme listing captures the part of the site that is the subject of this current application. However, the masonry fence identified in the datasheet is further along New Town Road and off-centre from the bowling green to be modified as a netball court. The middle part of the subject site (bowling green 2) will remain as a bowling green and is to be resurfaced and have new shade structure. That part of the subject site is located behind the masonry heritage fence.

The proposal involves demolition and new work.

The demolition involves the removal of the following elements:

- removal of the playing surface of the bowling green from grass to Plexipave for the netball courts, minor excavation for drainage and for the construction of 3 metre high fencing and new gates around three side of the courts.
- removal of the surface of bowling green 2 and edges and removal of existing umbrella structures.

The new work involves:

- new playing surface for the netball courts
- fencing and two new gates to the netball court - 3 metres high
- misc path surfaces
- new playing surface to the bowling green
- three new cantilever shade structures around the edge of the bowling green.

The proposal must be assessed against E13.7.1 P1 - demolition at a heritage place and E13.7.2 P1, P2, P3 new work at a heritage place. It should be noted that while there is a new fence, it is not a new 'front fence and gate' as defined under the Scheme, therefore clause E13.7.2 P5 does not apply.

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:

None of the features or elements proposed to be removed as part of the demolition for the new work can be considered to have any heritage value

or make a contribution to the historical significance of the site. Therefore clause E13.7.1 P1 is satisfied.

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.

The proposal satisfies the above provisions of the Scheme.

Response:

The proposed works are consistent with this site having been used as sporting facilities for a considerable period of time and although one of the parts of the site will change from a bowling green to two netball courts, it will remain as an open square of playing area. The new fence, a cyclone mesh fence on three sides, is likewise consistent with the character of sporting facilities. There are no changes to the existing vegetation and landscaping arrangement. The most significant change will be the construction of three (3) new shelters that have a cantilevered roof around bowling green 2, all having a height of 2.3 metres and finished in Colorbond Classic Cream and Grey. Again, these types of structures are consistent with current shade facilities provided at bowling greens around Australia and are designed to be simple, open and functional structures.

The colours selected are described above and from an overall point of view, the proposed development is consistent and sympathetic to the setting, uses appropriate materials and is of a scale that does not result in diminution or loss of heritage values associated with the heritage listed place, satisfying E13.7.2 P1, P2 and P3.

The proposal satisfies the above 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, Fencing and Two New Netball Courts, at 4-10 St Johns Avenue New Town.
- 7.2 The application was advertised and no representations were received.
- 7.3 The proposal has been assessed against the relevant provisions of the planning scheme and is considered to perform well.
- 7.4 The proposal has been assessed by other Council officers, including the Council's Development Engineer, Technical Officer - Engineering, Parks Planner and Senior 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, Fencing and Two New Netball Courts, at 4-10 St Johns Avenue New Town satisfies the relevant provisions of the *Hobart Interim Planning Scheme 2015*, and as such is recommended for approval.

9. Recommendations

That: Pursuant to the *Hobart Interim Planning Scheme 2015*, the Planning Committee, in accordance with the delegations contained in its terms of reference, approves the application for Partial Demolition, Alterations, Fencing and Two New Netball Courts at 4-10 St Johns Avenue, New Town for the reasons outlined in the officer's report and a permit containing the following conditions be issued:

GEN

The use and/or development must be substantially in accordance with the documents and drawings that comprise PLN-21-809 - 4-10 ST JOHNS AVENUE NEW TOWN TAS 7008 - Final Planning Documents except where modified below.

Reason for condition

To clarify the scope of the permit.

ENG sw1

All stormwater from the proposed development (including but not limited to: roofed areas, ag drains 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 7

Prior to occupancy or the commencement of the use (whichever occurs first), any alterations to the existing connections required by the final design must be constructed and existing redundant connection(s) be abandoned and sealed at the owner's expense.

Prior to the issuing of any approval under the Building Act 2016 or

commencement of works (whichever occurs first), detailed engineering drawings must be submitted and approved. The detailed engineering drawings must include:

1. the location of the proposed connections and all existing connections;
2. the size and design of the connection such that it is appropriate to safely service the development;
3. clearances from any nearby obstacles (eg services, crossovers, trees, poles, walls)
4. long-sections of the proposed connection clearly showing cover, size, grade, material and delineation of public and private infrastructure;
5. connections which are free-flowing gravity driven.
6. be in general accordance with Council's departures from the LGAT Tasmanian Standard Drawings, available from [our website](#)

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

Advice: Upgraded or new connections can be approved either via the CEP process or via the Application for New Connection form available from [here](#). The approved stormwater connection documents must be included in your plumbing permit application document set and listed in accompanying forms.

SW 9

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

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

1. include detailed design of the proposed treatment train, including final estimations of contaminant removal;
2. include detailed design and supporting calculations of the detention tank showing:
 1. detention tank sizing such that there is no increase in flows from the developed site up to 5% AEP event and no worsening of flooding;

2. the layout, the inlet and outlet (including long section), outlet size, overflow mechanism and invert level;
 3. the discharge rates and emptying times; and
 4. all assumptions must be clearly stated;
3. include a supporting maintenance plan, which specifies the required maintenance measures to check and ensure the ongoing effective operation of all systems, such as: inspection frequency; cleanout procedures; descriptions and diagrams of how the installed systems operate; details of the life of assets and replacement requirements.

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

Advice:

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 runoff from the site enters the New Town Rivulet, and all cleaning chemicals etc used on the courts must be chosen accordingly. Council accepts the proposed detention and treatment designs in principle, however notes it may be more efficient if equivalent treatment / detention were installed elsewhere on the site.

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, 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.

ADVICE

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

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

BUILDING PERMIT

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

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

PLUMBING PERMIT

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

NOISE REGULATIONS

Click [here](#) for information with respect to noise nuisances in residential areas.

FEES AND CHARGES

Click [here](#) for information on the Council's fees and charges.

DIAL BEFORE YOU DIG

Click [here](#) for dial before you dig information.



(Deanne Lang)

Development Appraisal Planner

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



(Ben Ikin)

Senior Statutory Planner

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

Date of Report: 7 February 2023

Attachment(s):

Attachment B - Planning Committee Agenda Documents

Attachment C - Planning Referral Officer Cultural Heritage Report

SOUTHERN TASMANIAN NETBALL ASSOCIATION
'We're having a ball'



Address: PO Box 310 Moonah • Tel: 03 6228 0760 • Email: info@stna.org.au

10 December 2021

Liz Wilson
Acting Senior Statutory Planner
City Planning
City of Hobart

Re: Application No. PLN-21-809

Dear Liz

In response to the additional information requested **HER 2**, I offer the following and the additional attachments (quotations for the works to give details).

1. Aerial photo attached separately shows the dotted line where the 3 sides of new fence will be situated and points to where gates will be placed.
The gate closest to the netball centre will be a pedestrian gate PLUS a double gate to allow Ambulance access if required. The other gate indicated is a pedestrian gate only to allow access to grass/garden for upkeep.
2. No structures are to be removed at all. The existing seats and shade structures on green 3 that will become netball courts, will stay and be used.
The hedge will not be removed and the fence behind it will stay in place and form the 4th side of the fencing.
3. The walkways are not cantilevered, they are simply replacing existing grass with artificial grass to make them more level and suitable in all-weather conditions to ensure non-slip, stable footing for bowlers.
The shade/shelter structures (as per the previously supplied quotes and diagrams) are on all 3 sides as indicated by the solid pink lines around green 2 in the attached picture.
Currently bowling green 2 has umbrellas for shade (picture attached) that are not fit for purpose, can not be used when windy and do not provide sufficient protection from the sun or rain.
Recently a visiting bowls team refused to play on green 2 because of the lack of protection from the weather when there were intermittent showers affecting the game.
The proposed changes will solve this ongoing problem and add to the comfort, safety and enjoyment of Buckingham Bowls Club members.

This plan has been developed through cooperation and a partnership between STNA and Buckingham Bowls club with fencing design and placement approved by both parties.

Please let me know if you need any other information.

Kind regards

Dean

Dean Jackson
Centre Manager
Southern Tasmanian Netball Association
Hobart Netball and Sports Centre

SOUTHERN TASMANIAN NETBALL ASSOCIATION
'We're having a ball'



Address: PO Box 310 Moonah • Tel: 03 6228 0760 • Email: info@stna.org.au

29 November 2021

Dear City of Hobart

The Southern Tasmanian Netball Association requests approval to change the surface (and the sport using it) of an unused bowling green at the Buckingham Bowls Club at 4-10 St Johns Avenue.

Buckingham Bowls club offered the land to our netball association as they have no need for the third green and have gone through an exhaustive process of trying to find a new user including leasing the space to another bowls club.

With no use found for the area as a bowling green they offered the space to us to develop an additional two netball courts as the area borders our centre.

We have had several meetings with the bowls club, and with Shannon Avery from the City of Hobart who both enthusiastically support the plan and we were ready to proceed with the change to the surface when we were notified the area is Heritage Listed and therefore we must lodge a Planning Application to be able to proceed with the change.

We have been granted funds from the Tasmanian Government to do this project and replace some shading on the other bowls greens and to make the surface around the other bowls green safer and all weather and this was all in fact organised to proceed and be completed by November 2021 until we were notified we needed approval due to the Heritage listing of the bowls club.

The new surface will be contained completely within the current bowling green area so there is no change to the size of the playing area and we are adding a security fence so the netball operations do not interfere at all with the bowls club.

Our centre is at capacity, and this change will allow us to continue to cater for a very large netball community and to provide a valuable asset that can be used by the wider community for netball and Basketball.

I have included the accepted quote for the works on the netball courts.

Please let me know if you need any further information to help with your decision.

We hope to hear from you soon.

Kind regards

Dean Jackson
Centre Manager
Hobart Netball & Sport Centre
Southern Tasmanian Netball Association
Email: venue.operations@stna.org.au



BLACKTAC NO3 PTY LTD
448 WESTBURY ROAD
PROSPECT TASMANIA 7250
PHONE / FAX : 03 6344 5723
EMAIL : blacktac@bigpond.com
WEB : www.blacktac.com.au

WAYNE CHUGG : 0417 331 001
ABN : 18 629 876 151

18TH June 2021

2 NETBALL COURTS - 1444m2

Dean Jackson
Southern Netball Association

Email : venue.operations@stna.org.au

Hello Dean,

Further to our recent conversation we would like to submit the following quotation.

Provide temporary access roadway for site access and remove at project completion.

Removal of steel/timber rack from site.

Excavate existing bowling green to approx.150mm depth and grade to suit new levels.

Supply geo-fabric under base course. Import 200mm thick base materials and grade to suit new levels.

Supply and install grated drain (Everhard 'Evomax' item #4770235 from Bunnings) to both side of the courts (76 metres total). Connect grated drain to existing storm water connection.

Excludes any other works than stated in inclusions, any council permit fees or other.

Any rock obstructions to be deemed variation to contract.

Supply, lay and compact 30mm thickness asphalt.

Surface to be crowned in the centre with approx.. 200mm fall to both sides. (1444m²)

Supply and lay a 'Plexipave' surfacing system to match existing courts at Creek Road.

Erect a 3 metre high galvanized chain wire fence with top rail and (2) P.A. gates.

Supply and install (4) netball posts. (Lighting has not been included).

Clean up site.

PRICE : \$214,860.00

GST : \$ 21,486.00

TOTAL : \$236,346.00

The 'Plexipave' system under the control of Blacktac Pty Ltd is guaranteed against faulty material and workmanship for a period of (5) years.

Save and except from fair wear and tear and 'Acts of God'.

Hoping to be of service.

Kind Regards

Wayne Chugg

SOUTHERN TASMANIAN NETBALL ASSOCIATION
'We're having a ball'



Address: PO Box 310 Moonah • Tel: 03 6228 0760 • Email: info@stna.org.au

3 December 2021

Liz Wilson
Acting Senior Statutory Planner
City Planning
City of Hobart

Re: Application No. PLN-21-809

Dear Liz

In response to the additional information requested **HER 1**, I offer the following and the additional attachments (quotations for the works to give details).

1. Clarify what is meant by the covering letter that states: 'replace some shading on the other bowls greens and to made the surface around the other bowls greens safer and all weather'. Show on a site plan what additional works are proposed including pathways, steps or other landscaping.

Response: The current shading on Bowling Green 2 is inadequate and does not offer vital UV protection to the players. As per the attached quotations, it is proposed to install robust shading that will stand up to the elements and protect the players while they are waiting to bowl.

There are no additional works in the form of pathways, steps or landscaping except to replace current grass surrounds of Bowling Green 2 with all-weather artificial grass that will provide a stable, non-slip surface that will not become dangerous or slippery for the players when it is wet.

The playing surface is not changing, but it is worth noting that the playing surface of Bowling Green 1 was changed from grass to artificial grass several years ago and it also has artificial surrounds as this application is proposing.

2. The chain wire fence is shown on only one side of the existing bowls green. Please clarify if there will be fencing on the other three sides.

Response: The initial request for more information only mentioned the external chain wire fence as it is visible from the road. There are two other sides that will have new fencing. The side that borders the Bowls Club and the side that will border the Bowls Club storage shed.

The existing fence on the driveway currently between the existing netball court and the bowling green we want to turn into netball courts will be kept and will form the 4th side of

the new fenced area. We are also keeping the hedge in place that is growing against the existing fence.

The new fencing is designed to keep the bowls club secure and separate from the netball courts.

This plan has been developed through cooperation and a partnership between STNA and Buckingham Bowls club with fencing design and placement approved by both parties.

Please let me know if you need any other information.

Kind regards

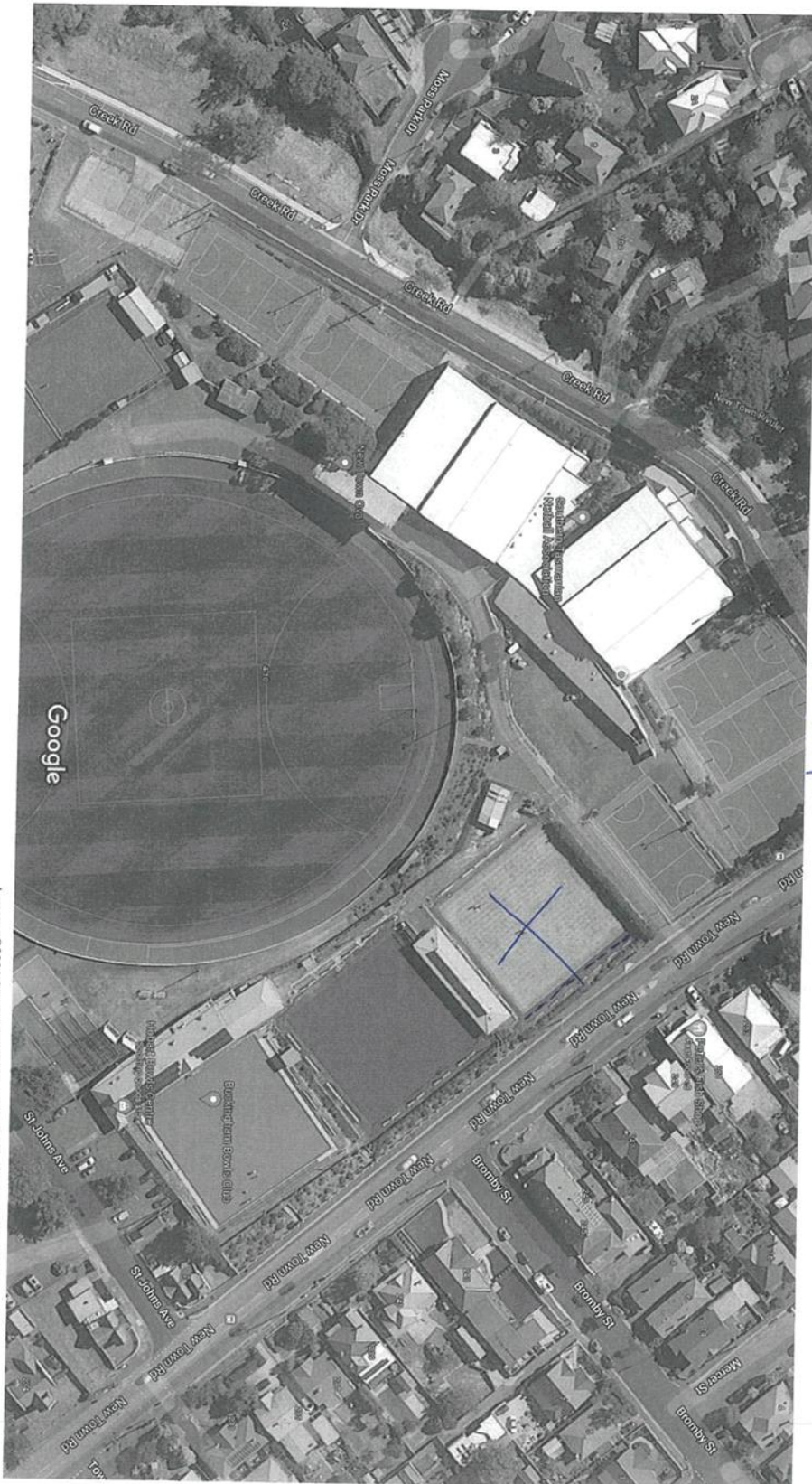
Dean

Dean Jackson
Centre Manager
Southern Tasmanian Netball Association
Hobart Netball and Sports Centre

12/1/21, 1:39 PM

Google Maps

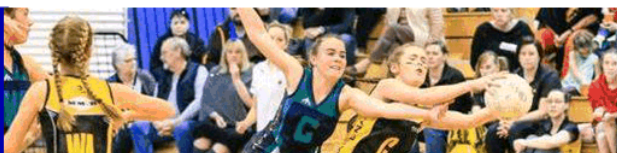
indicates 3m high Google Maps
fence. At least 5m from
existing border line that marks
the footpath
the Green closest to
our Netball Centre



<https://www.google.com/maps/@-42.8526284,147.298314,214m/data=!3m1!1e3>

Imagery ©2021 CNES / Airbus, Maxar Technologies, Map data ©2021 20 m

SOUTHERN TASMANIAN NETBALL ASSOCIATION

'We're having a ball'

Address: PO Box 310 Moonah • Tel: 03 6228 0760 • Email: info@stna.org.au

1 December 2021

Dear Liz

Thank you for your letter dated 30 November 2021 to
venue.operations@snta.org.au.

In response to the request for additional information, I have provided an aerial photograph showing PLN 1 the bowling green that will be converted to the netball courts.

And PLN 2 on the same picture I have drawn a series of dashes - - - to indicate where the fence will go. It is approx. 5m from the current boundary wall/fence that meets the footpath, so is not within 4.5m of the frontage with New Town Road.

PLN3 The hours of use would be primarily Saturdays from 8.40am until 5.30pm
And Monday to Friday between 3pm and 5.30pm

PLN 4 I can confirm there is no external lighting proposed for the new courts

PLN 5 Commercial and patron movements will be in-line with PLN 3. Saturdays from
8.40am until 5.30pm
And Monday to Friday between 3pm and 5.30pm

Please let me know if you need any other information

Kind regards

Dean Jackson
Southern Tasmanian Netball Association
Centre Manager



Enquiries to: City Planning
Phone: (03) 6238 2715
Email: coh@hobartcity.com.au

3 November 2021

Dean Jackson (STNA)
4-10 St Johns Avenue
NEW TOWN TAS 7008

mailto:venue.operations@stna.org.au

Dear Sir/Madam

**4 - 10 ST JOHNS AVENUE, NEW TOWN - WORKS ON COUNCIL LAND NOTICE OF
LAND OWNER CONSENT TO LODGE A PLANNING APPLICATION - GMC-21-66**

Site Address:

4 – 10 St Johns Avenue, New Town

Description of Proposal:

Works on Council Land

Applicant Name:

Dean Jackson
Southern Tasmanian Netball Association

PLN (if applicable):

N/A

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

Hobart Town Hall
50 Macquarie Street
Hobart TAS 7000

Hobart Council Centre
16 Elizabeth Street
Hobart TAS 7000

City of Hobart
GPO Box 503
Hobart TAS 7001

T 03 6238 2711
F 03 6234 7109
E coh@hobartcity.com.au
W hobartcity.com.au

CityofHobartOfficial
ABN 39 055 343 428
Hobart City Council

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

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

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

Yours faithfully



(Glenn Doyle)
DIRECTOR CITY AMENITY

Relevant documents/plans:

Letter - Dean Jackson, Southern Tasmanian Netball Association



Address: PO Box 310 Moonah • Tel: 03 6228 0760 • Email: info@stna.org.au

22 October 2021

Dear General Manager

The Southern Tasmanian Netball Association requests your consent to submit a Planning Application to change the surface (and the purpose) of an unused bowling green at the Buckingham Bowls Club at 4-10 St Johns Avenue.

Buckingham Bowls club offered the land to our netball association as they have no need for the third green and have gone through an exhaustive process of trying to find a new user including leasing the space to another bowls club.

With no use found for the area as a bowling green they offered the space to us to develop an additional two netball courts as the area borders our centre.

We have had several meetings with the bowls club, and with Shannon Avery from the City of Hobart who both enthusiastically support the plan and we were ready to proceed with the change to the surface when we were notified the area is Heritage Listed and therefore we must lodge a Planning Application to be able to proceed with the change.

I have included the quote we received for the work and we have been granted a sum of money by the Tasmanian Government to make the change and now we request your consent to lodge our application and hopefully move ahead with the much needed community project.

The new surface will be contained completely within the current bowling green area so there is no change to the size of the playing area and we are adding a security fence so the netball operations do not interfere at all with the bowls club.



Our centre is at capacity, and this change will allow us to continue to cater for a very large netball community and to provide a valuable asset that can be used by the wider community for netball and Basketball.

Please let me know if you need any further information to help with your decision.

We hope to hear from you soon.

Kind regards

Dean Jackson
Centre Manager
Hobart Netball & Sport Centre
Southern Tasmanian Netball Association
Email: venue.operations@stna.org.au



BLACKTAC NO3 PTY LTD
448 WESTBURY ROAD
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WEB : www.blacktac.com.au

WAYNE CHUGG : 0417 331 001
ABN : 18 629 876 151

18TH June 2021

2 NETBALL COURTS - 1444m2

Dean Jackson
Southern Netball Association

Email : venue.operations@stna.org.au

Hello Dean,

Further to our recent conversation we would like to submit the following quotation.

Provide temporary access roadway for site access and remove at project completion.
Removal of steel/timber rack from site.

Excavate existing bowling green to approx.150mm depth and grade to suit new levels.
Supply geo-fabric under base course. Import 200mm thick base materials and grade to suit new levels.

Supply and install grated drain (Everhard 'Evomax' item #4770235 from Bunnings)
to both side of the courts (76 metres total). Connect grated drain to existing storm
water connection.

Excludes any other works than stated in inclusions, any council permit fees or other.
Any rock obstructions to be deemed variation to contract.



Supply, lay and compact 30mm thickness asphalt.

Surface to be crowned in the centre with approx.. 200mm fall to both sides. (1444m²)

Supply and lay a 'Plexipave' surfacing system to match existing courts at Creek Road.

Erect a 3 metre high galvanized chain wire fence with top rail and (2) P.A. gates.

Supply and install (4) netball posts. (Lighting has not been included).

Clean up site.

PRICE : \$214,860.00

GST : \$ 21,486.00

TOTAL : \$236,346.00

The 'Plexipave' system under the control of Blacktac Pty Ltd is guaranteed against faulty material and workmanship for a period of (5) years.

Save and except from fair wear and tear and 'Acts of God'.

Hoping to be of service.

Kind Regards

Wayne Chugg

**RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



SEARCH OF TORRENS TITLE

VOLUME 149031	FOLIO 1
EDITION 1	DATE OF ISSUE 01-Mar-2007

SEARCH DATE : 30-Nov-2021

SEARCH TIME : 10.34 AM

DESCRIPTION OF LAND

City of HOBART

Lot 1 on Sealed Plan 149031

Derivation : Whole of Lot 1000 (229m2) The Crown and Whole of

Lot 1 on Plan 131801 Gtd. to The Crown

Prior CTs 149031/1000 and 138753/1

SCHEDULE 1

C215003 & C583173 TRANSFER HOBART CITY COUNCIL is seized of a conditional estate in fee simple

SCHEDULE 2

Reservations and conditions in the Crown Grant if any

C165059 Application Reserving unto THE CROWN the right upon payment of \$20,000 to resume the said land within described: (a) If it is not used for the purpose of public or recreational use and, (b) If having been used for such purpose it is no longer being so used. (as relates to that portion of Lot 1 formerly comprised in Certificate of Title Volume 138753 Folio 1)

C215003 Application Reserving unto THE CROWN the right upon payment of \$20,000 to resume the said land within described: (a) If it is not used for the purpose of public or recreational use and, (b) If having been used for such purpose it is no longer being so use (as relates to that portion of Lot 1 formerly comprised in Certificate of Title Volume 138753 Folio 1)

C215003 & C583173 FENCING PROVISION in Transfer

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations



FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



OWNER HOBART CITY COUNCIL THE CROWN FOLIO REFERENCE C.T. 138753-1 27A. C 583172 GRANTEE WHOLE OF LOT 1, 5-126 ha., GRANTED TO THE CROWN. WHOLE OF LOT 1000 229 m ² THE CROWN.		PLAN OF SURVEY BY SURVEYOR TONY WOOLFORD 72 GRAHAM'S ROAD, MT RUNNEY. 7170 LOCATION Phone 6248 5224 CITY OF HOBART SCALE 1:1,500 LENGTHS IN METRES		REGISTERED NUMBER SP149031 APPROVED EFFECTIVE FROM - 1 MAR. 2007 <i>Alice Kawa</i> Recorder of Titles
MAPSHEET MUNICIPAL CODE No. 114 5225-32	LAST UPI No 2104574	LAST PLAN No. P 138753	ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN	

Lot 1
5.149 ha

CREEK ROAD

NEW TOWN ROAD

ST JOHNS AVENUE

LOT 1 COMPILED FROM C.T. 138753-1 AND THIS SURVEY.

(1-1)

**SCHEDULE OF EASEMENTS**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



SCHEDULE OF EASEMENTS	Registered Number
NOTE: THE SCHEDULE MUST BE SIGNED BY THE OWNERS & MORTGAGEES OF THE LAND AFFECTED. SIGNATURES MUST BE ATTESTED.	SP 149031

PAGE 1 OF 1 PAGE/S

EASEMENTS AND PROFITS

Each lot on the plan is together with:-

- (1) such rights of drainage over the drainage easements shown on the plan (if any) as may be necessary to drain the stormwater and other surplus water from such lot; and
- (2) any easements or profits a prendre described hereunder.

Each lot on the plan is subject to:-

- (1) such rights of drainage over the drainage easements shown on the plan (if any) as passing through such lot as may be necessary to drain the stormwater and other surplus water from any other lot on the plan; and
- (2) any easements or profits a prendre described hereunder.

The direction of the flow of water through the drainage easements shown on the plan is indicated by arrows.

No easements covenants or profits a prendre are intended to be created.

SIGNED by *Michael David Jones*)
being and as a *Manager Crown Land Serv.*)
prescribed in Statutory Rule No. 187 of 2001 and)
pursuant to an Instrument of Delegation dated the)
15th November 2004 in the presence of:-)

Signature of witness: *T. Ferraro-Rum*
Occupation: *Public Servant*
Address: *134 Macquarie St Hobart*

(USE ANNEXURE PAGES FOR CONTINUATION)

SUBDIVIDER: HOBART CITY COUNCIL & THE CROWN SEALED BY:	
FOLIO REF: 138753/1 & 149031/1000	DATE:
SOLICITOR & REFERENCE: Crown Solicitor	REF NO. Council Delegate
NOTE: The Council Delegate must sign the Certificate for the purposes of identification.	

**RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME 138753	FOLIO 2
EDITION 1	DATE OF ISSUE 02-Apr-2003

SEARCH DATE : 30-Nov-2021

SEARCH TIME : 10.34 AM

DESCRIPTION OF LAND

City of HOBART

Lot 2 on Diagram 138753 (Section 27A of the Land Titles Act.)

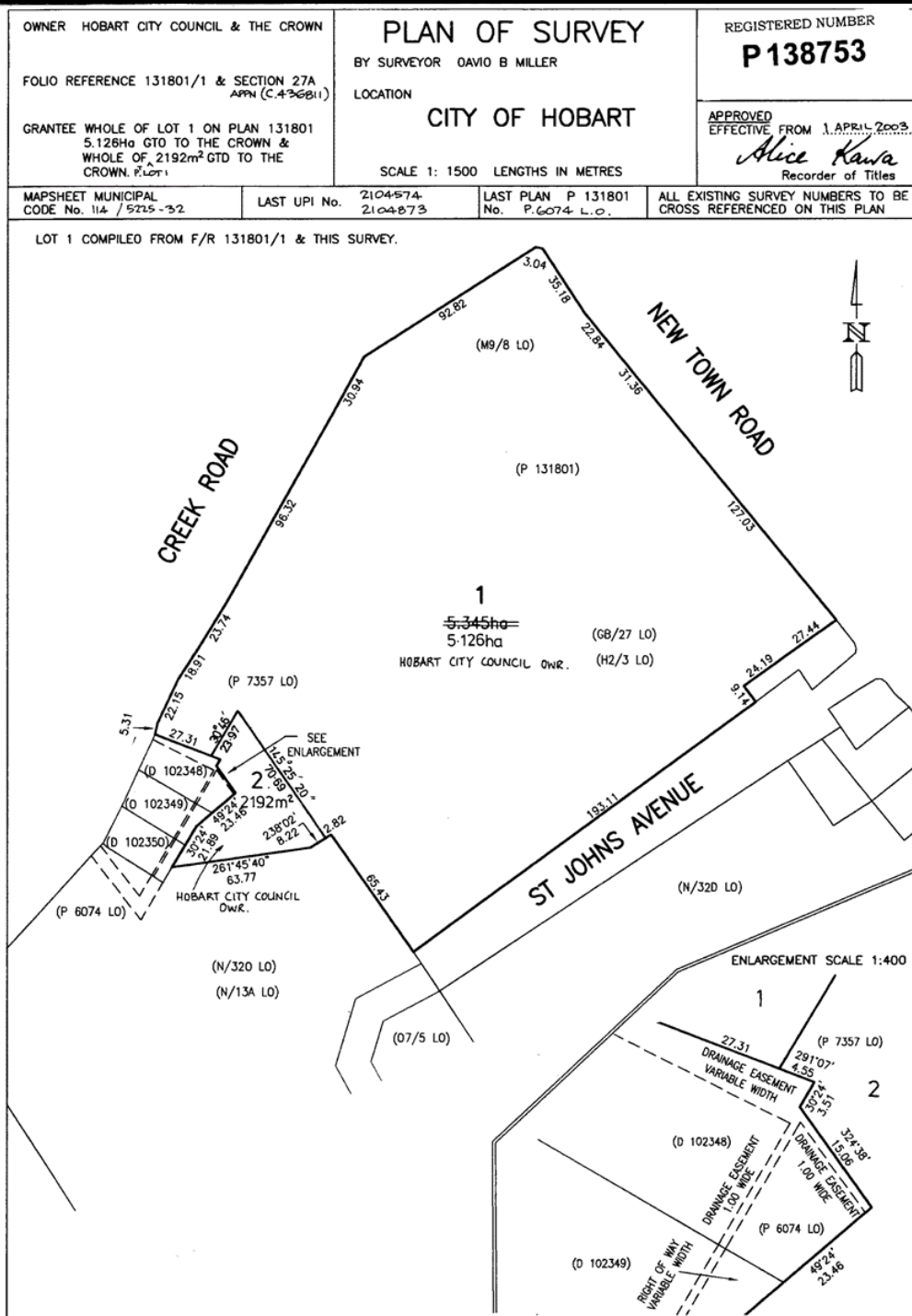
Derivation : Whole of Lot 2 on Diagram 138753 Gtd. to The Crown

SCHEDULE 1C436802 TRANSFER to HOBART CITY COUNCIL Registered
02-Apr-2003 at 12.01 PMSCHEDULE 2C436811 Land is limited in depth to 15 metres, excludes
minerals and is subject to reservations relating to
drains sewers and waterways in favour of the CrownC436802 Land is limited in depth to 15 metres, excludes
minerals and is subject to reservations relating to
drains sewers and waterways in favour of the Crown

C436802 Transfer Made Subject To Fencing Condition.

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations



Planning: #243594

Property

1 ST JOHNS AVENUE NEW TOWN TAS 7008

People

Applicant

*

STNA

Dean Jackson

Cnr Creek Road and New Town Road

NEW TOWN TAS 7008

0467 853 980

venue.operations@stna.org.au

Owner

*

STNA

Dean Jackson

Cnr Creek Road and Main Road

NEW TOWN TAS 7008

0467 853 980

venue.operations@stna.org.au

Entered By

DEAN JACKSON

4 - 10 ST JOHNS AVENUE

NEW TOWN TAS 7008

0467 853 980

venue.operations@stna.org.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)?

*

Sport and Leisure

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

*

Change playing surface from grass to concrete, add perimeter fencing

Estimated cost of development

*

245000.00

Existing floor area (m2)

160.00

Proposed floor area (m2)

160.00

Site area (m2)

200

Carparking on Site

N/A

Total parking spaces

0

Existing parking spaces

0

☐ 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)

*

CouncilCertificate-149031-1.pdf

Plans (proposed, existing)

*

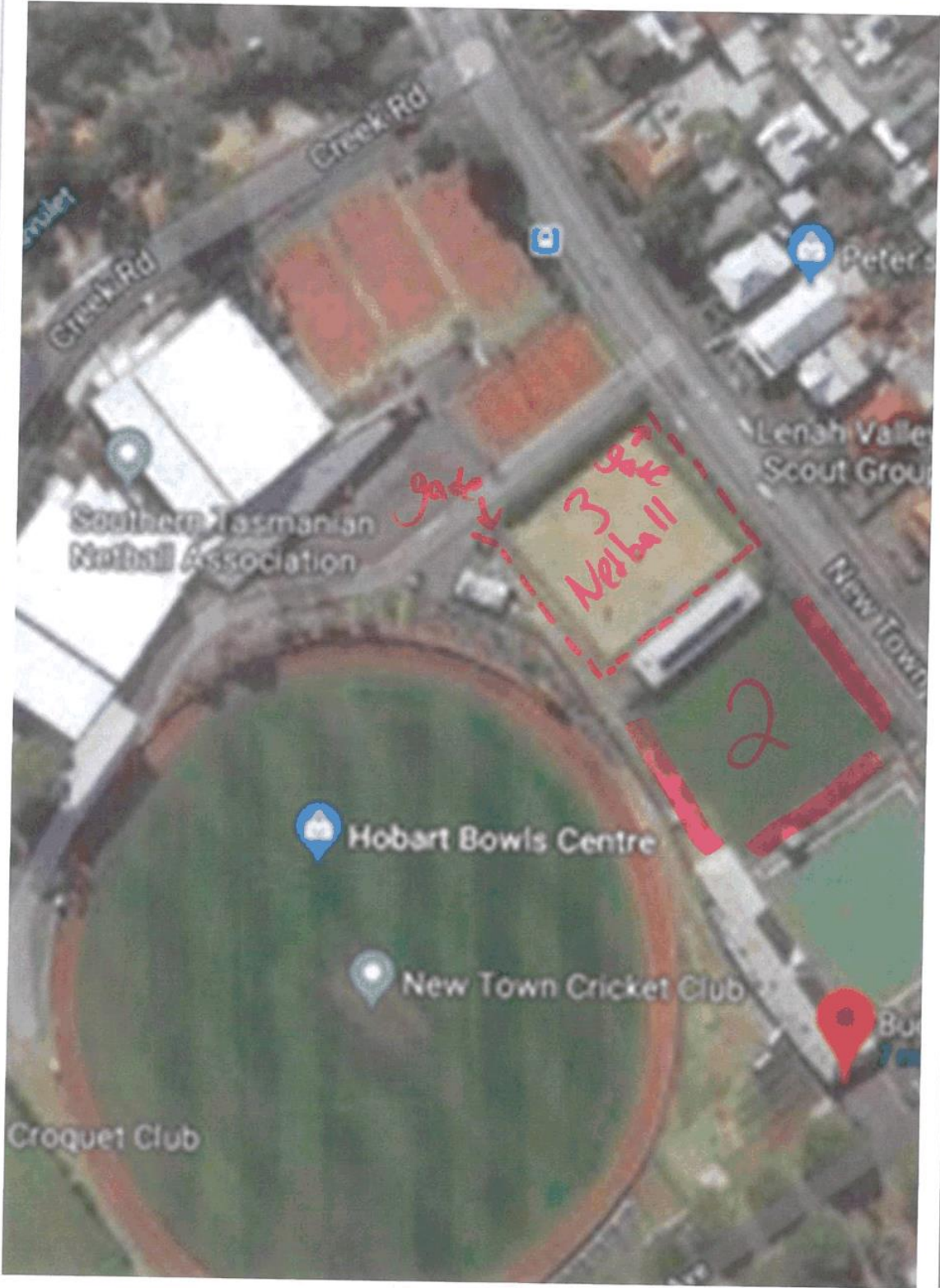
GMC-21-66 - 4-10 ST JOHNS AVENUE NEW TOWN TAS 7008 - Notice of Land Owner Consent to Lodge a Planning Application (including documents) (2).PDF

GM or Crown consent

GMC-21-66 - 4-10 ST JOHNS AVENUE NEW TOWN TAS 7008 - Notice of Land Owner Consent to Lodge a Planning Application (including documents) (2).PDF

Covering Letter

STNA Covering Letter for Planning Application.pdf



AD DESIGN + CONSULTINGEngineering + Development
Infrastructure Services
Project Management

13/09/2022

Liz Wilson
Acting Senior Statutory Planner
CITY OF HOBART
16 Elizabeth Street
Hobart, TAS 7001

Dear Liz,

**RE: 4 – 10 St John Avenue, New Town
PLN-21-809**

In reference to your request for further information dated 14th December 2021 regarding the above-mentioned project, please refer responses below addressing the raised items.

Should you have any further queries, please contact me on the details below.

Yours sincerely,

Tom Norman

Senior EngineerAD Design & Consulting Pty Ltd
tom@addconsulting.com.auaddconsulting.com.au
admin@addconsulting.com.au
ABN 55 169 899 683**North:**
Level 1, Suite 3
44 Formby Road
Devonport TAS 7310**South:**
Cat & Fiddle Centre
Level 2, 51 Murray Street
Hobart TAS 7000

AD DESIGN + CONSULTING

SW 1:

Request

A site plan and sufficient levels to demonstrate how stormwater from the proposed development (including roofed areas, ag drains and impervious surfaces) will be disposed of via gravity to public stormwater infrastructure. Clearly distinguish between public infrastructure and Council-owned private infrastructure. Show all existing lot connections.

Advice: a single lot connection is allowed under the Urban Drainage Act, unless demonstrated that this is not practicable.

Response

Please refer to the enclosed stormwater management plan detailing how stormwater run off generated from the site will be drained via gravity to Council infrastructure. The lot connection is an existing kerb adaptor which has been clearly shown on the plan.

SW 5:

Request

A report prepared by a suitably qualified person demonstrating that the stormwater system for the new development incorporates stormwater quality treatment which achieves 80% removal total sediments, 45% removal total nitrogen and 45% removal of total phosphorous and (if a carpark) targets fine sediments and hydrocarbons.

If this treatment cannot be achieved, demonstrate why it is not feasible. Demonstrate no environmental harm to New Town Rivulet will occur from cleaning of the new court, addressing chemicals used, frequency and method.

Response

Please refer to the enclosed stormwater management plan detailing how stormwater run off generated from the site will be treated and pollutants removed to the treatment targets specified by the State Stormwater Strategy.

SW 6:

Request

A stormwater drainage report, design and supporting calculations prepared by a suitable qualified person which demonstrates compliance with the following:

1. Accommodate a storm with an ARI of 20 years when the land serviced by the system is fully developed.
2. Stormwater runoff will be no greater than pre-existing runoff or any increase can be accommodated within existing or upgraded public stormwater infrastructure.

This information must include the location and sizing (both volume and orifice size) for any detention tanks required, a statement that installation and operation will be prior to occupation or first use, and a maintenance plan. Timing of both flows from the site and within the Rivulet must be discussed. No worsening of flooding will be accepted.

Advice: Council notes the pipework within the property boundaries which services only the lot is not considered public infrastructure but Council-owned private.

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Response

Please refer to the enclosed stormwater management plan detailing how stormwater run off generated from the site will be detained in underground storage tanks and flow restricted to the same rate as pre-development.

AD DESIGN + CONSULTING



Engineering
Project Management
Property Development

DESIGN MEMO

TO: Development Engineer, City of Hobart
FROM: Tom Norman
DATE: 24/08/2022
PROJECT: 4 - 10 St John Avenue, New Town
RE: Design Memorandum – Stormwater Management

Southern Tasmanian Netball Association has engaged AD Design & Consulting to provide advice on the stormwater management requirements for two proposed netball courts at 4 – 10 St John Avenue, New Town.

This document aims to satisfy the requirements of the Hobart Interim Planning Scheme 2015 through:

- assessment of the peak pre-development and post-development stormwater discharges from the site and providing mitigation solutions if required.
- Provide water-sensitive urban design in line with the State Stormwater Strategy.

Key site details are tabulated in Table 1.

Table 1: Site details

Location	4 - 10 St John Avenue, New Town
Municipality	City of Hobart
Policy Controls	Hobart Interim Planning Scheme 2015

AD DESIGN+CONSULTING



Figure 1: 64 Alexander Street, Sandy Bay (LIST, 2021)

1 Stormwater Quantity

Determining Permissible Site Discharge

The Permissible Site Discharge (PSD) is based on the undeveloped scenario for the site. A predevelopment percentage impervious of 0% for the site has been adopted, this accounts for the current use case, being a lawn bowls green. Table 2 outlines the model parameters used to determine the PSD.

Table 2: PSD model parameters

Catchment Area	0.1444 ha
Fraction Impervious	0%
Manning’s number	0.05 Previous 0.013 Impervious
Catchment slope	1%

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The results of the hydrological analysis show that the mean peak discharge from the undeveloped site for the 25-minute storm duration was 11 L/s. Figure 2 shows the results of the analysis for the 5% AEP ensemble storm event.

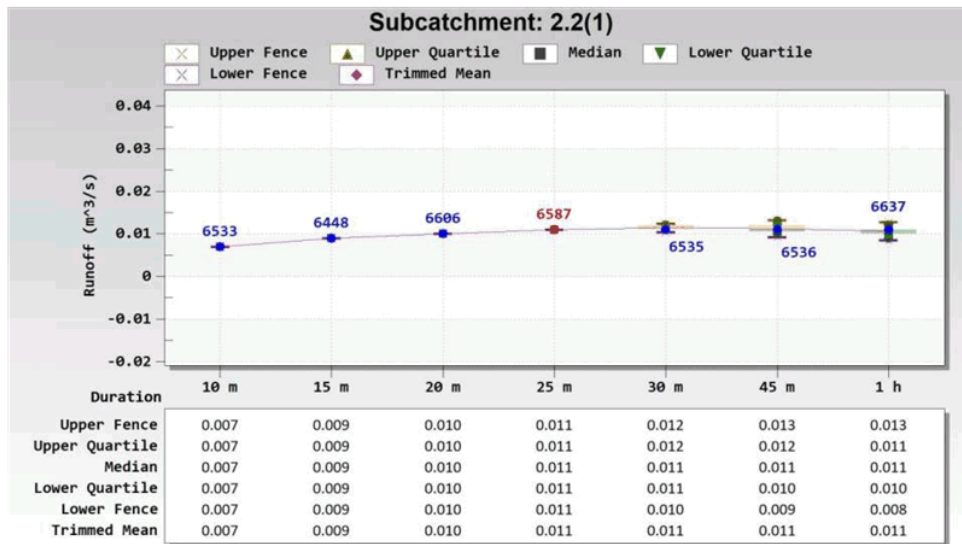


Figure 2: Pre-development runoff (PSD)

Developed Scenario Runoff

The proposed development will increase the site's impervious area, which will increase stormwater runoff. Table 3 summarises the post develop catchment characteristics. To assess whether detention is required, the post-development and PSD are compared.

Table 3: Driveway model parameters

Court Area	0.1444 ha
Fraction Impervious	100%
Manning's number	0.013
Catchment slope	1%

The results of the hydrological analysis (Figure 3: post-development runoff) show that the critical storm duration is 15 min, with a mean peak discharge of 29 L/s. As such the site requires on-site detention to be installed to mitigate flows to pre-development flow rates.

AD DESIGN + CONSULTING

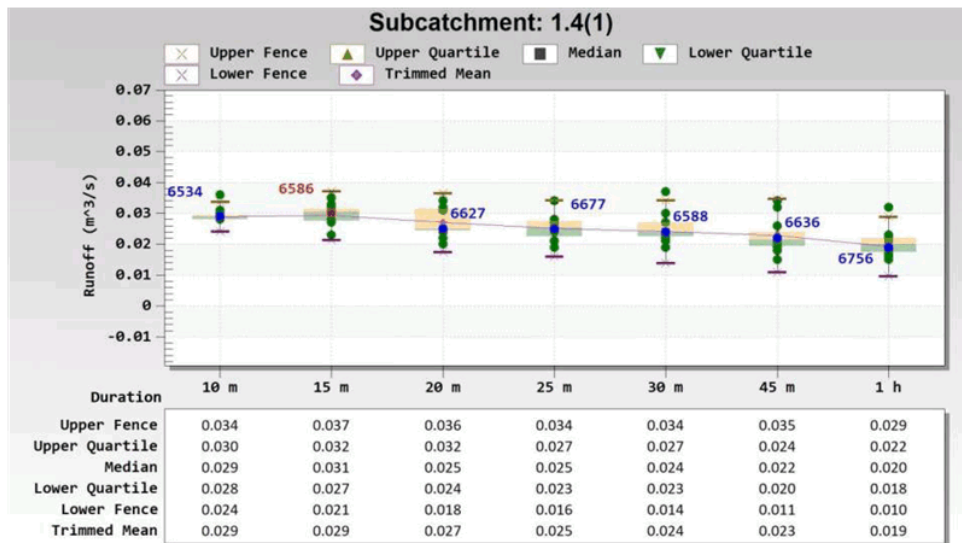


Figure 3: post-development runoff

Detention Design

It is proposed to drain the entire court area to an underground detention tank. Limiting the permissible site discharge for the developed site to the required 11/s, the modelling results are tabulated below. The hydrograph of the critical storm (ID6586) was selected for the design of the detention tank.

Table 4: Detention modelling results

Total Detention Volume	12m ³
Detention Tank Size	4m x 3m x 1m underground detention tank
Control	DN70 orifice control valve located at the base of the last tank
Mitigated flow	11 l/s.

The results of the mitigate flow are shown in Figure 4. It is shown that the maximum storage volume in the tank reaches 12.16m³, inflow is 30L/s and outflow is 11L/s. The results demonstrate that the underground detention tank is sufficient to effectively mitigate site discharge to the permissible site discharge.

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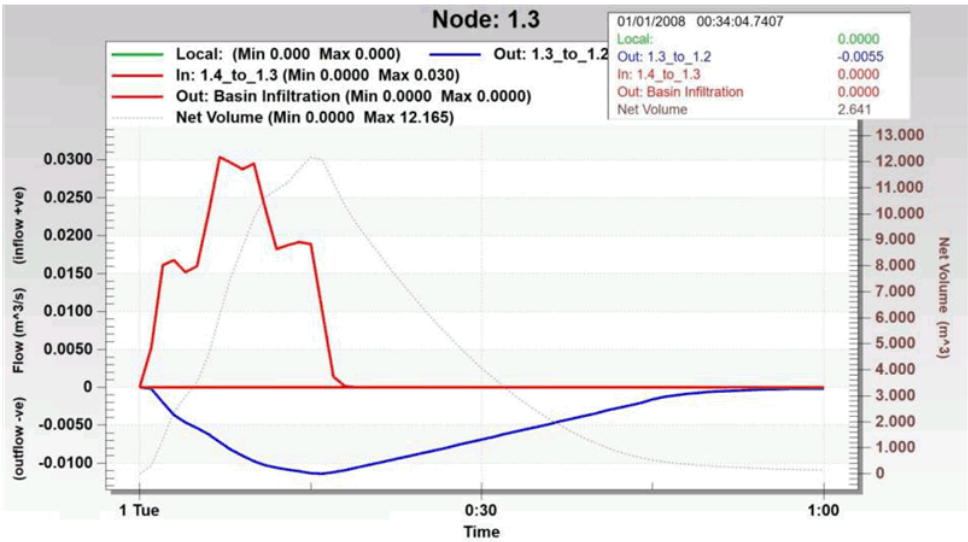


Figure 4: Storage volume calculation

2 Stormwater Quality

Methodology

Water quality modeling has been undertaken in accordance with Derwent Estuary Program and Water by Design guidelines. MUSIC software has been used to estimate the reduction targets for the given development. The parameters used within MUSIC are tabulated below.

Model Parameters

Table 5: Rainfall data

Parameter	Value
Rain station	Hobart - 094145
Time step (minutes)	6

Table 6: Rainfall parameters

Parameter	Value
Rainfall threshold (mm/day)	1
Soil storage capacity (mm)	120
Initial storage capacity (% of capacity)	25
Field capacity (mm)	50

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Infiltration rapacity coefficient A	200
Infiltration capacity coefficient B	1
Initial depth (mm)	10
Daily recharge rate (%)	25.00
Daily base flow rate (%)	5.00
Daily deep seepage rate (%)	0

Table 7: Urban pollutant sources

Pollutant	Surface Type	Storm Flow		Base Flow	
		Mean (log mg/l)	SD (log mg/L)	Mean (log mg/l)	SD (log mg/L)
TSS	Roof	1.301	0.333	-	-
	Hardstand/ Road	2.431	0.333	-	-
	Ground	1.900	0.333	0.96	0.401
TP	Roof	-0.886	0.242	-	-
	Hardstand/ Road	-0.301	0.242	-	-
	Ground	-0.700	0.242	-0.731	0.360
TN	Roof	0.301	0.205	-	-
	Hardstand/ Road	0.342	0.205	-	-
	Ground	0.243	0.182	0.455	0.363

Table 8: Pollutant catchments

Pollutant Catchment	Pollutant Catchment (m ²)
Court	1443

2.1.1 Treatment Train

The proposed treatment train has been summarised in Figure 5: MUSIC model schematic and results in Table 9. A single pollutant source catchment was used as both sides of the tennis court will be drained to the treatment device before being discharged from the site. No catchment bypass was identified.

Table 9: Treatment node

Node	Quantity	Description
SPEL Hydrosystem 400 x 2 cartridges	1	The SPEL Hydrosystem is specifically designed for the the capture of gross pollutants and provide tertiary treatment of stormwater for small developments.

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Figure 5: MUSIC model schematic and results

2.1.2 Results

The results of the pollution reduction are summarised in Table 10. It is shown that the proposed treatment train is effective at reducing pollutant levels.

Table 10: MUSIC treatment train effectiveness results summary

Pollutant (kg/yr)	Source (kg/yr)	Residual Load (kg/yr)	Reduction (%)
Total Suspended Solids	205	30.8	85
Total Phosphorus	0.344	0.117	66
Total Nitrogen	1.3	0.717	45
Gross Pollutants	21.9	0	100

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3 Conclusion

It is concluded that stormwater runoff detention can be employed to control runoff to pre-development levels. The following arrangement has been modelled and is proposed:

A detention volume of at least 12m³ with a DN70 orifice. This volume can be provided in any underground detention arrangement deemed suitable by the developer.

Stormwater from the site can be effectively treated by the installation of a **SPEL Hydrosystem HS400 with two cartridges**. This treatment train effectively brings down the pollutant load in line with the State Stormwater Strategy.

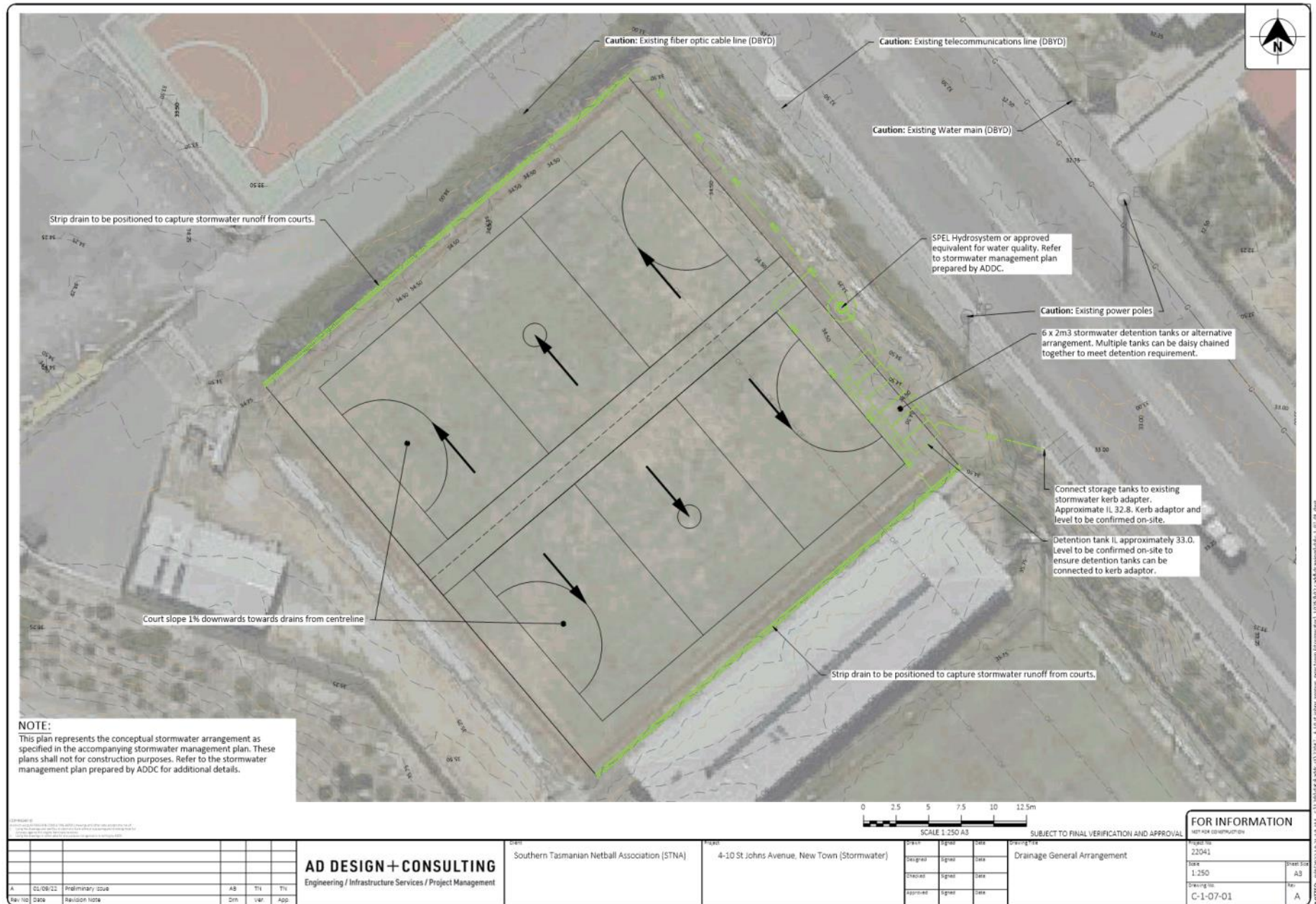
The site can therefore be developed in accordance with E7 of the Hobart Interim Planning Scheme 2015.

Regards,



Tom Norman
Senior Engineer

AD Design and Consulting







AMBIENT GARDENS

Horticulturists and Landscapers

PO Box 662
MOONAH TAS 7009

Mobiles: Rod Walker 0418 221 884
Jennifer Thomson 0400 792 619
Email: jenniferthomson2@bigpond.com
ABN: 65 085 035 521

26 April 2021

ATTENTION: Pat

Buckingham Bowls Club
4 St Johns Avenue
NEW TOWN TAS 7008

Email: bucksbowls@bigpond.com

Quote for the supply and installation of artificial grass at 4 St Johns Avenue NEW TOWN TAS 7008

Location: Club bowling green: Area 2

Tasks:

- Excavate the existing lawn areas around the perimeter of the bowling green to allow for the introduction of base materials for the artificial grass; dispose of excavated material.
- Supply, install and compact the FCR (fine crushed rock) base layer.
- Supply, install and screed the metal dust layer; compact the metal dust to complete the base preparations.
- Supply and lay *Premium 40mm* artificial grass, trim to fit, join all sections with tape, and secure in place with pegs.
- Supply and apply the sand infill; sweep in to finish.
- Dispose of rubbish and any unwanted off cuts.

Excavation and disposal of soils	\$8,700.00
FCR and metal dust base materials	7,000.00
<i>Premium 40mm</i> artificial grass, joining tape, pegs and kiln dried sand	+ 38,500.00
Materials	\$54,200.00
Labour	+ \$11,550.00
TOTAL (GST and delivery fees inclusive)	\$65,750.00

Additional Information

- This quotation is valid for three (3) months as from 26 April 2021.
- Ambient Gardens is fully insured and have White Card accreditation; verification of each can be produced upon request.
- **Please note our terms of payment are strictly 14 days from Invoice Date.**

Cantilever Walkway Quote
#SGSNBC0022System: v3.6.19
Eng Solution Ver: Gama Consulting: v13 March 2020
Date Produced: 02-Sep-21 3:11 PM

Sheds N Homes Hobart

✉:
☎:
👤: Kyla Davidson
📞: 0362636545

- CUSTOMER DETAILS -

First Name Last Name
Buckingham Bowls
Site Address
4 St Johns Street
Suburb
New Town TAS Phone
Delivery Notes

- JOB DETAILS -

Email

Customer Reference

Buckingham Bowls

Delivery Notes

QUOTATION

\$0.00

TOTAL (inc-GST) \$32,388.69

PAYMENT STRUCTURE

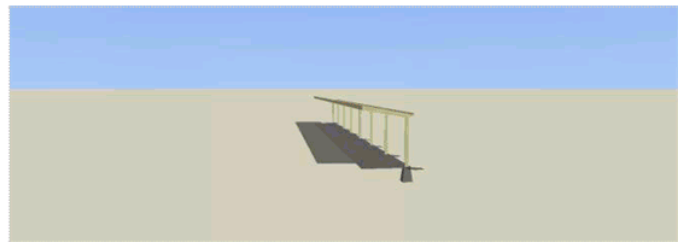
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CONTRACT ACCEPTANCE

Please print your name, sign and date the box below.
By signing this declaration, this quotation becomes a CONTRACT. You agree to the terms and conditions and the price of \$32,388.69.

- NOTES -

- DESIGN SPECIFICATION -



COLOUR SELECTIONS

Purlin: Classic Cream

Roof: Classic Cream/Grey

Rafter: Classic Cream

Flashing: Classic Cream

Column: Classic Cream

Gutter: Classic Cream

Structure Use: Domestic

Type: Skillion, Monoslope, Free-standing Canopy

Size: approx. 2.2 metres wide x 36 metres long.

Height: 2300 mm (Column: 2300 mm)

Cantilever: 2000mm ; Rear: 200mm

Number of Bays: 9

Bay Length: 3927 mm (between columns)

Roofing Material: Corrugated Colorbond (Non-Trafficable) roof sheeting.

Roof Pitch: 10°

Gutters: Colorbond OG Gutter

Fascia Beam: 158 x 65 x 1.0 Box Beam

Rafter: 158 x 65 x 1.0 Box Beam

Purlins: 65 x 65 x 0.8 Box Beam

Column: 150 x 50 x 3.0 RHS

Insert Frame: 150 x 50 x 3.0 RHS

Footing Type: Square Concrete Piers, In Ground
Footing Size: 900mm sq piers x 950 mm deep

Cantilever Walkway Quote
#SGSNBC0022System: v3.6.19
Eng Solution Ver: Gama Consulting: v13 March 2020
Date Produced: 02-Sep-21 3:08 PM

Sheds N Homes Hobart

✉:
☎:
📞: Kyla Davidson
📞: 0362636545

- CUSTOMER DETAILS -

First Name Last Name
Buckingham Bowls
Site Address
4 St Johns Street
Suburb
New Town TAS Phone
Delivery Notes

- JOB DETAILS -

Email
Customer Reference
Buckingham Bowls
Delivery Notes

QUOTATION

	\$0.00

TOTAL (inc-GST) \$39,696.76

PAYMENT STRUCTURE

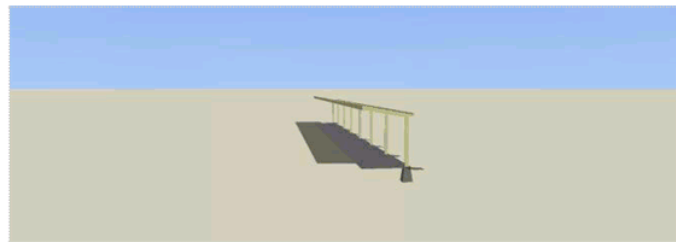
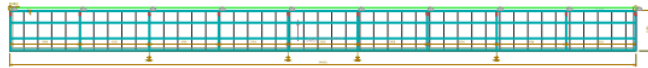
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- NOTES -

- DESIGN SPECIFICATION -



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Rafter: Classic Cream	Flashing: Classic Cream
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Structure Use: Domestic

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Cantilever Walkway Quote
#SGSNBC0022System: v3.6.19
Eng Solution Ver: Gama Consulting: v13 March 2020
Date Produced: 02-Sep-21 3:05 PM

Sheds N Homes Hobart

✉:
☎:
👤: Kyla Davidson
📞: 0362636545

- CUSTOMER DETAILS -

First Name Last Name
Buckingham Bowls
Site Address
4 St Johns Street
Suburb
New Town TAS Phone
Email
Customer Reference
Buckingham Bowls
Delivery Notes

- JOB DETAILS -

QUOTATION

	\$0.00
TOTAL (inc-GST)	\$40,794.34

PAYMENT STRUCTURE

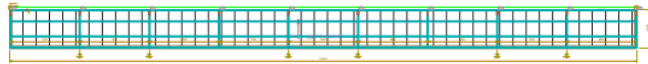
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CONTRACT ACCEPTANCE

Please print your name, sign and date the box below.
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CONTRACT. You agree to the terms and conditions
and the price of \$40,794.34.

- NOTES -

- DESIGN SPECIFICATION -



COLOUR SELECTIONS

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Height: 2300 mm (Column: 2300 mm)

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Roofing Material: Corrugated Colorbond (Non-Trafficable) roof sheeting.

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Column: 150 x 50 x 3.0 RHS

Insert Frame: 150 x 50 x 3.0 RHS

Footing Type: Square Concrete Piers, In Ground
Footing Size: 900mm sq piers x 950 mm deep

AD DESIGN + CONSULTING

Engineering
Project Management
Property Development**DESIGN MEMO**

TO: Development Engineer, City of Hobart
FROM: Tom Norman
DATE: 21/12/2022
PROJECT: 4 - 10 St John Avenue, New Town
RE: Design Memorandum – Stormwater Management

Southern Tasmanian Netball Association has engaged AD Design & Consulting to provide advice on the stormwater management requirements for two proposed netball courts at 4 – 10 St John Avenue, New Town.

This document aims to satisfy the requirements of the Hobart Interim Planning Scheme 2015 through:

- assessment of the peak pre-development and post-development stormwater discharges from the site and providing mitigation solutions if required.
- Provide water-sensitive urban design in line with the State Stormwater Strategy.

The site has been split into two area. One site is for the re-development of the lawn bowls into a netball court (shown red), and the other site is the installation of four new sheltered areas (shown blue). The detention tank designs have been calculated individually however the water quality design has taken both sites as a single development to provide a single net reduction in water pollutants for the centre. This was done to avoid duplication of unnecessary infrastructure.

Key site details are tabulated in Table 1.

Table 1: Site details

Location	4 - 10 St John Avenue, New Town
Municipality	City of Hobart
Policy Controls	Hobart Interim Planning Scheme 2015

AD DESIGN+CONSULTING



Figure 1: 64 Alexander Street, Sandy Bay (LIST, 2021)

1 Stormwater Quantity – Netball Courts

Determining Permissible Site Discharge

The Permissible Site Discharge (PSD) is based on the undeveloped scenario for the site. A predevelopment percentage impervious of 0% for the site has been adopted, this accounts for the current use case, being a lawn bowls green. Table 2 outlines the model parameters used to determine the PSD.

Table 2: PSD model parameters

Catchment Area	0.1444 ha
Fraction Impervious	0%
Manning’s number	0.05 Previous 0.013 Impervious
Catchment slope	1%

AD DESIGN+CONSULTING

The results of the hydrological analysis show that the mean peak discharge from the undeveloped site for the 25-minute storm duration was 11 L/s. Figure 2 shows the results of the analysis for the 5% AEP ensemble storm event.

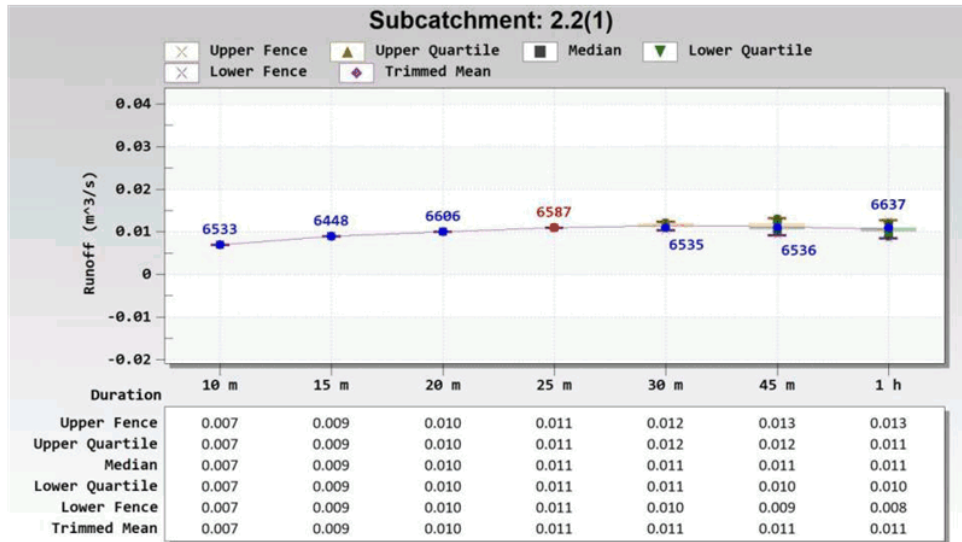


Figure 2: Pre-development runoff (PSD)

Developed Scenario Runoff

The proposed development will increase the site's impervious area, which will increase stormwater runoff. Table 3 summarises the post develop catchment characteristics. To assess whether detention is required, the post-development and PSD are compared.

Table 3: Courts model parameters

Court Area	0.1444 ha
Fraction Impervious	100%
Manning's number	0.013
Catchment slope	1%

The results of the hydrological analysis (Figure 3: post-development runoff) show that the critical storm duration is 15 min, with a mean peak discharge of 29 L/s. As such the site requires on-site detention to be installed to mitigate flows to pre-development flow rates.

AD DESIGN+CONSULTING

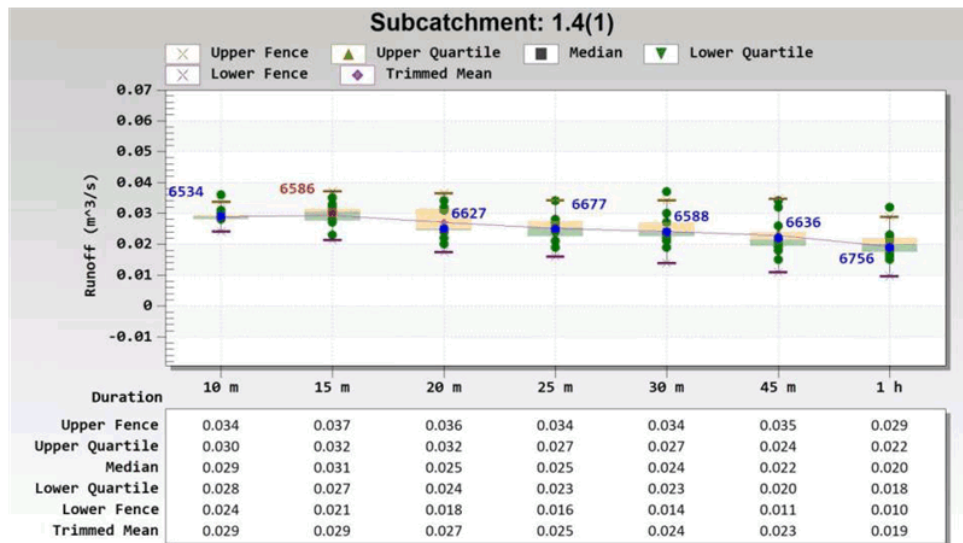


Figure 3: post-development runoff

Detention Design

It is proposed to drain the entire court area to an underground detention tank. Limiting the permissible site discharge for the developed site to the required 11/s, the modelling results are tabulated below. The hydrograph of the critical storm (ID6586) was selected for the design of the detention tank.

Table 4: Courts detention modelling results

Total Detention Volume	12m ³
Detention Tank Size	4m x 3m x 1m underground detention tank
Control	DN70 orifice control valve located at the base of the last tank
Mitigated flow	11 l/s.

The results of the mitigate flow are shown in Figure 4. It is shown that the maximum storage volume in the tank reaches 12.16m³, inflow is 30L/s and outflow is 11L/s. The results demonstrate that the underground detention tank is sufficient to effectively mitigate site discharge to the permissible site discharge.

AD DESIGN+CONSULTING

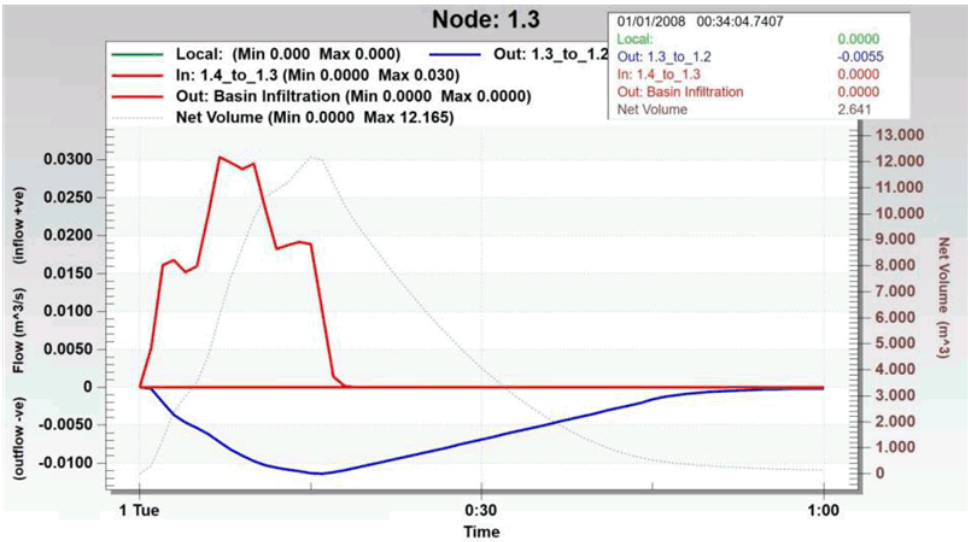


Figure 4: Courts storage volume and flows

2 Stormwater Quantity – Shelters

Determine Permissible Site Discharge

The Permissible Site Discharge (PSD) is based on the undeveloped scenario for the site. A predevelopment percentage impervious of 0% for the site has been adopted, this accounts for the current use case, being a lawn bowls green with no shelters. Table 5 – Shelters PSD Model Parameters, outlines the model parameters used to determine the PSD.

Table 5 – Shelters PSD Model Parameters

Catchment Area	0.029 ha
Fraction Impervious	0%
Manning’s number	0.05 Previous 0.013 Impervious
Catchment slope	1%

The results of the hydrological analysis show that the mean peak discharge from the undeveloped site for the 10-minute storm duration was 2 L/s, this will be adopted as the PSD. Figure 5 – Shelters Pre-development runoff (PSD) shows the results of the analysis for the 5% AEP ensemble storm event.

AD DESIGN+CONSULTING

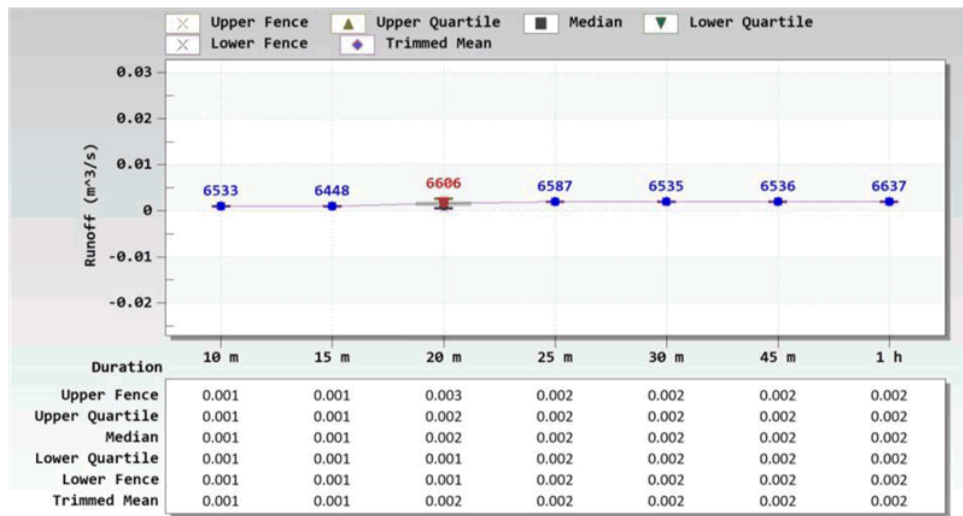


Figure 5 – Shelters Pre-development runoff (PSD)

Developed Scenario Runoff

The proposed development will increase the site's impervious area, which will increase stormwater runoff. Table 6 - Shelters model parameters summarises the post develop catchment characteristics. To assess whether detention is required, the post-development and PSD are compared.

Table 6 - Shelters model parameters

Court Area	0.029 ha
Fraction Impervious	100%
Manning's number	0.013
Catchment slope	1%

The results of the hydrological analysis (Figure 6 – Shelters post development runoff) show that the critical storm duration is 10 min, with a mean peak discharge of 6 L/s. As such the site requires on-site detention to be installed to mitigate flows to pre-development flow rates.

AD DESIGN+CONSULTING



Figure 6 – Shelters post development runoff

Detention Design

It is proposed to drain all shelters to an underground detention tank before discharging to a kerb adaptor in New Town Road. Limiting the outflows to the permissible site discharge for the developed site of 2L/s, the modelling results are tabulated below. The hydrograph of the critical storm (ID6534) was selected for the design of the detention tank.

Table 7 - Shelter detention modelling results

Total Detention Volume	2m ³
Detention Tank Size	2m x 1m x 1m underground detention tank
Control	DN25 orifice control valve located at the base of the tank
Mitigated flow	1 l/s.

The results of the mitigate flow are shown in Figure 7 - Shelter detention storage and flows. It is shown that the maximum storage volume in the tank reaches 1.83m³, the inflow is 5L/s and outflow is 1L/s. The results demonstrate that the underground detention tank is sufficient to effectively mitigate site discharge to the permissible site discharge.

AD DESIGN+CONSULTING

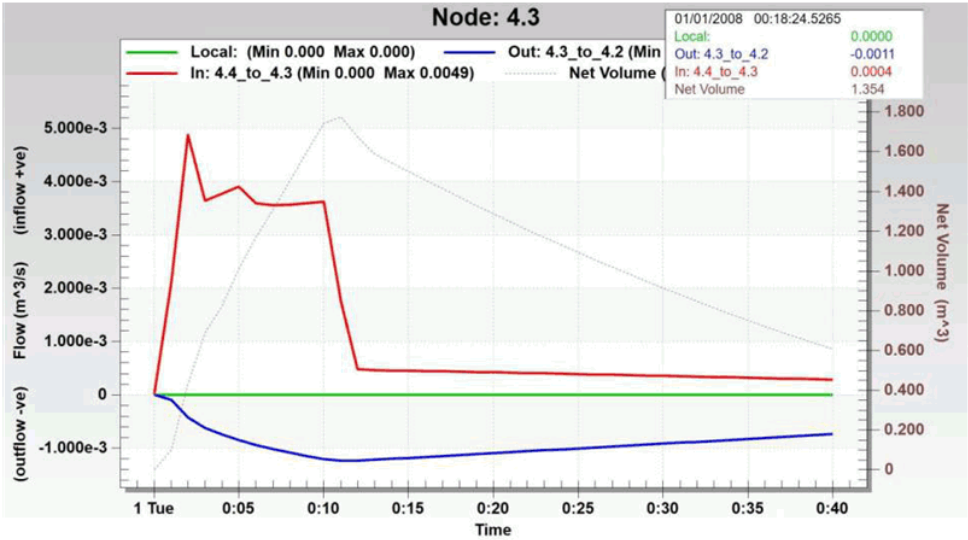


Figure 7 - Shelter detention storage and flows

3 Stormwater Quality

Methodology

Water quality modeling has been undertaken in accordance with Derwent Estuary Program and Water by Design guidelines. MUSIC software has been used to estimate the reduction targets for the given development. The parameters used within MUSIC are tabulated below.

The netball court development and the shelter development have been considered as a joint catchment. This was done as we are interested in reductions across the whole development and not just at each point (net reduction). As the development is small, and water quality devices are effective at treating stormwater, it is possible to overtreat one area and undertreat another area to have a net result compliant with the planning scheme.

Model Parameters

Table 8: Rainfall data

Parameter	Value
Rain station	Hobart - 094145
Time step (minutes)	6

Table 9: Rainfall parameters

Parameter	Value
Rainfall threshold (mm/day)	1

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Soil storage capacity (mm)	120
Initial storage capacity (% of capacity)	25
Field capacity (mm)	50
Infiltration capacity coefficient A	200
Infiltration capacity coefficient B	1
Initial depth (mm)	10
Daily recharge rate (%)	25.00
Daily base flow rate (%)	5.00
Daily deep seepage rate (%)	0

Table 10: Urban pollutant sources

Pollutant	Surface Type	Storm Flow		Base Flow	
		Mean (log mg/l)	SD (log mg/L)	Mean (log mg/l)	SD (log mg/L)
TSS	Roof	1.301	0.333	-	-
	Hardstand/ Road	2.431	0.333	-	-
	Ground	1.900	0.333	0.96	0.401
TP	Roof	-0.886	0.242	-	-
	Hardstand/ Road	-0.301	0.242	-	-
	Ground	-0.700	0.242	-0.731	0.360
TN	Roof	0.301	0.205	-	-
	Hardstand/ Road	0.342	0.205	-	-
	Ground	0.243	0.182	0.455	0.363

Table 11: Pollutant catchments

Pollutant Catchment	Pollutant Catchment (m ²)
Court	1443
Roofs	290

3.1.1 Treatment Train

The proposed treatment train has been summarised in Figure 8: MUSIC model schematic and results in Table 12. A single pollutant source catchment was used as both sides of the tennis court will be drained to the treatment device before being discharged from the site. As the shelters will go untreated (as the courts are being over treated), this was setup as a catchment bypass.

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Table 12: Treatment node

Node	Quantity	Description
Detention Basins	2	Detention basin help to still water allowing nutrient and sediment to drop out of the water.
SPEL Hydrosystem HS1000	1	The SPEL Hydrosystem is specifically designed for the capture of gross pollutants and provide tertiary treatment of stormwater for small developments.

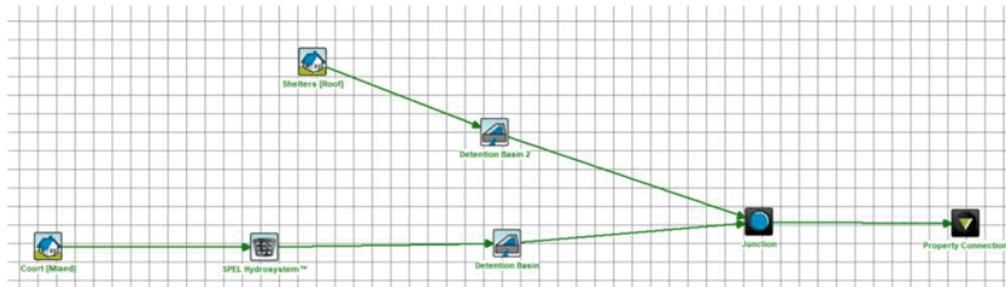


Figure 8: MUSIC model schematic and results

3.1.2 Results

The results of the pollution reduction are summarised in Table 13. It is shown that the proposed treatment train is effective at reducing pollutant levels.

Table 13: MUSIC treatment train effectiveness results summary

Pollutant (kg/yr)	Source (kg/yr)	Residual Load (kg/yr)	Reduction (%)
Total Suspended Solids	205	30.8	91.5
Total Phosphorus	0.344	0.117	73.5
Total Nitrogen	1.3	0.717	45
Gross Pollutants	21.9	0	100

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4 Conclusion

It is concluded that stormwater runoff detention can be employed to control runoff to pre-development levels. The following arrangement has been modelled and is proposed:

The netball courts require a **detention volume of at least 12m³ with a DN70 orifice**. This volume can be provided in any underground detention arrangement deemed suitable by the developer.

The shelters require a **detention volume of at least 2m³ with a DN25 orifice**. This volume can be provided in any underground detention arrangement deemed suitable by the developer.

Stormwater from the site can be effectively treated by the installation of a **SPEL Hydrosystem HS1000**. This treatment train effectively brings down the pollutant load in line with the State Stormwater Strategy.

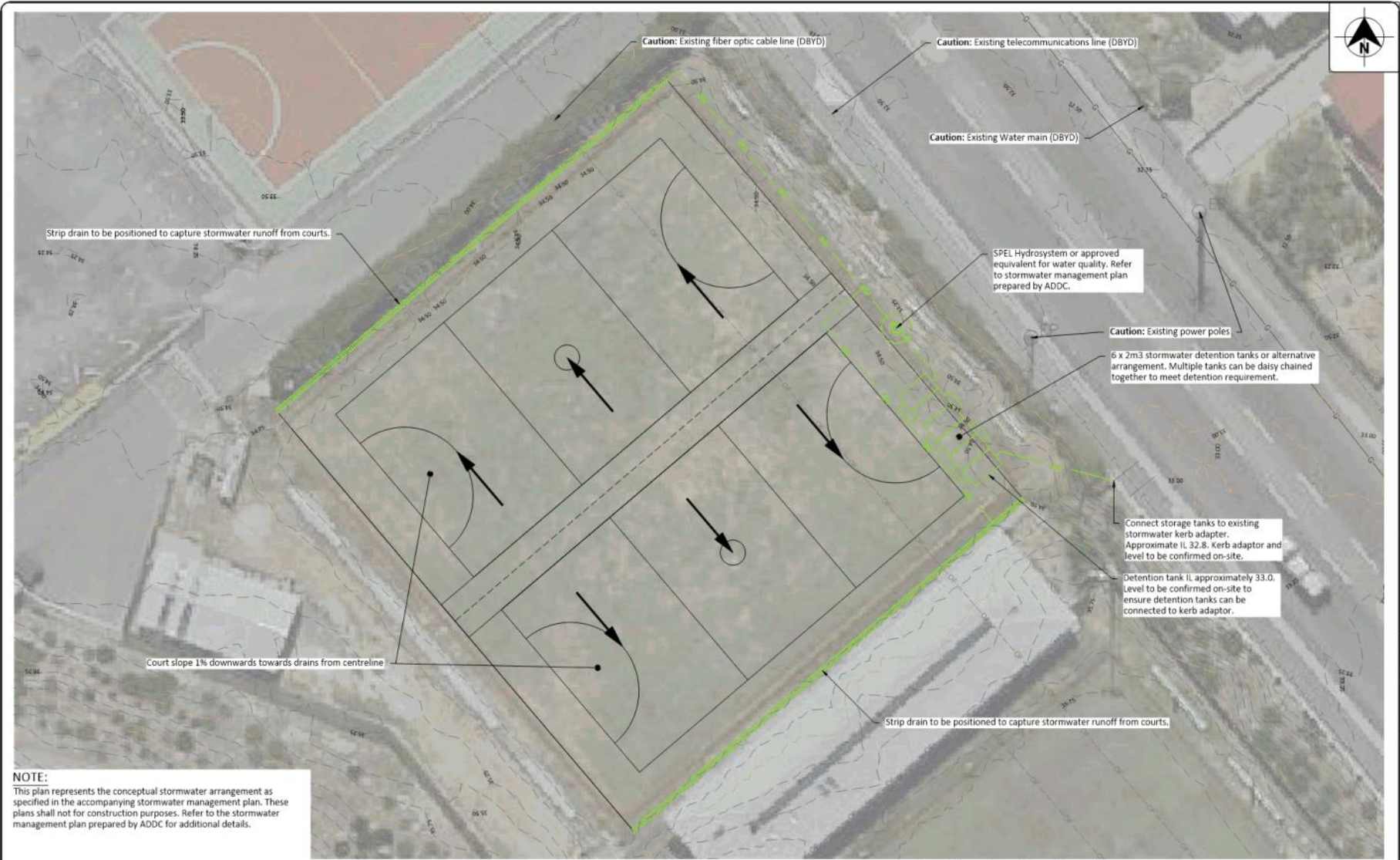
The site can therefore be developed in accordance with E7 of the Hobart Interim Planning Scheme 2015.

Regards,



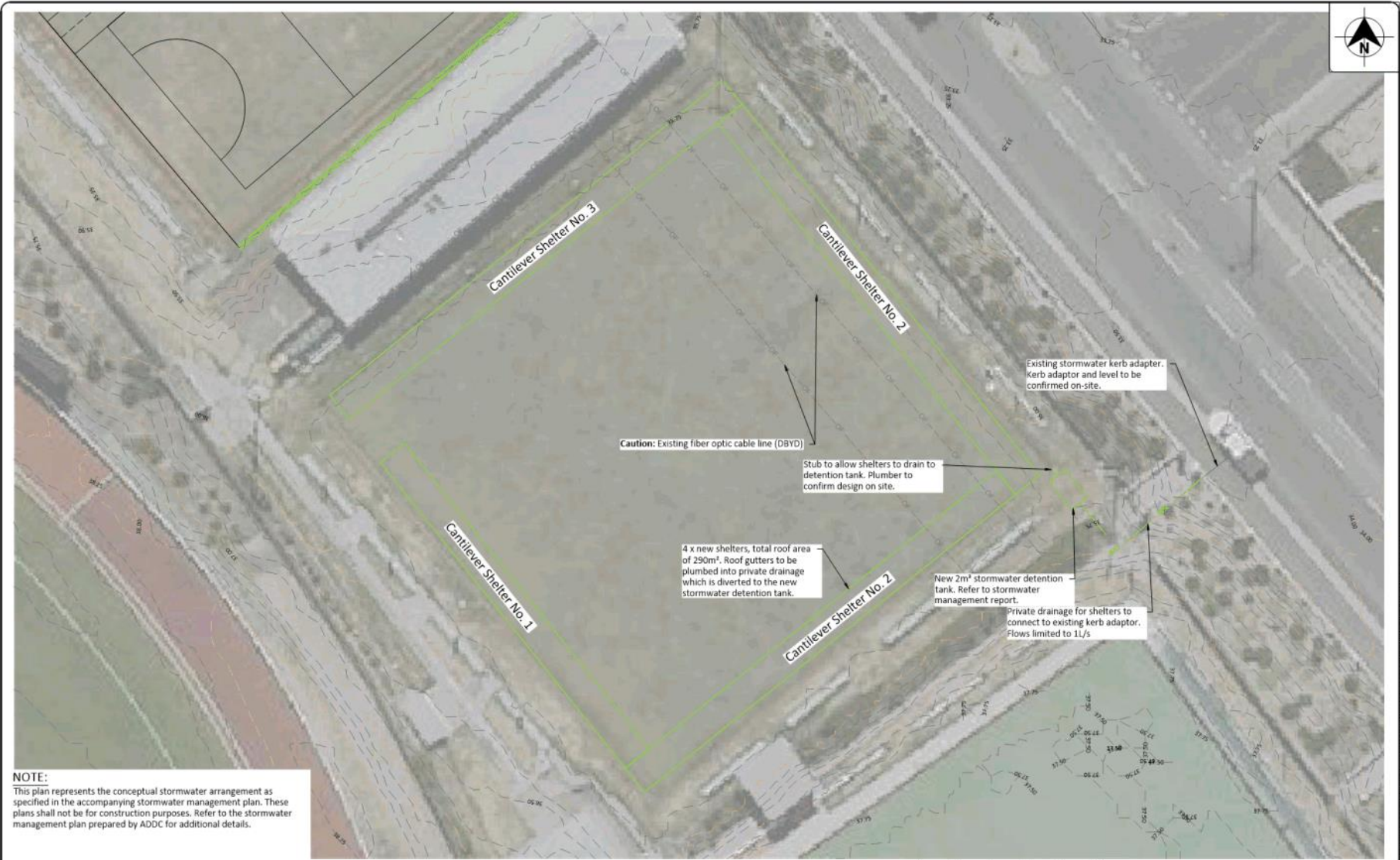
Tom Norman
Senior Engineer

AD Design and Consulting



NOTE:
This plan represents the conceptual stormwater arrangement as specified in the accompanying stormwater management plan. These plans shall not for construction purposes. Refer to the stormwater management plan prepared by ADDC for additional details.

<div>AD DESIGN+CONSULTING</div> <div>Engineering / Infrastructure Services / Project Management</div>										<div>Client</div> <div>Southern Tasmanian Netball Association (STNA)</div>										<div>Project</div> <div>4-10 St Johns Avenue, New Town (Stormwater)</div>										<div>Drawn</div> <div>Designed</div> <div>Checked</div> <div>Approved</div>										<div>Sign</div> <div>Sign</div> <div>Sign</div> <div>Sign</div>										<div>Date</div> <div>Date</div> <div>Date</div> <div>Date</div>										<div>Drawing Title</div> <div>Drainage General Arrangement</div>										<div>Project No</div> <div>22041</div>										<div>Scale</div> <div>1:250</div>										<div>Sheet No</div> <div>A3</div>										<div>Drawing No</div> <div>C-1-07-01</div>										<div>Rev</div> <div>A</div>										<div>FOR INFORMATION</div> <div>SEE FOR 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Andrew Sutherland Consulting Engineers



Technical Note

To: City of Hobart

Project: New Town Netball Court Lighting Upgrade

Date: 19/12/2022

Job No. 15922

From: Terence Ling

Document No. 15922_TN_001_A

Subject: New Town Netball Court Lighting Design

Client Contract No.

Revision A

1. Background

The existing bowling ground is converted to 2 new netball courts. The new sport lighting is proposed to the new netball courts.

2. Proposed Sport Lighting for the New Netball Court

The new sport lighting for the netball court is design to meet AS 2560.2-2021 Sport Lighting. The illuminance level is designed to meet mid-level for local and regional competition (see Table 2.9.1).

Table 2.9.1 — LTPs for netball and basketball

Level of play	Average horizontal maintained illuminance (\bar{E}_h)	Minimum horizontal uniformity		Maximum glare rating (GR)	Minimum colour rendering index (R_a)
		(E_{hmin}/\bar{E}_h) (U_1)	(E_{hmin}/E_{hmax}) (U_2) ^b		
Recreation or training, and low-level local competition	100	0.50	0.30	50	65
Mid-level local and regional competition, high level training	200	0.60	0.40	50	65
International and national competition with large spectator galleries ^a	500	0.70	0.50	45	65
^a International and national competitions are rarely (if at all) played on outdoor courts.					
^b Where two or more courts are adjacent, and with luminaires operating simultaneously U_2 may be reduced by an absolute value of 0.1, e.g. from 0.30 to 0.20 for low level competition.					

Lighting scheme comprises four lighting structures of approximately 12m height that provide average 249lux. The new sport lighting system will comprised of 2 illuminance levels that can be control from onsite switchboard/control board.



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3. Montage of existing site and proposed new sport lighting

View 1 from Main Road.



View 2 from Main Road



View 3 from





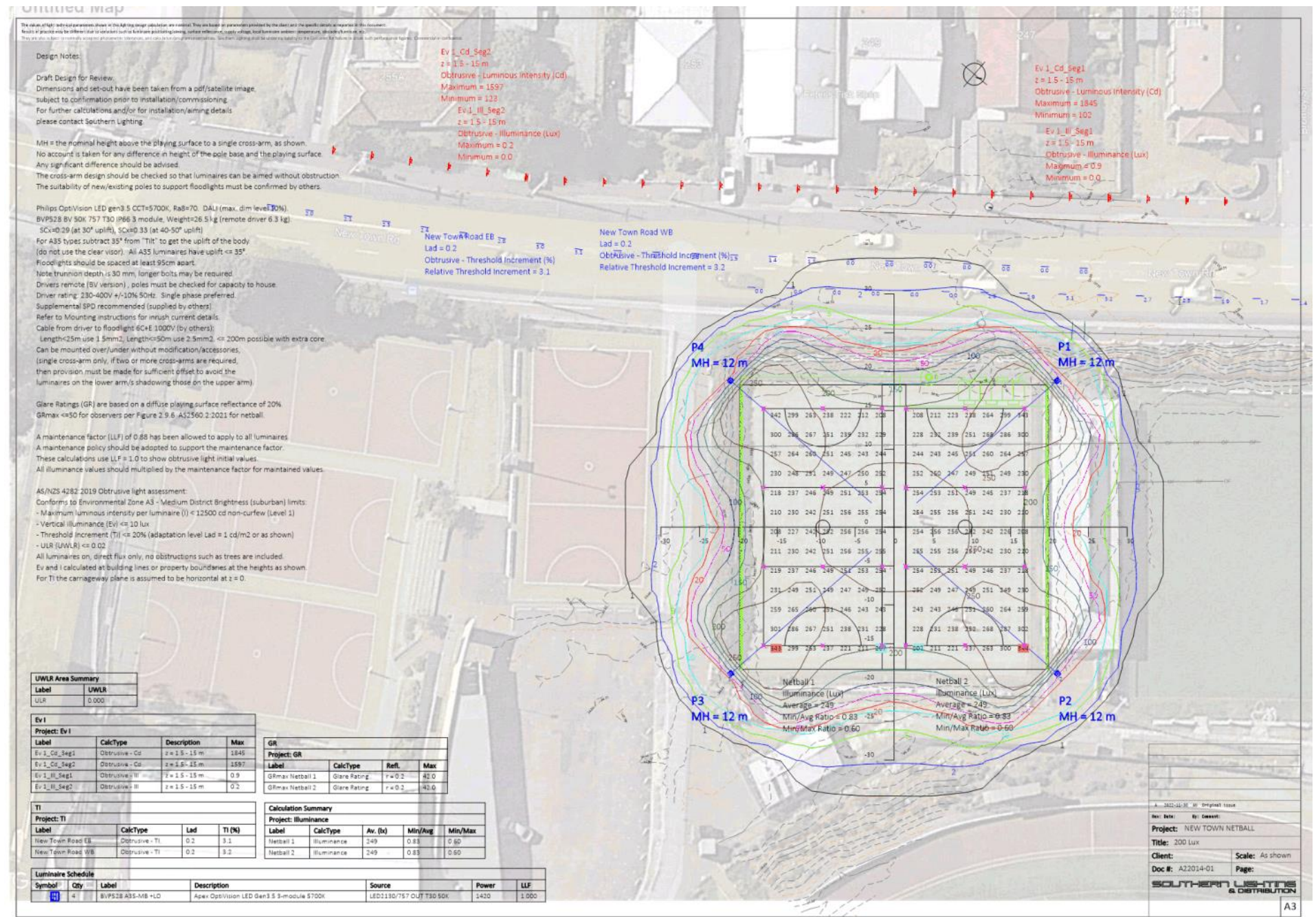
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4. Attachment

- a. Lighting calculation
- AS2560.2:2021 – Netball Mid Level
 - AS4282:2019 – Obtrusive Light Assessment at property boundaries and carriageway

END OF DOCUMENT



Application Referral Cultural Heritage - Response

From:	Sarah Waight
Recommendation:	Proposal is acceptable without conditions.
Date Completed:	
Address:	4 - 10 ST JOHNS AVENUE, NEW TOWN
Proposal:	Partial Demolition, Alterations, Fencing and Two New Netball Courts
Application No:	PLN-21-809
Assessment Officer:	Deanne Lang,

Referral Officer comments:

This application is for works to a place heritage listed in Table E13.1 of the Historic Heritage Code of the Scheme. The listing in Table E13.1 (No. 3003) describes the site as the St John's Bowling Club, however this is not correct as that bowls club is located within and covered by the St John's Park site listing in Table E13.1 (No. 3002) in the Historic Heritage Code of the Scheme.

That aside, the subject site (No. 3003) was identified in the New Town and Lenah Valley Significant Garden Study and the datasheet (Ref G81) prepared as part of the study specifically describes the collective nature of the landscapes within the St John's Park site, avenues of trees, planting associated with the John Edis centre and the bowls club including its 'prominent fence and concrete retaining wall.' It can therefore be confirmed that the heritage listed site is that defined as having the title 149031/1, but also the elements described and those of within the larger St John's Park site on other titles.

The proposal is for the conversion of one of the three bowling greens associated with the Buckingham Bowls Club into netball courts. The site is shown in the image below. The bowling green to be developed is the one closest to the existing netball courts located on the corner of Creek Road and New Town Road.



Subject site for the proposed netball court shown by red line with masonry heritage fence to the left.

The adjacent (or middle) bowling green is to be resurfaced and have new shade structures.

The heritage listed land parcel identified by the Scheme listing captures the part of the site that is the subject of this current application. However, the masonry fence identified in the datasheet is further along New Town Road and off-centre from the bowling green to be modified as a netball court. The middle part of the subject site (bowling green 2) will remain as a bowling green and is to be resurfaced and have new shade structure. That part of the subject

site is located behind the masonry heritage fence.

The proposal involves demolition and new work.

The demolition involves the removal of the following elements:

- removal of the playing surface of the bowling green from grass to Plexipave for the netball courts, minor excavation for drainage and for the construction of 3 metre high fencing and new gates around three side of the courts.
- removal of the surface of bowling green 2 and edges and removal of existing umbrella structures.

The new work involves:

- new playing surface for the netball courts
- fencing and two new gates to the netball court - 3 metres high
- misc path surfaces
- new playing surface to the bowling green
- three new cantilever shade structures around the edge of the bowling green.

The proposal must be assessed against E13.7.1 P1 - demolition at a heritage place and E13.7.2 P1, P2, P3 new work at a heritage place. It should be noted that while there is a new fence, it is not a new 'front fence and gate' as defined under the Scheme, therefore clause E13.7.2 P5 does not apply.

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:

None of the features or elements proposed to be removed as part of the demolition for the new work can be considered to have any heritage value or make a contribution to the historical significance of the site. Therefore clause E13.7.1 P1 is satisfied.

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.
The proposal satisfies the above provisions of the Scheme.*

Response:

The proposed works are consistent with this site having been used as sporting facilities for a considerable period of time and although one of the parts of the site will change from a bowling green to two netball courts, it will remain as an open square of playing area. The new fence, a cyclone mesh fence on three sides, is likewise consistent with the character of sporting facilities. There are no changes to the existing vegetation and landscaping arrangement. The most significant change will be the construction of three (3) new shelters that have a cantilevered roof around bowling green 2, all having a height of 2.3 metres and finished in Colorbond Classic Cream and Grey. Again, these types of structures are consistent with current shade facilities provided at bowling greens around Australia and are designed to be simple, open and functional structures. The colours selected are described above and from an overall point of view, the proposed development is consistent and sympathetic to the setting, uses appropriate materials and is of a scale that does not result in diminution or loss of heritage values associated with the heritage listed place, satisfying E13.7.2 P1, P2 and P3.

The proposal satisfies the above provisions of the Historic Heritage Code of the Scheme.

Sarah Waight
Senior Cultural Heritage Officer
6 Feb 2023

**6.1.2 487 AND 489 SANDY BAY ROAD, SANDY BAY - SUBDIVISION
(BOUNDARY ADJUSTMENT)
PLN-22-736 - FILE REF: F23/12766**

Address: 487 and 489 Sandy Bay Road, Sandy Bay

Proposal: Subdivision (Boundary Adjustment)

Expiry Date: 16 February 2023


Extension of Time:




Author: Helen Ayers

RECOMMENDATION

That pursuant to the *Hobart Interim Planning Scheme 2015*, the Planning Committee, in accordance with the delegations contained in its terms of reference, refuses the application for Subdivision (Boundary Adjustment), at 487 and 489 Sandy Bay Road, Sandy Bay for the following reasons:

1. The proposal does not meet the acceptable solution of the performance criterion with respect to clause E13.7.3 P1 (a), (b) or (c) of the Hobart Interim Planning Scheme 2015 because it will not ensure that sufficient curtilage is retained as part of any title containing heritage values; does not ensure a sympathetic pattern of subdivision; and does not provide 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.
2. The proposal does not meet the acceptable solution or the performance criterion with respect to clause E13.8.3 P1 (a) and (b) of the Hobart Interim Planning Scheme 2015 because the subdivision proposal will result in detriment to the historic cultural heritage significance of the precinct as described in Table E13.2 and a pattern of subdivision that is unsympathetic.

Attachment A: PLN-22-736 - 487 SANDY BAY ROAD SANDY BAY TAS 7005 - Planning Committee or Delegated Report ↓ 

- Attachment B: PLN-22-736 - 487 AND 489 SANDY BAY ROAD
SANDY BAY TAS 7005 - Attachment B - PC
Agenda Documents ↓ 
- Attachment C: PLN-22-736 - 487 SANDY BAY ROAD SANDY
BAY TAS 7005 - Attachment C - Planning Referral
Officer Cultural Heritage Report ↓ 
- Attachment D: PLN-22-736 - 487 AND 489 SANDY BAY ROAD
SANDY BAY TAS 7005 - Attachment D - Post
Advertising Applicant Heritage Submission ↓ 

**APPLICATION UNDER HOBART INTERIM PLANNING SCHEME 2015**

Type of Report:	Committee
Committee:	15 February 2023
Expiry Date:	16 February 2023
Application No:	PLN-22-736
Address:	487 SANDY BAY ROAD , SANDY BAY 489 SANDY BAY ROAD , SANDY BAY
Applicant:	Daniel Cripps (Leary, Cox and Cripps) G04, 40 Molle Street
Proposal:	Subdivision (Boundary Adjustment)
Representations:	None
Performance criteria:	General Residential Zone Development Standards for Subdivision, and Historic Heritage Code

1. Executive Summary

- 1.1 Planning approval is sought for Subdivision (Boundary Adjustment), at 487 and 489 Sandy Bay Road, Sandy Bay.
- 1.2 More specifically the proposal includes:
 - Transferring 352m2 from the rear of 487 Sandy Bay Road to 489 Sandy Bay Road to make more regular lots.
 - Creating a right of way over the existing driveway for 487 Sandy Bay Road to 489 Sandy Bay Road.
 - Demolition of the carport that is currently within 487 Sandy Bay Road to facilitate the boundary adjustment and new access arrangement.
- 1.3 The proposal relies on performance criteria to satisfy the following standards and codes:
 - 1.3.1 General Residential Zone - Lot Design
 - 1.3.2 Historic Heritage Code - Development Standards for Heritage Places, Development Standards for Heritage Precincts
- 1.4 No representations were received during the statutory advertising period between 15/12/22 and 5/1/23.

- 1.5 The proposal is recommended for refusal.
- 1.6 The final decision is delegated to the Planning Committee because the application is recommended for refusal.

2. Site Detail

- 2.1 The application site is comprised of two adjacent titles. The front lot is irregularly shaped, and has a heritage listed single dwelling located toward its rear. The rear lot is a small internal lot, with a long driveway, and very limited area to construct a dwelling.

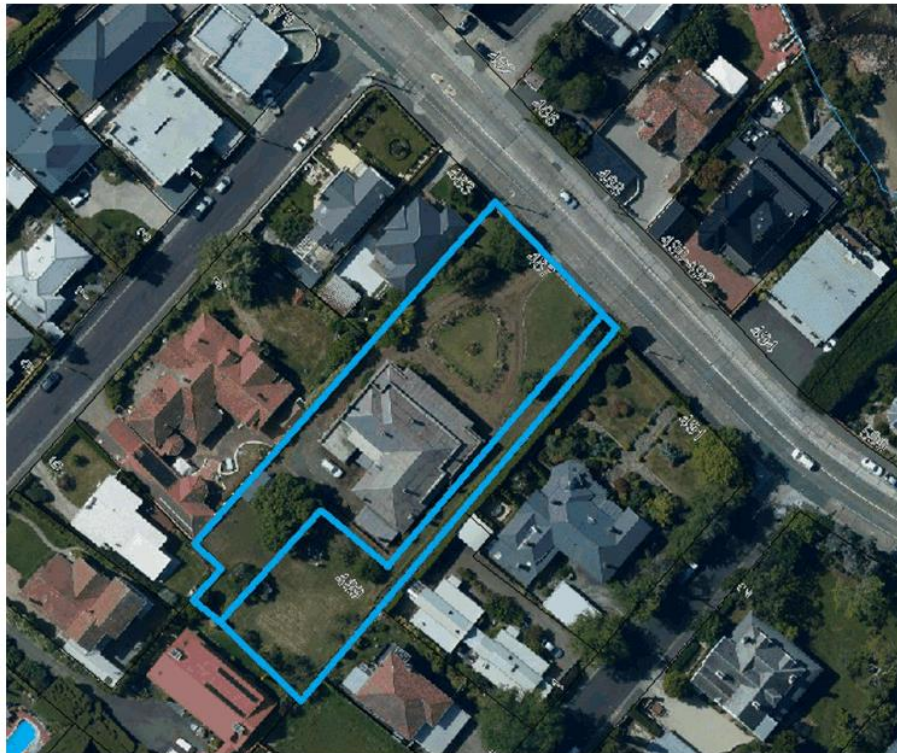


Figure 1: The location of the application site is outlined in blue

3. Proposal

- 3.1 Planning approval is sought for Subdivision (Boundary Adjustment), at 487 and 489 Sandy Bay Road, Sandy Bay.

3.2 More specifically the proposal is for:

- Transferring 352m² from the rear of 487 Sandy Bay Road to 489 Sandy Bay Road to make more regular lots.
- Creating a right of way over the existing driveway for 487 Sandy Bay Road to 489 Sandy Bay Road.
- Demolition of the carport that is currently within 487 Sandy Bay Road to facilitate the boundary adjustment and new access arrangement.

4. Background

- 4.1 The applicant sought pre-application advice from Council regarding the proposed boundary adjustment through PAE-22-260 in October 2022. At this time, heritage advice was provided that a rear boundary for the front, heritage listed, dwelling be located a minimum of approximately 8m from the rear of the building.
- 4.2 When the application was initially submitted, this reflected the heritage advice provided in PAE-22-260, showing the boundary in the location recommended.

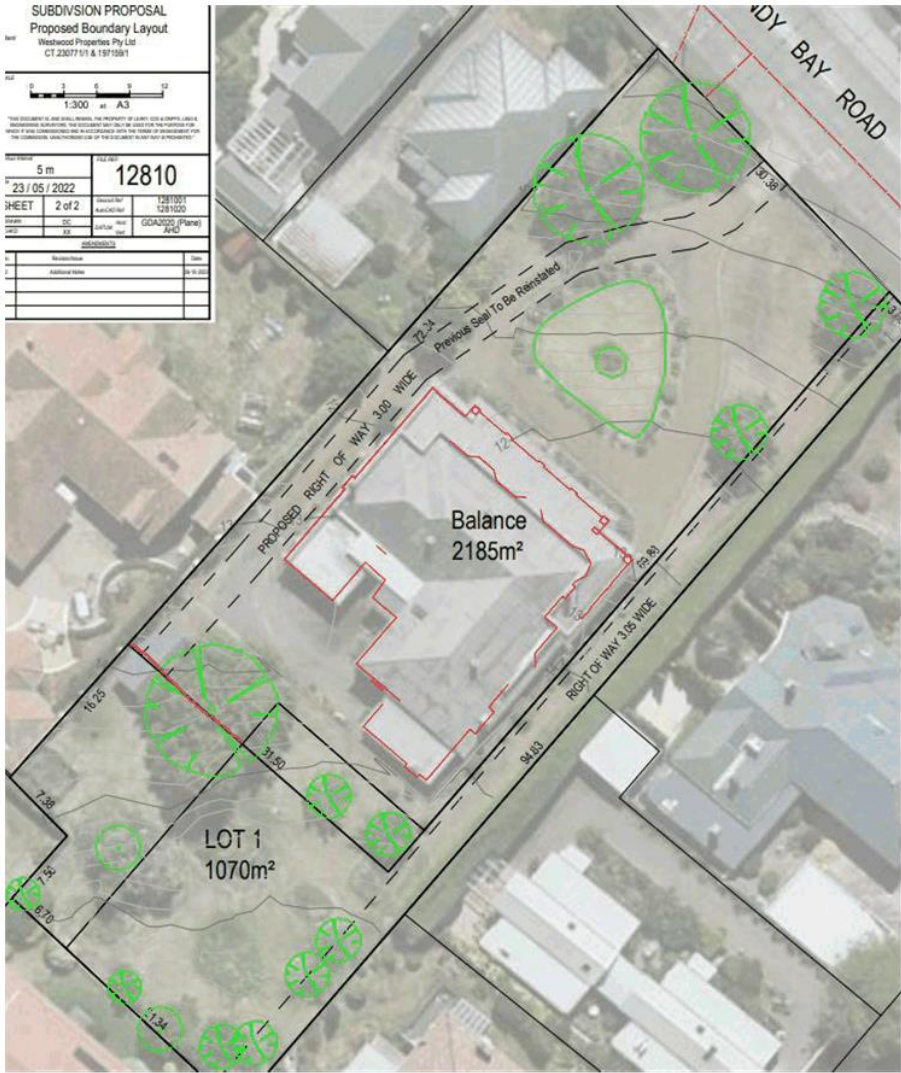


Figure 2: The originally proposed subdivision showing the lot boundary (in red) in line with Council's heritage advice.

- 4.3 An unrelated request for additional information resulted in the location of the boundary being moved 5m closer to the heritage listed dwelling without consultation with Council officers, and the proposed boundary was advertised in this new location.

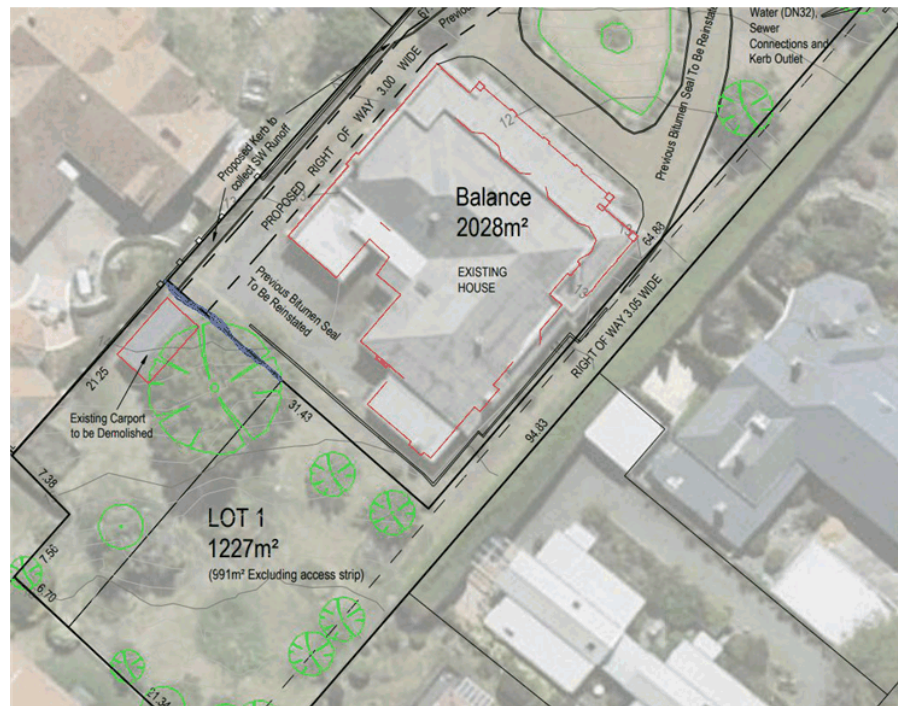


Figure 3: The advertised plan showing the new boundary (in blue), not in accordance with Council's heritage advice.

- 4.4 Following advertising, in the detailed assessment of the proposal, the change to the plans was identified, and the applicant contacted to discuss it and the fact that it rendered the application difficult to support from a heritage perspective.
- 4.5 The applicant considered their options, came up with a potential alternative subdivision design (below) and sought independent heritage advice on this and the advertised design. The amended design gives the access strip from 489 Sandy Bay Road (the rear lot) to 487 Sandy Bay Road (the front lot), retaining it as a service easement for 489 Sandy Bay Road (the rear lot), but critically it does not address the heritage concerns regarding the proximity of the lot boundary to the rear of the heritage listed dwelling on 487 Sandy Bay Road.



Figure 4: Applicant's post-advertising alternative design which was provided to accompany the post advertising heritage advice.

- 4.6 Amongst other things, this independent heritage advice confirms Council's Cultural Heritage Officer advice that the boundary location is not appropriate with respect to the heritage listed dwelling. This advice is an attachment to the report. Its concluding paragraph states as follows:

I do have some concerns that the proposed boundary is too close to the rear of the existing heritage residence. I feel that the place would benefit from a larger rear curtilage (say +4-5m than what is proposed) to allow for retained backyard amenity and to retain some of the backyard setting of the building. That said, the proposal provides less impact upon the curtilage and amenity of the building than the current situation which allows for a driveway very close to the eastern side of the building.

- 4.7 This independent heritage advice was discussed with the applicant, but they sought to progress the application regardless, knowing that it would be difficult to support from a heritage perspective.

- 4.8 Advice provided through PAE-22-260 also indicated that any alteration to the sandstone wall at the front of the property could be problematic given the heritage values of the site and surrounds. In the heritage assessment below under section 6, the Council's Cultural Heritage Officer also advises that:

It should be noted the consultant contends that the current legal access to the rear lot would require partial demolition of the sandstone wall to provide vehicle access and consequently this would result in more detriment than an insufficient rear boundary. The submitted [advertised] documents do not apply for any demolition or modification of the sandstone wall and as such an argument based on this scenario is not accepted to be a valid consideration.

- 4.9 An extension of the statutory timeframe to determine the application was granted to enable the application to be considered at the Planning Committee Meeting.

5. Concerns raised by representors

- 5.1 No representations were received during the statutory advertising period between 15/12/23 and 5/1/23.

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 General Residential Zone of the *Hobart Interim Planning Scheme 2015*.
- 6.3 There is no proposed change to the existing residential use of the front lot, or vacant rear lot. The application is for an adjustment of their shared boundary. The existing use is a permitted use in the zone.
- 6.4 The proposal has been assessed against:
- 6.4.1 Part D - 10.0 General Residential Zone
 - 6.4.2 Part E - E5.0 Road and Railway Assets Code
 - 6.4.3 Part E - E6.0 Parking and Access Code
 - 6.4.4 Part E - E7.0 Stormwater Management Code
 - 6.4.5 Part E - E13.0 Historic Heritage Code
- 6.5 The proposal relies on the following performance criteria to comply with the applicable standards:
- 6.5.1 General Residential Zone:

Lot Design – Part D 10.6.1 P4
 - 6.5.2 Historic Heritage Code:

Development Standards for Heritage Places - Part E E13.7.1 P1, E13.7.3 P1
Development Standards for Heritage Precincts - Part E E13.8.1 P1, E13.8.3 P1
- 6.6 Each performance criterion is assessed below.
- 6.7 Lot Design – Part D 10.6.1 P4
- 6.7.1 The acceptable solution at clause 10.6.1 A4 requires no lot to be an internal lot.
 - 6.7.2 The proposal includes an internal lot.
 - 6.7.3 The proposal does not comply with the acceptable solution; therefore

assessment against the performance criterion is relied on.

6.7.4 The performance criterion at clause 10.6.1 P4 provides as follows:

An internal lot must satisfy all of the following:

(a) the lot gains access from a road existing prior to the planning scheme coming into effect, unless site constraints make an internal lot configuration the only reasonable option to efficiently utilise land;

(b) it is not reasonably possible to provide a new road to create a standard frontage lot;

(c) the lot constitutes the only reasonable way to subdivide the rear of an existing lot;

(d) the lot will contribute to the more efficient utilisation of residential land and infrastructure;

(e) the amenity of neighbouring land is unlikely to be unreasonably affected by subsequent development and use;

(f) the lot has access to a road via an access strip, which is part of the lot, or a right-of-way, with a width of no less than 3.6m;

(g) passing bays are provided at appropriate distances to service the likely future use of the lot;

(h) the access strip is adjacent to or combined with no more than three other internal lot access strips and it is not appropriate to provide access via a public road;

(i) a sealed driveway is provided on the access strip prior to the sealing of the final plan.

(j) the lot addresses and provides for passive surveillance of public open space and public rights of way if it fronts such public spaces.

6.7.5 The lot already exists with a 69.8m long, 3.6m wide frontage strip, with no capacity for passing bays within the title boundaries, and no constructed access, wither within the strip or from the road pavement. The application

seeks to provide vehicular access via the existing driveway for the dwelling at 487 Sandy Bay Road.

- 6.7.6 There are no passing bays along the driveway for 487 Sandy Bay Road, however, the proposal to utilise this existing driveway will provide opportunity for a wider driveway than is possible for the access strip that currently exists for 489 Sandy Bay Road, and will remove the need to consider the removal of the sandstone front wall to provide vehicular access to the rear, should it be desired in the future.
- 6.7.7 The right of way is proposed to be re-sealed in bitumen.
- 6.7.8 As the internal lot already exists, the remainder of the assessment criteria under the performance criteria are not relevant.
- 6.7.9 The proposal complies with the performance criterion.
- 6.8 Development Standards for Heritage Places and Precincts - Part E E13.7.1 P1, E13.7.3 P1, E13.8.1 P1, and E13.8.3 P1
 - 6.8.1 There are no acceptable solutions for E13.7.1 A1, E13.7.3 A1, E13.8.1 A1, and E13.8.3 A1.
 - 6.8.2 The proposal includes the demolition of an outbuilding, and an adjustment of the boundaries between the two properties.
 - 6.8.3 There is no acceptable solution; therefore assessment against the performance criterion is relied on.
 - 6.8.4 The performance criterion at clauses E13.7.1 P1, E13.7.3 P1, E13.8.1 P1, and E13.8.3 P1 provide as follows:

E13.7.1 Demolition

P1 - Demolition must not result in the loss of significant fabric, form, items, outbuildings or landscape elements that contribute to the historic cultural heritage significance of the place unless all of the following are satisfied;

(a) there are, environmental, social, economic or safety reasons of greater value to the community than the historic cultural heritage values of the place;

(b) there are no prudent and feasible alternatives;

(c) important structural or façade elements that can feasibly be retained and reused in a new structure, are to be retained;

(d) significant fabric is documented before demolition.

E13.7.3 Subdivision

P1 - A proposed plan of subdivision must show that historic cultural heritage significance is adequately protected by complying with all of the following:

(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. 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.

E13.8.1 Demolition

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.

E13.8.3 Subdivision

P1 - 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.

- 6.8.5 The application has been reviewed by Council's Cultural Heritage Officer, who has provided the following assessment:

Number 487 Sandy Bay Road Preana is an individually Heritage Listed property in Table E13.1 of the Hobart Interim Planning Scheme 2015 and located within the Sandy 12 Heritage Precinct, whilst number 489 Sandy Bay Rd is within the Sandy Bay 12 Precinct. The proposed boundary adjustment must be assessed against E13.7.3 Subdivision for Heritage Places, and E13.8.3 Subdivision for Heritage Precincts. The proposed demolition must be assessed against E13.7.1 Demolition for Heritage Places, and E13.8.1 Demolition for Heritage Precincts.

Introduction:

487 Sandy Bay Road was constructed in 1918 for Mr L E Gibson, and the property remained in the Gibson family until 2020. The house is surrounded by generous grounds and was positioned in what was originally the centre of the large lot, setback from Sandy Bay Road with an imposing street presence. The rear of the property was partially subdivided in c1957 with the rear north western portion of the lot remaining with the residence as a rear

garden.

Background:

Pre Application Enquiry – 2022

The applicant sought pre-application advice from Council regarding the proposed boundary adjustment. At this time, it was advised by the Heritage Officer that; it is recommended to avoid moving the boundary closer to the house on 487, the boundary should provide the heritage listed residence 487 with a sufficient rear garden setting and curtilage.

Development Application – 2022

When the application was initially submitted, it reflected the earlier heritage advice, showing the boundary in the location recommended with sufficient rear setting. An unrelated request for additional information saw the location of the boundary adjustment moved without consultation with Council Officers, and the application was advertised with the boundary in this new location. Following advertising, in the final detailed assessment, this unspecified change to the plans was identified, and the applicant contacted to discuss the change and the fact that it rendered the application unsupportable from a cultural heritage perspective. The applicant sought advice from a heritage consultant. The consultant report makes comments on a range of heritage outcomes in relation to the boundary adjustment, the heritage consultant advice confirms Council's Cultural Heritage Officer advice that the boundary location at the rear of the listed property is not appropriate, this has been summarised in the assessment below, and the heritage consultant advice in full is in the application documents attached.

Proposal:

- Boundary adjustment to existing subdivision dating from c1957.*
- Demolition of c1998 carport.*

Statements of significance for 487 Sandy Bay Road:

(a)-Historical:

The house is of cultural heritage significance because it demonstrates the growing popularity of Lower Sandy Bay as a residential suburb in the twentieth century.

(d)-Representative of:

The house is of cultural heritage significance because it

demonstrates the principle characteristics of a substantial Inter War Georgian Revival residence in an imposing setting.

Sandy Bay 12 Heritage Precincts is significant for reasons including:

- 1. The key historical role of the road in the development of the precinct and the buildings and features that demonstrate that history.*
- 2. The large number of exceptionally fine residences dating from 1830 through to the present day.*
- 3. The small number of commercial buildings creating a village character including some which are of individual heritage significance.*
- 4. The very fine groups of residential buildings representing varying phases of development and demonstrating attitudes to subdivision, styles of building, landscaping and the social importance of properties with high levels of exposure.*

Assessment:

E13.7.1 Demolition for Heritage Places, and E13.8.1 Demolition for Heritage Precincts

Objective:

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

Performance Criteria 1

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 includes the demolition of the existing carport structure, the carport was constructed in c1998 and is not of any heritage value. It is considered that the demolition works will not

result in the loss of historic cultural heritage values of the precinct. The proposed works therefore satisfy the Performance Criteria 1 of E13.7.1 and E13.8.1.

E13.7.3 Subdivision

Objective:

To ensure that subdivision of part of a heritage place maintains cohesion between the elements that collectively contribute to an understanding of historic cultural heritage values, and protects those elements from future incompatible development.

Performance Criteria 1

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.*

Performance Criteria 1 is not met as the proposed subdivision boundary would have an unacceptable impact on the heritage significance of the place and its setting. The property is described in the Heritage Data Sheet 'as a substantial Inter War Georgian Revival residence in an imposing setting' imposing meaning grand and impressive, and setting referring to the residence's surroundings and environment, i.e. the garden and open space surrounding the house. The architectural ideals of a substantial dwelling of this period and style was to be set within a generous sized garden that was intended to complement and provide a backdrop to the architectural character of the residence. In the widely referenced text Identifying Australian Architecture, Styles and Terms from 1788 to Present; the setting for a Inter-War Georgian Revival residence such as Preana is described as 'free standing in formal garden settings'.

The curtilage of the dwelling would be significantly reduced by the proposed subdivision and it is considered to be insufficient. The proposal will diminish the significance and setting of the residence

as identified in the statements of significance. The subdivision is a clear separation of the dwelling from its original setting providing little to no rear curtilage or garden setting. The proposed rear setback from the residence of only 2.7m, this is considered inadequate and will not prevent unsympathetic development on lots adjoining any titles containing heritage values. The heritage consultant engaged by the applicant shares these concerns "I do have concerns that the proposed boundary is too close to the rear of the existing heritage residence. I feel that the place would benefit from a larger rear curtilage (say +4-5m than what is proposed) to allow for retained backyard amenity and to retain some of the backyard setting of the building".

It should be noted the consultant contends that the current legal access to the rear lot would require partial demolition of the sandstone wall to provide vehicle access and consequently this would result in more detriment than an insufficient rear boundary. The submitted documents do not apply for any demolition or modification of the sandstone wall and as such an argument based on this scenario is not accepted to be a valid consideration.

The proposal is not consistent with the Objective or Performance Criteria of E13.7.3. Performance Criteria 1 is not satisfied.

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.

Performance Criteria 1

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.*

The statements of significance within the heritage code state that

the precinct is significant for the following reason: 4. The very fine groups of residential buildings representing varying phases of development and demonstrating attitudes to subdivision, styles of building, landscaping, and the social importance of properties with high levels of exposure.

Preana at 487 Sandy Bay Road accurately reflects the above statement of significance, as a fine residential building, in a landscaped setting, with a high level of exposure. The residence demonstrates the attitude to subdivision at the time of construction which was large residences with generous garden settings. Although the c1957 subdivision altered this configuration it does still provide the residence with sufficient rear setting, unlike the proposed boundary.

The proposed boundary adjustment is considered to result in a subdivision that is unsympathetic to the heritage significance of the precinct, and an increased likelihood of future development that is incompatible with the heritage significance of the precinct. Performance Criteria 1 is not satisfied.

In conclusion the proposal is unacceptable and fails to satisfy the Performance Criteria 1 of E13.7.3 and Performance Criteria 1 of E13.8.3.

6.8.6 The proposal does not comply with the performance criterion.

7. Discussion

- 7.1 Planning approval is sought for Subdivision (Boundary Adjustment), at 487 and 489 Sandy Bay Road, Sandy Bay.
- 7.2 The application was advertised and no representations were received.
- 7.3 The proposal has been assessed against the relevant provisions of the planning scheme and is not considered to perform well.

7.4 The proposal has been assessed by other Council officers, including the Council's Development Engineer, Cultural Heritage Officer, Stormwater Engineer and Surveyor. The engineering officers have raised no objection to the proposal, subject to conditions. The Cultural Heritage Officer has raised objection to the proposal and recommends refusal of the application.

7.5 The proposal is recommended for refusal.

8. Conclusion

8.1 The proposed Subdivision (Boundary Adjustment), at 487 and 489 Sandy Bay Road, Sandy Bay does not satisfy the relevant provisions of the *Hobart Interim Planning Scheme 2015*, and as such is recommended for refusal.

9. Recommendations

That: Pursuant to the *Hobart Interim Planning Scheme 2015*, the Planning Committee, in accordance with the delegations contained in its terms of reference, refuses the application for Subdivision (Boundary Adjustment), at 487 and 489 Sandy Bay Road, Sandy Bay for the following reasons:

- 1 The proposal does not meet the acceptable solution of the performance criterion with respect to clause E13.7.3 P1 (a), (b) or (c) of the Hobart Interim Planning Scheme 2015 because it will not ensure that sufficient curtilage is retained as part of any title containing heritage values; does not ensure a sympathetic pattern of subdivision; and does not provide 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.
- 2 The proposal does not meet the acceptable solution or the performance criterion with respect to clause E13.8.3 P1 (a) and (b) of the Hobart Interim Planning Scheme 2015 because the subdivision proposal will result in detriment to the historic cultural heritage significance of the precinct as described in Table E13.2 and a pattern of subdivision that is unsympathetic.



(Helen Ayers)

Development Appraisal Planner

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



(Ben Ikin)

Senior Statutory Planner

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

Date of Report: 6 February 2023

Attachment(s):

Attachment B - Planning Committee Agenda Documents

Attachment C - Planning Referral Officer Cultural Heritage Report

Attachment D - Post Advertising Applicant Heritage Submission



4th November 2022

Ref No 12810

The General Manager
Hobart City Council
16 Elizabeth Street
Hobart, TAS, 7000

Dear Sir or Madam,

**RE: Boundary Adjustment Proposal
487 & 489 Sandy Bay Rd, Sandy Bay**

Please find the following attached:

- A boundary adjustment proposal plan.

Notes regarding application:

- As discussed with Allie Costin, ListMap/HCC GIS Boundaries are not correct. Please refer to proposal plan for correct boundary location.
- It is our intention to increase most of the existing house rear boundary setback and remove the awkwardly shaped back yard.

The proposed right of way is intended to be used the sole access for the rear lot. Which would remove the need to build a driveway on the eastern side of the existing house.

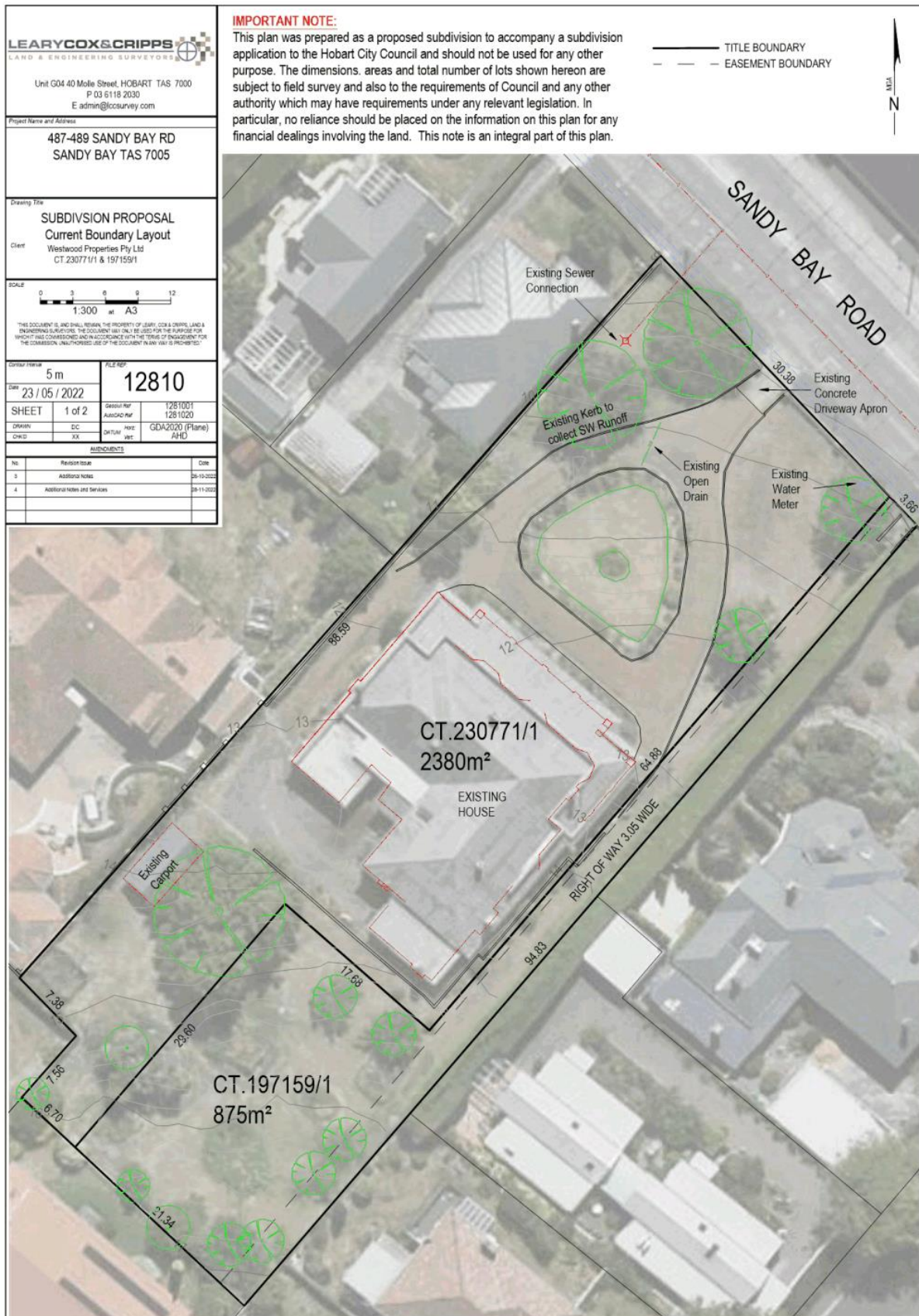
Please do not hesitate to contacting me.

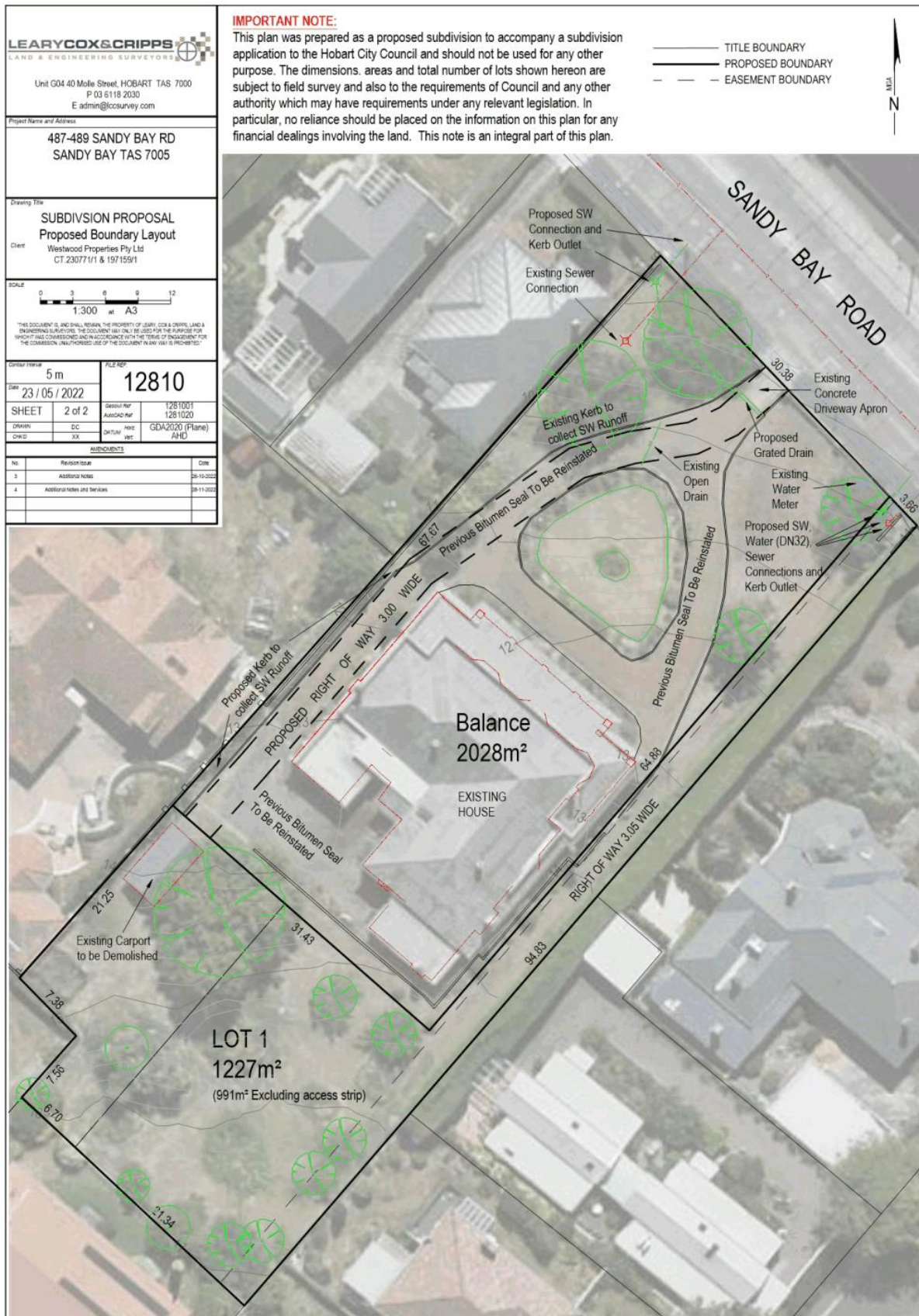
Yours faithfully

LEARY COX & CRIPPS

A handwritten signature in black ink, appearing to read 'D Cripps'.

DANIEL CRIPPS





**RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME 197159	FOLIO 1
EDITION 3	DATE OF ISSUE 02-Aug-2022

SEARCH DATE : 23-Aug-2022

SEARCH TIME : 11.46 AM

DESCRIPTION OF LAND

City of HOBART

Lot 1 on Plan 197159

Derivation : Part of 9A-2R-38.1/2Ps. Gtd. to A. Andrew.

Prior CT 3043/89

SCHEDULE 1

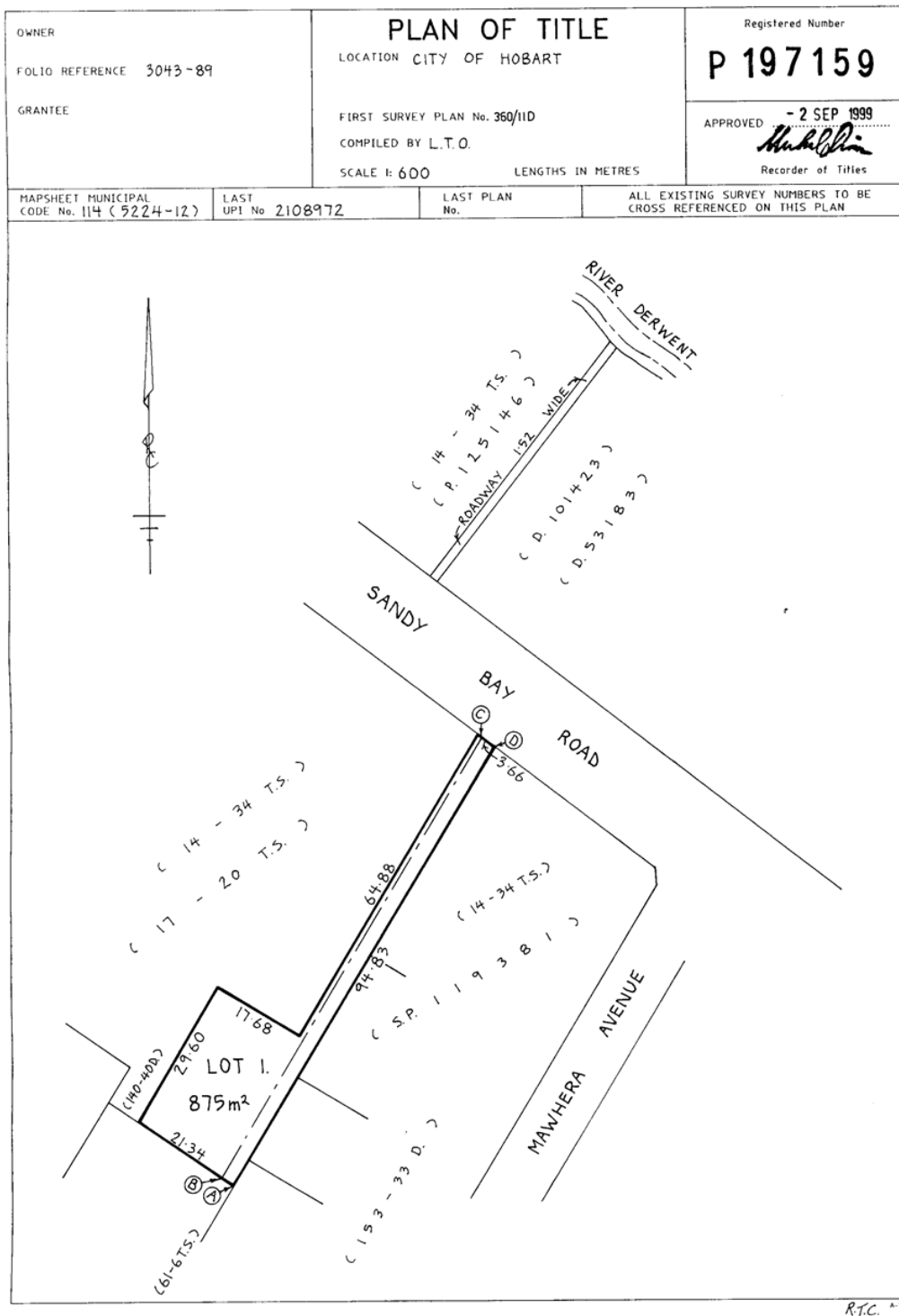
M969074 TRANSFER to WESTWOOD PROPERTIES PTY LTD Registered
02-Aug-2022 at noon

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
BENEFITING EASEMENT: appurtenant to the land marked A.B.C.D.
on Plan No. 197159 excepting thereout the North
Western portion 6 links wide a right of way or
passage for the registered proprietors and their
heirs and assigns and all persons by their permission
to go return pass and repass in through over and
along and upon the Roadway shown on Plan No. 197159
leading from the Main Road to the beach.

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations



**RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME 230771	FOLIO 1
EDITION 6	DATE OF ISSUE 02-Aug-2022

SEARCH DATE : 23-Aug-2022

SEARCH TIME : 11.53 AM

DESCRIPTION OF LAND

City of HOBART

Lot 1 on Plan 230771

Derivation : Part of 9A-2R-38.1/2Ps. - Gtd. to A. Andrew.

Prior CT 3043/90

SCHEDULE 1

M969068 TRANSFER to TIMOTHY ALLEN WARK of one million eight hundred thousand undivided 1/3000000 shares and WESTWOOD PROPERTIES PTY LTD of one million two hundred thousand undivided 1/3000000 shares as tenants in common Registered 02-Aug-2022 at 12.01 PM

SCHEDULE 2

Reservations and conditions in the Crown Grant if any

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations



FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



ORIGINAL - NOT TO BE REMOVED FROM TITLES OFFICE

R.P. 1469
TASMANIA
REAL PROPERTY ACT, 1862, as amended
NOTE - REGISTERED FOR OFFICE
CONVENIENCE TO REPLACE



CERTIFICATE OF TITLE

Register Book
Vol. Fol.
3043 90

Cert. of Title Vol.902. Fol.78.

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

Recorder of Titles.



DESCRIPTION OF LAND

CITY OF HOBART
TWO RODS FOURTEEN PERCHES AND ONE TENTH OF A PERCH on the Plan hereon

FIRST SCHEDULE (Continued overleaf)

MARJORIE KING GIBSON of Hobart, Married Woman

SECOND SCHEDULE (Continued overleaf)

NO. A164577 MORTGAGE to The
Hobart Savings Bank
Registered 26th June, 1962 at 12.4 p.m.,
(sgd.) A. IMLACH
Recorder of Titles.

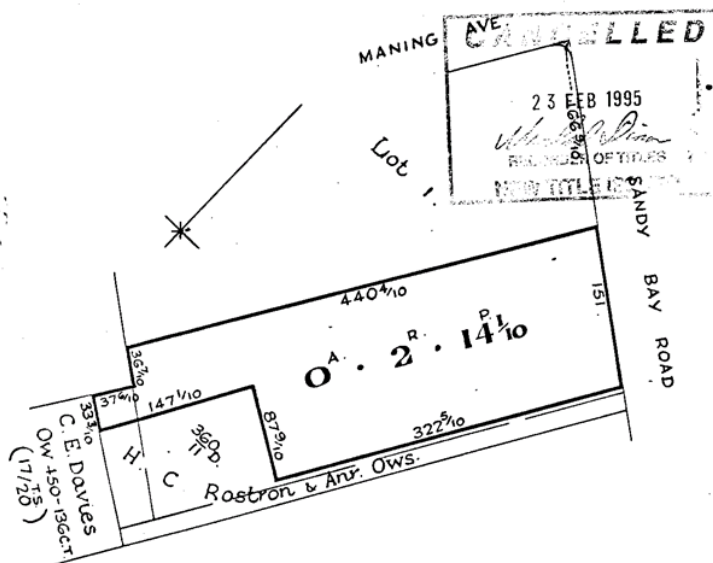
DISCHARGED
B472896(13.4.1988)

Recorder of Titles.

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

REGISTERED NUMBER

230771



Part of 9A-2R-38.1/2Ps. Gtd.to A. Andrew Meas.in Links
17/20 T.S.-140/40 D.

FIRST Edition. Registered

Derived from C.T. Vol.902.Fol.78. Transfer 63557 W.J. Gibson

Balance A88090

45451 L.G. Gibson

Planning #268212

Property

487 SANDY BAY ROAD SANDY BAY TAS 7005

**People****Applicant ***

Leary, Cox and Cripps
Daniel Cripps
G04, 40 Molle Street
HOBART TAS 7000
03 6118 2030
admin@lccsurvey.com

Owner *

WESTWOOD PROPERTIES PTY LTD

PO BOX 231
MARGATE TAS 7054
0419672288
tim@westwoodprop.com.au

Entered By

RACHAEL WELLS
0361182030
admin@lccsurvey.com

Use

Other

Details

Have you obtained pre application advice?

☒ Yes

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

PAE-22-260

Are you applying for permitted visitor accommodation as defined by the State Government Visitor Accommodation Standards? Click on help information button for definition. *

☒ No

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

☒ No

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

Details

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

Residential

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

Boundary Adjustment - Residential

Estimated cost of development *

0.00

Existing floor area (m2)

Proposed floor area (m2)

Site area (m2)

Carparking on Site

Total parking spaces

Existing parking spaces

N/A

☒ Other (no selection chosen)**Other Details**

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 FolioPlans and Texts.pdf
Schedule of Easements) *

Plans (proposed, existing) * 1281020_Proposal Plan-Rev3.pdf

Covering Letter 12810_HobartCouncilApplicationLetter_04-11-2022.pdf

Application Referral Cultural Heritage - Response

From:	Allie Costin
Recommendation:	Proposal is unacceptable.
Date Completed:	
Address:	487 SANDY BAY ROAD, SANDY BAY 489 SANDY BAY ROAD, SANDY BAY
Proposal:	Subdivision (Boundary Adjustment)
Application No:	PLN-22-736
Assessment Officer:	Helen Ayers,

Referral Officer comments:

Number 487 Sandy Bay Road *Preana* is an individually Heritage Listed property in Table E13.1 of the *Hobart Interim Planning Scheme 2015* and located within the Sandy 12 Heritage Precinct, whilst number 489 Sandy Bay Rd is within the Sandy Bay 12 Precinct. The proposed boundary adjustment must be assessed against E13.7.3 Subdivision for Heritage Places, and E13.8.3 Subdivision for Heritage Precincts. The proposed demolition must be assessed against E13.7.1 Demolition for Heritage Places, and E13.8.1 Demolition for Heritage Precincts.

Introduction:

487 Sandy Bay Road was constructed in 1918 for Mr L E Gibson, and the property remained in the Gibson family until 2020. The house is surrounded by generous grounds and was positioned in what was originally the centre of the large lot, setback from Sandy Bay Road with an imposing street presence. The rear of the property was partially subdivided in c1957 with the rear north western portion of the lot remaining with the residence as a rear garden.



Subject site *Preana* 487 Sandy Bay Road (image taken by Heritage Officer)



Subject site *Preana* 487 Sandy Bay Road (image taken by Heritage Officer)

Background:

Pre Application Enquiry – 2022

The applicant sought pre-application advice from Council regarding the proposed boundary adjustment. At this time, it was advised by the Heritage Officer that; *it is recommended to avoid moving the boundary closer to the house on 487, the boundary should provide the heritage listed residence 487 with a sufficient rear garden setting and curtilage.* It is noted that this advice was provided in line with Council's GIS mapping, which is now understood to differ from the applicant's depiction of the title boundaries.

Development Application – 2022

When the application was initially submitted, it reflected the earlier heritage advice, showing the boundary in the location recommended with sufficient rear setting. An unrelated request for additional information saw the location of the boundary adjustment moved without consultation with Council Officers, and the application was advertised with the boundary in this new location. Following advertising, in the final detailed assessment, this unspecified change to the plans was identified, and the applicant contacted to discuss the change and the fact that it rendered the application unsupportable from a cultural heritage perspective. The applicant sought advice from a heritage consultant. The consultant report makes comments on a range of heritage outcomes in relation to the boundary adjustment, the heritage consultant advice confirms Council's Cultural Heritage Officer advice that the boundary location at the rear of the listed property is not appropriate, this has been summarised in the assessment below, and the heritage consultant advice in full is in the application documents attached.

Proposal:

- Boundary adjustment to existing subdivision dating from c1957.
- Demolition of c1998 carport.

Statements of significance for 487 Sandy Bay Road:

(a)-Historical:

The house is of cultural heritage significance because it demonstrates the growing popularity of Lower Sandy Bay as a residential suburb in the twentieth century.

(d)-Representative of:

The house is of cultural heritage significance because it demonstrates the principle

characteristics of a substantial Inter War Georgian Revival residence in an imposing setting.

Sandy Bay 12 Heritage Precincts is significant for reasons including:

- 1. The key historical role of the road in the development of the precinct and the buildings and features that demonstrate that history.*
- 2. The large number of exceptionally fine residences dating from 1830 through to the present day.*
- 3. The small number of commercial buildings creating a village character including some which are of individual heritage significance.*
- 4. The very fine groups of residential buildings representing varying phases of development and demonstrating attitudes to subdivision, styles of building, landscaping and the social importance of properties with high levels of exposure.*

Assessment:

E13.7.1 Demolition for Heritage Places, and E13.8.1 Demolition for Heritage Precincts

Objective:

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

Performance Criteria 1

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 includes the demolition of the existing carport structure, the carport was constructed in c1998 and is not of any heritage value. It is considered that the demolition works will not result in the loss of historic cultural heritage values of the precinct. The proposed works therefore satisfy the Performance Criteria 1 of E13.7.1 and E13.8.1.

E13.7.3 Subdivision

Objective:

To ensure that subdivision of part of a heritage place maintains cohesion between the elements that collectively contribute to an understanding of historic cultural heritage values, and protects those elements from future incompatible development.

Performance Criteria 1

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.*

Performance Criteria 1 is not met as the proposed subdivision boundary would have an unacceptable impact on the heritage significance of the place and its setting. The property is described in the Heritage Data Sheet 'as a substantial Inter War Georgian Revival residence in an imposing setting' imposing meaning grand and impressive, and setting referring to the

residence's surroundings and environment, i.e. the garden and open space surrounding the house. The architectural ideals of a substantial dwelling of this period and style was to be set within a generous sized garden that was intended to complement and provide a backdrop to the architectural character of the residence. In the widely referenced text *Identifying Australian Architecture, Styles and Terms from 1788 to Present*; the setting for a Inter-War Georgian Revival residence such as *Preana* is described as *'free standing in formal garden settings'*.

The curtilage of the dwelling would be significantly reduced by the proposed subdivision and it is considered to be insufficient. The proposal will diminish the significance and setting of the residence as identified in the statements of significance. The subdivision is a clear separation of the dwelling from its original setting providing little to no rear curtilage or garden setting. The proposed rear setback from the residence of only 2.7m, this is considered inadequate and will not prevent unsympathetic development on lots adjoining any titles containing heritage values. The heritage consultant engaged by the applicant shares these concerns *"I do have concerns that the proposed boundary is too close to the rear of the existing heritage residence. I feel that the place would benefit from a larger rear curtilage (say +4-5m than what is proposed) to allow for retained backyard amenity and to retain some of the backyard setting of the building"*.

It should be noted the consultant contends that the current legal access to the rear lot would require partial demolition of the sandstone wall to provide vehicle access and consequently this would result in more detriment than an insufficient rear boundary. The submitted documents do not apply for any demolition or modification of the sandstone wall and as such an argument based on this scenario is not accepted to be a valid consideration.

The proposal is not consistent with the Objective or Performance Criteria of E13.7.3. Performance Criteria 1 is not satisfied.

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.

Performance Criteria 1

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.*

The statements of significance within the heritage code state that the precinct is significant for the following reason: 4. *The very fine groups of residential buildings representing varying phases of development and demonstrating attitudes to subdivision, styles of building, landscaping, and the social importance of properties with high levels of exposure.*

Preana at 487 Sandy Bay Road accurately reflects the above statement of significance, as a fine residential building, in a landscaped setting, with a high level of exposure. The residence demonstrates the attitude to subdivision at the time of construction which was large residences with generous garden settings. Although the c1957 subdivision altered this configuration it does still provide the residence with sufficient rear setting, unlike the proposed boundary.

The proposed boundary adjustment is considered to result in a subdivision that is unsympathetic to the heritage significance of the precinct, and an increased likelihood of future

development that is incompatible with the heritage significance of the precinct. Performance Criteria 1 is not satisfied.

In conclusion the proposal is unacceptable and fails to satisfy the Performance Criteria 1 of E13.7.3 and Performance Criteria 1 of E13.8.3.

The reasons for refusal are as follows:

1. The proposal does not meet the acceptable solution of the performance criterion with respect to clause E13.7.3 P1 (a), (b) or (c) of the *Hobart Interim Planning Scheme 2015* because it will not ensure that sufficient curtilage is retained as part of any title containing heritage values; does not ensure a sympathetic pattern of subdivision; and does not provide 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.
2. The proposal does not meet the acceptable solution or the performance criterion with respect to clause E13.8.3 P1 (a) and (b) of the *Hobart Interim Planning Scheme 2015* because the subdivision proposal will result in detriment to the historic cultural heritage significance of the precinct as described in Table E13.2 and a pattern of subdivision that is unsympathetic.

Allie Costin
Cultural Heritage Officer
3rd of February 2023

Reviewed
Sarah Waight
Senior Cultural Heritage Officer
6 Feb 2023

Mr. Daniel Cripps
Leary, Cox and Cripps
40 Molle Street
HOBART TAS 7000

Via email – dcripps@lccsurvey.com.au

23rd January 2023

Dear Daniel

Re – Comments on possible heritage impact, proposed boundary adjustment, 487-489 Sandy Bay Road, Hobart.

I provide the following comments in regard to the proposed boundary adjustment at the above address.

The place is listed as a Heritage Place on Table E.13.1 of the Hobart Interim Planning Scheme 2015. It is also within Heritage Precinct SB12 as defined by Table E.13.2 of the scheme. It is not included on the Tasmanian Heritage Register.

The current title arrangement

The 'rear' lot that has been excised off the parent title (i.e. the heritage building and site at 487 Sandy Bay Road, which occurred pre-1958) comprises of an 875m² lot, accessed by a 3.66m 'battleaxe' laneway along the eastern edge of the parent title.

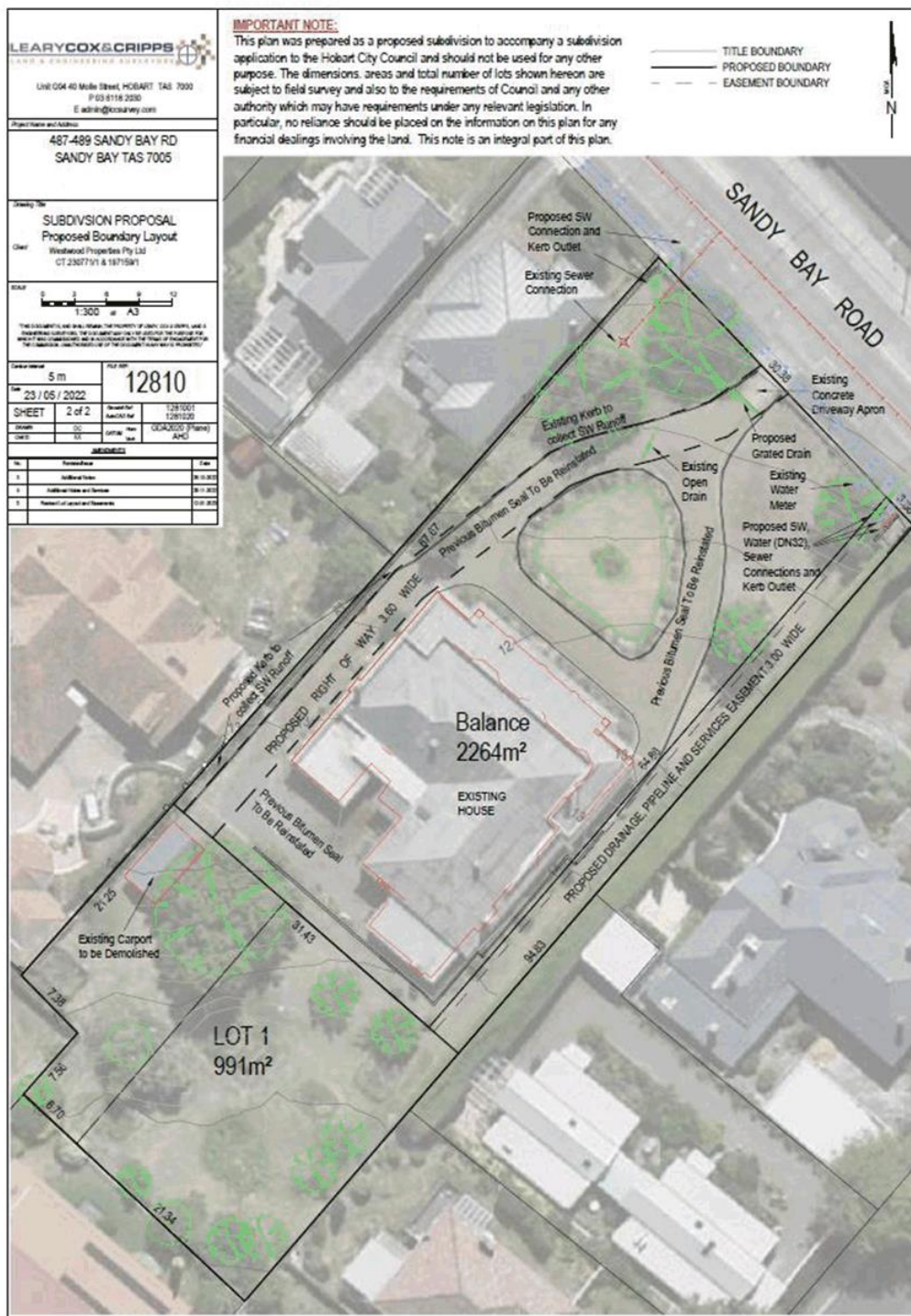


That excised title has been in separate (but related) ownership to the parent title since the mid-c20th and has never been developed in its own right. It benefits from a direct driveway from Sandy Bay Road which has never been constructed, to do so would result in a driveway in very close proximity to the principal entrance and eastern veranda of the heritage building, as well as requiring partial demolition of the original sandstone fence at the street frontage of the property.



Existing legal access to the rear lot. Note that the picket fence is unlikely to be wide enough for compliant access, therefore the sandstone fence would require modification.

Both the parent title and the excised title are now in common ownership, and the owner of both titles wishes to pursue a boundary adjustment as per the figure below. That proposal would result in a slightly larger rear allotment, accessed via the existing driveway via a right of way, the existing (unformed) legal access to the rear would not be used as access but remain as a pipeline and services easement and no physical works to the street frontage or driveway would be required.



I make the following comments as a comparative assessment of the possible impact of this proposal – i.e. the possible impacts of the proposal versus the possible heritage impact resulting from development of the title configuration as-existing:

- The proposal will not require the formation of a separate street access, therefore will not impact the historic sandstone fence.
- The proposal will not require a separate formed driveway along the eastern side of the site. The current title configuration would put this driveway very close to the principal entrance to the heritage residence, and is not considered to provide a suitable curtilage to the building. If the existing title arrangement were retained and developed, there would be no prudent or feasible alternative than to provide access along this strip, which would be detrimental to the values of the place.
- The proposal would require the retention of the driveway on the western side of the building – which maintains the status-quo of existing, and that elevation is not considered as important as the eastern side which includes the main formal entrance.
- Although the proposed rear lot size will be 122m² larger than that existing, this increase in size (hence decrease in the size of the original parent title) is considered negligible (i.e. the original parent title will retain 2264m² of land) therefore not have any appreciable increased heritage impact insofar as it would retain a large allotment commensurate with the scale of the building.
- I do have some concerns that the proposed boundary is too close to the rear of the existing heritage residence. I feel that the place would benefit from a larger rear curtilage (say +4-5m than what is proposed) to allow for retained backyard amenity and to retain some of the backyard setting of the building. That said, the proposal provides less impact upon the curtilage and amenity of the building than the current situation which allows for a driveway very close to the eastern side of the building.

Please contact me if you have any further queries or require any clarification.

Regards



Brad Williams BA. (Hons.) Archaeology, MA Cultural Heritage Management, G.Dip Environmental Planning

Director – Praxis Environment

A division of Praxis Synergy Pty. Ltd.

PO Box 338 NORTH HOBART 7002

0418 303 184 info@prax.com.au www.prax.com.au

**6.1.3 175 CAMPBELL STREET, HOBART - PARTIAL DEMOLITION, ALTERATIONS, NEW BUILDING FOR 31 MULTIPLE DWELLINGS, FOOD SERVICES, BUSINESS AND PROFESSIONAL SERVICES, GENERAL RETAIL AND HIRE, SUBDIVISION (LOT CONSOLIDATION) AND ASSOCIATED WORKS IN THE ROAD RESERVE INCLUDING TREE REMOVAL
PLN-21-471 - FILE REF: F23/13017**

Address: 175 Campbell Street, Hobart

Proposal: Partial Demolition, Alterations, New Building for 31 Multiple Dwellings, Food Services, Business and Professional Services, General Retail and Hire, Subdivision (Lot Consolidation) and Associated works in the Road Reserve including Tree Removal

Expiry Date: 17 February 2023

Extension of Time:

Author: Helen Ayers

RECOMMENDATION








Pursuant to the *Hobart Interim Planning Scheme 2015*, the Council refuse the application for Partial Demolition, Alterations, New Building for 31 Multiple Dwellings, Food Services, Business and Professional Services, General Retail and Hire, Subdivision (Lot Consolidation), and Associated Works in the Road Reserve including Tree Removal, at 169-173, 175, 177, and 179 Campbell Street, and the Adjacent Road Reservation for the following reasons:

- 1 The proposal does not meet the acceptable solution or the performance criterion with respect to clause 15.4.1 A1 and P1 of the *Hobart Interim Planning Scheme 2015* because the proposed building height is not compatible with the scale of nearby buildings, and fails to provide stepping between itself and adjoining buildings.
- 2 The proposal does not meet the acceptable solution and there is no performance criterion with respect to clause E7.7.1 A4 and P4 of the *Hobart Interim Planning Scheme 2015* because it includes a major stormwater drainage system that

has not been designed to accommodate a storm with an ARI of 100 years.

- 3 The proposal does not meet the acceptable solution or the performance criterion with respect to clause E15.7.4 A1 and P1 of the *Hobart Interim Planning Scheme 2015* because the car park floor level is not 300mm above the 1% AEP flood extent, and its proposed floor level does not satisfy: (a) that risk to users of the site, adjoining or nearby land is acceptable; (b) that risk to adjoining or nearby property or public infrastructure is acceptable; (c) that risk to buildings and other works arising from riverine flooding is adequately mitigated through siting, structural or design methods; and (d) that the need for future remediation works is minimised.

- 4 The proposal does not meet the acceptable solution or the performance criterion with respect to clause E15.7.5 A1 and P1 of the *Hobart Interim Planning Scheme 2015* because it includes a new wall that is greater than 5m in length and it will not satisfy the following: (a) that there is no adverse affect on flood flow over other property through displacement of overland flows; and (b) that the rate of stormwater discharge from the property will not increase.

- | | |
|---------------|---|
| Attachment A: | PLN-21-471 - 175 CAMPBELL STREET HOBART TAS 7000 - Planning Committee or Delegated Report ↓  |
| Attachment B: | PLN-21-471 - 175 CAMPBELL STREET HOBART TAS 7000 - CPC AGENDA DOCUMENTS ↓  |
| Attachment C: | PLN-21-471 - 175 CAMPBELL STREET HOBART TAS 7000 - PC Supporting Documents ↓  |
| Attachment D: | PLN-21-471 - 175 CAMPBELL STREET HOBART TAS 7000 - Stormwater and Flooding Consultant Engineer's Report ↓  |
| Attachment E: | PLN-21-471 - 175 CAMPBELL STREET HOBART TAS 7000 - UDAP Report ↓  |
| Attachment F: | PLN-21-471 - 175 CAMPBELL STREET HOBART TAS 7000 - Further Information Provided by Applicant ↓  |
| Attachment G: | PLN-21-471 - 175 177 179 Campbell Street Hobart - Further information provided by applicant after Planning Committee meeting on 14 Dec 2022 ↓  |

**APPLICATION UNDER HOBART INTERIM PLANNING SCHEME 2015**

Type of Report:	Committee
Committee:	15 February 2023
Expiry Date:	17 February 2023
Application No:	PLN-21-471
Address:	175 CAMPBELL STREET , HOBART 177 CAMPBELL STREET , HOBART 179 CAMPBELL STREET , HOBART 169 - 173 CAMPBELL STREET , HOBART ADJACENT ROAD RESERVE
Applicant:	(JMG Engineers and Planners obo BUILDING GROUP APPRENTICESHIP SCHEME LTD) 117 Harrington Street
Proposal:	Partial Demolition, Alterations, New Building for 31 Multiple Dwellings, Food Services, Business and Professional Services, General Retail and Hire, Subdivision (Lot Consolidation), and Associated Works in the Road Reserve including Tree Removal
Representations:	Fourteen (14)
Performance criteria:	Urban Mixed Use Zone Use and Development Standards, Potentially Contaminated Land Code, Road and Railway Assets Code, Parking and Access Code, Stormwater Code, Attenuation Code, Historic Heritage Code, Inundation Prone Areas Code, Signs Code

1. Executive Summary

- 1.1 Planning approval is sought for Partial Demolition, Alterations, New Building for 31 Multiple Dwellings, Food Services, Business and Professional Services, General Retail and Hire, Subdivision (Lot Consolidation), and Associated Works in the Road Reserve including Tree Removal, at 169-173, 175, 177, and 179 Campbell Street, and the Adjacent Road Reservation.

1.2 More specifically the proposal includes:

- Consolidation of all lots comprising 175, 177, and 179 Campbell Street, Hobart.
- Demolition of the rear lean to additions to the dwellings at 177 and 179 Campbell Street.
- Demolition of all outbuildings on 177 and 179 Campbell Street.
- Demolition of all buildings on 175 Campbell Street.
- External alterations to the dwellings at 177 and 179 Campbell Street to facilitate a connection between the two buildings, and level access.
- Internal demolition and alterations within the dwellings at 177 and 179 Campbell Street to facilitate their change of use to a food premises and consulting rooms.
- Construction of a new 6 storey building at 175 Campbell Street which contains two ground floor commercial tenancies, basement carparking, and 31 new multiple dwellings.
- The multiple dwellings will include 6 one bedroom, 14 two bedroom, and 11 three bedroom dwellings.
- The proposal relies upon the ongoing use, and upgrading of the shared right of way between 175 and 169-173 Campbell Street.
- Upgrades to public infrastructure are proposed to facilitate the proposed development.

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

- 1.3.1 Urban Mixed Use Zone - Use, Height, Setback, Design, Passive Surveillance, Landscaping, Fencing, Residential Amenity
- 1.3.2 Potentially Contaminated Land Code - Excavation
- 1.3.3 Road and Railway Assets Code - Existing Road Accesses and Junctions, Sight Distance at Accesses, Junctions and Level Crossings
- 1.3.4 Parking and Access Code - Number of Parking Spaces, Design of Vehicle Accesses, Layout of Parking Areas, Design of Bicycle Parking Areas, Facilities for Commercial Vehicles
- 1.3.5 Stormwater Code - Stormwater Drainage and Disposal
- 1.3.6 Attenuation Code - Development for Sensitive Use in Proximity to Use with Potential to Cause Environmental Harm
- 1.3.7 Historic Heritage Code - Development Standards for Heritage Places, Development Standards for Places of Archaeological Potential
- 1.3.8 Inundation Prone Areas Code - Riverine Inundation Hazard Areas
- 1.3.9 Signs Code - Standards for Signs, Standards for Signs on Heritage Places subject to the Heritage Code

- 1.4 Fourteen (14) representations objecting to the proposal were received within the statutory advertising period between 12 and 26 July 2022.
- 1.5 The proposal is recommended for refusal.
- 1.6 The final decision is delegated to the Planning Committee, because more than five objections were received, the proposal is a major application, and the officer recommendation is for refusal.
- 1.7 This application was considered by the Planning Committee on 14 December 2022. At that meeting, the Elected Members proposed that the application be deferred to give the applicant and officers an opportunity to consider aspects of the application further. The applicant agreed that this may be useful and the Committee passed a resolution to defer the application. In section 7 of this report, there is a further analysis of the issues which arose at the earlier meeting and on the subsequent discussions with the applicant.

2. Site Detail

- 2.1 The application site is comprised of five separate titles, one of which (163-173 Campbell Street) is relied upon for right of way access to the site only, and has no actual development proposed. The works are to occur on 175, 177 and 179 Campbell Street, with infrastructure works spilling on the road reserve either side. The site is surrounded by a mixture of commercial, retail, bulky goods sales, residential, business and professional services, and educational uses. The site is slightly below the level of Campbell Street, but is generally flat back toward the Brooker Highway. There are two heritage listed dwellings on 177 and 179 Campbell Street, with a carpark behind associated with the commercial use of 175 Campbell Street.



Figure 1: The location of the application site is highlighted in orange



Figure 2: The location of the area where works are to occur is highlighted in orange

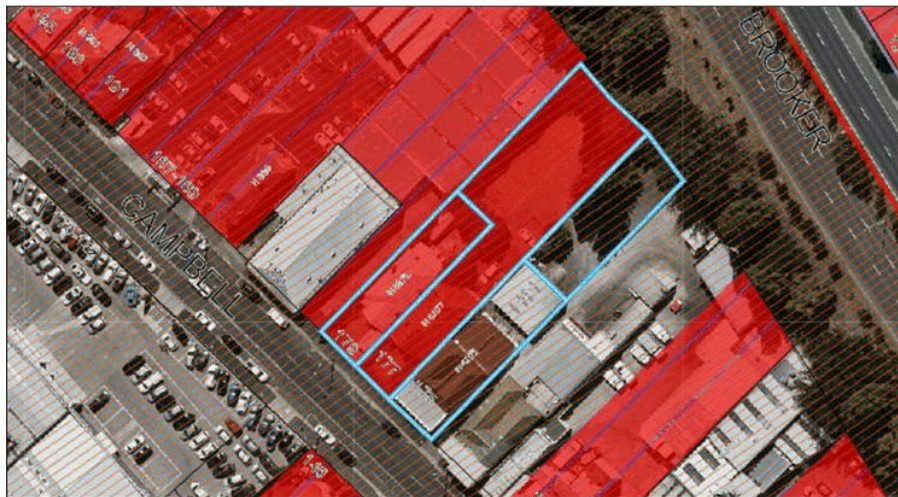


Figure 3: Showing the heritage listings for the site. The red denotes individual heritage listing under the planning scheme. The brown hatching indicates the area of archaeological potential. Source: Council GIS.

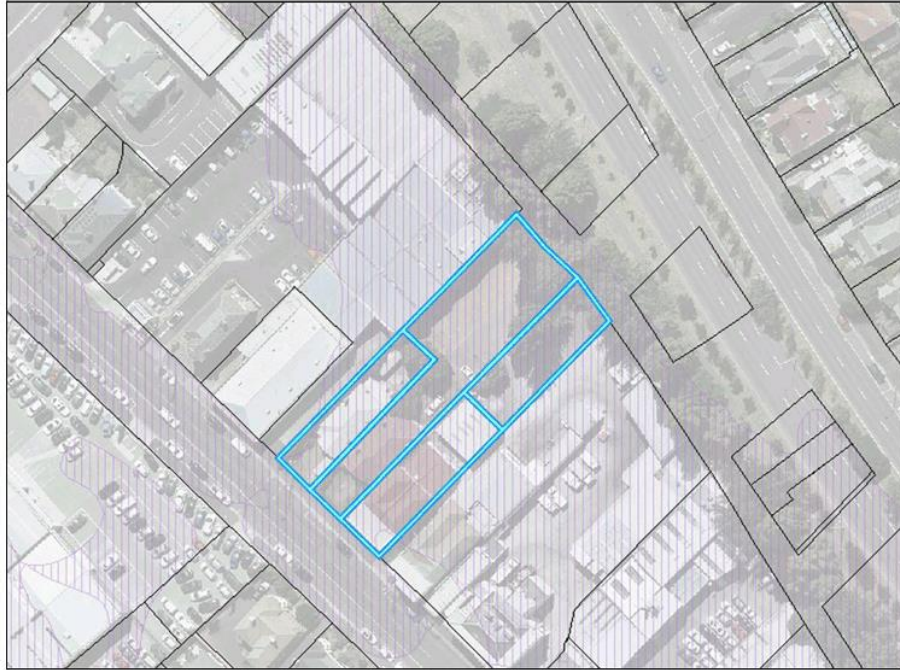


Figure 4: The site is flood prone (purple hatching). Source: Council GIS.

3. Proposal

- 3.1 Planning approval is sought for Partial Demolition, Alterations, New Building for 31 Multiple Dwellings, Food Services, Business and Professional Services, General Retail and Hire, Subdivision (Lot Consolidation), and Associated Works in the Road Reserve including Tree Removal, at 169-173, 175, 177, and 179 Campbell Street, and the Adjacent Road Reservation.

3.2 More specifically the proposal is for:

- Consolidation of all lots comprising 175, 177, and 179 Campbell Street, Hobart.
- Demolition of the rear lean to additions to the dwellings at 177 and 179 Campbell Street.
- Demolition of all outbuildings on 177 and 179 Campbell Street.
- Demolition of all buildings on 175 Campbell Street.
- External alterations to the dwellings at 177 and 179 Campbell Street to facilitate a connection between the two buildings, and level access.
- Internal demolition and alterations within the dwellings at 177 and 179 Campbell Street to facilitate their change of use to a food premises and consulting rooms.
- Construction of a new 6 storey building at 175 Campbell Street which contains two ground floor commercial tenancies, basement carparking, and 31 new multiple dwellings.
- The multiple dwellings will include 6 one bedroom, 14 two bedroom, and 11 three bedroom dwellings.
- The proposal relies upon the ongoing use, and upgrading of the shared right of way between 175 and 169-173 Campbell Street.
- Upgrades to public infrastructure are proposed to facilitate the proposed development.



Figure 5: Rendering of the proposal's front elevation. Source: Cumulus.

4. Background

- 4.1 Several pre-application meetings occurred between the applicant and Council Officers.
- 4.2 The application was considered by the Urban Design Advisory Panel at its meetings of 28 April 2021 and 7 September 2021 in a pre-application review of the proposed development. The minutes of both meetings are provided as attachments to this report. In the context of the provisions on which they were asked to comment, the Panel was broadly not supportive of the proposal. The Applicant has advised that the Panel's comments were incorporated in the final design through a number of design changes to the proposed building(s) including:
- 4.3 The proposal considered by the Panel at its 28 April 2021 meeting was at a very early stage, and was largely a massing exercise. Refer figure 6 below.

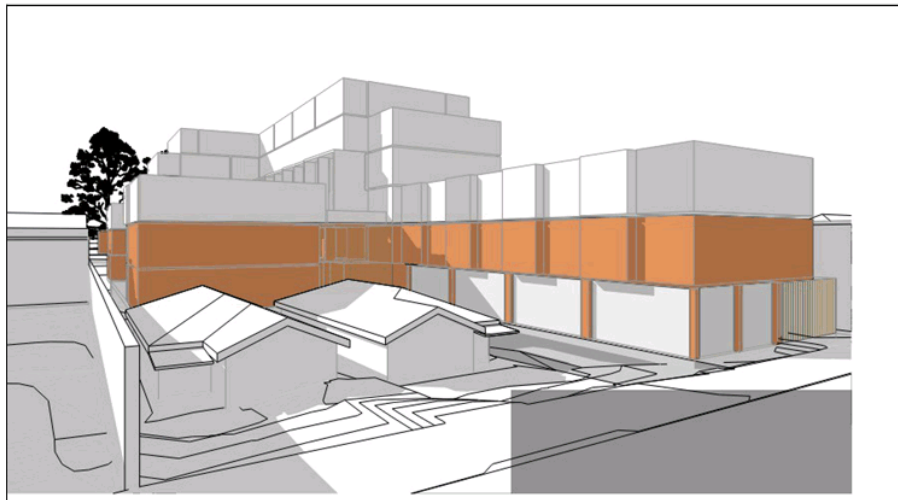


Figure 6: Campbell Street Model of the original design taken to UDAP on 28 April 2021

- 4.4 At its 7 September 2021 meeting, the Panel considered the proposal at the early stages of the planning application, will it was still invalid awaiting General Manager's Consent. The applicant provided the Panel with two iterations of the design - the original version and a reduced height version. Refer Figures 7 and 8 below.



Figure 7: Front and rear elevations of the original proposal submitted in the planning application. Ultimately this iteration of the design was not pursued.
Source: Cumulus.



Figure 8: Front and rear elevations of the reduced height proposal provided to the Panel for comment. Ultimately this iteration of the design was not pursued.
Source: Cumulus.

- 4.6 In response to the Panel's comments, the applicant made a number of changes to the design, most notably:
- Reduced overall height and number of apartments
 - Reduced roof height over circulation space to south
 - Simplification of building form behind heritage cottages
 - Relocation of plant equipment on the street so that heritage cottages are not concealed.
- 4.7 The third iteration of the design incorporating the above changes is what was publicly advertised, and is before the Council for consideration. It is depicted in Figure 9 below.



Figure 9: Front and rear elevations of the current iteration of the design, currently before the Council for determination. Source: Cumulus.

- 4.8 Throughout the assessment process, the applicant has been advised that it would be difficult for Council Officers to recommend support for the proposed height of the building, or for the proposed response to the Planning Provisions surrounding flood safety and mitigation. Following advertising the applicant had this reiterated to them and was asked if they wished to progress the application to City Planning Committee and Council Meetings. The applicant acknowledged officer concerns and requested that the application progress regardless.

5. Concerns raised by representors

- 5.1 Thirteen (14) representations objecting to the proposal were received within the statutory advertising period between 12 and 26 July 2022
- 5.2 The following table outlines the concerns raised in the representations received. Those concerns which relate to a discretion invoked by the proposal are addressed in Section 6 of this report.

Height:
Several representors are concerned that the height of the proposed new building is not consistent with the surrounding area, and will detract from the streetscape and heritage values of the site.
Several representors have suggested that the proposed height will dominate surrounding buildings and is therefore not appropriate.
Representors are concerned that the application relies on examples of buildings that are not nearby the development site to justify the proposed building height.
Representors suggest that the height of nearby buildings is only 1-2 stories on average, and as such the proposed height does not satisfy the performance criteria.

Representors have indicated their view that the proposed building does not provide any transition of height between it and adjoining buildings.
Views:
Several representors have expressed concern that the proposed building will obstruct views of Mount Wellington and the Historic buildings (including the Holy Trinity Church) in Church Street, Paternoster Row, and the surrounding area, from the Glebe. The representors suggest that this compromises the historic connection between the two areas.
Sunlight / Overshadowing:
Representors have expressed concern that the proposed new building will result in an unreasonable amount of overshadowing of adjoining properties, reducing the amenity and enjoyment of the current use of the sites, as well as compromising future development potential.
Representors have expressed concern that the proposed new building will result in an unreasonable amount of overshadowing and loss of sunlight to the footpath and road in Campbell Street to the front of the site. They suggest that the impact on the public area is unacceptable and that the proposal should not be supported.
Amenity:
Several representors are concerned that the proposed new building being constructed to the footpath will not provide opportunity for landscaping, and will negatively impact the amenity of the surrounding area.
Representors have noted that the trees that are to remain on the Brooker Highway are deciduous, and as such will offer little screening for residents of the Glebe during the winter months, thus making the appearance of the building at this street front facade of concern.
Tree Removal:

Several representors are concerned that the application will result directly in the removal of trees on the Brooker Highway road reservation, and potentially indirectly in the need to remove more as a result of potential construction damage. The representors have suggested that the trees are a significant streetscape element and as such that they should be preserved and not compromised through this proposed development.
Adjacent Site Access:
One representor is concerned that access to the adjacent property that shares the right of way will be impacted during construction, and may be impacted into the future as a result of the increased volume of users. The representor has requested that construction not impact site access for the adjoining property, and that there be no ongoing impacts on access from the use of the proposed new development.
Construction Impacts:
Several representors were concerned about the potential footpath and road closures that could occur from the construction of this proposed development. They have indicated that the ongoing impacts of other developments in the street create unreasonable impacts when traversing the street already and that they do not feel it appropriate to compound this with more partial road and footpath closures.
Representors are concerned that there will be unreasonable dust and noise from the construction of the proposed new building for a protracted amount of time.
One representor was concerned that there may be structural impacts for adjoining buildings during construction given the proximity of the proposed new building to the site boundaries.
Parking:
Several representors have suggested that there is insufficient parking proposed for the use of the site.
Several representors have suggested that there is too much parking for the use on site given the location, proximity to services, and availability of alternate means of transport in this location.
Representors are concerned that the lack of parking provided on site will result in vehicles from the site occupying long term car parking in the surrounding area, which the representors say is already highly sought after.

One representor has suggested that the Australian Standard relied upon for the car parking design is outdated and reflects a time when vehicles were generally smaller, and as such should not be relied upon for a modern development.
Traffic / Access:
Representors are concerned that there may be a loss of access to nearby and adjacent sites during construction, and have expressed the desire for this not to occur.
One representor has suggested that building to the footpath will make use of the driveway to exit the site difficult.
One representor has suggested that the access will be unsafe for pedestrians walking down Campbell Street. They have suggested that there is already difficulty given the existing use of the driveway, so adding extra vehicles will likely exacerbate the concern.
One representor is concerned that the design fails to provide access for high vehicles.
Trade Interruptions:
Representors are concerned that workers vehicles, potential footpath or partial road closures, and general difficulty in accessing the area will result in customers seeking alternate routes, resulting in loss of casual trade, and in other customers not being able to park nearby, or thinking that nearby businesses are closed, so not visiting retain premises nearby. They are concerned that this will have a negative impact on their trade during construction.
One representor has suggested that surrounding businesses should be compensated for any loss in trade during the construction of the proposed new building.
Bike Parking:
Several representors are concerned that the proposed bicycle parking is both insufficient and poorly designed. The representors suggest that the location of the site is ideal for alternate means of transport, such as bicycles, and as such suggests that all the residences should be provided with secure on-site bicycle parking to help facilitate this option. The representors go so far as to say that the bicycle parking could be included at the cost of car parks to encourage this means of transport.

Scale / Bulk / Intensity:
Representors have suggested that the proposed development is too large for the site, and will unreasonably intensify the use of the site and surrounds, negatively impacting the area.
One representor has suggested that the vertical articulation of the building design further exacerbated the appearance of building height and bulk.
Design:
Representors have suggested that the design of the building should include stepping of the frontage, and introduce balconies with landscaping to soften the facade and make it more sympathetic to its surrounds.
Representors have questioned the efficacy of replicating other saw-tooth roof structures on commercial buildings in the area as a means of reducing the visual bulk of the building. The representors have suggested that the building referenced by this design is likely to be replaced with housing in the medium to long term future, and that this will result in a roof form which is out of character with the surrounding area.
Representors have suggested that the proportion of the site dedicated to impervious surface is a poor design outcome. They have suggested that for future climate change risks it would be better to have more plantings and water pervious surfaces.
One representor has suggested that the failure to angle all roofs in the same direction means that the design fails to reflect the sawtooth roofs that they are suggested to replicate.
One representor has suggested that the proposed finishes are neither reflective of the surrounding materials, nor of sufficient distinction to warrant their use. They have suggested that the materials are a cheap option that denigrates the heritage values of the surrounding area.
Heritage:
Representors are concerned that the proposed new building is not consistent with the heritage streetscape of Campbell Street.
Representors suggest that the proposed new building is not subservient or complimentary to the heritage buildings and sites.
Representors have suggested that the design of the new building is not sympathetic to that of the two existing heritage listed dwellings on site.

One representor suggest that the proposed demolition within the heritage listed buildings is not necessary or appropriate.
Neighbourhood Character:
Several representors have suggested that the scale and design of the proposed new building is out of character with the surrounding neighbourhood.
Flood Risk:
Representors are concerned that the site is prone to flooding in significant weather events, the carparking area will be under a significant amount of water, and therefore unsafe for residents.
Precedent:
Several representors are concerned that the proposed height and form of this development will set a precedent for other similar such developments in the area.
One representor was concerned that the approval of this development will set a precedent for incremental increases in the height of buildings in the area, paving the way for further inconsistent development by similar degrees to that which they perceived from this development.
Noise:
Several representors are concerned that the residents will be subjected to unreasonable amounts of noise due to the proximity of the dwellings to the Brooker Highway.
Representors have expressed concern that there is no noise attenuation proposed for users of the rooftop garden or courtyard, and that the likely impact of Highway noise will result in limited use of these facilities

6. Assessment

- 6.1 The *Hobart Interim Planning Scheme 2015* is a performance based planning scheme. To meet an applicable standard, a proposal must demonstrate compliance with either an acceptable solution or a performance criterion. Where a proposal complies with a standard by relying on one or more performance criteria, the Council may approve or refuse the proposal on that basis. The ability to approve or refuse the proposal relates only to the performance criteria relied on.
- 6.2 The site is located within the Urban Mixed Use Zone of the *Hobart Interim Planning*

Scheme 2015.

- 6.3 The existing use is Residential and Business and Professional Services. The proposed use is Partial Demolition, Alterations, New Building for 31 Multiple Dwellings, Food Services, Business and Professional Services, General Retail and Hire, Subdivision (Lot Consolidation), and Associated Works in the Road Reserve including Tree Removal. The existing uses are permitted uses in the zone. The proposed uses are permitted and discretionary uses in the zone.
- 6.4 The proposal has been assessed against:
- 6.4.1 Part D - 15.0 Urban Mixed Use Zone
 - 6.4.2 Part E - E2.0 Potentially Contaminated Land Code
 - 6.4.3 Part E - E5.0 Road and Railway Assets Code
 - 6.4.4 Part E - E6.0 Parking and Access Code
 - 6.4.5 Part E - E7.0 Stormwater Management Code
 - 6.4.6 Part E - E9.0 Attenuation Code
 - 6.4.7 Part E - E13.0 Historic Heritage Code
 - 6.4.8 Part E - E15.0 Inundation Prone Areas Code
 - 6.4.9 Part E - E17.0 Signs Code
- 6.5 The proposal relies on the following performance criteria to comply with the applicable standards:
- 6.5.1 Urban Mixed Use Zone:
 - Zone Use Table - Part D - 15.3.1*
 - Height - Part D 15.4.1 P1*
 - Setback - Part D 15.4.2 P1*
 - Design - Part D - 15.4.3 P1*
 - Passive Surveillance - Part D 15.4.4 P1*
 - Landscaping - Part D 15.4.5 P1*
 - Fencing - Part D 15.4.7 P1*
 - Residential Amenity - Part D 15.4.8 P1, P3*

6.5.2 Potentially Contaminated Land Code:

Excavation - Part E E2.6.2 P1

6.5.3 Road and Railway Assets Code:

*Existing Road Accesses and Junctions - Part E E5.5.1 P3**Sight Distance at Accesses, Junctions and Level Crossings - Part E E5.6.4 P1*

6.5.4 Parking and Access Code:

*Number of Parking Spaces - Part E E6.6.1 P1**Design of Vehicle Accesses - Part E E6.7.2 P1**Layout of Parking Areas - Part E E6.7.5 P1**Design of Bicycle Parking Areas - Part E E6.7.10 P1 and P2**Facilities for Commercial Vehicles - Part E E6.7.13 P1*

6.5.5 Stormwater Code:

Stormwater Drainage and Disposal - Part E E7.7.1 P2 and A4

6.5.6 Attenuation Code:

Development for Sensitive Use in Proximity to Use with Potential to Cause Environmental Harm - Part E E 9.7.2 P1

6.5.7 Historic Heritage Code:

*Development Standards for Heritage Places - Part E E13.7.1 P1 and E13.7.2 P1, P2, P3, P4, P5, and P6, and E13.7.3 P1**Development Standards for Places of Archaeological Potential - Part E E13.10.1 P1 and E13.10.2 P1*

6.5.8 Inundation Prone Areas Code:

*Riverine Inundation Hazard Areas - Part E E15.7.4 P1**Riverine, Coastal Investigation Area, Low, Medium, High Inundation Hazard Areas - Part E E15.7.5 P1*

6.5.9 Signs Code:

Standards for Signs - Part E E17.7.1 P1

*Standards for Signs on Heritage Places subject to the Heritage Code -
Part E E17.7.2 P1*

- 6.6 Each performance criterion is assessed below.
- 6.7 Zone Use Table - Part D 15.3.1
- 6.7.1 The Zone Use Table provides for the status of all uses within the Urban Mixed Use Zone.
- 6.7.2 General Retail and Hire is a discretionary use in the Zone Use Table.
- 6.7.3 Clause 8.10.1 and 8.10.2 require that a use satisfy the relevant zone use standards, along with the Zone Purpose Statement, Local Area Objectives, and Desired Future Character Statements of the relevant zone.
- 6.7.4 The proposed use satisfies the relevant Use Standards for the Zone.
- 6.7.5 The relevant Zone Purpose Statements for the Urban Mixed Use Zone are as Follows:

15.1.1.1 To provide for integration of residential, retail, community services and commercial activities in urban locations.

The mixed use proposed for the site combines residential, commercial, consulting rooms. and food services in an urban area

15.1.1.2 To encourage use and development at street level that generates activity and pedestrian movement through the area.

The development includes food services, consulting rooms, and commercial tenancies facing the street, with residential above. This will encourage activity in the street.

15.1.1.3 To provide for design that maximises the amenity at street level including considerations of microclimate, lighting, safety, and pedestrian connectivity.

The proposed works retain the existing building setbacks, albeit that the southern building is replaced with a taller structure. This ensures minimal impact on the microclimate of the street. Lighting will remain largely unchanged at the street as the courtyard for the

development is internal and therefore the majority of the lighting (excluding security and pedestrian walkway lighting) will be shielded from the street. Public pedestrian connectivity is not provided through the site, however, this is not desirable as there is no destination on the Brooker Highway side of the site that does not have adequate alternative access.

15.1.1.4 To ensure that commercial use are consistent with the activity centre hierarchy.

N/A

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

The site is on a bus route, and a bicycle path, and is close enough to the city, and to supermarkets, schools, and other business and professional services that walking and cycling are options for residents.

15.1.1.6 To provide for a diversity of uses at densities responsive to the character of streetscapes, historic areas and buildings and which do not compromise the amenity of surrounding residential areas.

The diversity of use introduced to the surrounding area by the proposed development will compliment the existing use. The existing area is capable of supporting the residential density proposed without any compromise of the existing residential amenity. Council's Cultural Heritage Officers have assessed the proposed works and have determined that they are acceptable in the context of the heritage surrounds.

15.1.1.7 To encourage the retention of existing residential uses and the greater use of underutilised sites as well as the reuse and adaptation of existing buildings for uses with a scale appropriate to the site and area.

Whilst the residential function of the two existing dwellings on the site is displaced, this is offset by the introduction of much higher density residential in the new building(s) on site which are designed to modern construction standards for enhanced residential amenity. The existing dwellings are re-purposed to commercial uses which

require a lower amenity standard, but retain the character and aesthetic of the site.

15.1.1.8 To ensure that the proportions, materials, openings and decoration of building facades contribute positively to the streetscape and reinforce the built environment of the area in which the site is situated.

The works to the heritage buildings achieve this. The proposed new building does not achieve this, and is discussed in detail at paragraph 6.8 below.

15.1.1.9 To maintain an appropriate level of amenity for residential uses without unreasonable restriction or constraint on the nature and hours of commercial activities.

The proposal will introduce new residential use to the site with current construction standards. This will result in residential development that protects its own amenity from potential commercial activity in the area, thus conserving the ability to maintain a diverse pattern of use of the wider area.

15.1.1.10 To ensure that retail shopping strips do not develop along major arterial roads within the zone.

No new retail strip will result from the proposed development.

- 6.7.6 There are no Local Area Objectives for the Urban Mixed Use Zone.
- 6.7.7 There are no Desired Future Character Statements for the Urban Mixed Use Zone.
- 6.7.8 The proposal complies with the Planning Scheme requirements for discretionary use for the site.
- 6.8 Height - Part D 15.4.1 P1
 - 6.8.1 The acceptable solution at clause 15.4.1 A1 requires buildings to have a maximum height of 10m.
 - 6.8.2 The proposal includes a new building with a maximum height above natural ground level of 23.6m.

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

6.8.4 The performance criterion at clause 15.4.1 P1 provides as follows:

Building height must satisfy all of the following:

(a) be consistent with any Desired Future Character Statements provided for the area;

(b) be compatible with the scale of nearby buildings;

(c) not unreasonably overshadow adjacent public space;

(d) allow for a transition in height between adjoining buildings, where appropriate;

6.8.5 In relation to (a), there are no Desired Future Character Statements for the Urban Mixed Use Zone.

6.8.6 In relation to (c), the sun shadow diagrams submitted with the application show that the footpath in Campbell Street will be overshadowed by the proposed development for much of the day at the winter solstice. However, the plans also show that the adjacent buildings will also overshadow the footpath for much of the same time. As such, it can reasonably be extrapolated that a much smaller building, possibly even complying with the permitted building height, would have a similar impact on the footpath in terms of overshadowing. As there are no other public spaces affected by overshadowing or loss of sunlight from this development, this is considered acceptable.

6.8.7 In relation to (b) and (d), the Tribunal has held that 'compatibility' means:

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

The Tribunal has held that 'scale' means:

The Tribunal holds that “scale” in this Clause [clause 15.4.1 – building height in the Urban Mixed Use zone] should be read in the context of P1; the term takes its colour from that context. The terms of P1 relate to building height. Accordingly, the reference to scale in this part is an inference to height and requires compatibility in that respect. Such matters cannot ignore altogether the form of the building, since height generates mass ... but the intent is that building height must be compatible with the scale (height) of “nearby” buildings.

The Tribunal has held that 'nearby' means “close to” the subject development.

The Tribunal has held that 'transition' means:

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

The Tribunal has held that 'adjoining' means:

The Tribunal prefers a wider interpretation of this concept. ‘Adjoining’ should be construed to mean ‘next to’, without a requirement for physical connection between structures.

The height of the proposed building is between 4 and 6 storeys, and a maximum of 23.6m above the existing ground level. Buildings that are 'close to' the subject development, including those that are adjoining, are between one and two stories in height and have a significantly lower maximum height in relation to the existing ground level.





Figure 10: Showing the height of nearby and adjoining buildings. 175 Campbell St is highlighted blue. Note the site also includes 177 and 179 Campbell Street. Source: HCC Digital Twin.

The lack of higher buildings adjoining and nearby the subject site is a significant constraint on the development potential of the site, given the wording of the performance criteria. It is acknowledged that this proposal has some positive elements, and hypothetically, if there was higher development already existing in close proximity to the site, a more favourable assessment against the performance criteria could potentially be made. However, as a 'first mover', this development has to comply with the above performance criteria in the context of the development which currently exists.

While it is noted that towards the city there are higher buildings, these are too far afield to be considered nearby, and therefore cannot be relied on for the purposes of this clause.

As a consequence, the proposal cannot be said to be compatible with the height of nearby buildings.

While (d) includes the words 'as appropriate' in requiring a transition in height to adjoining buildings, with a permitted maximum height of only 10m, the maximum height of almost 24m makes it very hard to argue that appropriate transitioning is being provided, either to current existing development, or possible future permitted development. Further, while it is noted that the 'tower' of the building is located at the centre of the site, behind the two heritage buildings, and is lower than the remaining new building(s), the proposed new buildings are designed with full height to all boundaries, with no discernable stepping of the facade to respond to adjacent properties. It is acknowledged that the application site is restricted in the extent that stepping can be effectively achieved given the two significant frontages, and the number and location of the heritage listed structures, both on site and in the surrounding area. Notwithstanding this limitation, it is considered that the lack of stepping is unacceptable as it fails to assist the proposed new building(s) in sitting comfortably within the surrounds. It is considered that some form of stepping to help soften the appearance of the building in its surrounds is considered necessary in this location.

6.8.8 In relation to height, the UDAP commented as follows at its 7 September 2021 meeting:

The Panel note the proposal substantially exceeds the current Scheme's height requirements, and if required to comment on height in a formal Development Application review, the Panel would recommend refusal on the height of the proposal.

The Panel appreciated the proponents reason for introducing a varied roofline, to reflect the industrial buildings' roof-lights nearby, though felt they were being used as an architectural expression and could have assisted more in reducing the height adjacent to neighbours to allow more sunlight on adjoining properties.

The panel noted that while the proposal needs to be compatible with nearby buildings, it does not need to match.

The Panel noted that the proposal did seem to be addressing the Campbell Street streetscape by reducing the height. The Panel felt that the street frontage could maintain the form in the higher of the two versions shown, given the relationship to the existing buildings on the opposite side of Campbell Street. However, the Panel were also of the opinion that massing impacts are more significant to the neighbouring properties than tinkering with the streetscape. The panel raised the issue

of bulk not just height, noting that height should be an outcome of location and form.

On a strict interpretation of the planning scheme provisions for height, the Panel concluded that the proposal does not comply. While there are meritorious elements of the proposal, overall they are not yet so significant as to warrant supporting the proposal, notwithstanding the non-compliance with the scheme.

6.8.9 The proposal does not comply with the performance criterion.

6.9 Setback - Part D 15.4.2 P1

6.9.1 The acceptable solution at clause 15.4.2 A1 requires buildings and works to be set back from the front boundary within 1m of the median setback within 100m on the same side of the street. An assessment of the setbacks within 100m of the site on the Campbell Street frontage has determined that this is between 0.2m and 2.2m from the front boundary. An assessment of the setbacks within 100m of the site on the Brooker Highway frontage has determined that this is between 0.7m and 2.7m from the front boundary.

6.9.2 The proposal includes a new building with a 0m setback from the front boundary to both Campbell Street and the Brooker Highway.

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

6.9.4 The performance criterion at clause 15.4.2 P1 provides as follows:

Building setback from frontage must satisfy all of the following:

(a) be consistent with any Desired Future Character Statements provided for the area;

(b) be compatible with the setback of adjoining buildings, generally maintaining a continuous building line if evident in the streetscape;

(c) enhance the characteristics of the site, adjoining lots and the streetscape;

(d) provide for small variations in building alignment only where

appropriate to break up long building facades, provided that no potential concealment or entrapment opportunity is created;

(e) provide for large variations in building alignment only where appropriate to provide for a forecourt for space for public use, such as outdoor dining or landscaping, provided that no potential concealment or entrapment opportunity is created and the forecourt is afforded very good passive surveillance.

- 6.9.5 There are sufficient buildings built to the front boundary in the nearby streetscape, and the extent to which the building does not comply with the front setback is small enough, that the proposed setback will not be out of character with the majority of the surrounds. The exception to this are the existing dwellings on the application site, but they are also significantly outside of the median range of front setbacks. As such, the proposed new building is more in keeping with the streetscape than the existing dwellings are.
- 6.9.6 The proposed setback to the Brooker Highway is consistent with that of buildings on adjacent properties. There is sufficient setback from the road carriageway, and sufficient detail in the building facade above ground level that it will not detract from the streetscape in this location.
- 6.9.7 The proposal complies with the performance criterion.
- 6.10 Design - Part D 15.4.3 P1
- 6.10.1 The acceptable solution at clause 15.4.3 A1 requires that blank walls occupy no more than 30% of the surface area of the ground floor level facade.
- 6.10.2 The proposal includes 51% of the Campbell Street front facade as blank wall.
- 6.10.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
- 6.10.4 The performance criterion at clause 15.4.3 P1 provides as follows:

Building design must enhance the streetscape by satisfying all of the following:

(a) provide the main access to the building in a way that addresses

the street or other public space boundary;

(b) provide windows in the front façade in a way that enhances the streetscape and provides for passive surveillance of public spaces;

(c) treat large expanses of blank wall in the front façade and facing other public space boundaries with architectural detail or public art so as to contribute positively to the streetscape and public space;

(d) ensure the visual impact of mechanical plant and miscellaneous equipment, such as heat pumps, air conditioning units, switchboards, hot water units or similar, is insignificant when viewed from the street;

(e) ensure roof-top service infrastructure, including service plants and lift structures, is screened so as to have insignificant visual impact;

(f) not provide awnings over the public footpath only if there is no benefit to the streetscape or pedestrian amenity or if not possible due to physical constraints;

(g) only provide shutters where essential for the security of the premises and other alternatives for ensuring security are not feasible;

(h) be consistent with any Desired Future Character Statements provided for the area.

- 6.10.5 Half of the ground floor facade of the new building is proposed to be shop front window and door. This will provide opportunity for mutual passive surveillance between the business and the street.
- 6.10.6 The large expanse of blank wall is at ground floor only. As there is no signage proposed for the site it is anticipated that this would be the location for business signage at a later date. Should this not occur, the limited detailing of the doors for the fire hydrant and booster assembly that are understood to be accessed from this location can be conditioned to add sufficient detail so as not to detract from the streetscape..
- 6.10.7 The proposal complies with the performance criterion, subject to the condition regarding the detailing of the access to the fire hydrant and booster assembly.

6.11 Passive Surveillance - Part D 15.4.4 P1

- 6.11.1 The acceptable solution at clause 15.4.4 A1 requires that blank walls occupy no more than 30% of the surface area of the ground floor level facade.
- 6.11.2 The proposal includes 51% of the Campbell Street front facade as blank wall.
- 6.11.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
- 6.11.4 The performance criterion at clause 15.4.4 P1 provides as follows:

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

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

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

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

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

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

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

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

- 6.11.5 Half of the ground floor facade of the new building is proposed to be shop front window and door. This will provide opportunity for mutual passive surveillance between the business and the street.

6.11.6 The proposal complies with the performance criterion.

6.12 Landscaping - Part D 15.4.5 P1

6.12.1 There is no acceptable solution at clause 15.4.5 A1 for circumstances where a building is set back more than 1m from the front boundary.

6.12.2 The proposal includes alterations and additions to buildings that are set back 9.7m from the front boundary.

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

6.12.4 The performance criterion at clause 15.4.5 P1 provides as follows:

Landscaping must be provided to satisfy all of the following:

(a) enhance the appearance of the development;

(b) provide a range of plant height and forms to create diversity, interest and amenity;

(c) not create concealed entrapment spaces;

(d) be consistent with any Desired Future Character Statements provided for the area.

6.12.5 Landscaping of the front garden of the whole of the site is proposed. The landscaping is to be sympathetic to the era of the original buildings, whilst ensuring that mutual passive surveillance is retained between the site and the street.

6.12.6 The proposal complies with the performance criterion.

6.13 Fencing - Part D 15.4.7 P1

6.13.1 The acceptable solution at clause 15.4.7 A1 requires walls, fences and gates within 4.5m of the front boundary to have a maximum height of 1.5m, and to be at least 50% transparent above 1.2m.

6.13.2 The proposal includes fencing above a retaining wall within 4.5m of the frontage that has a combined maximum height of approximately 3.2m above the existing ground line.

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

6.13.4 The performance criterion at clause 15.4.7 P1 provides as follows:

Fencing must contribute positively to the streetscape and not have an unreasonable adverse impact upon the amenity of land in the General Residential Zone or Inner Residential Zone which lies opposite or shares a common boundary with a site, having regard to all of the following:

(a) the height of the fence;

(b) the degree of transparency of the fence;

(c) the location and extent of the fence;

(d) the design of the fence;

(e) the fence materials and construction;

(f) the nature of the use;

(g) the characteristics of the site, the streetscape and the locality, including fences;

(h) any Desired Future Character Statements provided for the area.

6.13.5 There is insufficient detail of the fence at the top of the retaining wall, and at the side of the pedestrian ramp to have understanding of the transparency or height. It appears, however, that these un-specified fences will be of the same design as the front fence for the two heritage buildings. Given the height and transparency of the boundary fence, it is considered that this would provide for mutual passive surveillance, and be in keeping with the site and surrounds, so long as the material, transparency and height in relation to AHD match those of the proposed front boundary fence. As such a condition requiring this is recommended.

6.13.6 The proposal complies with the performance criterion.

6.14 Residential Amenity - Part D 15.4.8 P1

- 6.14.1 The acceptable solution at clause 15.4.8 A1 requires that all dwellings have one window facing between 30 degrees of east west alignment.
- 6.14.2 The proposal includes all dwellings with windows facing 45 degrees east and west of north.
- 6.14.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
- 6.14.4 The performance criterion at clause 15.4.8 P1 provides as follows:
- A dwelling must be sited and designed to optimise sunlight to at least one habitable room (other than a bedroom).*
- 6.14.5 The orientation of all dwellings is such that they will receive sunlight to the habitable rooms for large parts of the day.
- 6.14.6 The proposal complies with the performance criterion.
- 6.15 Residential Amenity - Part D 15.4.8 P3
- 6.15.1 The acceptable solution at clause 15.4.8 A3 requires dwellings to have a minimum 10m² private open space, with a minimum 2m dimension.
- 6.15.2 The proposal includes two dwellings (G09 and 107) which have less than 10m² private open space with a minimum 2m dimension.
- 6.15.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
- 6.51.4 The performance criterion at clause 15.4.8 P3 provides as follows:
- Outdoor living space must be provided for a dwelling with dimensions sufficient for the projected requirements of the occupants.*
- 6.15.5 These two dwellings have sufficient private open space for outdoor dining, and to extend the living area of the dwelling to the outside. This is augmented by a large, communal rooftop garden, as well as courtyards within the site to facilitate larger gatherings. As such, the performance criteria is considered to have been satisfied.

6.15.6 The proposal complies with the performance criterion.

6.16 Excavation - Part E E2.6.2 P1

6.16.1 There is no acceptable solution for E2.6.2 A1.

6.16.2 The proposal includes (insert what the proposal includes, so far as relevant to the acceptable solution).

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

6.16.4 The performance criterion at clause E2.6.2 P1 provides as follows:

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

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

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

(i) an environmental site assessment;

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

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

6.16.5 The application has been reviewed by Council's Environmental Health Officer, who has provided the following comment:

E2.6.2 Excavation is the section of the Potentially Contaminated Land Code that applies to this development. As there is no acceptable solution, the applicants are relying on meeting P1 (b), which contains three components:

(i) An Environmental Site Assessment (ESA) dated November 2021 - this was submitted.

(ii) Any specific remediation and protection measures required to be implemented before excavation commences - see below.

(iii) A statement that the excavation does not adversely impact on human health or the environment - this was included in Section 13.4 'Conclusions Summary' of the ESA (Environmental Site Assessment).

Regarding (ii), the ESA states that a 'Contamination Management Plan' and 'Soil and Water Management Plan' are required to be completed for the site. This has been included as a recommended condition on the planning permit for the development.

- 6.16.6 The proposal complies with the performance criterion, subject to the above mentioned condition.

6.17 Existing Road Accesses and Junctions - Part E E5.5.1 P3

- 6.17.1 The acceptable solution at clause E5.5.1 A3 requires use and development not to result in an increase of more than 20% or 40 vehicle movements per day to and from a site, whichever is the greater.
- 6.17.2 The proposal includes a traffic impact assessment stating that the increase in vehicle movements to and from the site will exceed this.
- 6.17.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
- 6.17.4 The performance criterion at clause E5.5.1 P3 provides as follows:

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

- (a) the increase in traffic caused by the use;*
- (b) the nature of the traffic generated by the use;*
- (c) the nature and efficiency of the access or the junction;*
- (d) the nature and category of the road;*
- (e) the speed limit and traffic flow of the road;*
- (f) any alternative access to a road;*
- (g) the need for the use;*
- (h) any traffic impact assessment; and*

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

- 6.17.5 The application has been reviewed by Council's Development Engineer, who has provided the following assessment:

The existing road access must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).

Documentation submitted to date does not satisfy the Acceptable Solution for clause E5.5.1 (A3) and as such, shall be assessed under Performance Criteria.

Acceptable Solution A3: - NON COMPLIANT

The annual average daily traffic (AADT) of vehicle movements, to and from a site, using an existing access or junction, in an area subject to a speed limit of 60km/h or less, must not increase by more than 20% or 40 vehicle movements per day, whichever is the greater.

Performance Criteria – P3:

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

"The TIA indicated that the currently AADT of vehicle movements will be increased by more than 40 vehicle movements per day (182 vmpd), therefore, P3 must be considered." - Page 21, JMG Planning Report, dated January 2022

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

- "When fully occupied based on the medium density residential, office and commercial and restaurant will generate approximately 182 vehicle movements per day. The residential building is expected to generate 94 vehicle movements per day (base on the RTA Traffic Generating Guidelines). The business and professional services will generate 22 vehicle movements per day. The food service will generate 66 vehicle movements per day. Additionally, 18 vehicle movements were generated within the weekday peak hour surrounding the road network. Thus the fully occupied vehicle movement number will be 200 per day. This number of vehicle movements is low for an Urban Mixed Use area

of this size, given much of the zone area is used for multiple purposes." - Page 21, JMG Planning Report, dated January 2022

*(b) the nature of the traffic generated by the use;
- "The proposed development is likely to be offset by the inner-city location and will encourage the uptake of other modes of transport." - Page 21, JMG Planning Report, dated January 2022*

*(c) the nature and efficiency of the access or the junction;
- "The proposed development is located in a section of Campbell Street which already provides a high level of accessibility to local businesses in area." - Page 21, JMG Planning Report, dated January 2022*

*(d) the nature and category of the road;
- "Campbell Street has sufficient capacity as a collector road for the additional traffic movements." - Page 21, JMG Planning Report, dated January 2022*

*(e) the speed limit and traffic flow of the road;
- "The Campbell Street signalised intersection with Warwick Street effectively creates gaps in the traffic flow for this section of the road for safe entry/exit into properties and parking but not so long that traffic flow is restricted." - Page 21, JMG Planning Report, dated January 2022*

*(f) any alternative access to a road;
- "There is no alternative access." - Page 21, JMG Planning Report, dated January 2022*

*(g) the need for the use;
- "The existing site access has operated safely and efficiently to date and will be upgraded as part of the proposed development." - Page 21, JMG Planning Report, dated January 2022*

*(h) any traffic impact assessment; and
- "A minor crash history exists for the area but there is no evidence of significant road safety issues in the study area." - Page 21, JMG Planning Report, dated January 2022*

*(i) any written advice received from the road authority.
- "No advice was received from the road authority." - Page 21, JMG Planning Report, dated January 2022*

"Based on the above the proposal is considered to satisfy Performance Criteria P3." - Page 21, JMG Planning Report, dated January 2022

The minor access intensification identified (182 vmpd) may be accepted as a performance based solution by the City, based on the applicant's responses for each of the relevant performance criteria.

- 6.17.6 The proposal complies with the performance criterion.
- 6.18 Sight Distance at Accesses, Junctions and Level Crossings - Part E E5.6.4 P1
- 6.18.1 The acceptable solution at clause E5.6.4 A1 requires site distances at accesses to be provided in accordance with Table E5.1.
- 6.18.2 The proposal includes site distances at the site access that do not comply with Table E5.1.
- 6.18.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
- 6.18.4 The performance criterion at clause E5.6.4 P1 provides as follows:
- The design, layout and location of an access, junction or rail level crossing must provide adequate sight distances to ensure the safe movement of vehicles, having regard to:
- (a) the nature and frequency of the traffic generated by the use;
 - (b) the frequency of use of the road or rail network;
 - (c) any alternative access;
 - (d) the need for the access, junction or level crossing;
 - (e) any traffic impact assessment;
 - (f) any measures to improve or maintain sight distance; and
 - (g) any written advice received from the road or rail authority.
- 6.18.5 The application has been reviewed by Council's Development Engineer,

who has provided the following assessment:

The sight distance at access and junctions must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).

Documentation submitted to date does not satisfy the Acceptable Solution for clause E5.6.4 and as such, shall be assessed under Performance Criteria.

Acceptable solution - A1: - NON COMPLIANT

Sight distances at:

- (a) an access or junction must comply with the Safe Intersection Sight Distance shown in Table E5.1; and*
- (b) rail level crossings must comply with AS1742.7 Manual of uniform traffic control devices - Railway crossings, Standards Association of Australia. - N/A*

Performance Criteria – P1:

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

"An acceptable solution is partially met as safe intersection sight distance to the right of the site access is deficient and on-street parking restricts sight distance to the left of the site access. E5.6.4 has been assessed in the TIA against the Performance Criteria. It is deemed acceptable on the following grounds:" - Page 22, JMG Planning Report, dated January 2022

(a) the nature and frequency of the traffic generated by the use;
- "Sight distance to the right of the site access meets the minimum safe sight distance requirement stated in Figure 3.2 of AS/NZS 2890.1 for exiting an access driveway other than domestic property. Use of the site access to enter/exit the off-street car park is less frequent due to the largely residential nature of the development." - Page 22, JMG Planning Report, dated January 2022

(b) the frequency of use of the road or rail network;
- "Sight distance to the right of the site access meets the minimum safe sight distance requirement stated in Figure 3.2 of AS/NZS 2890.1 for exiting an access driveway other than domestic

property. Use of the site access to enter/exit the off-street car park is less frequent due to the largely residential nature of the development." - Page 22, JMG Planning Report, dated January 2022

(c) any alternative access;

- "The site access arrangements are consistent with those around it hence the proposal does not introduce any new elements." - Page 22, JMG Planning Report, dated January 2022

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

- "In addition to being a collector road, Campbell Street plays a local access role hence it is challenging to satisfy the SISD requirement for all access points along this road when on-street parking is present." - Page 23, JMG Planning Report, dated January 2022

(e) any traffic impact assessment;

- "A minor crash history exists for the area but there is no evidence of significant road safety issues in the study area." - Page 23, JMG Planning Report, dated January 2022

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

- "It is acknowledged on-street parking is commonplace in urban streets thus it is normal for sight distance to be partly obstructed at site accesses. Drivers generally observe gaps between parked vehicles. Whilst the site access will be upgraded, the existing site access has operated safely and efficiently to date. There is sufficient capacity in Campbell Street for the additional traffic movements from the proposed development." - Page 23, JMG Planning Report, dated January 2022

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

- "No advice was received from the road authority." - Page 23, JMG Planning Report, dated January 2022

"Therefore, the proposed development is consistent with E5.6.4 P1." - Page 23, JMG Planning Report, dated January 2022

The available S.I.S.D may be accepted under a performance based solution by the City, based on the applicant's responses for each the relevant performance criteria.

- 6.18.6 The proposal complies with the performance criterion.
- 6.19 Number of Parking Spaces - Part E E6.6.1 P1
- 6.19.1 The acceptable solution at clause E6.6.1 A1 requires 101 car parking spaces to be provided on site for the proposed uses.
- 6.19.2 The proposal includes 34 car parking spaces on site.
- 6.19.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.
- 6.19.4 The performance criterion at clause E6.6.1 P1 provides as follows:

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

- (a) car parking demand;*
- (b) the availability of on-street and public car parking in the locality;*
- (c) the availability and frequency of public transport within a 400m walking distance of the site;*
- (d) the availability and likely use of other modes of transport;*
- (e) the availability and suitability of alternative arrangements for car parking provision;*
- (f) any reduction in car parking demand due to the sharing of car parking spaces by multiple uses, either because of variation of car parking demand over time or because of efficiencies gained from the consolidation of shared car parking spaces;*
- (g) any car parking deficiency or surplus associated with the existing use of the land;*
- (h) any credit which should be allowed for a car parking demand deemed to have been provided in association with a use which existed before the change of parking requirement, except in the case of substantial redevelopment of a site;*

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

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

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

(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.

- 6.19.5 The application has been reviewed by Council's Development Engineer, who has provided the following assessment:

The parking number assessment must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).

Documentation submitted to date does not satisfy the Acceptable Solution for clause E6.6.1 (a) and as such, shall be assessed under Performance Criteria.

Acceptable solution - A1: - NON COMPLIANT

The number of on-site car parking spaces must be:

(a) no less than and no greater than the number specified in Table E6.1;

Performance Criteria - P1:

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

"The proposed development has 31 dwellings comprising 2 bedrooms and 3 bedrooms apartments, townhouses and 2 commercial dwellings. The proposed car parking space contains 34 car parking spaces. Table E6.1 stipulated the number of vehicle parking spaces are 101 (Refer to Appendix G Traffic

Impact Assessment – Table 7 Parking Requirements). Therefore, it cannot meet the A1 thus P1 must be considered." - Page 24, JMG Planning Report, dated January 2022

(a) car parking demand;

- "The residential component of the proposed development is sited in a location that reduces the need for a personal vehicle due to the high level of accessibility to local services and community activities." - Page 24, JMG Planning Report, dated January 2022

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

- "There is a considerable range of on-street parking around the subject site to cater for visitors to the building and business employees." - Page 24, JMG Planning Report, dated January 2022

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

- "Campbell Street is a Metro route and a bus stop is located less than 50 m from the proposed development." - Page 24, JMG Planning Report, dated January 2022

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

- "Close proximity to the Hobart CBD and North Hobart with the option to use transport modes such as walking, cycling or bus. The café is likely to attract people in the local area as there are very few other similar food services, and it is likely customers will walk or ride rather than drive." - Page 24, JMG Planning Report, dated January 2022

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

- "Close proximity to the Hobart CBD and North Hobart with the option to use transport modes such as walking, cycling or bus. The café is likely to attract people in the local area as there are very few other similar food services, and it is likely customers will walk or ride rather than drive." - Page 24, JMG Planning Report, dated January 2022

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

the consolidation of shared car parking spaces;

- "Car parking demand in this section of Campbell Street is likely to vary considerably across the day with a turnover of time-restricted on-street parking regularly making spaces available for short-term use." - Page 24, JMG Planning Report, dated January 2022

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

- "Car parking demand in this section of Campbell Street is likely to vary considerably across the day with a turnover of time-restricted on-street parking regularly making spaces available for short-term use." - Page 24, JMG Planning Report, dated January 2022

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

- "There is no car parking credit as a result of previous use of the site, therefore sub-clause." - Page 24, JMG Planning Report, dated January 2022

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

- "Private off-street parking is provided extensively for various purposes in this area taking pressure off on-street parking availability." - Page 24, JMG Planning Report, dated January 2022

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

- Not applicable.

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

- "There is no relevant parking plan for the area adopted by Council, therefore sub-clause (k) is not applicable." - Page 24, JMG Planning Report, dated January 2022

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

- "The heritage building has been retained and protected, thus

there is no significant impact on the listed items. The Heritage Assessment is enclosed with the report to demonstrate details regarding the Local Heritage Code." - Page 24, JMG Planning Report, dated January 2022

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

- "The site is not in proximity to any significant trees listed in the Significant Trees Code; therefore, sub-clause (m) is not applicable." - Page 24, JMG Planning Report, dated January 2022

"Based on the above, the proposed development is considered to satisfy the applicable E6.6.1 P1." - Page 24, JMG Planning Report, dated January 2022

Within the Residents Car Park, submitted plans show 35 car parking spaces, 4 of which are configured in tandem (i.e., 2 'jockey' for 2 out of 4 Skyhomes) and 1 DDA (car parking bay 4), hence 33 private provisions appear to have been proposed.

Based on the applicant's responses for each relevant performance criteria, and given the submitted design documentation (including reports), the car parking quantities proposed may be accepted as a performance based solution by the City.

This is particularly due to the practical consideration for residential amenity demonstrated, as the total proposed provisions ensure at least one (1) car parking space per residence, see CUMULUS DWG J20823-A-100 Rev DA06 dated 13/1/22.

6.19.6 The proposal complies with the performance criterion.

6.20 Design of Vehicle Accesses - Part E E6.7.2 P1

6.20.1 The acceptable solution at clause E6.7.2 A1 requires vehicle accesses to be designed in accordance with the relevant Australian Standard.

6.20.2 The proposal includes a vehicle accesses that has not been designed in accordance with the relevant Australian Standard.

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

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

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

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

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

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

(d) ease of accessibility and recognition for users.

6.20.5 The application has been reviewed by Council's Development Engineer, who has provided the following assessment:

The design of the vehicle access must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).

Documentation submitted to date does not satisfy the Acceptable Solution for clause E6.7.2 (a) and as such, shall be assessed under Performance Criteria.

Acceptable Solution - A1: - NON COMPLIANT

Design of vehicle access points must comply with all of the following:

(a) in the case of non-commercial vehicle access; the location, sight distance, width and gradient of an access must be designed and constructed to comply with section 3 – "Access Facilities to Off-street Parking Areas and Queuing Areas" of AS/NZS 2890.1:2004 Parking Facilities Part 1: Off-street car parking.

Performance Criteria - P1: - COMPLIANT

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

"The existing access will be utilised which satisfies the location requirements of Section 3.2.3 of AS/NZS 2890.1:2004 and entry

width of 5.5 m wide (Combined for Category 1 access as defined in Tables 3.1 and 3.2 – Based on User Class 1A; local road frontage, <100 car spaces)." - Page 26, JMG Planning Report, dated January 2022

"The minimum entering sight distance to the right is acceptable despite SISD not being achieved however this is not considered an issue for the reasons given in Section 4.4. The minimum sightlines for pedestrian safety appear to be met (as required in Figure 3.3 of AS/NZS 2890.1:2004) however this should be checked at the site access detailed design stage. The gradient of the access driveway does not comply however modification of the grade will be incorporated into the site access driveway design to achieve the standard as far as reasonably practicable." - Page 27, JMG Planning Report, dated January 2022

*(a) avoidance of conflicts between users including vehicles, cyclists and pedestrians;
- Submitted documentation appears to satisfy this requirement given the statements provided by the applicant*

*(b) avoidance of unreasonable interference with the flow of traffic on adjoining roads;
- Submitted documentation appears to satisfy this requirement given the statements provided by the applicant*

*(c) suitability for the type and volume of traffic likely to be generated by the use or development; and
- Submitted documentation appears to satisfy this requirement given the statements provided by the applicant*

*(d) ease of accessibility and recognition for users.
- Submitted documentation appears to satisfy this requirement given the statements provided by the applicant*

"The proposed development is consistent with E6.7.2 A1." - Page 27, JMG Planning Report, dated January 2022

The design of the access driveway (including vehicular access) appears to meet the relevant parameters of a performance based solution, and therefore may be accepted by the City.

It has been noted the engineering modifications proposed, to

widen the existing vehicular access to 6m, are typical in the context of works proposed. It has also been noted, in addition to passenger vehicles (Class 2) the Category 2 (as per AS2890.1) access will also serve in a commercial vehicle capacity. Therefore, the access design evidently needed to also consider the largest likely vehicle (HRV) to use the facility.

See JMG Basement Carpark Layout and Proposed Surface Levels DWG P02 Rev DA3 dated 18/2/22, approved under GMC-21-81.

6.20.6 The proposal complies with the performance criterion.

6.21 Layout of Parking Areas - Part E E6.7.5 P1

6.21.1 The acceptable solution at clause E6.7.5 A1 requires parking areas to be laid out in accordance with the relevant Australian Standard.

6.21.2 The proposal includes a car parking area that has not been laid out in accordance with the relevant Australian Standard..

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

6.21.4 The performance criterion at clause E6.7.5 P1 provides as follows:

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

6.21.5 The application has been reviewed by Council's Development Engineer, who has provided the following assessment:

The layout of the parking area must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).

Documentation submitted to date does not satisfy the Acceptable Solution for clause E6.7.5 and as such, shall be assessed under Performance Criteria.

Acceptable Solution A1: - NON COMPLIANT

The layout of car parking spaces, access aisles, circulation

roadways and ramps must be designed and constructed to comply with section 2 "Design of Parking Modules, Circulation Roadways and Ramps" of AS/NZS 2890.1:2004 Parking Facilities Part 1: 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.

- *Car Parking Space Dimensions (AS2890.1 Fig 2.2 = 2.5x5.4m Class 2):*
 - *Submitted documentation appears able to satisfy this requirement, 2.5mx5.4m (31) bays detailed*
- *Car Parking Space Design Envelope (AS2890.1 Fig 5.2 300mm clearance on side):*
 - *Submitted documentation appears able to satisfy this requirement, structural clearances (300mm) and design envelope detailed (bay 11) detailed*
- *Headroom: (AS2890.1 Fig 5.3 = 2.2m clearance):*
 - *Submitted documentation appears able to satisfy this requirement,*
- *Parking Space Gradient (5%):*
 - *Submitted documentation appears able to satisfy this requirement, <5% based on detailed RL(s)*
- *Aisle Width (AS2890.1 Fig 2.2 = 5.8m Class 2):*
 - *Submitted documentation appears able to satisfy this requirement, > min. aisle widths detailed*
- *Garage Door Width & Apron (AS2890.1 Fig 5.4 = 2.4m wide = >7m wide apron):*
 - *Submitted documentation appears able to satisfy this requirement, dimensions appear to satisfy their linear relationship's min. requirements*
- *Parking Module Gradient (5% Acceptable):*
 - *Submitted documentation appears able to satisfy this requirement, <5% based on detailed RL(s)*

- *Driveway Gradient & Width (AS2890.1 Section 2.6 = 25% and 3m):*
 - *Submitted documentation appears able to satisfy these requirements, longitudinal section detailed*
- *Transitions (AS2890.1 Section 2.5.3 = 12.5% summit, 15% sag = >2m transition):*
 - *Submitted documentation appears able to satisfy this requirement, longitudinal section detailed*
- *Vehicular Barriers (AS2890.1 Section 2.4.5.3 = 600mm drop, 1:4 slope):*
 - *N/A*
- *Blind Aisle End Widening (AS2890.1 Fig 2.3 = 1m extra):*
 - *Submitted documentation appears able to satisfy this requirement, clearance detailed with additional widening shown*
- *Tandem Configuration "Jockey Parking" (Performance Assessment):*
 - *Submitted documentation appears able to satisfy internal requirements, 2 (2.6mx5.4m) provisions detailed in accordance*

The design documentation assessed appears to meet the relevant parameters of a performance based solution, and therefore may be accepted by the City.

See CUMULUS DWG J20823-A-100 Rev DA06 dated 13/1/22.

6.21.6 The proposal complies with the performance criterion.

6.22 Design of Bicycle Parking Areas - Part E E6.7.10 P1 and P2

- 6.22.1 The acceptable solutions at clauses E6.7.10 A1 and A2 require bicycle facilities to be provided within 30m of the main entrance, and as specified in Table E6.2, as well as being designed in accordance with the relevant Australian Standard..
- 6.22.2 The proposal does not include the specified bicycle facilities.
- 6.22.3 The proposal does not comply with the acceptable solution; therefore assessment against the performance criterion is relied on.

- 6.22.4 The performance criterion at clauses E6.7.10 P1 and P2 provide as follows:

P1 - The design of bicycle parking facilities must provide safe, obvious and easy access for cyclists, having regard to all of the following:

(a) minimising the distance from the street to the bicycle parking area;

(c) providing clear sightlines from the building or the public road to provide adequate passive surveillance of the parking facility and the route from the parking facility to the building;

(d) avoiding creation of concealment points to minimise the risk.

P2 - The design of bicycle parking spaces must be sufficient to conveniently, efficiently and safely serve users without conflicting with vehicular or pedestrian movements or the safety of building occupants.

- 6.22.5 The application has been reviewed by Council's Development Engineer, who has provided the following assessment:

The bicycle parking must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).

Documentation submitted to date does not satisfy the Acceptable Solution for clause E6.7.10 and as such, shall be assessed under Performance Criteria.

Acceptable Solution A1: - NON COMPLIANT

The number of on-site bicycle parking spaces provided must be no less than the number specified in Table E6.2.

Acceptable Solution A2: - NON COMPLIANT

The design of bicycle parking spaces must be to the class specified in table 1.1 of AS2890.3-1993 Parking facilities Part 3: Bicycle parking facilities in compliance with section 2 "Design of Parking Facilities" and clauses 3.1 "Security" and 3.3 "Ease of Use" of the same Standard.

Table E6.2 sets out the number of bicycle parking spaces required. The requirement for spaces for a use or development listed in the first column of the table is set out in the second and forth columns of the table with the corresponding class set out in the third and fifth columns. If the result is not a whole number, the required number of (spaces) is the nearest whole number. If the fraction is one-half, the requirement is the next whole number.

Performance Criteria - P1:

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

"This requirement is not applicable for residential dwellings but is applicable for the proposed commercial and food activities based on floor area. The proposed commercial and food activities individually cover small floor areas hence the requirements are not considered proportionate. It has been calculated that perhaps 2-3 bicycle parking spaces may be appropriate. Bicycle hoops are provided at the entry to the retail tenancies basement storage lockers (suitable for bicycle storage) and vertical hangers for 12 bicycles are provided in the basement car parking area." - Page 25, JMG Planning Report, dated January 2022

(a) minimising the distance from the street to the bicycle parking area;

- N/A

(c) providing clear sightlines from the building or the public road to provide adequate passive surveillance of the parking facility and the route from the parking facility to the building; and

- Acceptable, submitted documentation appears to satisfy this requirement

(d) avoiding creation of concealment points to minimise the risk.

- Acceptable, submitted documentation appears to satisfy this requirement

Performance Criteria – P2:

The design of bicycle parking spaces must be sufficient to conveniently, efficiently and safely serve users without conflicting with vehicular or pedestrian movements or the safety of building occupants.

12 vertical wall mounted (basement/private) bicycle storage hangers, and 8 private bicycle parking racks in 'entry secured' (resident's) courtyard.

Based on the applicant's statement, and given the submitted design documentation (including reports), the bicycle parking quantities proposed may be accepted as a performance based solution by the City.

This is particularly due to the quantity being proposed being practically reasoned, see CUMULUS DWG, J20823-A-100 J20823-A-101 Rev DA06 dated 13/1/22, and J20823-A-101 Rev DA07 dated 10/2/22.

6.2.6 The proposal complies with the performance criterion.

6.23 Facilities for Commercial Vehicles - Part E E6.7.13 P1

6.23.1 The acceptable solution at clause E6.7.13 A1 requires commercial vehicle facilities to be provided in accordance with the relevant Australian Standard.

6.23.2 The proposal does not include commercial vehicle facilities that have been designed in accordance with the relevant Australian Standard.

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

6.23.4 The performance criterion at clause E6.7.13 P1 provides as follows:

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

6.23.5 The application has been reviewed by Council's Development Engineer, who has provided the following assessment:

The facilities for commercial vehicles must satisfy either Acceptable Solutions or Performance Criteria for each clause of the Hobart Interim Planning Scheme 2015 (HIPS 2015).

Documentation submitted to date does not satisfy the Acceptable Solution for clause E6.7.13 and as such, shall be assessed under

Performance Criteria.

Acceptable Solution A1: - NON COMPLIANT

Commercial vehicle facilities for loading, unloading or manoeuvring must be provided on-site in accordance with Australian Standard for Off-street Parking, Part 2 : Commercial Vehicle Facilities AS 2890.2:2002, unless:

(a) the delivery of all inward bound goods is by a single person from a vehicle parked in a dedicated loading zone within 50 m of the site; and

(b) the use is not primarily dependent on outward delivery of goods from the site.

Performance Criteria - P1: - COMPLIANT

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

The largest likely commercial vehicle expected to use the facilities is a Heavy Rigid Vehicle (HRV), albeit such a vehicle is likely to provide Occasional Service (as per AS2890.2).

With respect to the proposed development, the commercial vehicle facilities detailed have been designed to enable on-site waste collection using a private contractor 'Rear Lift Truck', the dimensions of which closely resemble a Small Rigid Vehicle (SRV). The specifications for this vehicle are;

Overall length, width (including mirrors), max. height: 7.54m, 2.84m, 2.6m

Wheel base (from centre of front and rear axle): 4.2m

See JMG New Carpark Entry Profile & Service Vehicle Clearances DWG P05 Rev DA1 dated 19/11/21, approved under GMC-21-81.

Despite the lack of a dedicated service area as required for Regular Service (as per AS2890.2), the access driveway and circulation roadway detailed designs;

Demonstrate operational vehicle clearances are available,

*Show on-site turning can be achieved by the atypical SRV (swept paths detailed),
Detail roadway and ramp grades (including appropriate rates of change), and
Sight distance requirements.*

Based on the above assessment and given the submitted documentation, the facilities for commercial vehicles may be accepted under a performance based solution by the City.

6.23.6 The proposal complies with the performance criterion.

6.24 Stormwater Drainage and Disposal - Part E E7.7.1 P2

6.24.1 The acceptable solution at clause E7.7.1 A2 requires development to incorporate water sensitive urban design.

6.24.2 The proposal does not incorporate water sensitive urban design.

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

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

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

6.24.5 The application has been reviewed by Council's External Consultant Engineer, who has provided the following assessment:

*The planning response detailed on page 13 of the engineering reports states the development meets the acceptable solution A2. Although, the assessment provided responds to P2. The most reasonable approach for a development of this size is to assess the site against P2 which has been done.
There are inconsistencies with how the water quality assessment is presented. Under the response to planning criteria on Page 13, a table of treatment train effectiveness is presented, along with a model schematic (Figure 1). There is no further information provided on how these model results were obtained*

On page 60 of the engineering reports, a different water quality assessment is presented with a different model schematic and different results (Figure 2). This assessment does provide sufficient information to assess water quality compliance.

The information provided from Page 59 to Page 62 of the engineering reports provides sufficient detail for council to accept.

It should be noted the model results presented in the planning response to P2 do not have any technical background. A reasonable approach has been undertaken for this part of the assessment as an assessment has been provided that demonstrates compliance. It is recommended that council condition that an appropriate water quality management system be implemented meeting the Stormwater Quality Targets.

6.24.6 The proposal complies with the performance criterion.

6.25 Stormwater Drainage and Disposal - Part E E7.7.1 A4

6.25.1 The acceptable solution at clause E7.7.1 A1 provides as follows:

A major stormwater drainage system must be designed to accommodate a storm with an ARI of 100 years.

6.25.2 The proposal include a major stormwater drainage system that does not accommodate a storm with an ARI of 100 years.

6.25.3 There is no performance criteria; therefore compliance with the acceptable solution is required.

6.25.5 The application has been reviewed by Council's External Consultant Engineer, who has provided the following assessment:

The proposed development is located within a flood affected area. A major overland flow path exists at the rear of the property. The proposed development footprint is within this area.

A design to accommodate this flow path has not been provided. The flood modelling undertaken has classified the flood hazard as predominantly H5 and some areas of H6.

A major stormwater drainage system is required a system to

provide safe conveyance of stormwater runoff and a specific level of flood mitigation. The flood hazard category estimated and proposed use in the major stormwater drainage path does not constitute safe conveyance of floodwater.

The physical design of the development has not appropriately considered the overland flow path and relied upon administrative measures to attempt to manage the risk. The proposed solution accepts there will be damage to property (cars).

The response to A4 provided on Page 14 state all habitable floors are located more than 300mm above the calculated 1% AEP flood level. It is noted that the HIPS defines a habitable building as a building of Class 1 - 9 of the Building Code of Australia. The National Construction Code defines carparks as a class 7a building. As such the not all habitable floor areas are above the 1% AEP flood level.

Based on the information provided, the development does not comply with A4.

- 6.25.6 The proposal does not comply with the acceptable solution, and there is no corresponding performance criterion.

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

- 6.26.1 There is no acceptable solution for E9.7.2 A1.

- 6.26.2 The proposal includes a sensitive use (residential) adjacent to butcher and smallgoods manufacturer, within the attenuation area for the existing use.

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

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

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

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

- (i) operational characteristics;
- (ii) scale and intensity;
- (iii) degree of hazard or pollution that may be emitted from the activity;

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

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

- 6.26.5 The application has been reviewed by Council's
Environmental Development Planner, who has provided the following
assessment:

*Approval is sought for a multiple dwelling development at 175-179
Campbell Street, Hobart.*

Attenuation Code

*The Code applies because development for sensitive use is
proposed within the attenuation distance of an activity listed in
Table E9.1. The site is adjacent to a butcher that includes
smallgoods manufacturing at 169-173 Campbell Street.*

*Smallgoods are processed, ready-to-eat meat products or meat
products that are heat treated and undergo a cooling process (e.g.
ham, salami, bacon, saveloys). Table E9.1 lists odours as the
likely environmental impact of smallgoods manufacturing.*

No exemptions apply.

*The relevant standards are under clause E9.7.2. There is no
acceptable solution for A1. Performance criterion P1 states the
following:*

*Use with potential to cause environmental harm and which is set
back less than the distance prescribed in A1 must not have an
unacceptable adverse effect on existing or likely future sensitive
use, having regard to all of the following:*

- (a) operational characteristics;*
- (b) scale and intensity;*
- (c) degree of hazard or pollution that may be emitted from the activity;*
- (d) hours of operation;*
- (e) nature of amenity impacts from likely light, noise, odour, particulate, radiation, vibration or waste emissions;*
- (f) existing ambient background levels of light, noise, odour, particulate, radiation, vibration or waste emissions in the locality;*
- (g) measures to eliminate, mitigate or manage emissions.*

The application includes the following information about the butcher:

Tasmanian Meat Wholesalers are located at 169-173 Campbell Street and sell approximately 52 tonnes of sausages, red meat, poultry and smallgoods a month;

The site currently operates a variety of small-scale equipment, including mincers, dicers, sausage fillers, bandsaws, and a smokehouse (which is used for a short period, mainly around Christmas);

The retail shop is currently open:

- o 7:30 – 18:00, Monday – Friday*
- o 7:30 – 14:00, Saturday*
- o Closed Sunday and public holidays*

The commercial/wholesale currently operates:

- o 6:00 – 18:00, Monday – Friday*
- o Closed Sunday and public holidays*

Deliveries currently comprise 4/5 LRV vehicles which enter and leave the site for deliveries multiple times a day, and approximately 3-5 third party deliveries per day, with suppliers operating a variety of HRV trucks that enter the site for loading/unloading (deliveries occurring from approximately 5:00 am – close of business, Monday – Saturday);

The site operates an LPG forklift which operates within the service yard areas and buildings approximately 12 hours a day (6:00 – 18:00, Monday – Friday);

All equipment is housed with the existing buildings, which minimises any potential noise impacts. The site has limited odour emissions due to the containment of operations within the existing buildings. In addition, the potential sources of odours are mainly smokehouse and grease traps. In relation to the smokehouse, the emissions are discharged above the roofline through a flue, and

the smoker is used for a very short period during December. The grease traps are maintained and cleaned approximately every three months to manage odour emission.

Noise nuisance is not considered a significant risk as the area is subject to high levels of traffic noise.

A review of Council records found no complaints relating to the operation.

Given the scale and nature of the use, and the lack of any compliant history, the smallgoods manufacturing activities are not expected to have an unreasonable impact upon future residents of the proposed development and the exercise of discretion is recommended.

6.26.6 The proposal complies with the performance criterion.

6.27 Demolition - Part E E13.7.1 P1

6.27.1 There is no acceptable solution for E13.7.1 A1.

6.27.2 The proposal includes demolition of the rear lean-to additions to the heritage dwellings, as well as internal and external alterations to the two dwellings..

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

6.27.4 The performance criterion at clause E13.7.1 P1 provides as follows:

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

(a) there are, environmental, social, economic or safety reasons of greater value to the community than the historic cultural heritage values of the place;

(b) there are no prudent and feasible alternatives;

(c) important structural or façade elements that can feasibly be

retained and reused in a new structure, are to be retained;

(d) significant fabric is documented before demolition.

- 6.27.5 The application has been reviewed by Council's Cultural Heritage Officer, who has provided the following assessment:

The buildings have been proposed for adaptation to commercial uses (consulting rooms). To facilitate this new use a number of elements are proposed for demolition.

Internally demolition is as follows:

- Original doors in both residences*
- Original windows in both residences*
- A number of internal wall openings are proposed*

Externally demolition is as follows:

- Roof galvanised short sheeting is to be removed and replaced*
- Rear infilled verandahs / skillion structures at the rear of both residences are to be demolished*
- External sections of walls are to be removed to allow for the proposed link-way between the two buildings*
- Removal of existing front fencing*
- Removal of carport structure in front of 179 Campbell Street*
- Removal of existing front garden landscaping elements*

A number of the proposed internal works can satisfy the demolition provisions of Performance Criteria 1 via permit conditions. Some elements proposed for demolition e.g original windows is viewed as unnecessary, and the proposed design can still be achieved without these removals. Internal wall demolition has been conditioned to retain bulkheads beneath picture rails and nibs where appropriate. The internal site visit for 177 Campbell Street has indicated that the existing floorplan submitted does not show the decorative hallway arch with plaster work mouldings (see fig.3). This element is significant heritage fabric and must be retained, a condition enforcing this has been applied.

In regards to external demolition both residences currently have painted short sheet galvanised iron roofs (see fig.4 below). Plans indicate this roof sheeting is to be repaired or made good, in the instance that the roof sheeting is to be replaced galvanised iron is considered the appropriate replacement and a condition has been

applied to reflect this.

It is noted that the submitted plans for 177 Campbell Street does not adequately show the entrance porch. The entrance porches and tessellated tiles of both properties must be retained and protected during construction.

The proposed demolition in regards to the carport removal, fencing, and landscaping to the frontage of the properties are considered acceptable. The front gardens do not contain significant plantings or landscape features, and whilst the ironwork fencing at 179 Campbell Street appears to date to the Inter-War period it is not considered to be of high significance and its removal and replacement will not result in detriment to the listed place.

Subject to the aforementioned conditions the proposed demolition components of the proposal are considered to satisfy Performance Criteria 1 of E13.7.1.

6.27.6 The proposal complies with the performance criterion.

6.28 Works Other Than Demolition - Part E E13.7.2 P1, P2, P3, P4, P5, and P6

6.28.1 There are no acceptable solutions for E13.7.2 A1, A2, A3, A4, A5, or A6.

6.28.2 The proposal includes Alterations and additions to the existing dwellings.

6.28.3 There are no acceptable solutions; therefore assessment against the performance criterion is relied on.

6.28.4 The performance criterion at clauses E13.7.2 P1, P2, P3, P4, P5, and P6 provide as follows:

P1 - Development must not result in any of the following:

(a) loss of historic cultural heritage significance to the place through incompatible design, including in height, scale, bulk, form, fenestration, siting, materials, colours and finishes;

(b) substantial diminution of the historic cultural heritage significance of the place through loss of significant streetscape elements including plants, trees, fences, walls, paths, outbuildings

and other items that contribute to the significance of the place.

P2 - Development must be designed to be subservient and complementary to the place through characteristics including:

(a) scale and bulk, materials, built form and fenestration;

(b) setback from frontage;

(c) siting with respect to buildings, structures and listed elements;

(d) using less dominant materials and colours.

P3 - Materials, built form and fenestration must respond to the dominant heritage characteristics of the place, but any new fabric should be readily identifiable as such.

P4 - Extensions to existing buildings must not detract from the historic cultural heritage significance of the place.

P5 - New front fences and gates must be sympathetic in design, (including height, form, scale and materials), to the style, period and characteristics of the building to which they belong.

P6 - The removal of areas of landscaping between a dwelling and the street must not result in the loss of elements of landscaping that contribute to the historic cultural significance of the place.

- 6.28.5 The application has been reviewed by Council's Cultural Heritage Officer, who has provided the following assessment:

Performance Criteria 1

Development must not result in any of the following:

(a) loss of historic cultural heritage significance to the place through incompatible design, including in height, scale, bulk, form, fenestration, siting, materials, colours and finishes;

(b) substantial diminution of the historic cultural heritage significance of the place through loss of significant streetscape elements including plants, trees, fences, walls, paths, outbuildings and other items that contribute to the significance of the place.

The proposed new development at the rear of the listed properties will not have a detrimental impact upon the heritage significance

of the places. The proposed new buildings are considered to be clearly detached from the c1914 dwellings, and are interpreted physically and visually as a separate freestanding development within the rear of the sites.

A mixture of mono pitched, and flat roof forms have been proposed for the new development whilst the pitched roofs likely add some additional height, the roof forms are considered appropriate and compatible with the surrounding heritage roof forms. Performance Criteria 1 of E13.7.2 is considered satisfied.

Performance Criteria 2

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

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

In regards to the new development behind the listed residences, the proposal should be considered in its proximity to the residences and the objectives of performance criteria of being subservient and sympathetic to the historic cultural heritage values of these listed residences. The proposed development is sited to offer open space to the rear of the dwellings, this provides an appropriate degree of physical separation between the residences and new development. This separation also allows for a full and complete view of the residences rather than enclosing or obscuring the listed places.

The height of the proposed apartment buildings on the listed site are set back from Campbell Street with the height (see fig 5) stepping back from the listed residences and increasing in scale towards the Brooker Highway frontage, and the adjacent 175 Campbell Street lot.

It should be noted that a number of representations refer to the portion of development taking place at 175 Campbell Street to the right of the residences in the image below (see fig 3) under the Heritage Code of Planning Scheme (HIPS 2015), this site is assessable against the Archaeology provisions only, and the bulk, scale, setback, and siting of this part of the development cannot be assessed under the Heritage Code.

Performance Criteria 2 of E13.7.2 is considered satisfied.

Performance Criteria 3

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

The proposed materials, colours and built form of the development is described by the architects as providing a "backdrop" to the listed residences. This is true in that recessive colours, and a relatively flat façade treatment allows for a more muted and simplified visual appearance behind the residences, whilst being readily identifiable as a modern structure. Performance Criteria 3 is considered satisfied.

Performance Criteria 4

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

The proposed covered link-way extension between the two residences will have a standing seam basalt clad roof with a flat profile (2 degree pitch). The link-way will be recessed back from the front building line, and is considered to be subservient to the heritage significance and characteristics of the listed places. Performance Criteria 4 of E13.7.2 is considered satisfied.

Performance Criteria 5

New front fences and gates must be sympathetic in design, (including height, form, scale and materials), to the style, period and characteristics of the building to which they belong.

The proposed fencing is of a simple but traditional style, it is low scale, and uses appropriate materials that complement the characteristics of the listed residences. Performance Criteria 5 of E13.7.2 is considered satisfied.

Performance Criteria 6

The removal of areas of landscaping between a dwelling and the street must not result in the loss of elements of landscaping that contribute to the historic cultural significance of the place.

The landscape design proposes two small terrace gardens at the frontage of the residences, an element of the design incorporates

an access ramp to the side boundary of number 177. The landscape works are understood to enhance the residences presentation within the streetscape. There is no loss of cultural heritage significance to the places through these proposed landscaping works. E13.7.2 Performance Criteria 6 is considered satisfied.

In relation to heritage, the UDAP commented:

The Panel noted the heritage constraints of the site and appreciate the Council's heritage officer's assessment is based on the Scheme's requirement for new development to be "subservient" to the heritage properties. The Panel also felt that the treatment of the heritage buildings on site likely impacted the design in a detrimental way, leaving a building behind that was trying not to be tall. The Panel questioned whether the amended plans neither provided a "subservient" relationship to the heritage buildings, nor provided a rationale for a considered design solution in respect of the Scheme's requirement for a subservient relationship. The Panel felt there is more opportunity in addressing the relationship between the heritage buildings set down low from the street, and their relationship to the original landform including the former rivulet along its Brooker Highway edge, the subsequent pattern of development through infill of the Brooker Highway, and more recent and likely future development in the precinct.

On a strict interpretation of the planning scheme provisions for heritage, the Panel concluded that the proposal does not comply. While there are meritorious elements of the proposal, overall they are not yet so significant as to warrant supporting the proposal, notwithstanding the non-compliance with the scheme.

Notwithstanding these comments, Council's Cultural Heritage Officers are satisfied that the proposal complies with the heritage provisions of the scheme, as set out above. In addition, it is noted that the proposal is not in a heritage precinct as alluded to by UDAP, the heritage buildings on the site have little presence from the Brooker and while the proposal is taller than the existing heritage buildings, the preceding heritage assessment concludes that it is an acceptable relationship.

6.28.6 The proposal complies with the performance criterion.

6.29 Subdivision - Part E E 13.7.3 P1

- 6.29.1 There is no acceptable solution for E13.7.3 A1.
- 6.29.2 The proposal includes the consolidation of all lots subject to works within the application.
- 6.29.3 There is no acceptable solution; therefore assessment against the performance criterion is relied on.
- 6.29.4 The performance criterion at clause E13.7.3 P1 provides as follows:

A proposed plan of subdivision must show that historic cultural heritage significance is adequately protected by complying with all of the following:

(a) ensuring that sufficient curtilage and contributory heritage items (such as outbuildings or significant plantings) are retained as part of any title containing heritage values;

(b) ensuring a sympathetic pattern of subdivision;

(c) providing a lot size, pattern and configuration with building areas or other development controls that will prevent unsympathetic development on lots adjoining any titles containing heritage values, if required.

- 6.29.5 The application has been reviewed by Council's Cultural Heritage Officer, who has provided the following assessment:

Lot consolidation of the various titles is required. The proposed adhesion is technically a subdivision and will create a large single lot. The lot boundaries shown on 1913 council records have been previously altered in the 1970s, meaning the existing lot boundaries do not reflect the original lot size or subdivision pattern. The proposed consolidation will not result in detriment to the listed places of 177, and 179 Campbell Street. Performance Criteria 1 of E13.7.3 is considered satisfied.

- 6.29.6 The proposal complies with the performance criterion.

6.30 Development Standards for Places of Archaeological Potential - Part E E13.10.1 P1

- 6.30.1 The acceptable solution at clause E13.10.1 A1 requires that demolition

include no excavation.

6.30.2 The proposal includes excavation to facilitate the use and development.

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

6.30.4 The performance criterion at clause E13.10.1 P1 provides as follows:

Buildings, works and demolition must not unnecessarily impact on archaeological resources at places of archaeological potential, having regard to:

(a) the nature of the archaeological evidence, either known or predicted;

(b) measures proposed to investigate the archaeological evidence to confirm predictive statements of potential;

(c) strategies to avoid, minimise and/or control impacts arising from building, works and demolition;

(d) where it is demonstrated there is no prudent and feasible alternative to impacts arising from building, works and demolition, measures proposed to realise both the research potential in the archaeological evidence and a meaningful public benefit from any archaeological investigation;

(e) measures proposed to preserve significant archaeological evidence 'in situ'.

6.30.5 The application has been reviewed by Council's Cultural Heritage Officer, who has provided the following assessment:

Building and works of the proposed development will involve excavation and ground disturbance as a basement level will be created for a car parking. The statement of archaeological potential provided indicates that there is likely minimal historical archaeological potential across the sites. A condition has been applied to the permit in the case that unanticipated significant archaeological evidence is uncovered. Performance Criteria 1 of E13.10.1 is considered satisfied.

6.30.6 The proposal complies with the performance criterion.

6.31 Development Standards for Places of Archaeological Potential - Part E E13.10.2 P1

6.31.1 The acceptable solution at clause E13.10.2 A1 requires building envelopes to be placed on the titles for places of archaeological potential.

6.31.2 The proposal includes lot consolidation, not division, and no building envelopes are proposed.

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

6.31.4 The performance criterion at clause E13.10.2 P1 provides as follows:

Subdivision must not impact on archaeological resources at Places of Archaeological Potential through demonstrating either of the following:

(a) that no archaeological evidence exists on the land;

(b) that there is no significant impact upon archaeological potential.

6.31.5 The application has been reviewed by Council's Cultural Heritage Officer, who has provided the following assessment:

The statement of archaeological potential provided indicates that there is likely minimal historical archaeological potential across the sites. It is also noted that the lots although proposed to be consolidated will remain within the archaeological potential zoning that covers this part of Campbell Street. Performance Criteria 1 of E13.10.2 is considered satisfied.

6.31.6 The proposal complies with the performance criterion.

6.32 Riverine Inundation Hazard Areas - Part E E15.7.4 P1

6.32.1 The acceptable solution at clause E15.7.4 A1 requires new habitable building to have a floor level no lower than the 1% AEP (100 yr ARI) storm event plus 300mm.

6.32.2 The proposal includes a habitable building with a floor level that does not meet the acceptable solution.

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

6.32.4 The performance criterion at clause E15.7.4 P1 provides as follows:

A new habitable building must have a floor level that satisfies all of the following:

(a) risk to users of the site, adjoining or nearby land is acceptable;

(b) risk to adjoining or nearby property or public infrastructure is acceptable;

(c) risk to buildings and other works arising from riverine flooding is adequately mitigated through siting, structural or design methods;

(d) need for future remediation works is minimised;

(e) provision of any developer contribution required pursuant to policy adopted by Council for riverine flooding protection works.

6.32.5 The application has been reviewed by Council's External Consultant Engineer, who has provided the following assessment:

As the carpark is a Class 7a building, the carpark is considered to be a habitable building. As the proposed car park floor level is 15.70m AHD, and the 1% AEP + CC flood level is estimated to be 18.015m AHD, A1 is not achieved and the performance criteria must be responded to.

A specific response to P1 has not been provided. The review of the compliance against P1 has been undertaken based on the information presented in the engineering reports.

(a) Risks to users of the site, adjoining or nearby land is acceptable.

Page 80 of the engineering reports presents flood hazard maps for both the existing and developed case for the 1% AEP + climate change event. The maps show an increase in flood hazard

category on the site through the lowering of the ground level to facilitate the design of the car park. The flood hazard is predominantly H5 with some areas of H6. The flood hazard category H5 means unsafe for vehicles and people. All buildings vulnerable to structural damage. Some less robust building types vulnerable to failure. H6 means unsafe for vehicles and people. All building types considered vulnerable to failure. The level of flood risk within the carpark is considered to be unacceptable. It is noted the flood hazard rating on the site has increased when compared to the existing condition.

The proposed approach to manage risk is to implement a Flood Emergency Management Plan (FEMP). There is no discussion regarding alternate options for managing flood risk. The following comments are provided on the proposed FEMP:

- The engineering report states, depth in the car park rises from an initial noticeable depth of 50mm to maximum in a period of around 9.5 minutes (engineering reports, Page 13 - JMG). It is noted the maximum depth is approximately 2.2m. This is the time it takes to reach peak depth, but no comment has been provided on the time it takes to which flow becomes hazardous to people and infrastructure. This will be shorter and hence further reduces the time available to vacate affected areas.
- An understanding of how the flood hazard changes with time is required. The assumption of adopting a FEMP based on the time to peak depth is not appropriate. The documentation provided to support a FEMP as being possible is lacking adequate detail.
- The time for noticeable overland flow to hazardous flooding is too short for a flood emergency management plan to be appropriately implemented. It appears the approach relied upon will be for people to notice flood water and will make a decision to remove themselves from the area. There is no time for instruction or intervention from a flood warden. The emergency response system relies on automated measures as warning devices, although it is likely they may only provide minutes of warning.
- Figure 3 shows an excerpt from the Australian Disaster Resilience Manual 20 and presents an example evacuation timeline. For this example, only the first four steps are relevant. For a FEMP to work, the time between the first indication of flooding and the prediction of inundation height, plus the response initiation time must be less than the time where flood water first becomes hazardous (noting this is less than 9.5 minutes). There has been no discussion in the

material provided on evacuation timeline.

- A risk assessment is documented in Appendix A of the report (Page 88 of engineering reports). Risk Ref No. D2 recognises there is a risk to personal safety within the car park and waste room. The assessment nominates a consequence of moderate for a risk that could result in serious injury or death. This does not appear to be correct.
- The risk assessment states that with implementation of the flood emergency management plan that the consequence, reduces from moderate to minor. The consequence will not change with the implementation of administrative risk reduction measures. There is still the consequence of serious injury and death.
- The JMG report accepts that cars may become damaged and have suggested the body corporate insurance may be able to recover losses. This still means people will be without a car for a period of time. Insurance should not need to be relied upon if the risk is known prior to the development be constructed; and
- The flood hazard categorisation is predominantly H5 and some H6 and represents hazards typically found in defined river and creek channels. Areas that contain this level of hazard would normally be left clear of development. It is not recommended to place infrastructure or provide incentive for people to access areas like this.

The proposed design exposes users to an unacceptable level of risk with a mitigation option that cannot guarantee the safety of people and accepts the damage to property will occur. The proposed approach does not meet P1 (a)

(b) Risk to adjoining or nearby property or public infrastructure is acceptable.

Section 2.4.1 of the Flussig Report states there will be no displacement of overland flow over other property. A graph is provided in Figure 7, although, this only demonstrates a change at a single point. A comparison between the flood maps provided in Appendix B, Pre-Development 1% AEP + CC and Post-Development 1% AEP + CC, do show an increase in flood depth downstream, a minor decrease in flood extent onto Campbell Street, an increase in the flood extent within the Brooker Avenue Road Reserve and a minor increase in flood extent behind Woolworths.

A high level review of the flood hazard maps suggests the extent of

H6 hazard increases downstream.

Furthermore, figure 6 (page 75 of the engineering reports) shows an increase in peak flow rate of approximately 13% within the Brooker Avenue Road reserve.

To appropriately quantify the change in flood behaviour, a water level difference / flood afflux map or suitably detailed equivalent information is required. This has not been provided and hence there isn't enough information provided to adequately address P1 (b). This is information that should have been provided at this stage of the development assessment. As such it cannot be conditioned.

(c) Risk to buildings and other works arising from riverine flooding is adequately mitigated through siting, structural or design methods

With regard to mitigation options relating to structural design of the development, the engineering report has recommended the building be designed to resist flood forces. A review of the structural design is beyond the scope of this assessment although this item can be conditioned.

(d) Need for future remediation works is minimised

By allowing the overland flow path to pass through the car park introduces a problem for the development to deal with in the future. Damage to cars and building utilities are likely which will impose burden on those living at the proposed development site.

(e) Provision of any developer contribution required pursuant to policy adopted by Council for riverine flooding protection works

Developer contribution not applicable for this development.

6.32.6 The proposal does not comply with the performance criterion.

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

6.33.1 There is no acceptable solution for E15.7.5 A1.

6.33.2 The proposal includes solid walls greater than 5m in length and 0.5m high.

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

6.33.4 The performance criterion at clause E15.7.5 P1 provides as follows:

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

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

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

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

6.33.5 The application has been reviewed by Council's External Consultant Engineer, who has provided the following assessment:

As the proposed development introduces a new structure into the development site that is greater than 5m, A1 cannot be achieved and the performance criteria (P1) must be addressed.

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

Section 2.4.1 of the Flussig Report states there will be no displacement of overland flow over other property. A graph is provided in Figure 7, although, this only demonstrates a change at a single point. A comparison between the flood maps provided in Appendix B, Pre-Development 1% AEP + CC and Post-Development 1% AEP + CC, do show an increase in flood depth downstream, a minor decrease in flood extent onto Campbell Street, an increase in the flood extent within the Brooker Avenue Road Reserve and a minor increase in flood extent behind Woolworths.

A high level review of the flood hazard maps suggests the extent of H6 hazard increases downstream.

To appropriately quantify the change in flood behaviour, a water level difference / flood afflux map or suitably detailed equivalent

information is required. This has not been provided and hence there isn't enough information provided to adequately address P1 (b). The review of flood maps provided suggests there is a change, but it is not possible to ascertain the impact. This is information that should have been provided at this stage of the development assessment. As such it cannot be conditioned.

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

Figure 6 (page 75 of the engineering reports) shows an increase in peak flow rate of approximately 13% within the Brooker Avenue Road reserve. The statement provided in the response to planning criteria (page 82 of the engineering reports) states no change. The response is inconsistent with the detail provided in the report. P1 (b) has not been achieved. Information should have been provided at this stage. It is not recommended to condition for this.

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

The response stated on page 82 of the engineering reports suggest there is no evidence that stormwater quality will be reduced. Based on the review of the site this is reasonable and can be accepted.

6.33.6 The proposal does not comply with the performance criterion.

6.34.1 Standards for Signs and Standards for Signs on Heritage Places subject to the Heritage Code - Part E E17.7.1 P1 and E17.7.2 P1

6.34.1 The acceptable solution at clause E17.7.1 P1 requires signs to be of the dimension and type specified in the nominated tables.

6.34.1 There is no acceptable solution for E17.7.2 P1.

6.34.2 The proposal includes a wall or possibly ground based panel sign, however the sign was not replicated on all plans, and insufficient detail was provided for the sign to confirm this.

6.34.3 The proposal does not comply with, or there is no acceptable solution; therefore assessment against the performance criterion is relied on.

- 6.34.4 The performance criterion at clauses E17.7.1 P1 and E17.7.2 P1 provide as follows:

E17.7.1

P1 - A sign not complying with the standards in Table E17.2 or has discretionary status in Table E17.3 must satisfy all of the following:

(a) be integrated into the design of the premises and streetscape so as to be attractive and informative without dominating the building or streetscape;

(b) be of appropriate dimensions so as not to dominate the streetscape or premises on which it is located;

(c) be constructed of materials which are able to be maintained in a satisfactory manner at all times;

(d) not result in loss of amenity to neighbouring properties;

(e) not involve the repetition of messages or information on the same street frontage;

(f) not contribute to or exacerbate visual clutter;

(g) not cause a safety hazard.

E17.7.2

P1 - A sign on a Heritage Place listed in the Historic Heritage Code or within a Heritage Precinct or Cultural Landscape Precinct must satisfy all of the following:

(a) be located in a manner that minimises impact on cultural heritage significance of the place or precinct;

(b) be placed so as to allow the architectural details of the building to remain prominent;

(c) be of a size and design that will not substantially diminish the cultural heritage significance of the place or precinct;

(d) be placed in a location on the building that would traditionally have been used as an advertising area if possible;

(e) not dominate or obscure any historic signs forming an integral part of a building's architectural detailing or cultural heritage values;

(f) have fixtures that do not damage historic building fabric, including but not restricted to attachments to masonry and wood, such as to using non-corrosive fixings inserted in mortar joints;

(g) not project above an historic parapet or roof line if such a projection impacts on the cultural heritage significance of the building;

(h) be of a graphic design that minimises modern trademark or proprietary logos not sympathetic to heritage character;

(i) not use internal illumination in a sign on a Heritage Place unless it is demonstrated that such illumination will not detract from the character and cultural heritage values of the building.

6.34.5 There are insufficient details of the signs provided in the application documentation. The applicant was contacted regarding this, and has agreed that the reference to the sign was left on some of the plans in error, and that there is no intention to apply for signage at this time. As such, it is recommended that a condition be included in any permit requiring the removal of any reference to any signage, and advising that signage for the site will need to be the subject of further application at a later time.

6.34.6 The proposal does not comply with the performance criterion, however a condition removing all reference to the signage from the scope of works, is considered appropriate.

7. Discussion

7.1 Planning approval is sought for Partial Demolition, Alterations, New Building for 31 Multiple Dwellings, Food Services, Business and Professional Services, General Retail and Hire, Subdivision (Lot Consolidation), and Associated Works in the Road Reserve including Tree Removal, at 169-173, 175, 177, and 179 Campbell Street, and the Adjacent Road Reservation.

- 7.2 The application was advertised and received fourteen (14) representations. The representations raised concerns including Height, Views, Sunlight / Overshadowing, Amenity, Tree Removal, Adjacent Site Access, Construction Impacts, Parking, Traffic / Access, Trade Interruptions, Bike Parking, Scale / Bulk / Intensity, Design, Heritage, Neighbourhood Character, Flood Risk, Precedent, and Noise.
- 7.3 The proposal has been assessed against the relevant provisions of the planning scheme and is considered to not perform well, in terms of building height and inundation.
- 7.4 The proposal has been assessed by other Council officers, including the Council's Development Engineer, Cultural Heritage Officer, Environmental Development Planner, Environmental Health Officer, Open Space Planner, Roads Engineer, and Traffic Engineer. Given the flood characteristics of the site, the application was reviewed by an external hydraulic engineer. That external engineer has assessed the proposal as being non-compliant with the requirements of the Stormwater Code and the Inundation Prone Areas Code. The external engineer concludes as follows:

The proposed development is located in an area affect by extremely hazardous flood water in a 1% AEP + Climate Change flood event. The primary issue is part of the development exposes users to an unacceptable level of risk, which is in conflict with the purpose of the code, and in particular E15.7.4/P1. It is our opinion that the management measure proposed (emergency management plan) is not appropriate for this situation. Even if a detailed flood emergency plan could be developed, there would be a problem enacting the plan as the time required to enact the plan would be far longer than the flood response time.

It is reasonable to assume a person could be located within the basement carpark at the onset of flooding. They could be exposed the highly hazardous flooding (as defined by Australian Rainfall & Runoff Flood Hazard Categorisation- Book 6 – Chapter 7) and hence we do not believe the development in its current form meets the requirements of the [planning scheme].

- 7.5 The application was considered by the Urban Design Advisory Panel twice in a pre-application capacity at its meetings of 28 April 2021 and 7 September 2021. The Panel's comments are provided in full as an attachment to this report, and have also been set out above in section 6 of this report where relevant. In the context of the provisions on which they were asked to comment, the Panel was broadly not supportive of the designs they saw prior to refinement and lodgement. The following additional comments of the Panel are worth noting:

A previous early stage of the development, essentially a massing version, came before the Panel for pre-application advice at its meeting on the 28 April 2021. The Panel was broadly not supportive of that proposal, especially with regards to the impact on adjacent properties and the pattern this development would establish in exceeding the current Scheme requirements.

The Panel acknowledge the precinct warrants a review of Scheme requirements and an increased density, especially for housing, is appropriate. Consistent with previous advice (April 2021), the Panel seek urban analysis on the appropriateness of exceeding the current Scheme requirements and the pattern this establishes for future development.

The Panel remain concerned by the precedent established by the pattern which would be as a result of 'first in, best dressed' rather than as a proposal addressing amenity issues influenced by a precinct plan. The Panel is concerned that the width of the lots in the area would generate a typology that, if developed to similar height and bulk, will progressively overshadow each neighbouring lot.

In response, this site forms part of the Central Hobart Precincts Plan, which, once implemented, will provide more clarity on what may be an acceptable development on this site. The exact timing of when the Precinct Plan will form part of the planning scheme is not known, and it is not expected to be in the short term.

- 7.6 In response to the officer recommendation for refusal, the Applicant provided further information in an attempt to address officer concerns. That material is at Attachment F. The material has been reviewed by Council officers and by the consultant engaged by the Council to assist with the assessment of stormwater and inundation issues for this application. The further information has not altered the assessment that this application is recommended for refusal.

- 7.7 The proposal is recommended for refusal.

.....

- 7.8 Discussions between Council officers and the applicant regarding possible application changes did not lead to any proposed new design. The further information provided by the applicant (Attachment G) included the following statement:

Whilst we welcome the suggestions of Council's subconsultant (Pitt & Sherry) these are not practical. Raising the car-park level to allow flood water to run underneath the building is both cost prohibitive and would result in a substantial reduction of dwellings or increased building height. Removal of the car park altogether is not desirable for tenants and would create an on-street car parking problem which the officers would be unlikely to support. The car stacker option again is not practical as these would not suit multiple tenants and cannot be located outside the flooded area.

The following issues which were raised in the Planning Committee meeting are addressed below and in Attachment G:

1. Whether the Council has any risk of liability if it approves this proposal in the current circumstances.
2. Whether there can be conditions imposed on the permit which would allow the applicant / owner to indemnify the Council for any risks associated with inundation.
3. Clarification of what is a habitable floor area under the scheme and whether advice from a building surveyor that the car park is not a habitable space (noting the applicant has 3 building surveyors who have given that advice) is relevant to the interpretation / application of the scheme.
4. Further information provided by the applicant (see Attachment G) & the response by Council officers, along with Pitt & Sherry.

7.9 **Council liability**

The Committee asked whether the Council could face any legal liability if it decided to approve this application in circumstances where the expert engaged by the Council to assess the application is not satisfied that the proposal meets the planning scheme requirements regarding stormwater and inundation. Potential liability may arise if the development is constructed and the mitigation measures which the applicant has proposed are not sufficient to avoid damage to property and / or safety of the occupants if there is a significant rain event.

For the reasons set out below, it is the opinion of the Manager Development Compliance that the answer is yes; at least, we are unable to say conclusively that the Council has no risk of being liable. Even if the Council is ultimately found to have no liability, there is a chance that the Council will have to defend legal proceedings which may be costly and time consuming for officers.

The answer to this question will depend on a number of issues, including:

1. the circumstances which gave rise to any loss or damage (including personal injury or death);
2. the basis of the claim (cause of action) against the Council, such as negligence or breach of statutory duty;
3. the extent to which any liability was shared with other entities, such as the owner of the property and anyone who was responsible for mitigation steps which were supposed to take place in a significant rain event; and
4. whether any statutory or common law protections will apply to limit or prevent any liability, such as the Council not having any liability *unless the act or omission was in the circumstances so unreasonable that no authority having the functions of the authority in question could properly consider the act or omission to be a reasonable exercise of its functions* (section 40 Civil Liability Act 2002).

This is a complex area of law, with many legal and factual variables, and it is not possible to say that the Council has no risk of liability by approving the application.

There could be an argument that in the context of two competing well formulated opinions of qualified experts as to the assessment of the particular performance criteria, and with the consideration of specific conditions to address the risk also informed by that advice, that the granting of a permit subject to those specific conditions would fall short of the threshold so as to establish the grant of the permit was negligent. However, even if the Council is successful with this argument and ultimately has no liability to anyone, it is not so clear-cut that a claim would never be made and that the Council would face legal fees defending its position.

The potential for facing liability is not a consideration which is relevant to the discretions which are called up by the planning scheme and this should not form part of an Elected Member's decision making process.

7.10 Conditions

The Manager Development Compliance has also considered whether a condition can be imposed to ensure that the owner or applicant takes on the full liability for the development, taking any risk of the Council having any liability. There are clear decisions which state that any such condition would not be legally enforceable.

The Tribunal has consistently struck down conditions requiring indemnities (following a line of NSW authorities). In *H Waldmann v Huon Valley Council* [2009] TASRMPAT 75, the Tribunal held that the indemnity condition was not imposed for a proper planning purpose, as “its sole purpose is to allow a planning authority to have complete protection or indemnity from the consequences of its actions.”

The Tribunal said:

17. The only conclusion in this case is that an indemnity in this form, or probably at all, is the antithesis of a condition which has a proper planning purposes and is, in fact, imposed for an ulterior purpose, namely to afford the Council protection from litigation arising from its decision to grant the permit at some stage in the future.

18. It is the exact opposite of a condition that has a proper planning purpose for its sole purpose is to allow a planning authority to have complete protection or indemnity from the consequences of its actions. Thus, the planning authority is, in effect, relieved from having to make a decision on any proper planning basis whatsoever. It is empowered to make a decision without having much or indeed any regard to any proper planning considerations.

As a model litigant, the Council must follow decisions which have been made by Tribunal previously. It would therefore not be appropriate to impose a condition which restricted the Council's liability.

7.11 **Habitable building**

There were questions raised about whether the car parking area was classified as a “habitable building”. If so, the planning scheme provisions apply to it. In the opinion of the Manager Development Compliance, the car parking area does fall within this definition in the planning scheme and that element of the proposal must satisfy the relevant provisions of the scheme.

The performance criterion at clause E15.7.4 P1 provides as follows:

*A new **habitable building** must have a floor level that satisfies all of the following:*

- (a) risk to users of the site, adjoining or nearby land is acceptable;*
- (b) risk to adjoining or nearby property or public infrastructure is acceptable;*
- (c) risk to buildings and other works arising from riverine flooding is adequately mitigated through siting, structural or design methods;*
- (d) need for future remediation works is minimised;*
- (e) provision of any developer contribution required pursuant to policy adopted by Council for riverine flooding protection works.*

Habitable building is defined in the *Hobart Interim Planning Scheme 2015 (HIPS)* as “means a [building](#) of Class 1 - 9 of the [Building](#) Code of Australia”.

Class 1-9 of the National Construction Code (NCC), which replaced the Building Code of Australia, are as follows:

CLASSES OF BUILDING		
Class 1	Class 1a	A single dwelling being a detached house, or one or more attached dwellings, each being a building, separated by a <i>fire-resisting</i> wall, including a row house, terrace house, town house or villa unit.
	Class 1b	A boarding house, guest house, hostel or the like with a total area of all floors not exceeding 300m ² , and where not more than 12 reside, and is not located above or below another dwelling or another Class of building other than a private garage.
Class 2	A building containing 2 or more sole-occupancy units each being a separate dwelling.	
Class 3	A residential building, other than a Class 1 or 2 building, which is a common place of long term or transient living for a number of unrelated persons. <i>Example: boarding-house, hostel, backpackers accomodation or residential part of a hotel, motel, school or detention centre.</i>	
Class 4	A dwelling in a building that is Class 5, 6, 7, 8 or 9 if it is the only dwelling in the building.	
Class 5	An office building used for professional or commercial purposes, excluding buildings of Class 6, 7, 8 or 9.	
Class 6	A shop or other building for the sale of goods by retail or the supply of services direct to the public. <i>Example: café, restaurant, kiosk, hairdressers, showroom or service station.</i>	
Class 7	Class 7a	A building which is a carpark.
	Class 7b	A building which is for storage or display of goods or produce for sale by wholesale.
Class 8	A laboratory, or a building in which a handicraft or process for the production, assembling, altering, repairing, packing, finishing, or cleaning of goods or produce is carried on for trade, sale or gain.	
Class 9	A building of a public nature -	
	Class 9a	A health care building, including those parts of the building set aside as a laboratory.
	Class 9b	An assembly building, including a trade workshop, laboratory or the like, in a primary or secondary school, but excluding any other parts of the building that are of another class.
	Class 9c	An aged care building.
Class 10	A non habitable building or structure -	
	Class 10a	A private garage, carport, shed or the like.
	Class 10b	A structure being a fence, mast, antenna, retaining or free standing wall, swimming pool or the like.

Under the NCC, a class 7 building is not a habitable building (although noting that the term “habitable building” is not defined in the NCC) but the definition in HIPS is clear and does not refer to definitions in NCC but instead just refers to the class of building.

In our view, a car park is a class 7 and is therefore captured by the HIPS definition and clause E15.7.4 P1 must be satisfied.

The applicant has indicated that three building surveyors have concluded that the car park should not be classified as “habitable. Building surveyors are experts in the NCC, not planning. Their only point of reference is the NCC and the definitions contained in it; not the planning scheme. It is not disputed that the car park would not be habitable in a *Building Act 2016* sense, but that is not the relevant test here – it is the test in HIPS which is the relevant test.

For further explanation of “habitable” terms:

“Habitable room” is defined in HIPS as:

means any room of a dwelling other than a bathroom, laundry, toilet, pantry, walk-in wardrobe, corridor, stair, hallway, lobby, clothes drying room and other space of a specialised nature occupied neither frequently nor for extended periods.

“Habitable room” is defined in NCC as:

Habitable room means a room used for normal domestic activities, and—
a. includes a bedroom, living room, lounge room, music room, television room, kitchen, dining room, sewing room, study, playroom, family room, home theatre and sunroom; but
b. excludes a bathroom, laundry, water closet, pantry, walk-in wardrobe, corridor, hallway, lobby, photographic darkroom, clothes-drying room, and other spaces of a specialised nature occupied neither frequently nor for extended periods

Despite these inconsistent terms and definitions, it is clear that the car park in this application is a “habitable building” and that part of the development must satisfy the requirements in HIPS, clause E15.7.4 P1.

7.12 Further proposal by applicant & response

Attachment G to this report is the further proposal provided by the applicant.

Pitt & Sherry have been engaged by the Waterways Unit to assist with the assessment of this proposal. The further proposal by the applicant was provided to Pitt & Sherry for their input. The response by Pitt & Sherry is summarised below.

7.13 Flood risk - Flood Emergency Management Plan

“We accept there is a risk with respect to flooding on this site, but these flooding risks appear on many sites within the Hobart City Council area”

Flood risk is a very serious issue and regardless if other locations within the municipality have similar risk does not justify allowance or continuing to develop in unsafe flood zones, particularly very high hazard areas.

H5 and H6 flood risk generally represent flood depth greater than 2.0 m depth and/or velocities greater than 2.0 m/s. recent flood mapping illustrates there are few sites with this high level of risk. Where this high level of flood risk is mostly contained within exiting streams/waterways.

The majority of known overland flow paths within the City in the urban areas are typically within H3 or less flood hazard.

This statement is incorrect would needs to be substantiated by factual information.

“In these cases, Council manages these risks to be to an ‘acceptable risk’ by undertaking flooding analysis/risk assessments and putting in place management plans to ensure the risk is minimised...”

The City does not have a definition of ‘acceptable’ flood risk and is guided by water professionals, best practice, standards and guidelines. This includes the *Australian Rainfall and Runoff Guidelines* which is evidence based produced by the Australian Government. These guidelines clearly stipulate that for:

H5 – Unsafe for vehicles and people. All buildings vulnerable to structural damage. Some less robust building types vulnerable to failure.

H6 – Unsafe for vehicles and people. All buildings types considered vulnerable to failure.

“We have investigated control mechanisms to ensure the flood risk is known early and the car park can be closed to avoid severe flood risks. The mechanism to ensure this is a Flood Emergency Management Plan which details the necessary warning systems/actions and is put as a condition on the Planning Permit.”

The City needs to be aware there are no enforcement mechanisms within the local or state government to ensure ongoing management of these systems.

“Whilst we are aware that Council have some pre-warning sensors within the Hobart Rivulet and the same could be done for the Newtown Rivulet, we believe the simpler approach is to rely on the existing Australian Bureau of Meteorology warning system. Based on the attached advice from BOM severe weather warnings are issued 24-36

hours before an event and thunderstorm warnings are issued with 1-3 hours notice (Attachment A). BOM have a subscriber service whereby text messages and/or data warnings can be sent to direct to specific mobiles or devices (Attachment B). As such, we propose as part of a Flood Hazard Management Plan occupiers of the building would receive a text to mobile warning of a severe weather warning (24-36h in advance of an event) and the car park would be automatically closed to vehicles 30 minutes after a thunderstorm warning (1-3h in advance of an event).

Occupants would also receive the flood warning text to their phone and would be briefed that in such an event the car park will close in 30 minutes. This may be able to be done via specific text message to occupants also (i.e. the car park will be closing in 30min) or other internal building alarm/messaging. The car park would be opened by the building manager when the thunderstorm warning was lifted by the BOM. Again building occupants would be advised of this.

Our previous management measures would also remain in the form of:

- *An on-site building manager (responsible for occupier inductions/communication, visual sweeps of the car park during a thunderstorm warning/car park closure and opening the car park after the risk has passed);*
- *A audio and visual (light) warning within the car park during a thunderstorm warning; and*
- *Physical closure of the car park to entering and exiting vehicles via a cable across the entry (that allows pedestrian egress up the entry ramp) 30 minutes after a BOM thunderstorm warning."*

There is no disputing that robust early warning system would be effective. We do note there are risks associated with the practicality of implementing such a system such as:

- This is not a common approach for managing flood risk for at a development level. Flood warning systems are generally implemented by government authorities and maintained by them. Therefore this is untested, particularly in Hobart.
- Ongoing management for the life of the building given there is no regulatory frameworks or mechanisms to ensure compliance.
- Complacency due to false alarms. Utilising rainfall warning system with Bureau of Meteorology will likely trigger false alarms as these systems are no capable of predicting exact location of storms and usually warning cover wide range of areas due to this uncertainty. Regular lockdowns could leave to complacency.

“We believe a condition similar to that used on the Bethlehem House project in Harrington Street would meet Council's requirements on this issue:”

A copy of planning condition SW 11 from the Bethlehem house was provided.

Note there was no condition requiring a flood emergency management plan for Bethlehem House (225 Harrington Street).

Comparison of other development cannot be used in the development assessment as it is unrelated, however it is important to note the differences give it has been mentioned.

Bethlehem House development has a different level of risk. The site presented hazard levels less than that of H3 “Unsafe for vehicles, children and elderly”. The site was able to provide a safe overland flow path. This minimises the likelihood of the carpark being inundated and flood management plan would not be the sole mechanism for managing the risk.

Given the design, lower risks and no mechanism to enforce a flood emergency management there was no need to condition or require a flood emergency management plan in the circumstances of the redevelopment of that site.

Flood afflux map

A flood afflux map shows the change of depth of inundation between the existing conditions and the developed site. The flood afflux map which has been provided is considered to be unsatisfactory. Comparison has been made with previous flood maps provided and changes are shown. However it is unclear the extent of the changes. Given the potential for development on this site to have inundation impacts on surrounding property, is not equitable for a development to disadvantage other properties without considering the flood afflux.

GHD Central Hobart Precinct Stormwater Modelling

GHD has been engaged by the Council to provide flood mapping as part of the Central Hobart Precinct Structure Plan. It was hoped that this work would be sufficiently advanced so that the applicant and the Council could understand any changes that could be made to the public stormwater system around this particular site, to improve the flood risk. Unfortunately, this body of work is not yet at the point where this information can be provided and is not expected to be available for at least a further 6 months.

8. Conclusion

- 8.1 The proposed Partial Demolition, Alterations, New Building for 31 Multiple Dwellings, Food Services, Business and Professional Services, General Retail and Hire, Subdivision (Lot Consolidation), and Associated Works in the Road Reserve including Tree Removal, at 169-173, 175, 177, and 179 Campbell Street, and the Adjacent Road Reservation does not satisfy the relevant provisions of the *Hobart Interim Planning Scheme 2015*, and as such is recommended for refusal.

9. Recommendations

That: Pursuant to the *Hobart Interim Planning Scheme 2015*, the Council refuse the application for Partial Demolition, Alterations, New Building for 31 Multiple Dwellings, Food Services, Business and Professional Services, General Retail and Hire, Subdivision (Lot Consolidation), and Associated Works in the Road Reserve including Tree Removal, at 169-173, 175, 177, and 179 Campbell Street, and the Adjacent Road Reservation for the following reasons:

- 1 The proposal does not meet the acceptable solution or the performance criterion with respect to clause 15.4.1 A1 and P1 of the *Hobart Interim Planning Scheme 2015* because the proposed building height is not compatible with the scale of nearby buildings, and fails to provide stepping between itself and adjoining buildings.
- 2 The proposal does not meet the acceptable solution and there is no performance criterion with respect to clause E7.7.1 A4 and P4 of the *Hobart Interim Planning Scheme 2015* because it includes a major stormwater drainage system that has not been designed to accommodate a storm with an ARI of 100 years.
- 3 The proposal does not meet the acceptable solution or the performance criterion with respect to clause E15.7.4 A1 and P1 of the *Hobart Interim Planning Scheme 2015* because the car park floor level is not 300mm above the 1% AEP flood extent, and its proposed floor level does not satisfy: (a) that risk to users of the site, adjoining or nearby land is acceptable; (b) that risk to adjoining or nearby property or public infrastructure is acceptable; (c) that risk to buildings and other works arising from riverine flooding is adequately mitigated through siting, structural or design methods; and (d) that the need for future remediation works is minimised.
- 4 The proposal does not meet the acceptable solution or the performance criterion with respect to clause E15.7.5 A1 and P1 of the *Hobart Interim Planning Scheme 2015* because it includes a new wall that is greater than 5m in length and it will not satisfy the following: (a) that there is no adverse affect on flood flow over other property through displacement of overland flows; and (b) that the rate of stormwater discharge from the property will not increase.



(Helen Ayers)

Development Appraisal Planner

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



(Ben Ikin)

Senior Statutory Planner

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

Date of Report: 8 September 2022

Attachment(s):

Attachment B - CPC Agenda Documents

Attachment C - Supporting Documents

Attachment D - Stormwater and Flooding Consultant Engineer's Report

Attachment E - Urban Design Advisory Panel Report (28 April 2021 and 7 September 2021)

Attachment F - Further information provided by Applicant in response to recommendation for refusal

Attachment G - Further information provided by the Applicant subsequent to the Planning Committee meeting on 14 December 2022

BGAS 175-179 Campbell Street Multi-Residential Development

ARCHITECT

ARCHITECTED BY
PETER WALKER

ACCOMMODATION BY
COWI

ARCHITECT ADDRESS
PROJECT NAME
175-179 Campbell Street
Multi-Residential Development

PROJECT INFORMATION

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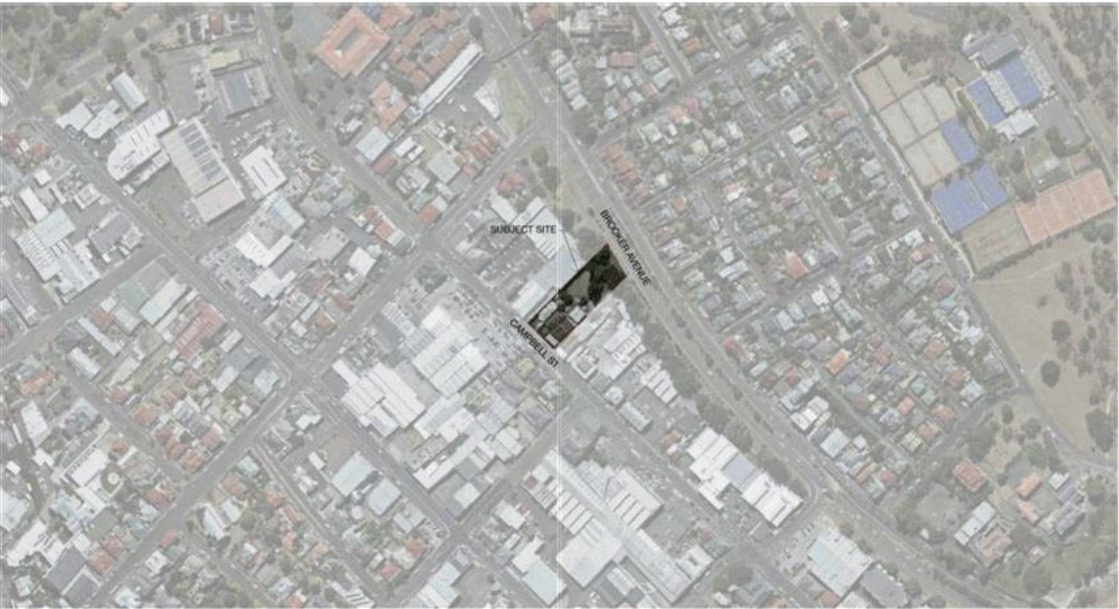
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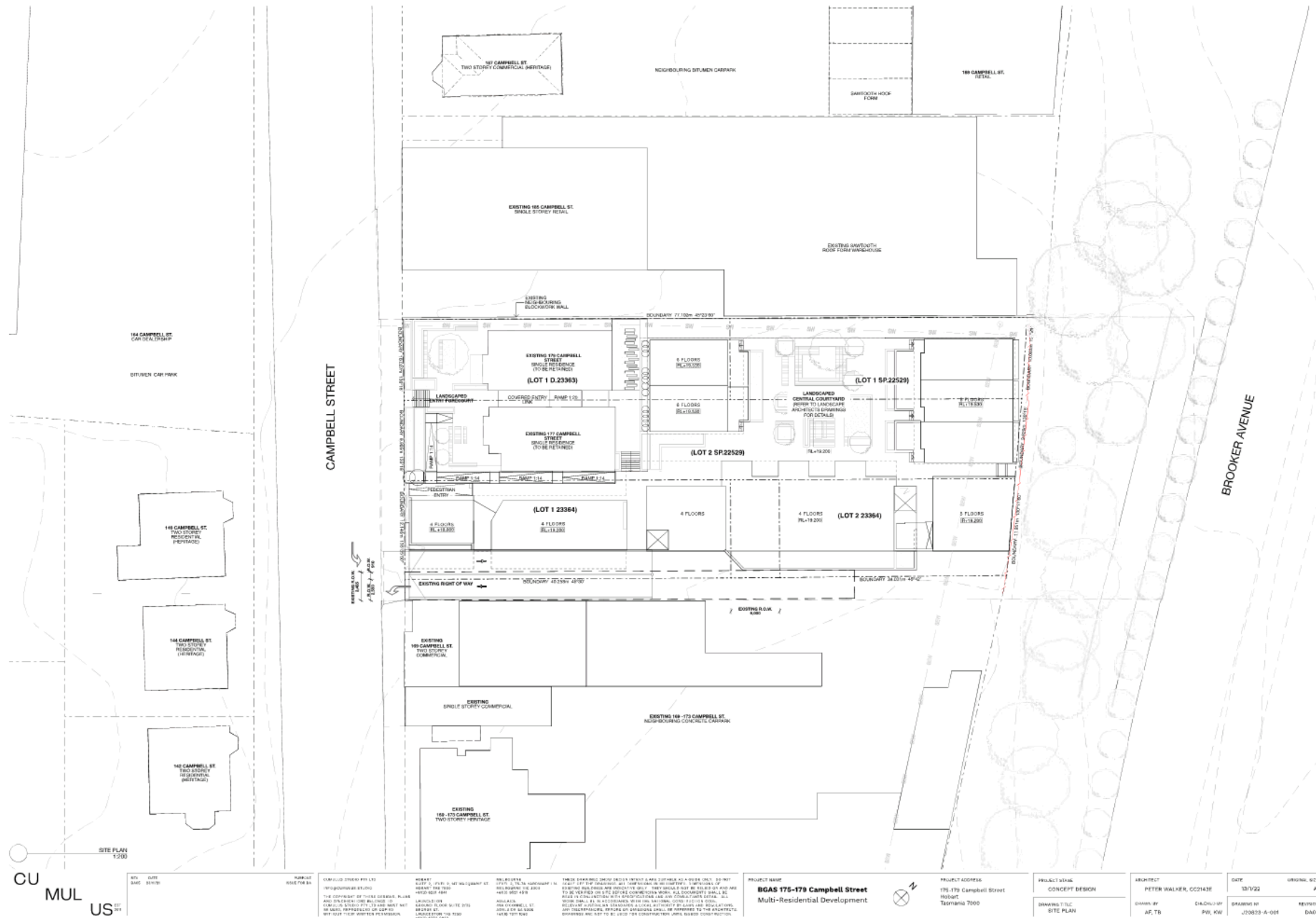
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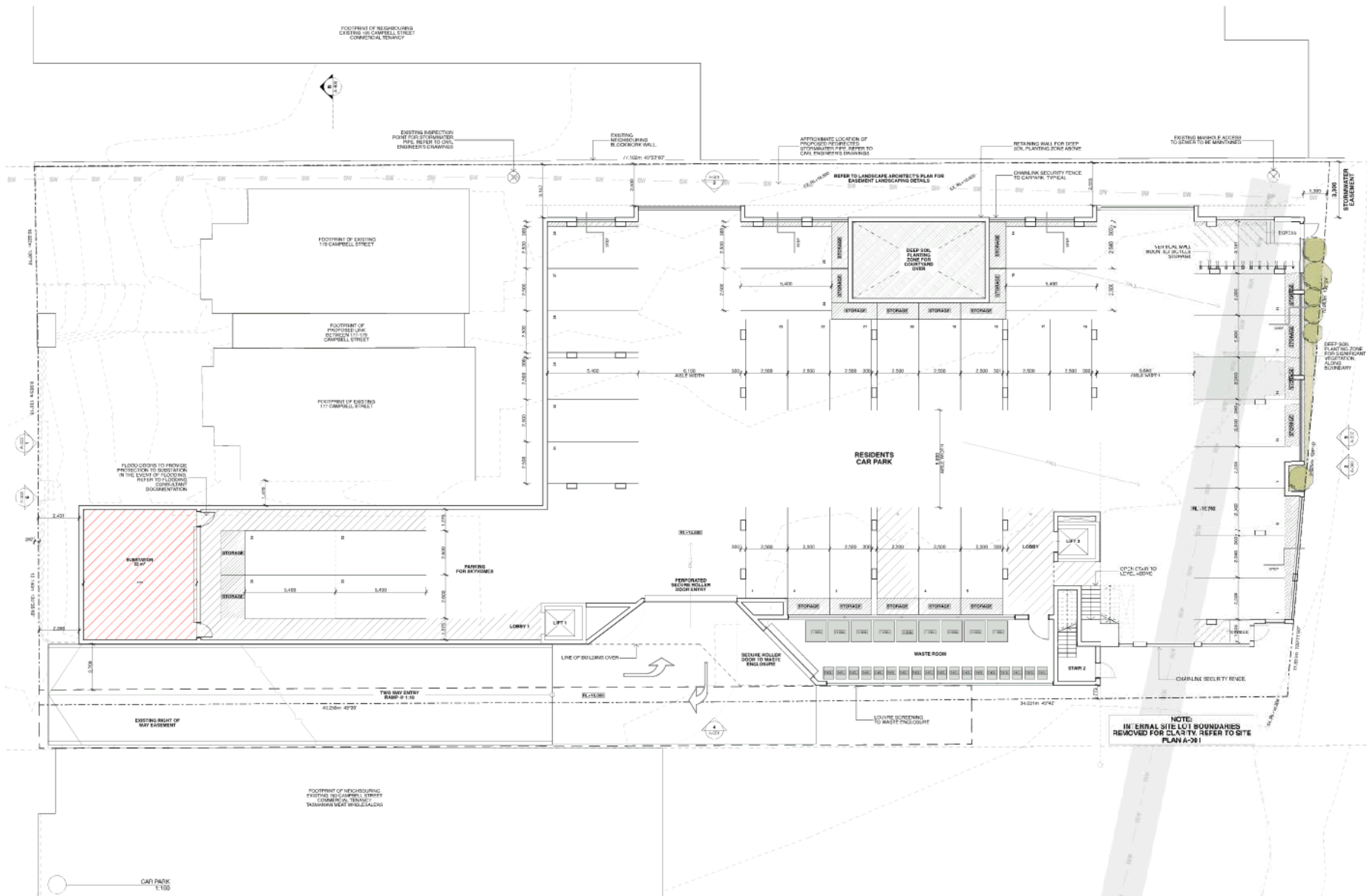
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	003	35.11	LEVEL 1 of 2
	004	35.11	LEVEL 1 of 2
	005	35.11	LEVEL 1 of 2
	006	35.11	LEVEL 1 of 2
	007	35.11	LEVEL 1 of 2
	008	35.11	LEVEL 1 of 2
	009	35.11	LEVEL 1 of 2
LEVEL 01			
	101	37.37	
	102	37.37	
	103	37.37	
	104	37.37	
	105	37.37	
	106	37.37	
	107	37.37	
	108	37.37	
	109	37.37	
	110	37.37	
	111	37.37	LEVEL 2 of 2
	112	37.37	LEVEL 2 of 2
	113	37.37	LEVEL 2 of 2
	114	37.37	LEVEL 2 of 2
	115	37.37	LEVEL 2 of 2
	116	37.37	LEVEL 2 of 2
	117	37.37	LEVEL 2 of 2
	118	37.37	LEVEL 2 of 2
	119	37.37	LEVEL 2 of 2
	120	37.37	LEVEL 2 of 2
LEVEL 02			
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	203	37.37	LEVEL 1 of 2
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	219	37.37	LEVEL 1 of 2
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	418	37.37	LEVEL 3 of 2
	419	37.37	LEVEL 3 of 2
	420	37.37	LEVEL 3 of 2

APARTMENT SUMMARY	
APARTMENT TYPE	QTY
1 BED	1
2 BED	2
3 BED	3
4 BED	4
5 BED	5
TOTAL APARTMENTS	15
CARPARKING	
RESIDENTIAL CARPARKS	15
TOTAL CARPARKS	15



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DATE: 13/1/22
BY: PETER WALKER, CC2143E

PROJECT NAME: BGAS 175-179 Campbell Street Multi-Residential Development

PROJECT ADDRESS: 175-179 Campbell Street, Hobart, Tasmania 7500

PROJECT IDEAS: CONCEPT DESIGN

ARCHITECT: PETER WALKER, CC2143E

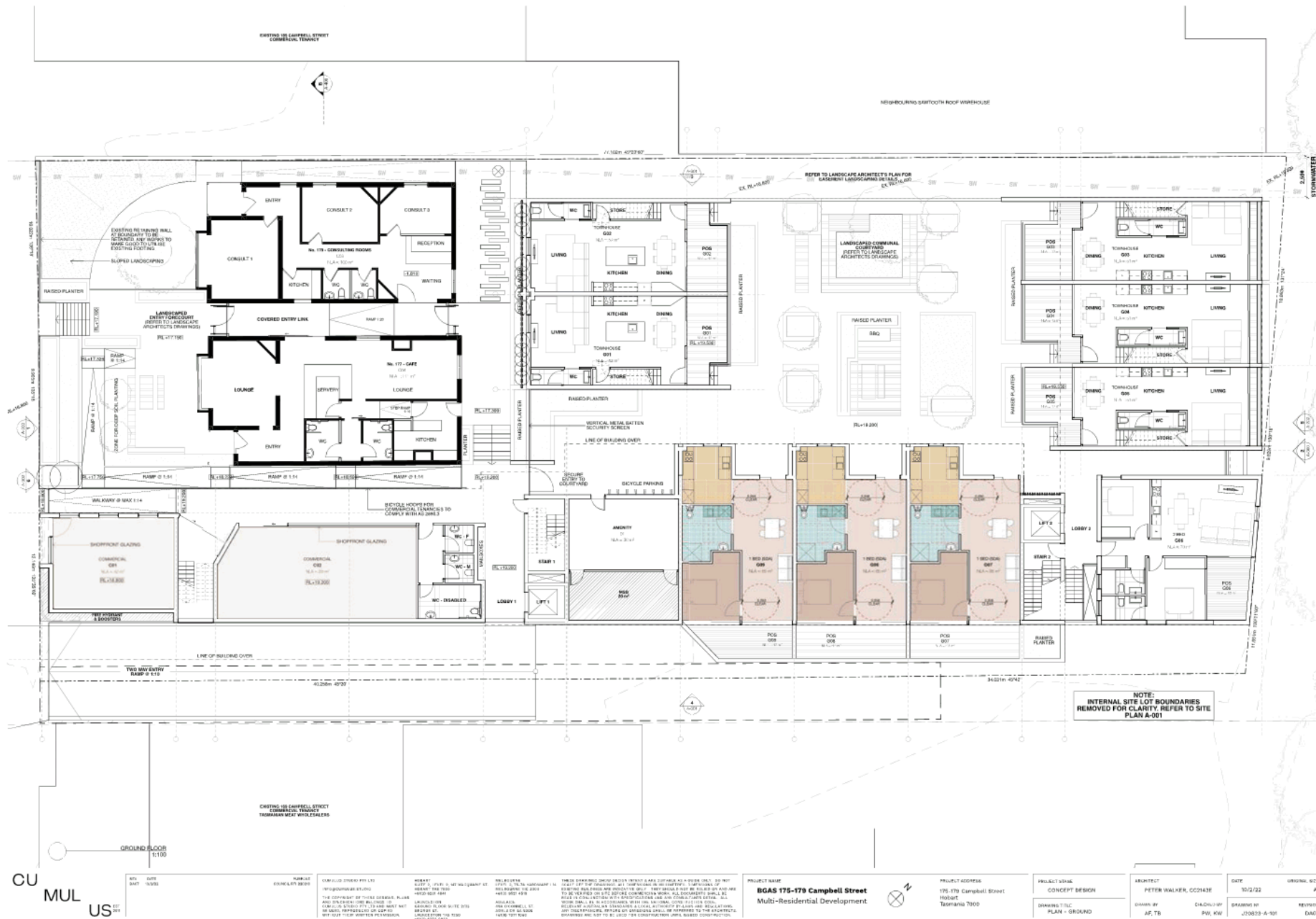
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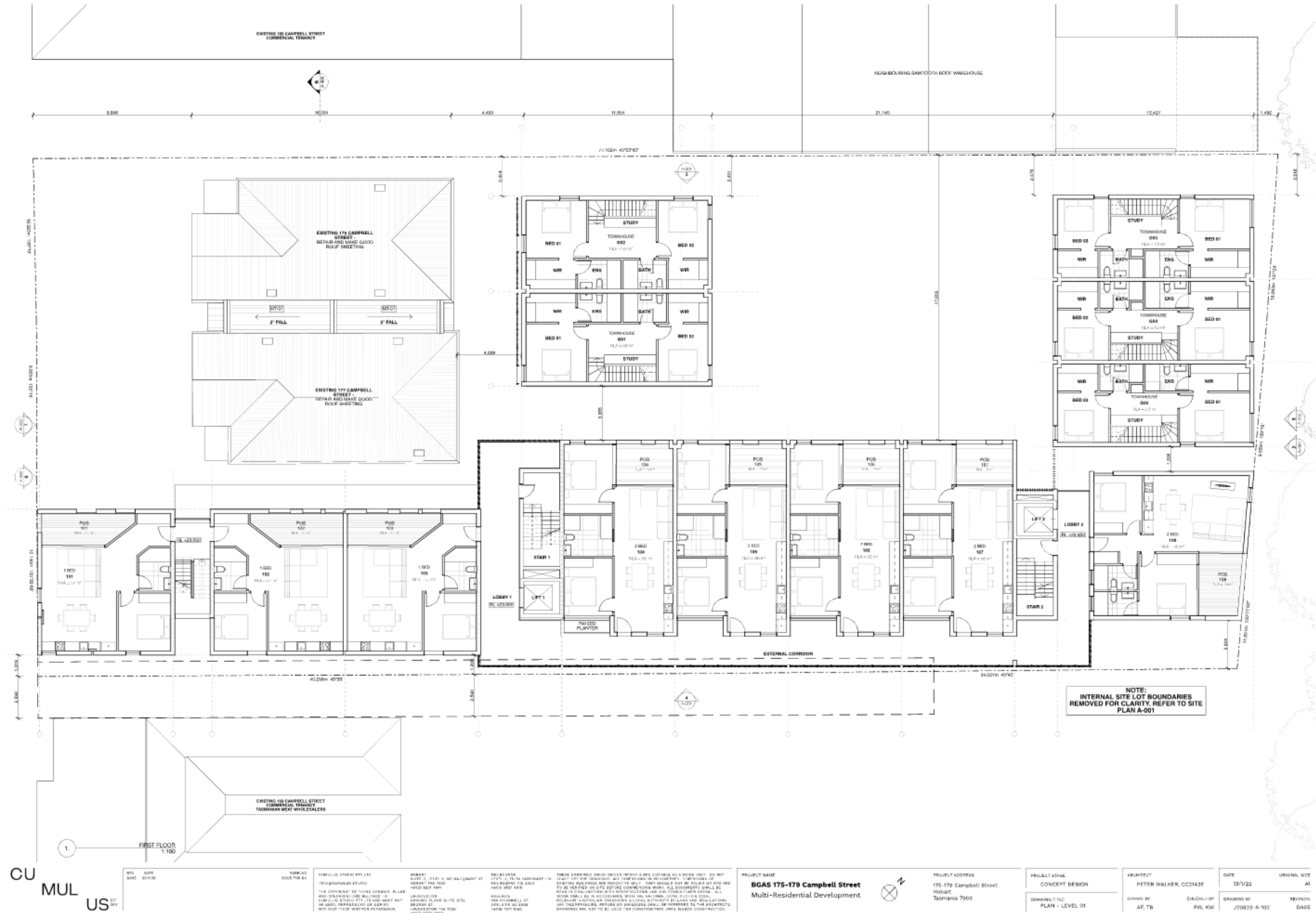
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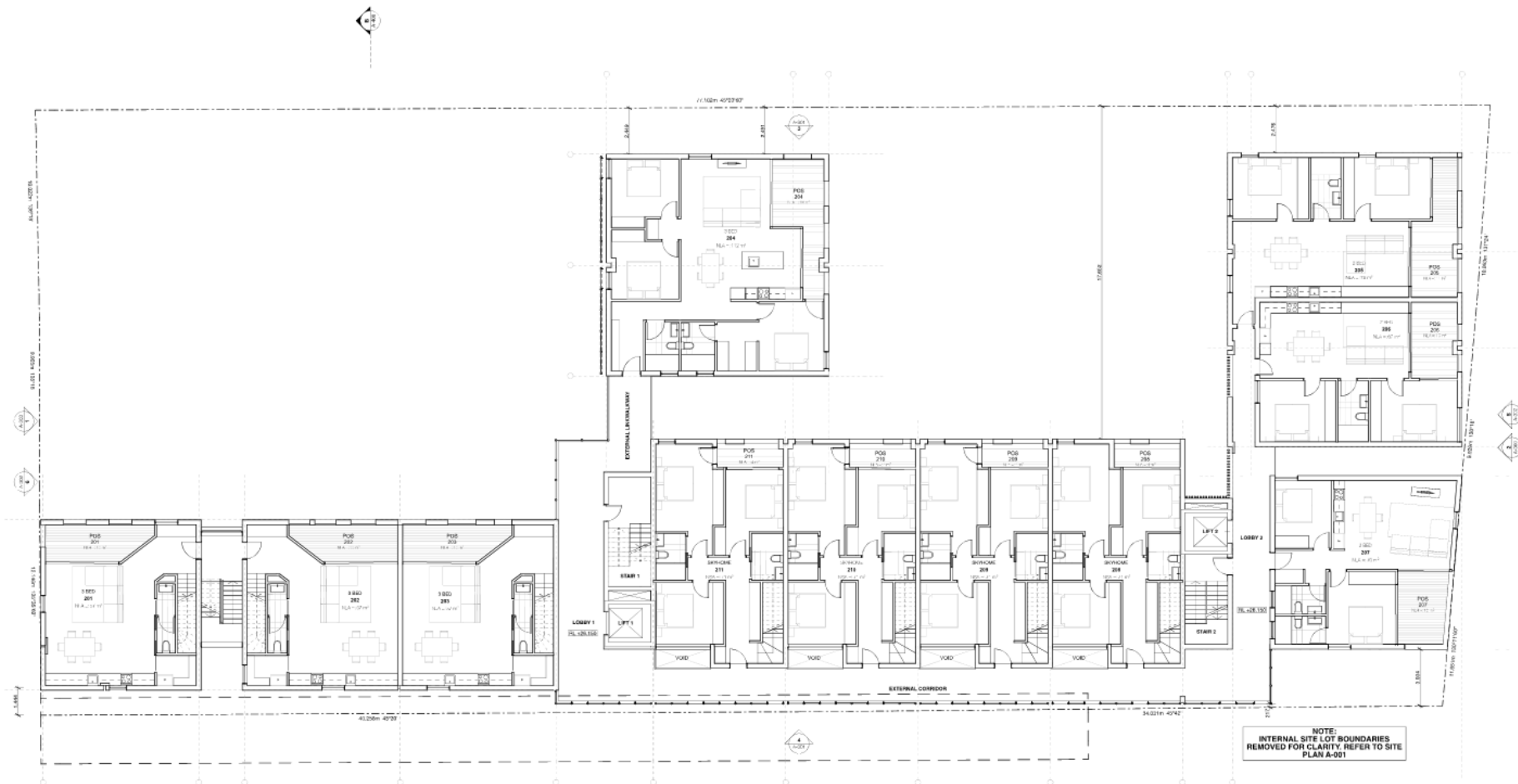
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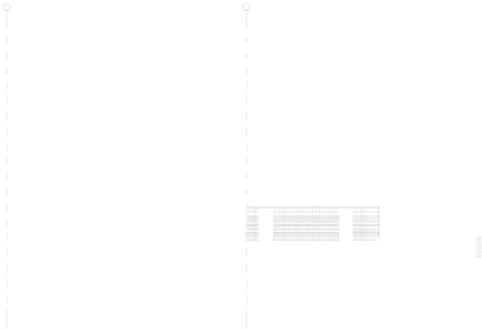
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DATE	01/19	STATUS	CONCEPT DESIGN	PROJECT NAME	PROJECT ADDRESS	PROJECT PHASE	CONCEPT DESIGN	ARCHITECT	PETER WALKER, CC2436	DATE	10/1/22	ORIGINAL SIZE	A1
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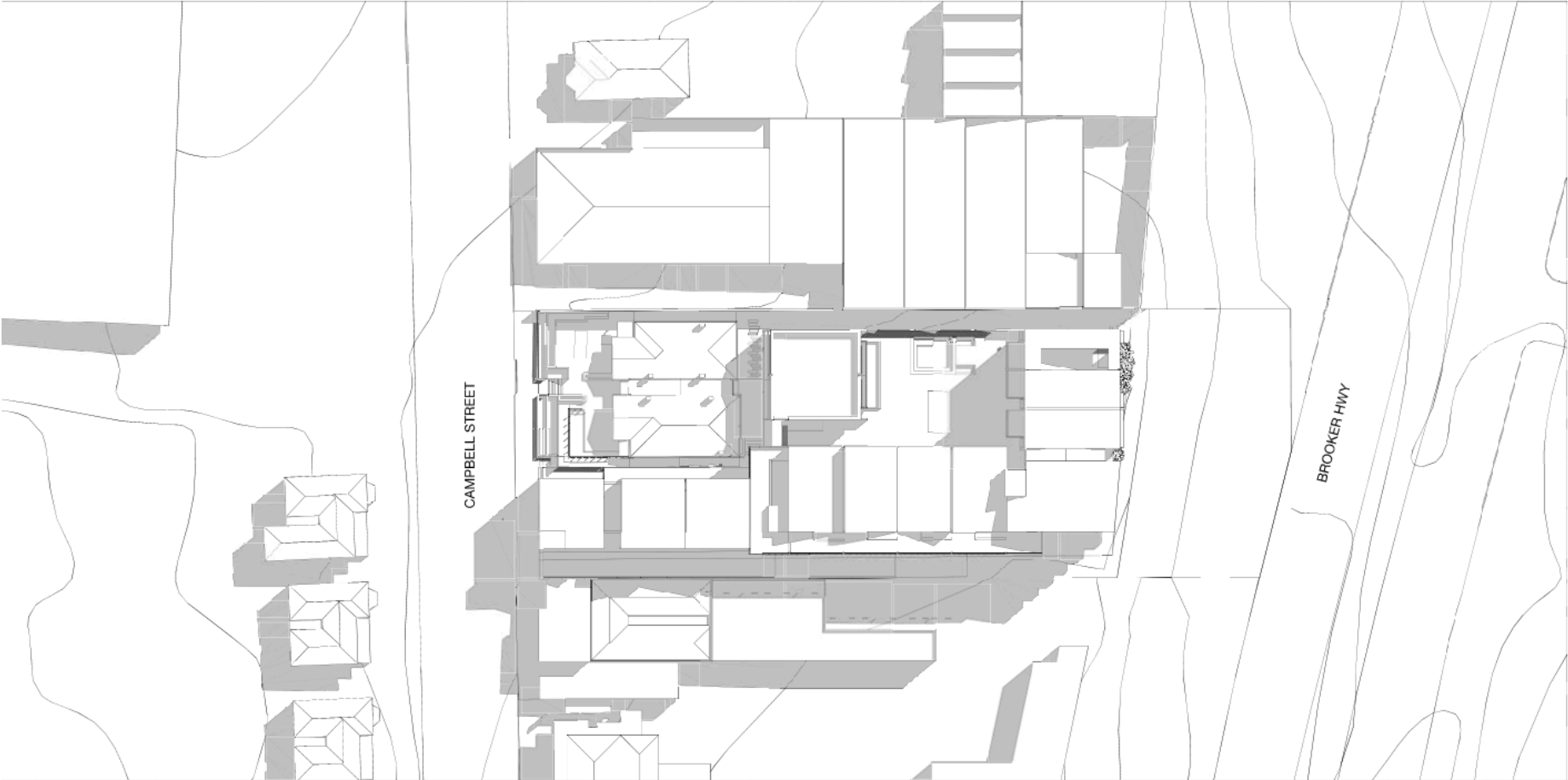








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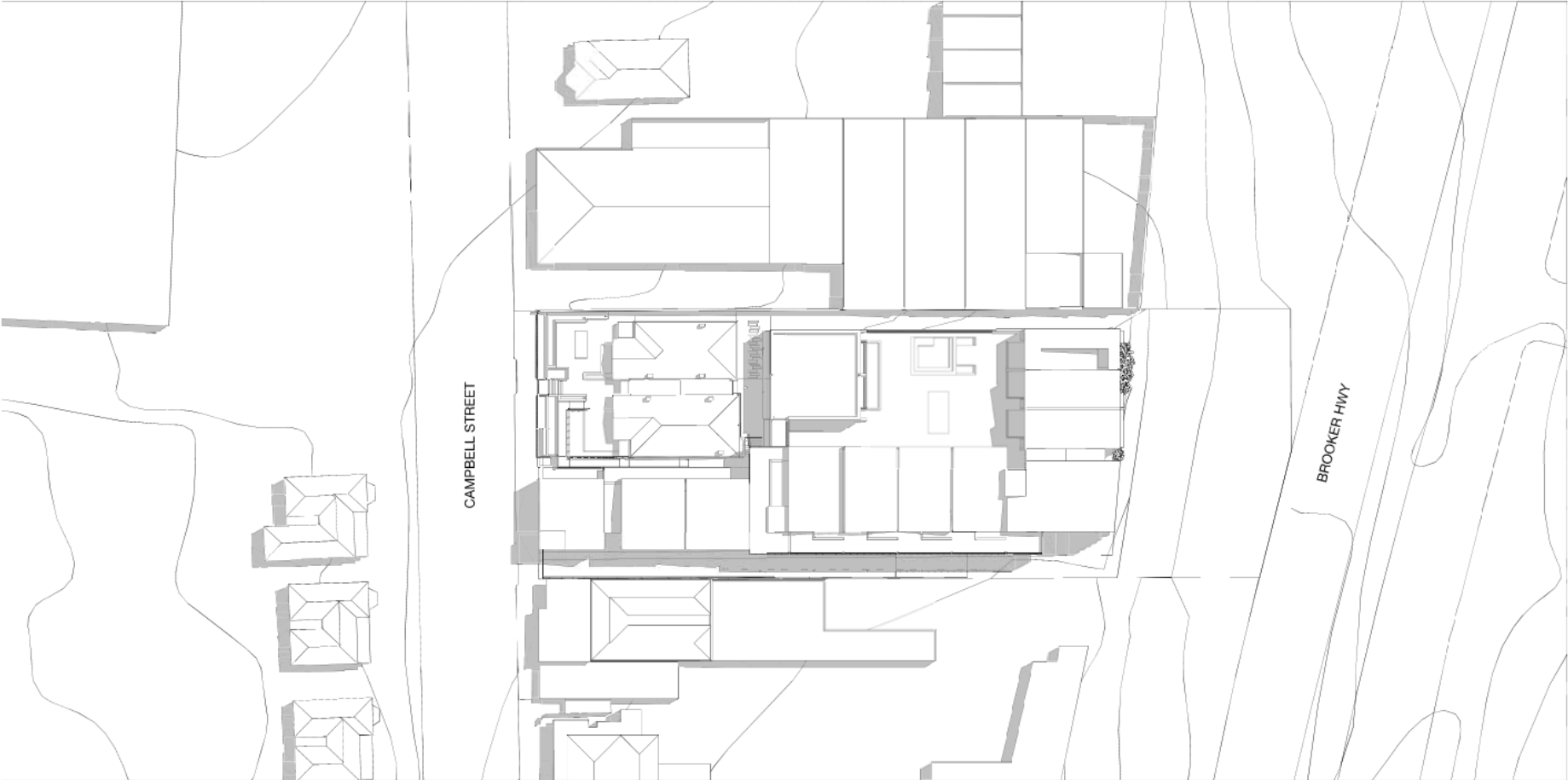
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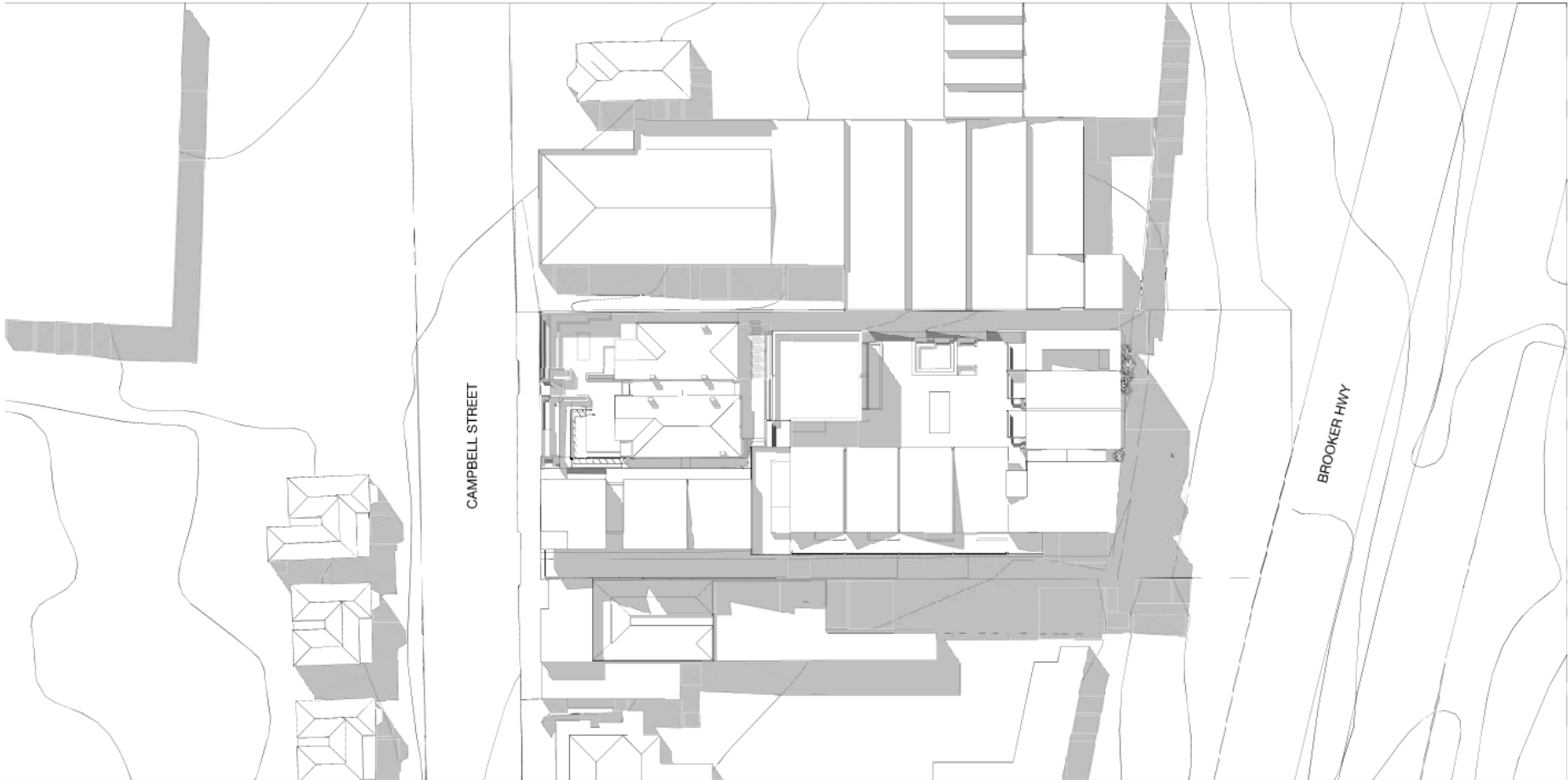
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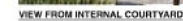
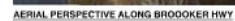
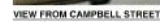
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REV. DATE	REVISIONS	REMARKS	CORRELATION SHEET	REMARKS	PROJECT NAME	PROJECT ADDRESS	PROJECT NAME	ARCHITECT	DATE	ORIGINAL SIZE
DATE 20/1/23	REVISIONS	REVISIONS	THE CONCEPT OF THIS DESIGN, PLAN AND ELEVATION, INCLUDING THE CONCEPT DESIGN, IS THE PROPERTY OF THE ARCHITECT. IT IS NOT TO BE REPRODUCED OR USED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF THE ARCHITECT.	THIS DRAWING IS THE PROPERTY OF THE ARCHITECT. IT IS NOT TO BE REPRODUCED OR USED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF THE ARCHITECT.	BGAS 175-179 Campbell Street	175-179 Campbell Street	CONCEPT DESIGN	PETER WALKER, CC2143E	13/1/22	A1
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PLANNING REPORT

BUILDING GROUP APPRENTICESHIP SCHEME LTD

175, 177 & 179 Campbell Street



January 2022

**Johnstone McGee & Gandy Pty Ltd**

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- Estimates have been prepared on the basis of information to hand at the time.
- Estimates are order of cost. They are not quoting, nor based on quotes and are not upper limit of cost.
- Estimates are not based on measured quantities or a defined scope of works.
- Unless stated otherwise estimates are exclusive of GST, engineering fees, market escalation, associated builder's works, builder's margins, design contingency, project contingency.
- As project scope becomes better defined it is strongly recommended that estimates are updated.

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Executive Summary

SolutionsWon Group on behalf of The Building Group Apprenticeship Scheme Ltd seeks to develop land located at 175, 177 and 179 Campbell Street.

The proposed development is for:

- Demolition of the following:
 - the commercial building and concrete block office building to the rear at 175 Campbell Street;
 - the 'lean-to' additions, the timber shed and patio to the rear of the residential dwelling at 179 Campbell Street;
 - the existing front ramp and landscaping in the front of 177 and 179 Campbell Street;
- Adhesion of four lots to create a single development site area of 2420m²;
- Refurbishment of the existing residential dwellings at 177 and 179 Campbell Street;
- Development of a 6-storey mixed-use building with basement car parking below the natural ground level:
 - A basement level containing:
 - 35 car parking spaces (including two tandem spaces);
 - Ground floor area centred around a pedestrian circulation spine (including a central courtyard) off which access is provided to:
 - 4 x commercial buildings, three of which front onto Campbell Street (two existing heritage buildings);
 - 1 x amenity room;
 - 1 x two-bedroom apartment
 - 5 x two-storey townhouses;
 - 3 x one-bedroom apartments;
 - The Second floor contains:
 - 3 x one-bedroom apartments;
 - 5 x two-bedroom apartments;
 - The third floor contains:
 - 3 x two-bedroom apartments
 - 4 x three bedroom sky home apartments;
 - 4 x three bedroom apartments;
 - The fourth floor contains:
 - 3 x three bedroom apartments;
 - 1 x communal rooftop terrace
 - The fifth floor contains:
 - the second storey for sky home apartments and three-bedroom apartments.

The total number of dwellings is 31.

The development is located on land within the Urban Mixed Use Zone and the proposed development generates the following discretions under the *Hobart Interim Planning Scheme 2015* (the Scheme):

- 15.4 Development Standards for Buildings and Works
 - 15.4.1 Building Height P1
 - 15.4.5 Landscaping P1
- E2.0 Potentially Contaminated Land Code
 - E2.6.2 Excavation P1
- E5.0 Road and Railway Assets Code
 - E5.5.1 Existing road accesses and junctions P3
 - E5.6.4 Sight distance at accesses, junctions and level crossings P1
- E6.0 Parking and Access Code
 - E6.6.1 Number of Car Parking Spaces P1
- E9.0 Attenuation Code

- E9.7.1 Development for Use with Potential to Cause Environmental Harm P1
- **E13.0 Historic Heritage Code**
 - E13.7.1 Demolition P1
 - E13.7.2 Building and Work other than Demolition P1
 - E13.7.2 Building and Work other than Demolition P2
 - E13.7.2 Building and Work other than Demolition P3
 - E13.7.2 Building and Work other than Demolition P4
 - E13.7.2 Building and Work other than Demolition P6
 - E13.10.1 Building, Works and Demolition P1

The proposal has been assessed against all relevant Scheme criteria and is found to either comply with Acceptable Solutions or satisfy relevant Performance Criteria. The application is considered to be acceptable with respect to the Scheme requirements and therefore ought to be supported by the Planning Authority.

1. Introduction

JMG Engineers and Planners have been engaged by SolutionsWon Group to prepare a planning permit application for a mixed-use development at 175, 177 and 179 Campbell Street, Hobart. The proposal involves the demolition of some existing buildings, changing the use of remaining existing buildings and new mix-use multiple dwelling development.

This report serves to provide an assessment of the proposed development and works against the provisions of the *Hobart Interim Planning Scheme 2015* ('the Scheme').

A number of expert reports are provided in support of the planning permit application including a Traffic Impact Assessment, Concept Services Report, Heritage Assessment, Environmental Site Assessment, Flood Modelling Report and an Architectural Design Statement. These reports are provided in the Appendices to this planning report and are referenced as appropriate throughout the document.

2. Site Location & Context

The subject site is located just under 450m from north of the Hobart Central Business zone. The landowner is the Tasmanian Building Group Apprenticeship Scheme Ltd. The proposed development will require works on multiple titles (listed in Table 1) with copies provided in Appendix A. Copies of the landowner notification letters and Council consent as required by section 52 of the *Land Use Planning and Approvals Act 1993* are provided in Appendix D.

Table 1 - Summary of existing titles involved in the proposed development.

Title Reference	Street Number	Comments re existing/proposed	Owner Advice/Consent
CT 23364/1	175 Campbell Street (front lot)	Containing an existing commercial building and shed to the rear, with an area of approximately 483m ² . All structures to be demolished and a new mixed-use building to be developed.	Landowner notification (section 52(1) <i>Land Use Planning and Approvals Act 1993</i>)
CT 23364/2	175 Campbell Street (rear lot)	Containing an existing car parking and vehicle circulation space, with an area of approximately 423m ² . A new mixed-use building is to be developed over this area of the site.	Landowner notification (section 52(1) <i>Land Use Planning and Approvals Act 1993</i>)
CT 22529/3	177 Campbell Street	Containing an existing building with car parking at the rear, used for residential purposes, with an area of approximately 1116m ² . The existing residential building is to be retained, the front courtyard space to be redeveloped, and the rear area of the Title developed with the new mixed-use building.	Landowner notification (section 52(1) <i>Land Use Planning and Approvals Act 1993</i>)
CT 23363/1	179 Campbell Street	Containing an existing building and outbuildings, used for residential purposes, with an area of approximately 413m ² . The existing residential building is to be retained, the front courtyard space to be redeveloped, and demolition of some structures at the rear of the Title.	Landowner notification (section 52(1) <i>Land Use Planning and Approvals Act 1993</i>)
CT 140732/1	169-173 Campbell Street	Containing Tasmanian Meat Wholesalers - utilising access right of way.	Landowner notification (section 52(1) <i>Land Use Planning and Approvals Act 1993</i>)
CT 121292/1	181-189 Campbell Street	'Woolworths' - the potential underpinning of an existing warehouse wall.	Landowner notification (section 52(1) <i>Land Use Planning and Approvals Act 1993</i>)

The (four) titles [CT 23364/1, CT 23364/2, CT 22529/3, and CT 23363/1] will need to be adhered to and rights of way widths adjusted to ensure CT 140732/1 (Tasmanian Meat Wholesalers) have full access over the new access ramp.

Existing buildings within 100m of the development site are generally single or double-storey displaying a mix of styles including:

- Commercial buildings adjoining the development site to the north-west and south-east, as well as on the southern side of Campbell Street; and
- Residential style buildings to the north-west of the development site and on the southern side of Campbell Street.

There are 3 Metro Bus stops within a 200m radius of the site, associated with a number of services to the northern suburbs as well as southern and eastern suburbs via the Elizabeth Street bus interchange facilities.

3. Proposed Use & Development

The proposed development is for:

- Demolition of the following:
 - the commercial building and concrete block office building to the rear at 175 Campbell Street;
 - the 'lean-to' additions, the timber shed and patio to the rear of the residential dwelling at 179 Campbell Street;
 - the existing crossovers, driveways and landscaping in the front of 177 and 179 Campbell Street;
- Adhesion of four lots to create a single development site area of 2420m²;
- Refurbishment of the existing residential dwellings at 177 and 179 Campbell Street;
- Development of a 6-storey mixed-use building with basement car parking below the natural ground level:
 - A basement level containing:
 - 35 car parking spaces;
 - Ground floor area centred around a pedestrian circulation spine (including a central courtyard) off which access is provided to:
 - 4 x commercial buildings, three buildings fronting Campbell Street comprising two existing heritage buildings;
 - 1 x amenity room;
 - 1 x two-bedroom apartment
 - 5 x two-storey townhouses;
 - 3 x one-bedroom apartments;
 - The Second floor contains:
 - 3 x one-bedroom apartments;
 - 5 x two-bedroom apartments;
 - The third floor contains:
 - 3 x two-bedroom apartments
 - 4 x three bedroom sky home apartments;
 - 4 x three bedroom apartments;
 - The fourth floor contains:
 - 3 x three bedroom apartments;
 - 1 x communal rooftop terrace
 - The fifth floor contains:
 - the second storey for sky home apartments and three-bedroom apartments.

The basement contains 35 car parking spaces with 22 storage areas and a 58m² waste room. The vehicle access will partially use the subject site at 175 Campbell Street and the right of way from 169-173 Campbell Street (Tasmanian Meat Wholesalers).

There are four commercial tenancies on the ground floor. An amenity room, a master switchboard room and fire three bathrooms (one for disability) are also provided with the development.

Details plans of the proposed development (Proposal Plan) are shown in Appendix C and details of the demolition are outlined in a Demolition Plan in Appendix E.

4. Development Assessment

The proposed development comprises the title adhesion, demolition and change of use, the relating special provisions need to be assessed as follow.

4.1 Special Provisions

9.3 Adjustment of a Boundary (Title Adhesion)

The proposed development will involve merging four lots (CT 23364/1, CT 23364/2, CT 22529/3 and CT 23363/1) to create one new lot of 2420m². This aspect of the proposed development has been considered against criteria for Adjustment of a Boundary (Clause 9.3.1) under the Scheme and an assessment is as follows:

9.3 Adjustment of a Boundary	Compliance of Proposed Development
(a) No additional lots are created;	Complies - the proposed boundary adjustment will convert 4 existing lots into 1 lot.
(b) There is only a minor change to the relative size, shape and orientation of the existing lots;	Not compliant - there will be more than a minor change to the existing 4 lots that comprise the development site.
(c) No setback from an existing building will be reduced below the applicable minimum setback requirement;	Complies - the setback of the proposed building parallel to the frontage and is not more than 1m as 15.4.2 Setback requested.
(d) No frontage is reduced below the applicable minimum frontage requirement; and	Complies - the frontage of the proposed building is not reduced /there is no minimum frontage required for residential within the Urban Mixed Use Zone.
(e) No lot boundary that aligns with a zone boundary will be changed.	Complies - it will not change the boundary which aligns with a zone boundary

As the proposed development does not satisfy clause 9.3.1 (b) and is not considered a subdivision, it will be treated as an adhesion under Section 110 of the *Local Government (Building and Miscellaneous Provisions) Act 1993*, which is thought to be satisfactorily addressed through permit conditions prescribing an adhesion order.

9.4 Demolition

The proposed development consists of the demolition of buildings.

The two-storey brick office building and concrete block office building at 175 Campbell Street (CT 23364/1) is to be demolished. The timber sheds and patio to the rear of the residential dwelling at 179 Campbell Street (CT 23363/1) are also to be demolished. The internal walls and doors of the existing two heritage buildings at 177 and 179 Campbell Street (22529/3)(CT 23363/1) will be demolished. This is as shown in the demolition plan (Appendix E).

The proposed demolition forms part of a permissible development application within the Urban Mixed Use Zone and it is considered that Clause 9.4 *Demolition* has been satisfied.

4.2 Zones

The subject site is zoned 'Urban Mixed Use', the north and south of the subject site with the same zone. The land immediately to the southwest and northeast is zoned 'Utilities' (containing

the Campbell Street and Brooker Avenue Road Reserves). The land on the southern side of the Campbell Street Road Reserve is zoned 'Commercial' (18m from the subject site), and land on the northeast side of the Brooker Avenue Road Reserve is zoned 'Inner Residential' (50m from the subject site). The zoning of the Subject Site is shown below in Figure 1.



Figure 1 - Zoning of the Subject Site and surrounding area (source: List Map).

The Subject Site is also subject to the Royal Hobart Hospital Helipad Airspace Specific Area Plan overlay as shown in Figure 2.

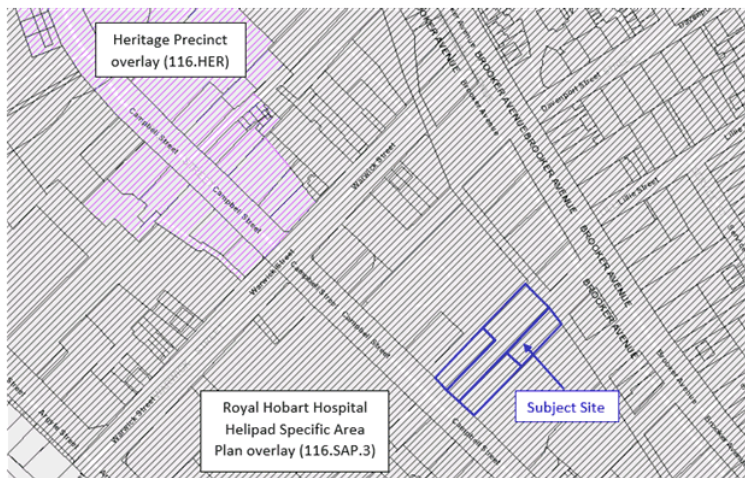


Figure 2 - 'Royal Hobart Helipad Airspace Specific Area Plan' and 'Heritage Precinct' overlays (source: List Map).

15.0 Urban Mixed Use Zone

15.1 Zone Purpose

15.1.1 Zone Purpose Statements

- 15.1.1.1
To provide for integration of residential, retail, community services and commercial activities in urban locations.
- 15.1.1.2
To encourage use and development at street level that generates activity and pedestrian movement through the area.
- 15.1.1.3
To provide for design that maximises the amenity at street level including considerations of microclimate, lighting, safety, and pedestrian connectivity.
- 15.1.1.4
To ensure that commercial use are consistent with the activity centre hierarchy.
- 15.1.1.5
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 proposed development is comprised of residential dwellings and commercial uses to provide integration in urban locations (15.1.1.1).

The street level contains a landscaped courtyard (utilised by the proposed food services use) and a retail space which will create an active street frontage (15.1.1.2).

The proposed development includes a garden area to the streetscape and will provide sufficient lighting to enhance the amenity at street level. The massing of the buildings towards the Brooker Highway will decrease overshadowing onto Campbell Street (15.1.1.3).

The proposed commercial uses are for 'Food Service' and 'General Retail and Hire', the proposed use of the shops will increase the diversity of the commercial uses within the Urban Mixed Use Zone (15.1.1.4).

The proposed development is accessible for walking and cycling. The proposed buildings are facing Campbell Street which has public transport within 30m (15.1.1.5).

The proposal retains the existing heritage buildings on the site and includes a diversity of uses. The primary impact in terms of residential areas is on the Glebe area north of the site. Whilst there will be increased bulk adjoining the Brooker Highway, the building sits behind substantial trees in the road reserve which is of a similar height to the proposal. Further, the façade is detailed to break up the massing of this façade (refer to the Architects Design Statement in Appendix K) (15.1.1.6).

The rear area of the proposed site is comprised of a large parking space that is underutilised. The existing heritage building will be renovated and utilised to service the residential complex (15.1.1.7).

The façade of the proposed building is of a modern style that will make a positive contribution to the streetscape and enhance the environment of the area (15.1.1.8).

The proposed building is for 'Residential' use. Other uses such as 'Food Service' and 'General Retail and Hire' with specific operation hours is consistent with relevant sub-clause under the Scheme (15.1.1.9).

Campbell Street is not a major arterial road (15.1.1.10).

15.3 Use Standards

The proposed uses are Residential, Food services (restaurant - No.177), Business and Professional Services (Consulting Rooms - No.179) and General Retail and Hire (Shops C-01 and C-02). The Residential and Food Services uses are permitted uses, and the remaining uses are discretionary.

15.3.1 Non-Residential Use

Objective: To ensure that non-residential use does not unreasonably impact residential amenity.	
Acceptable Solutions	Performance Criteria
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.	P1 ***

The operation hours of the proposed restaurant, consulting rooms and shop are 7 am to 9 pm weekdays, 8 am to 6 pm Saturdays and 9 am to 5 pm Sundays. The proposal will comply with 15.3.1 A1.

A2 Noise emissions measured at the boundary of the site 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.	P2 Hours of operation must not have an unreasonable impact upon the residential amenity through commercial vehicle movements, noise or other emissions that are unreasonable in their timing, duration or extent.
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A noise assessment has not been undertaken for the proposed development, so A1 cannot be demonstrated. Given the proposed uses are unlikely to generate significant noise and the hours of operation are compliant with A2, the non-residential uses are unlikely to cause environmental harm meeting P2.

A3 External lighting must comply with all of the following: (a) be turned off between 10:00 pm and 6:00 am, except for security lighting; (b) security lighting must be baffled to ensure they do not cause emission of light into adjoining private land.	P3 ***
--	----------------------

The external lighting will only be for security lighting (a) and the security lights will be baffled (b). The proposed development thus complies with 15.3.1 A3.

A4	P4 ***
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Commercial vehicle movements, (including loading and unloading and garbage removal) to or from a site must be limited to within the hours of: (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.	
---	--

Commercial vehicle movements (including waste disposal) will be limited to 7 am to 5 pm weekdays, 8 am to 5 pm Saturdays and 9 am to 12 noon Sundays, thus the Acceptable Solution P4 is met.

15.4 Development Standards for Buildings and Works

15.4.1 Building Height

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	P1
Building height must be no more than: 10m	Building height must satisfy all of the following: (a) be consistent with any Desired Future Character Statements provided for the area; (b) be compatible with the scale of nearby buildings; (c) not unreasonably overshadow adjacent public space; (d) allow for a transition in height between adjoining buildings, where appropriate;

The height of the building is 23.3m in height and thus cannot meet the Acceptable Solution. It has therefore been considered against the Performance Criteria P1 as follows:

There are no Desired Future Character Statements for the Urban Mixed Use Zone, therefore sub-clause (a) is not applicable.

Whilst the immediately surrounding buildings are only of single or double-storey height, there are buildings in the area nearby which are of similar scales such as the 5 storey/17.9m 87-91 Campbell Street (Housing Tasmania), 19 Bathurst (Tafe Tasmanian Campus) - 7 storeys/26.64m and 65-69 Letitia Street (old Hobart High School) - 4 storeys, which similarly abut the Brooker Highway. It is also relevant that whilst the roofing form design results in increased height (as opposed to a flat-roofed concept) it adds visual interest to the form. In terms of the floor plate, 152-170 Campbell Street, 116-138 Campbell Street and 181-189 Campbell Street (Woolworths) all have a substantially larger floor plate than the proposal. As the objective is to require building scale to contribute positively to the streetscape, the proposed design meets this objective as the building steps to the rear of the site where the scale is less visible from Campbell Street (b).

The higher parts of the proposed development would be setback from the site frontage with Campbell Street and stepped in such a way to reduce overshadowing of adjacent public spaces. The shadow diagrams demonstrate that in mid-winter Campbell Street will not be overshadowed at 9 am or 3 pm but would be subject to some overshadowing at 12 midday. However, given the footpath on the same side of the street would be already overshadowed at midday and that footpath on the other side would not be overshadowed by the proposed development, the proposal is not considered to have an unreasonable overshadowing impact upon adjacent public spaces (c).

In terms of transition between adjoining buildings, the design mimics the industrial warehousing that is prevalent on 181-189 Campbell Street (Woolworths) and other sites within the area. The scale of the element that meets Campbell Street has been kept at 4 storeys to maintain consistency with the 2-3 storey building line present on 181-189 Campbell Street (Woolworths) site (particularly the State listed townhouse in the centre of the car park), 185 Campbell Street (Antique Store) and 169-173 Campbell Street (Tasmanian Meat Wholesalers). The proposed design breaks the massing up with differently cladding elements and modulated surfaces. The two

landscaped courtyards and connecting spaces give permeability to the design as well as provide deep soil zones and opportunity for significant planting to soften the harder urban forms in the proposal.

Given the above assessment, the Performance Criteria is considered to have been met.

As no part of the building is within 10m of a residential zone, A2 is not applicable.

15.4.2 Setback

Objective:	
To ensure that building setback contributes positively to the streetscape and does 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.	P1 ***

The proposed building setback is nil and parallel to the frontage compliant with A1.

As the Subject Site is not in close proximity to a General Residential Zone or Inner Residential Zone A2 is not applicable.

15.4.3 Design

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.	
Acceptable Solutions	Performance Criteria
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 facade no less than 40% of the surface area of the ground floor level facade; (c) for new building or alterations to an existing facade ensure any single expanse of blank wall in the ground level front facade 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.	P1 ***

The proposed shop, consulting rooms and café entry forecourt make a positive contribution to the streetscape by providing a shopfront and two landscaped courtyards fronting Campbell Street. The compliance for non-residential use is as follows:

The main pedestrian entrances off of Campbell Street are easily visible and accessible (a).

The façade of two existing commercial use heritage buildings will remain as is. The proposed building has approximately 50 % of the building's front façade as glass/window on the ground floor, allowing for a visual connection between the building and streetscape (b)(c).

No mechanical plant or miscellaneous equipment is visible from the street, as provision for this has been made in the basement car park of the building (d).

The proposed lift overrun is within the roof structure (e).

The proposal includes an awning over the shopfront, although these are not provided on adjoining lots (f).

No security shutters are proposed (g).

Based on the above, the proposed development is considered to satisfy Clause 15.4.3 A1.

Acceptable Solutions	Performance Criteria
A2	P2
Walls of a building facing the General Residential Zone or Inner Residential Zone must be coloured using colours with a light reflectance value not greater than 40 percent.	No performance criteria.

The northeast elevation faces the General Residential zone of the Glebe at a distance of approximately 50m. The surfaces are brick and will thus have a low reflective value, however, the substantial row of trees in the Brooker Highway reserve will largely block views of the building from this perspective. Thus A2 is achieved.

15.4.4 Passive Surveillance

Objective:	
To ensure that building design for non-residential uses provides for the safety of the public.	
Acceptable Solutions	Performance Criteria
A1	P1
Building design must comply with all of the following: (a) provide the main pedestrian entrance to the building so that it is clearly visible from the road or publicly accessible areas on the site; (b) for new buildings or alterations to an existing facade provide windows and door openings at ground floor level in the front façade which amount to no less than 40% of the surface area of the ground floor level facade; (c) for new buildings or alterations to an existing facade provide windows and door openings at ground floor level in the façade of any wall which faces a public space or a car park which amount to no less than 30% of the surface area of the ground floor level facade; (d) avoid creating entrapment spaces around the building site, such as concealed alcoves near public spaces; (e) provide external lighting to illuminate car parking areas and pathways; (f) provide well-lit public access at the ground floor level from any external car park.	***

The main pedestrian entrances to the building from Campbell Street are easily visible and accessible (a).

Approximately 50% of the building's ground floor, front façade is for window openings or glass doors, allowing for a visual connection between the building and streetscape (b)(c).

The entryway to the building is open to the northern side and offers passive surveillance of the two shopfronts, whilst the inner courtyard area has passive surveillance of the units. The access through the northern side of the site has the passive surveillance of the alfresco area and the circulation/court area (d).

External lighting to public areas will be implemented as per relevant Australian Standards as well as lighting for the underground car parking area (e).

There is no external car park, thus (f) is not applicable.

Accordingly, the proposal is considered compliant with 15.4.4 A1.

15.4.5 Landscaping

Objective:	
To ensure that a safe and attractive landscaping treatment enhances the appearance of the site and if relevant provides a visual break from land in a residential zone.	
Acceptable Solutions	Performance Criteria
A1	P1
Landscaping along the frontage of a site is not required if all of the following apply: (a) the building extends across the width of the frontage, (except for vehicular access ways); (b) the building has a setback from the frontage of no more than 1m.	Landscaping must be provided to satisfy all of the following: (a) enhance the appearance of the development; (b) provide a range of plant height and forms to create diversity, interest and amenity; (c) not create concealed entrapment spaces; (d) be consistent with any Desired Future Character Statements provided for the area.

The building does not extend along the width of the frontage (due to the existing heritage items) thus landscaping along the frontage is required and as such A1 cannot be met and P1 must be considered.

The proposed development contains a landscaped area in front of the heritage buildings and a central courtyard area (refer to the Landscape Architectural Report in Appendix M) which enhances the appearance of the proposal (a).

A range of shrubs and large trees are utilised (b).

As discussed above, entrapment spaces are not created and landscaping along the street edge is low thus providing passive surveillance of the site from Campbell Street (c).

There is no Desired Future Character Statement thus (d) is not applicable. Therefore, it complies with 15.4.5 P1.

As no part of the site of the proposed development is adjacent to a residential zone, A2 is not applicable.

As no outdoor storage is proposed for the non-residential uses (on the site) 15.4.6 is considered not applicable.

15.4.7 Fencing

Objective:	
To ensure that fencing does not detract from the appearance of the site or the locality and provides for passive surveillance.	
Acceptable Solutions	Performance Criteria
A1	P1
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 10 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 a residential zone must be no more than 2.1 m and must not contain barbed wire.	***

The proposed steel and brick fence on the Campbell Street frontage is 20m long with a maximum of 2.3m in height and has more than 50% transparency above a height of 0.8m, therefore, it complies with sub-clause A1(a) and (b). As the proposed development is not adjoining with the residential zone sub-clause (c) is not applicable.

15.4.8 Residential Amenity

Objective: To ensure that buildings for residential use provide reasonable levels of residential amenity and safety.	
Acceptable Solutions	Performance Criteria
A1 A dwelling must have at least one habitable room window (other than a bedroom) facing between 30 degrees west of north and 30 degrees east of north.	P1 ***

The proposed development contains 31 apartments, the living room windows are facing 30 degrees west of north and 30 degrees east of north. Therefore, the proposal satisfies 15.4.8 A1.

A2 The potential for direct overlooking from windows of habitable rooms with a finished surface or floor level more than 1m above natural ground level on one lot to the windows of habitable rooms, balconies, decks and roof gardens on adjacent lots must be avoided or minimised by complying with any of the following: (a) have a side boundary setback no less than 3 m; (b) be offset no less than 1.5 m from the windows of habitable rooms on adjacent lots where on the same horizontal lane; (c) have a window seal height no less than 1.5 m.	P2 ***
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There are no habitable room windows on adjoining lots thus compliance with A2 (b) is achieved.

A3 Outdoor living space must be provided for a dwelling that complies with all of the following: (a) be no less than 10m ² ; (b) have a width no less than 2 m.	P3 ***
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All dwellings have a single deck space of 10 m² with a minimum width of 2m compliant with A3.

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).	P4 ***
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There will be noise impacts on the units given the proximity to the Brooker Highway and to a lesser degree Campbell Street. As such, the façade/glazing treatments will comply with AS2107 compliant with A4.

4.3 Codes

E 2.0 Potentially Contaminated Land Code

Hobart City Council has advised that the site is a potentially contaminated site due to the historic use of adjacent land. Therefore, an Environmental Site Assessment has been prepared by Geo-Environmental Solutions (GES) (Appendix F).

The Assessment identified there is a low risk for contaminated soil or groundwater on site.

The Scheme defines 'Potentially Contaminated Land' as follows:

Land that is, or adjoins, land that the applicant or the planning authority:

- (a) knows to have been used for a potentially contaminating activity by reference to:*
 - (i) a notice issued in accordance with Part 5A of the Environmental Management and Pollution Control Act 1994; or*
 - (ii) a previous permit; or*
- (b) ought reasonably to have known was used for a potentially contaminating activity.*

The proposed development is a mixed-use proposal and as development is on potentially contaminated land, the Code needs to be considered as per Clause 2.2 (Application of this Code).

An assessment of the proposal against the applicable Code provisions follows.

E2.5 Use Standards

Objective: To ensure that potentially contaminated land is suitable for the intended use	
Acceptable Solution	Performance Criteria
<p>A1</p> <p>The Director, or a person approved by the Director for the purpose of this Code:</p> <ul style="list-style-type: none"> (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. 	<p>P1</p> <p>Land is suitable for the intended use, having regard to:</p> <ul style="list-style-type: none"> (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: <ul style="list-style-type: none"> (i) an environmental site assessment; (ii) any specific remediation and protection measures required to be implemented before any use commences; and (iii) a statement that the land is suitable for the intended use.

There is no approval from the Director of the EPA for this proposal thus A1 cannot be achieved. The Environmental Site Assessment (Appendix F) identifies *"there is low risk for contaminated soil or groundwater on site"* from underground fuel tanks on the adjacent 181-189 Campbell Street site.

The assessment recommends a further *"environmental site assessment be completed to test for contamination on the site prior to any site excavation and development works"*.

Therefore, it is consistent with E2.5 P1 (b).

E2.6 Development Standards

E2.6.1 Subdivision

As the proposed development does not involve subdivision, this provision is not considered applicable.

E2.6.2 Excavation

Objective:	
To ensure that works involving excavation of potentially contaminated land does not adversely impact on human health or the environment.	
Acceptable Solution	Performance Criteria
A1 No acceptable solution.	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.

Significant excavation will occur on-site for the car park level. There is no Acceptable Solution under A1 thus P1 must be considered. The Environmental Site Assessment (Appendix F) identifies “there is low risk for contaminated soil or groundwater on-site” from underground fuel tanks on the adjacent 181-189 Campbell Street site. The assessment recommends a further “environmental site assessment be completed to test for contamination on the site prior to any site excavation and development works” (b). On this basis, E2.6.2 P1 (b) is satisfied.

E 5.0 Road and Railway Assets Code

The proposed development will utilise an existing vehicle crossing and two other existing vehicle crossings will be removed.

E5.5 Use Standards**E5.5.1 Existing road accesses and junctions**

Acceptable Solution	Performance Criteria
A1 The annual average daily traffic (AADT) of vehicle movements, to and from a site, onto a category 1 or category 2 road, in an area subject to a speed limit of more than 60km/h, must not increase by more than 10% or 10 vehicle movements per day, whichever is the greater.	P1 ***

Vehicle movements from the site will only be onto Campbell Street which is not a category 1 or category 2 road and has a speed limit of 50km/h. Accordingly, A1 is considered not applicable.

A2 The annual average daily traffic (AADT) of vehicle movements, to and from a site, using an existing access or junction, in an area subject to a speed limit of 60km/h or less, must not increase by more than 10% or 10 vehicle movements per day, whichever is the greater.	P2 ***
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The speed limit along Campbell Street is 50km/h, accordingly, A2 is considered not applicable.

A3	P3
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The annual average daily traffic (AADT) of vehicle movements, to and from a site, using an existing access or junction, in an area subject to a speed limit of 60km/h or less, must not increase by more than 20% or 40 vehicle movements per day, whichever is the greater.	Any increase in vehicle traffic at an existing access or junction in an area subject to a speed limit of 60km/h or less, must be safe and not unreasonably impact on the efficiency of the road, having regard to: (a) the increase in traffic caused by the use; (b) the nature of the traffic generated by the use; (c) the nature and efficiency of the access or the junction; (d) the nature and category of the road; (e) the speed limit and traffic flow of the road; (f) any alternative access to a road; (g) the need for the use; (h) any traffic impact assessment; and (i) any written advice received from the road authority.
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The TIA indicated that the currently AADT of vehicle movements will be increased by more than 40 vehicle movements per day (182 vmpd), therefore, P3 must be considered.

When fully occupied based on the medium density residential, office and commercial and restaurant will generate approximately 182 vehicle movements per day. The residential building is expected to generate 94 vehicle movements per day (base on the RTA Traffic Generating Guidelines). The business and professional services will generate 22 vehicle movements per day. The food service will generate 66 vehicle movements per day. Additionally, 18 vehicle movements were generated within the weekday peak hour surrounding the road network. Thus the fully occupied vehicle movement number will be 200 per day. This number of vehicle movements is low for an Urban Mixed Use area of this size, given much of the zone area is used for multiple purposes (a).

The proposed development is likely to be offset by the inner-city location and will encourage the uptake of other modes of transport (b).

The proposed development is located in a section of Campbell Street which already provides a high level of accessibility to local businesses in area (c).

Campbell Street has sufficient capacity as a collector road for the additional traffic movements (d).

The Campbell Street signalised intersection with Warwick Street effectively creates gaps in the traffic flow for this section of the road for safe entry/exit into properties and parking but not so long that traffic flow is restricted (e).

There is no alternative access (f).

The existing site access has operated safely and efficiently to date and will be upgraded as part of the proposed development (g).

A minor crash history exists for the area but there is no evidence of significant road safety issues in the study area (h).

No advice was received from the road authority (i).

Based on the above the proposal is considered to satisfy Performance Criteria P3.

E5.5.2 Exiting level crossings - Not Applicable

The proposed development does not impact any existing Level Crossings. Accordingly, this provision is considered not applicable.

E5.6 Development Standards

E5.6.1 Development adjacent to road and railways

As the site of the proposed development is not adjacent to a Category 1 or Category 2 road or rail network, Clause E5.6.1 is not applicable.

E5.6.2 Road accesses and junctions

Acceptable Solution	Performance Criteria
A1 No new access or junction to roads in an area subject to a speed limit of more than 60km/h.	P1 ***

The speed limit along Campbell Street is 50 km/hr and accordingly, A1 is not considered applicable.

Acceptable Solution	Performance Criteria
A2 No more than one access providing both entry and exit, or two accesses providing separate entry and exit, to roads in an area subject to a speed limit of 60km/h or less.	P2 ***

One existing access will provide both entry/exit and no new accesses are proposed as part of the development. Therefore, the proposal is compliant with the E5.6.2 A2.

E5.6.3 New level crossings

As the site is not in proximity to any rail network, Clause E5.6.3 is not considered applicable.

E5.6.4 Sight distance at accesses, junctions and level crossings

Objective: To ensure that accesses, junctions, and level crossings provide sufficient sight distance between vehicles and between vehicles and trains to enable safe movement of traffic.	
Acceptable Solution	Performance Criteria
A1 Sight distances at: (a) an access or junction must comply with the Safe Intersection Sight Distance shown in Table E5.1; and (b) rail level crossings must comply with AS1742.7 Manual of uniform traffic control devices - Railway crossings, Standards Association of Australia.	P1 The design, layout and location of an access, junction or rail level crossing must provide adequate sight distances to ensure the safe movement of vehicles, having regard to: (a) the nature and frequency of the traffic generated by the use; (b) the frequency of use of the road or rail network; (c) any alternative access; (d) the need for the access, junction, or level crossing; (e) any traffic impact assessment; (f) any measures to improve or maintain sight distance; and (g) any written advice received from the road or rail authority.

An acceptable solution is partially met as safe intersection sight distance to the right of the site access is deficient and on-street parking restricts sight distance to the left of the site access.

E5.6.4 has been assessed in the TIA against the Performance Criteria. It is deemed acceptable on the following grounds:

Sight distance to the right of the site access meets the minimum safe sight distance requirement stated in Figure 3.2 of AS/NZS 2890.1 for exiting an access driveway other than domestic property. Use of the site access to enter/exit the off-street car park is less frequent due to the largely residential nature of the development. (a) (b).

The site access arrangements are consistent with those around it hence the proposal does not introduce any new elements (c).

In addition to being a collector road, Campbell Street plays a local access role hence it is challenging to satisfy the SISD requirement for all access points along this road when on-street parking is present (d).

A minor crash history exists for the area but there is no evidence of significant road safety issues in the study area (e).

It is acknowledged on-street parking is commonplace in urban streets thus it is normal for sight distance to be partly obstructed at site accesses. Drivers generally observe gaps between parked vehicles. Whilst the site access will be upgraded, the existing site access has operated safely and efficiently to date. There is sufficient capacity in Campbell Street for the additional traffic movements from the proposed development (f).

No advice was received from the road authority (g).

Therefore, the proposed development is consistent with E5.6.4 P1.

E 6.0 Parking and Access Code

No use or development is exempt from this code as per Clause E6.4.1. The proposal has been assessed against the relevant provisions of the code.

E 6.6 Use Standards

E6.6.1 Number of Car Parking Spaces

Objective:	
To ensure that:	
(a) there is enough car parking to meet the reasonable needs of all users of a use or development, taking into account the level of parking available on or outside of the land and the access afforded by other modes of transport.	
(b) a use or development does not detract from the amenity of users or the locality by:	
(i) preventing regular parking overspill;	
(ii) minimising the impact of car parking on heritage and local character.	
Acceptable Solution	Performance Criteria
A1	P1
The number of on-site car parking spaces must be:	The number of on-site car parking spaces must be sufficient to meet the reasonable needs of users, having regard to all of the following:
(a) no less than and no greater than the number specified in Table E6.1;	(a) car parking demand;
except if:	(b) the availability of on-street and public car parking in the locality;
(i) the site is subject to a parking plan for the area adopted by Council, in which case parking provision (spaces or cash-in-lieu) must be in accordance with that plan;	(c) the availability and frequency of public transport within a 400m walking distance of the site;
(ii) the site is subject to clauses E6.6.5, E6.6.6, E6.6.7, E6.6.8, E6.6.9 or E6.6.10 of this planning scheme.	(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.
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The proposed development has 31 dwellings comprising 2 bedrooms and 3 bedrooms apartments, townhouses and 2 commercial dwellings. The proposed car parking space contains 34 car parking spaces. Table E6.1 stipulated the number of vehicle parking spaces are 101 (Refer to Appendix G Traffic Impact Assessment - Table 7 Parking Requirements). Therefore, it cannot meet the A1 thus P1 must be considered.

The residential component of the proposed development is sited in a location that reduces the need for a personal vehicle due to the high level of accessibility to local services and community activities (a);

There is a considerable range of on-street parking around the subject site to cater for visitors to the building and business employees (b);

Campbell Street is a Metro route and a bus stop is located less than 50 m from the proposed development (c)

Close proximity to the Hobart CBD and North Hobart with the option to use transport modes such as walking, cycling or bus. The café is likely to attract people in the local area as there are very few other similar food services, and it is likely customers will walk or ride rather than drive. (d) (e);

Car parking demand in this section of Campbell Street is likely to vary considerably across the day with a turnover of time-restricted on-street parking regularly making spaces available for short-term use (f) (g);

There is no car parking credit as a result of previous use of the site, therefore sub-clause (h) is not considered applicable;

Private off-street parking is provided extensively for various purposes in this area taking pressure off on-street parking availability (i);

There is no relevant parking plan for the area adopted by Council, therefore sub-clause (k) is not applicable;

The heritage building has been retained and protected, thus there is no significant impact on the listed items. The Heritage Assessment is enclosed with the report to demonstrate details regarding the Local Heritage Code (l);

The site is not in proximity to any significant trees listed in the Significant Trees Code; therefore, sub-clause (m) is not applicable.

Based on the above, the proposed development is considered to satisfy the applicable E6.6.1 P1.

E6.6.2 Number of Accessible Car Parking Spaces for People with a Disability

Objective:	
To ensure that a use or development provides sufficient accessible car parking for people with a disability.	
Acceptable Solution	Performance Criteria
A1	P1
Car parking spaces provided for people with a disability must: <ul style="list-style-type: none"> (a) satisfy the relevant provisions of the Building Code of Australia; (b) be incorporated into the overall car park design; (c) be located as close as practicable to the building entrance. 	No Performance Criteria.

The proposed development building is classified by the Building Code of Australia as a mix of classes. The classes and number of accessible car spaces required include:

- Class 2 (two or more sole occupancy units) - Not required
- Class 5 (office/commercial) - 1 space for every 100 car parking spaces or part thereof
- Class 6 (café) - 1 space for every 50 car parking spaces or part thereof

D3.5 Accessible car parking of the BCA states that accessible car parking spaces need not be provided in a car parking area where direct access to any of the car parking spaces is not available to the public. This is the case for the proposed development where the car park provided is for the residential apartments with no public access.

On-street car parking in this section of Campbell Street is likely to provide suitable alternatives in most cases for accessible parking, particularly given the wide, level carriageway and time-restricted parking available along the front of the proposed development.

Therefore, the proposed development complies with A1.

E6.6.3 Number of Motorcycle Parking Spaces

Objective:	
To ensure enough motorcycle parking is provided to meet the needs of likely users of a use or development.	
Acceptable Solution	Performance Criteria
A1	P1
The number of on-site motorcycle parking spaces provided must be at a rate of 1 space to each 20 car parking spaces after the first 19 car parking spaces except if bulky goods sales, (rounded to the nearest whole number). Where an existing use or development is extended or intensified, the additional number of motorcycle parking spaces provided must be calculated on the amount of extension or intensification, provided the existing number of motorcycle parking spaces is not reduced.	***

Not considered applicable to this development however it is noted on-street motorcycle parking is provided in the next block just after the Brisbane Street intersection.

E6.6.4 Number of Bicycle Parking Spaces

Objective:	
To ensure enough bicycle parking is provided to meet the needs of likely users and by so doing to encourage cycling as a healthy and environmentally friendly mode of transport for commuter, shopping and recreational trips.	
Acceptable Solution	Performance Criteria
A2	P2
The number of on-site bicycle parking spaces provided must be no less than the number specified in Table E6.2.	***

This requirement is not applicable for residential dwellings but is applicable for the proposed commercial and food activities based on floor area.

The proposed commercial and food activities individually cover small floor areas hence the requirements are not considered proportionate.

It has been calculated that perhaps 2-3 bicycle parking spaces may be appropriate. Bicycle hoops are provided at the entry to the retail tenancies basement storage lockers (suitable for bicycle storage) and vertical hangers for 12 bicycles are provided in the basement car parking area.

E 6.7 Development Standards**E6.7.1 Number of Vehicular Accesses**

Objective: To ensure that: (a) safe and efficient access is provided to all road network users, including, but not limited to: drivers, passengers, pedestrians, and cyclists, by minimising: (i) the number of vehicle access points; and (ii) loss of on-street car parking spaces; (b) vehicle access points do not unreasonably detract from the amenity of adjoining land uses; (c) vehicle access points do not have a dominating impact on local streetscape and character.	
Acceptable Solution	Performance Criteria
A1	P1
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.	***

The proposed development will use the existing access from Campbell Street. It complies with E6.7.1 A1.

Acceptable Solution	Performance Criteria
A2	P2
In the Central Business Zone and Particular Purpose Zone 10 (Royal Hobart Hospital) no new vehicular access is provided unless an existing access point is removed.	***

The site of the proposal is not located within the Central Business Zone or the Particular Purpose Zone 10 (Royal Hobart Hospital). Accordingly, this provision is not applicable.

Acceptable Solution	Performance Criteria
A3	P3
In Particular Purpose Zone 4 - Calvary Healthcare Hospital Campus access to the site is to be provided according to the location of approved access points off Augusta Road and Honara Avenue shown on the endorsed plans associated with permit PLN-14-00428-01. The other access points noted are to be utilised for emergency access only.	No performance criteria.

The proposal is not located in Particular Purpose Zone 4. Accordingly, this provision is not applicable.

E6.7.2 Design of Vehicular Accesses

Objective: To ensure safe and efficient access for all users, including drivers, passengers, pedestrians and cyclists by locating, designing and constructing vehicle access points safely relative to the road network.	
Acceptable Solution	Performance Criteria
A1	P1
Design of vehicle access points must comply with all of the following: (a) In the case of non-commercial vehicle access; the location, sight distance, width and gradient of an access must be designed and constructed to comply with section 3 - "Access Facilities to Off-street Parking Areas and Queuing Areas" of AS/NZS 2890.1:2004 Parking Facilities Part 1: Off-street car parking; (b) In the case of commercial vehicle access; the location, sight distance, geometry and gradient of an access must be designed and constructed to comply with all access driveway provisions in section 3 "Access Driveways and Circulation Roadways" of AS2890.2 - 2002 Parking facilities Part 2: Off-street commercial vehicle facilities.	***

The existing access will be utilised which satisfies the location requirements of Section 3.2.3 of

AS/NZS 2890.1:2004 and entry width of 5.5 m wide (Combined for Category 1 access as defined in Tables 3.1 and 3.2 - Based on User Class 1A; local road frontage, <100 car spaces).

The minimum entering sight distance to the right is acceptable despite SISD not being achieved however this is not considered an issue for the reasons given in Section 4.4.

The minimum sightlines for pedestrian safety appear to be met (as required in Figure 3.3 of AS/NZS 2890.1:2004) however this should be checked at the site access detailed design stage.

The gradient of the access driveway does not comply however modification of the grade will be incorporated into the site access driveway design to achieve the standard as far as reasonably practicable.

The proposed development is consistent with E6.7.2 A1.

E6.7.3 Vehicular Passing Areas along an Access

Objective:	
To ensure that:	
(a) the design and location of access and parking areas creates a safe environment for users by minimising the potential for conflicts involving vehicles, pedestrians, and cyclists;	
(b) use or development does not adversely impact on the safety or efficiency of the road network as a result of delayed turning movements into a site.	
Acceptable Solution	Performance Criteria
A1	P1
Vehicular passing areas must:	***
(a) be provided if any of the following applies to an access:	
(i) it serves more than 5 car parking spaces;	
(ii) is more than 30 m long;	
(iii) it meets a road serving more than 6000 vehicles per day;	
(b) be 6 m long, 5.5 m wide, and taper to the width of the driveway;	
(c) have the first passing area constructed at the kerb;	
(d) be at intervals of no more than 30 m along the access.	

The existing access meets a road serving more than 6,000 vehicles per day. The width of the access at the kerb will be 5.5 m and will continue at this width for the length of the 40 m driveway up to the car park entry. The driveway then tapers to a 3m width over a 10 m distance providing an area to reverse into if required.

The proposal is considered to comply with E6.7.3 A1.

E 6.7.4 On-Site Turning

Objective:	
To ensure safe, efficient and convenient access for all users, including drivers, passengers, pedestrians and cyclists, by generally requiring vehicles to enter and exit in a forward direction.	
Acceptable Solution	Performance Criteria
A1	P1
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;	
(c) it meets a road carrying less than 6000 vehicles per day.	

The off-street car park enables vehicles to exit in a forward direction.

It is noted waste management contractors will require access to the proposed development hence a turning path assessment has been completed (refer to Appendix A).

A typical waste collection vehicle utilised for these types of premises is able to manoeuvre and exit in a forward direction, however, any larger commercial vehicles will not be able to access the car park due to entry clearance height (discussed in E6.7.5).

E 6.7.5 Layout of Parking Areas

Objective: To ensure that parking areas for cars (including assessable parking spaces), motorcycles and bicycles are located, designed and constructed to enable safe, easy and efficient use.	
Acceptable Solution	Performance Criteria
A1 The layout of car parking spaces, access aisles, circulation roadways and ramps must be designed and constructed to comply with section 2 "Design of Parking Modules, Circulation Roadways and Ramps" of AS/NZS 2890.1:2004 Parking Facilities Part 1: Off-street car parking and must have sufficient headroom to comply with clause 5.3 "Headroom" of the same Standard.	P1 ***

The acceptable solution is met as the off-street car park concept design complies with AS/NZS 2890.1:2004. Entry into the proposed development car park will have a clearance height of approximately 2.71 m (refer to Appendix A). This satisfies Clause 5.3 Headroom - a general requirement of a minimum of 2.2 m. However, this height requires the use of a Low Clearance sign as it is less than the required 3 m for cars/light vans and 4.6 m for all other cases. Level 1 of the building will horizontally overhang the access driveway by 2 m which at the start of the site access from Campbell Street will be a vertical distance of 4.05 m (i.e. ground level up to the Level 1 overhand) hence a Low Clearance sign will be required. On this basis, the proposed development is consistent with E6.7.5 A1.

E6.7.6 Surface Treatment of Parking Areas

Objective: To ensure that parking spaces and vehicle circulation roadways do not detract from the amenity of users, adjoining occupiers or the environment by preventing dust, mud and sediment transport.	
Acceptable Solution	Performance Criteria
A1 Parking spaces and vehicle circulation roadways must be in accordance with all of the following; (a) paved or treated with a durable all-weather pavement where within 75m of a property boundary or a sealed roadway; (b) drained to an approved stormwater system, provided that the standard of paving and drainage complies with the adopted standards of the Council.	P1 ***

The proposed off-street parking and vehicle circulation roadways will be concrete and drained to an approved stormwater system, including a new stormwater discharge to the kerb, as shown in the Concept Services plan in Appendix H therefore the proposal is consistent with E6.7.6 A1.

E6.7.7 Lighting of Parking Areas

Objective: To ensure parking and vehicle circulation roadways and pedestrian paths used outside daylight hours are provided with lighting to a standard which: (a) enables easy and efficient use; (b) promotes the safety of users; (c) minimises opportunities for crime or anti-social behaviour; and (d) prevents unreasonable light overspill impacts.	
Acceptable Solution	Performance Criteria
A1 Parking and vehicle circulation roadways and pedestrian paths serving 5 or more car parking spaces, used outside daylight hours, must be provided with lighting in accordance with clause 3.1 "Basis of Design" and clause 3.6 "Car Parks" in AS/NZS 1158.3.1:2005 Lighting for roads and public spaces Part 3.1: Pedestrian area (Category P) lighting.	P1 ***

Lighting to public areas will be implemented as per Australian Standards, it is considered appropriate that permit conditions requiring more detailed plans prior to works commencing be incorporated into any planning permit issued.

On this basis, the proposed development is considered able to comply with E6.7.7 A1.

E6.7.8 Landscaping of Parking Areas

Objective: To ensure that large parking and circulation areas are landscaped to: (a) relieve the visual impact on the streetscape of large expanses of hard surfaces; (b) screen the boundary of car parking areas to soften the amenity impact on neighbouring properties; (c) contribute to the creation of vibrant and liveable places; (d) reduce opportunities for crime or anti-social behaviour by maintaining clear sightlines.	
Acceptable Solution A1	Performance Criteria P1
Landscaping of parking and circulation areas must be provided where more than 5 car parking spaces are proposed. This landscaping must be no less than 5 percent of the area of the car park, except in the Central Business Zone where no landscaping is required.	***

As the proposed car parking is in the basement E6.7.8 is not considered applicable.

E6.7.9 Design of Motorcycle Parking Areas

Objective: To ensure that motorcycle parking areas are located, designed and constructed to enable safe, easy and efficient use.	
Acceptable Solution A1	Performance Criteria P1
The design of motorcycle parking areas must comply with all of the following: (a) be located, designed and constructed to comply with section 2.4.7 "Provision for Motorcycles" of AS/NZS 2890.1:2004 Parking Facilities Part 1: Off-street car parking; (b) be located within 30 m of the main entrance to the building.	***

As no motorcycle parking areas are included in the proposal, Clause E6.7.9 is not applicable.

E6.7.10 Design of Bicycle Parking Facilities

Objective: To encourage cycling as a healthy and environmentally friendly mode of transport for commuter, shopping and recreational trips by providing secure, accessible and convenient bicycle parking spaces.	
Acceptable Solution A1	Performance Criteria P1
The design of bicycle parking facilities must comply with all the following: (a) be provided in accordance with the requirements of Table E6.2; (b) be located within 30 m of the main entrance to the building.	***

Bicycle parking compliant with AS2890.3 is shown at the entry to the retail facilities compliant with A1.

E6.7.11 Bicycle End of Trip Facilities

Not applicable - please see the above statement under E6.7.10.

E6.7.12 Siting of Car Parking

Objective:	
To ensure that the streetscape, amenity and character of urban areas is not adversely affected by siting of vehicle parking and access facilities.	
Acceptable Solution	Performance Criteria
A1	P1
Parking spaces and vehicle turning areas, including garages or covered parking areas in the Inner Residential Zone, Urban Mixed Use Zone, Village Zone, Local Business Zone and General Business Zone must be located behind the building line of buildings located or proposed on a site except if a parking area is already provided in front of the building line of a shopping centre.	***

The Subject Site is zoned 'Urban Mixed Use' and all car parking areas are located on the basement level at the rear of the site, well behind the building lines of both existing heritage buildings.

The proposal complies with E6.7.12 A1.

E6.7.13 Facilities for Commercial Vehicles

Objective:	
To ensure that facilities for commercial vehicles are provided on site, as appropriate.	
Acceptable Solution	Performance Criteria
A1	P1
Commercial vehicle facilities for loading, unloading or manoeuvring must be provided on-site in accordance with Australian Standard for Off-street Parking, Part 2: Commercial. Vehicle Facilities AS 2890.2:2002, unless:	***
(a) the delivery of all inward bound goods is by a single person from a vehicle parked in a dedicated loading zone within 50 m of the site;	
(b) the use is not primarily dependent on outward delivery of goods from the site.	

Commercial vehicle facilities for loading, unloading or manoeuvring have not been provided on-site, there is not a dedicated loading zone within 50 m of the site, and the use is not primarily dependent on outward delivery of goods from the site.

Therefore, E6.7.13 is not considered applicable.

E6.7.14 Access to a Road

Objective:	
To ensure that access to the road network is provided appropriately.	
Acceptable Solution	Performance Criteria
A1	P1
Access to a road must be in accordance with the requirements of the road authority.	No Performance Criteria.

The existing access will be increase to 6.2m in width, it is sufficient to accommodate the two-way traffic movement.

The TIA confirms that the dimensions of the access are compliant with relevant Australian Standards thus satisfying the requirements of the road authority.

The proposal is considered compliant with Acceptable Solution (A1).

E 7.0 Stormwater Management Code

This code applies to development requiring the management of Stormwater (Clause E7.2.1) and no development is exempt from this code as per Clause E7.4.1. The proposal has been assessed against the relevant provisions of the code.

E7.7 Development Standards

Flood Modelling Report for the following clauses is contained in Appendix I.

E7.7.1 Stormwater Drainage and Disposal

Objective:	
To ensure that stormwater quality and quantity is managed appropriately.	
Acceptable Solution	Performance Criteria
A1	P1
Stormwater from new impervious surfaces must be disposed of by gravity to public stormwater infrastructure.	***

The site will drain by gravity via a new internal stormwater network and connect to the existing DN1800 park Street rivulet culvert. Refer to the Concept Services report for further information. The development is compliant with the E7.7.1 A1.

Acceptable Solution	Performance Criteria
A2	P2
A stormwater system for a new development must incorporate water sensitive urban design principles R1 for the treatment and disposal of stormwater if any of the following apply: (b) the size of new impervious area is more than 600 m ² ; (b) new car parking is provided for more than 6 cars; (c) A subdivision is for more than 5 lots.	***

The stormwater system incorporates a proprietary SQID within the basement car park to treat stormwater run-off from the site. The development is compliant with the E7.7.1 A2.

Acceptable Solution	Performance Criteria
A3	P3
A minor stormwater drainage system must be designed to comply with all of the following: (a) Be able to accommodate a storm with an ARI of 20 years in the case of non-industrial zoned land and 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.	No Performance Criteria.

The minor stormwater drainage system has been designed to accommodate a storm with an ARI of 20 years. Stormwater detention for any increase inflows can be incorporated in the oversizing of the new private stormwater pipework under the basement car park upstream of the SQID and property connection.

Please Refer to Concept Services (Appendix H).

Given the above assessment the proposal, therefore, meets E7.7.1 A3.

Acceptable Solution	Performance Criteria
A4	P4
A major stormwater drainage system must be designed to accommodate a storm with an ARI of 100 years.	No Performance Criteria.

The assessment of the development in relation to overland, major, drainage systems across the site is included in the Flood hazard Report, Flussig, July 2021 included in Appendix I. This report demonstrates the site can safely be developed to accommodate a 1% AEP (ARI 100 yrs) event complying with acceptable solution A4.

E8.0 Electricity Transmission Infrastructure Protection Code

The proposed development is not within:

- an electricity transmission corridor;
- 55m of a communications station; or
- 65 m of a substation.

The TasNetworks substation at 222 Campbell Street, North Hobart is approximately 320m northwest of the development site. Accordingly, an assessment against the code is not triggered by the proposal.

E9.0 Attenuation Code

The proposed development comprises uses that are 'sensitive' ('Residential').

The proposed development on land within 100m from 'Smallgoods Manufacture' (Tasmanian Meat Wholesalers) which listed in Table E9.1, but not on land within an Attenuation Area shown on the planning scheme maps. Therefore the code must be considered.

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

Objective:	
To ensure that new sensitive use does not conflict with, interfere with or constrain uses with potential to cause environmental harm.	
Acceptable Solution	Performance Criteria
A1	P1
No Acceptable Solution.	Development for sensitive use, including subdivision of lots within a sensitive zone, must not result in potential to be impacted by environmental harm from use with potential to cause environmental harm, having regard to all of the following: <ul style="list-style-type: none"> (a) The nature of the use with potential to cause environmental harm; including: <ul style="list-style-type: none"> 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.

As there is no acceptable solution for the above clause, thus E9.7.2 P1 is addressed as follows:

The Tasmanian Meat Wholesalers operation is unlikely to cause environmental harm given its small scale and its regulation under the *Meat Hygiene Act 1985* (a).

The proposed sensitive uses are well within the 100m attenuation distance, but this is not considered significant given the scale and intensity of the manufacturer of the small goods (b).

The façade immediately opposite Tasmanian Meat Wholesalers is the access to the car park only with a 4.3m high wall (c).

Based on the above the proposal is considered to satisfy applicable elements of E9.7.2 P1.

E13.0 Historic Heritage Code

The subject site is not listed on the Tasmanian Heritage Register. However, two of the residential dwellings located on titles within the Subject Site are listed as heritage places within Table E13.1 of the *Hobart Interim Planning Scheme 2015* ('Heritage Places by Street Name - Hobart'). These are located at 177 and 179 Campbell Street respectively (CT 22529/3 and CT 23363/1). Furthermore, Titles immediately adjoining the northwest and southeast boundaries of the Subject Site also contain buildings permanently registered on the Tasmanian Heritage Register (refer to Appendix J). All heritage items on or within immediate proximity to the Subject Site are listed below in Table 2.

Table 2 - Heritage Places by Street Name - Hobart (Cameron to Cross)

Ref. No.	Street No.	Street/Location	C.T.	General Description
514	169	Campbell Street	140732/1	Now part of 169-173 Campbell Street - that part of the address previously known as 169 Campbell Street only
517	177	Campbell Street	22529/3	House
518	179	Campbell Street	23363/1	House
520	187	Campbell Street	121292/1	Listed as 181-189 Campbell Street on the List Map

A heritage consultant has prepared a heritage assessment which can be found in Appendix J. The proposal has also been assessed against Part E13.7 of the Planning Scheme, 'Development Standards for Heritage Places', as outlined below.

E13.7 Development Standards for Heritage Places

E13.7.1 Demolition

Objective:	
To ensure that building, works and demolition at a place of archaeological potential is planned and implemented in a manner that seeks to understand, retain, protect, preserve and otherwise appropriately manage significant archaeological evidence.	
Acceptable Solution	Performance Criteria
A1	P1
No acceptable solution	Demolition must not result in the loss of significant fabric, form, items, outbuildings or landscape elements that contribute to the historic cultural heritage significance of the place unless all of the following are satisfied: (a) there are environmental, social, economic or safety reasons of greater value to the community than the historic cultural heritage values of the place; (b) there are no prudent and feasible alternatives; (c) important structural or façade elements that can feasibly be retained and reused in a new structure, are to be retained; (d) significant fabric is documented before demolition.

As there is no Acceptable Solution under A1 thus P1 must be considered.

Some of the internal walls and doors of the existing heritage buildings and 'Lean-On' walls at the rear of houses will be demolished. The existing front access ramp, landscaping in the front of the house and the timber shed at the rear of 179 Campbell Street will be demolished. However, all of the significant fabric, forms and items will be protected and maintained.

The heritage consultant concluded that the existing heritage buildings have a low level of historic cultural heritage values and are limited to the architectural qualities in terms of the buildings themselves. The proposed new fence and landscape in front of the heritages would contribute a positive visual impact compared to the existing wire fence and landscape. The heritage buildings will change the residential use to commercial use, which provide greater value to the community (a).

The renovation is a feasible approach to maintain and enhance the value of the existing heritage buildings (b).

The façade and significant structure will be retained and re-used with the new structure (c).

As no significant fabric will be demolished, therefore sub-clause (d) is not applicable.

Based on the above, the proposal satisfies the E13.7.1 P1.

E13.7.2 Buildings and Works other than Demolition

Objective:	
To ensure that development at a heritage place is: (a) undertaken in a sympathetic manner which does not cause loss of historic cultural heritage significance; and (b) designed to be subservient to the historic cultural heritage values of the place and responsive to its dominant characteristics.	
Acceptable Solution	Performance Criteria
A1 No Acceptable Solution.	P1 Development must not result in any of the following: (a) loss of historic cultural heritage significance to the place through incompatible design, including in height, scale, bulk, form, fenestration, siting, materials, colours and finishes; (b) substantial diminution of the historic cultural heritage significance of the place through loss of significant streetscape elements including plants, trees, fences, walls, paths, outbuildings and other items that contribute to the significance of the place.

As there is no Acceptable Solution under A2 thus P2 must be considered.

The scale of the new building around the heritage items has been carefully considered to ensure it appropriately steps away from the heritage item such as not to dominate them. Further, the building has been designed to respond to the scale of the heritage items by breaking up the form into smaller discrete elements and utilising some of the finishes common with the heritage item. The architectural design statement includes more detail on this matter (a).

The existing heritage buildings are retained intact and their relationship with the street enhances through the proposed forecourt garden. The low retaining wall and fence presented to Campbell Street is of residential scale and maintains view lines into the former front yards of the heritage items (refer to the landscape plan in the Proposal Plan, Appendix C). Therefore, sub-clause (b) is considered not applicable.

Based on the above, the proposal complies with E13.7.2 P1.

A2 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.
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There is no Acceptable Solution under A2 thus P2 must be considered.

As stated above, the new buildings are set back and designed to complement the heritage items albeit in a changed context. The stepping form of the new building, granular design and common material selections do not diminish the importance of the heritage items (a).

The frontage setback is not altered in front of the heritage buildings themselves, but the new building does wrap around them and creates a frontage with the street (which is consistent in the area. The relationship between the heritage items and the street is enhanced by the re-use of the front garden area into a useable garden space for the commercial premises (b)(c). The materials used are both borrowed from but are less dominant than the heritage items (refer to the architectural design statement in Appendix K). The proposed development is therefore consistent with E13.7.2 P2.

A3	P3
No Acceptable Solution.	Materials, built form and fenestration must respond to the dominant heritage characteristics of the place, but any new fabric should be readily identifiable as such.

As there is no Acceptable Solution under A3 thus P3 must be considered.

The proposed materials, form and detailing respond to the industrial nature of the area and the small scale of the heritage items. The new building is a contemporary design but borrows from surrounding elements in terms of form and materiality (refer to the architectural design statement in Appendix K). Therefore, the proposal complies with E13.7.2 P3.

A4	P4
No Acceptable Solution.	Extensions to existing buildings must not detract from the historic cultural heritage significance of the place.

As there is no Acceptable Solution under A4 thus P4 must be considered.

As there are no extensions proposed to existing buildings, this E13.7.2 P4 is not considered applicable.

A5	P5
New front fences and gates must accord with original design, based on photographic, archaeological or other historical evidence.	New front fences and gates must be sympathetic in design, (including height, form, scale and materials), to the style, period and characteristics of the building to which they belong.

The proposed front fence is a steel brick fence that has a similar style to the existing heritage building. Therefore, it complies with E13.7.2 A5.

A6	P6
Areas of landscaping between a dwelling and the street must be retained.	The removal of areas of landscaping between a dwelling and the street must not result in the loss of elements of landscaping that contribute to the historic cultural significance of the place.

Areas of landscaping to be removed and replaced with new landscaping between the heritage dwellings (177 and 179 Campbell Street) and the Campbell Street Road Reserve are the low steel fencing, trees and shrubbery. Therefore, it cannot meet the Acceptable Solution A6 and has therefore been considered against the Performance Criteria P6. There are no specific elements of the landscaping that contribute to the historic cultural significance of the place, however, the area between the heritage items and the street have been re-landscaped and utilised as open space for commercial activities.

E13.7.3 Subdivision

As the proposed development contains no subdivision, this provision is not considered applicable.

E13.8 Development Standards for Heritage Precincts

As no part of the proposed development is within a Heritage Precinct, no provisions within this Clause are considered applicable.

E13.9 Development Standards for Cultural Landscape Precincts

As no part of the proposed development is within a Cultural Landscape Precinct, no provisions within this Clause are considered applicable.

E13.10 Development Standards for Places of Archaeological Potential

The site is located within a place of Archaeological Potential (namely, that of Central Hobart as shown in Figure E13.4.1, Table 13.4).

E13.0 Development Standards for Places of Archaeological Potential

E13.10.1 Building, Works and Demolition

Objective:	
To ensure that building, works and demolition at a place of archaeological potential is planned and implemented in a manner that seeks to understand, retain, protect, preserve and otherwise appropriately manage significant archaeological evidence.	
Acceptable Solution	Performance Criteria
A1	P1
Building and works do not involve excavation or ground disturbance.	Buildings, works and demolition must not unnecessarily impact on archaeological resources at places of archaeological potential, having regard to: <ul style="list-style-type: none"> (a) the nature of the archaeological evidence, either known or predicted; (b) measures proposed to investigate the archaeological evidence to confirm predictive statements of potential; (c) strategies to avoid, minimise and/or control impacts arising from building, works and demolition; (d) where it is demonstrated there is no prudent and feasible alternative to impacts arising from building, works and demolition, measures proposed to realise both the research potential in the archaeological evidence and a meaningful public benefit from any archaeological investigation; (e) measures proposed to preserve significant archaeological evidence 'in situ'.

Building and works of the proposed development will involve excavation and ground disturbance

as a basement level will be created, containing a car park. The proposal, therefore, does not comply with A1 and has instead been considered against P2 as follows:

The ArcTas Statement of Archaeological Potential Report (Appendix L) indicated that the site does not have archaeological potential, therefore compliance with E13.10.1 P1 is achieved.

E13.10.2 Subdivision

As the proposed development does not involve subdivision, this provision is considered not applicable.

4.4 Specific Area Plans

F4.0 Royal Hobart Hospital Helipad Airspace Specific Area Plan

The proposed development is within the area of the Royal Hobart Hospital Helipad Airspace Specific Area Plan. The purpose of this Specific Area Plan is to ensure that the development of land does not obstruct safe air navigation of aircraft approaching and departing the Royal Hobart Hospital helipad.

E13.0 Development Standards for Buildings and Works

F4.3.1 Building Height

Objective:	
To ensure that buildings do not interfere with safe aircraft operations in the vicinity of the Royal Hobart Hospital helipad.	
Acceptable Solution	Performance Criteria
A1	P1
Building height including minor protrusions, masts or aerials within the areas shown on Figure F4.1 must be no more than: (a) 64.5m AHD if within the Inner Area; (b) 100m AHD if within the Outer Area.	Buildings that exceed the specified height must not create an obstruction or hazard for the operation of aircraft, having regard to any advice from the Civil Aviation Safety Authority, the Department of Health and Human Services and the helipad operator.

Building and works of the proposed development are within the Inner Area of the Specific Area Plan, the highest building is 25.4m less than 64.5m. Therefore, it complies with F4.3.1 A1 (a).

5. Impact Assessment

5.1 Visual Impact

The assessment of visual impact considers short, medium and long-distance perspectives. Relevant short distance perspectives are:

- The Glebe;
- The Brooker Highway; and
- On Campbell Street;

Relevant medium distance perspectives are:

- The Aberdeen Street Playground and the upper parts of the Glebe;
- Residential areas to the south-west in the Paternoster and Church Street area; and
- Residential areas to the east in the Warwick Street/Tasma Street area.

Longer distance views are largely blocked by the Church Street ridge from the west and the Queens Domain from the east. Views north and south are generally obstructed by intervening buildings.

An Architects Design Statement (Appendix K) supports the visual assessment.

The Glebe

The proposed building will be clearly visible from houses that are on the lower part of the Glebe, particularly between Scott and Lillie Street directly across from the site at a distance of 60m at the closest point. These residences will view the site through a line of well-established poplar and other trees on the western side of Brooker Highway. Further, there is also a row of paperbark trees in the median strip of the Brooker Highway which in time will add further screening to these houses. It is recognised these trees are deciduous and thus the building will be more obvious in winter and that two trees will be removed. However, significant screening of the building remains and the proposal includes a deep soil zone on the eastern side of the building which will accommodate some larger trees in case those in the highway reserve fail at some time in the future. The building is designed to be lower than the existing trees and thus given the extent of existing and future screening from eastern views, the impact is considered to be reasonable.



Photo 1 - Lillie Street looking west

The Brooker Highway

The proposed building will be visible both north and southbound on Brooker Highway. Both these viewpoints view the building to some extent through the large trees on the western side of the highway. From the north, the northern elevation is visible above the Woolworths site, but does not reflect the same roof design as the building on this site and thus is read as part of this architecture. The building is designed to appear as a conglomerate of separate elements, which will assist the building in forming an expected part of the townscape. From the south, the same applies, but as the vegetation is more prominent from this angle



Photo 2 - Brooker Highway looking north

Campbell Street

The proposal will be clearly visible from Campbell Street, particularly as the southern part of the building is built to the frontage. The existing houses will retain their relationship with the street, but the newer parts of the built form will reinforce the street edge as do other buildings in the area. The building mass is concentrated at the rear of the site and is broken into a series of discrete elements that will read as a series of interrelated parts rather than a monolithic form. The views from the street will largely be of the four-storey element meeting the street frontage and the existing houses (and the green spaces in front of them). Given the mass is concentrated to the rear of the site and it does not dominate the streetscape, the visual impact is considered reasonable.



Photomontage 1 - View south down Campbell Street

Aberdeen Street Playground and the upper parts of the Glebe

The views from the upper parts of the Glebe and Aberdeen Street Playground will also view the eastern elevation behind a line of significant trees but from a higher and more distant perspective. Whilst from this elevation the coverage of the existing trees will not be as great, the viewer is more likely to look over the site. For these reasons, the visual impact is considered reasonable.



Photo 3 - View west down Lillie Street

Residential areas to the south-west in the Paternoster and Church Street area

Views down to the site from the Church Street ridge are at a distance of 250-300m. Due to the intervening townscape, only the upper parts of the building will be visible from these perspectives. The building will appear as a series of individual roofs which will be read against the housing in the Glebe. As such, the visual impact is considered reasonable.



Photo 4 - View east from Paternoster Row

Residential areas to the east in the Warwick Street/Tasma Street area

Due to the intervening townscape, only the upper parts of the building will be visible from these perspectives. This area does not have great elevation, as such more of the proposed building will be hidden by the existing townscape. The visual impact from this perspective is considered reasonable.



Photo 5 - Warwick Street looking east

5.2 Traffic and Transport Networks

A Traffic Impact Assessment(TIA) has been undertaken (refer to Appendix G). The report considers the potential increase in traffic from the proposed uses and development, safety implications as well as compliance with elements of the Planning Scheme and relevant Australian Standards. The report concludes that the proposed development does not significantly increase the number of vehicle movements on the local road network during peak periods and is unlikely to impact existing parking facilities therefore should not adversely impact traffic efficiency and road safety in the area. In addition, the Metro bus stops are located within a 200m radius of the subject site. The site is also within easy walking distance of local shops and a college. Future residents and users of the proposed development will be provided with a number of active transport options contributing to better health outcomes. Based on the TIA, the proposed development is supported on traffic grounds.

5.4 Economic Impacts

Beyond the economic stimulus from the construction activity, the future residents and visitors to the site will provide ongoing positive contributions. There will be increased patronage to existing businesses in the Hobart CBD. The proximity of working and studying opportunities is likely to appeal to residents, thereby reducing the need for increased road infrastructure.

6. Conclusion & Recommendations

The proposal seeks to develop Mixed-Use Development predominantly at 175, 177 and 179 Campbell Street (CT 23364/1, CT 23364/2, CT 22529/3, and CT 23363/1 respectively) for residential use with several commercial tenancies and publicly accessible open space areas.

The proposal is for demolition of the existing building at 175 Campbell Street; the adhesion of four lots to create a single development site area; and the development of a 6-storey mixed-use building.

The mixed-use building will comprise a basement car park which is below the ground; 5 floors of residential development with a total of 31 multiple dwellings.

The proposed development will use the existing access to enable vehicle movements. The proposed development generates the following discretions under the *Hobart Interim Planning Scheme 2015* (the Scheme):

- **15.4 Development Standards for Buildings and Works**
 - 15.4.1 Building Height P1
 - 15.4.5 Landscaping P1
- **E2.0 Potentially Contaminated Land Code**
 - E2.6.2 Excavation P1
- **E5.0 Road and Railway Assets Code**
 - E5.5.1 Existing road accesses and junctions P3
 - E5.6.4 Sight distance at accesses, junctions and level crossings P1
- **E6.0 Parking and Access Code**
 - E6.6.1 Number of Car Parking Spaces P1
- **E9.0 Attenuation Code**
 - E9.7.1 Development for Use with Potential to Cause Environmental Harm P1
- **E13.0 Historic Heritage Code**
 - E13.7.1 Demolition P1
 - E13.7.2 Building and Work other than Demolition P1
 - E13.7.2 Building and Work other than Demolition P2
 - E13.7.2 Building and Work other than Demolition P3
 - E13.7.2 Building and Work other than Demolition P4
 - E13.7.2 Building and Work other than Demolition P6
 - E13.10.1 Building, Works and Demolition P1

The proposal has been assessed against all relevant performance criteria and found to either comply with Acceptable Solutions or be able to satisfy applicable Performance Criteria.

In conclusion, the application is considered to be acceptable with respect to the Planning Scheme requirements and therefore ought to be supported by the Planning Authority.

APPENDIX A

Title Information

APPENDIX B

Survey Plan

APPENDIX C

Proposal Plans

APPENDIX D

Notification Letters

APPENDIX E

Demolition Plan

APPENDIX F

Environmental Site Assessment

APPENDIX G

Traffic Impact Assessment

APPENDIX H

Concept Services Report

APPENDIX I

Flood Modelling Report

APPENDIX J

Heritage Assessment

APPENDIX K

Architectural Design Statement

APPENDIX L

Arctas Statement of Archaeological Potential

APPENDIX M

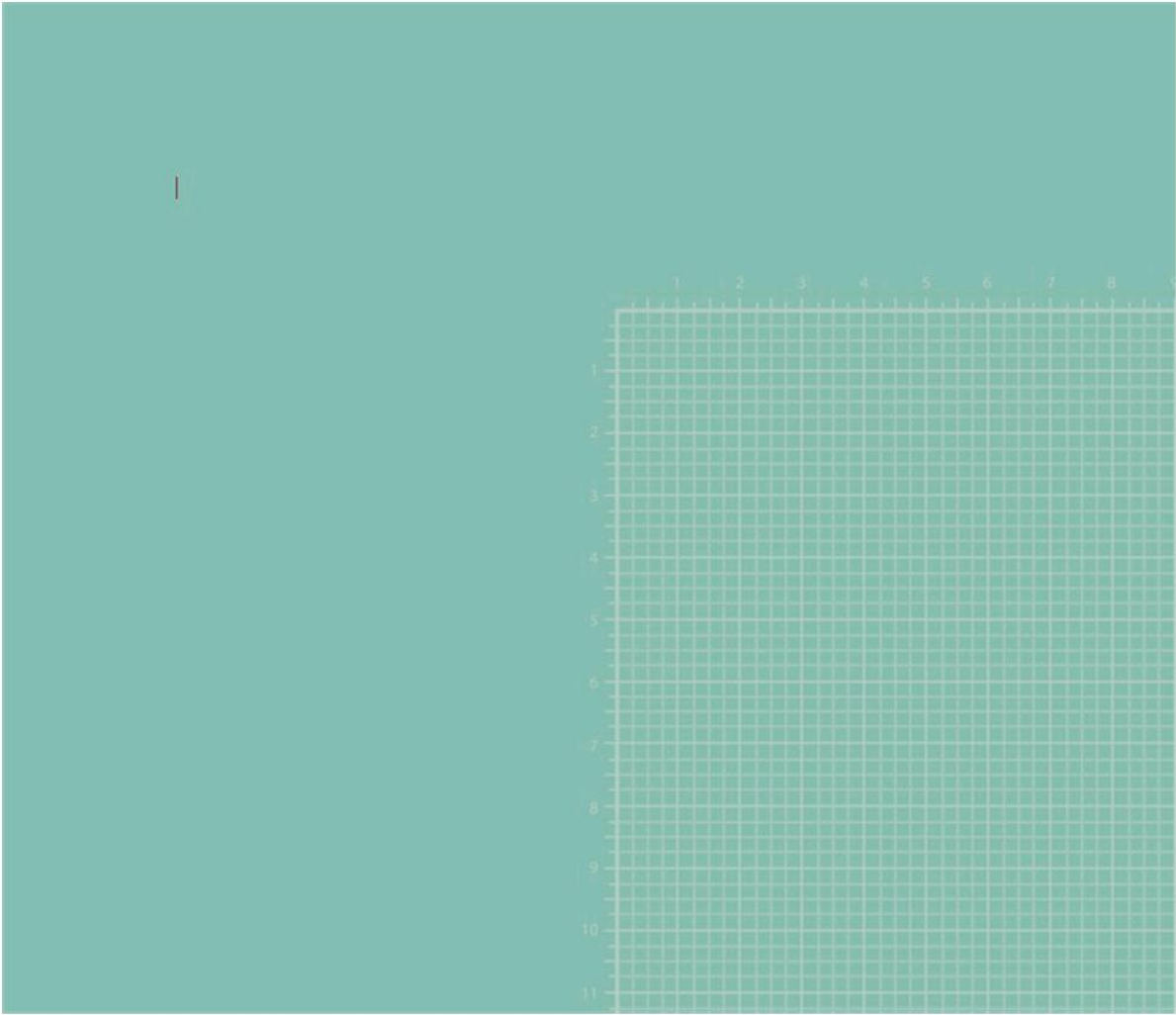
Landscape Architecture Report

APPENDIX N

Arborist Assessment

APPENDIX O

Waste Management Plan



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175-179 CAMBELL ST
DA REPORT
NOVEMBER 2021

CONTENTS

01	LOCATION	Cumulus respectfully acknowledges the First Peoples of Australia, their Elders past and present, who were and are the keepers of their cultural and knowledge and traditions, and the traditional owners of the land on which we live and work.
02	CONTEXT	
03	DESIGN	

Revision #	Issue Date
Draft	01.07.2021
Revision A	06.07.2021
Revision B	17.11.2021
Revision C	17.01.2022

PROJECT INTRODUCTION



Hobart's high appeal as both a tourism destination and beautiful place to live has also brought with it an increase demand for housing. Unlike other larger Australian cities, Hobart is relatively undeveloped and provides high level of access to the city, social amenities and recreational areas, all of which make it ideal for higher density development inner city living.

Surrounded by residential and commercial uses, the design's form draws inspiration both from the surrounding industrial warehouse buildings as well as neighbouring historic residences.

NOTE:

This report has been updated to reflect a revised proposal based on extensive discussion with the HCC Urban Design Advisory Panel. Design changes include:

- › Reduced overall height and n° of apartments
- › Reduced roof height over circulation space to south
- › Simplification of building form behind heritage cottages
- › Relocation of plant equipment on the street so that heritage cottages are not concealed.



View of the Revised (current) Proposed Development from Campbell St



View of Original Proposal from Campbell St

01

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LOCATION

Located between the CBD and the
Queens Domain, the site is ideally
located for inner city living.

SITE LOCATION



RECREATIONAL AREAS



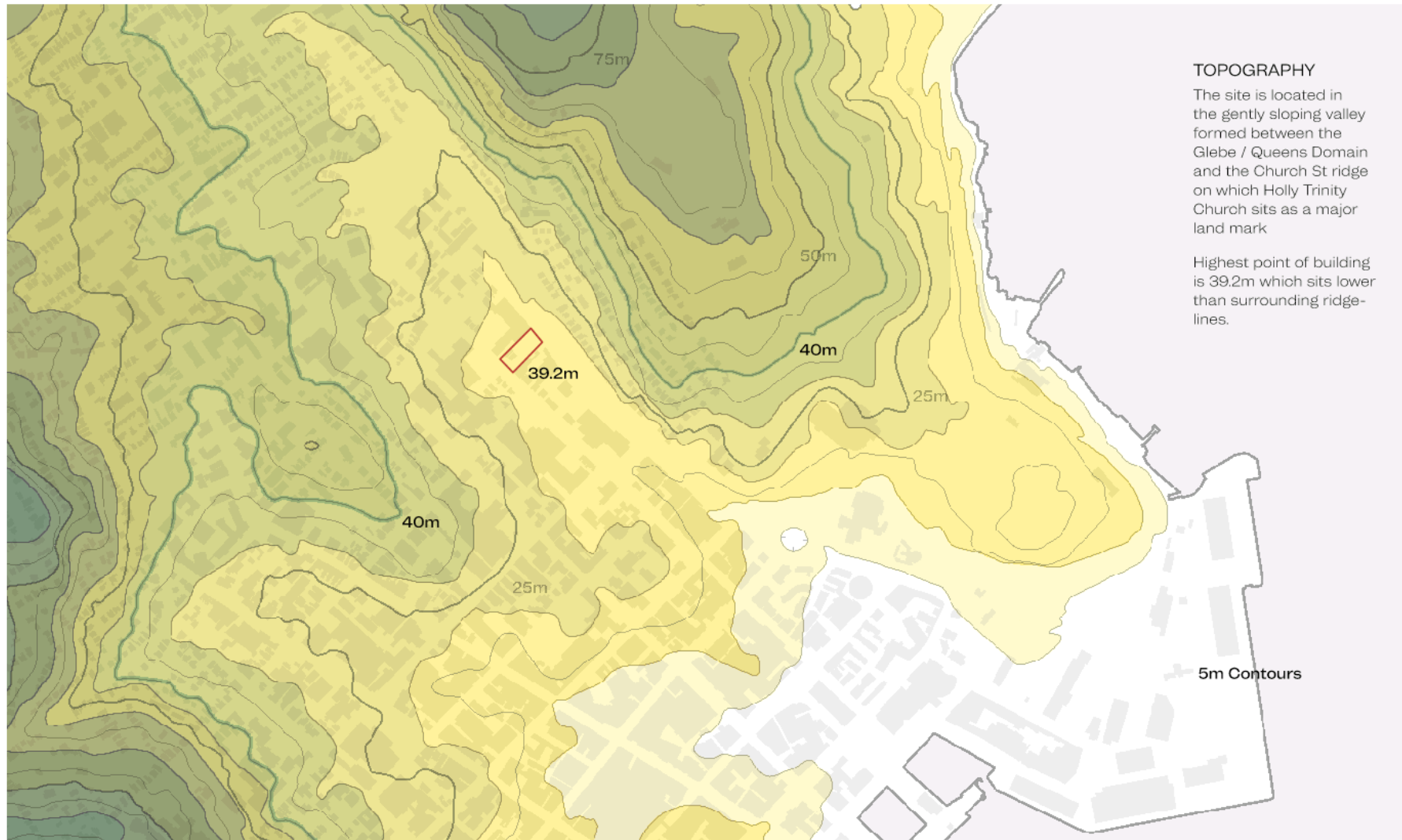
SPORTS FACILITIES



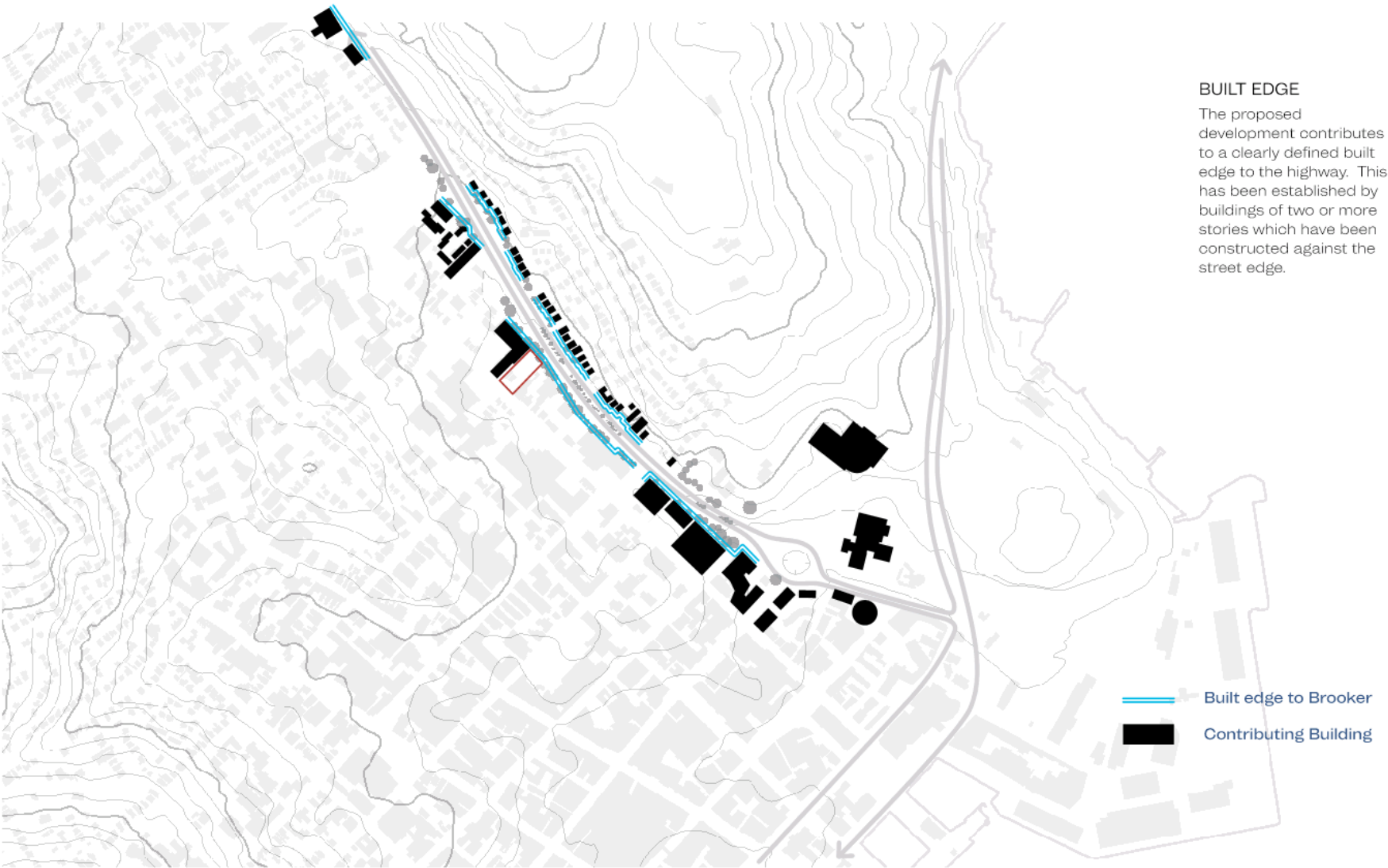
ROAD NETWORK



SITE TERRAIN



HIGHWAY EDGE



HIGHWAY EDGE



FUTURE PATTERN



02

/

CONTEXT

The design has evolved through understanding the site, its constraints and the surrounding context.

IMMEDIATE CONTEXT



CONTEXT

The site is located at 175-179 Campbell St and surrounded by a mix of residences, commercial and semi-industrial uses.

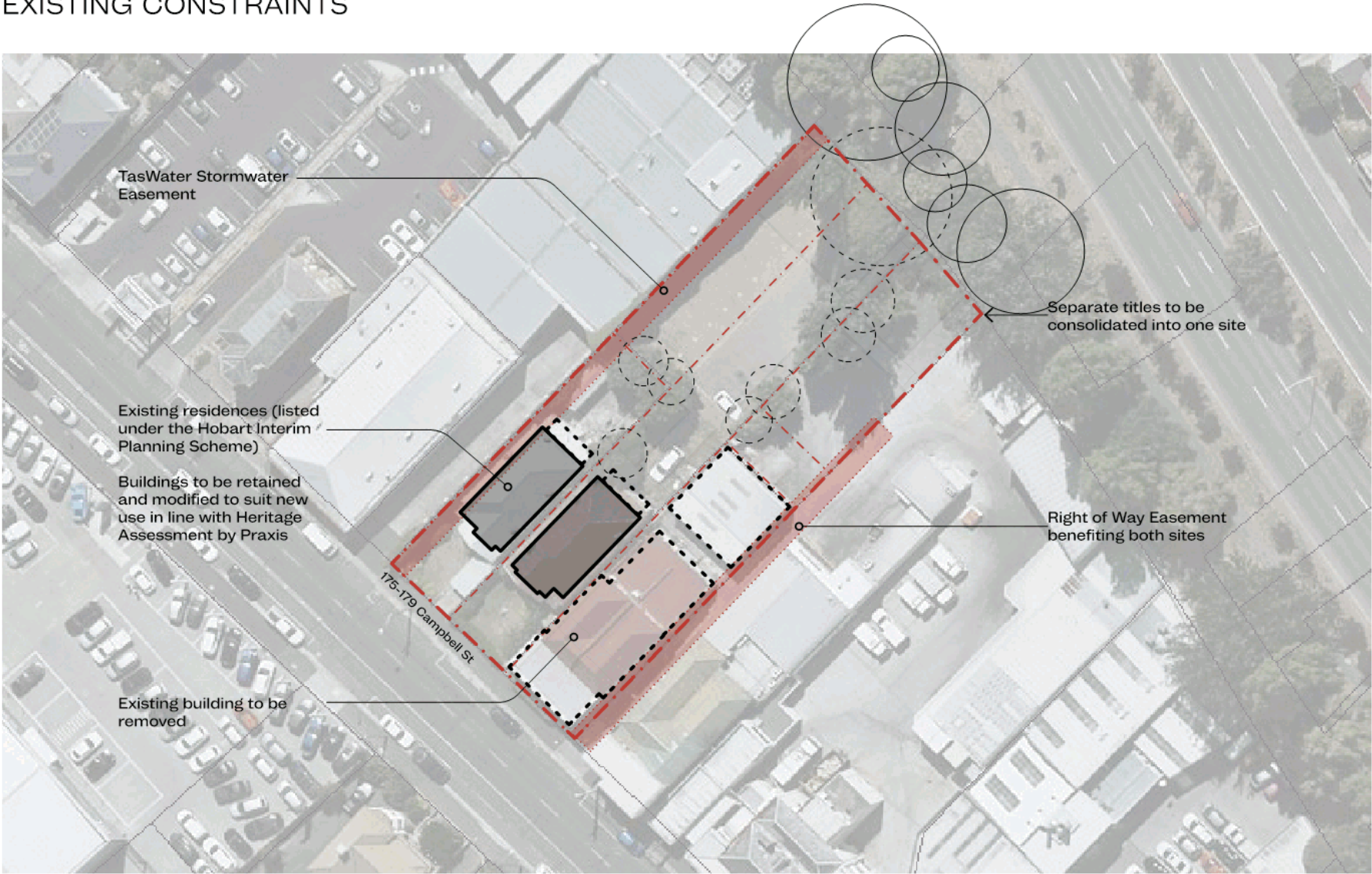
Campbell St is primarily single or two storey buildings however generous floor to ceiling heights, raised piths and pitched roofs fuhrer increase the presence of some of these residential buildings.

Where buildings are residential in nature the buildings generally have a direct relationship to the street.

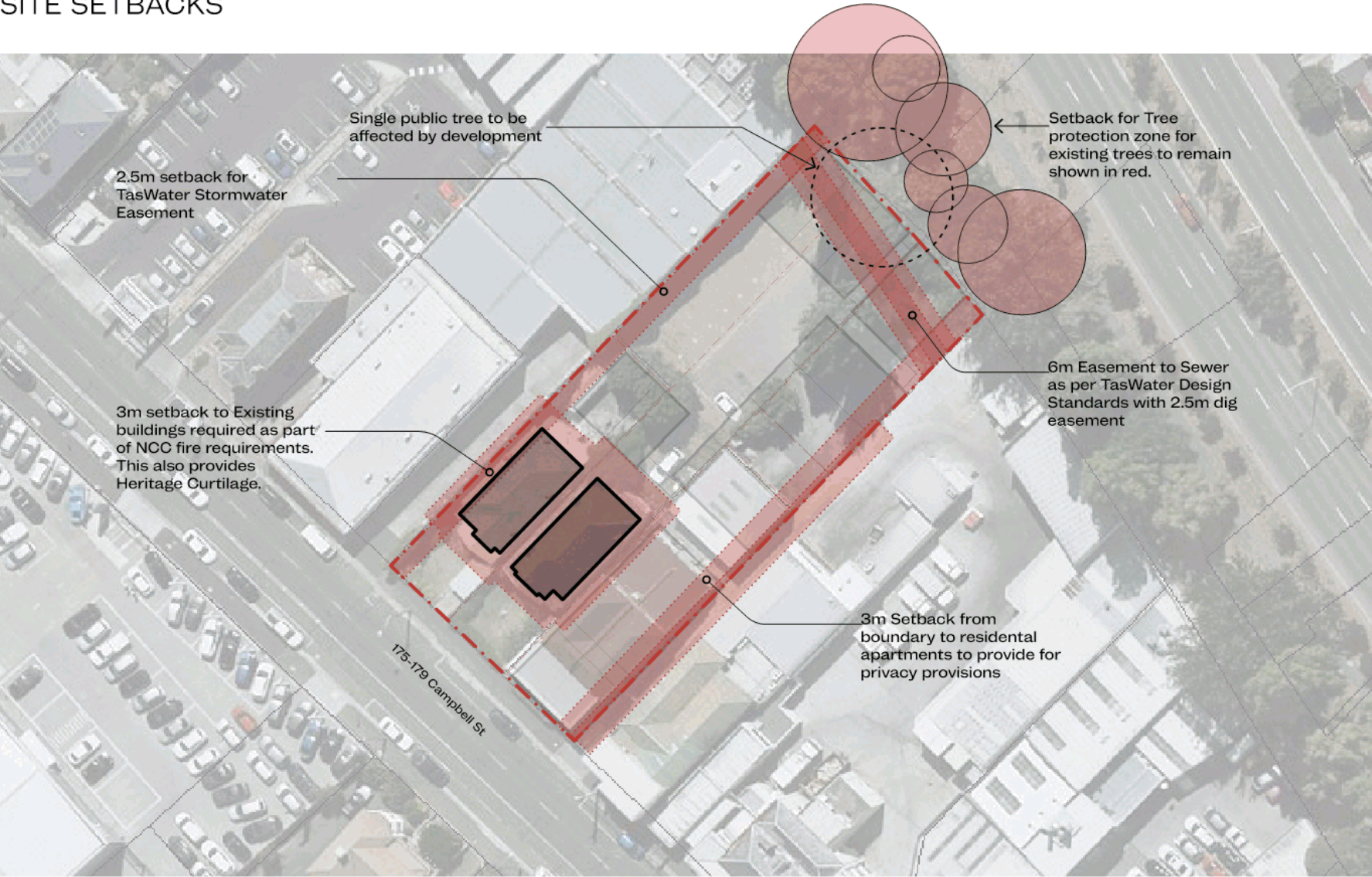
The design response draws from both the residential and industrial natures of the site. The material pallet for the proposed building is substantially masonry / brick picking up on the construction material of historic residences while the form is derived from the saw tooth roofs of the neighboring industrial warehouses.



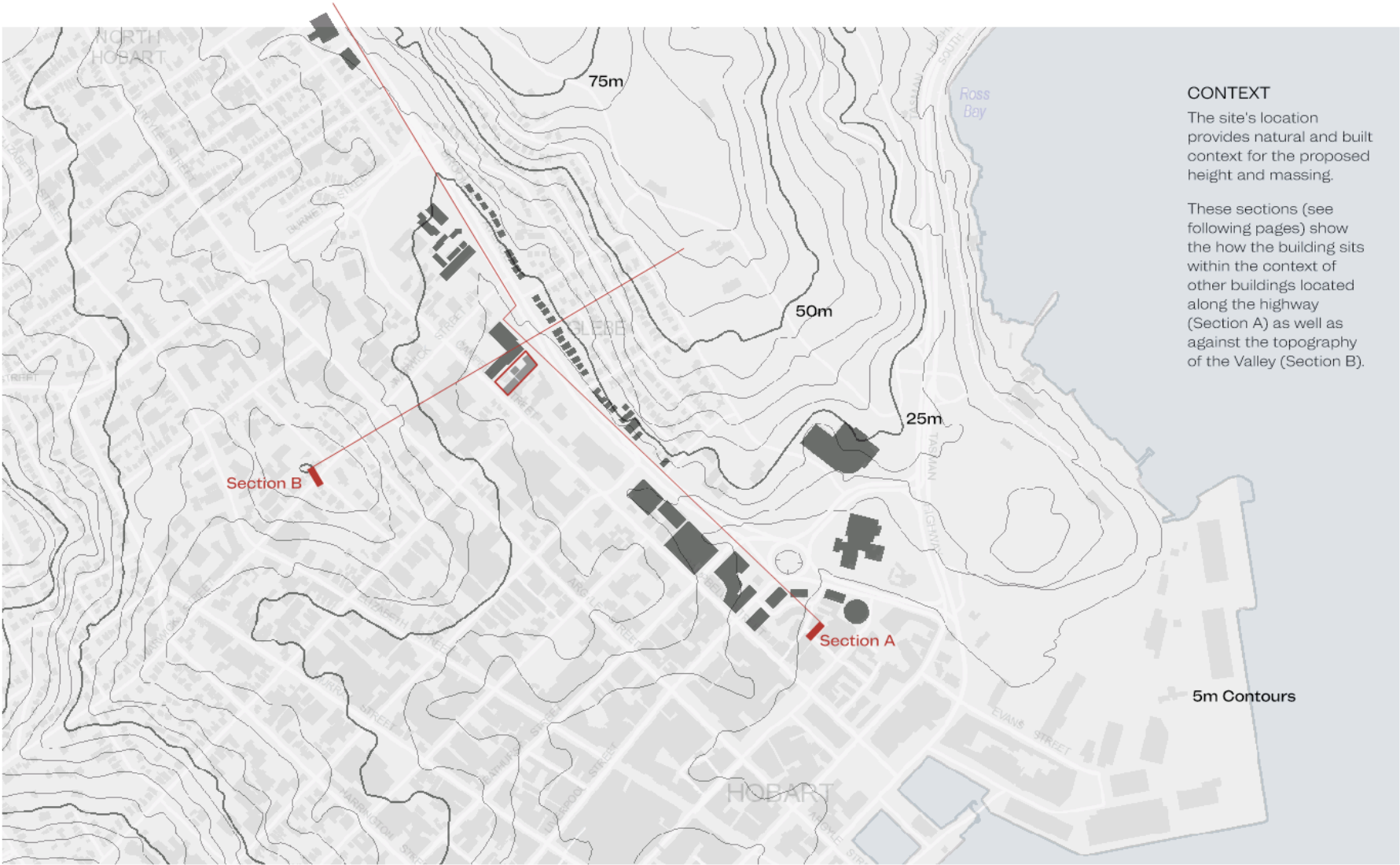
EXISTING CONSTRAINTS



SITE SETBACKS



BUILT CONTEXT



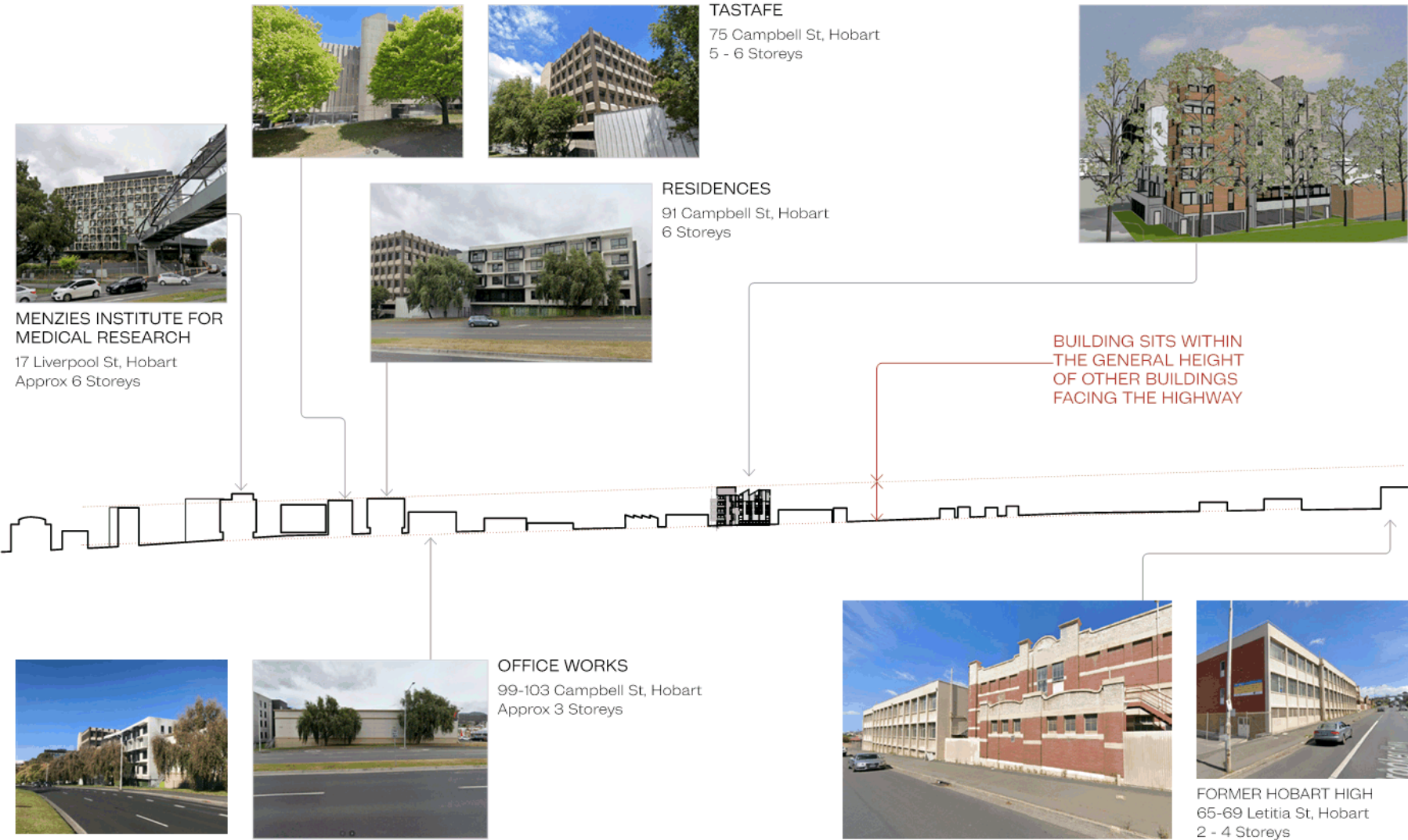
CONTEXT

The site's location provides natural and built context for the proposed height and massing.

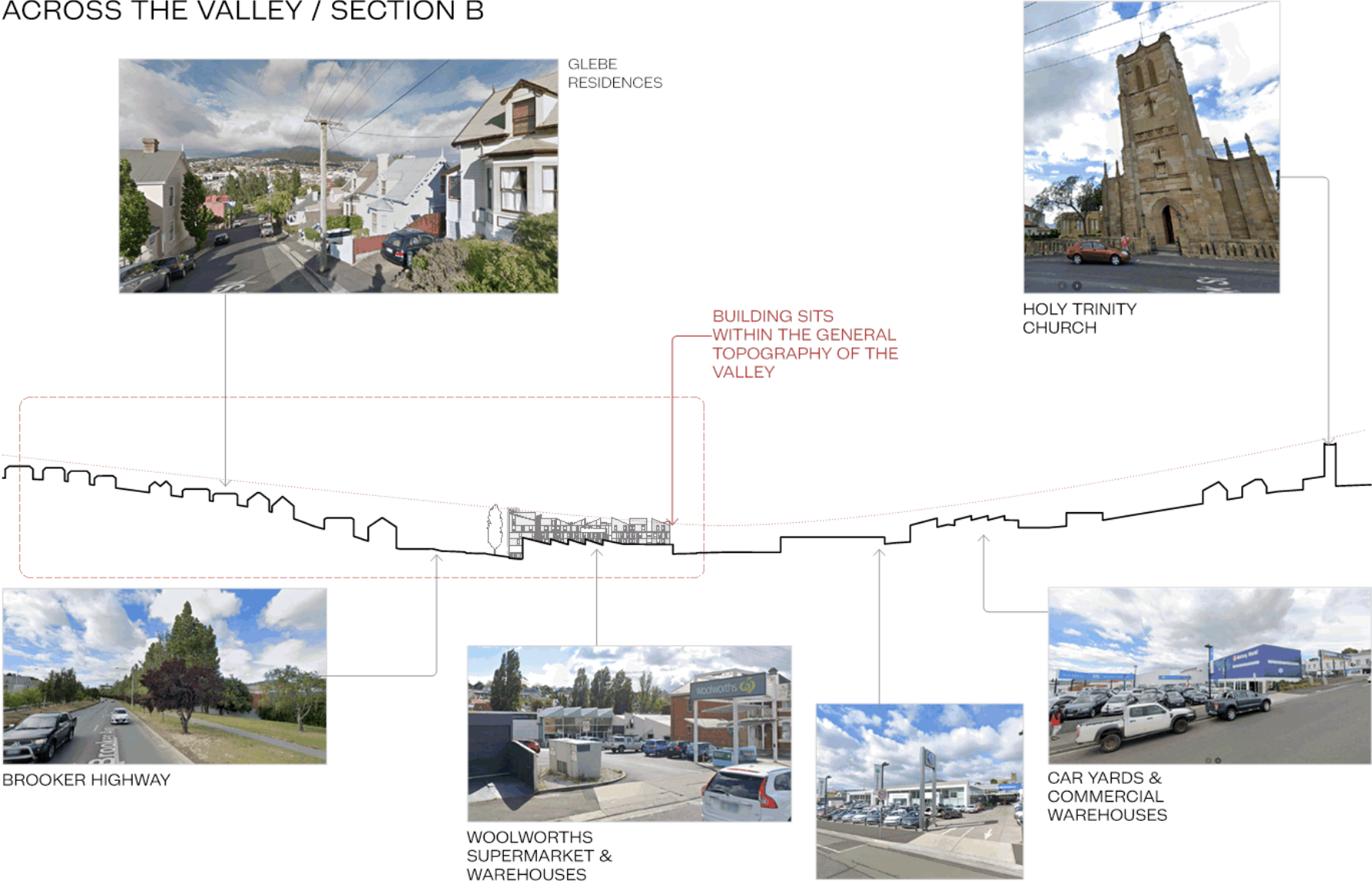
These sections (see following pages) show the how the building sits within the context of other buildings located along the highway (Section A) as well as against the topography of the Valley (Section B).

CUMULUS

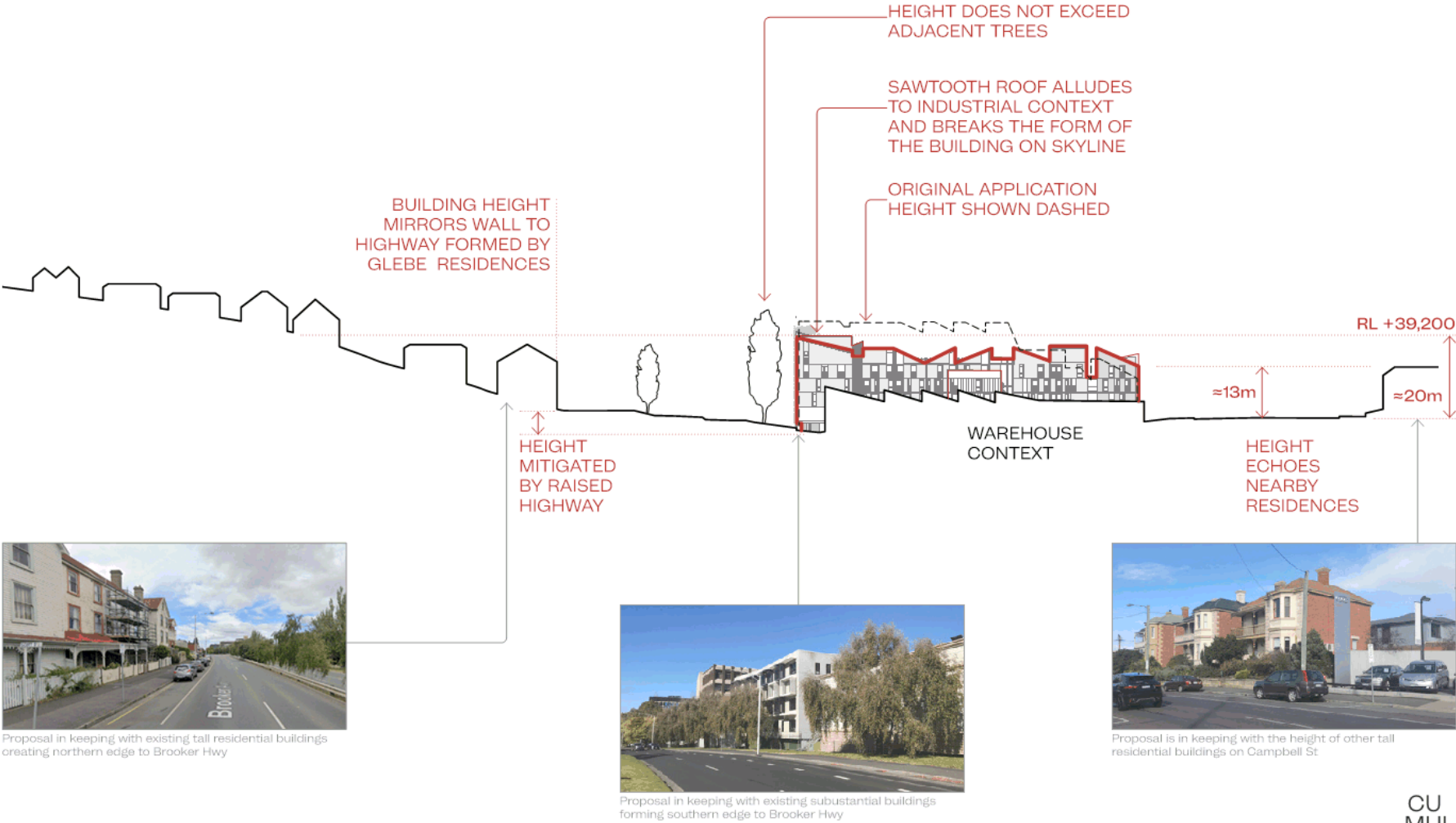
ALONG THE VALLEY / SECTION A



ACROSS THE VALLEY / SECTION B

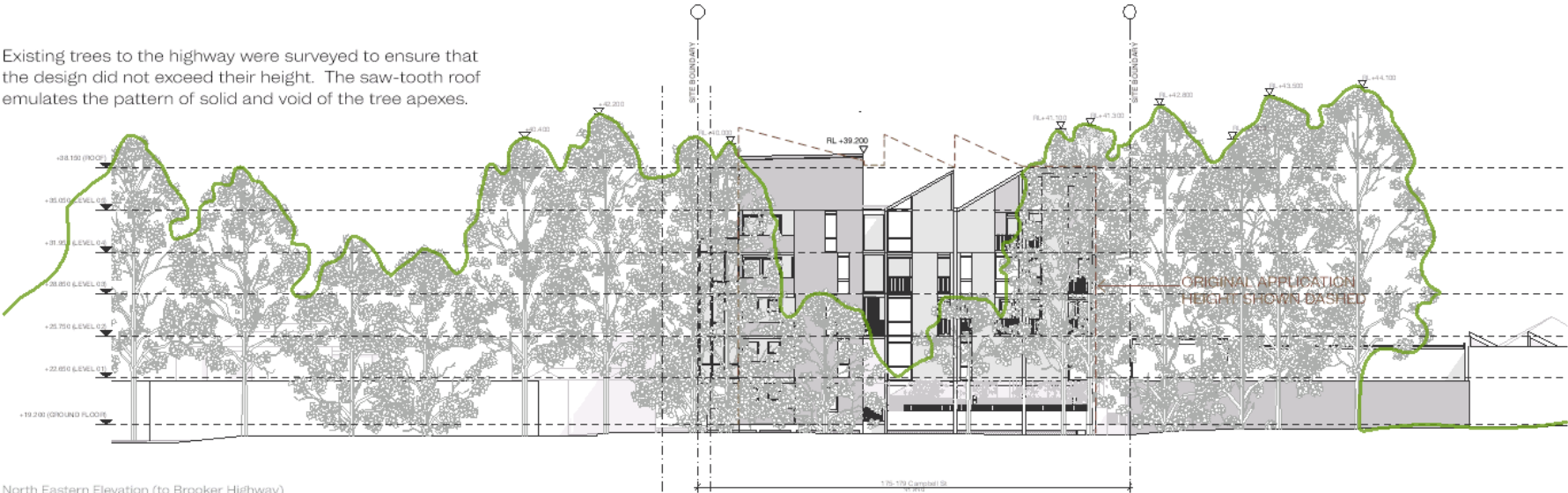


HIGHWAY EDGE / DETAILED SECTION B



HIGHWAY ELEVATION & TREE HEIGHTS

Existing trees to the highway were surveyed to ensure that the design did not exceed their height. The saw-tooth roof emulates the pattern of solid and void of the tree apexes.



North Eastern Elevation (to Brooker Highway)



Point cloud survey data of surrounding tree heights



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CONTEXT PHOTOMONTAGES

The following photomontages show the proposed building in the wider city context.

Five views have been supplied by Hobart City Council - taken from points of interest - using the HCC City Model to show scale, massing and form.

Below each of these, we have provided a rendered photomontage that demonstrates the reduced impact made by material & colour choice as well as the pattern of the openings in the facade of the building.

Note: height of building in photomontage shown as best estimate using data images supplied by HCC



View from Lillie Street (Photomontage - Revised Proposal)



View from Aberdeen Street (Photomontage - Revised Proposal)



View from Brooker Highway (Photomontage - Revised Proposal)



View from Brooker Highway (Photomontage - Revised Proposal)



View from Campbell St (Photomontage - Revised Proposal)

03

/

DESIGN

Design seeks to respect the local context, drawing from its scale, material and formal characteristics.

DESIGN STATEMENT

The proposed development at 175-179 Campbell St aspires to be a respectful insertion into the inner city fabric of Hobart. Drawing design inspiration from the surrounding building typologies the building is both contemporary yet contextually appropriate.

The following design moves are particular motivated by a consideration of the local context:

HERITAGE

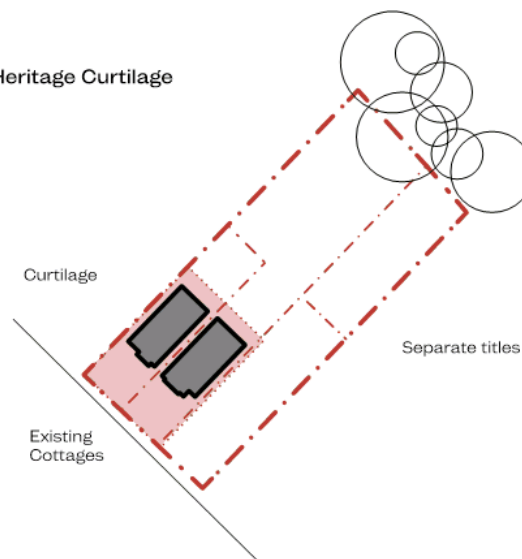
The two existing cottages that are listed in the Heritage Schedule HIPS15 of the Hobart Planning Scheme (177 & 179 Campbell St) have been retained. Noted in the Praxis heritage assessment as "[merely demonstrative] representative of a class of place" rather than of importance to the wider local context, the buildings have been proposed for adaptation to commercial uses.

A new glazed link is proposed between the buildings to provide new access compliant entry to both of the cottages. The new structure will sit under the eaves line of the existing buildings and recessed so that it is subservient to the form of the cottages. Important stylistic features of the buildings will be retained with only minor alterations to the existing fabric to facilitate access and greater connection to the site - the most substantial of which is the removal of poorly constructed lean-to additions to the rear.

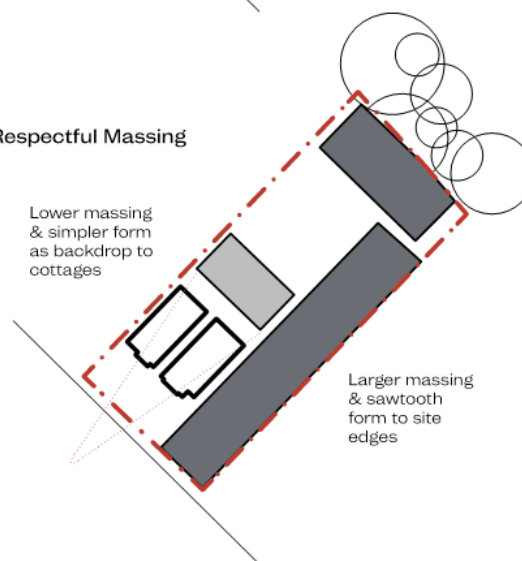
Although not required by the Praxis report, the new apartment building has been arranged to provide appropriate curtilage to the heritage buildings. Where the new building forms a backdrop cottages, the form is simplified and scale has been decreased to reduce its presence. A mesh screen with growing vines adds greenery to the scene, reminiscent of its current vegetated backdrop.

The landscape design proposes two small terrace gardens at the street opening the cottages' facades to the street and forming an active edge to the site. The proposed fencing draws inspiration from the existing simple metal balustrade.

Heritage Curtilage



Respectful Massing



Simplified building form with green screen as backdrop to cottages



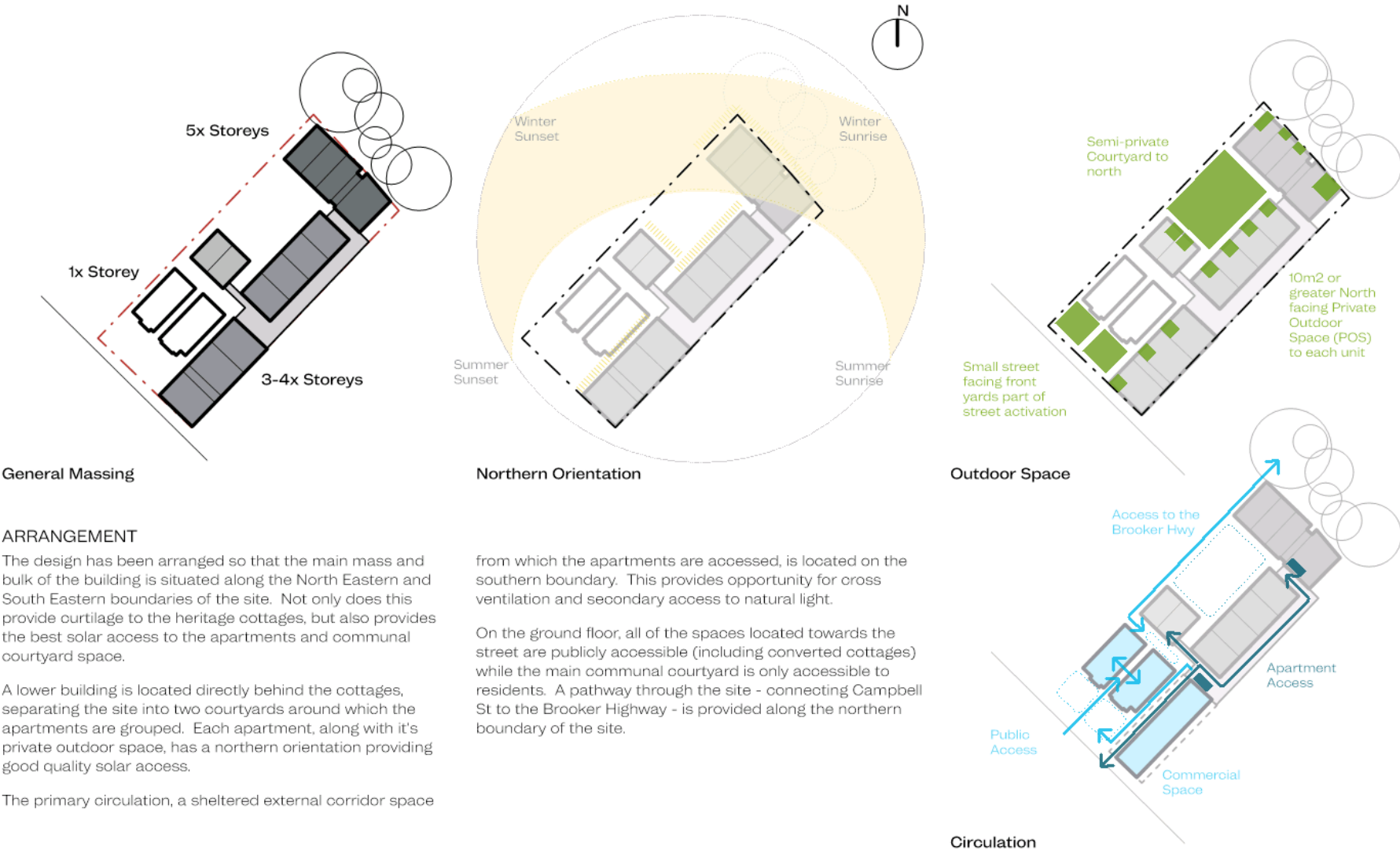
Simplified building form with green screen as backdrop to cottages



Site massing around heritage cottages

CUMULUS

ARRANGEMENT



ARRANGEMENT

The design has been arranged so that the main mass and bulk of the building is situated along the North Eastern and South Eastern boundaries of the site. Not only does this provide courtilage to the heritage cottages, but also provides the best solar access to the apartments and communal courtyard space.

A lower building is located directly behind the cottages, separating the site into two courtyards around which the apartments are grouped. Each apartment, along with its private outdoor space, has a northern orientation providing good quality solar access.

The primary circulation, a sheltered external corridor space

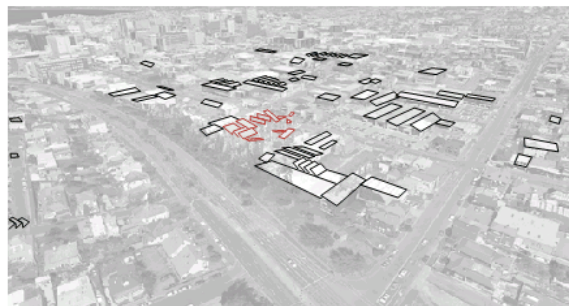
from which the apartments are accessed, is located on the southern boundary. This provides opportunity for cross ventilation and secondary access to natural light.

On the ground floor, all of the spaces located towards the street are publicly accessible (including converted cottages) while the main communal courtyard is only accessible to residents. A pathway through the site - connecting Campbell St to the Brooker Highway - is provided along the northern boundary of the site.

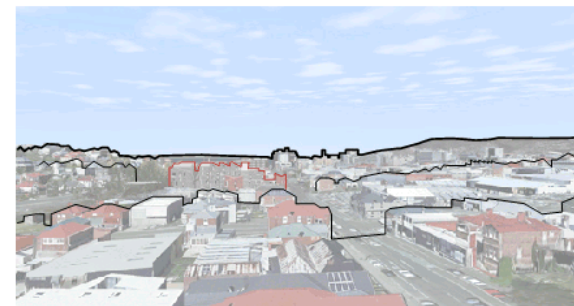
BUILDING FORM



Roofs of proposal blends with the patchwork of roofs in the Glebe



Proposal's roof mimics warehouse roofs of surrounding industrial uses



Height Of proposal sits within the amphitheater form of Hobart

FORM

The building's proposed form is lower on Campbell St - responding to the largely 2 to 3 storey street pattern - and increases in height towards the Brooker Highway - taking precedent from both the adjacent Poplar trees and other buildings that front the Highway.

The pitched roof forms are inspired by the neighbouring sawtooth warehouse roofs as well as the abstracted pattern of roofs seen against the slope of the Glebe - particularly when viewed from West Hobart.

The "sawtooth" roof form also helps to break up the form of the building against the skyline while creating a cohesive and unified design. When viewed from the north the building sits within the general basin form of the valley and creates an uneven roof pattern that comfortably sits within the collection of roof lines of the city.

OPENINGS

Punctuating the solidity of the residential 'blocks' the windows and balcony openings have been arranged as an abstraction of the existing heritage pattern. These take inspiration from neighbouring Victorian houses which have consistent height windows which vary in width as demanded by the floor plan.

Metal balustrades sit within these openings maintaining the simplicity of the opening and providing high degree of solar penetration to the apartments (see following page).

MATERIALS & COLOUR

The cladding materials and colour for the project have also been inspired by the surrounding context.

The residential 'blocks' have been specified as to be cladding either in brick or terracotta brick skin alluding to the primarily brick construction of the surrounding houses. These envisaged to be a mixture of burnt red (to match neighbouring red brick walls and roofs) and sandy grey (picking up on the warehouse context).

Translucent vertical circulation cores break up the solid brick forms of the building. These are envisaged to be clad with light weight, semi-transparent polycarbonate which are also in-keeping with the industrial context.

CONTEXTUAL ABSTRACTION

EXISTING PATTERN



Historic window pattern has consistent height but varied widths



Industrial sawtooth forms vary the local roof line



Metal balustrades transparently guard openings

ABSTRACTED DESIGN RESPONSE



Simple openings that vary in width and location on the facade



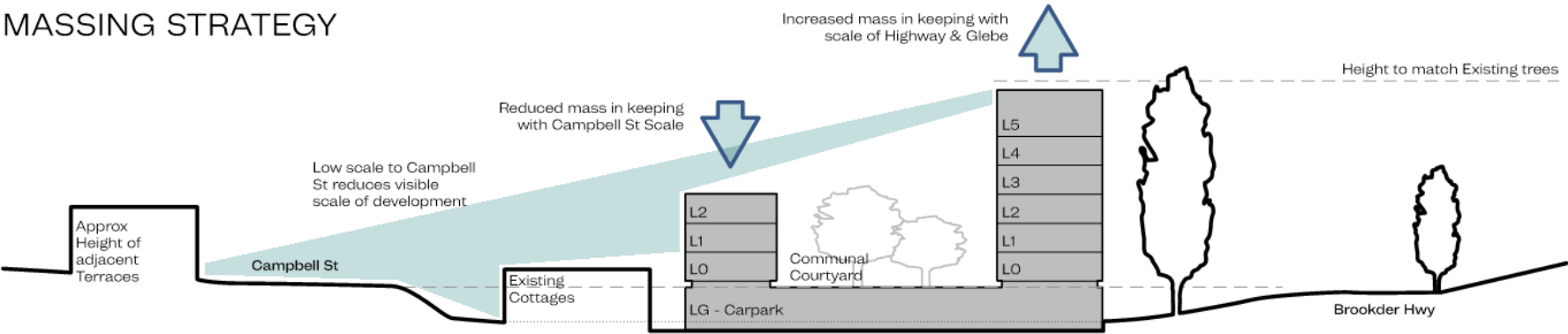
Dynamic roof-line that mimics context



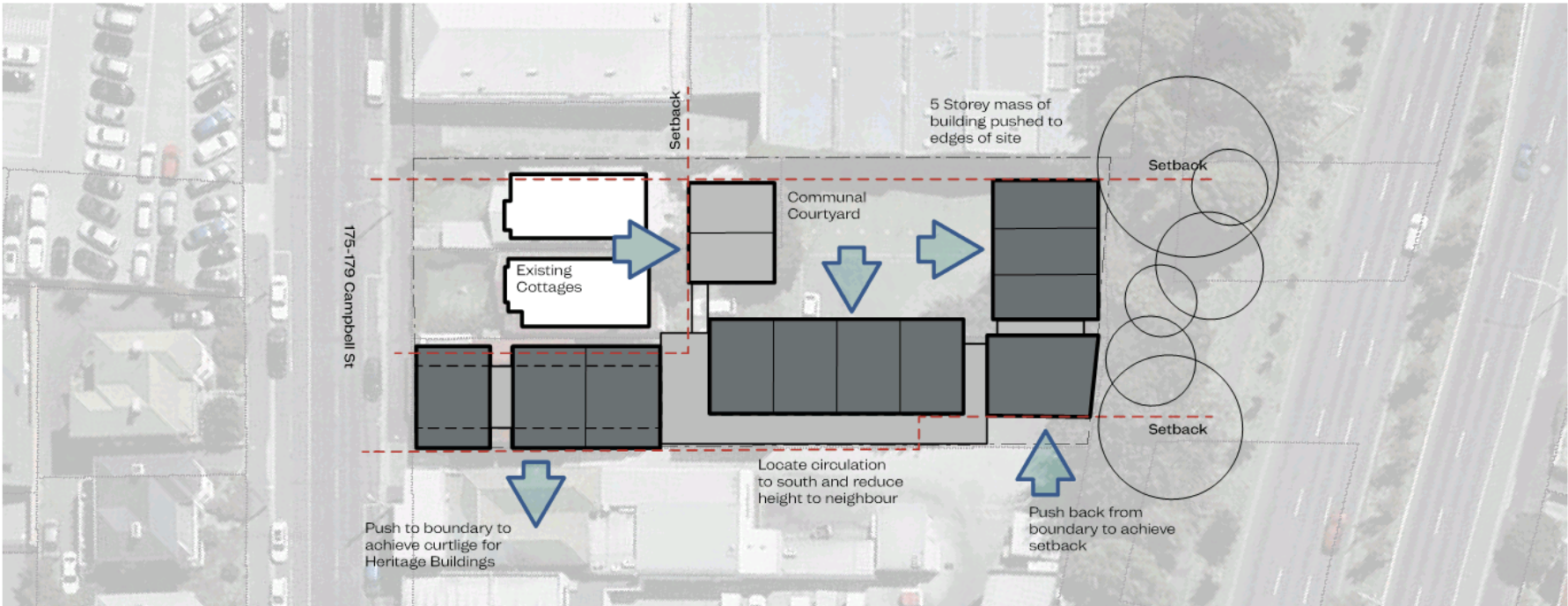
Simple balustrades that do not interfere with pattern of openings

CUMULUS

MASSING STRATEGY



Diagrammatic Site Section illustrating increased massing away from Campbell St



Diagrammatic Plan illustrating Massing towards southern and northern edges of the site

CAMPBELL STREET SCALE



MASSING SITS WITHIN 2-3 STOREY CONTEXT OF CAMPBELL ST



INCREASED MASSING AWAY FROM CAMPBELL ST (TO RHS)



CAMPBELL ST MASSING SITS WITHIN ARRAY OF VARYING HEIGHT BUILDINGS

PROPOSED - MASSING & FORM



AERIAL VIEW - CAMPBELL ST (RHS) TO BROOKER (LHS)



CAMPBELL ST ELEVATION



MASSING OF DEVELOPMENT TO BROOKER (FROM NORTH)



MASSING OF DEVELOPMENT TO BROOKER (FROM SOUTH)

175-179 CAMPBELL ST - PROPOSED



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CONCEPT SERVICES REPORT

Multi-Residential Development 177-179 Campbell Street, Hobart - 7000



June 2022

**Johnstone McGee & Gandy Pty Ltd**

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Appendix A - Architects Site Plan

Appendix B - Concept Services Plans

Appendix C - Water and Sewer Demand Calculations

Appendix D - Stormwater Detention Calculations

1 Introduction

This concept services report has been prepared in support of a development application to be lodged with Hobart City Council for the construction of a multi-residential development at 177/179 Campbell Street, Hobart TAS 700 across three titles (S.P.22529/D.23364 and D.23363). The proposal involves the partial demolition of the existing buildings and a new development comprising of 8 Townhouses, 22 apartments (13 two bedrooms/9 three bedrooms) and 4 skyhomes.

The property has a total area of 2431 m² grading at between 1 & 5% from Campbell Street towards the rear of the lot adjacent to the Brooker Highway road reservation. The property shows in addition to the existing residences, an area in the northern region of the land with shrubs, trees, and a considerable portion of gravel paving for the existing light vehicles traffic/parking. The two existing properties being retained across the Campbell Street facade to the south of the land under analysis, represents approximately 200 m² combined. In addition, both properties are planned for partial demolition and reconstruction as part of the proposed development.

The concept is to be serviced with power, communications, water, sewer and stormwater connections all of which are to be installed as part of the development. This report addresses how each of these are to be provided to meet authority and planning scheme requirements.

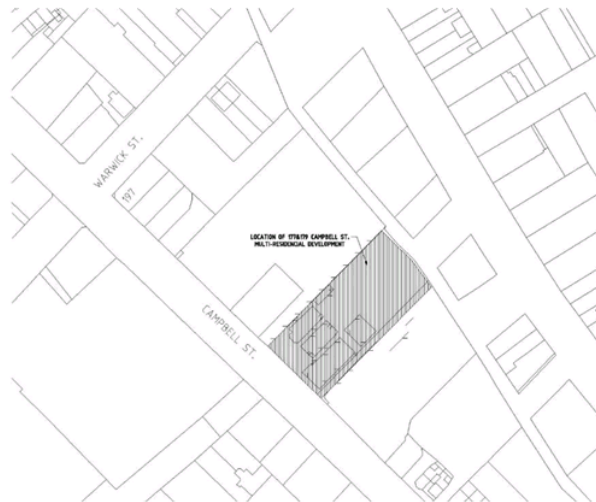


Figure 1 - Site Locality Plan

2 Power, Lighting and Communications

2.1 Applicable Design Standards

- Electrical Infrastructure on the lot shall be designed in accordance with AS/NZS3000, Australian / New Zealand Wiring Rules.
- Lighting of common areas, where required, shall be provided to meet AS/NZS1158 .3.1 - 2020.
- Nation Broadband Network connections shall be provided to each unit and tenancy in accordance with the NBN standards "Residential preparation and installation: Single Dwelling Units (SDUs) and Multi Dwelling Units (MDUs)" (1).

2.2 Proposed System

Electrical supply to the site is to be provided from the existing TasNetworks system in Campbell Street which consists of overhead and underground services on the eastern side of the street.

A new private sub-station is proposed to be installed at the basement level of the building adjacent to Campbell Street, this sub-station will supply all of the new residential and commercial properties on the site. Due to the potential of inundation of the basement during flood events the sub-station enclosure is to be fitted with suitable flood doors to prevent flooding of the substation during these relatively short term events, refer Flood Hazard Report, Flussig Engineers, July 2021.

Where required by the planning scheme lighting of common areas including the driveway and paths will be provided in accordance with the requirements of AS/NZS 1158.3.1 and the NCC, the electrical supply to the common area lighting shall be provided from a dedicated Common Area switchboard.

Existing NBN services are located in the back of the footpath in Campbell Street adjacent to the property boundary from which a new connection to the site is to be provided.

NBN connections will be provided from the property boundary to the MDU of each unit in accordance with NBN guidelines, "Residential preparation and installation: Single Dwelling Units (SDUs) and Multi Dwelling Units (MDUs)".

NBN designs shall be prepared in accordance with the NBN design standards using the NBN Assisted Drafting Tool (ADT) and be submitted to and approved by NBN prior to the commencement of installation.

3 Sanitary Drainage System

3.1 Applicable Design Standards

The sanitary drainage system for the site shall be designed to comply with AS 3500.2 National Plumbing and Drainage Code - Sanitary Plumbing and Sanitary Drainage and to TasWater Standards (2).

An existing TasWater DN400 sewer gravity trunk main runs perpendicular to the site through the northern region of 177 Campbell St. In addition, it includes a manhole near the northwest perimeter adjacent to the boundary with Woolworths (185 Campbell Street). Furthermore, there is also sewer on the site which services 179 Campbell St, a DN100 TasWater gravity service.

3.2 Proposed System

As part of the development the titles for the existing properties, 175 to 179 Campbell Street are to be amalgamated creating a single lot on which the new development can be constructed. The existing private sewer drains servicing the property, are to become redundant and removed.

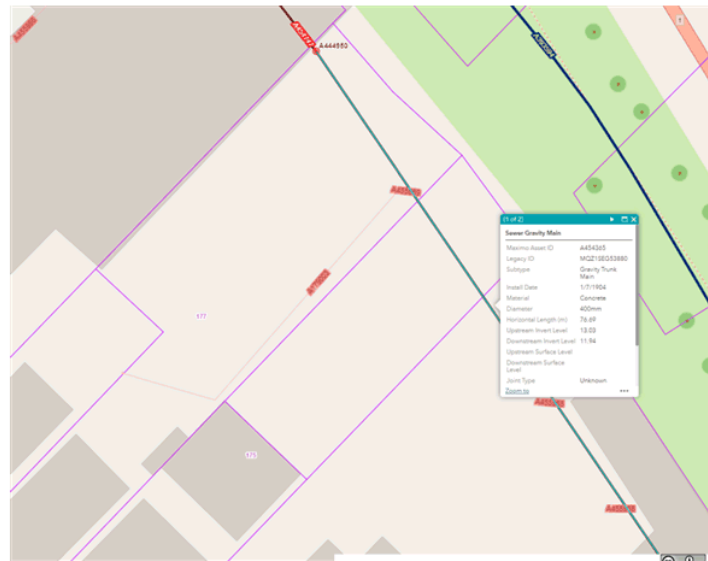


Figure 2: Existing Sewer Connections

The existing connection to the main will need to be upgraded to provide a DN150 connection to the new multi-story development, including the redeveloped commercial properties on Campbell Street. As the area is within the Hobart City Council boundary trap zone a boundary trap will need to be provided on the new connection. Due to the low level of the basement, approximately 1 meter lower than the surrounding ground surface and the potential for overland flows through the site and surrounding properties, it is proposed that a reflux valve be installed upstream of the boundary trap.

The DN150 connection size complies with the minimum lot connection size required by TasWater and referenced on Standard Drawing MRWA-S-104A. The property will be serviced by new internal sanitary drainage pipework to be designed following the approval of the development.

The existing DN400 TasWater sewer main running through the site has a depth below the new finished surface level of the carpark varying from 2.7 meters to 3 metres, TasWater require that the depth to invert from the carpark surface be provided as the minimum clearance above the level of the carpark finished surface to allow for future maintenance of the main. Car park levels of 15.7 to 15.8m AHD have been set to achieve this clearance to the underside of the ground floor level beams, refer drawing J173021PH-P-S1 in Appendix B.

Construction of the new development will limit TasWater access, through the existing property, to the sewer manhole located on the northeast corner of the site adjacent to the Woolworth's boundary wall. Access to this manhole can provided in the future via the Brooker Highway road reservation from Warwick St. The Hobart City Council also have a stormwater pit which provides access to the Park Street Rivulet in the vicinity of the site, within the Brooker Highway road reserve, they will also require access to this from Warwick Street.

Refer drawing J173021PH-P-S1 Appendix B for concept layouts of the proposed sanitary services for the development.

The TasWater supplement to the Sewerage Code of Australia has been used to estimate the sewerage flows from the development as follows:

Table 1: Residential Sewer Flow Calculations

	Value	Units
Number of Units (ET code: RA03)	34	No.
Equivalent Tenements	30.76	(-)
Average Dry Weather Flow	0.160	(L/s)
Peak Dry Weather Flow	1.729	(L/s)
Total Design Flow	1.957	(L/s)

Refer Appendix D for sewer flow calculations.

4 Water

4.1 Applicable Design Standards

The water reticulation system for the site shall be designed to comply with AS3500.1 National Plumbing and Drainage Code - Water Supply.

Water metering shall be provided in accordance with TasWater's Water Metering & Guidelines.

Sub-Metering shall be provided in accordance with TasWater's Southern Region Sub-Metering Policy.

Backflow Protection of the site shall be provided in accordance with TasWater's Water Boundary Backflow Containment Selection Guidelines.

Fire hydrant coverage of the site is to be provided in accordance with AS2419 and Table 8.8 of TasWater's Supplement to the Water Supply Code of Australia WSA-03 2011.

Internal fire hydrants will need to be provided.

4.2 Proposed System

There are currently 3 No. water connections to the properties which are to be developed, 175 to 177 Campbell Street. TasWater has a known size of only one of these, DN20 (ID 11W187160) to 179 Campbell Street with the other 2 being unknown, it is assumed that these will also be of a similar size. Each of the existing connections will become redundant and need to be sealed off at the main by a TasWater accredited Contractor.

TasWater have a DN250 CICL water main located on the eastern side of Campbell Street to which the existing connections are currently connected. It is proposed that the new site connection will be connected to this main.

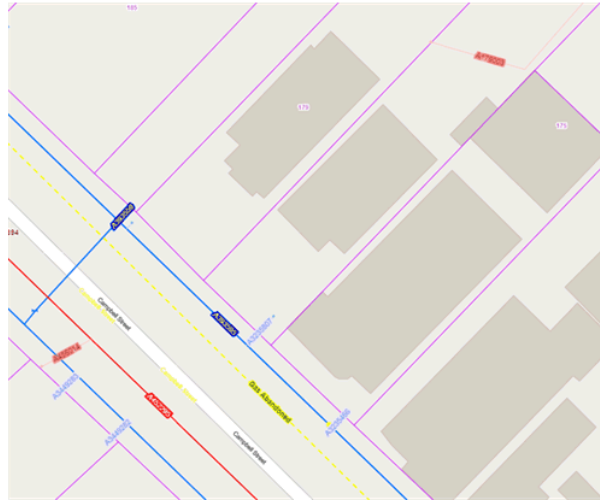


Figure 3: Existing Water Connections

The development of the site with residential apartments, a consulting room and small café will result in the site will being classified as Low Hazard in accordance with TasWater Backflow Containment Guidelines. A new DN100 water connection will be required to service the domestic and fire service requirements of the development, it is proposed that the water meter assembly and fire hydrant booster be located adjacent to the central walkway into the site next to the Campbell Street footpath.

A 65mm domestic water low hazard master meter assembly will be required to service the domestic water requirements of the development. Sub metering of each residential unit, the commercial tenancies and common property landscape requirements can be installed downstream of the meter. These can be installed in the basement carpark to provide easy access for reading with individual pipework to be run from the sub-meters to each tenancy and the communal garden. Sub metering is to be installed in accordance with TasWater's Water Metering Guidelines.

Existing fire plugs are located within the street in front of 175 and 152-170 Campbell Street around 25m to 30m away from the proposed project. Due to the number of stories in the new development the site will require new internal fire hydrants to be installed in accordance with the requirements of AS419.1 and TasFire. The fire hydrant booster assembly being located downstream of the fire service meter assembly on Campbell Street.

Refer Appendix B for Water Services Concept Drawings

The TasWater supplement to the MRWA Water Supply Code has been used to estimate the flows as follows:

Table 2: Residential Water Demand Calculations <100ET - AS3500.1-2003

	Value	Units
Number of Units (ET code: RA03)	34	(-)
Equivalent Tenements	30.76	(-)
Probable Simultaneous Demand	3.46	(L/s)

Refer Appendix D for Water Flow Calculations.

5 Stormwater

5.1 Applicable Planning Scheme Requirements

The applicable planning scheme is the *Hobart Interim Planning Scheme 2015*, with the applicable provisions provided by Code E7.0, Stormwater Management Code. The proposal has been assessed against the requirements of the scheme as detailed in section 5.3.1 below.

5.2 Applicable Design Standards

The stormwater reticulation system for the site shall be designed to comply with AS3500.3 National Plumbing and Drainage Code - Stormwater Drainage.

5.3 Proposed Systems

The site is currently crossed by a DN525 HCC stormwater main which runs along the northern boundary from Campbell Street to the Park Street Rivulet which is located within the Brooker Highway road reservation just to the east of the site boundary.

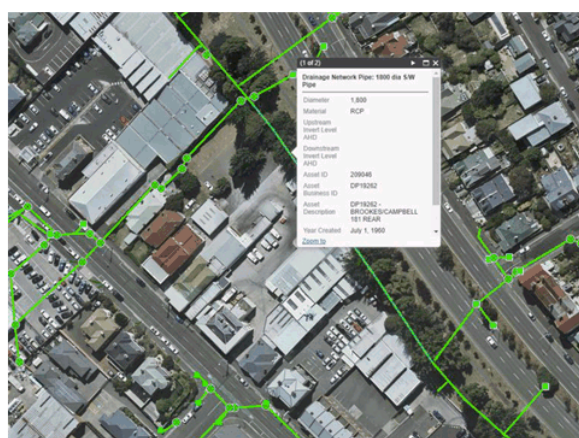


Figure 4: Existing Stormwater Infrastructure

It is proposed that the DN525 stormwater pipe be realigned where it is adjacent to the new building so as it runs parallel with the northern boundary of the site in a 3.0m wide easement. The existing main is to be retained in its current location from Campbell Street past the existing house located on 179 Campbell Street to SW1.4, refer Figure 5 below.

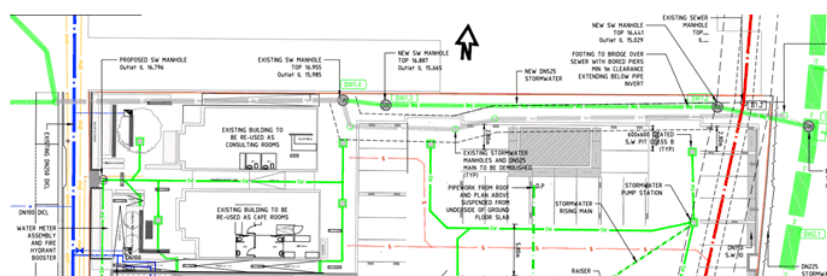


Figure 5: DN525 Stormwater Main Replacement

The level of the pipe relative to the proposed development is shown on the drawings in Appendix B with a preliminary profile and cross sections through the new carpark shown. The new pipe's location, close to the rear of the Woolworths site at 185 Campbell Street may require the underpinning of the adjacent property to ensure the pipe can be installed and maintained without risking damage to this property. This requirement to be determined during detail design where the construction detail of the boundary wall will need to be determined.

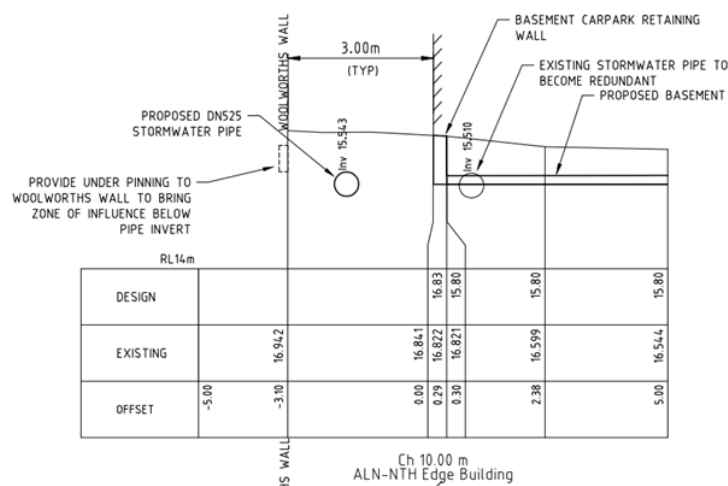


Figure 6: DN525 Stormwater Relative to New Building

The development's eastern boundary runs parallel with the Park Street Rivulet which is located within the Brooker Highway road reservation. The location of the existing main has been determined by CCTV camera and tracking of the camera unit from the surface. Cross section drawings showing the relative location of this existing main and the new development are shown on the drawings in Appendix B. The new building structural elements will need to be constructed such that they are extended below the zone of influence for this main so as to ensure that it can be excavated for maintenance in the future. The closest point of the new development to the main is 1800mm.

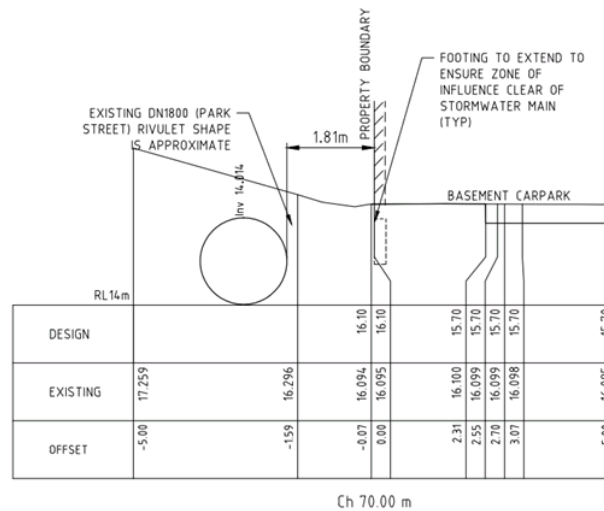


Figure 7: Park Street Rivulet Relative to New Building

A new stormwater connection is proposed into the rivulet main to service the development, a profile of this is included on drawing J173021PH-P-SW5 provided in Appendix B. Due to the level of the connection relative to the main it is proposed that a reflux valve be installed on the connection to prevent flows from the main during significant events from entering the basement carpark.

5.3.1 Planning Scheme Requirements E7.7.1

A1 - Stormwater Disposal

The development meets the acceptable solution A1:

The site will drain by gravity via the new internal stormwater network and connect to the existing DN1800 Park Street rivulet culvert. The connection to the culvert can be made into the top 1/3rd of the pipe. The level of the stormwater connection requires that pits located within the carpark basement be serviced with a stormwater pump station. All roof and plaza drainage, including the area around the existing houses at the front of the site can be collected via gravity drainage to the stormwater detention tank.

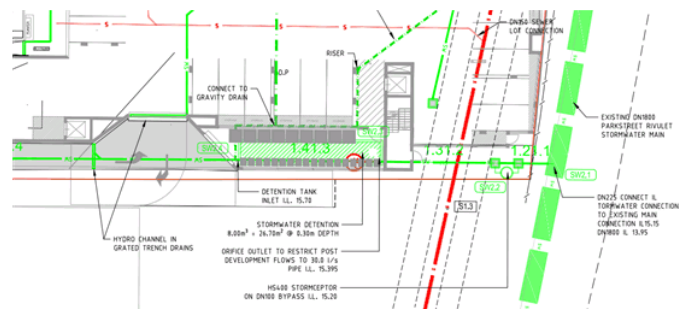


Figure 8: Site Stormwater Connection plan

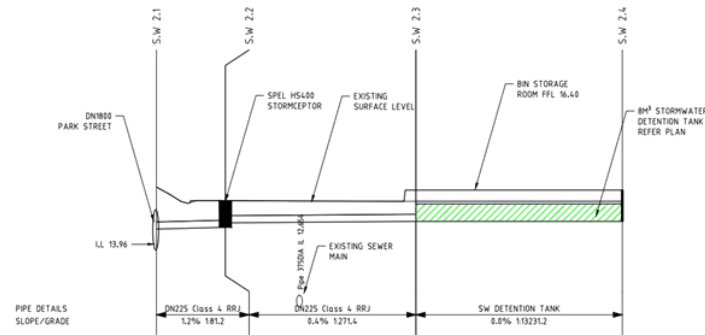


Figure 9: Site Stormwater Connection Profile

A2 - Stormwater Quality and Quantity

The development meets the acceptable solution A2:

The stormwater system incorporates Water Sensitive Urban Design principles as per the *Water Sensitive Urban Design Engineering Procedures for Stormwater Management in Southern Tasmania* with the inclusion of a proprietary SPEL HS400 stormwater treatment device to treat stormwater run-off from the site.

A Model for Urban Stormwater Improvement Conceptualisation (MUSIC) has been created to determine the reduction in runoff pollutants from the road, landscape and roof areas considering a mixed node modelling the whole site (Figure 10). The model reflects the approximation of 10% of pervious area associated with planters, etc.

The results displayed in Figure 11 show the proposed stormwater treatment train complies with best practice pollutant reductions for all parameters.



Figure 10 - MUSIC Schematic

	Sources	Residual Load	% Reduction
Flow (ML/yr)	1.19	1.19	0
Total Suspended Solids (kg/yr)	245	14.8	93.9
Total Phosphorus (kg/yr)	0.49	0.144	70.5
Total Nitrogen (kg/yr)	3.43	1.63	52.4
Gross Pollutants (kg/yr)	46.2	0	100

Figure 11 - MUSIC Results

A3 - Minor Stormwater Drainage System Design

The development is compliant with acceptable solution A3:

- The internal stormwater network will be sized to accommodate the 5% AEP runoff from the property based on it being close to 100% impervious.
- Stormwater detention for any increase in flows can be incorporated by the inclusion of a 8m³ stormwater detention tank under the proposed bin store on the southern side of the site. This tank will collect all stormwater run-off from the site via either gravity drainage from roofs and courtyards or a rising main from a stormwater pump station in the basement carpark. Flows for a 15 minutes duration storm, which is in excess of the catchment time of concentration, provided in Figure 6 of the 175-170 Campbell Street, Flood Hazard Report, Flussig Oct 2021. Outlet flows will be limited to pre-development levels by an orifice outlet sized to limit post development flows to 30L/s. Refer Appendix D for stormwater detention calculations.

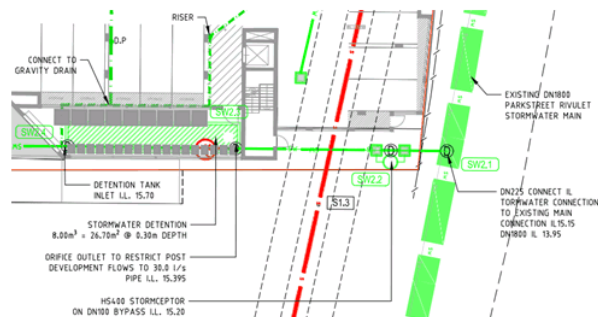


Figure 12: Stormwater Detention Tank

A4 - Major Stormwater Drainage System Design

Refer 175-179 Campbell Street, Flood Hazard Report, Flussig Engineers, October 2021 (Revision 3 June 2022) for discussion on overland flow paths and site inundation. All habitable floors are located more than 300mm above the calculated 1% AEP flood levels.

The Flussig report identifies significant hazard of flooding of the basement car park area in a 1% AEP plus climate change rain event. The resultant risk levels are shown as up to H5 and H6 in areas of the car park closest to the Brooker Highway. Note that the Flussig report identifies that the development will have an insignificant effect on the current flood behaviour. The area concerned is currently acting as a car park as shown in the below Google Earth image Figure 13, and hence the levels of risk are already at the H5 and H6 levels. The development may mean that the risk exposure is for 24 hours per day as compared to the current assumed day shift parking duration.

A key to minimising the risk to users of the proposed car park will be a Flood Emergency Management Plan (FEMP). The development will be run by a Body Corporate with responsibility for safety, security and maintenance of essential health and safety features of the development. While it is not intended to provide the FEMP until the detailed design stage, it is important to consider a range of measures that could be undertaken to reduce risk to future occupiers of the development.

It is recommended that the FEMP be prepared and once adopted, become part of the site maintenance schedule including audits to ensure any elements such as signage, alarm sirens, lights, barriers, water depth transducers, etc. are regularly checked and maintenance registers updated similar to other safety features such as fire extinguishers, fire blankets etc.

It is recommended that the FEMP include occupant inductions so that they are cognisant of the flooding risks and what to do in the event of an event, which might be as simple as do not enter the car park area during extreme rainfall. These can possibly be part of any tenancy agreements.

The updated Flussig report shows a duration to maximum flow (hence depth) of around 13 minutes, slightly longer than previous modelling but still short in terms of a traditional FEMP where occupants may be evacuated from the site - in this case the occupants don't need to leave their rooms, they simply don't enter the car park. If anyone is already in the car park, they would know (from the induction, warning signs, and alarms) that they need to leave the car park promptly. The Flussig report shows the depth in the car park rises from an initial noticeable depth of 50mm to maximum in a period of around 9.5 minutes (refer Fig. 8 of the Flussig report). This gives users adequate time to move to higher ground if they notice water entering the car park. They can either walk up to road level or go up the stairs to ground floor, both of which are safe refuges.

Part of the FEMP is likely to be the appointment of flood wardens who would have a similar role to fire wardens in a fire situation. These wardens (maybe on a roster system but alerted by an alarm system) would need to patrol the car park to ensure there is nobody at risk, for example someone sleeping in a car who may not recognise the warning system.

Any electrical components of the developed FEMP system would need battery backup as major rainfall storms may coincide with a loss of power.

It is noted that higher frequency flooding events will also create risk but at a lower level. There is no significant overland flow expected until the underground pipe system is at capacity - this should be at around the 5% AEP events. When high intensity rainfall events occur, people are not aware what AEP event they are experiencing, but they can appreciate unusually heavy rain events.

One aspect to be considered in the preparation of a FEMP is the potential for someone to attempt to enter the car park to remove their vehicle from the car park to prevent property loss, this can be countered by a cable gate or similar system which would prevent vehicles entering or leaving the car park in an alarmed event. The body corporate insurance may be able to cover such property damage which would reduce the desire to extract the vehicles.

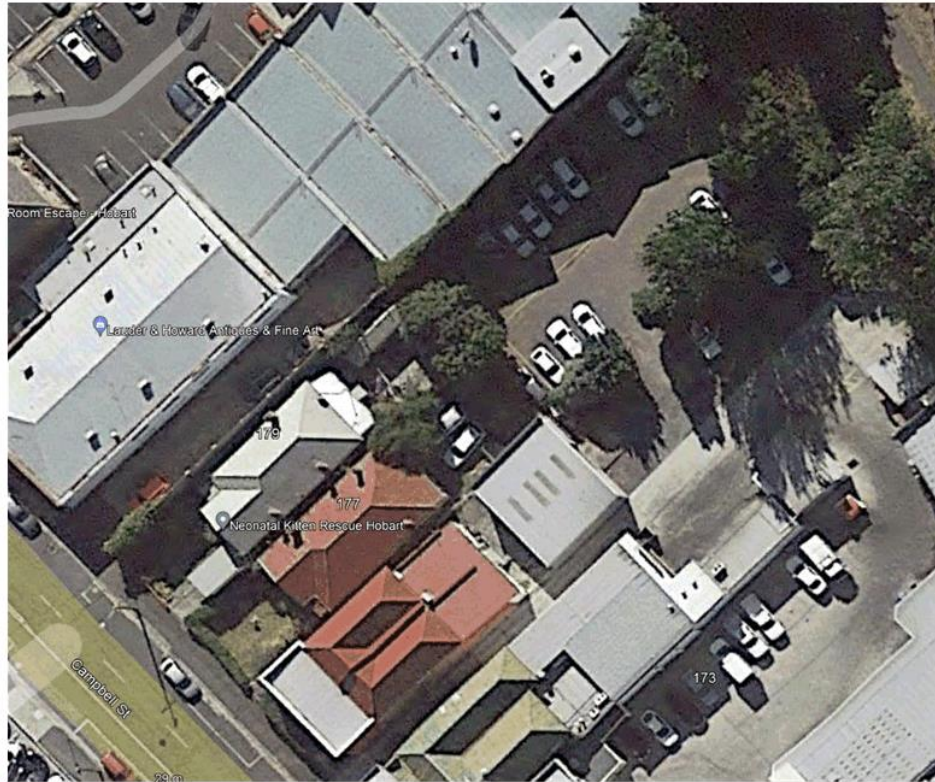


Figure 13: Google Earth image showing existing car parking

6 Abandoned Town Gas

TasWater Records show the presence of Abandoned Town Gas mains in Campbell Street. Incidents have occurred where civil workers have been exposed to harmful gases and Volatile Organic Compounds (VOCs) whilst excavating in roadways in Hobart and Moonah. The sources of the contaminants are mostly related to the old town gas (coal gas) pipes that were made redundant in Hobart in 1978.

Care should be taken when working in the vicinity of old mains for any new connections to the site, VOC monitoring equipment should be used and appropriated PPE should be worn by workers, further information on how to safely work in the vicinity of towns gas infrastructure should be sourced from WorkSafe Tasmania. Ring 1300 366 322 or email wstinfo@justice.tas.gov.au



Figure 14: Existing Abandoned Gas Pipe Locations

7 Access and Parking

Access and parking requirements for the site are addressed in the Traffic Impact Assessment by ECTM Consulting, July 2021.

JMG have prepared drawings which demonstrate the following compliance of the development with the requirements of AS2890.1 & AS2890.2:

- Vertical clearance will be provided across the full width of the driveway for access to the adjacent property for a HRV vehicle
- Vertical clearance will be provided into the undercover carpark to allow turning of the Veolia garbage truck
- Onsite turning is provided within the property and adjacent ROW for the Veolia garbage truck
- Access to the adjacent property is available for a MRV vehicle utilising the widened driveway access
- The vertical profile of the driveway will be improved for existing heavy vehicles accessing the site at the existing crossover
- The new driveway profile will provide clearance for the Veolia garbage truck
- Carparking and aisle dimensions within the basement carpark are provided in accordance AS2890.1 user class 2.

8 Conclusion

The proposed multi-unit residential and commercial development can be constructed with the provision of all required services to comply with the requirements of Council's Planning Scheme, TasWater's Design Guidelines, and the applicable Australian Standards.

The property can be serviced with communications, power, water, sewer and stormwater connections adequately sized to cater for the number of units.

With appropriate engineering detailing, existing and new council and TasWater services can be protected from damage and future maintenance and/or replacement can be undertaken. Building footings for the new development and adjacent properties will need to extend below the zone of influence for these pipes.

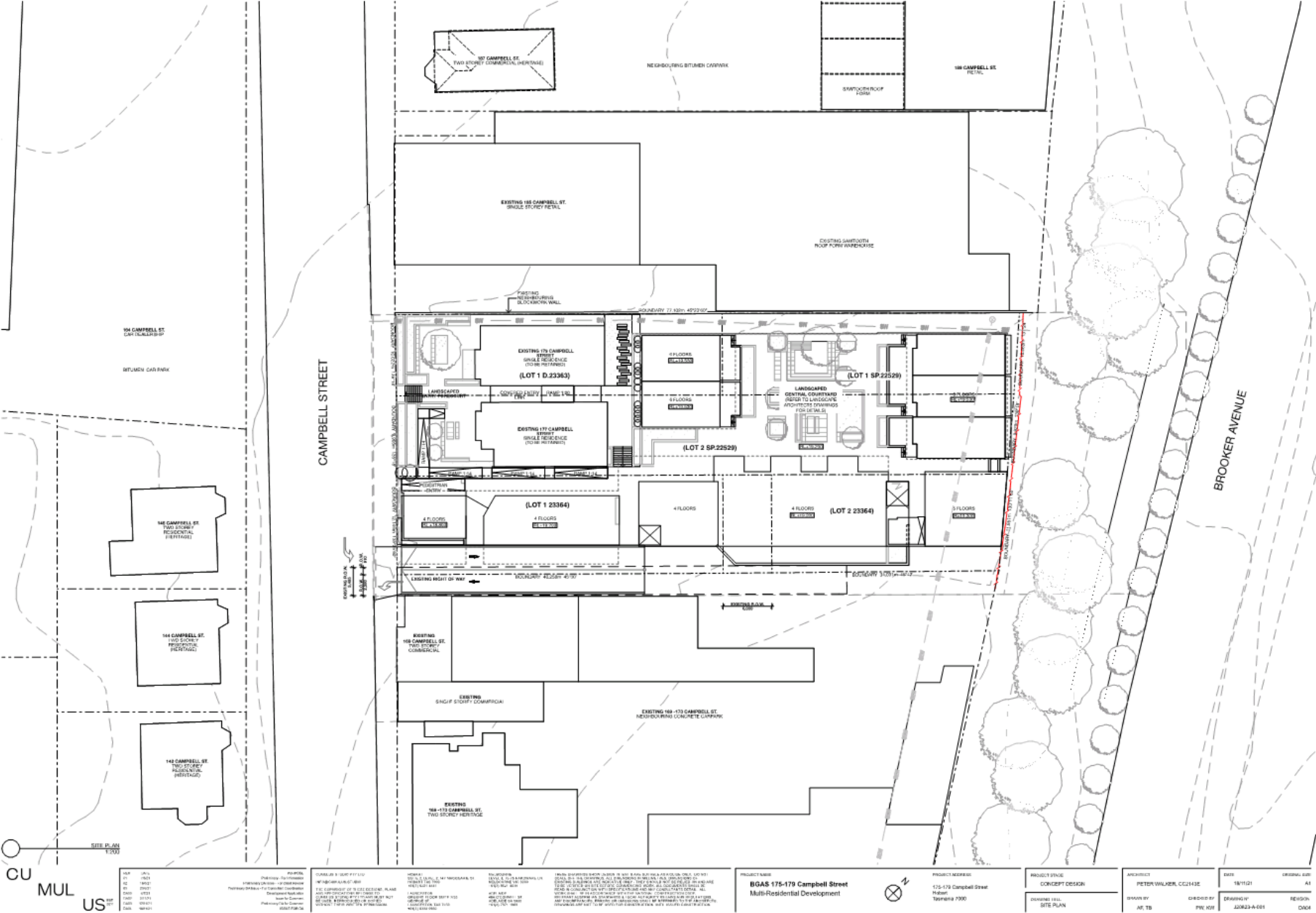
The flood risk assessment has highlighted hazardous conditions in the basement car park, and a suitable FEMP will need to be developed and implemented to minimise the risk to as low as reasonably practicable, noting that these risks are already experienced in the current site use. The FEMP will need to include appointment of flood wardens, audio and visual alarms (with battery back-up) and a cable gate across the vehicle access to prevent vehicular access/egress but allow pedestrian egress. The trigger for the alarm/cable gate should be at 50mm water depth in the basement.

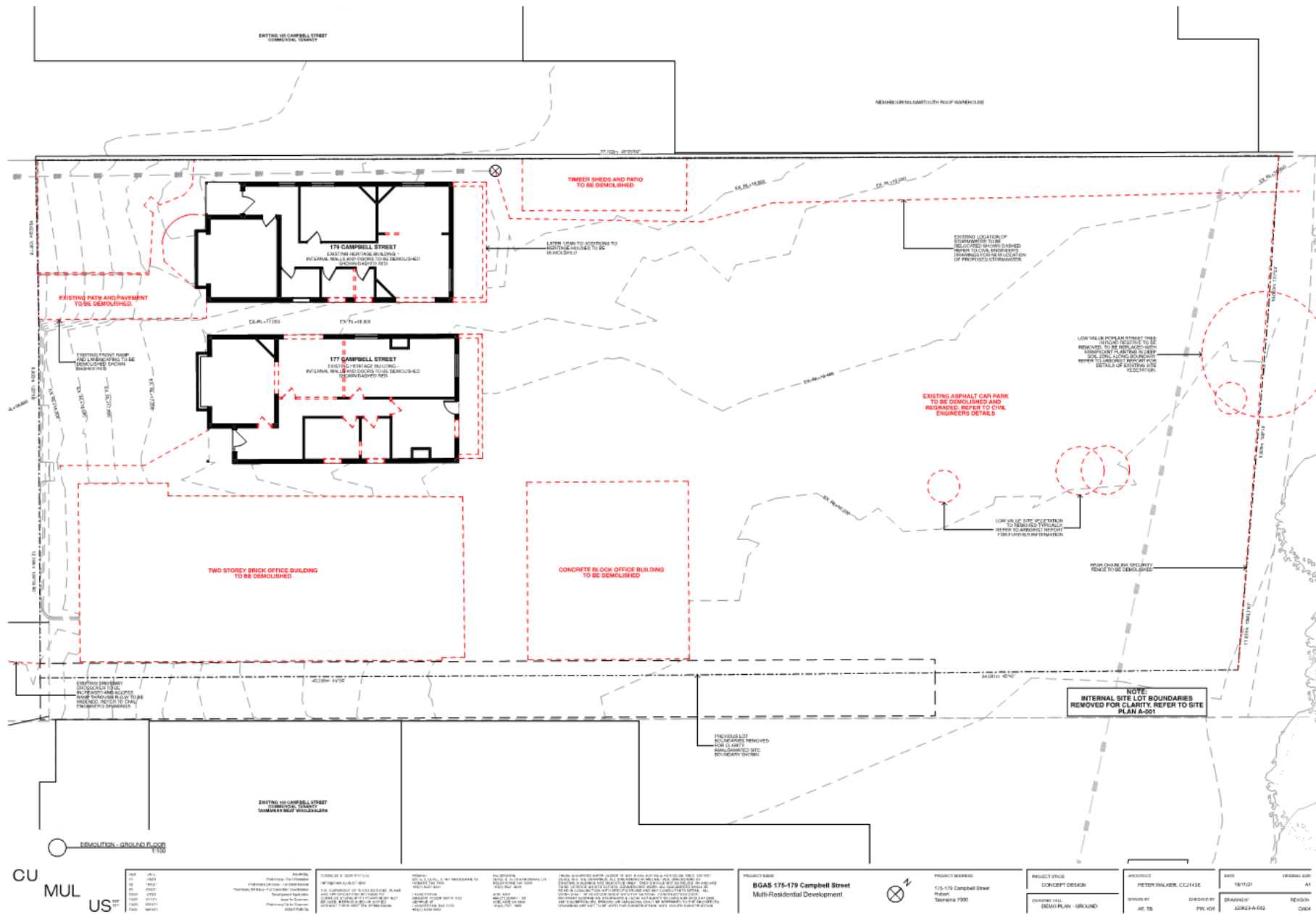
9 References

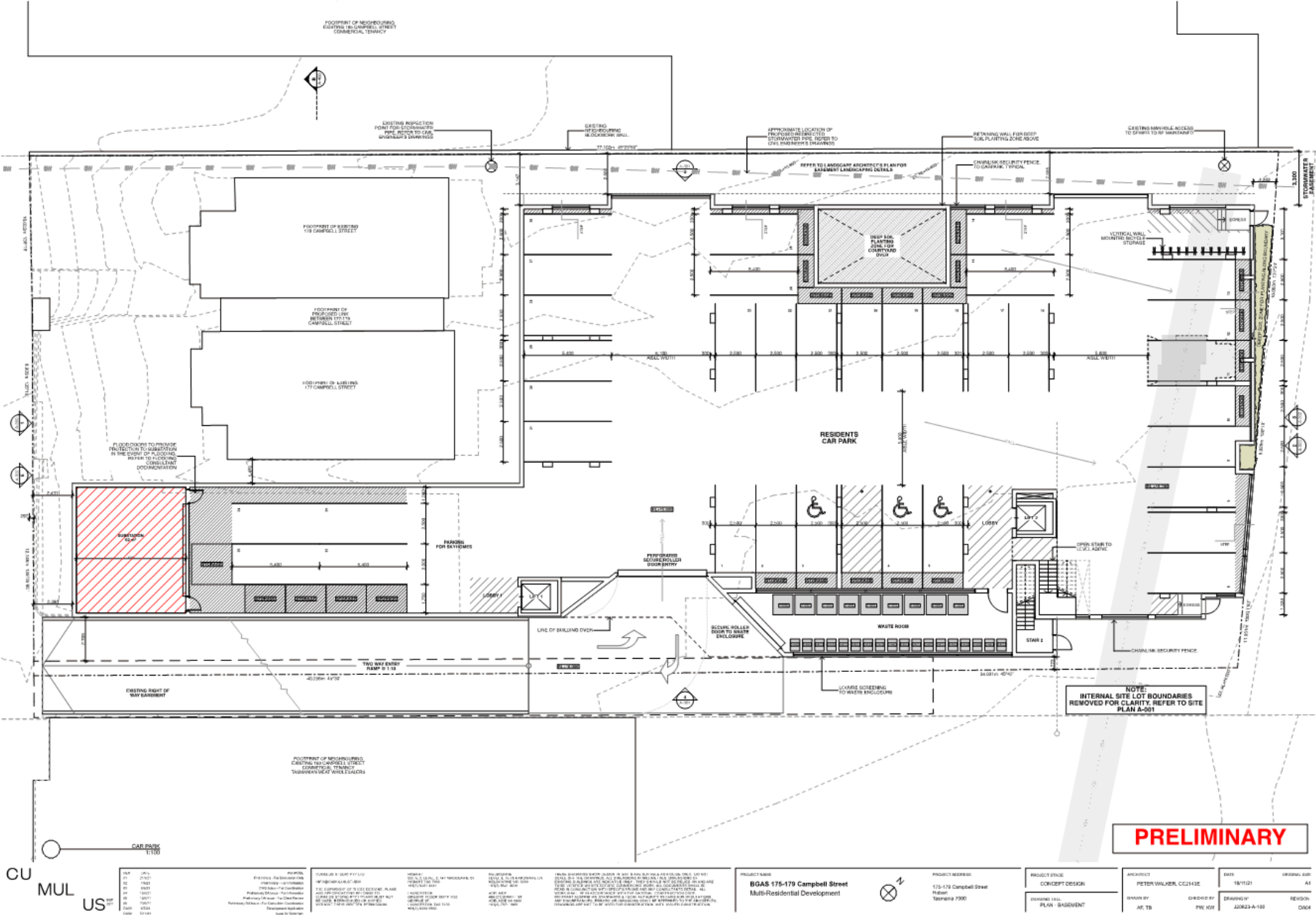
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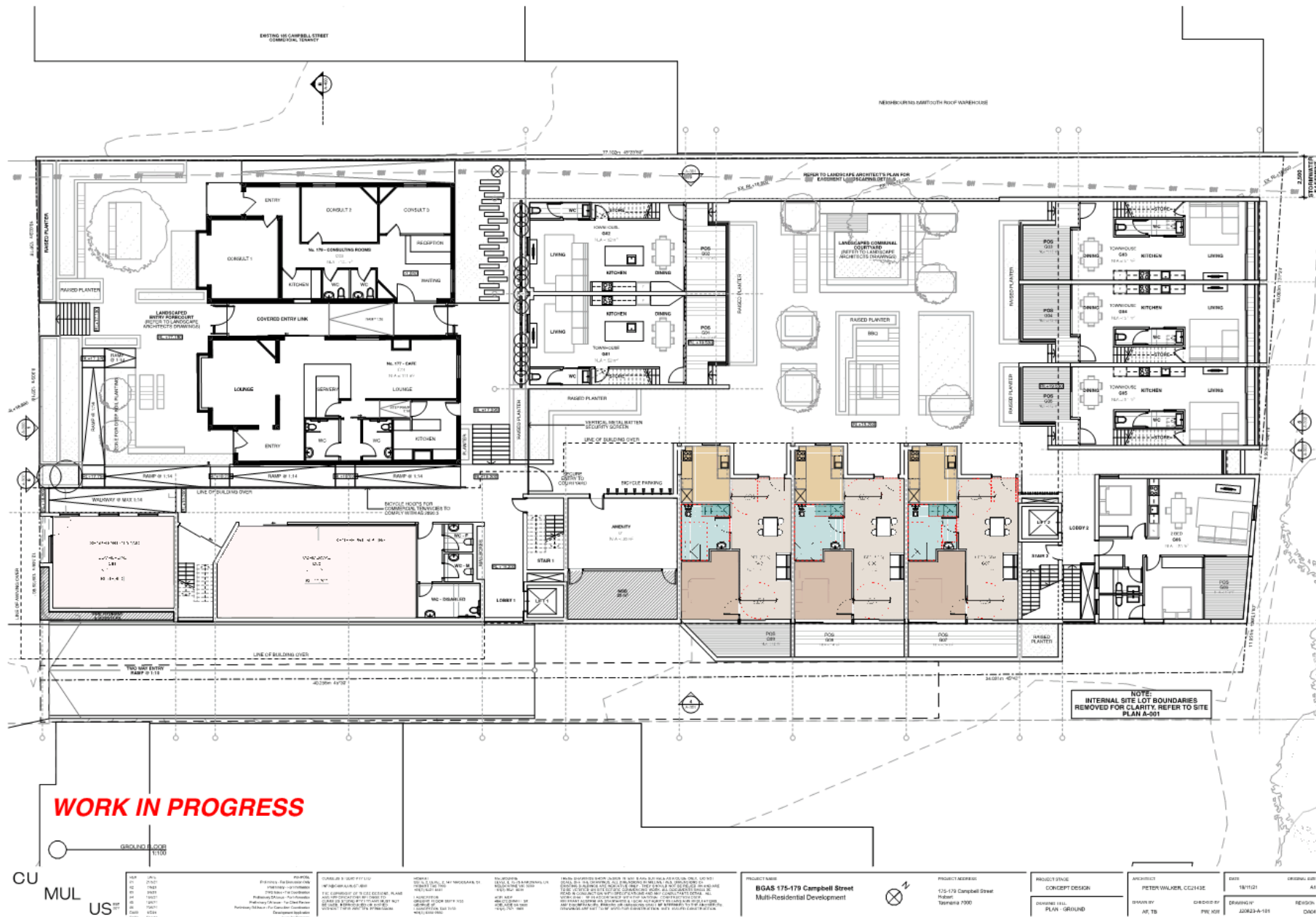
APPENDIX A

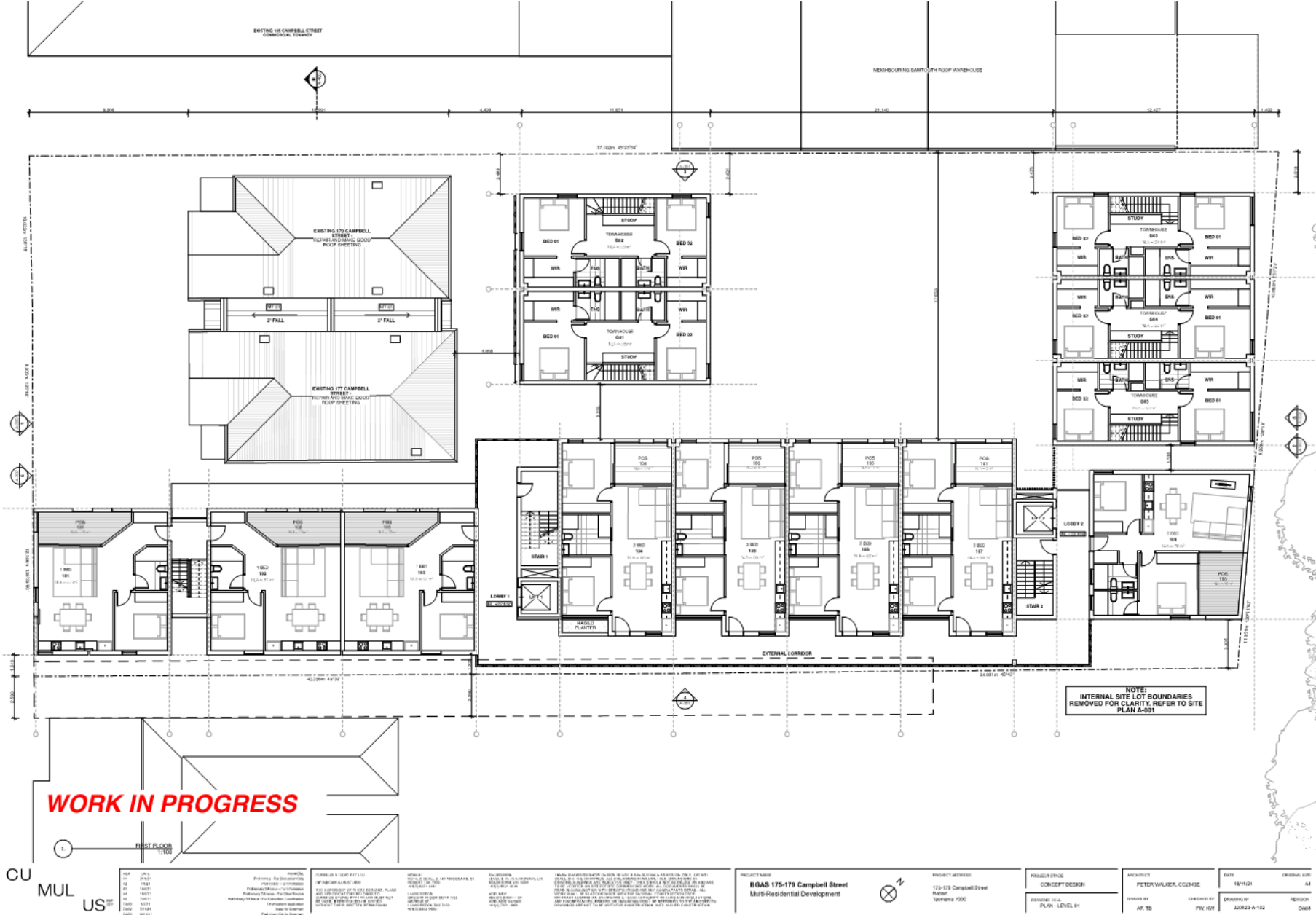
**Architects Plans
(Under Separate Cover)**

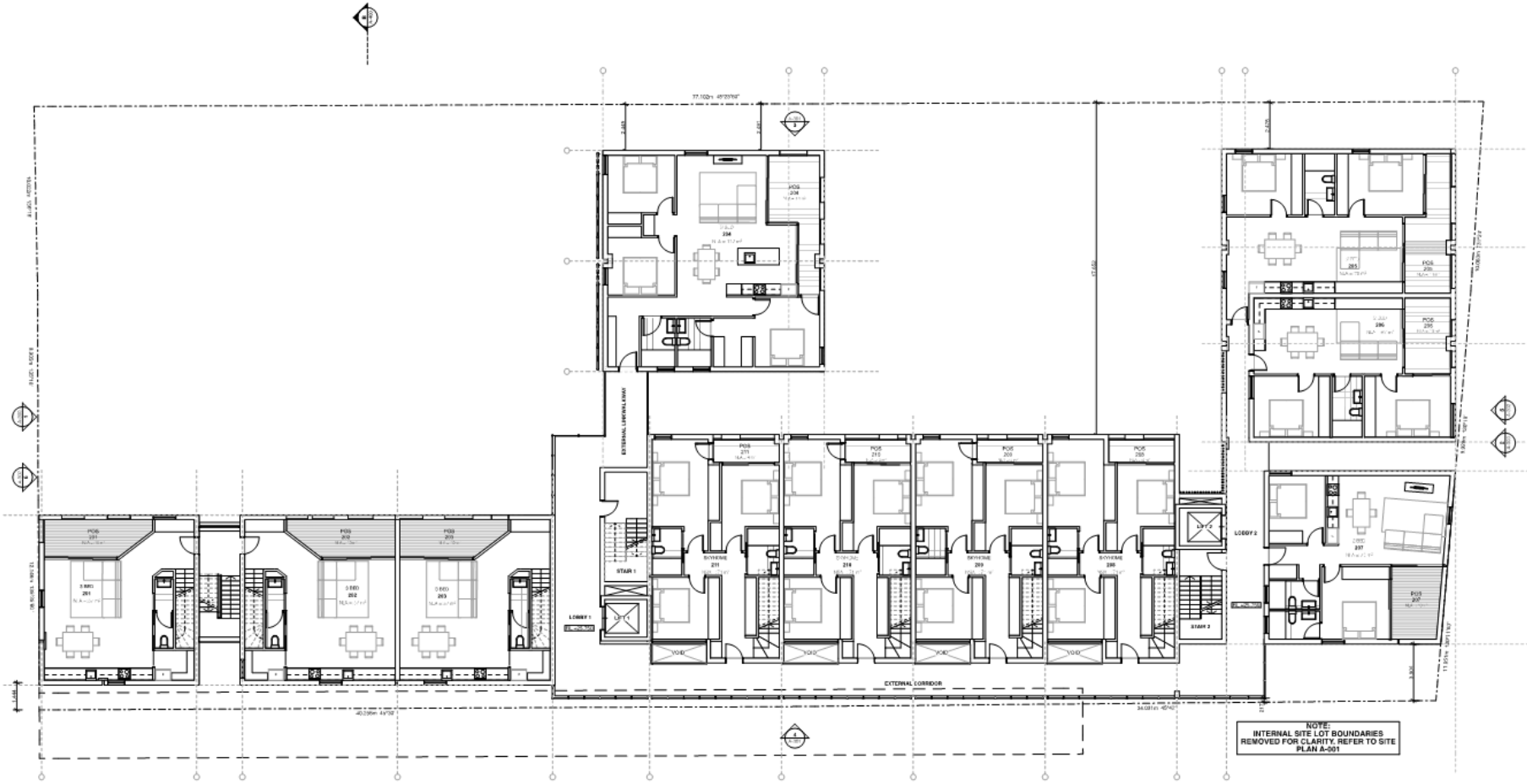












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PROJECT NAME
BGAS 175-179 Campbell Street
Multi-Residential Development

PROJECT ADDRESS
175-179 Campbell Street
Hobart
Tasmania 7000

PROJECT OWNER
CONCEPT DESIGN

ARCHITECT
PETER WALKER, CQ143E

DESIGNED BY
AT, TB

DRAWN BY
PW, KOT

DATE
18/11/21

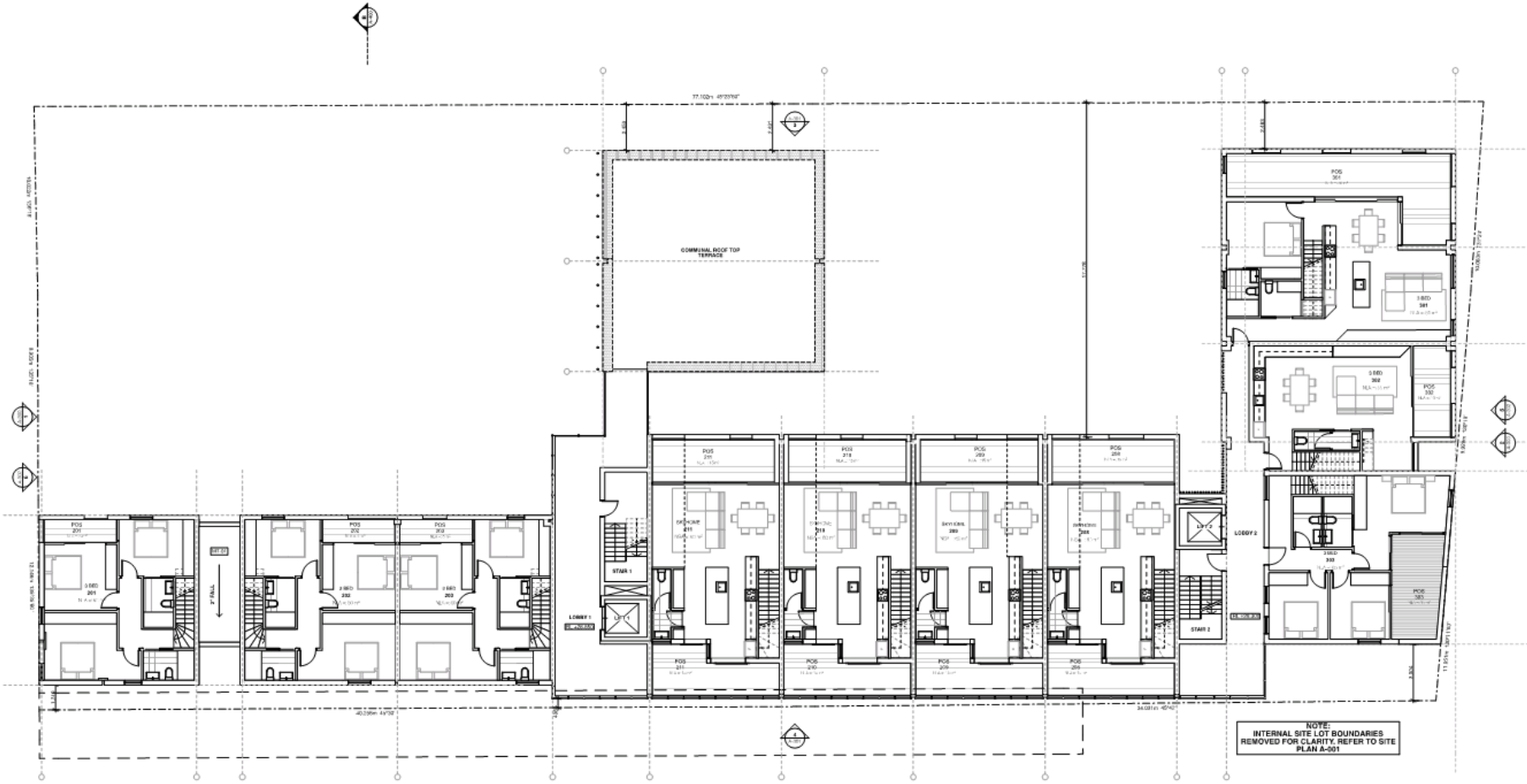
REVISION
220823-A-103

ORIGINAL SIZE
A1

DATE
18/11/21

REVISION
220823-A-103

ORIGINAL SIZE
A1

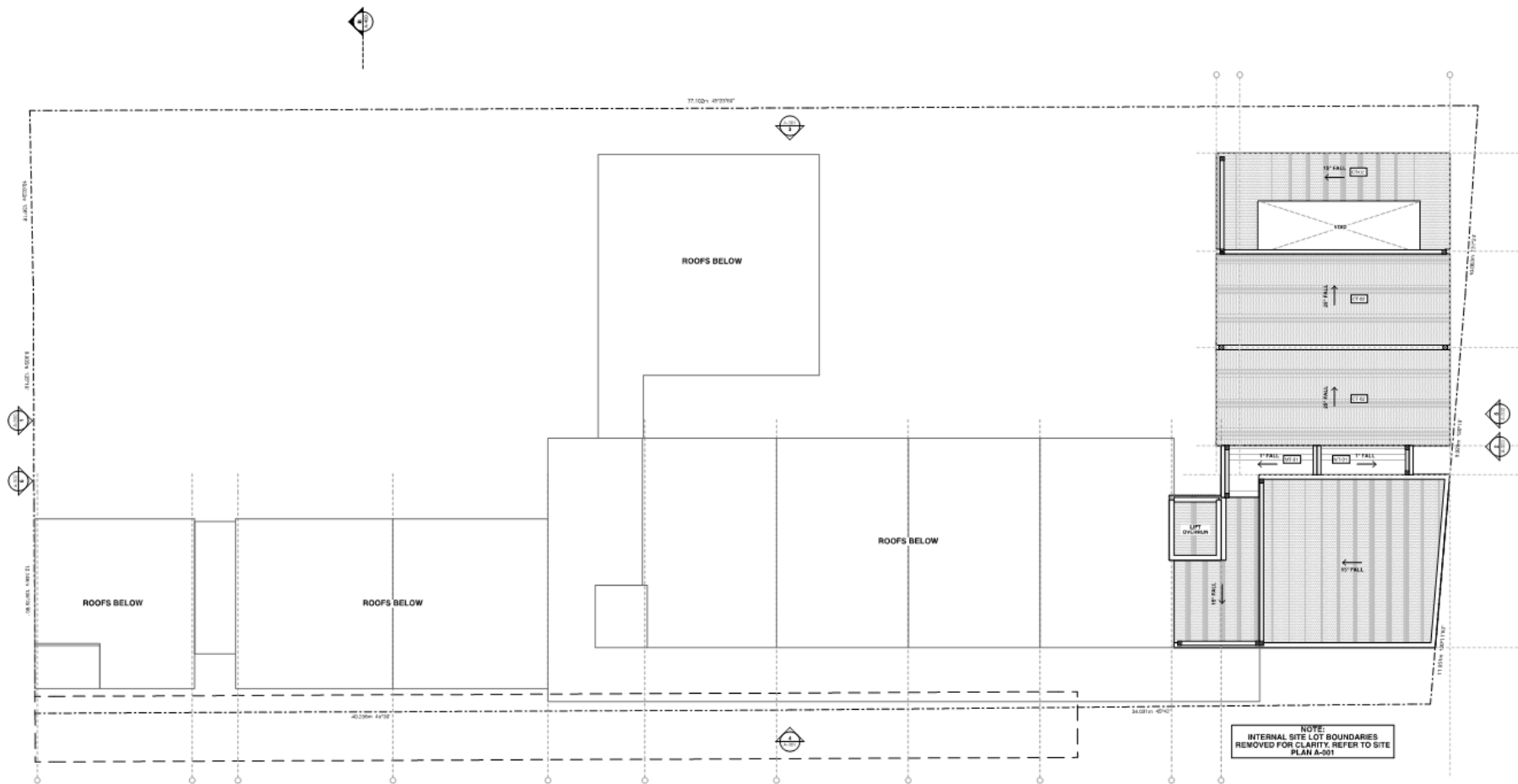


WORK IN PROGRESS

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US

DATE: 15/02/2023 DRAWN BY: PETER WALKER CHECKED BY: PETER WALKER PROJECT NO: 175-179 CAMPBELL STREET SHEET NO: 1/1	PROJECT NAME: BGAS 175-179 Campbell Street Multi-Residential Development PROJECT ADDRESS: 175-179 Campbell Street, Hobart, Tasmania 7500 PROJECT OWNER: CONCEPT DESIGN ARCHITECT: PETER WALKER, CCJ143E DESIGN BY: AT, TB DRAWN BY: PFW, KOT DATE: 18/11/21 REVISION: 2022-03-18-18 DRAWN BY: KOT
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NOTE:
INTERNAL SITE LOT BOUNDARIES
REMOVED FOR CLARITY, REFER TO SITE
PLAN A-001

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US

NO. 175-179 Campbell Street Multi-Residential Development	PROJECT ADDRESS 175-179 Campbell Street Hobart Tasmania 7500	PROJECT TYPE CONCEPT DESIGN	ARCHITECT PETER WALKER, CC143E	DATE 18/11/21	ORIGINAL SIZE A1
DESIGNED BY PLAN - LEVEL 05	DRAWN BY AT, TB	CHECKED BY PW, KOT	DESIGNED BY PW, KOT	DESIGNED BY PW, KOT	DESIGNED BY PW, KOT

APPENDIX B

Concept Services Plans

APPENDIX C

Water and Sewer Demand Calculations

177&179 Campbell St. - Hobart
WATER REQUIREMENTS

Probable Simultaneous Demand Calculation

ET's < 100

For a water flow estimate, use: AS/NZS 3500.1:2003 Section 3

	Quantity	Units	Comments
Number of Units/Homes/Town Houses	30.76	ET's	
Probable Simultaneous Demand (PSD)	3.46	L/s	Depends on the no. of units (Cell B10), determine from: AS/NZS 3500.1:2018 Table 3.2.3

Average Day Usage Calculations

ET's >= 100

	Quantity	Units	Comments
Average Day Demand (AD)	0	L/ET/day	As per 2.3.1 of TasWater Supplement
Average Water Demand (per day)	0	L/day	Based on ET of 13.2
Average Water Demand (per day)	0	kL/day	

TABLE 3.2.3
PROBABLE SIMULTANEOUS DEMAND (PSD) FOR DWELLINGS

No. of units or dwellings	Flow rate L/s	No. of units or dwellings	Flow rate L/s	No. of units or dwellings	Flow rate L/s
1	0.48	35	3.74	68	5.79
2	0.70	36	3.81	69	5.85
3	0.88	37	3.88	70	5.91
4	1.03	38	3.95	71	5.96
5	1.17	39	4.01	72	6.02
6	1.30	40	4.08	73	6.08
7	1.41	41	4.14	74	6.13
8	1.53	42	4.21	75	6.19
9	1.64	43	4.27	76	6.25
10	1.74	44	4.34	77	6.30
11	1.84	45	4.40	78	6.36
12	1.94	46	4.47	79	6.41
13	2.03	47	4.53	80	6.47
14	2.12	48	4.59	81	6.53
15	2.21	49	4.66	82	6.58
16	2.30	50	4.72	83	6.64
17	2.39	51	4.78	84	6.69
18	2.47	52	4.84	85	6.75
19	2.55	53	4.90	86	6.80
20	2.64	54	4.96	87	6.86
21	2.72	55	5.02	88	6.91
22	2.79	56	5.09	89	6.96
23	2.87	57	5.15	90	7.02
24	2.95	58	5.21	91	7.07
25	3.03	59	5.27	92	7.12

Total ET	30.76
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TasWater Supplement Appendix B

1-2 Storeys, Medium Density, Dwelling				
	1 Bedroom	2 Bedroom	3 Bedroom	
Factor/dwelling	0.4	0.6	0.8	
No. of Units	0	18	16	Sum
ET	0	10.8	12.8	23.6

>2 Storeys, High Density, Dwelling				
	1 Bedroom	2 Bedroom	3 Bedroom	
Factor/dwelling	0.33	0.5	0.67	
No. of Units	0	0	0	Sum
ET	0	0	0	0

Accommodation (permanent)		
Nursing Home / Special Care Home		
Factor/Bed	0.657	
No. of Beds	0	Sum
ET	0	0

Meal Preparation					
	Catering	Restaurant/Café	Take Away/Fast Food (no)	Take Away/Fast	
Factor/GBFA m2	0.005	0.005	0.015	0.03	
GBFA m2	0	0	0	0	Sum
ET	0	0	0	0	0

Services			
	Industrial Laundry	Laboratories	
Factor/GBFA m2	0.24	0.084	
GBFA m2	0	0	Sum
ET	0	0	0

Business (excl. food preparation)			
	Office	Single Retail Shop	
Factor/GBFA m2	0	0.002	
GBFA m2	210	0	Sum
ET	0	0	0

26	3.10	60	5.32	93	7.18
27	3.17	61	5.38	94	7.23
28	3.25	62	5.44	95	7.29
29	3.32	63	5.50	96	7.34
30	3.39	64	5.56	97	7.39
31	3.46	65	5.62	98	7.44
32	3.53	66	5.68	99	7.50
33	3.60	67	5.73	100	7.55
34	3.67	—	—	—	—

NOTES:

1 The minimum flow rates shown in this Table are based on domestic installations. If it is expected that the dwelling(s) will have a greater demand, then the probable simultaneous flow rate may be estimated using the loading unit method outlined in Appendix D.

2 Determination of PSD for dwellings exceeding the scope of this Table may be estimated using the following equation:

$$Q = 0.03 n + 0.4554 \sqrt{n}$$

where

Q = flow rate, in litres per second

n = number of dwellings

3 Scott Street Bellerive WSA CALCULATIONS		CALCULATED VALUES	UNITS	COMMENTS
DESIGN FLOW	PDWF + GWI + RDI	1.957028895	L/s	Design flow result
PDWF	d x ADWF	1.729359753	L/s	
d	PDWF			
A	$0.01 \cdot (\text{LOG}(A))^4 - 0.19 \cdot (\text{LOG}(A))^3 + 1.4 \cdot (\text{LOG}(A))^2 - 4.66 \cdot \text{LOG}(A) + 7.57$	10.79513408		
A	Gross Area of Development	0.2618	Ha	Determine area (m2) off plans
ADWF	ADWF			
ADWF	$0.001736 \cdot \text{EP} \cdot (150 \text{ L/d/EP} - \text{as per TasWater})$	0.16019808	L/s	
EP	3 x ET	92.28		TasWater overrides WSA
ET	Total Equivalent Tenements	30.76		TasWater Assumption (right)
GWI	$0.025 \times A \times \text{Portion}(\text{wet})$	0.0045815	L/s	
Portion _{wet}	Portion of Network where GW > Pipe RL	0.7		TasWater Assumption (5.5.5.2)
RDI	$0.028 \times A_{\text{eff}} \times C \times I$	0.223087642	L/s	
A _{eff}	A x (Density/150)/0.5 OR A	0.2618		Density > /< 150
Density	EP/A	352.4828113		
C	Suspect + Naspect	1.4		
Suspect	Soil Aspect	0.8		TasWater Assumption
Naspect	Network Defects Aspect	0.6		TasWater Assumption
I	$I_{1.2} \times \text{Factor}_{\text{size}} \times \text{Factor}_{\text{containment}}$	21.73801101		
I _{1.2}	1 hr duration rainfall intensity, ARI 2 years	11.8		Determined from BOM
Factor _{size}	$(40/A)^{0.12}$	1.829482642		
Factor _{containment}	$0.77 \times (10^{(0.43X)}) / (10^{(0.14X^2)})$	1.007504409		
X	$\log(\text{ARI})$	0.301029996		
ARI	Annual Recurrence Interval	2		TasWater Assumption

Total ET	30.76
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TasWater Supplement Appendix B

1-2 Storeys, Medium Density, Dwelling				
	1 Bedroom	2 Bedroom	3 Bedroom	
Factor/dwelling	0	0.75	1	
No. of Units	0	18	16	Sum
ET	0	13.5	16	29.5

>2 Storeys, High Density, Dwelling				
	1 Bedroom	2 Bedroom	3+ Bedroom	
Factor/dwelling	0.5	0.75	1	
No. of Units	0	0	0	Sum
ET	0	0	0	0

Accommodation (permanent)		
	Nursing Home / Special Care Home	
Factor/Bed	0.971	
No. of Beds	0	Sum
ET	0	0

Meal Preparation					
	Catering	Restaurant/Café	Take Away/Fast Food (no public amenities)	Take Away/Fast Food (incl. public amenities)	
Factor/GBFA m2	0.008	0.008	0.024	0.048	
GBFA m2	0	0	0	0	Sum
ET	0	0	0	0	0

Services			
	Industrial Laundry	Laboratories	
Factor/GBFA m2	0.24	0.064	
GBFA m2	0	0	Sum
ET	0	0	0

Business (excl. food preparation)			
	Office	Single Retail Shop	
Factor/GBFA m2	0.006	0.003	
GBFA m2	210	0	Sum
ET	1.26	0	1.26

177 Campbell St. - Hobart

Stormwater Calculations

Post Development

Time of Concentration			
$C_{1,10}$	25	mm	10% AEP, 60min Rainfall
A=	2618	m ²	Insert Catchment Area
A=	0.00262	Km ²	Calculated in Km2
S_e =	-	m/Km	Insert Catchment Grade
L=	-	Km	Insert Flow Length
t_c =	-	mins	Tc Calculated
	5	mins	Whole Number Tc

Impervious Area		
Existing Hardstand Area=	2546.96	m ²
Total Area =	2618	m ²
Fraction Impervious =	97%	

Runoff Coefficient		
Fraction impervious =	97%	
$C_{1,10}$ =	0.100	Formula - Refer ARR Book VIII
C10 =	0.88	Runoff Coefficient

Frequency Conversion Factors -Refer AR&R 1987										
ARI (years)	1	2	5	10	20	40	60	80	50	100
Factor, F_y	0.8	0.85	0.95	1	1.05	1.2	1.17	1.19	1.15	1.2

Peak Catchment Flows For Varied 5% AEP Storm Durations		
AEP	Duration (min)	Flow (m ³ /s)
5%	5	0.057
5%	10	0.043
5%	15	0.035
5%	20	0.030
5%	25	0.026
5%	30	0.023
5%	45	0.018
5%	60	0.015
5%	90	0.012
5%	120	0.010
5%	180	0.008
5%	270	0.006

Peak Catchment Flows For Given AEP at T.O.C.		
AEP	$I_{t_c,y}$ (mm/h)	Flow (m ³ /s)
63.20%	38.2	0.0195
50.00%	43.2	0.0235
20.00%	60.0	0.0364
10.00%	72.1	0.0461
5.00%	84.7	0.0568
2.00%	102.0	0.0750
1.00%	116.0	0.0890

Hardstand (100% Impervious)		
Roof	851	
Walkway	1649	
Carpark	0	
Impervious Area	2499.6	m ²

Landscaping (40% Impervious)		
Backyard	118.4	
Impervious Area	47.36	m ²

177/179 Campbell St.

Stormwater Calculations

Boyd's (CC)

Catchment & Flow Details			Comments
Catchment Area =	0.26	Ha	
10 Year Runoff Coefficient =	0.88	-	
20 Year Effective Catchment Area =	0.24	Ha	
Restricted Outflow Requirement =	0.053	m3/s	Site Runoff: pre development 5% AEP, 5min (ToC) storm duration.

Detention Calculation							29% Climate Change			
Storm Duration	5% AEP	5% AEP + 29% CC	Ip	Qp	V1	Smax	Ip	Qp	V1	Smax
(min)	Intensity (mm/hr)	Intensity (mm/hr)	(m3/s)	(m3/s)	(m3)	(m3)	(m3/s)	(m3/s)	(m3)	(m3)
1	138.00	178.0	0.093	0.053	5.55	2.36	0.119	0.053	7.16	3.97
2	109.00	140.6	0.073	0.053	8.77	2.38	0.094	0.053	11.32	4.93
3	98.60	127.2	0.066	0.053	11.90	2.32	0.085	0.053	15.35	5.77
4	91.00	117.4	0.061	0.053	14.65	1.87	0.079	0.053	18.89	6.12
5	84.70	109.3	0.057	0.053	17.04	1.07	0.073	0.053	21.98	6.01
10	63.90	82.4	0.043	0.053	25.71	-6.24	0.055	0.053	33.17	1.22
15	51.90	67.0	0.035	0.053	31.33	-16.60	0.045	0.053	40.41	-7.51
20	44.20	57.0	0.030	0.053	35.57	-28.32	0.038	0.053	45.89	-18.01
25	38.80	50.1	0.026	0.053	39.03	-40.84	0.034	0.053	50.35	-29.52

177/179 Campbell St.

Stormwater Calculations

IFD Table

Rainfall mm/hr								
Annual Exceedance Probability (AEP) mm/hr								
Duration	Duration (min)	63.20%	50%	20%	10%	5%	2%	1%
1 min	1	61	69.1	96.7	117	138	169	194
2 min	2	52.4	59	80	94.7	109	127	142
3 min	3	46.3	52.2	71.4	84.9	98.6	116	130
4 min	4	41.8	47.2	65	77.8	91	108	122
5 min	5	38.2	43.2	60	72.1	84.7	102	116
10 min	10	27.7	31.4	44.2	53.8	63.9	78.7	91
15 min	15	22.4	25.5	35.9	43.7	51.9	64.1	74.3
20 min	20	19.2	21.8	30.6	37.2	44.2	54.4	62.9
25 min	25	17	19.3	27	32.7	38.8	47.5	54.8
30 min	30	15.3	17.4	24.3	29.4	34.7	42.4	48.6
45 min	45	12.2	13.8	19.2	23.1	27.1	32.6	37.1
1 hour	60	10.4	11.8	16.2	19.4	22.7	27	30.5
1.5 hour	90	8.35	9.44	12.9	15.3	17.7	20.9	23.4
2 hour	120	7.14	8.07	11	13	15	17.6	19.6
3 hour	180	5.73	6.5	8.86	10.4	12	14	15.5
4.5 hour	270	4.6	5.23	7.17	8.44	9.67	11.3	12.5
6 hour	360	3.92	4.48	6.17	7.28	8.34	9.75	10.8
9 hour	540	3.11	3.57	4.97	5.9	6.78	7.99	8.9
12 hour	720	2.62	3.02	4.24	5.05	5.84	6.92	7.75
18 hour	1080	2.03	2.34	3.34	4.01	4.67	5.59	6.3
24 hour	1440	1.67	1.94	2.78	3.35	3.93	4.73	5.36
30 hour	1800	1.43	1.65	2.38	2.89	3.4	4.11	4.67
36 hour	2160	1.25	1.45	2.09	2.54	3	3.63	4.13
48 hour	2880	0.999	1.16	1.68	2.05	2.42	2.93	3.34
72 hour	4320	0.718	0.831	1.2	1.46	1.73	2.09	2.38
96 hour	5760	0.564	0.65	0.932	1.13	1.34	1.6	1.82
120 hour	7200	0.466	0.536	0.762	0.921	1.08	1.29	1.47
144 hour	8640	0.4	0.459	0.646	0.776	0.904	1.08	1.22
168 hour	10080	0.351	0.403	0.563	0.671	0.776	0.928	1.05

177/179 Campbell St.

Stormwater Calculations

Pre Development

Time of Concentration			
$C_{1,10}$	25	mm	10% AEP, 60min Rainfall
A=	2618	m ²	Insert Catchment Area
A=	0.00262	Km ²	Calculated in Km ²
S_e =	-	m/Km	Insert Catchment Grade
L=	-	Km	Insert Flow Length
t_c =	-	mins	Tc Calculated
	5	mins	Whole Number Tc

Impervious Area		
Existing Hardstand Area=	2364.8	m ²
Total Area =	2618	m ²
Fraction Impervious =	90%	

Runoff Coefficient		
Fraction impervious =	90%	
$C_{1,10}$ =	0.100	Formula - Refer ARR Book VIII
C10 =	0.82	Runoff Coefficient

Frequency Conversion Factors -Refer AR&R 1987										
ARI (years)	1	2	5	10	20	40	60	80	50	100
Factor, F_y	0.8	0.85	0.95	1	1.05	1.2	1.17	1.19	1.15	1.2

Peak Catchment Flows For Varied 5% AEP Storm Durations		
AEP	Duration (min)	Flow (m ³ /s)
5%	5	0.053
5%	10	0.040
5%	15	0.033
5%	20	0.028
5%	25	0.024
5%	30	0.022
5%	45	0.017
5%	60	0.014
5%	90	0.011
5%	120	0.009
5%	180	0.008
5%	270	0.006

Peak Catchment Flows For Given AEP at T.O.C.		
AEP	$I_{t_c,y}$ (mm/h)	Flow (m ³ /s)
63.20%	38.2	0.0183
50.00%	43.2	0.0220
20.00%	60.0	0.0341
10.00%	72.1	0.0432
5.00%	84.7	0.0532
2.00%	102.0	0.0702
1.00%	116.0	0.0833

Hardstand (100% Impervious)		
Roof	704	
Concrete Ground Resd.	229	
Carpark / Driveway	841	
Impervious Area	1774	m²

Landscaping (70% Impervious)		
Gravel and Grass	844	
Impervious Area	590.8	m²

APPENDIX D

Stormwater Detention Calculations

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Engineers & Planners

177 & 179 CAMPBELL 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	69.1	96.7	117	138	169	194
2 min	2	52.4	59	80	94.7	109	127	142
3 min	3	46.3	52.2	71.4	84.9	98.6	116	130
4 min	4	41.8	47.2	65	77.8	91	108	122
5 min	5	38.2	43.2	60	72.1	84.7	102	116
10 min	10	27.7	31.4	44.2	53.8	63.9	78.7	91
15 min	15	22.4	25.5	35.9	43.7	51.9	64.1	74.3
20 min	20	19.2	21.8	30.6	37.2	44.2	54.4	62.9
25 min	25	17	19.3	27	32.7	38.8	47.5	54.8
30 min	30	15.3	17.4	24.3	29.4	34.7	42.4	48.6
45 min	45	12.2	13.8	19.2	23.1	27.1	32.6	37.1
1 hour	60	10.4	11.8	16.2	19.4	22.7	27	30.5
1.5 hour	90	8.35	9.44	12.9	15.3	17.7	20.9	23.4
2 hour	120	7.14	8.07	11	13	15	17.6	19.6
3 hour	180	5.73	6.5	8.86	10.4	12	14	15.5
4.5 hour	270	4.6	5.23	7.17	8.44	9.67	11.3	12.5
6 hour	360	3.92	4.48	6.17	7.28	8.34	9.75	10.8
9 hour	540	3.11	3.57	4.97	5.9	6.78	7.99	8.9
12 hour	720	2.62	3.02	4.24	5.05	5.84	6.92	7.75
18 hour	1080	2.03	2.34	3.34	4.01	4.67	5.59	6.3
24 hour	1440	1.67	1.94	2.78	3.35	3.93	4.73	5.36
30 hour	1800	1.43	1.65	2.38	2.89	3.4	4.11	4.67
36 hour	2160	1.25	1.45	2.09	2.54	3	3.63	4.13
48 hour	2880	0.999	1.16	1.68	2.05	2.42	2.93	3.34
72 hour	4320	0.718	0.831	1.2	1.46	1.73	2.09	2.38
96 hour	5760	0.564	0.65	0.932	1.13	1.34	1.6	1.82
120 hour	7200	0.466	0.536	0.762	0.921	1.08	1.29	1.47
144 hour	8640	0.4	0.459	0.646	0.776	0.904	1.08	1.22
168 hour	10080	0.351	0.403	0.563	0.671	0.776	0.928	1.05

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**177 & 179 CAMPBELL STREET - HOBART****STORMWATER CALCULATION - PRE DEVELOPMENT**

Time of Concentration			
C _{t,10}	25	mm	10% AEP, 60min Rainfall
A=	2,567.00	m ²	Insert Catchment Area
A=	0.00257	Km ²	Calculated in Km ²
T _c	15	mins	Whole Number T _c

Impervious Area		
Existing Hardstand Area=	2,159.90	m ²
Total Area =	2,567.00	m ²
Fraction Impervious =	0.84	

Runoff Coefficient		
Fraction impervious =	84.14%	Formula - Refer ARR Book VIII
C _{1,10} =	0.10	
C ₁₀ =	0.77	

Frequency Conversion Factors -Refer AR&R 1987										
ARI (years)	1	2	5	10	20	40	60	80	50	100
Factor, F _y	0.8	0.85	0.95	1	1.05	1.2	1.17	1.19	1.15	1.2


Peak Catchment Flows For Varied 5% AEP Storm Durations		
AEP	Duration (min)	Flow (m ³ /s)
5%	5	0.049
5%	10	0.037
5%	15	0.030
5%	20	0.026
5%	25	0.022
5%	30	0.020
5%	45	0.016
5%	60	0.013
5%	90	0.010
5%	120	0.009
5%	180	0.007
5%	270	0.006

Peak Catchment Flows For Given AEP at T.O.C.		
AEP	I _{tc,y} (mm/h)	Flow (m ³ /s)
63.20%	22.4	0.0099
50.00%	25.5	0.0120
20.00%	35.9	0.0188
10.00%	43.7	0.0241
5.00%	51.9	0.0301
2.00%	64.1	0.0407
1.00%	74.3	0.0492

Garden (50%)		
Vegetation Area	155.00	m ²
Impervious Area	77.50	m ²

Gravel (60%)		
Carpark Gravel Area	824.00	m ²
Impervious Area	494.40	m ²

Hardstand Area (100% Impervious)		
Roof	655	m ²
Concrete Floor	464	m ²
Asphalt Carpark & Driveway	469	m ²
Impervious Area	1588	m ²

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177 & 179 CAMPBELL STREET - HOBART	
STORMWATER CALCULATION - POST DEVELOPMENT	

Time of Concentration			
C _{1,10}	25	mm	10% AEP, 60min Rainfall
A=	2,567.00	m ²	Insert Catchment Area
A=	0.00257	Km ²	Calculated in Km ²
Tc=	15	mins	Whole Number Tc

Impervious Area		
Existing Hardstand Area=	2,499.00	m ²
Total Area =	2,567.00	m ²
Fraction Impervious =	97%	

Runoff Coefficient		
Fraction impervious =	97%	
C _{1,10} =	0.100	Formula - Refer ARR Book VIII
C ₁₀ =	0.88	Runoff Coefficient

Frequency Conversion Factors -Refer AR&R 1987										
ARI (years)	1	2	5	10	20	40	60	80	50	100
Factor, F _y	0.8	0.85	0.95	1	1.05	1.2	1.17	1.19	1.15	1.2

Peak Catchment Flows For Varied 5% AEP Storm Durations		
AEP	Duration (min)	Flow (m ³ /s)
5%	5	0.056
5%	10	0.042
5%	15	0.034
5%	20	0.029
5%	25	0.026
5%	30	0.023
5%	45	0.018
5%	60	0.015
5%	90	0.012
5%	120	0.010
5%	180	0.008
5%	270	0.006

Peak Catchment Flows For Given AEP at T.O.C.		
AEP	I _{c,y} (mm/h)	Flow (m ³ /s)
63.20%	22.4	0.0112
50.00%	25.5	0.0136
20.00%	35.9	0.0214
10.00%	43.7	0.0274
5.00%	51.9	0.0342
2.00%	64.1	0.0462
1.00%	74.3	0.0559

Hardstand Area (100% Impervious)		
Roof + Building Line	1,343.00	m ²
Driveway	300.00	m ²
Concrete Floor	754.00	m ²
Impervious Area	2,397.00	m ²

Vegetation (60% Impervious)		
Garden Beds	170	m ²
Impervious Area	102	m ²

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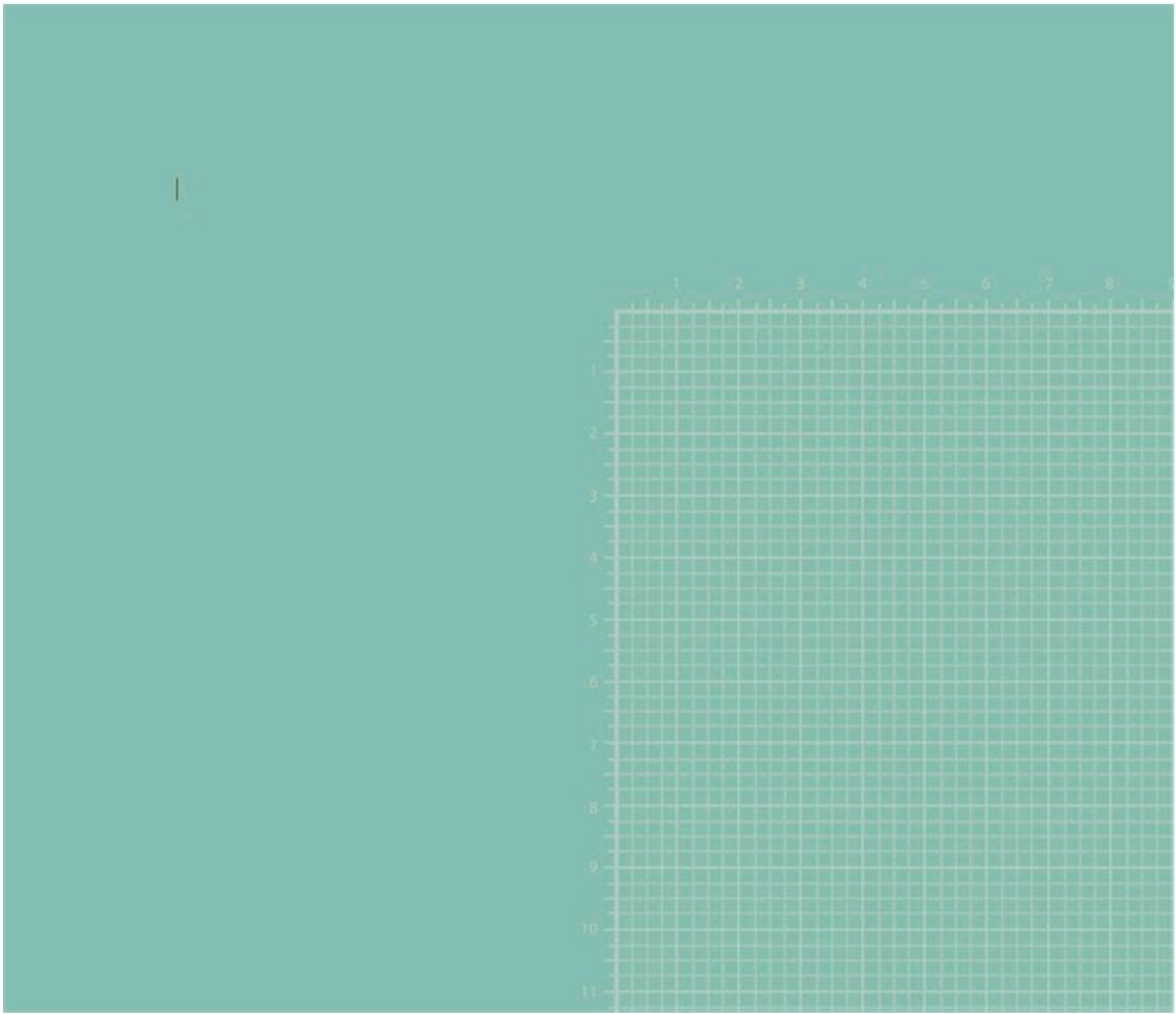


177 & 179 CAMPBELL STREET - HOBART

5% AEP STORMWATER DETENTION CALCULATION

Catchment & Flow Details			Comments
Catchment Area =	0.26	Ha	
10 Year Runoff Coefficient =	0.88	-	
20 Year Effective Catchment Area =	0.24	Ha	
Restricted Outflow Requirement =	0.0301	m3/s	Site Runoff: pre development 5% AEP, 20min (ToC) storm duration.

Detention Calculation					
Storm Duration	5% AEP	Ip	Qp	V1	Smax
(min)	Intensity (mm/hr)	(m3/s)	(m3/s)	(m3)	(m3)
1	138.00	0.091	0.030	5.45	3.64
2	109.00	0.072	0.030	8.61	5.00
3	98.60	0.065	0.030	11.68	6.27
4	91.00	0.060	0.030	14.37	7.15
5	84.70	0.056	0.030	16.72	7.70
10	63.90	0.042	0.030	25.23	7.19
15	51.90	0.034	0.030	30.73	3.67



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175-179 Campbell Street, Stormwater Management Plan

Prepared For:
**SOLUTIONSWON
GROUP PTY LTD**


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<i>Title</i>	<i>Client</i>	<i>Document Number</i>	<i>Project Manager</i>
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Prepared by:  Date: 29th May 2022
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Reviewed by:  Date: 29th May 2022
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Max W. Möller

Revision History					
Rev No.	Description	Prepared by	Reviewed by	Authorised by	Date
00	175-179 Campbell St, SWMP	Mark Smith	John Holmes	Max W. Möller	08/07/2021
01	Corrections following peer review section 3.3, update to pre/post dev depth maps. Minor formatting changes.	Mark Smith	John Holmes	Max W. Möller	29/05/2022

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FS_HOB_2181_175-179 Campbell Street, SWMP/ REV01

29th May 2022

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29th May 2022

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FS_HOB_2181_175-179 Campbell Street, SWMP/ REV01

29th May 2022

1. Introduction

Flüssig Engineering has been engaged by **Solutionswone Group Pty Ltd** to undertake a site-specific Stormwater Management Plan for the property at number 175-179 Campbell Street, Hobart in the **City of Hobart** municipality. The purpose of this report is to determine the quantity and quality properties of stormwater runoff on the existing and post-development lot drainage for the 5% AEP.

1.1 Objectives and Scope

This stormwater analysis has been written to meet the standards of the Hobart City Council Interim Planning Scheme 2015 (HIPS, 2015), with the intent of understanding the development influences on local runoff. The objectives of this study are:

- Provide an assessment of the current and proposed site runoff for the 5% AEP Storm event ensuring there is no increase in runoff from the development, or any increase can be catered for by receiving infrastructure.
- Provide an assessment of the receiving infrastructure and its capacity.
- Provide quality mitigation methods which met water pollutant reduction standards of 80% TSS, 45% TN and 45% P.
- Provide maintenance regimes for any mitigation methods.
- Provide recommendations for potential future development, where appropriate.

1.2 Limitations

This study is limited to the objectives of the client engagement, the availability and reliability of data, and including the following:

- The quantity model is limited 5% AEP worst case temporal design storm.
- All parameters have been derived from best practice manuals and available relevant studies (if applicable) in the area.
- All provided data by the client or government bodies for the purpose of this study is deemed fit for purpose and has not been checked for accuracy.
- The study is to determine the effects of the new development on stormwater runoff and should not be used outside the specified area without further assessment.

2. Site Characteristics

2.1 Site Location

175-179 Campbell Street, Hobart is located along the Park Street Rivulet. The properties total approximately 2,430m² (Figure 1). The site is in inner city Hobart and is listed as mixed urban use.

Figure 1 below outlines the approximate location for the site at 175-179 Campbell Street.

FS_HOB_2181_175-179 Campbell Street, SWMP/ REV01

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Figure 1. Development Location, 175-179 Campbell Street, Hobart

2.2 Topography

The 2D surface model was taken from *Mt Wellington LiDAR 2011* to create a 1m and cell size DEM. For the purposes of this report, 1m cells are enough to capture accurate flow paths. The DEM with hill shading can be seen below (Figure 2).



Figure 2. 1m DEM (Hill shade) of Property Area

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2.3 Proposed Development

The proposed development consists of the construction of multi storey townhouse complex at the rear of 175-179 Campbell Street, currently a partially sealed carpark. This includes the redivision of a DN525 stormwater main to allow for footings.

3. Stormwater Quantity

3.1 Catchment

The following Table 1 states the adopted hydrological parameters for the RAFTS catchment.

Table 1. Parameters for RAFTS catchment

Catchment Area (ha)	Initial Loss Perv/imp (mm)	Continuing Loss Perv/imp (mm/hr)	Manning's N pervious	Manning's N impervious	Non-linearity factor
0.243	10/1	3.0/0.0	0.035	0.018	-0.285

3.1.1 Design Rainfall Events

Design storm durations and temporal pattern were calculated using Australian Rainfall and Runoff 2019 (ARR19) guidelines, running ten temporal pattern events through each duration to determine the worst-case duration using the median temporal pattern. below shows the 5% AEP 10min duration temporal pattern 8 rainfall event as the storm event.

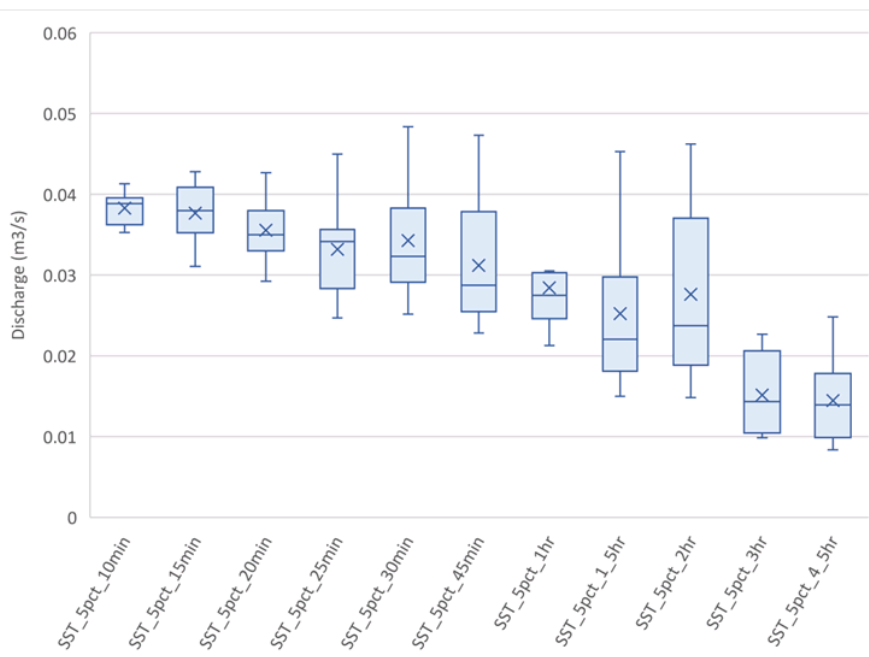


Figure 3. 1% Box and Whisker Plot

FS_HOB_2181_175-179 Campbell Street, SWMP/ REV01

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3.1.2 Land use

Pervious and impervious land use for the development both pre- and post-development were derived from plans and aerial imagery. Land use values are as follows in Table 2.

Table 2. Site Characteristics

Catchment	Area (ha)	Average Slope (%)	Total Land use pervious/ impervious (ha)	Storm duration and pattern
Pre-Development	0.243	2.6	0.040/ 0.203	5% 10-minute storm pattern 8
Post-Development	0.243	2.6	0.02/ 0.223	5% 10-minute storm pattern 8

3.1.3 Roughness (Manning's n)

Roughness values for this model were derived from the ARR 2019 Guidelines. The Manning's values are listed in Table 3.

Table 3. Manning's Coefficients (ARR 2019)

Land Use	Roads	Open Channel	Rural	Residential	Parks	Buildings	Piped Infrastructure
Manning's n	0.018	0.035	0.04	0.045	0.05	0.3	0.013

3.2 Development Runoff

Stormwater runoff from the development site has been assessed under pre- and post-development models to determine the potential impact the development at 175-179 Campbell Street has on the immediate local flows. As per planning guidelines it is a requirement that this does not worsen from pre to post development.

Using the above parameters, the site was calculated using Infoworks ICM software and ARR19 best practice manuals. Site characteristics for the pre- and post-development model were summarised in Table 2. Site Characteristics.

3.3 Model Results

The pre- and post-development scenarios were calculated using Infoworks ICM software against the 5% AEP. The storm durations were derived from the worst case median temporal pattern for these two events which were both 10 minutes duration.

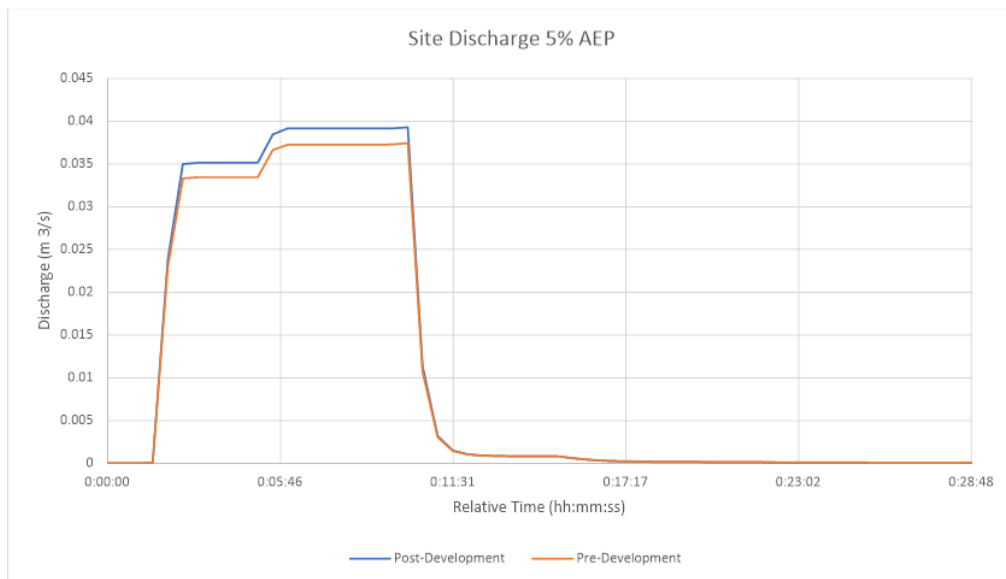
The pre and post conditions can be seen in Table 4 below showing the peak discharge and increase in peak discharge from pre to post development.

FS_HOB_2181_175-179 Campbell Street, SWMP/ REV01

29th May 2022**Table 4. Discharge rates pre- and post-development**

Design Event (AEP)	Peak Discharge (L/s) Development Areas		Difference (L/s)
	Pre-Development	Post- Development	
5%	37	39	2

As per the Hobart City Council Interim Planning Scheme 2015, E7.0 (Stormwater Management) the post-development allowable site discharge must not exceed the pre-development site discharge. As can be seen from Table 4, this is exceeded in the 5% AEP by a peak discharge of 39 L/s, 2 L/s more than the allowable site discharge of 37 L/s. Therefore, the site must detain the difference using an onsite stormwater detention (OSD) system.

**Figure 4. Site Discharge Pre- Vs Post-development comparison**

3.4 On-Site Detention Sizing and Configuration

Pre- and post-development 5% AEP modelling for the site shows a total volume of 19.594 m³ post-development, 0.88m³ more than pre-development flows of 18.714. As per ARR2019, Book 9, Section 5.5.1 "An Integrated Approach" – Figure 5.6, a single 880 Litre detention tank is proposed to be discharged into existing stormwater network.

3.5 Maintenance

To ensure ongoing operation of the tanks, strata owners/body corporate would be required to perform regular maintenance on OSD devices to ensure they remain in good working order. This would include but not be limited to the tasks described in Table 5.

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29th May 2022**Table 5. Concept Maintenance Plan**

Task	Action	Frequency
General Cleaning – pits, pipe, filters etc.	Clear all debris from tank and tank filters, ensure operational.	Approximately every 6 months
Specialised cleaning and inspection	Inspect all pipes, inflow and outflow – flush if required. Inspect all filters replace if required. Inspect main tank for defects.	Yearly
Maintenance	Perform detailed inspection and maintenance of tank and associated infrastructure by a qualified person.	Every 5 years

The above maintenance plan is generic and based on best practise advice. Specific maintenance plans should be created for each specific device upon purchasing or confirmation of design.

3.6 Existing Stormwater Network Capacity

The site currently drains to an existing council DN525 stormwater pipe that runs through the site and joins into a DN1800 trunk main (piped Park Street Rivulet). The DN525 has an upstream contributing catchment of approximately 2 ha of commercial zoned area (largely impervious). As can be seen from Figure 5, with the addition of upstream Park Street Rivulet catchment and Providence Rivulet the existing infrastructure is well under capacity for even a 5% AEP event, flooding the existing car park and neighbouring properties.

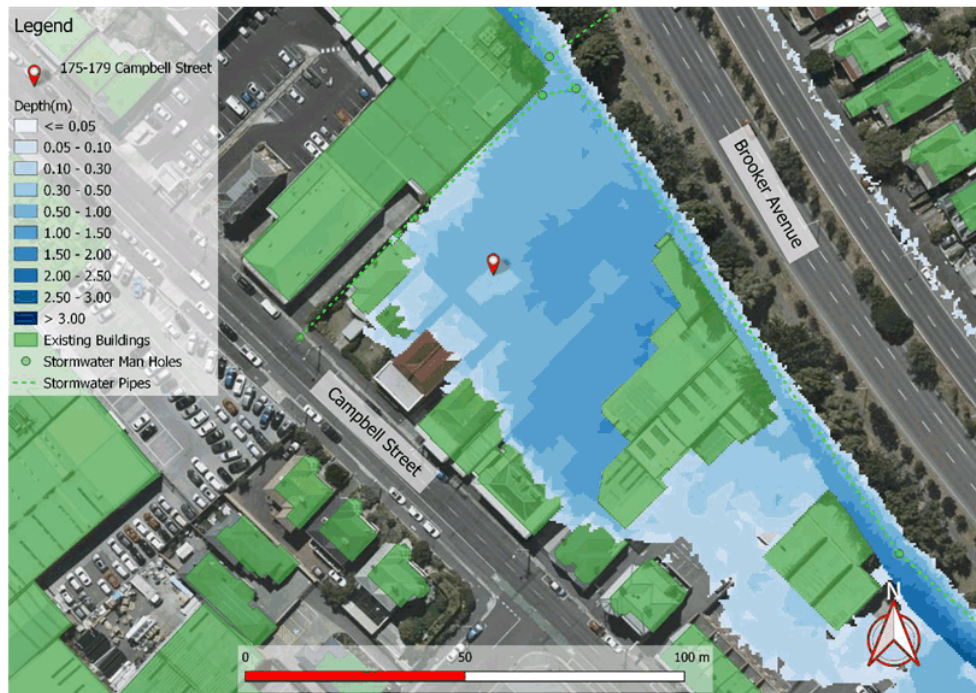


Figure 5. Pre-development 5% AEP, flood depths and extents

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With the introduction of the lowered car park the basement carpark flooding occurs with depths of up to 1.5m (Figure 7). Figure 7 Shows how the Park Street Rivulet floods the proposed re-aligned DN525 restricting any additional flow from contributing catchments and flooding 175-179 Campbell Street and surrounding properties.

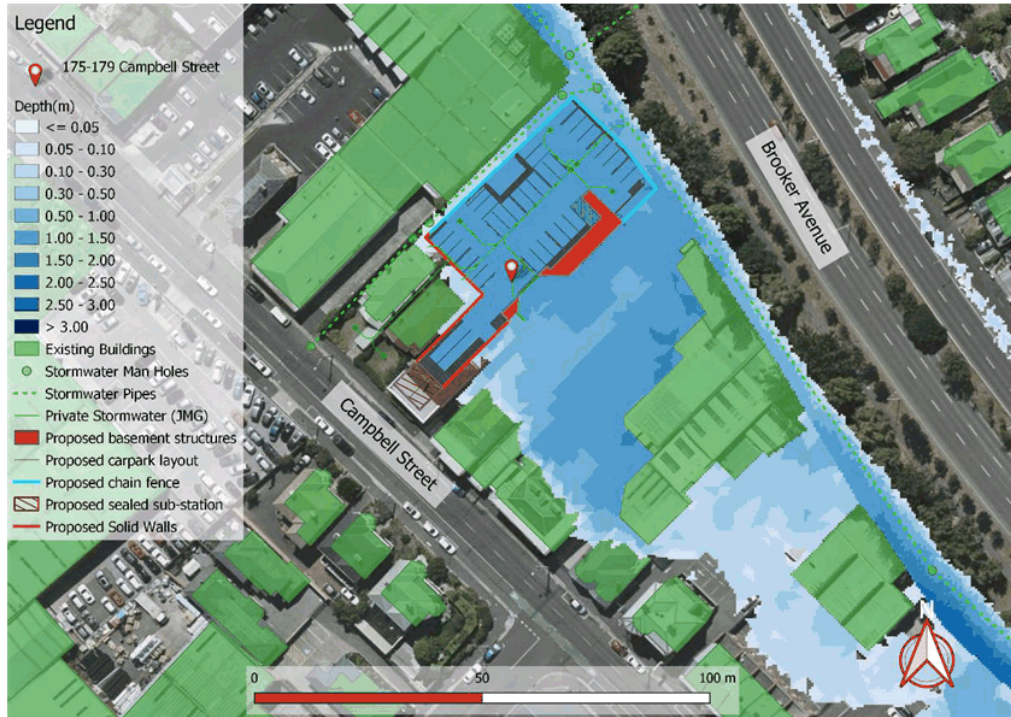


Figure 6. Post – Development 1% AEP at 2100, flood depths and extents

Figure 8 shows the capacity of the DN525 Stormwater infrastructure with only the contributing catchments to this section of pipe included (localised rainfall). In this long section current requirement is 34 L/s at post development contribution well under the pipe's maximum 92.5 L/s free flowing capacity.

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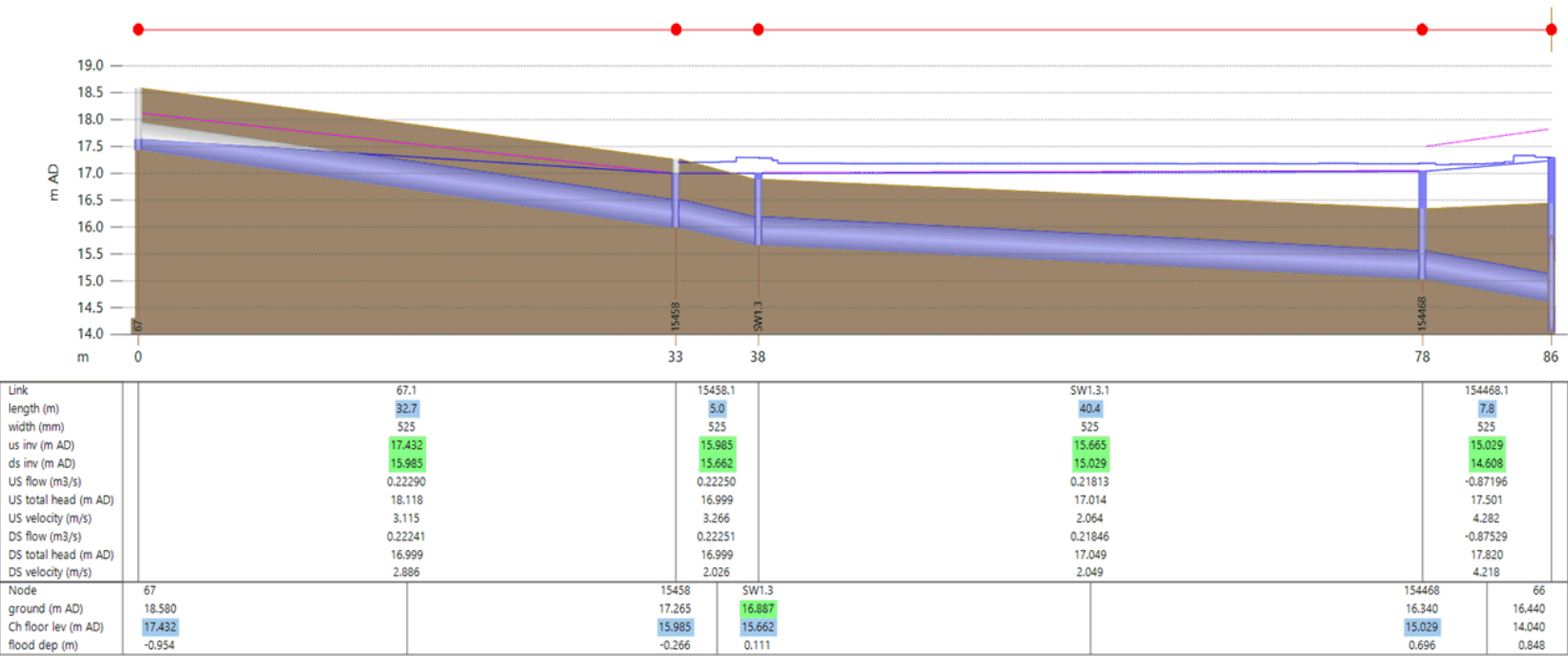


Figure 7. Long section of the proposed re-alignment of the DN525 (proposed by JMG) including DN1800 catchments.

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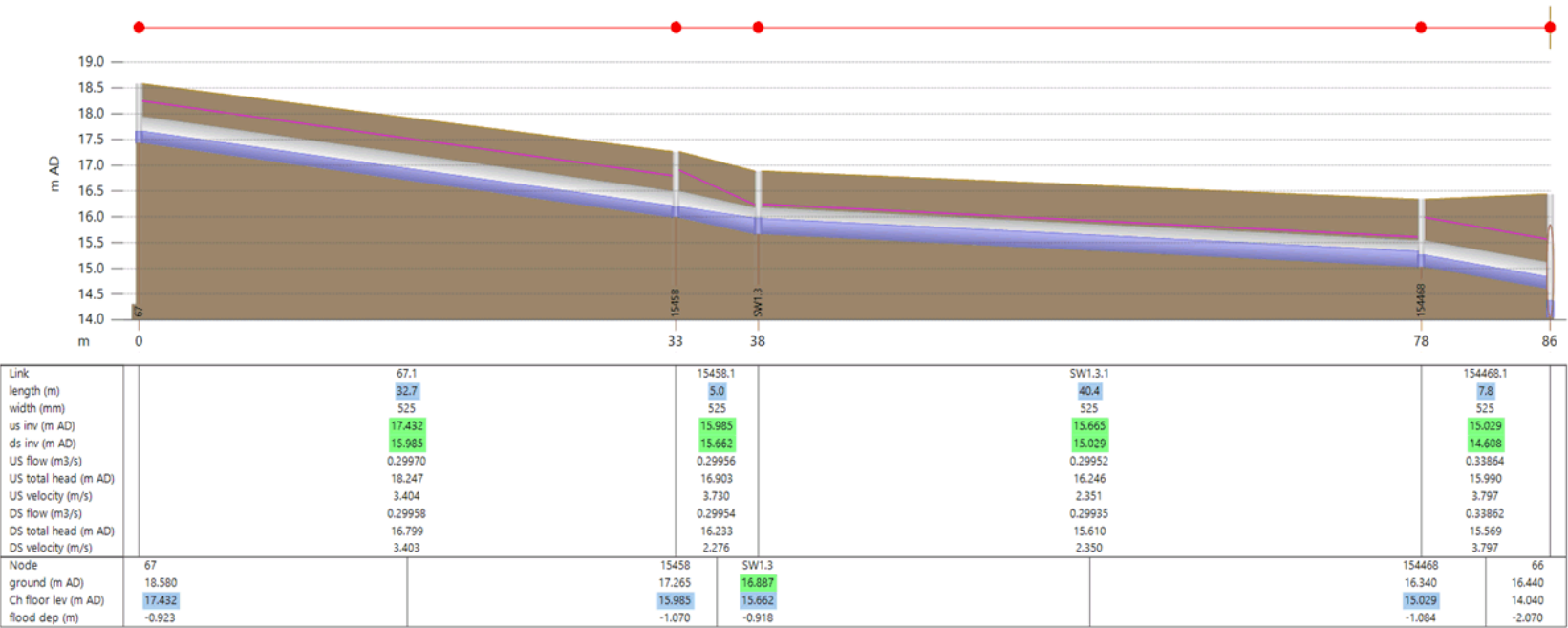


Figure 8. Long Section of proposed DN525 with localised to DN525 contributing catchments.

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3.7 Quantity Summary

This concept quantity report is based off limited available information and guidelines from the Hobart City Council in line with the Hobart Interim Planning Scheme. The following is a summary of the concept requirements for stormwater management for the development at 175-179 Campbell Street, Hobart:

1. Site exceeds pre-development maximum discharge by 0.20 L/s for the 5% AEP.
2. Recommended onsite storage detention of 880 litres for the 10 min storm duration.
3. Site drainage to have minimum 1.0kL tank as OSD for site.
4. New building must provide a free flowing path to allow for overland flow path for the 1% and 5% AEP runoff around development site.

4. Stormwater Quality

Water quality modelling for the site has been undertaken with the urban stormwater improvement conceptualisation software MUSIC. The modelling conducted in MUSIC has been done in accordance with MUSIC Modelling Guidelines (BMT WBM, August 2019) and the Tasmanian State Stormwater Strategy. This document provides a guide to water quality modelling methodology and outlines the assumptions that should be made when selecting input parameters.

Recommendation for the improvement of the water quality on site would include the diversion of stormwater flows from the subdivision to a primary and secondary treatment (treatment train). This would reduce the pollutants in the receiving waters further downstream and be a safe design option if future usage of this sub catchment provides higher pollutant storm water runoff.

4.1 Stormwater Quality Treatment (Construction phase)

During construction, many pollutants are generated from various sources. These pollutants can easily be captured in stormwater runoff and introduced into the downstream receiving environment, polluting the waterways. Some of the main construction phase pollutants are described below:

- Litter from construction – Material packaging, paper, plastic, food packaging, off cuts etc.
- Sediment erosion and transports from excavated material and fresh surfaces.
- Hydrocarbons – equipment and machinery
- Toxic material – cement, solvents, paints, cleaning agents etc.
- pH altering substances – cement, cleaning agents etc.

Construction phase pollutants should be planned and mitigated for by a designed site-specific SWMP as part of the drawing set. This should detail controls including, but not limited to:

- Diversion of upslope water (where applicable)
- Stabilised exit/entry points
- Minimise site disturbance where possible.
- Implement sediment control along downslope boundaries.
- Appropriate location and protection for stockpiles
- Capture on-site runoff that may contain pollutants.
- Maintain control measures.
- Stabilise site after disturbance (revegetate etc)

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4.2 Stormwater Quality Modelling

Stormwater pollutant modelling for Campbell Street development was undertaken using Model for Urban Stormwater Improvement Conceptualisation (MUSIC) software, version 6.3.0 under the guidelines of the State Stormwater Strategy and Interim Planning Scheme.

This model splits the catchment into the following typical areas:

- Roof Catchment
- Road Catchment
- Driveways
- Revegetated land

The following fraction impervious and land areas were adopted in the modelling as per the concept design measurements. Revegetated land was left to freely drain to the node as there is no mechanism to drain this area to a treatment device. See Table 6 below for fraction imperviousness (fi).

Table 6. Adopted Fraction Impervious

Catchment Area (ha)	Roof		Driveways		Revegetated	
	Area (ha)	fi	Area (ha)	fi	Area (ha)	fi
0.243	0.203	1	0.02	0.9	0.02	0

4.2.1 Council Planning Quality Removal Standards

The Hobart Interim Planning Scheme 2015 has adopted the pollutant removal targets and best practice from the State Stormwater Strategy 2010. See Table 7 for target removal rates.

Table 7. State Stormwater Strategy Pollutant Removal Targets

Parameter	Result Pollutant Retention on Developed Site
Total Suspended Solids (TSS) (kg/yr)	80%
Total Phosphorous (TP) (kg/yr)	45%
Total Nitrogen (TN) (kg/yr)	45%
Total Pollutants (kg/yr)	100%

4.3 Treatment Train

To achieve stormwater pollutant removal targets outlined above and considering site constraints, this model utilised a primary and secondary proprietary treatment. The treatment train consists of a primary stormwater tank, followed by a gross pollutant trap which receives flow from new ground impervious areas and roofs (via rainwater tank). The driveway is captured by a Hydrochannel or similar.

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4.4 Quality Results

The MUSIC pollutant load reductions can be seen detailed in Table 8 below. As can be seen when comparing the MUSIC results to the required state stormwater strategy target load reductions, the specified treatment train outlined above and as seen in Table 8, shows that all targets either meet or exceed reduction targets.

Table 8. Pollutant Removal Achieved vs Targets.

Parameter	Required Load Reduction (%)	MUSIC Modelled Load Reduction (%)	State Stormwater Targets Achieved
Total Suspended Solids (TSS) (kg/yr)	80.0	79.9	Y
Total Phosphorous (TP) (kg/yr)	45.0	76.6	Y
Total Nitrogen (TN) (kg/yr)	45.0	45.2	Y
Total Pollutants (kg/yr)	90.0	99.2	Y

Based on the water quality assessment using the MUSIC software, it is found that the pollutant reduction improvement can be achieved by adopting the Stormwater Quality Improvement Devices (SQIDs) specified in Table 9.

Table 9. Required SQIDS

Stormwater Quality Improvement Device	Quantity
Detention Tank	1
Spel Hydrosystem HS.800	1

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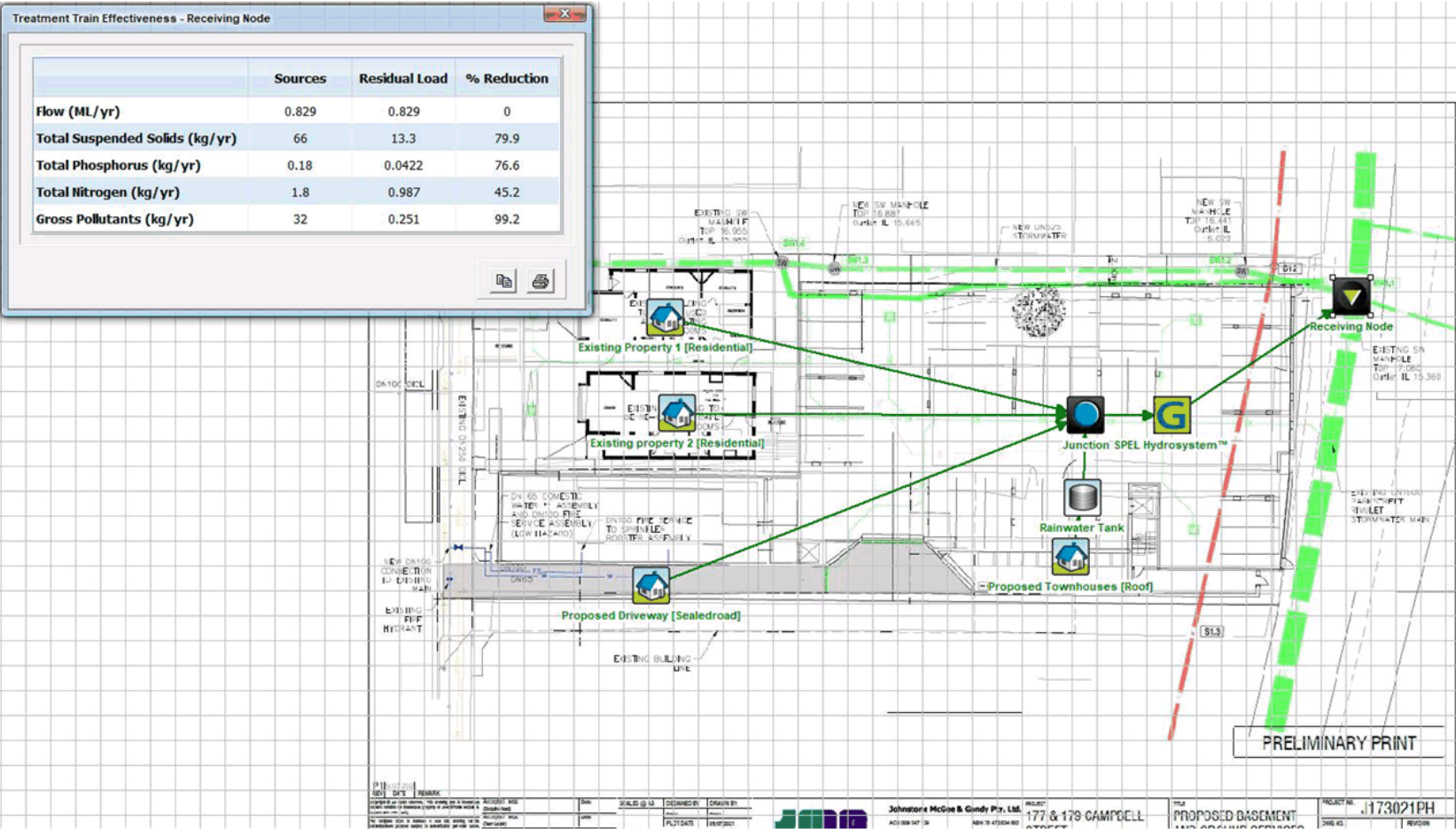


Figure 9. Music Model Treatment Train and removal statistics

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4.5 SQID Maintenance

To ensure ongoing operation of all treatment systems the strata management group would be required to perform regular maintenance on all treatment devices to ensure they remain in good working order. This would include, but not be limited to, information described in Table 10.

Table 10. Concept Maintenance Plan

Task	Action	Frequency
General Cleaning	Clear all pollutants from storage and device filters, ensure operational	Approximately every 6 months
Specialised cleaning and inspection	Inspect all storage, inflow and outflow – clean and flush if required. Inspect all filters replace if required. Visually inspect main device for defects	Yearly
Maintenance	Perform detailed inspection and maintenance of tank and associated infrastructure by a qualified person.	Every 5 years

The above maintenance plan is generic and based on removal rates and best practise advice. Specific maintenance plans should be created for each specific device upon purchasing or confirmation of design.

4.6 Quality Summary

Flüssig Spatial recommends the following be undertaken to ensure the ongoing stormwater quality from the developed site:

1. Construction quality control should be implemented to prevent pollution during construction.
2. Installation of treatment devices in the order specified in this document.
3. Maintenance plans need to be created and adhered to ensure the ongoing operation of the systems.

5. Conclusion

The Concept Stormwater Management Plan for 175-179 Campbell Street, Hobart development site has reviewed the post development quantity and quality scenarios. Post-development quantity and quality has been assessed against the State Stormwater Strategy to ensure the post-development flows meet specified standards.

The following conclusions were derived in this report:

1. A comparison of the post-development peak flows for the 5% AEP storm event were undertaken against pre-development discharge and found to meet the allowable discharge using OSD measure which include 1.0KL detention tank.
2. 1% and 5% AEP OFP is considered through the site and car park must maintain a free flow through the car park.
3. SQIDs designed and sized using MUSIC can achieve required pollutant removal through the installation of said primary treatment devices.

Under the Stormwater Management Plan, the development site will meet current specified standards for both quantity and quality control.

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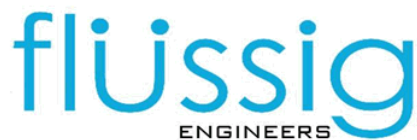
6. Limitations

Flüssig Engineers were engaged by **Solutionswon Group Pty Ltd**, for the purpose of a site-specific Stormwater Management Plan for 175-179 Campbell Street, Hobart, as per E7.0 of the Hobart Interim Planning Scheme 2015. This report is deemed suitable for purpose at the time of undertaking the study. If the conditions of the development should change, the plan will need to be reviewed against all changes.

This report is to be used in full and may not be used in part to support any other objective other than what has been outlined within, unless specific written approval to do otherwise is granted by Flüssig Engineers.

Flüssig Engineers accepts no responsibility for the accuracy of third-party documents supplied for the purpose of this Stormwater Management Plan.

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175-179 Campbell Street, Flood Hazard Report

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03	Additional detail re. storm verification, boundary conditions, blockage and time to inundation	Mark Smith	John Holmes	Max Moller	31/05/2022

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APPENDIX A: Risk Assessment Matrix

APPENDIX B: A3 Inundation Maps

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1. Introduction

Flüssig Engineering has been engaged by **Solutionsworn Group Pty Ltd** to undertake a site-specific Flood Hazard Report for the property at number 175-179 Campbell Street, Hobart in the **City of Hobart** municipality. The purpose of this report is to determine the flood characteristics on the existing and post-development flood hazard scenarios for the 1% AEP plus climate change storm event.

1.1 Objectives and Scope

This flood analysis has been written to meet the standards of the Hobart City Council Interim Planning Scheme 2015 (HIPS, 2015), with the intent of understanding the development risk with flooding. The objectives of this study are:

- Provide an assessment of the flood characteristics through the site under the 1% AEP plus climate change (CC) scenario.
- Provide comparison of flooding for pre- and post-development against acceptable solution and performance criteria.
- Provide flood mitigation recommendations for potential future development, where appropriate.

1.2 Limitations

This study is limited to the objectives of the client engagement, the availability and reliability of data, and including the following:

- The flood model is limited to a 1% AEP + CC worst case duration design storm.
- All parameters have been derived from best practice manuals and available relevant studies (if applicable) in the area.
- All provided data by the client or government bodies for the purpose of this study is deemed fit for purpose and has not been checked for accuracy.
- The study is to determine the effects of the new development on flooding behaviour and should not be used as a full flood study outside the specified area without further assessment.

2. Model Build

2.1 Overview of Catchment

The property at 175-179 Campbell Street, Hobart is located along the Park Street Rivulet. At this point the contributing catchment is made up of the upper Park Street Rivulet, Providence Gully Rivulet and a small catchment from the Brooker Highway to Church Street, North Hobart (Figure 1). These total approximately 283 ha and drain from a maximum height of approximately 322 mAHD to the site at approximately 16 mAHD. The land use is predominantly General Residential and Inner Residential with areas of light industrial and commercial zones, with the specific site being listed as mixed urban use.

Figure 1 below outlines the approximate contributing catchment for the site at 175-179 Campbell Street.

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Figure 1. Contributing Catchment, 175-179 Campbell Street, Hobart

2.2 Hydrology

The upper catchment was modelled using Infoworks ICM hydrology (RAFTS) module, which uses the Australian designed Laurenson method to calculate runoff to the outlet. The catchment characteristics (% impervious, roughness etc.) were taken from best practice manuals. The hydrology catchment was connected to the 2D hydraulic model.

The following Table 1 states the adopted hydrological parameters for the RAFTS catchment.

Table 1. Parameters for RAFTS catchment

Catchment Area (ha)	Initial Loss Perv/imp (mm)	Continuing Loss Perv/imp (mm/hr)	Manning's N pervious	Manning's N impervious	Non-linearity factor
283	10/1	3.0/0.0	0.045	0.018	-0.285

2.2.1 Design Rainfall Events

HIPS 2015 requires modelling of flood events of 1% AEP (100yr ARI) for the life of the development. Therefore, the design events assessed in this analysis are limited to the 1% AEP + CC design events. Due to the size and grade of the catchment the peak rainfall time was restricted to between 10 min – 4.5 hrs.

The model ran each duration for the 1% AEP design event against 10 temporal patterns sourced from the ARR data hub. ARR 2019 advises the use of the worst-case duration median temporal pattern to ensure the event is not too conservative. These events were run through a hydrologic model to determine the required storm event. Figure 2 shows the box and whisker output of the model run. The model shows that the 1%

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AEP 10 min storm temporal pattern 5 was the worst-case median storm. Therefore, this storm event was used within the hydraulic model. The short duration storm found to be the worst case is likely caused by the short nature of the side catchments in conjunction with short duration flooding from the upper catchments causing the largest runoff at the site.

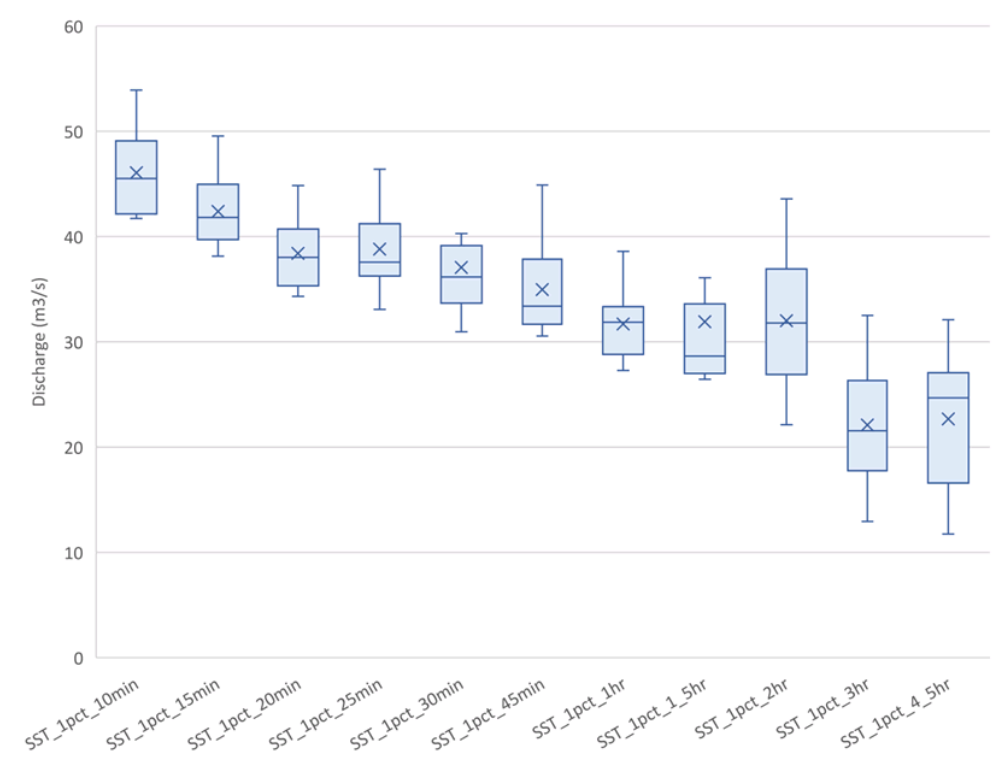


Figure 2. 1% Box and Whisker Plot

Verification of Worst-Case Storm

Given the contributing catchment and the 10-minute median worst case storm result, the hydrology model was verified using two individual scenarios to compare the outcomes of the hydrology output.

Scenario 1 included each sub catchment connected to the Park Street Rivulet underground 1D pipe infrastructure with the outlet connected via a 110m wide 1D channel. The result was assessed at both the pipe and channel for the worst-case event.

Scenario 2 connects each sub catchment to its respective downstream catchment until the final catchment (at site) is connected to the 1D Park Street system. The worst-case storm was assessed based on the total outflow from the last sub catchment. This method ignores any 1D and 2D model parameters and assesses purely from the runoff routing calculations.

In both cases the median worst-case storm resulted in the 10-minute storm and similar discharge quantities. Given the near identical outputs, and no gauge data available along Park Street Rivulet to calibrate the hydrology model, the 10-minute storm was accepted for use in the hydraulic model.

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2.2.2 Climate Change

As per ARR 2019 Guidelines, for an increase in rainfall due to climate change at 2100, it is recommended the use of RCP 8.5. However, ARR 2019 recommends that this figure be used in lieu of more local data being available. Climate Futures Tasmania, 2010 (CFT) was a Tasmanian in-depth, entire state study into climate. Table 2 shows the ARR 8.5 increase compared to the CFT increase of 30% that was used within the model.

Table 2. Climate Change Increases

Sub-Catchment	CFT increase @ 2100	ARR 8.5 increase @ 2100
Hobart	30.0%	16.3%

2.3 Hydraulics

A 1D/2D hydraulic model was created to determine the flood level through the target area.

2.3.1 Extents and topography

The hydraulic model extends from Brisbane Street to Burnett Street and from the Brooker to Argyle Street. This considers the interaction between pipe network and sub catchment inflows as well as showing all overland flow paths, detention basins and weirs. Hydraulic topography ranges between 15-40 mAHD with the site location around approximately 16 mAHD, with an average gradient of approximately 5.1%.

Boundary Conditions

Inflow points were supplied at the end of each catchment as a hydrology/hydraulic connected inflow point. All sub catchments were connected to the closest pit, all pits were connected to the 2D zone to provide the overland flow as egress from a pit or manhole.

Given the complexities of the downstream natural 'bowl', with Brisbane Street acting as a weir, the 2D model is extended to below Brisbane Street to ensure all terrain features and restrictions can be included without any user bias associated with guessing fixed boundaries.

2.3.2 Blockage

Blockage in the DN1800 Park Street Rivulet was not considered as there are no culvert inlets into this main that provide an opening large enough to block this pipe at any percent. Given the nature and location of the on-grade inlets, pits blockage at a pit level was deemed unlikely for this model and no pit level blockage was applied.

2.3.3 Calibration/Validation

This catchment has no stream gauge to calibrate the model against a real-world storm event. Similarly, there is little historical information available, and no past flood analysis undertaken to validate against the flows obtained in the model. Therefore, all parameters have been adopted from best practice manuals.

2.3.4 Survey

The 2D surface model was taken from *Mt Wellington LiDAR 2011* to create a 1m and cell size DEM. For the purposes of this report, 1m cells are enough to capture accurate flow paths. The DEM with hill shading can be seen below (Figure 3).

FS_HOB_2181_175-179 Campbell Street, Flood Report/ REV03

31st May 2022

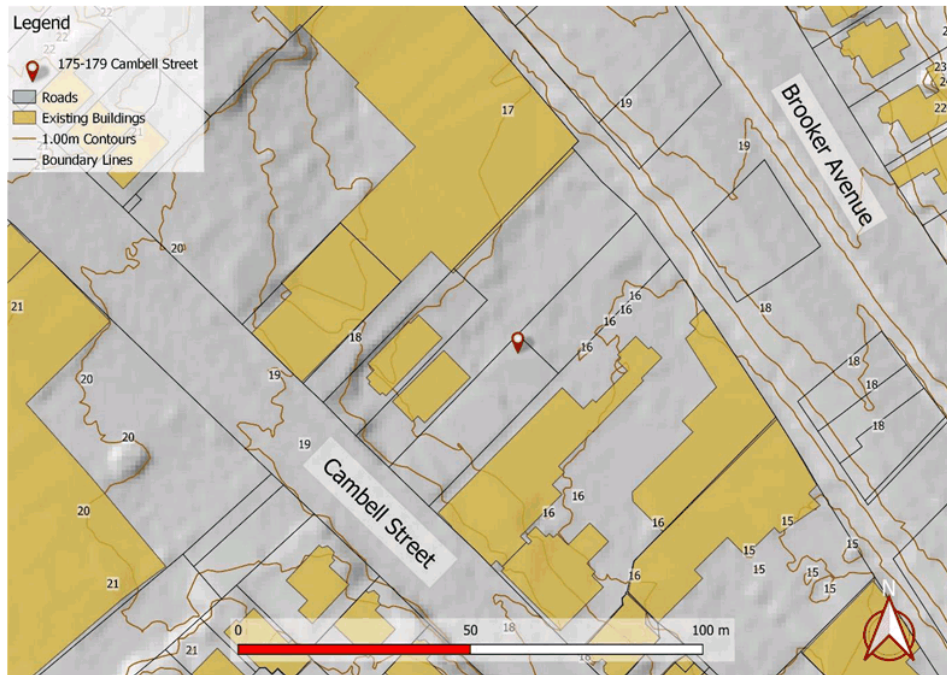


Figure 3. 1m DEM (Hill shade) of Property Area

2.3.5 Roughness (Manning's n)

Roughness values for this model were derived from the ARR 2019 Guidelines. The Manning's values are listed in Table 3.

Table 3. Manning's Coefficients (ARR 2019)

Land Use	Roads	Open Channel	Rural	Residential	Parks	Buildings	Piped Infrastructure
Manning's n	0.018	0.035	0.04	0.045	0.05	0.3	0.013

2.3.6 Walls

All significant walls/fences and retaining structures were included as 2D linear wall structures within the 2D model, all walls are assumed built to withstand flooding. Wall heights were derived from Utility Detection and Mapping survey or design documents.

2.3.7 Infrastructure

Major pipe network including Park Street Rivulet was included within the model as 1D structures linked to the 2D mesh. Infrastructure location and size was sourced from City of Hobart's GIS open-source database, where inverts are not known a default 600mm cover was included.

FS_HOB_2181_175-179 Campbell Street, Flood Report/ REV03

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2.3.8 Buildings

Buildings were represented as mesh polygons with a high Manning's n value within the model. Buildings with unknown floor levels were set with a minimum 300mm above ground. This method allows for flow through the building if the flood levels/pressure become great enough. The aim is to mimic flow through passageways such as doors, windows, and hallways.

Commercial properties along the boundary of each lot and the Brooker Highway Road reserve, were set to 4m high to act as solid structures along the overland flow path of Park Street Rivulet. This will provide a better flow path representation; however, it is likely to show conservative flood levels as some of these properties would likely flood, reducing the overall level.

Although on the conservative side, this approach was adopted as it is deemed that the direction of flow and level would be the most accurate representation.

2.4 Model Results

The 1% AEP at 2100 was run through the pre-development and post-development model scenarios to compare the effects flooding has onsite and to surrounding areas. It can be seen from the pre-development model runs (Figure 4), that significant flooding occurs through the site as well as all neighbouring properties and Campbell Street. This is expected given the current site topography and the catchment that feeds the Park Street Rivulet. The post-development run (Figure 5) shows the proposed structure extending well over the flood inundation hazard area. To mitigate against flooding, the current design proposes the ground level as a basement carpark, remaining open along the Park Street Rivulet side, with chain fencing to provide security. Included in the design and model as solid structures are the proposed wall against the existing dwellings at the front of the property including a staircase, two lift wells and a substation.

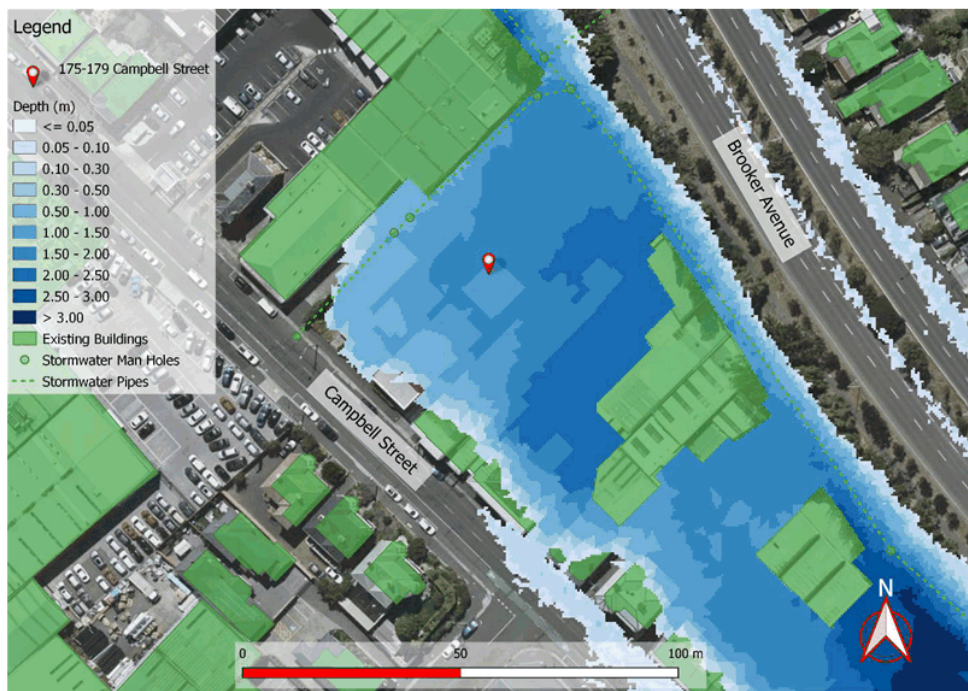


Figure 4. Pre-development 1% AEP at 2100, flood depths and extents

FS_HOB_2181_175-179 Campbell Street, Flood Report/ REV03

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It can be seen in Figure 5 that the proposed structures have minimal effect on surrounding properties. However, Figure 6 shows that the proposed structure does increase flow within the Brooker Road Reserve from 29.09 to 32.93 m³/s. This increase is relatively minor and does not cause an increase in flood hazards to any properties down to 1A Brisbane Street.

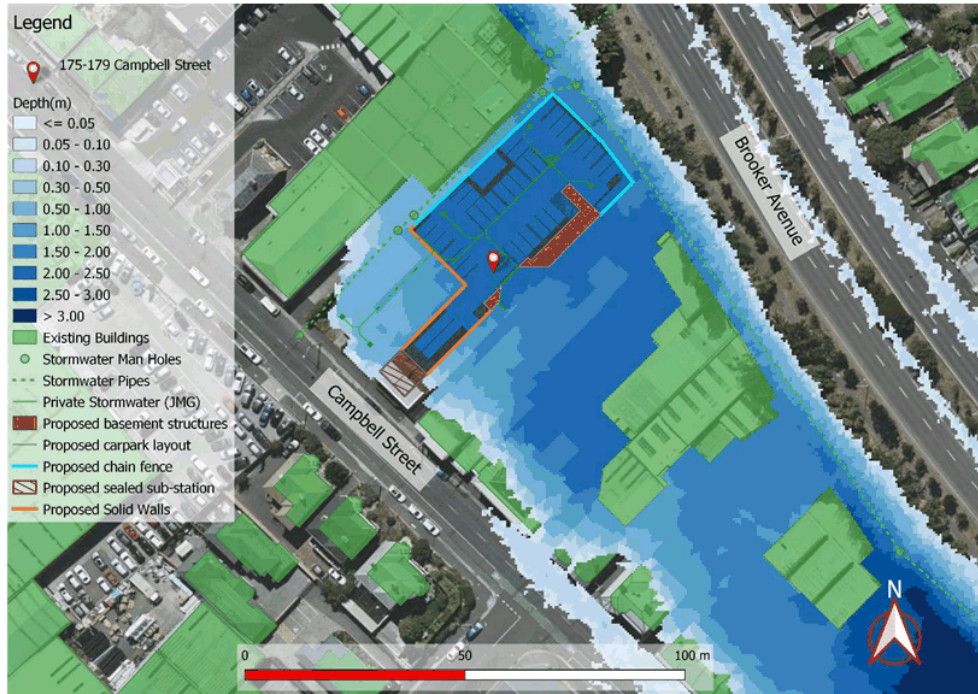


Figure 5. Post – Development 1% AEP at 2100, flood depths and extents

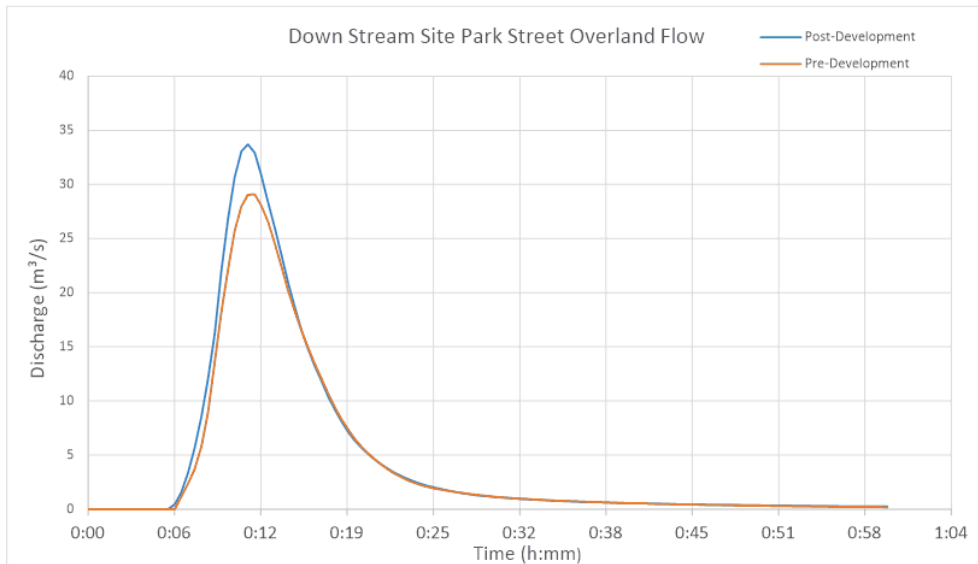


Figure 6. Pre and Post Development Downstream Site, Park St Rivulet OFP Flow 1% +CC

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2.4.1 Displacement of Overland Flow on Third Party Property

Figure 7 shows post-development depths on 169-173 Campbell St as the property immediately downstream, and on 167 Campbell Street to 1A Brisbane Street, when compared against pre-development, there is no increase in flood extents or depths.

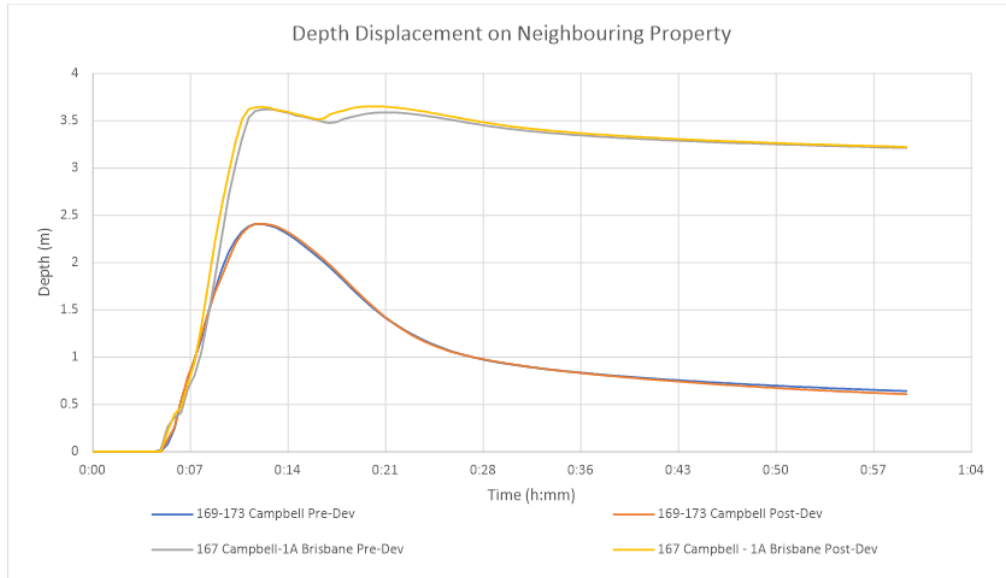


Figure 7. Pre and Post Development Depth Displacement 1% +CC

Time To Inundation

Figure 8 shows the pre vs post development depth-time graph. It can be seen from this graph that time to maximum inundation occurs at approximately 13m30s with a maximum depth in the post development scenario of 2.3 m, however, initial ingress of water into the carpark of approximately 30 mm, occurs around 5 minutes from the beginning of the storm.

Therefore, from the first noticeable ingress of water to the peak there is approximately 8 mins, with water extending to greater than 1 meter at 8m03s from first ingress.

FS_HOB_2181_175-179 Campbell Street, Flood Report/ REV03

31st May 2022

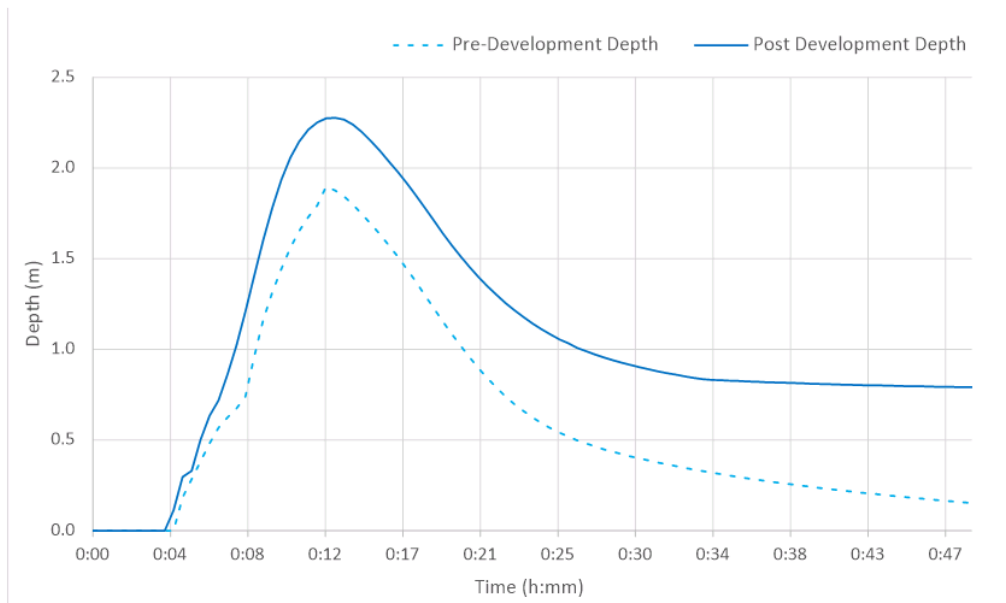


Figure 8. Pre & post-development depth

2.4.2 Development Effects on Stormwater Discharge

Figure 9 below shows the discharge hydrograph for the new property combined with the neighbouring proposed property runoff. The graph was captured in the model for both pre- and post-development runs and combined in graph format to demonstrate the change in net discharge. It can be seen from Figure 9 the pre-development discharge of 18.32 m³/s is marginally lower than the post-development discharge of 19.17 m³/s. This can be attributed in the change in flow around structures such as the lift well and stairs.

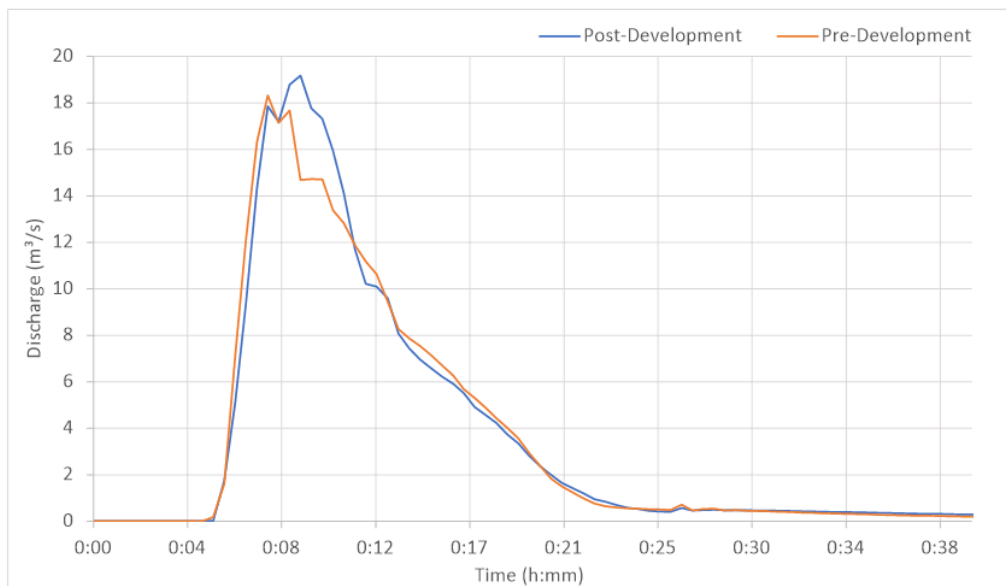


Figure 9. Pre and Post Development Net Discharge 1% +CC

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2.5 Description of Building Regulation S.53

In accordance with the Building Regulations S.53, the finished floor levels of habitable rooms must be at least 300mm above the defined flood level for that land. This includes:

- **S.53 – Acceptable Solution**
 - a) A new habitable building must have a floor level no lower than the 1% AEP (100 yr ARI) storm event plus 300 mm.

2.5.1 New Habitable Building

The construction of a new dwelling is required to either have a habitable floor level >1% AEP CC flood level + 300mm and meet the performance criteria of the Building Regulations S.53. This is equivalent to a height of 18.315 mAHD or greater for habitable space as per 1% AEP CC. The new dwelling must meet this regulation as shown in Table 4. (The floor level floor level >1% AEP CC flood level + 300mm does not apply for non-habitable buildings).

Table 4. Habitable Floor Construction Levels

Dwelling	1% AEP +CC flood level (mAHD)	Minimum Floor Level required (mAHD)	Current Design Floor Level (mAHD)
175-179 Campbell St	18.015	18.315	19.200

3. Flood Hazard

The proposed property is subject to inundation predominately <2m flood depth and <5.6m/s velocity (Figure 11). This places the hazard rating as adopted by Australian Flood Resilience and Design Handbook as predominantly H5 – *Unsafe for vehicles and people*, and some structures as shown in Figure 10, with the exception of the boundary with Brooker Highway, can see hazard ratings of up to H6. Downstream of the site, the post-development hazard rating shows minimal to no change from pre-development. However, the hazard remains above H4 in most areas.

Therefore, in the event of 1% AEP +CC, basement car park flood flows are predominately unsafe for people and vehicles and furthermore can create structural damage if not suitably catered for. Flüssig Engineers recommend any structures (piers or otherwise) be designed and certified by a suitably qualified person to withstand hydrodynamic and hydrostatic forces. Use of the carpark will be required to undergo a risk management and flood emergency evacuation design to ensure safe use for people.

Current design shows level access to Campbell Street, which would allow unimpeded access to the street free from flooding. Access to the basement carpark should be restricted in a flooding event.

FS_HOB_2181_175-179 Campbell Street, Flood Report/ REV03

31st May 2022

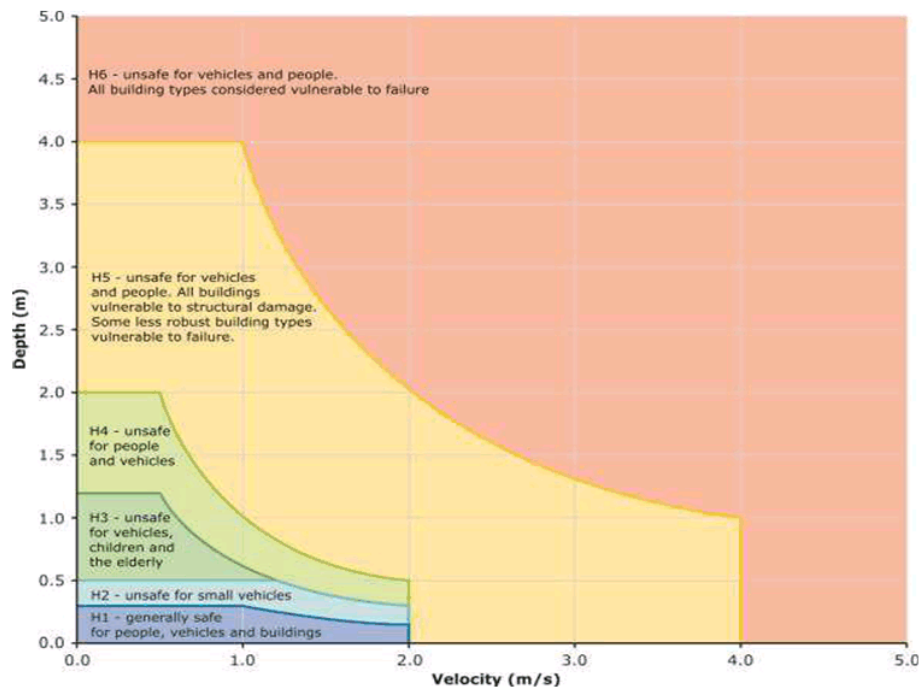


Figure 10. Hazard Categories Australian Disaster and Resilience Handbook

FS_HOB_2181_175-179 Campbell Street, Flood Report/ REV03

31st May 2022

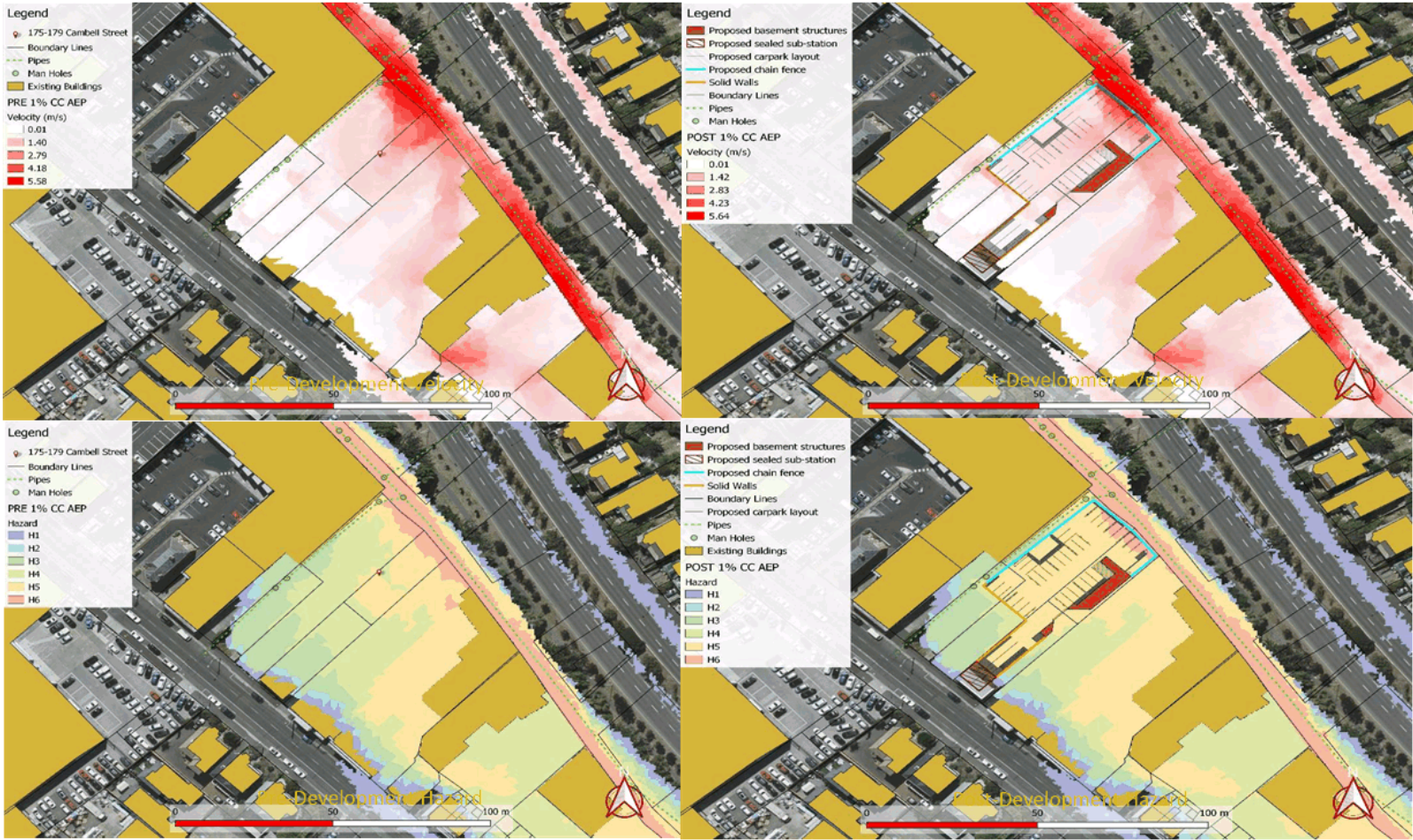


Figure 11. Pre- and post-development velocity (top) and hazard (bottom) maps

FS_HOB_2181_175-179 Campbell Street, Flood Report/ REV03

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Table 5. HIPS 2015 E15.8.3 Acceptable Solution Response

E15.7.4 Property within a Riverine Inundation Hazard Area			
Objective: To ensure that risk from riverine, watercourse or inland flooding is appropriately managed and takes into account the use of the buildings.			
Acceptable Solution		Response from Flood Report	
A1		A1	
		All responses have been derived from modelling report FS_HOB_2181	
			Met (Y/N)
(a)	A new habitable building must have a floor level no lower than the 1% AEP (100 yr ARI) storm event plus 300 mm.	(a)	Minimum Floor level set at 18.315mAHD for all habitable floor levels. Proposed floor level set at 19.200mAHD.
(b)	be for the creation of separate lots for existing buildings; An extension to an existing habitable building must comply with one of the following: (a) floor level of habitable rooms is no lower than the 1% AEP (100 yr ARI) storm event plus 300 mm; (b) floor area of the extension no more than 60 m2 as at the date of commencement of this planning scheme.	(b)	N/A
(c)	The total floor area of all non-habitable buildings, outbuildings and Class 10b buildings under the Building Code of Australia, on a site must be no more than 60 m2.	(c)	N/A

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Table 6. HIPS 2015 E15.8.3 Performance Criteria Response

E15.7.5 Riverine, Coastal Investigation Area, Low, Medium, High Inundation Hazard Areas				
Objective:				
(a) To ensure that landfill and mitigation works do not unreasonably increase the risk from riverine, watercourse and inland flooding, and risk from coastal inundation.				
Performance Criteria			Response from Flood Report	
P1		P1		
Landfill, or solid walls greater than 5 m in length and 0.5 m in height, must satisfy all of the following:			All responses have been derived from modelling report FS_HOB_2181	
				Met (Y/N)
(a)	No adverse effect on flood flow over other property through displacement of overland flows;	(a)	No adverse effects can be seen on neighbouring private properties through the displacement of overland flows. However, a small increase in flow has been shown along the Park Street Rivulet through the reduction in available flood plain area. The slight increase does not increase hazard in the area from the already extreme rating.	Y
(b)	the rate of stormwater discharge from the property must not increase;	(b)	Rate of discharge from the property remains consistent pre- and post-development	Y
(c)	stormwater quality must not be reduced from pre-development levels.	(c)	There is no evidence that stormwater quality will be reduced.	Y

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4. Conclusion

The Flood Hazard Report for 175-179 Campbell Street, Hobart property site has reviewed the potential pre- vs post- development flood scenarios.

The following conclusions were derived in this report:

1. A comparison of the pre- and post-development peak flows for the 1% AEP shows that there is no displacement of flood waters on neighbouring private properties, however there is a slight increase in flows down the overland flow path of the Park Street Rivulet (Brooker Highway).
2. Peak discharge from the site remains constant between pre- and post-development flood scenarios.
3. Peak flood depths on private property downstream remains constant between pre- and post-development scenarios.
4. Velocity pre- and post-development remains consistent downstream of the development, on 3rd party property, with a small diversion of increased velocity around the stairwell/elevator structure located on site.
5. Hazard from flooding in the area is predominantly H5 post development scenario, with predominately H4 for pre-development. Downstream of the development, on 3rd party property, the hazard rating remains constant (high) between pre- and post-development.
6. Post-development depth, velocity and hazard require Hydrostatic and hydrodynamic structural design considerations.

5. Recommendations

Flüssig Engineers therefore recommends the following engineering design parameters be adopted for the development to ensure the works meets the Inundation Code for properties, and future residents are free and safe from inundation:

1. The new buildings proposed habitable floor level is to have a minimum floor height of 18.315 mAHD.
2. The new building and associated structures must be designed to resist flood forces (hydrodynamic and hydrostatic) including debris, for flood depths >2m and velocities >5m/s.
3. Vehicles should be prevented from being swept away by means of a barrier or similar. Proposed chain link fence will need to withstand debris including vehicles.
4. Building use in inundated areas should be limited to use deemed safe under the ARR Disaster manual categories.
5. Substation should be sealed to flooding to prevent inundation and subsequent damage of electrical infrastructure.
6. All electrical and mechanical mechanisms for lifts should be provided above flood level or provide a strict inspection regime after any flooding event.
7. Any treatment devices including but not limited to stormwater or sewer treatment, to provide sealed chambers or similar with backflow prevention devices.

FS_HOB_2181_175-179 Campbell Street, Flood Report/ REV03

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8. An emergency evacuation plan be implemented as a precaution to flooding.

Under the requirements of Flood Hazard Report, the development site will likely meet current acceptable solutions and performance criteria under the Hobart Interim Planning Scheme 2015.

6. Limitations

Flüssig Engineers were engaged by **Solutionsworn Group Pty Ltd**, for the purpose of a site-specific Flood Hazard Report for 175-179 Campbell Street, Hobart, as per E15.0 of the Hobart Interim Planning Scheme 2015. This study is deemed suitable for purpose at the time of undertaking the study. If the conditions of the property should change, the plan will need to be reviewed against all changes.

This report is to be used in full and may not be used in part to support any other objective other than what has been outlined within, unless specific written approval to do otherwise is granted by Flüssig Engineers.

Flüssig Engineers accepts no responsibility for the accuracy of third-party documents supplied for the purpose of this Flood Hazard Report.

FS_HOB_2181_175-179 Campbell Street, Flood Report/ REV03

31st May 2022

7. References

1. Australian Disaster Resilience Guideline 7-3: Technical flood risk management guideline: Flood hazard, 2014, Australian Institute for Disaster Resilience CC BY-NC
2. Ball J, Babister M, Nathan R, Weeks W, Weinmann E, Retallick M, Testoni I, (Editors), 2019, Australian Rainfall and Runoff: A Guide to Flood Estimation, Commonwealth of Australia
3. Entura 2019, Newtown Rivulet Flood Study, Hydroelectric Company Pty Ltd, ENTURA-11B3E2.
4. Grose, M. R., Barnes-Keoghan, I., Corney, S. P., White, C. J., Holz, G. K., Bennett, J. & Bindoff, N. L. (2010). Climate Futures for Tasmania: General Climate Impacts Technical Report.



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APPENDIX A: Risk Assessment Matrix

Site/job
number **FS_HOB_2181_175-179 Campbell St Flood Report**

RISKS OF THE DEVELOPMENT IMPACTING ON EXISTING FLOOD BEHAVIOUR

Pre-Development Risk Identification (1% AEP)				Post-Development			Recommendations			
Risk Ref No	Risk Type A - Asset P - Project F - Financial S - Safety	Risk Description	Conclusions derived from report for the post development scenario	Risk with no Treatment			Treatment	Risk following recommended treatment		
				Likelihood	Consequence	Risk Level		Likelihood	Consequence	Risk Level
P1	A, F, S	There is a risk that the development could displace flood waters on neighboring properties resulting in damage to adjoining assets, infrastructure and and increased risk to personal safety.	No increased displacement of flood waters observed in flood model. No treatment recommended.	N/A	N/A	#N/A	none required	N/A	N/A	#N/A
P2	A, S	There is a risk that the development could contribute to an increased flow in the overland flow path resulting in damage to downstream assets, infrastructure and and increased risk to personal safety.	Slight increase in flows down the overland flow path of the Park Street Rivulet.	Rare	Minor	Low	none recommended	Rare	Minor	Low
P3	A, F, S	There is a risk that during a 1% AEP flood event, the development could result in an increase in the peak discharge from the site resulting in damage to stormwater infrastructure, assets and risk to personal safety.	No increase in peak discharge.	N/A	N/A	#N/A	none required	N/A	N/A	#N/A
P4	A, S	There is a risk that peak flood depths on private property downstream could increase as a result of the development increasing the risk of damage to assets, infrastructure and personal safety.	No increase on peak flood depths downstream from the development site.	N/A	N/A	#N/A	none	N/A	N/A	#N/A
P5	A, S	There is a risk that the development could increase the velocity of the floodwater resulting in damage to assets, infrastructure and increased risk to personal safety.	Small increase in velocity around stairwell/ elevator structure on proposed site development.	Possible	Moderate	High	Electrical and mechanical lift mechanisms to provided above installed above flood level. Habitable floor level to be above 18.315 mAHd.	Rare	Minor	Low
P6	A, F, S	There is a risk that the development could increase the flood hazard rating for surrounding areas and downstream resulting in increased risk to property and safety of residents and visitors.	There is an increase in the Hazard rating from H4 to H5 in the immediate area of the development, while remaining constant downstream.	Possible	Moderate	High	Structural design to consider hydrostatic and hydrodynamic forces at >2m depth and >5m/s velocity, chain link fence to prevent vehicle and debris movement, but allowing free flow of flood water, building use in inundated area limited to use deemed safe under ARR disaster manual categories, emergency evacuation plan to be implemented in relation to flooding.	Unlikely	Moderate	Medium

Site/ job
number

FS_HOB_2181_175-179 Campbell St Flood Report

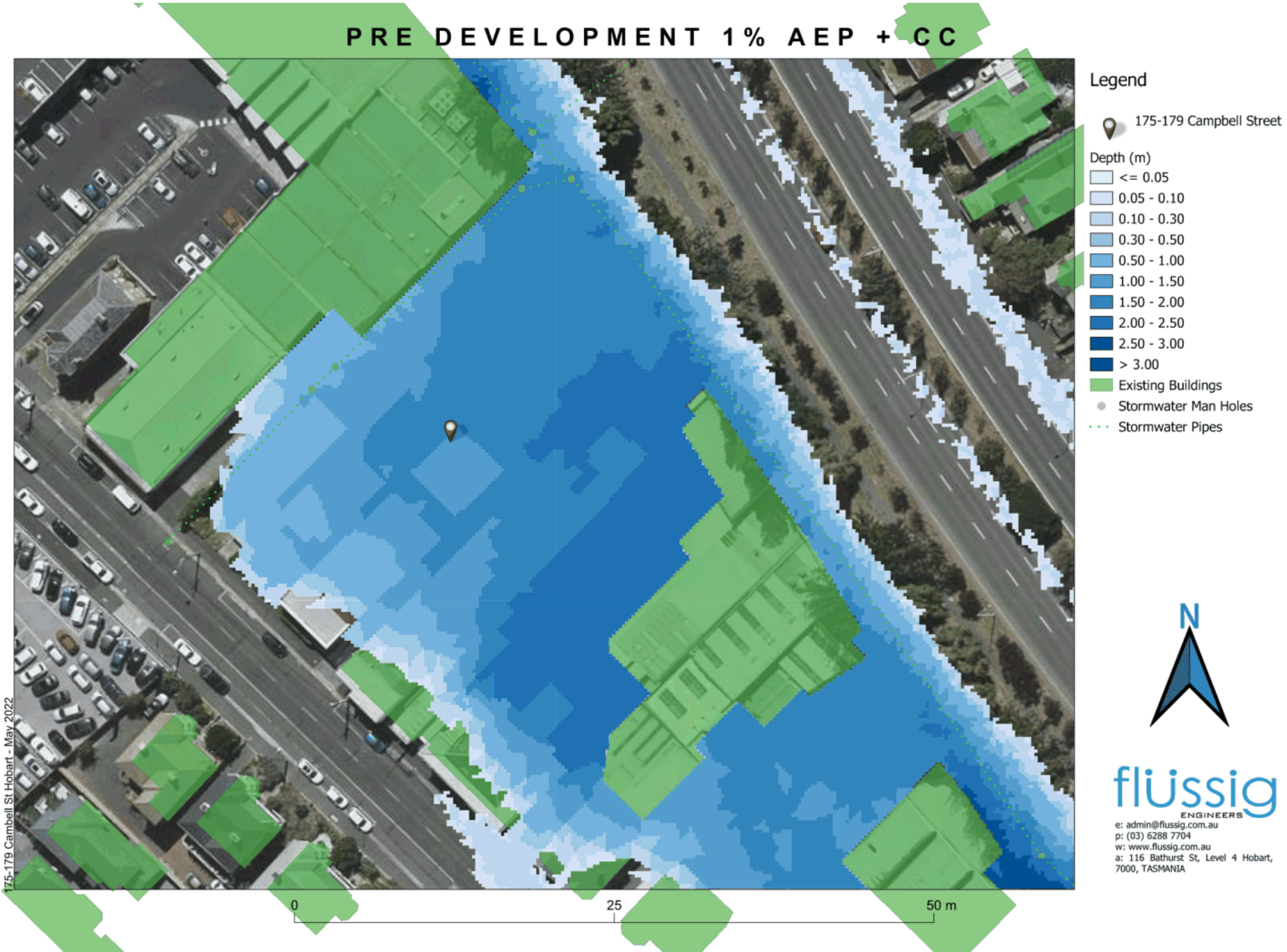
RISKS OF FLOOD BEHAVIOUR ON THE DEVELOPMENT POST CONSTRUCTION

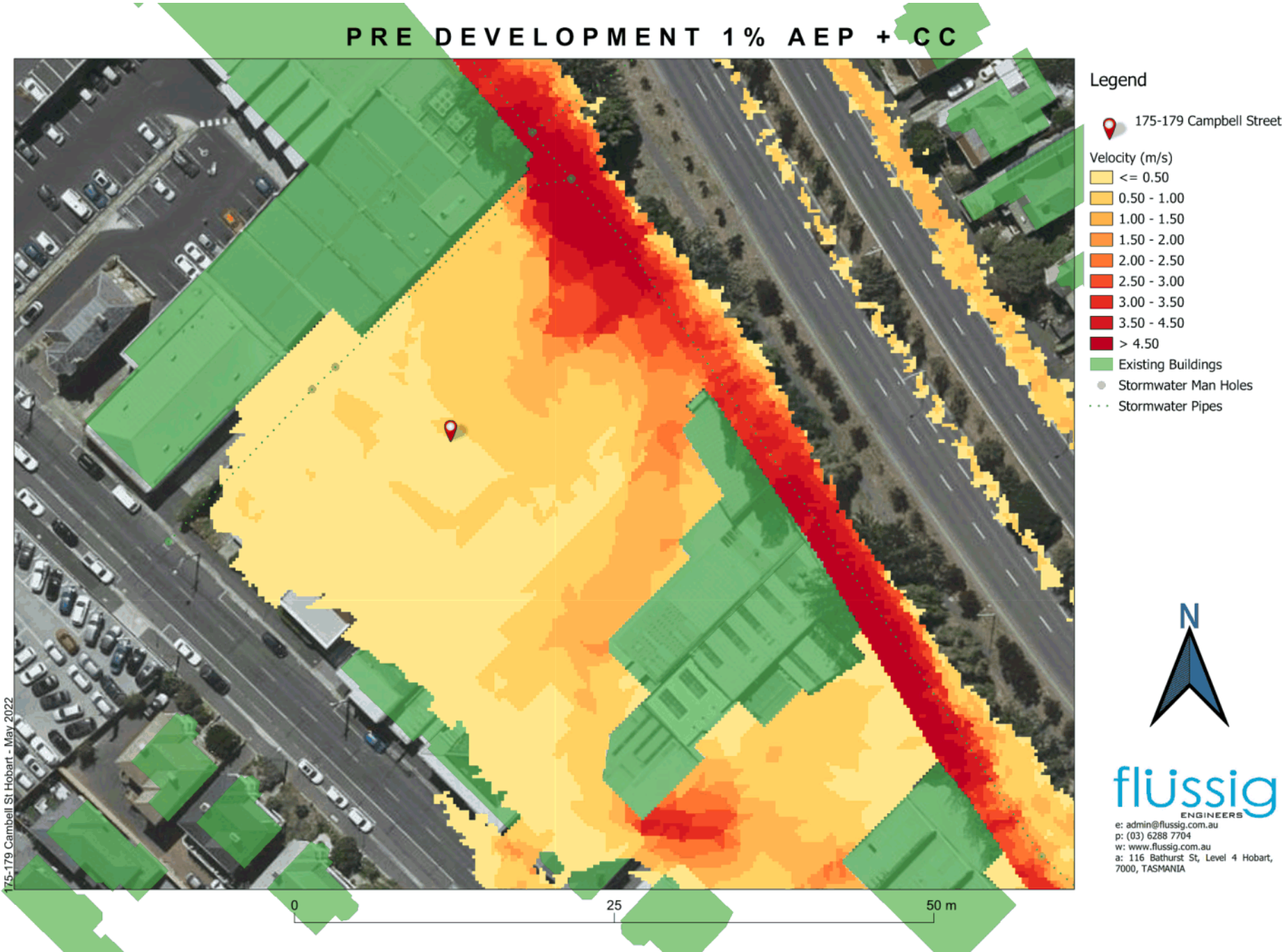
Risk Identification (1% AEP)						Recommendations			
Risk ref No	Risk Type A - Asset P - Project F - Financial S - Safety	Risk Description	Risk with no Treatment			Treatment	Risk following recommended treatment		
			Likelihood	Consequence	Risk Level		Likelihood	Consequence	Risk Level
D1	A	There is a risk that during a 1% AEP flood event, excessive flow could result in back flow of treatment devices (inc. stormwater and sewer).	Possible	Minor	Medium	Treatment devices to be installed with sealed chambers and backflow prevention devices.	Rare	Minor	Low
D2	S	There is a risk to personal safety in areas categorised as hazard H5 (i.e. waste room and carpark) during a 1% AEP flood event.	Unlikely	Moderate	Medium	An emergency exit door should be installed at the far end of the waste room ensuring people cannot become trapped. An emergency management plan should be established and communicated to the occupants and visitors to the site, all structures should be certified for hydrodynamic and hydrostatic forces.	Rare	Minor	Low
D3	A, F	There is a risk that the flow path of a 1% AEP flood event could result in damage to the proposed development due to flood water depth, velocity and debris.	Almost Certain	Moderate	Extreme	Building designed to resist flood forces, inc debris, for flood depths >2m & velocity >5m. Substation to be sealed.	Unlikely	Minor	Low
D4	A, S	There is a risk the flow path in hazard categories of H5 could pose a risk to assets and personal safety of the occupants of the development.	Possible	Moderate	High	Chain link fence erected to prevent and withstand vehicle and debris movement. Inundated areas of building to be limited to use according to ARR Disaster manual categories. Electrical and mechanical lift mechanisms to provided above installed above flood level.	Rare	Minor	Low

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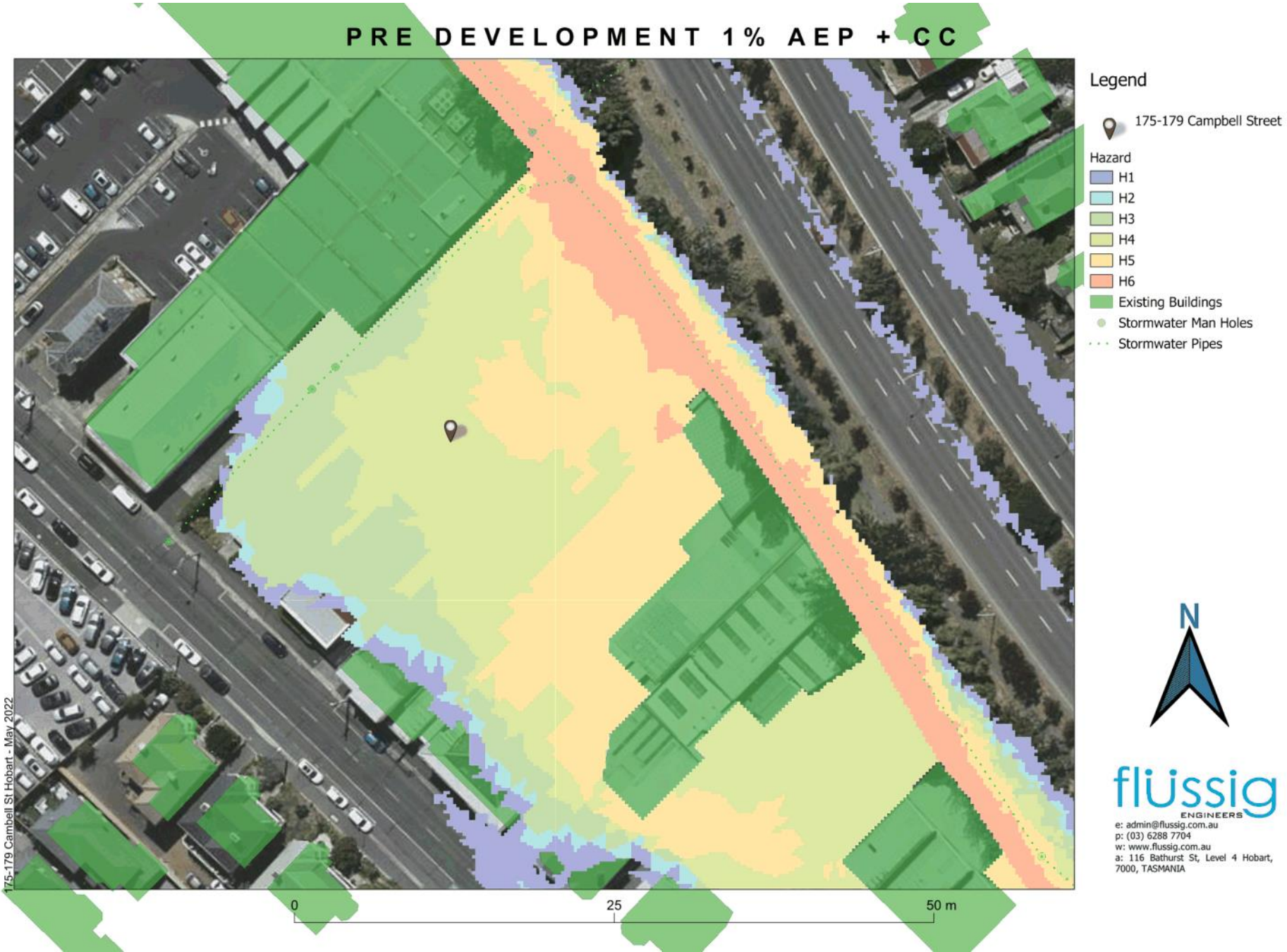
31st May 2022

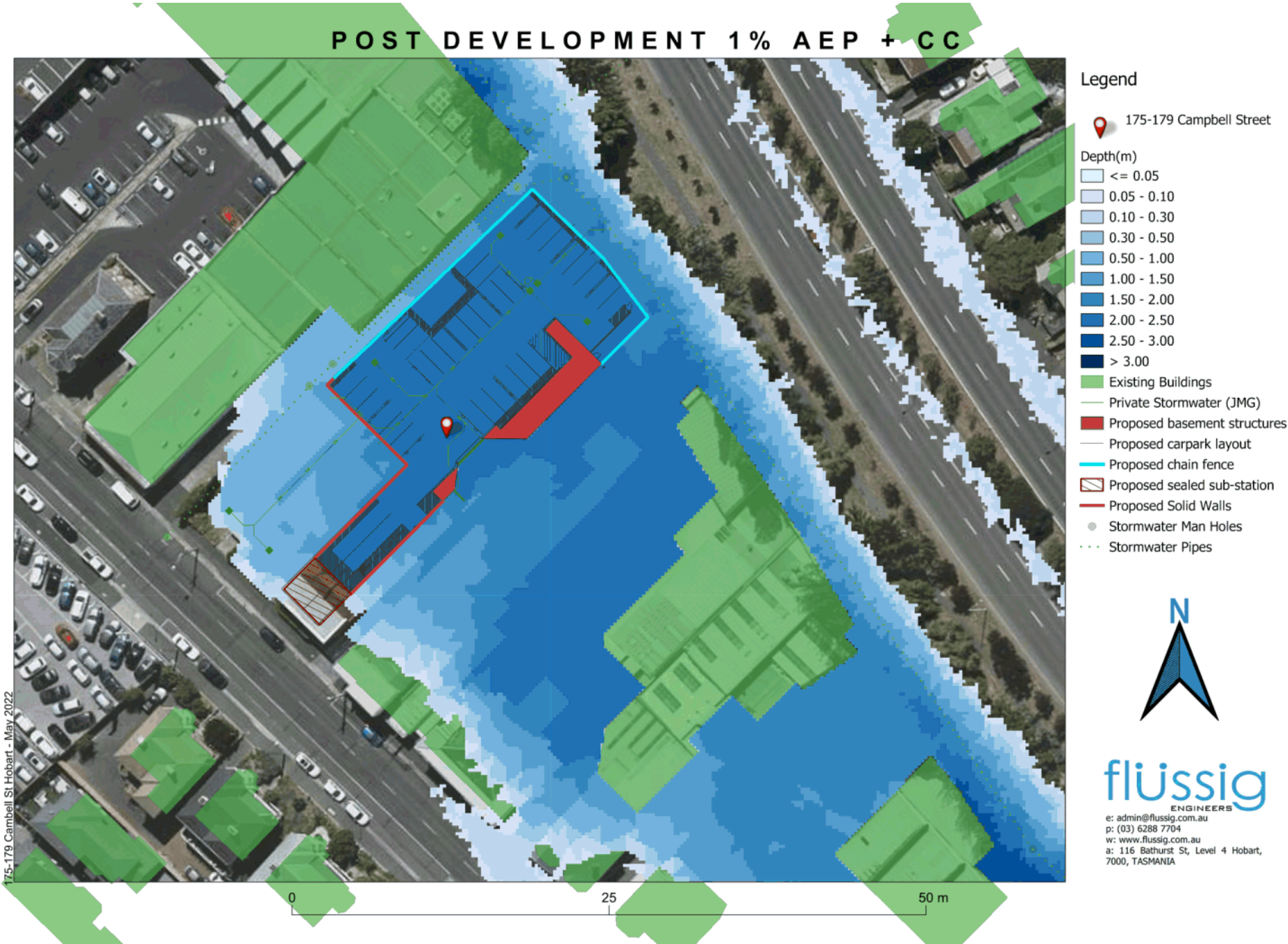
APPENDIX B: A3 Inundation Maps

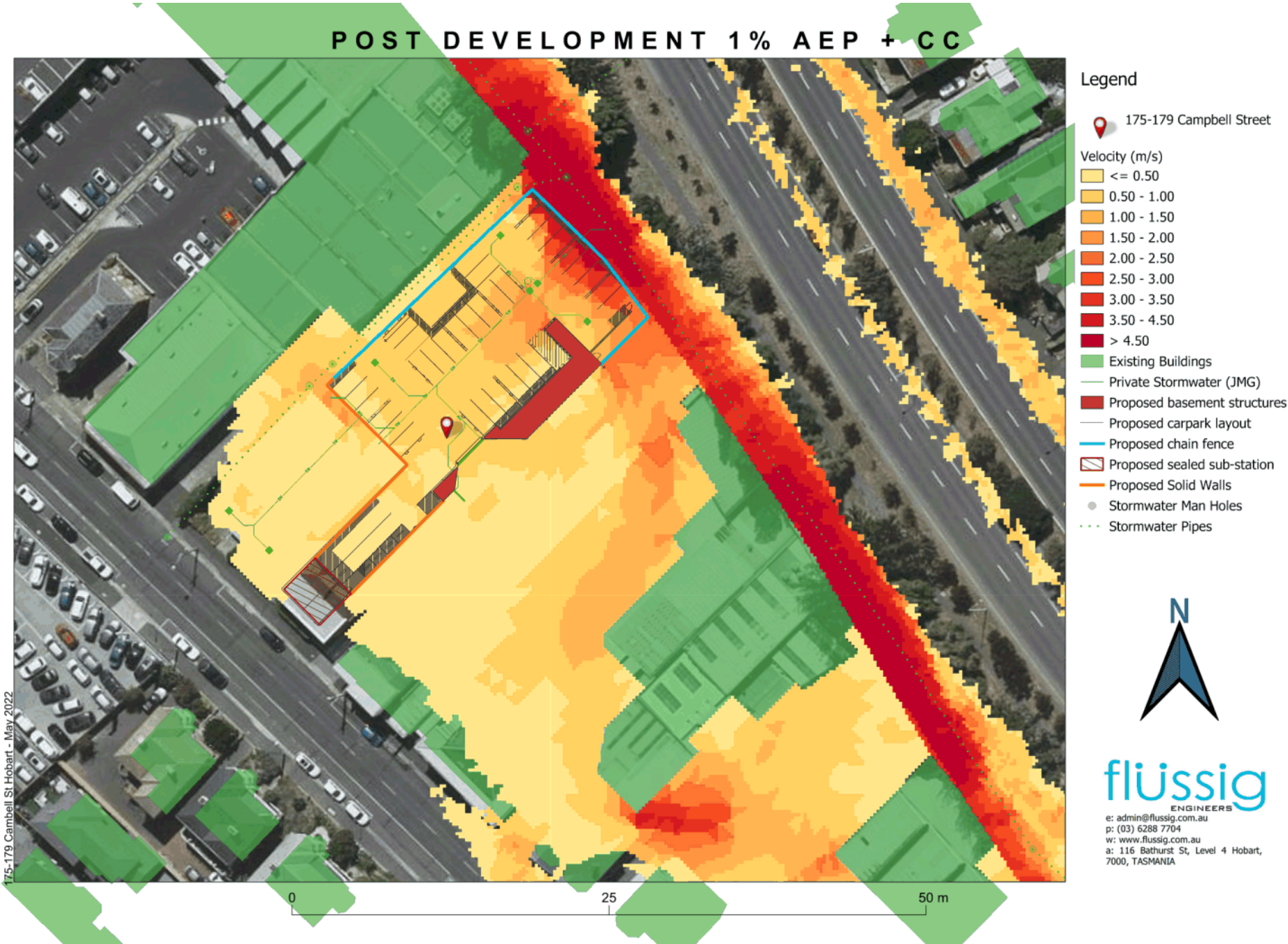




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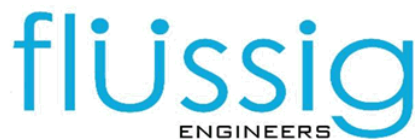








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BGAS Multi-Residential Development

175-179 Campbell St, Hobart

Traffic Impact Assessment

Prepared for JMG Engineers and Planners

Version 5

January 2022





ECTM Consulting

BGAS Multi-Residential Development, 175-179 Campbell St, Hobart Traffic Impact Assessment

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BGAS Multi-Residential Development, 175-179 Campbell St, Hobart Traffic Impact Assessment

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Acronyms

AADT	Average Annual Daily Traffic
ADT	Average Daily Traffic
AWDT	Average Weekday Daily Traffic
CBD	Central Business District
DSG	Department of State Growth
HCC	Hobart City Council
MRV	Medium rigid vehicles
SRV	Small rigid vehicles
SISD	Safe Intersection Sight Distance
TIA	Traffic Impact Assessment
vpd	vehicles per day
vph	vehicles per hour



1 Introduction

1.1 Background and Scope of Work

The property at 175-179 Campbell St, Hobart is being developed by BGAS. The 2,421 m² site contains an existing business and two original cottages fronting Campbell St with a large area of vacant land at the rear of the properties, some of which is currently used for carparking.

BGAS is proposing to develop a multi-residential apartment building with commercial space across the properties at 175-179 Campbell St. The footprint will incorporate the existing cottages at 177 and 179 Campbell St. The design provides the commercial frontage on Campbell St by retaining the original cottages for businesses and incorporating new commercial space at 175 Campbell St. Hobart City Council (HCC) requires a traffic impact assessment to be submitted with the development application for the proposed development.

ECTM Consulting Pty Ltd has been engaged by JMG to undertake the Traffic Impact Assessment for the proposed multi- residential development at 175-179 Campbell St, Hobart.

1.2 Traffic Impact Assessment Scope

The scope of this TIA is outlined as follows:

- Review of the existing road environment in the vicinity of the subject site and the traffic conditions on the road network.
- Provision of information on the proposed development with regards to traffic movements and activity.
- Identification of the traffic generation potential of the proposal with respect to the surrounding road network in terms of road network capacity.
- Review of the parking requirements of the proposed development and assessment of the parking supply with Planning Scheme requirements.
- Traffic implications of the proposal with respect to the external road network in terms of traffic efficiency and road safety.
- Provision of conclusions and recommendations relating to the key findings drawn from the traffic impact assessment.

This TIA has been prepared with reference to the Department of State Growth publication, *A Traffic Impact Assessments Guidelines*, September 2020 and Hobart Interim Planning Scheme 2015 (Planning Scheme). This TIA has also been prepared with reference to other relevant publications as listed in Section 7.

1.3 Subject Site

The subject site is located at 175-179 Campbell St, Hobart and covers four titles of varying size. The site sits in the fringe area of the Hobart Central Business District (CDB) and as such is an inner city location. The site is zoned 15.0 Urban Mixed Use under the Planning Scheme and is not subject to any additional overlays that require consideration in this TIA. Beyond the Urban Mixed Use zone, there is 11.0 Inner Residential zone to the east and north, and 23.0 Commercial to the south and west.



The subject site and surrounding road network are shown in Figure 1 and the location of the existing site access is shown in Figure 2. Surrounding land use in the immediate area of the site includes car sales yard, various retail and commercial businesses, residential properties and small supermarket.

Figure 1 Subject Site and Surrounding Road Network



Figure 2 Existing Site Access



Base image by **TASMAP** © State of Tasmania



2 Existing Conditions

2.1 Transport Network

For the purpose of this report, the transport network under review consists of the section of Campbell St in Hobart between the intersections with Warwick St and Brisbane St which includes the intersection with Patrick St.

Campbell St in the study area is a one-way Council owned road travelling in a south-eastly direction toward Hobart CBD where it ends at the intersection with Davey St. The sealed carriageway has an average width of 12 m between the kerbs (near the existing site access) and consists of two lanes for traffic, a 2 m wide cycle lane and on-street parking on both sides of the road. The traffic lanes are defined by a broken white centre line while a solid white line delineates the cycle lane on the western side of the road. There are three traffic lanes on approach to the signalised intersection with Brisbane St – the cycle lane become a through and right-turn lane, centre lane is a through lane only and left lane becomes through and left turn lane.

The proposed development site access is located on a straight and level section of Campbell St which has a posted speed limit of 50 km/hr. Pathways with an average width of 2.5 m are evident on both sides of the subject section of Campbell St and street lighting is generally provided on both sides of the road. Figure 3 and Figure 4 illustrate Campbell St, viewing to the south-east (towards Brisbane St intersection) and north-west (toward Warwick St intersection) respectively.

Figure 3 Campbell St – View to the South-East (Brisbane St)



**Figure 4 Campbell St – View to the North-West (Warwick St)**

On-street parking is available frequently on both sides of the road; located between the numerous accesses into properties along this section. The parking bays are marked and signposted with time limits (either 2P, 1P or ½P). There is evidence of yellow lines along kerbs indicating no stopping zones. There are many off-street carparks associated with surrounding businesses and various properties.

Campbell St is a Metro bus route with the closest bus stop located approximately 40 m to the south-east of the site. The site is in easy walking distance to the Hobart CBD on relatively level terrain for the most part and has access to other sustainable transport modes such as the Intercity Cycleway, a shared-use commuter and recreational user corridor, extending from Claremont in the north of the Greater Hobart area, to the Hobart Regatta Grounds in located near Hobart CBD.

In summary, Campbell St operates as a collector road defined as connecting arterial roads to local areas and supplementing arterial roads in providing traffic movements between urban areas. Collector roads provide high connectivity by supplementing arterial roads in connecting suburbs, business districts and localised facilities.

The following observations were made in the vicinity of the proposed development during the site inspection at 9 am on Tuesday 15 June 2021:

- Drivers were able to easily find gaps to enter or exit the traffic flow from parking spaces or site accesses due to the upstream signalised intersection with Warwick St.
- On-street parking in the study area appears to have a high-turnover of vehicles.



- Very few vehicles were observed using the existing site access next to 175 Campbell St - this was confirmed by an AM peak period survey as discussed in Section 2.4.
- Campbell St predominately carries light vehicles, but heavy vehicles are not unusual given there is a medium-size supermarket, large car yard and bodyworks in the same block.
- Reasonable volume of pedestrian traffic on both sides.

Warwick St and Brisbane St are both two-lane, two-way Council owned roads and are signalised at their intersections with Campbell St. Green time is predominantly with Campbell St as the major road. Both Warwick St and Brisbane St operate as link roads, connecting arterial roads such as the Brooker Ave to collector roads such as Campbell St.

Patrick St is a two-lane, two-way Council owned road controlled by a give-way sign at the intersection with Campbell St. This intersection is 40 m to the south-east of the proposed development site access. Patrick St also operates as a link road.

2.2 Existing Traffic Volumes

HCC administers traffic counting stations on local roads within its municipality while the Department of State Growth administers State owned roads and signalised intersections across Tasmania. DSG use the Sydney Coordinated Adaptive Traffic System (SCATS) to obtain data from signalised intersections. Given the signalised intersection of Campbell St with Warwick St provides SCATS data, this data source was utilised to provide current and representative traffic volumes.

Table 1 provides relevant traffic volume data, noting the following:

- Average daily traffic (ADT), average weekday daily traffic (AWDT) and peak volumes on Campbell St is based on data extracted from one week of Campbell St/ Warwick St intersection SCATS data collected in May 2021.
- A review of the May 2021 SCATS dataset indicates very consistent traffic volumes across weekdays as well as on Saturday and Sunday.
- Weekday peak hour volumes are also very consistent and occur at the same morning and afternoon time everyday.

Table 1 Existing Traffic Volume Data

Location	ADT (vpd)	AWDT (vpd)	Weekday AM Peak		Weekday PM Peak	
			AWT (vph)	Period	AWT (vph)	Period
Campbell Street (Mid-block; two lanes one-way)	7,800	8,803	915	8.00-9.00	772	16.00-17.00

2.3 Road Safety Performance

The following crash data has been obtained from Department of State Growth for the section of Campbell St from which the site is accessed and other areas of interest in the study area and is for the period January 2016 to April 2021. This data is based on compulsory reporting to Police if someone is injured or if an involved vehicle is damaged to the extent that it cannot be driven (i.e.



needs to be towed away). Crashes that do not meet these criteria do not have to be reported to Police although many are for other reasons.

Crash data can provide valuable information on the road safety performance of a road network. Existing road safety deficiencies can be highlighted through the examination of crash data, which can assist in determining whether traffic generation from the proposed development may exacerbate any identified issues.

It is evident from the data in Table 2 that there have been a low number of crashes in the section of Campbell St from which the site will be accessed. One crash had a severity of 'minor' (occurred in September 2017) while the remaining crashes had a severity of 'property damage only'.

It is noted three of the crashes occurred within the vicinity of the subject site however all occurred before August 2017 with a severity of 'property damage only'. Two of the three crashes were parking related while one involved a parallel lane side swipe. There have been no crashes near the site access for the past 4 years.

Occurrence of crashes is also evident in the areas immediately surrounding the subject site. However, the maximum injury severity has been recorded as 'first aid' and the overall frequency is low given the 5 year period over which this data has been collected.

Table 2 Crash Summary

Location	Year	Number of Crashes	Number of Injury Crashes
Campbell St between Intersection with Warwick St and Brisbane St	2016-2020	10	1 x Minor
Intersection of Campbell St and Warwick St	2016-2021	9 (3 in 2021)	1 x Minor; 4 x first aid
Intersection of Campbell St and Brisbane St	2017-2019	5	1 x Minor; 1 x first aid
Intersection of Campbell St and Patrick St	2019	2	2 x Minor

2.4 Existing Activity

The subject site consists of an existing business at 175 Campbell St and two original cottages at 177 and 179 Campbell St. There is a large area of vacant land at the rear of the properties, currently used for carparking (under lease arrangements) and accessed via a driveway to the south-east of 175 Campbell St.

The existing site access driveway is situated on the adjoining property of 169-173 Campbell St (Title 140732/1) over which 175-177 Campbell St has right of way. This adjoining property has another access driveway as shown in Figure 5. A meat wholesalers business operates on this site hence a survey of the access arrangement was conducted during an AM peak period (1 December 2021) to establish how they are currently being utilised. A summary of the survey results is provided below:

- Site access driveway 1 – 21 light vehicles IN (13 during the period 6.45 am to 8 am); 2 small delivery vans IN; 1 small delivery van OUT



- Site access driveway 2 – 1 light vehicle IN; 2 small delivery vans OUT; 1 medium delivery van IN and OUT (reversed into the driveway at 7.45am with no issues and minor delay for one light vehicle)

Other observations included:

- The carpark at the rear of 175 Campbell St appears to be utilised by people working in the area as there was a steady flow of people from the driveway shortly after light vehicles entered (between 7 and 8 am).
- Customers accessing the meat wholesalers utilised on-street parking which was readily available out the front (rather than park at the rear although this is offered as an option).
- Heavy vehicle movements are not unusual in this section of Campbell St due to deliveries to the supermarket, car yards and vehicle bodyworks.

Assuming the above survey results are representative of how the accesses are utilised, it appears light vehicles and small delivery vans use Access 1, and while all vehicle types may use Access 2, medium-sized heavy vehicles are more likely to enter and exit this site at this point.

Additional information regarding the adjoining business (Tasmanian Meat Wholesalers) is provided below:

Operational characteristics of TMW

- Has an annual turnover of approximately \$10M supplying a variety of products to wholesale and retail clients
- The site currently employs 35 full time staff
- The site currently sells approximately 52 tonnes of product a year
- The business currently operates across 169-173 Campbell Street, with a commercial lease for carparking on the adjacent site (175 Campbell Street)

Operational hours

- The retail shop is currently open:
 - 7:30 – 18:00, Monday – Friday
 - 7:30 – 14:00, Saturday
 - Closed Sunday
- The commercial/wholesale currently operates:
 - 6:00 – 18:00, Monday – Friday
 - Closed Saturday & Sunday

Transport and access

- The site is currently serviced by approximately 7 deliveries a week by TMW vehicles which comprise 'Medium Rigid' trucks
- The site is also serviced by third party suppliers with a variety of 'Heavy Rigid' trucks, with smaller trucks entering the site and larger vehicles loading from the street
- The site operates an LPG forklift which operates within the service yard areas and buildings approximately 12 hours a day (6:00 – 18:00, Monday – Friday)

Figure 5 Existing Site Access Arrangement for Subject Site and Adjoining Property



3 Proposed Development

The proposed development at 175-179 Campbell St, Hobart consists of a multi-residential apartment building with commercial space at the Campbell St frontage. The residential component of the design comprises 31 apartments with a mix of townhouse, 1, 2 and 3 bedroom apartments and skyhomes. A commercial frontage is provided by retaining the original cottages at 177 and 179 Campbell St for businesses and incorporating new commercial space at 175 Campbell St.

The 2,421 m² development footprint covers most of the land area of the three properties with the existing building at 175 Campbell St being removed and the existing cottages at 177 and 179 Campbell St integrated into the design.

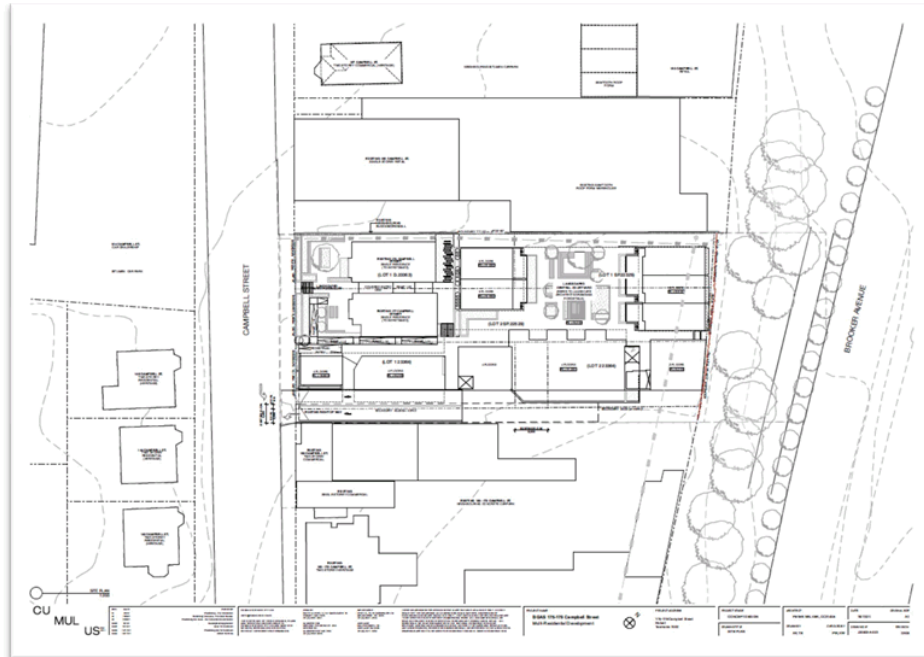
The following key elements of the proposed development are of importance to this TIA:

- Basement level contains a carpark (35 spaces), bicycle storage (12 space rack), storage areas and services which will be accessed by vehicles via a two-way site access driveway located to the south-east of the site; and

- Ground level is situated at Campbell St level providing access to the commercial areas and a central courtyard beyond which some apartments can be directly entered as well as access points for apartments on floors above.

The proposed development site plan is provided in Figure 6.

Figure 6 Proposed Development Site Plan



Ref: Cumulus Studios, Concept Design, Revision DA04, 18 November 2021

4 Traffic Impacts

4.1 Traffic Generation

The nature of the proposed development on the site is best represented by a traffic generating classification of 'Medium density residential flat building', 'Office and commercial' and 'Restaurant' as defined in the *NSW Guide to traffic generating developments* (Roads and Traffic Authority NSW 2002).

Recent surveys indicate a much lower peak hour vehicle trip rate when residential flat dwellings are located within metropolitan areas compared with regional areas. The weekday rates for AM and PM peak vehicle trips per unit ranged between 0.07-0.32 and 0.06-0.41 respectively for higher density residential flats in a metropolitan area. (RMS, 2013)

Based on the medium density residential rates provided in the RTA guide but applying 40% reduction in daily trips and 40% reduction in peak hour trips due to the factors of inner-city area and close proximity to services, the proposed development is expected to generate traffic volumes as shown in Table 3.



In summary, the proposed development together may generate an additional 182 journeys each day and add around 18 vehicles per hour to the AM and PM weekday peak periods of the surrounding road network. This is considered to be appropriate given the close proximity of the subject site to the Hobart CBD, short walking distance to a mainstream supermarket (90m) and range of other services, and access to a key route of the public transport system.

Table 3 Traffic Generation

Activity	Quantity	Daily Vehicle Trip Rate ¹	Daily Trips (veh/day)	Weekday Peak Hour Vehicle Trip Rate ¹	Weekday Peak Hour Trips (veh/hr)
Residential: Multiple dwelling containing 2 or more bedrooms Rate is / unit or apartment	31 apartments	3	94	0.24	7
Business and professional services: Consulting rooms, Commercial space Rate is / 100 m ² gross floor area	214 m ² GFA	10	22	2	5
Food services: Café Rate is / 100 m ² gross floor area	111 m ² GFA	60	66	5	6
Total trips			182		18 (each peak)

Note 1: RTA NSW Guide to traffic generating developments, 2002

4.2 Traffic Efficiency Impacts

Table 4 provides the traffic volumes on Campbell St once the proposed development has commenced.

Table 4 Traffic Volumes after Proposed Development

Location	ADT (vpd)	% Increase in ADT	% Increase in AM Weekday Peak	% Increase in PM Weekday Peak
Campbell St (2021)	7,991	2.3%	1.9%	2.2%

As indicated in Section 2.1, Campbell St operates as a collector road and as such, can carry between 3,000 – 10,000 vehicles per day. Whilst this a broad range, Campbell St has a wide carriageway, provision of footpaths and good sight distance along this section due to the combined pavement width and open nature of the street. There is spare capacity in this section of Campbell St (ADT of 7,991 veh/day) under the current conditions.

The proposed development will add a low number of vehicles per hour to each peak morning and afternoon hour traffic flow on Campbell St. Based on this assessment, the level of service will remain the same hence it is considered that the traffic efficiency will not be adversely affected by the proposed development.



4.3 Site Access Impacts

The existing site access arrangements were described in Section 2.4, noting the properties at 175-177 Campbell St currently have right of way over the existing driveway (shown in Figure 7). The driveway is part of the adjoining property and hence is also utilised by the business on this site. The traffic is predominately comprised of a low volume of light vehicles but also small delivery vans. The existing site access is approximately 3 m wide, and an upward grade exists for traffic leaving the property to access Campbell St.

Figure 7 Existing Site Access



The access arrangements for the proposed development involve the ongoing use of the existing driveway however it will be upgraded to accommodate two-way light vehicle movements and access by small to medium rigid vehicles (SRV and MRV). Some key details of the access upgrade are provided below.

Width

- According to the *AS/NZS 2890.1:2004 Parking facilities Part 1: Off-street car parking*, the vehicle access driveway width into the site should be 5.5 m (Table 3.1 and Table 3.2 of the Australian Standard) for a User Class 1A (residential, domestic and employee parking), local access facility with 25 to 100 parking spaces. It is proposed to widen the existing site access by 2 m in order to provide a 5.5 m wide driveway over the full distance of 40 m to the carpark entrance.
- The existing access driveway currently safely operates as a two-way lane with a combination of light vehicles and small trucks. Whilst it appears likely that medium rigid vehicle movements associated with the meat wholesalers will enter and exit at Site Access



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2 based on access survey results (Figure 5 and Section 2.4), a turning path for MRVs accessing the meat wholesalers via the proposed development site access is shown in Appendix A.

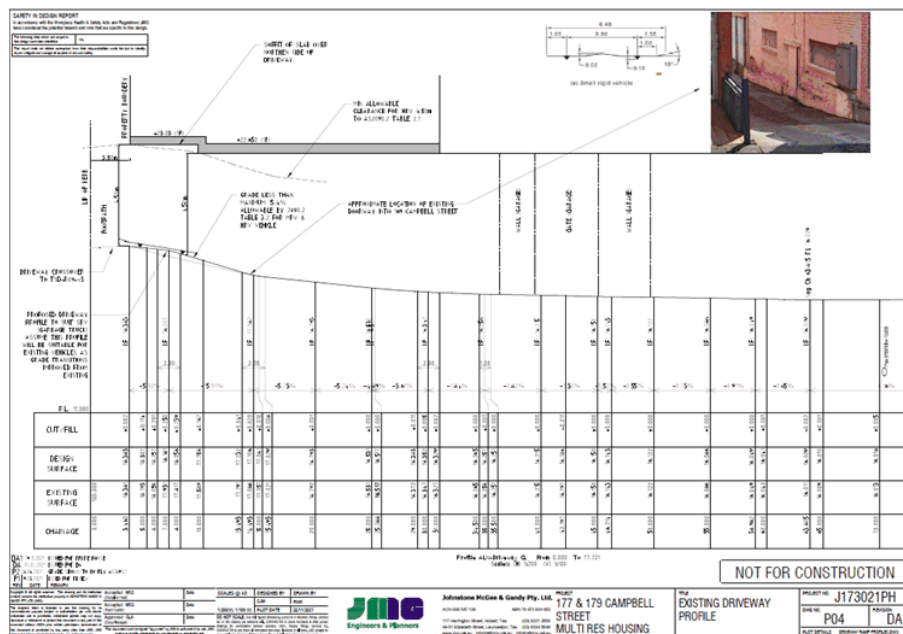
Height

- Level 1 of the building will overhang the site access on the north-western side, at a vertical height of 4.5 m at the Campbell St property boundary.
- To allow for potential MRV into the meat wholesalers, a step up in the new slab has been included to provide 4.5 m vertical clearance to comply with AS 2890.2 as shown in Figure 8.
- It is noted that MRVs are unlikely to utilise this access driveway, given the presence of a more suitable alternative access into the area behind the meat wholesalers.

Grade

- The grade change does not comply with AS2890.2 however an assessment of a SRV (Garbage truck) negotiating the crossover is shown in Appendix B to demonstrate it will work effectively. As the new profile will be better than the existing with regard to grade changes it is assumed there will be no impact on the existing vehicles accessing the site.

Figure 8 Existing Driveway Profile





4.4 Sight Distance Assessment

The Austroads publication, Guide to Road Design, Part 4A: 'Unsignalised and Signalised Intersections', 2021 defines Safe Intersection Sight Distance as "the minimum distance which should be provided on the major road at any intersection". Austroads 2021 states SISD:

- *is measured along the carriageway from the approaching vehicle to the conflict point; the line of sight having to be clear to a point 7.0 m (5.0 m minimum) back along the side road from the conflict point.*
- *provides sufficient distance for a driver of a vehicle on the major road to observe a vehicle on a minor road approach moving into a collision situation (e.g. in the worst case, stalling across the traffic lanes), and to decelerate to a stop before reaching the collision point*
- *is viewed between two points to provide inter-visibility between drivers and vehicles on the major road and minor road approaches. It is measured from a driver eye height of 1.1 m above the road to points 1.25 m above the road, which represents drivers seeing the upper part of cars.*
- *assumes the driver on the minor road is situated at a distance of 7.0 m (minimum of 5.0 m) from the conflict point on the major road SISD allows for a 3 sec observation time for a driver on the priority legs of the intersection to detect a problem ahead (e.g. car from minor road stalling in through lane), plus the SSD.*
- *provides sufficient distance for a vehicle to cross the non-terminating movement on two-lane two-way roads, or undertake two-stage crossings of dual carriageways, including those with design speeds of 80 km/h or more.*
- *should also be provided for drivers of vehicles stored in the centre of the road when undertaking a crossing or right-turning movement.*
- *enables approaching drivers to see an articulated vehicle, which has properly commenced a manoeuvre from a leg without priority, but its length creates an obstruction.*

The Planning Scheme states the requirements for SISD in *E5.0 Road and Railway Assets Code, E5.6.4 Sight distance at accesses, junctions and level crossings* which are closely aligned with the Austroads requirements. *Figure E5.1 Sight lines for Accesses and Junctions* from the Planning Scheme is shown in Figure 9. However, it is important to point out the above mentioned Austroads guide also states that while sight distances at accesses should comply with the sight distance requirements for intersections, these criteria often cannot be obtained for various reasons. In these cases, the minimum gap sight distance should be assessed in context of the specific situation.

The site access on Campbell St was assessed for available SISD with a summary of sight distance findings provided in Table 5, noting:

- Campbell St is categorised in 'all other roads' and hence 'X' is required to equal 5 m in Figure 9.
- The vehicle speed equates to the 85th percentile speed however this is unknown for Campbell St hence the posted speed limit will be utilised.



Figure 9 Extract from Planning Scheme: Figure E5.1 Sight Lines for Accesses and Junctions

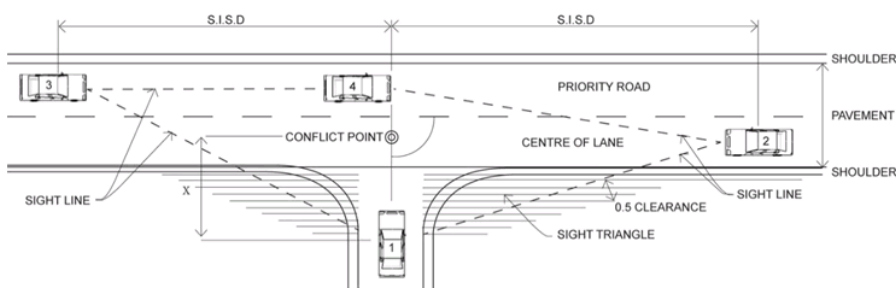


Table 5 Sight Distance Assessment

Access / Junction	85 th Percentile Speed	Required SSD	Min Gap (5 s) Sight Distance	Sight Distance Left	Sight Distance Right	Comments
Campbell St site access	50 km/hr	80 m	69 m	NA	~45 m	SSD may be impeded due to location of power poles and presence on-street parking

As shown in Table 5, the sight distance to the right of the existing site access does not meet the Planning Scheme requirement for a range of reasons including impeded by the presence of on-street parking. However, it is acknowledged on-street parking is commonplace in urban streets thus it is normal for sight distance to be partly obstructed at site accesses. Drivers generally observe gaps between parked vehicles.

The sight distance to the right of the existing site access meets the minimum safe sight distance (SSD) requirement of 45 m (for 50 km/hr speed) but falls short of the SSD with the desirable 5 s gap (69 m) stated in Section 3.2.4 of *AS/NZS 2890.1 Off-street car parking* (for exiting an access driveway other than a domestic property) and Section 3.4.5 of *AS/NZS 2890.2 Off-street commercial vehicle facilities*. The Australian Standard also highlights the potential need to restrict parking either side of the access driveway to ensure an approaching vehicle is not obstructed. However, this block of Campbell St has a high degree of property access, including heavy vehicle movements, yet it operates well and with minimal safety issues. Hence, it is noted also there are numerous other examples on Campbell St where it would be challenging to satisfy the SSD requirement.

Figure 10 shows the view to the right of the existing site access. Although the SSD will be deficient according to the planning scheme requirements, it is considered the site access will operate in a safe and efficient manner due to the existing access function of the road, one-way two-lane arrangement with preceding signalised intersection to provide gaps in the traffic flow, provision for cyclists and pedestrians, proposed access upgrade and absence of road safety issues in the vicinity of the site access.

**Figure 10 View Right at Existing Site Access**

4.5 Road Safety Impacts

Analysis of crash history data for the section of Campbell St relevant to the proposed development along with an on-site investigation of the site access has highlighted a deficiency in the required sight distance for use as a development access and a low level crash history in the surrounding area.

However, no significant detrimental road safety impacts are foreseen as a result of the proposed development based on the following:

- The existing site access has operated safely and efficiently for many years as an access to the subject site and adjoining existing businesses. The proposed development does not significantly increase the number of movements in and out of the access nor to the road network.
- There is sufficient capacity in the surrounding road network to safely absorb the minimal increase in traffic movements.
- There is no crash history trend as such to suggest that there is a road safety deficiency in the vicinity of the existing site access. Furthermore, there has been no crashes near the site access in the past four years.
- Whilst the proposed development is new in concept for this site, vehicle movements into and out of the site will not be seen as an unusual event by other motorists due to existing access into other properties along this section of Campbell St.

4.6 Assessment of Relevant Road and Railway Assets Code Use Standards

The Planning Scheme requires developments to comply with relevant Use Standards set out in the Road and Railway Assets Code. Applicable use standards are addressed in Table 6.



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Table 6 Planning Scheme E5.0 Road and Railway Assets Code

Acceptable Solutions / Performance Criteria	Assessment of Compliance with Code
<p>E5.5.1 Existing road accesses and junctions</p> <p>A3 The annual average daily traffic (AADT) of vehicle movements, to and from a site, using an existing access or junction, in an area subject to a speed limit of 60km/h or less, must not increase by more than 20% or 40 vehicle movements per day, whichever is the greater.</p> <p>P3 Any increase in vehicle traffic at an existing access or junction in an area subject to a speed limit of 60km/h or less, must be safe and not unreasonably impact on the efficiency of the road, having regard to:</p> <ul style="list-style-type: none"> (a) the increase in traffic caused by the use; (b) the nature of the traffic generated by the use; (c) the nature and efficiency of the access or the junction; (d) the nature and category of the road; (e) the speed limit and traffic flow of the road; (f) any alternative access to a road; (g) the need for the use; (h) any traffic impact assessment; and (i) any written advice received from the road authority. 	<p>Acceptable solution is not met but has been assessed in this TIA against the Performance Criteria. It is deemed acceptable on the following grounds:</p> <ul style="list-style-type: none"> • Increase in daily vehicle trips will be less than 2.5% and whilst more than 40 vehicle movements per day are expected, this is likely to be off-set by the inner city location of the proposed development which will encourage the use of other modes of transport. • The proposed development is located in a section of Campbell St already providing a high level of accessibility to local businesses in the area – the site access arrangements are consistent with those around it hence does not introduce any new elements. • There is sufficient capacity in Campbell St as a collector road for the additional traffic movements from the proposed development. • The existing site access has operated safely and efficiently to date and will be upgraded as part of the proposed development. • A minor crash history exists for the area but there is no evidence of significant road safety issues in the study area. • Campbell St signalised intersection with Warwick St effectively creates gaps in the traffic flow for this section of the road for safe entry/exit into properties and parking but not so long that traffic flow is restricted.
<p>E5.6.2 Road accesses and junctions</p> <p>A2 No more than one access providing both entry and exit, or two accesses providing separate entry and exit, to roads in an area subject to a speed limit of 60km/h or less.</p>	<p>Acceptable solution is met – One existing access will provide both entry / exit and no new accesses are proposed as part of the development.</p>



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Acceptable Solutions / Performance Criteria	Assessment of Compliance with Code
<p>E5.6.4 Sight distance at accesses, junctions and level crossings</p> <p>A1 Sight distances at: an access or junction must comply with the Safe Intersection Sight Distance shown in Table E5.1</p> <p>P1 The design, layout and location of an access, junction or rail level crossing must provide adequate sight distances to ensure the safe movement of vehicles, having regard to: (a) the nature and frequency of the traffic generated by the use; (b) the frequency of use of the road or rail network; (c) any alternative access; (d) the need for the access, junction or level crossing; (e) any traffic impact assessment; (f) any measures to improve or maintain sight distance; and (g) any written advice received from the road or rail authority.</p>	<p>Acceptable solution is partially met as safe intersection sight distance to the right of the site access is deficient and on-street parking restricts sight distance to the left of the site access. E5.6.4 has been assessed in this TIA against the Performance Criteria for both light and heavy vehicles. It is deemed acceptable on the following grounds:</p> <ul style="list-style-type: none"> • Sight distance to the right of the site access meets the minimum safe sight distance requirement stated in Figure 3.2 of AS/NZS 2890.1 for exiting an access driveway other than domestic property. • It is acknowledged on-street parking is commonplace in urban streets thus it is normal for sight distance to be partly obstructed at site accesses. Drivers generally observe gaps between parked vehicles. • The site access arrangements are consistent with those around it hence does not introduce any new elements. • In addition to being a collector road, Campbell St plays a local access role hence it is challenging to satisfy the SISD requirement for all access points along this road when on-street parking is present. • There is sufficient capacity in Campbell St for the additional traffic movements from the proposed development. • Use of the site access to enter/exit the off-street carpark is less frequent due to the largely residential nature of the development. • Whilst the site access will be upgraded, the existing site access has operated safely and efficiently to date. • A minor crash history exists for the area but there is no evidence of significant road safety issues in the study area. • A range of small, medium and large heavy vehicles were observed manoeuvring in and out of accesses nearby and at the subject/adjointing site during morning peak hour, and whilst there were very minor delays at times, the traffic continues to flow well and without incident. • Good provision for pedestrians and cyclists in this area with wide carriageway hence providing opportunities for drivers to identify potential conflict points and assess suitability to accept gap for entry into traffic flow.



5 Parking Assessment

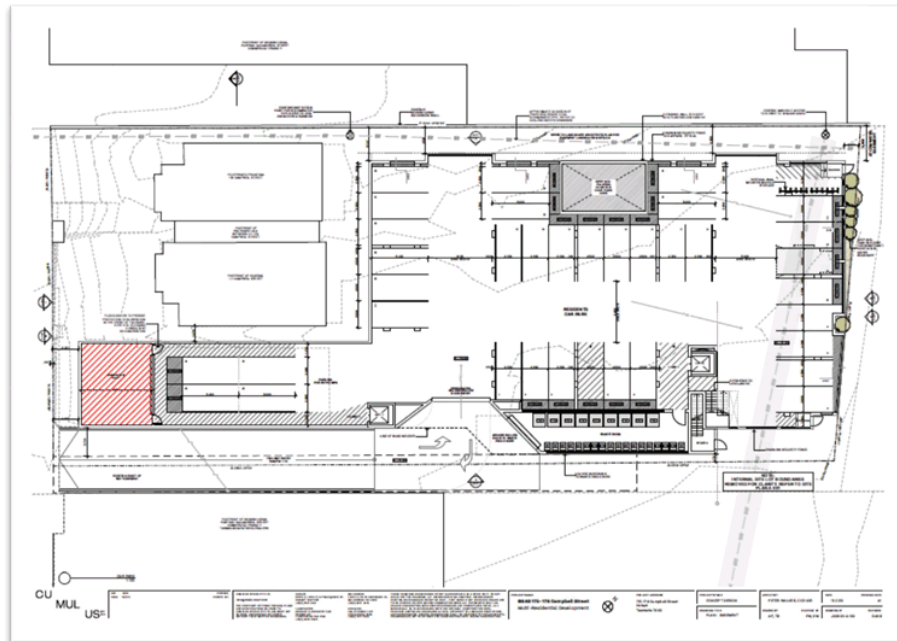
5.1 Parking Provision and Carpark Layout

Parking provision and carpark layout for the proposed development is shown in Figure 11. It is proposed to provide an off-street carparking area on the basement level of the building footprint. A total of thirty-five (35) car spaces will be provided for the residential component of the development, consisting of one space for each of the twenty-seven (27) apartments and townhouses, and two spaces each for the four skyhomes (total of 8).

It is noted that car spaces numbered 3, 4 and 5 will be compliant with accessibility design criteria hence can be allocated to residents with these requirements as needed. However, these spaces will not be signposted for accessible use only to avoid limiting their use. Car spaces 32 to 35 are in jockey configuration providing two spaces each for two of the skyhomes, and satisfying the requirement to be 2.6 m wide.

A vertical wall-mounted bicycle storage rack for up to twelve bikes, is located between car space 13 and an external exit pathway. The provision of bike storage for residents complements the development's close proximity to the city and encourages alternative modes of transport.

Figure 11 Proposed Development Off-Street Carpark Layout



Ref: Cumulus Studios, Concept Design, Revision DA06, 13 January 2022

There is a considerable amount of time-limited on-street parking (60 car spaces) available in the Campbell St block between Warwick St and Brisbane St, with parking bays marked and signposted with time limits (either 2P, 1P or ½P) as described in Section 2.1. This is complemented by existing



off-street parking provided within properties in the immediate surrounding area as can be seen in the aerial image shown in Figure 1.

The traffic generated from the proposed development is not likely to impact the availability of the parking in the surrounding area due to the provision of off-street parking for the proposed development as well as existing off-street parking in the area and turn-over rate of time-limited on-street parking. However, surrounding parking facilities will be utilised (as they are by all businesses and residential properties in the local area) to some extent by those either living or working at the 175-179 Campbell St development.

5.2 Calculated Parking Requirements

The proposed development must be categorised in several use classes specified in the Planning Scheme due to the multi-use nature of the development including 'Residential', 'Business and professional services' and 'Food services'. Parking requirements for the proposed development at the subject site have been calculated using *Table E6.1 Number of Car Parking Spaces Required*. An overview of the calculated parking requirements is provided in Table 7 which is based on applicable Use Class as defined in the Planning Scheme. Accordingly, 87 parking spaces are required to comply with the Planning Scheme.

The proposed development parking provision does not align with the planning scheme requirement hence is assessed against performance criteria in Point 1 of Table 8.

Table 7 Parking Requirements

Use Class	Number	Planning Scheme Rates	Parking Spaces Required
Residential: Multiple dwelling containing 1 bedroom	6 x 1 bedroom apartments	1 for each dwelling and visitor parking (see below)	6
Residential: Multiple dwelling containing 2 or more bedrooms	25 x 2+ bedroom apartments	2 for each dwelling and visitor parking (see below)	50
Residential: Visitor parking associated with dwellings	31 apartments	1 dedicated visitor parking space per 4 dwellings (applies to both types of multiple dwellings)	7
Business and professional services: Consulting rooms	100 m ²	1 for each 30 m ² of floor area	3
Business and professional services: Commercial space	114 m ²	1 for each 30 m ² of floor area	4
Food services: Café	111 m ²	15 for each 100 m ² of floor area or 1 space for each 3 seats	17
Total parking spaces required			87

5.3 Assessment of Relevant Parking and Access Code Use Standards

The Planning Scheme requires all use and development to comply with relevant Use Standards set out in the Parking and Access Code. Applicable use standards are addressed in Table 8.



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Table 8 Planning Scheme E6.0 Parking and Access Code

Code Use Standards	Assessment of Compliance with Use Standard
<p>E6.6.1 Number of Car Parking Spaces</p> <p>A1 Acceptable Solution</p> <p>The number of on-site car parking spaces must be: no less than and no greater than the number specified in Table E6.1</p> <p>P1 Performance Criteria</p> <p>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:</p> <ul style="list-style-type: none"> (a) car parking demand (b) the availability of on-street and public car parking in the locality (c) the availability /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 any relevant parking plan for the area adopted by Council (k) the impact on the historic cultural heritage significance of the site if subject to the Local Heritage Code (m) whether the provision of the parking would result in the loss, directly or indirectly, of one or more significant trees listed in the Significant Trees Code 	<p>Acceptable solution not met / Performance criteria addressed – The number of car spaces for the proposed use at the site as required by the Planning Scheme is outlined in Section 5.2. It has been calculated the number of car spaces to be provided does not align with the Planning Scheme parking requirements. However, it is recommended that the proposed parking provision is acceptable based on the following grounds:</p> <ul style="list-style-type: none"> • The residential component of the proposed development is sited in a location that reduces the need for a personal vehicle due to the high level of accessibility to local services and community activities • There is a considerable range of on-street parking around the subject site to cater for visitors to the building and business employees • Campbell St is a Metro route and a bus stop is located less than 50 m from proposed development • Car parking demand in this section of Campbell St is likely to vary considerably across the day with turnover of time-restricted on-street parking regularly making spaces available for short-term use • Private off-street parking is provided extensively for various purposes in this area taking pressure off on-street parking availability • Close proximity to the Hobart CBD and North Hobart with the option to use transport modes such as walking, cycling or bus • The café is likely to attract people in the local area as there are very few other similar food services, and it is likely customers will walk or ride rather than drive.



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Code Use Standards	Assessment of Compliance with Use Standard
E6.6.2 Number of Accessible Car Parking Spaces for People with a Disability A1 Car parking spaces provided for people with a disability must: (a) satisfy the relevant provisions of the Building Code of Australia; (b) be incorporated into the overall car park design; (c) be located as close as practicable to the building entrance.	Acceptable solution met – The proposed development building is classified by the Building Code of Australia as a mix of classes. The classes and number of accessible car spaces required include: <ul style="list-style-type: none"> • Class 2 (two or more sole occupancy units) – Not required • Class 5 (office/commercial) – 1 space for every 100 carparking spaces or part thereof • Class 6 (café) – 1 space for every 50 carparking spaces or part thereof <p><i>D3.5 Accessible carparking</i> of the BCA states that accessible carparking spaces need not be provided in a carparking area where a parking service is provided and direct access to any of the carparking spaces is not available to the public. This is the case for the proposed development where the carpark provided is for the residential apartments with no public access.</p> <p>On-street carparking in this section of Campbell St is likely to provide suitable alternatives in some cases for accessible parking, particularly given the wide, level carriageway and time-restricted parking available along the front of the proposed development.</p>
E6.6.3 Number of Motorcycle Parking Spaces A1	Not considered applicable to this development however it is noted on-street motorcycle parking is provided in the next block just after the Brisbane St intersection.
E6.6.4 Number of Bicycle Parking Spaces A1 The number of onsite bicycle parking spaces provided must be no less than the number specified in Table E6.2.	Acceptable solution met / Performance criteria addressed – Whilst not required under the planning scheme, a bicycle storage rack for up to 12 bikes will be provided in the basement carpark for residential apartments. <p>Bicycle parking is applicable for the proposed commercial and food activities both of which individually cover very small floor areas. Hence provision has been made for 5 bicycle hoops outside the commercial area of the proposed development which is considered appropriate for the subject site.</p>



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Code Use Standards	Assessment of Compliance with Use Standard
E6.7.1 Number of Vehicular Accesses A1 The number of vehicle access points provided for each road frontage must be no more than 1 or the existing number of vehicle access points, whichever is the greater.	Acceptable solution met – One vehicle access on Campbell St.
E6.7.2 Design of Vehicular Accesses A1 Design of vehicle access points must comply with all of the following: (a) in the case of non-commercial vehicle access; the location, sight distance, width and gradient of an access must be designed and constructed to comply with section 3 – “Access Facilities to Off-street Parking Areas and Queuing Areas” of AS/NZS 2890.1:2004 Parking Facilities Part 1: Off-street car parking; (b) in the case of commercial vehicle access; the location, sight distance, geometry and gradient of an access must be designed and constructed to comply with all access driveway provisions in section 3 “Access Driveways and Circulation Roadways” of AS2890.2 – 2002 Parking facilities Part 2: Off-street commercial vehicle facilities P1 Design of vehicle access points must be safe, efficient and convenient, having regard to all of the following: (a) avoidance of conflicts between users including vehicles, cyclists and pedestrians (b) avoidance of unreasonable interference with the flow of traffic on adjoining roads (c) suitability for the type and volume of traffic likely to be generated by the use or development (d) ease of accessibility and recognition for users	Acceptable solution partially met/ Performance criteria addressed. The existing access will be utilised noting the following aspects: <ul style="list-style-type: none"> • Entry width of 5.5 m wide (Combined for Category 1 access as defined in Tables 3.1 and 3.2 – Based on User Class 1A; local road frontage, <100 car spaces) will be provided; • Location requirements are met in Section 3.2.3 of AS/NZS 2890.1 • Minimum entering sight distance to the right is acceptable despite SISD not achieved for reasons given in Section 4.4 • Minimum sightlines for pedestrian safety appear to be met (as required in Figure 3.3 of AS/NZS 2890.1:2004) however this should be checked at the site access detailed design stage • Grade of access driveway complies with Table 3.2 of AS/NZS 2890.2, designed to suit SRV (garbage truck) – refer to Figure 8 Performance criteria addressed: (a) Campbell St is a one-way, two lane section of road with a dedicated cycle lane where the proposed development is located, hence provides opportunities to avoid conflicts between various road users, particularly as cyclists are encouraged to use the cycle lane on the opposite side of the road and pedestrians are provided with wide footpaths on both sides (b) There is evidence from site survey observations to indicate various sized rigid vehicles regularly access businesses along Campbell St and through timely traffic gap selection such as when signals change, these vehicles largely avoid interfering with traffic flow (c) & (d) Existing access has operated safely and efficiently to date as a two-way single lane hence the upgraded access will be suitable for the type and relatively small increase in traffic utilising the access (predominantly light vehicles associated with the proposed development)



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Code Use Standards	Assessment of Compliance with Use Standard
E6.7.3 Vehicular Passing Areas Along an Access A1 Vehicular passing areas must: (a) be provided if any of the following applies to an access: (i) it serves more than 5 car parking spaces; (ii) is more than 30 m long; (iii) it meets a road serving more than 6000 vehicles per day; (b) be 6 m long, 5.5 m wide, and taper to the width of the driveway; (c) have the first passing area constructed at the kerb; (d) be at intervals of no more than 30 m along the access.	Acceptable solution met – Existing access meets a road serving more than 6,000 vehicles per day. The width of the access at the kerb will be 5.5 m and will continue at this width for the length of the 40 m driveway up to the carpark entry. The driveway then tapers to a 3m width over a 10 m distance providing an area to reverse into if required.
E6.7.4 On-Site Turning A1 On-site turning must be provided to enable vehicles to exit a site in a forward direction, except where the access complies with any of the following: (a) it serves no more than two dwelling units; (b) it meets a road carrying less than 6000 vehicles per day.	Acceptable solution met – Off-street carpark enables vehicles to exit in a forward direction. It is noted waste management contractors will require access to the proposed development hence a turning path assessment has been completed (refer Appendix A). A typical waste collection vehicle utilised for these types of premises is able to manoeuvre and exit in a forward direction, however any larger commercial vehicles will not be able to access the carpark due to entry clearance height (discussed in E6.7.5). Collection of waste will be completed outside peak traffic times to ensure carpark access is not impacted and queuing does not occur.
E6.7.5 Layout of Parking Areas A1 The layout of car parking spaces, access aisles, circulation roadways and ramps must be designed and constructed to comply with section 2 "Design of Parking Modules, Circulation Roadways and Ramps" of AS/NZS 2890.1:2004 Parking Facilities Part 1: Off-street car parking and must have sufficient headroom to comply with clause 5.3 "Headroom" of the same Standard.	Acceptable solution met – The off-street carpark concept design indicates consideration of key parking area elements and based on a high-level review appears to comply with Section 2 of AS/NZS 2890.1:2004. Some specific points: <ul style="list-style-type: none"> • Dimensions of car spaces will meet standard design requirements for the designated User Class 1A. • Entry into the proposed development carpark will have a clearance height of approximately 2.8 m (refer to Appendix B). This satisfies Clause 5.3 Headroom – general requirement of a minimum of 2.2 m. It is recommended to ensure the detailed design of carpark layout is in accordance with relevant clauses of Section 2 AS/NZS 2890.1.



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Code Use Standards	Assessment of Compliance with Use Standard
E6.7.6 Surface Treatment of Parking Areas A1 Parking spaces and vehicle circulation roadways must be in accordance with all of the following; (a) paved or treated with a durable all-weather pavement where within 75m of a property boundary or a sealed roadway; (b) drained to an approved stormwater system, unless the road from which access is provided to the property is unsealed.	Acceptable solution will be addressed to the necessary standard in the detailed design phase of the proposed development.
E6.7.7 Lighting of Parking Areas A1 Parking and vehicle circulation roadways and pedestrian paths serving 5 or more car parking spaces, used outside daylight hours, must be provided with lighting in accordance with clause 3.1 "Basis of Design" and clause 3.6 "Car Parks" in AS/NZS 1158.3.1:2005 Lighting for roads and public spaces Part 3.1: Pedestrian area (Category P) lighting.	Acceptable solution will be addressed to the necessary standard in the detailed design phase of the proposed development.
E6.7.8 Landscaping of Parking Areas E6.7.9 Design of Motorcycle Parking Areas E6.7.11 Bicycle End of Trip Facilities	Not applicable.
E6.7.10 Design of Bicycle Parking Areas A1 (a) be provided in accordance with the requirements of Table E6.2 (b) be located within 30 m of the main entrance to the building	Acceptable solution will be addressed to the necessary standard in the detailed design phase of the proposed development.
E6.7.12 Siting of Car Parking A1 Parking spaces and vehicle turning areas, including garages or covered parking areas in the Inner Residential Zone, Urban Mixed Use Zone, Village Zone, Local Business Zone and General Business Zone must be located behind the building line of buildings located or proposed on a site except if a parking area is already provided in front of the building line of a shopping centre.	Acceptable solution met – Carpark located behind retail and commercial buildings.
E6.7.14 Access to a Road A1 Access to a road must be in accordance with the requirements of the road authority.	Acceptable solution met – Existing access to Campbell Street.



6 Conclusions and Recommendations

This report documents the findings from a Traffic Impact Assessment conducted for the proposed residential apartment building at 175-179 Campbell St, Hobart. This assessment has been conducted following a review of available traffic data, information on the proposed development and site plans provided to ECTM Consulting, relevant standards and guidelines, the Hobart Interim Planning Scheme and other supplementary traffic information.

The analysis undertaken in this report demonstrates that the additional traffic generated from the proposed development at the subject site on a day to day basis during normal peak hours, will not impact the operation of the surrounding road network nor significantly affect the existing road capacity.

The key findings of the TIA are summarised as follows:

- There is sufficient capacity in the surrounding road network to safely absorb the relatively small increase in traffic movements.
- There is no crash history trend to suggest that there are road safety deficiencies in the vicinity of the existing site access.
- The existing site access has operated safely and efficiently for many years as an access to the subject site and adjoining property at 169-173 Campbell St and will be upgraded as part of the proposed development.
- Minimum sight distance requirements are met at the site access although exiting the site may be restricted at times due to on-street parking. However, there are other examples on Campbell St where it would be challenging to satisfy the SISD requirement when on-street parking is present. As such, it is considered the site access provides acceptable safe entry and exit for the reasons outlined in the relevant section of the report.
- The proposed parking provision and carpark layout is considered adequate based on the grounds described in the report.

The following recommendations are made based on the findings of the TIA:

- Design site access in accordance with applicable clauses of Section 3 *AS/NZS 2890.1:2004 Off-street car parking* noting the site access needs to be widened to a minimum of 5.5 m.
- Check minimum sightlines for pedestrian safety are adequate at the site access detailed design stage.
- Incorporate modification of the site access driveway grade into the detailed design phase to achieve the *AS/NZS 2890.1:2004 Off-street car parking* standard as far as reasonably practicable.
- Ensure carpark layout is designed in accordance with relevant clauses of Section 2 *AS/NZS 2890.1:2004 Off-street car parking* noting dimensions of car spaces will meet standard design requirements for the designated User Class 1A (residents and employees).
- Ensure bicycle parking is designed in accordance with relevant clauses of *AS 2890.3:2015 Parking facilities – Bicycle parking*.
- Review and address parking area surface treatment, drainage and lighting requirements as stated in the Planning Scheme during the detailed design phase.

In conclusion, the proposed development does not significantly increase the number of movements on the local road network during peak periods and is unlikely to impact on existing parking facilities therefore should not adversely impact on traffic efficiency and road safety in the area. Based on the findings of this report and subject to the recommendations above, the proposed development is supported on traffic grounds.



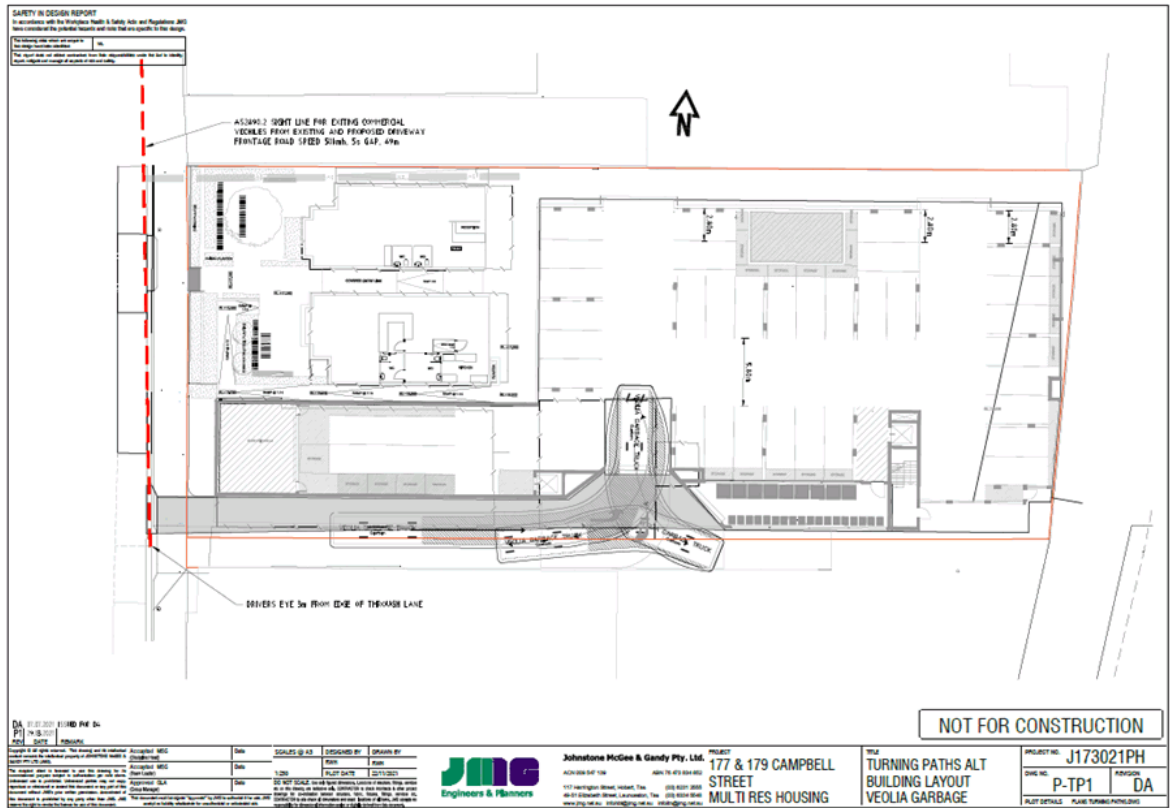
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Appendix A – Small and Medium Rigid Vehicle Turning Paths

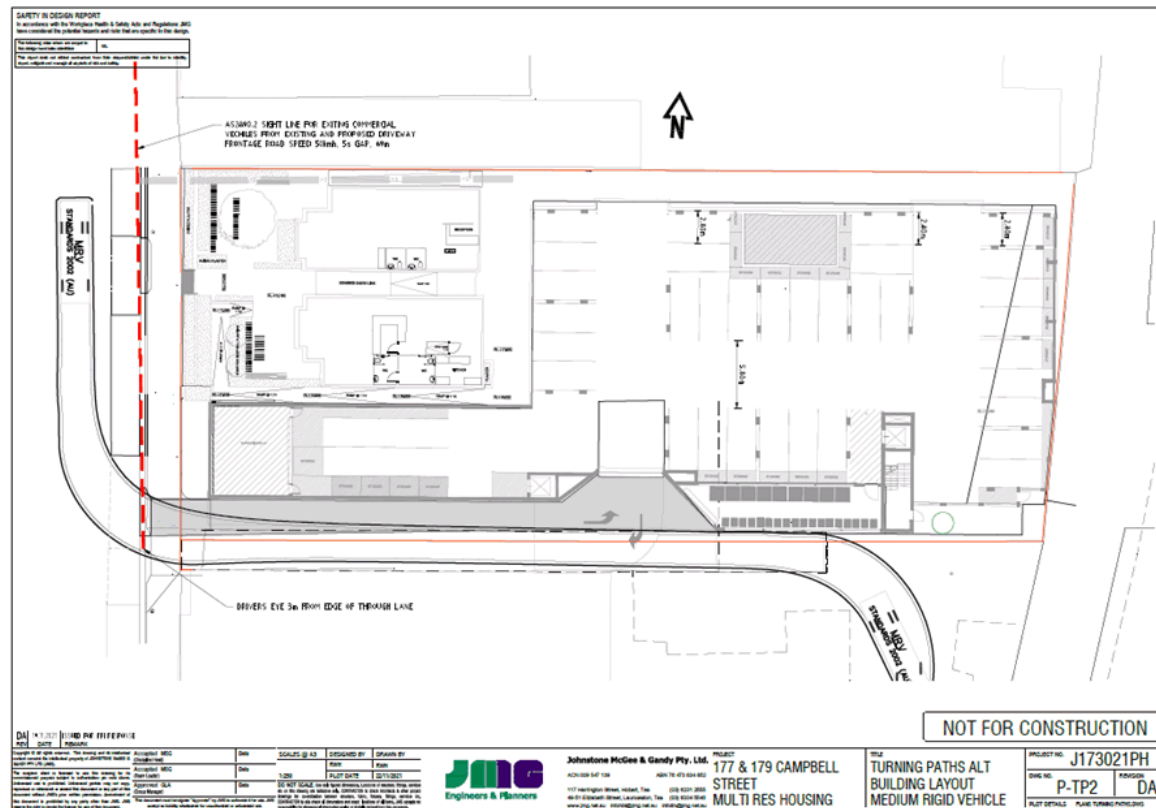


Ref: JMG Drawing P-TP1 22/11/21 – Turning Paths Alt Building Layout Veolia Garbage



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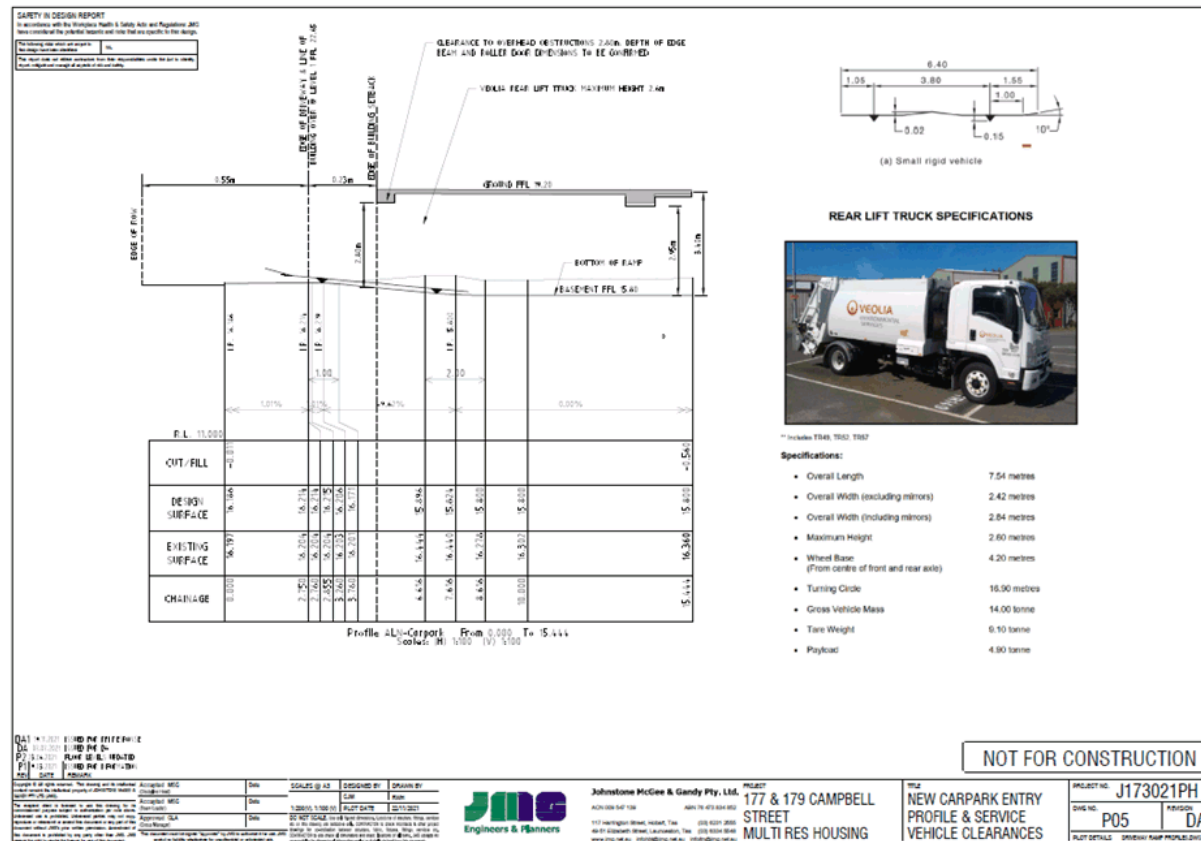
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Ref: JMG Drawing P-TP2 22/11/21 – Turning Paths Alt Building Layout Medium Rigid Vehicle



Appendix B – Waste Collection Truck Carpark Entry Clearance



Ref: JMG Drawing P05 22/11/21 – New Carpark Entry Profile and Service Vehicle Clearance



Document History and Status

Version	Date of Report	Prepared by	Revision type
1.0	30/06/2021	A Halley	Issued to client
2.0	7/07/2021	A Halley	Minor amendments
3.0	22/11/2021	A Halley	Update drawings and no. of car spaces
4.0	1/12/2021	A Halley	Inclusion of new information, update drawings, additional site access assessment
5.0	13/1/2021	A.Halley	Update Section 5 with revised carpark drawing and clarification of parking provision

Disclaimer

All sections of this report should be read in conjunction with the entire report. Information provided to ECTM Consulting Pty Ltd is taken as true and correct.

At no point does this document, or any correspondence provided by ECTM Consulting Pty Ltd absolve the client, site occupiers or any third party from any legal obligation or duty of care. If there is any conflict between information provided by ECTM Consulting Pty Ltd and any legislation, codes of practice, standards or industry guidance notes, then the latter is to take precedence in all circumstances.

Whilst all work is conducted by ECTM Consulting Pty Ltd in a professional manner, with due diligence and appropriate care, this report assesses the relevant issues identified at the time of writing. ECTM Consulting Pty Ltd will not accept responsibility or liability for any traffic assessment outcomes raised after the issuing of the final report. Recommendations are based on technical knowledge and appropriate professional judgement where required but the consideration, implementation and consequences of those recommendations are the sole duty of the Client.



ENVIRONMENTAL SITE ASSESSMENT

175-179 Campbell Street, Hobart

November 2021

For Solutionswon Group Pty Ltd

Environmental Site Assessment: 175-179 Campbell Street, Hobart, Tasmania. November 2021

DOCUMENT CONTROL

Title	Version	Date	Author	Reviewed By
<i>Environmental Site Assessment: 175-179 Campbell Street, Hobart, Tasmania</i>	Version 1	25 th November 2021	Mark Downie	JP Cumming

Environmental Site Assessment: 175-179 Campbell Street, Hobart, Tasmania. November 2021

EXECUTIVE SUMMARY

This report presents the findings of an Environmental Site Assessment (ESA) undertaken by Geo-Environmental Solutions Pty. Ltd. (GES) at 175-179 Campbell Street, Hobart, Tasmania - hereby referred to as 'The Site'. GES was commissioned by Solutionswon Group Pty Ltd to conduct the site assessment.

This ESA has been prepared by a suitably qualified and experienced practitioner in accordance with procedures and practices detailed in National Environmental Protection Measure [Assessment of Site Contamination] (NEPM ASC; 2013).

The objective of this ESA was to investigate the site for contamination, and address performance criteria under the potentially contaminated land code (E2) of the *Hobart City Council Interim Planning scheme 2015*. The assessment determines the suitability and safety of the soil for excavation at a typical depth for foundation & services excavation, and any human or environmental risks from the soil present on site.

The following information was gathered during the desktop investigation:

- The site is zoned *Urban Mixed Use* under the Hobart City Councils Interim Planning Scheme of 2015. The geology of the site is Quaternary alluvial deposits. Groundwater is inferred to travel south east along similar trajectory to the Brooker Highway towards the River Derwent. Surface water may be collected in stormwater culverts and discharged into Hobart Rivulet to the south east, or may infiltrate nearby unsealed areas to infiltrate to groundwater.
- A review of available information suggests that the site has been mostly residential land for 50+ years, with the buildings on site being converted to office use in more recent years. There are no records of potentially contaminating activities occurring on the site, or dangerous goods being stored on the site. The site is adjacent to a commercial warehouse and supermarket (formerly a commercial site with fuel storage) and as such there is potential for the presence of contaminants in the local area.
- Contaminants Of Potential Concern (COPC) include the following: TPH/TRH; Mono Aromatic hydrocarbons: (BTEXN); PAH; and metals.

From the soil assessment, it is concluded that:

- Environment: Zinc was detected above NEPM ASC 2013 EIL guideline limits in one sample, and Benzo(a)pyrene exceeded NEPM ASC 2013 ESL guideline limits in two samples. Metals and hydrocarbons were at elevated levels in samples which corresponded with overlying fill material, and not in the underlying clay soil.
- Human Health: There were no human health guideline exceedances for dermal contact or vapour intrusion risk. For NEPM ASC 2013 guidelines for dust inhalation and soil ingestion; for sample BH01 0.50, PAHs exceeded HIL C Class (recreation) investigation limits and Benzo(a)pyrene exceeded both HIL C Class and HIL D Class (commercial/industrial), and for sample BH02 0.50, Benzo(a)pyrene exceeded HIL C Class.
- Excavated Soil Management: In terms of IB105, the soil is a mixture of Level 1 Material (Clean Fill), Level 2 Material (Low Level Contaminated Soil), Level 3 and Level 4 Material (Contaminated Soil). If the soil is to be disturbed, it must be handled in accordance with IB105 and disposed of in line with IB105 and Controlled Waste Guidelines.

GES recommends the following:

- There are human health guideline exceedances for dust inhalation and soil ingestion, a Contamination Management Plan (CMP) will be required to mitigate risks to human receptors prior to development at the site.
- There are exceedances for ESL and EIL ecological guideline limits. A Soil and Water Management Plan (SWMP) will be required to account for the management and erosion of soil with ecological impacts during developments at the site.
- Any disposal of soil off site must be in accordance with IB105 and the controlled waste regulations. Excavated soil will require disposal at a suitable waste facility and a permit to transport the waste (obtained through the EPA) will be required.

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ABREVIATIONS

AEC	Areas of Environmental Concern
AHD	Australian Height Datum
ALS	Analytical Laboratory Services
ANZECC	Australia and New Zealand Environment and Conservation Council
BGS	Below Ground Surface
BH	Borehole
BTEXN	Benzene Toluene Ethylbenzene Xylene Naphthalene
COA	Certificate of Analysis
COC	Chain of Custody
COPC	Contaminant of Potential Concern
CRC CARE	Corporative Research Centre for Contamination Assessment and Remediation of the Environment
CSM	Conceptual Site Model
DQO	Data Quality Objectives
EOH	End Of Hole
EIL	Ecological Investigation Levels
ESL	Ecological Screening Levels
EPA	Environmental Protection Authority
ESA	Environmental Site Assessment
GDA94	Geocentric Datum of Australia 1994
GES	Geo-Environmental Solutions Pty. Ltd.
HIL	Health Investigation Levels
HSL	Health Screening Levels
IL	Investigation Levels
LOR	Limits of Reporting
MDL	Mean Detection Limit
NATA	National Association of Testing Authorities
NEPM ASC	National Environmental Protection (Assessment of Site Contamination) Measure
NHMRC	National Health and Medical Research Council
NL	Non Limiting
NRMMC	Natural Resource Management Ministerial Council
PAH	Polynuclear Aromatic Hydrocarbons
PCP	Physico-Chemical Parameters
PHC	Petroleum Hydrocarbons
PID	Photo-Ionisation Detector
PPA	Preferential (PVI) Pathways Assessment
PVI	Petroleum Vapour Intrusion
TPH	Total Petroleum Hydrocarbons
TRH	Total Recoverable Hydrocarbons
USCS	Unified Soil Classification System

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1 INTRODUCTION

1.1 General

This report presents the findings of an Environmental Site Assessment (ESA) undertaken by Geo-Environmental Solutions Pty. Ltd. (GES) at 175-179 Campbell Street, Hobart - hereby referred to as 'The Site'. The site location is presented in Figure 1 and the aerial photograph is presented in Figure 2. GES was commissioned by Solutionswon Group Pty Ltd to conduct the site assessment.

The site appears to of predominantly residential use for >50 years, and is surrounded by long-standing commercial and light industrial area. The ESA will compare contamination against E2.6.2 Excavation code of the Potentially Contaminated Land Code which will account for any future potential contact or excavation of earth such as services trenches or digging for foundations.

This ESA has been prepared by a suitably qualified and experience practitioner in accordance with procedures and practices detailed in National Environmental Protection Measure [Assessment of Site Contamination] (NEPM ASC; 2013) guidelines and key regulations and policies identified in the References section of this document. Personnel engaged in preparing this ESA are listed in Appendix 1 along with their relevant qualifications and years of experience.

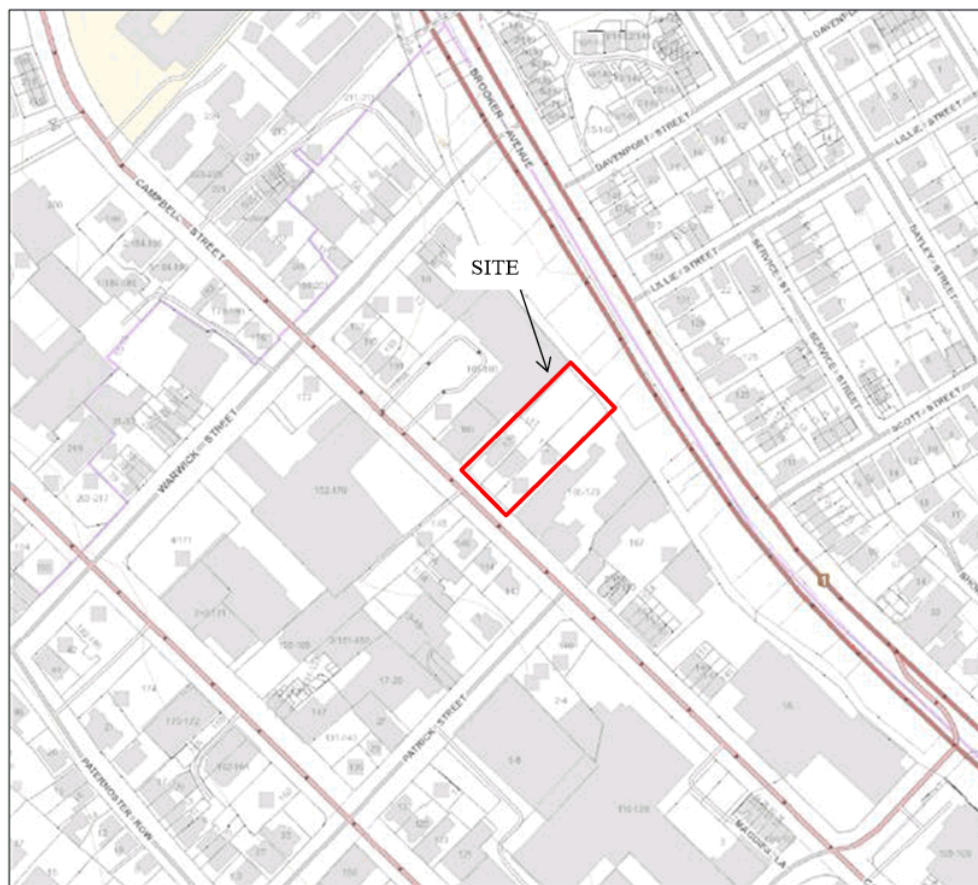


Figure 1 Site Location (Image C/O The LIST)

Environmental Site Assessment: 175-179 Campbell Street, Hobart, Tasmania. November 2021

1.2 Site Layout

An aerial image of the existing site layout is presented in Figure 2.



Figure 2 Existing Site Layout (Image C/O The LIST)

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1.3 Site Details

Site details are presented in Table 1.

Table 1 Site Details

SITE LOCATION: 175-179 Campbell Street, Hobart, Tasmania
INVESTIGATION AREA The site, with attention to be paid to the area behind the existing houses
SITE ELEVATION & GRADIENT Approximately 20 m AHD gently SE sloping site
SITE SURFACING Sealed driveways, gravel hardstands, grasses and shrubs
TITLE REFERENCES The title references: CT 23364/1, 23364/2, 22529/3, 23363/1
SITE OWNER Building Group Apprenticeship Scheme Ltd
PREVIOUS LANDUSE Mixed residential then office use for at least 50 years
SITE SURROUNDING LAND ZONING <i>Tasmanian Interim Planning Scheme 2015; Urban Mixed Use</i>
SITE LAND USE Mixed offices and residential
PROPOSED LAND USE Mixed offices and residential
SURROUNDING LAND USE: Adjacent properties all Urban mixed use, mix of offices, retail and residential

1.4 Investigation Objectives

The objective of this ESA was to investigate the site for contamination, we have done this by addressing E2.6.2 performance criteria under the *Hobart City Council Interim Planning scheme 2015* for excavation. To assess the suitability and safety of the soil for excavation at a typical depth foundations and services, and any human or environmental risks of the soil present on site.

Given the potential for contamination leaching to depth from upgradient sources, we have investigated the soil at a variety of depths where possible, and investigated any groundwater if found during testing.

1.5 Scope of Works

The scope of work for this ESA was to:

- Conduct a desktop and an invasive soil investigation at the site.
- Drill seven (7) soil bores and collect sixteen (16) primary soil samples, and any groundwater samples if groundwater is present (note – groundwater was not present); the primary samples were sent for analysis of total recoverable hydrocarbons (TRH) Benzene Toluene Ethylbenzene Xylene Naphthalene (BTEXN), Polynuclear Aromatic Hydrocarbons (PAH), and a suite of fifteen (15) metals to a National Association of Testing Authorities (NATA) accredited laboratory.
- Samples were sent with quality assurance/ quality control (QA/QC) samples including one rinsate blank, one duplicate sample.
- Determine the absence or presence and if present the level of site contamination and compare soil results against the relevant guidelines.
- Conduct a risk assessment, known as a Conceptual Site Model; and
- Report findings in an Environmental Site Assessment report, detailing specific onsite human health or environmental risk which may source from potentially detected contamination.

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2 PLANNING

2.1 Overview

GES has previously conducted a desktop Preliminary Site Investigation (PSI) at the site (GES 2021) to determine likelihood of contamination. The client has requested an Environmental Site Assessment to test for contamination and as a requirement for lodging a development application at the site. Plans include a development of units behind the existing houses, with a car parking basement below the proposed units, refer to Appendix 2 for plans.

The site is not considered a potentially contaminated site by Hobart City Council (HCC), but it is identified as sharing a boundary with a potentially contaminated site at 181-189 Campbell Street.

The site is within a long standing commercial and light industrial area, with decommissioned underground fuel storage identified at 181-189 Campbell Street, 12 Warwick Street and 171 Argyle Street. Given the long history of commercial and light industrial operations in the area (notably upgradient mechanics and workshops), other potential sources of contamination may be present. Identifying all potential contamination sources is beyond the scope of this report.

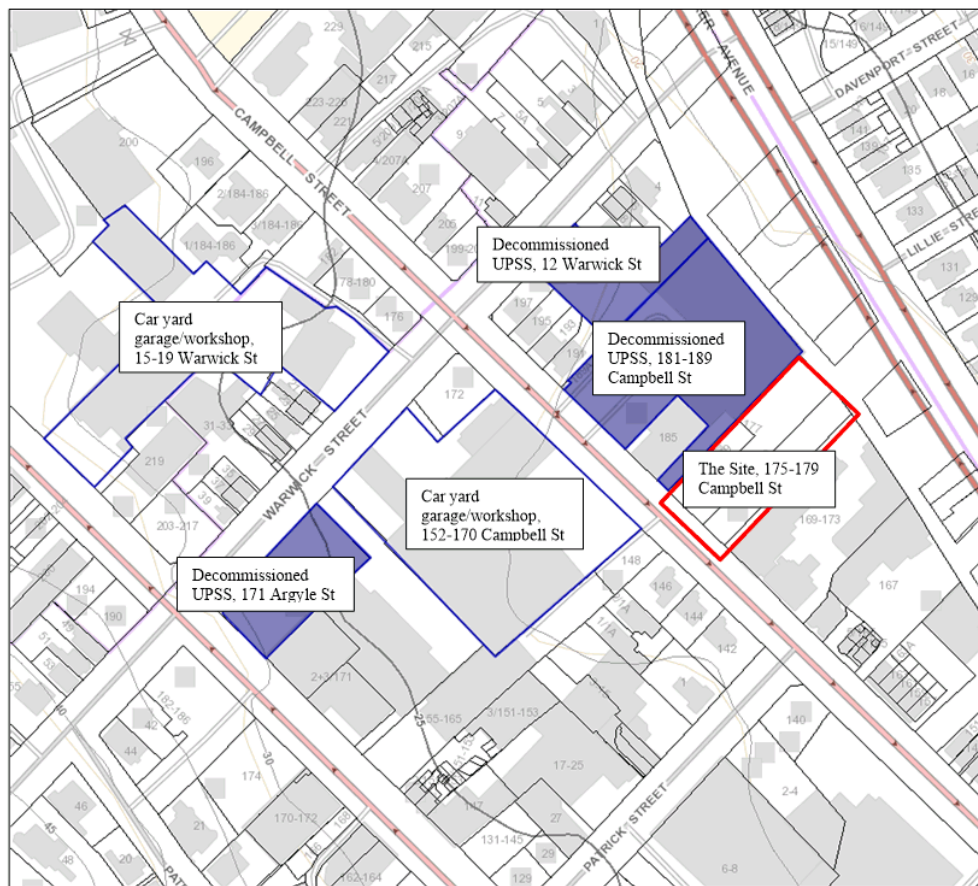


Figure 3 Potentially Contaminated Sites

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2.1.1 Excavation Works E2.6.2 P1

For this investigation we have addressed E2.6.2 P1 performance criteria to determine levels of potential contamination on site, of Hobart City Council's Interim Planning Scheme 2015. The performance criteria identify that any future potential excavation works must not adversely impact on health and the environment, having regard to:

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

2.1.2 Statement of Suitability

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

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3 DESKTOP STUDY

3.1 Site Zoning

The site is zoned *Urban Mixed Use* under the Tasmanian Interim Planning Scheme of 2015. The adjacent land on the north eastern side of Campbell Street is also zoned mixed use whilst the land on the south western side of Campbell Street is zoned commercial – see Figure 4. The site is to be assessed against land use Class D for Commercial and Industrial land use, for construction of units that will be not in direct contact with soil, due to a car parking basement below the units. A small strip of ground along the north western edge of the units will be retained and landscaped (see Appendix 2 for architect plans), and this area should be assessed against land use Class C for Recreational Land Use.



Figure 4 Hobart City Councils Interim Planning Scheme Zones (2015)

3.2 Site Walkover

An initial site walkover was completed by GES staff on 30th June 2021, an additional site walkover with soil sampling was completed by GES staff on the 26th October 2021. No obvious staining or odour of the site surface or underlying soil was observed. Images are presented in Appendix 3.

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3.3 MRT Geology Mapping

The geology of the site has been mapped by Mineral Resources Tasmania, see Figure 5. The majority of the site is inferred to be underlain with **Qa** (Quaternary aged alluvial deposits), with a boundary to **Q** (Undifferentiated Quaternary sediments) around the buildings existing at the Campbell Street frontage. Triassic sandstone is likely to be present upslope. Geological descriptions follow:

R– Triassic – Undifferentiated Upper Parmeener Supergroup rocks.

Jd– Jurassic – Dolerite and related rocks.

Qa – Quaternary deposits – Alluvial gravel, sand and clay.

Q – Undifferentiated Quaternary sediments.

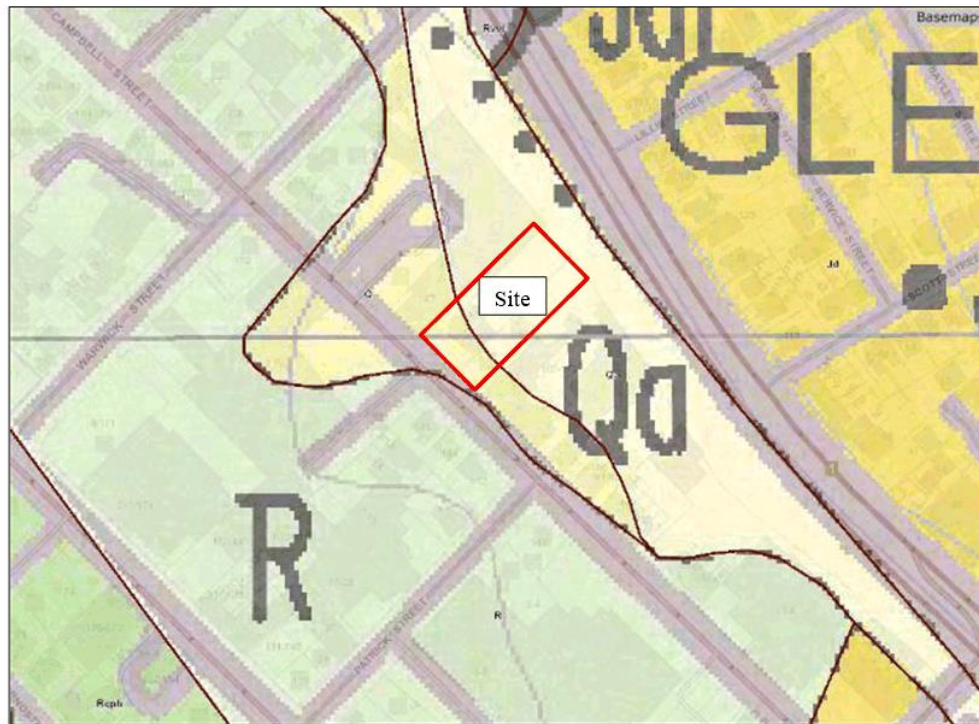


Figure 5 Mineral Resources Tasmania 1:25000 Scale Mapping (The LIST).

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3.4 Hobart City Council Records

The Hobart City Council was contacted for comment. The following information was provided:

- The Site is not listed as a potentially contaminated site.
- The site adjacent to the site; 181-189 Campbell Street is listed as a potentially contaminated site. This site had underground fuel storage tanks which were decommissioned in 1999 as part of redevelopment of the site for a supermarket.
- The site at 12 Warwick Street formerly hosted underground fuel tanks which were decommissioned in 2010.

3.5 EPA Regulated Premises

There are no EPA Regulated Premises layer points on The LIST within a 500m radius of the Site. There are two sites listed as containing decommissioned former underground fuel infrastructure (pins as shown in Figure 6), 12 Warwick Street approximately 75m upgradient of the site and 171 Argyle Street approximately 130m upgradient of the site. The adjacent site at 181-189 Campbell Street is not listed despite council records indicating decommissioned former fuel tanks at the site.

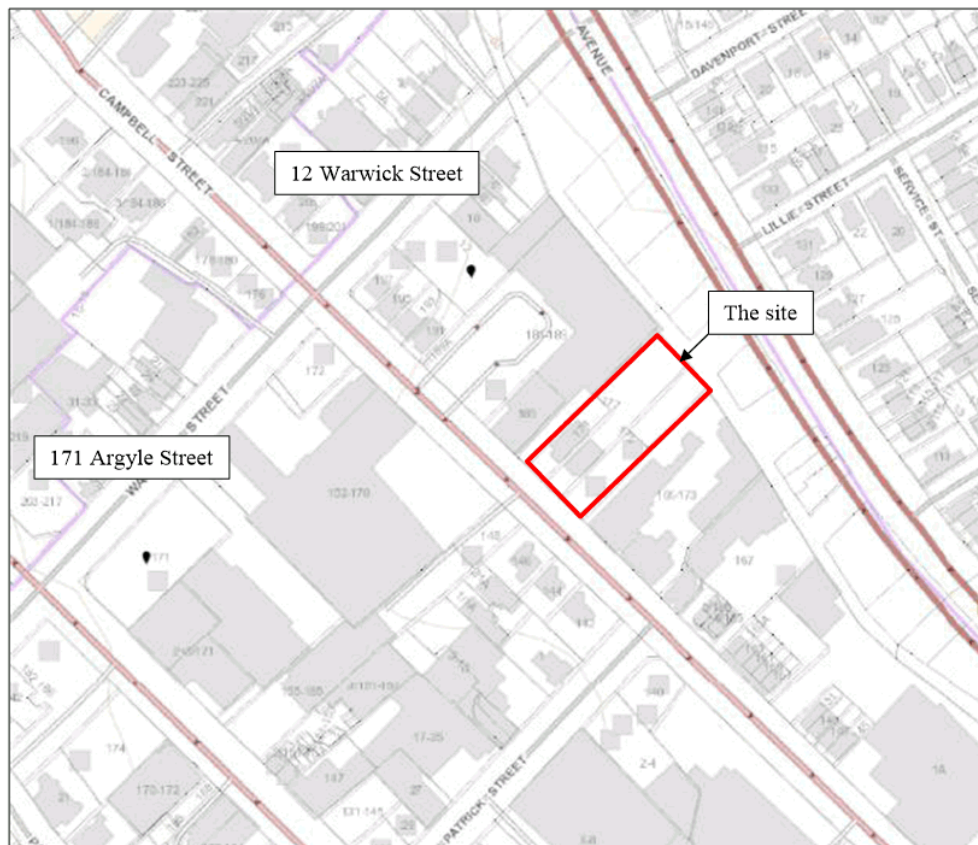


Figure 6 Spatial Relationship of nearby EPA listed premises (Image source The LIST)

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3.6 WorkSafe Tasmania Records

WorkSafe Tasmania were contacted by phone to ascertain if a dangerous goods search was required for the site. The search was not deemed necessary as no files were held for the site. This includes any possible WorkSafe Tasmania records, and the EPA ERLUR records. A further search was not warranted given the site has predominantly been residential for the past 50 years and has not been used for any industrial purposes.

3.7 Previous Environmental Site Investigations

GES undertook a PSI of the Site in June 2021, with conclusions as follows:

The desktop investigation has identified there is low risk for contaminated soil or groundwater on site. However, it cannot be demonstrated without doubt that the land is not contaminated, given that there are records of dangerous goods storage (underground fuel tanks) on the adjacent site (181-189 Campbell Street). Therefore, it is recommended that an environmental site assessment be completed to test for contamination on the site prior to any site excavation and development works.

GES is unaware of any other site investigations at the Site, or at the adjacent 181-189 Argyle Street.

3.8 Historical Aerial Photography Interpretation

Historical aerial photographs of the site and surrounding areas were accessed through the Department of Primary Industries, Parks, Water and Environment (DPIPWE) and Google Earth images were reviewed for the period 2003-2020. Individual aerial photos are presented in Appendix 4.

Error! Not a valid bookmark self-reference. Table 2 presents a summary of alterations to the site between photo events, and the individual aerial photos are presented in Appendix 4.

Table 2 Historical Aerial Photograph Review

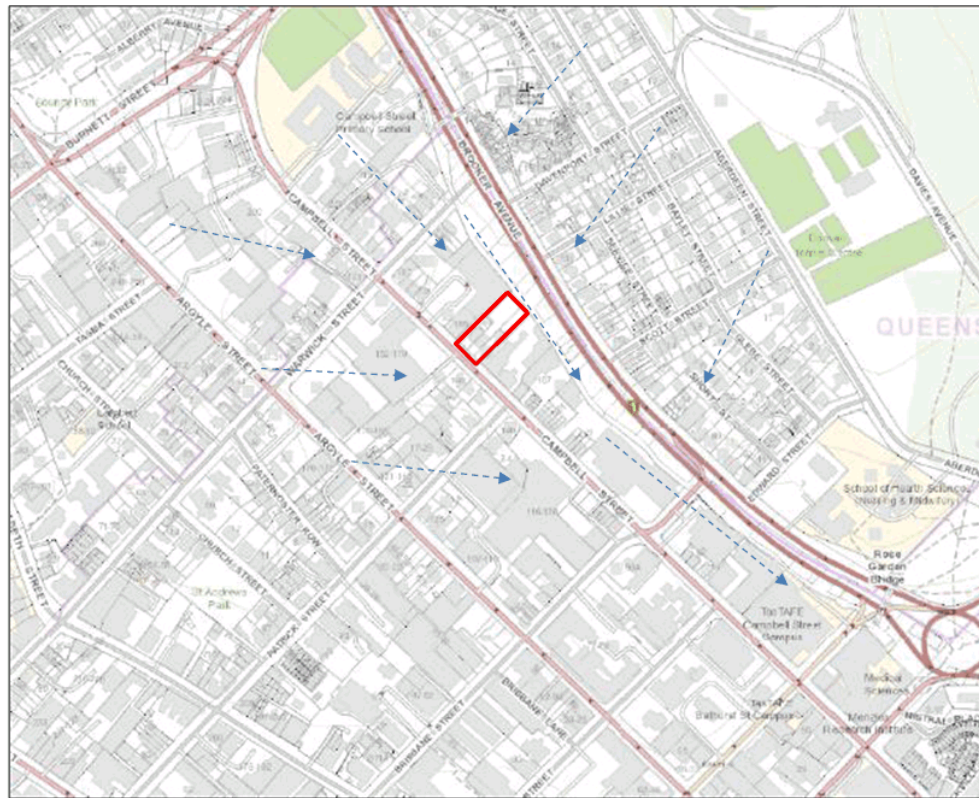
Photo	Observations
1957	<ul style="list-style-type: none"> The site features a house on each title, with gardens and small sheds visible in each backyard, consistent with residential use.
1969	<ul style="list-style-type: none"> The site is unchanged from 1957.
1977	<ul style="list-style-type: none"> The buildings on each site remain, the rear yard of 175 Campbell has been cleared and perhaps the building converted from residential to an office use
1989	<ul style="list-style-type: none"> Renovations to 175 Campbell have occurred, new small warehouse building to rear of existing building on 175 Campbell, further clearing for car parking at rear of 177-179 Campbell
2020	<ul style="list-style-type: none"> The site is largely unchanged from 1989

The surrounding area appears to feature commercial and light industrial premises surrounding the site in all photos, including the adjacent 181-189 Campbell Street (now a supermarket), and car yards on the opposite side of Campbell Street. This suggests a long history of commercial and light industrial operations in the general vicinity of the Site.

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3.9 Site Topography, Drainage & Hydrogeology

The site is situated in a relatively flat area with a gentle gradient to the east, in a slight depression between Campbell Street and the Brooker Highway. Surface water from the site is likely to drain in a south easterly direction parallel with the Brooker Highway eventually towards the Hobart Rivulet. Groundwater is likely to have a low gradient and slow to moderate movement towards the south east. Refer to Figure 7.



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3.10 Groundwater

No groundwater was encountered during excavation and soil sampling at the Site, with boreholes terminating at depths between 1.7 and 2.2m BGS.

3.10.1 Potential Up-Gradient Contamination Sources

The presence of former upgradient underground fuel tanks is a potential contamination source for groundwater at the site. Given the long history of light industrial land use in the vicinity, other potential up-gradient contamination sources may be present, identifying all contamination sources is beyond the scope of this report.

3.10.2 Downgradient Ecosystem Receptors

The closest downgradient ecosystems are Hobart Rivulet approximately 800m to the south east, and the Derwent River approximately 1km to the south east. It is likely that groundwater will have slow movement, due to the low gradient in the area.

3.10.3 Registered Water Bores

The closest registered Water Bore is 2864 (Water Resources Tasmania, Groundwater Information Access Portal), located on the eastern side of the Queens Domain, 1.4km from the site. The bore is not in the same groundwater catchment of the Site and is not considered applicable to the Site. Water bores have not been considered further in this investigation.

3.11 Potential Contamination Issues

There is no evidence of any industrial operations, or storage of dangerous goods on the site.

The site has predominantly been used for residential purposes over the last 50+years, with more recent development on 175 Campbell Street for offices with an associated small warehouse storage building to the rear.

The rear of the site is also used for car parking. The chance of hydrocarbon contamination of soil due to occasional parking is considered low, however possible in surface soils. There is also potential for localised contamination from former residential use and the burning of coal or other backyard waste.

The main potential contamination impact upon the site is the former storage of fuel on the upgradient properties at 181-189 Campbell Street and 12 Warwick Street which may have impacted groundwater in the local area with hydrocarbons and lead.

3.11.1 Areas of Potential Concern

The areas of potential concern is the area of the site, in the event that soil or groundwater has been contaminated by the activities outlined above in Section 3.11.

3.11.2 Contaminants of Potential Concern

Potential contaminants of potential concern (COPC) that have been considered include the following:

- Total Petroleum/Recoverable Hydrocarbons (TPH/TRH);
- Mono Aromatic hydrocarbons: Benzene, Toluene, Ethylbenzene, Xylene, Naphthalene (BTEXN);
- Polynuclear Aromatic Hydrocarbons (PAHs); and
- A suite of 15 Metals.

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4 FIELD INVESTIGATION PROCEDURES

4.1 Works Summary

Site investigation works comprised of soil bore drilling which is summarised in Table 3 and Figure 8

Table 3 Summary of Site Investigation Work Dates

Scope	Data	Lab Report	Details
Geoprobe direct push drilling & Sample collection	21 st October 2021	EM2121267 Primary Lab	16 Primary soil samples, 1 Duplicate sample, and 1 Rinsate sample were collected for analysis. No groundwater was encountered within the depths drilled, and no groundwater samples collected.



Figure 8 Borehole Plan (Aerial photo overlay)

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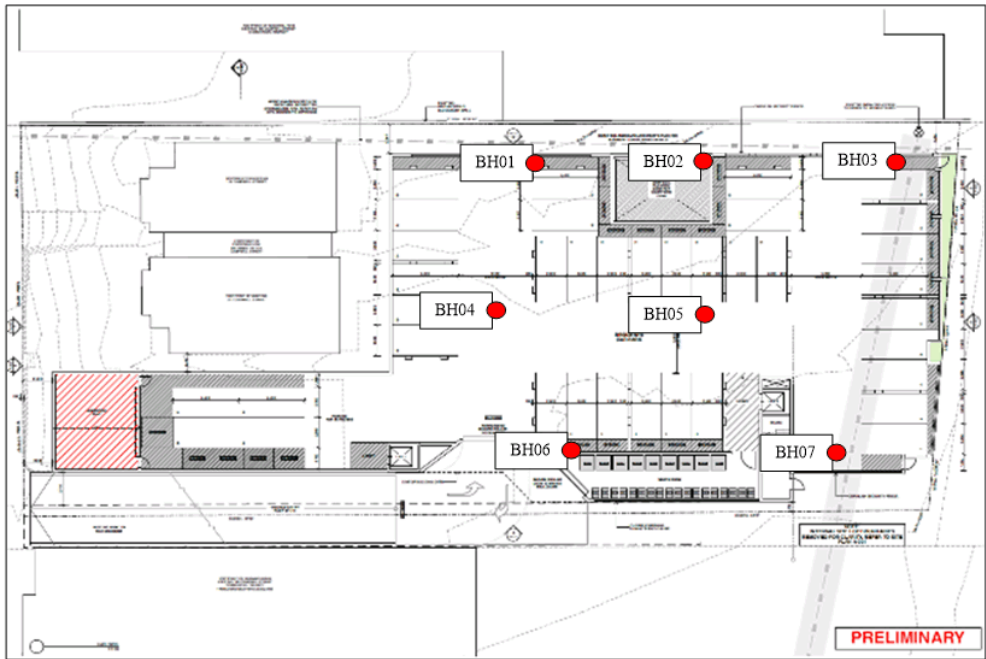


Figure 9 Borehole Plan (Preliminary Architect plans for ground level/basement)

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4.2 Soil Investigation

4.2.1 Borehole Drilling

A total of seven 65 mm diameter soil bores drilled using the industry recognized Geoprobe direct push drilling system for assessing site geology and sampling for contamination impact.

4.2.2 Soil Sampling

Soil sampling was conducted per the National Environmental Protection Measure (NEPM ASC 2013) and AS4482 sampling guidelines. Table 4 presents a summary of the soil assessment methodology adopted at the site.

Table 4 Summary of Soil Sampling Methods

Activity	Details / Comments
Drilling Method	Geoprobe direct push drilling system, and 65mm hand auger to clear for services.
Soil Logging	Logging the soil was conducted in accordance with the unified soil classification system (USCS) as detailed in AS1726 (1993).
Decontamination of Sampling Equipment	Quantum Clean Laboratory Detergent (R213) was used to decontaminate reusable sampling equipment (hand auger) between each borehole sampling event.
Soil Screening	In accordance with AS4482.2. Individual soil samples were collected from the core tray at 0.5 intervals below ground surface (bgs) and/or change in geology. Collected samples were deemed to not have odour associated with hydrocarbon contamination, and screening for volatile fractions using a photoionisation Detector (PID) was deemed not necessary.
Laboratory Soil Sample Collection	<p>In accordance with AS4482.2. All samples were collected using disposable nitrile gloves. Samples were selected for laboratory analysis:</p> <ul style="list-style-type: none"> • at 0.5m below ground surface (bgs) • at 1.5m below ground surface (bgs) • at 2.2m or 2.5m below ground surface (bgs) <p>A minimum number of samples were carefully selected which would provide enough information to delineate soil contamination.</p>
Sample preservation	Samples were placed into a jar for laboratory analysis. Soil jars were placed in a pre-chilled cool box with ice bricks.
Sample holding times	Sample holding times were within acceptable range (based on NEPM ASC B3-2013) from collection to extraction.

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4.2.3 Sample Analysis

Primary and QC samples were submitted to Analytical Laboratory Services (ALS), Springvale, Melbourne for analysis. A total of 18 samples (16 primary and 2 QC) were selected for analysis. Chain of Custody (COC) documentation was completed and is provided in Appendix 5 along with the Sample Receipt Notification (SRN) for each batch. Table 5 presents a summary of the laboratory analyses undertaken.

Table 5 Overview of Soil and Groundwater Analysis and Quality Control

Analytes	Primary Soil Samples	Duplicate Soil Samples ^a	Rinse Blank ^b
TRH	16	1	1
BTEXN	16	1	1
PAH	16	1	1
Suite 15 Metals	16	1	1

Sampling Quality Control Standards (AS4482):

a – Duplicate and Inter-Laboratory Split samples, one (1) in twenty (20) primary samples

b – Single rinse sample per piece of equipment per day

Given metals were analysed, there was requirement to assess the following soil physical properties to determine soil threshold investigation levels: Soil grain class (sand/silt or clay); % Clay content; Cation exchange capacity (CEC); and Soil pH. The soil physical properties were based on knowledge of similar soil types encountered around the greater Hobart area.

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5 QUALITY CONTROL

All Field and laboratory Quality Assurance and Quality Control (QA/QC) details and outputs are presented in Appendix 6.

5.1 Field

It is standard to expect up to 10% error in field duplication and up to 10% laboratory error. Therefore, in theory up to 20% error can be assumed on duplicate analysis. Some variation may exist in soil and groundwater because even though all efforts are made to split samples homogeneously, fragments of materials may bias samples in certain elements.

Relative Percentage Differences (RPDs) for the duplicate samples where applicable are calculated using the method outlined below.

The acceptance criteria used for the RPDs depend on the levels of contaminants detected and the laboratory's Method Detection Limits. The closer the levels detected are to the MDL the greater the acceptable RPD. RPDs are calculated as follows:

- RPD <50% for low level results (<20 * MDL)
- RPD <30% for medium level results (20-100 * MDL)
- RPD <15% for high level results (>100 * MDL)
- No limit applies at <2 * MDL (Method Detection Limit)

Field QA/QC procedures and compliance are summarised in Table 6

Table 6 Soil Field QA/QC procedures and Compliance

QA/QC Requirement	Compliance	Comments
Appropriate sampling strategy used and representative samples collected	Yes	Sampling program was undertaken in accordance with AS4482.1-2005
Appropriate and well documented sample collection, handling, logging and transportation procedures.	Yes	Appropriate and well documented
Decontamination	Yes	Appropriate decontamination such as cleaning tools before sampling and between sample locations was undertaken
Chain-of-custody documentation completed	Yes	COC were completed in accordance with NEPM ASC Schedule B2, Section 5.4.5 and transported under strict COC procedures. The signed COC documents are included in this report, which includes the condition report on arrival of samples to the Laboratory, cross checking of sample identification and paperwork and preservation method.
Required number of splits: Duplicate & inter-lab splits: 1 per 20 primary samples	No	1 duplicate sample was collected and analysed as per AS4482.1-2005. An inter-lab split sample was not collected.
QA/QC samples reported RPD's within indicated MDL guidelines.	No	For Duplicate and BH01 0.50 pairs, 57% of analytes complied. Non compliances were generally for hydrocarbons, particularly PAH, as outlined in Appendix 6. This suggest a non-uniform distribution of hydrocarbons within the soil samples.
Required numbers of rinse blank samples collected with no laboratory detections?	Yes	One rinse blank was collected, as per AS4482.1-2005.
Trip blanks collected with no laboratory detections?	NA	According to Australian Standards, there is no requirement to collect trip blanks, unless there is potential for hydrocarbon contamination.
Field blanks collected with no laboratory detections?	NA	According to Australian Standards, there is no requirement to collect field blanks, unless there is concern with cross contamination risks.
Samples delivered to the laboratory within sample holding times and with correct preservative	Yes	All samples were sent to the laboratory within holding times and correct preservative.

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5.2 Laboratory

Soil laboratory QA/QC procedures and compliance are summarised in Table 7.

Table 7 Soil Laboratory QA/QC Procedures and Compliance

QA/QC Requirement	Compliance	Comments
All analyses NATA accredited	Yes	ALS Laboratories is NATA Accredited. Appropriate analytical methods used, in accordance with Schedule B(3) of the NEPM ASC 2013. Acceptable laboratory limits of reporting (LORs) adopted.
Method Blanks: zero to <Practical Quantitation Limit (PQL)	Yes	There were no method blank value outliers in the QCI report.
Laboratory Control Samples: 70% to 130% recovery for soil.	Yes	There were no laboratory control sample recovery outliers in the QCI report.
Matrix spikes: 70% to 130% recovery for organics or 80%-120% recovery for inorganics	Yes	There were no matrix spike outliers in the QCI report
Duplicate Samples: 0% to <20% RPD.	No	There were 19 duplicate sample RPD outliers in the EM2121267 QCI report. 17 of the RPD outliers are for hydrocarbons in sample BH01 0.50, and could be attributed to non-uniform distribution of hydrocarbons in that sample.
Surrogates: 70% to 130% recovery	Yes	There were no surrogate recovery outliers in the QCI report.
Analysis holding time outliers	Yes	There were no analysis holding time outliers in the QCI report.
Quality Control Sample Frequency Outliers	No	For EM2002563 QCI Report: For NEPM 2013 B3 & ALS QC Standard; PAH/Phenols; Laboratory Duplicates and Matrix Spikes below expected, TRH – Semivolatile Fraction; Laboratory Duplicates and Matrix Spikes below expected

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6 FIELD INVESTIGATION FINDINGS

6.1 Soil Bores

6.1.1 Geological Interpretation

Our test holes yielded a clayey soil underneath a surface of fill material. Fill material is deeper at the north western edge (from 0.4m BGS at BH03 to 1.0m BGS at BH01 and BH02), and shallower at the south eastern edge (from 0.1m BGS at BH06 to 0.3m BGS at BH07). The fill material featured bricks in some samples suggesting debris from demolitions, and did not contain hydrocarbon odour. The geology of the site is mapped as Quaternary alluvial deposits, and clay soils below the fill surface are likely to have formed from alluvial deposits. Test holes yielded refusal on underlying rocks at depths around 1.7-2.2m BGS, the underlying rock may not be bedrock, as gravels encountered varied between test holes, which can be an indication of boulder deposits underlying alluvial clays.

6.1.2 Grain & Depth Class Interpretation

Grain size classifications are applied to all soils at the site to determine threshold screening level concentrations for hydrocarbons (and chromium) to assess soil ecological and human health risks.

Grain class threshold values are determined based on either the:

- sample grain size (in the case of ecological screening levels or chromium limits); or
- average grain class overlying the sample point (when assessing petroleum vapour screening levels) relative to the proposed finished floor level.

Table 8 provides a summary of the grain class averages for material overlying the samples.

Table 8 Summary of Grain Class Based on USCS Classification

Sample	Footing Excavation Depth ^A - Red Fill Thickness ^A - Green	Sample PVI/Depth (m) Relative to Slab/Cut Depth	Soil Grain Size Class Averaging Above Soil Sample														Attenuation				Petroleum Vapour Intrusion HSL Grain Class ^B	SAMPLE USCS		
			GW	GP	GM	GC	SW	SP	SM	SC	ML	CL	OL	MH	CH	OH	CI	Rock (R)	Existing Pavement (P)	Crawl/Space Thickness (m)			Proposed CONCRETE (CH)	Crawl/Space
BH01 0.50	0.4	0.4	0.1							0.3									NA	0.1	1.0	1.0	CLAY	CL
BH01 1.50	0.4	1.5	0.4							0.5						0.5			NA	0.1	1.0	1.0	CLAY	CI
BH02 0.50	0.4	0.4								0.3									NA	0.1	1.0	1.0	CLAY	CL
BH02 1.50	0.4	1.5	0.4							0.5						0.5			NA	0.1	1.0	1.0	CLAY	CI
BH03 0.50	0.4	0.4								0.3						0.1			NA	0.1	1.0	1.0	CLAY	CI
BH03 1.50	0.4	1.5								0.3						1.1			NA	0.1	1.0	1.0	CLAY	CI
BH04 0.50	0.4	0.4								0.3						0.1			NA	0.1	1.0	1.0	CLAY	CI
BH04 1.50	0.4	1.5								0.3						1.1			NA	0.1	1.0	1.0	CLAY	CI
BH04 2.50	0.4	2.5								0.5						1.8			NA	0.1	1.0	1.0	CLAY	CL
BH05 0.50	0.4	0.4												0.3	0.1				NA	0.1	1.0	1.0	CLAY	CH
BH05 1.50	0.4	1.5												1.3	0.1				NA	0.1	1.0	1.0	CLAY	CH
BH05 2.20	0.4	2.2												1.7	0.3				NA	0.1	1.0	1.0	CLAY	CI
BH06 0.50	0.4	0.4												0.3					NA	0.1	1.0	1.0	CLAY	CH
BH06 1.50	0.4	1.5												1.4					NA	0.1	1.0	1.0	CLAY	CH
BH07 0.50	0.4	0.4							0.2					0.2					NA	0.1	1.0	1.0	CLAY	CH
BH07 1.50	0.4	1.5							0.2					1.2					NA	0.1	1.0	1.0	CLAY	CH

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

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6.1.3 Soil Contamination Observations

No staining or odour consistent with hydrocarbon contamination were observed either on the site surface, or in the soil during the site visit. Collected samples were not observed to have any odour consistent with hydrocarbon contamination.

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7 SOIL ECOLOGICAL IMPACT ASSESSMENT

7.1 Protected Environmental Values

The requirement for protecting soil from contaminated activities in Tasmania is managed under the Environmental Management and Pollution Control Act 1994 (EMPCA) which states in Part 5A:

(2) An area of land is a contaminated site if –

(a) there is in, on or under that area of land a pollutant in a concentration that –

(i) is above the background concentration; and

(ii) is causing or is likely to be causing serious or material environmental harm or environmental nuisance, or is likely to cause serious or material environmental harm or environmental nuisance in the future if not appropriately managed;

Potential soil impact at the site is assessed through application of the following environmental investigation guidelines.

7.2 NEPM ASC (2013) Guidelines

The following ecological investigation guidelines are to be addressed in order to assess acceptable levels of risk to terrestrial ecosystems:

- NEPM ASC (2013) Ecological Investigation Levels (EIL's) – have been developed for selected metal and organic substances. EIL's depend on specific soil and physicochemical properties and land use scenarios and generally apply to the top two (2) metres of the soil profile (NEPM ASC 2013);
- NEPM ASC (2013) Ecological Screening Levels (ESL's) – have been developed for selected petroleum hydrocarbon compounds and total petroleum hydrocarbon fractions. ESL's broadly apply to coarse- and fine-grained soils and various land use scenarios within the top two (2) metres of the soil profile (NEPM ASC 2013).

Soil analytical results are compared against Ecological Screening Levels (ESL's) and EIL's limits presented in Table 9.

Table 9 Summary of Soil Contaminates Considered as part of this investigation, based on NEPM (2013) ASC

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

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7.3 Guidelines

7.3.1 Ecological Screening Levels

The following compounds were compared against NEPM ASC (2013) Ecological Screening Levels (ESL's):

- BTEX;
- F1 to F4 TRH; and
- Benzo(a)pyrene (PAH)

Selection of ESL threshold investigation limits are set out in the NEPM ASC (2013) guidelines and require classification of the soil according to:

- Land use sensitivity:
 - Areas of ecological significance
 - Urban residential and public open space; and
 - Commercial and industrial.
- Dominant particle size passing through a 2 mm sieve into:
 - Coarse – sand sizes and greater; and
 - Fine – clay and silt sizes.

Adopted NEPM ASC (2013) soil and land use classifications are presented below.

7.3.2 Ecological Investigation Levels

The following compounds were compared against Environmental Investigation Levels:

- Lead;
- Nickel;
- Chromium;
- Zinc;
- Copper;
- Arsenic; and
- Naphthalene.

There was a requirement to classify the soil according to physicochemical properties to develop investigation limits for the above listed compounds. Adopted physicochemical parameters are presented in the results tables.

Selection of EIL threshold investigation limits are set out in the NEPM ASC (2013) guidelines and require classification of the soil per specific soil and physicochemical properties which are presented in the results tables. The adopted land use scenarios presented in Table 10.

We have selected Commercial and Industrial land use as most applicable as; The surrounding area is predominantly commercial premises, The proposed residential developments will be built above a carpark basement and not in direct contact with any soil, and a lack of ecological receptors being within an urban environment with contained stormwater networks.

Table 10 Adopted Land Use Scenario for the Soil Bores

Land Use Scenario	Applicable Soil Bores
Areas of Ecological Significance	
Urban Residential & Public Open Space	
Commercial & Industrial	<i>All soil bores</i>

Based on a preliminary assessment of site soil conditions, the following physicochemical properties are applied to assess guideline EIL's:

- Clay content consistent with field observations;
- A soil pH and cation exchange capacity (CEC) consistent with Table 11.

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Table 11 Cation Exchange and Clay content, Adopted for the Site

Soil Physicochemical Properties Adopted for The Site			
USCS	Clay %	CEC	pH
R	100	10	6.0
GW	0	10	6.0
GP	0	10	6.0
GM	10	15	6.0
GC	30	20	6.0
SW	0	10	6.0
SP	0	10	6.0
SM	10	15	6.0
SC	20	20	6.0
ML	30	20	6.0
CL	100	35	6.0
OL	50	35	6.0
MH	30	35	6.0
CH	100	45	6.0
OH	100	60	6.0
PT	100	80	6.0
P	0	0	6.0
CL	100	35	6.0
CI	100	35	6.0
Rock	0	10	4.5

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7.4 Findings

7.4.1 Ecological Screening Levels

Laboratory analytical results are presented in Appendix 7. Table 12 compares soil analytical results against relevant NEPM ASC (2013) ESL's. Concentrations which exceeded laboratory limit of reporting (LOR) are highlighted in bold, and ESL exceedances are highlighted with a coloured cell.

The concentration of Benzo(a)pyrene was 20-50x above ESL in BH01 0.50, and 5-20x above ESL in BH02 0.50, at commercial/industrial land use.

Table 12 Summary of Soil Analytical Results Compared with ESL's for commercial/industrial land use.

NEPM Ecological Screening Levels for Soil				BTEX				PAH	TRH			
Bold - Indicates LOR Exceedances X - Indicates Sample has been Excavated				Benzene	Toluene	Ethylbenzene	Xylenes	Benzo(a)pyrene	F1 (05 - C10)	F2 (>C10 - C16)	F3 (>C16 - C34)	F4 (>C34 - C40)
Colour Shading - Indicates ESL Exceedances: >1 x, * 2-5 x, ** 5-20 x, *** 20-50 x, **** >50 x												
Sample ID	Sample Date	Soil Texture Class (fine / coarse)	Land Use	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
				LOR 0.2	LOR 0.5	LOR 0.5	LOR 0.5	LOR 0.5	LOR 10	LOR 50	LOR 100	LOR 100
BH01 0.50	21/10/21	F	COM/IND	<0.2	<0.5	<0.5	<0.5	27.4****	<10	70	1440	240
BH01 1.50	21/10/21	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH02 0.50	21/10/21	F	COM/IND	<0.2	<0.5	<0.5	<0.5	9**	<10	<50	480	100
BH02 1.50	21/10/21	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH03 0.50	21/10/21	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH03 1.50	21/10/21	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH04 0.50	21/10/21	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH04 1.50	21/10/21	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH04 2.50	21/10/21	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH05 0.50	21/10/21	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH05 1.50	21/10/21	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH05 2.20	21/10/21	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH06 0.50	21/10/21	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH06 1.50	21/10/21	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH07 0.50	21/10/21	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100
BH07 1.50	21/10/21	F	COM/IND	<0.2	<0.5	<0.5	<0.5	<0.5	<10	<50	<100	<100

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7.4.2 Ecological Investigation Levels

Table 13 compares soil analytical results against relevant EIL's. Concentrations which exceeded laboratory LOR are reported in the table, EIL exceedances are highlighted with a coloured cell. Zinc exceeded commercial/industrial guidelines by 1-2x in BH01 0.50.

Table 13 Soil Analytical Results Compared Against Ecological Investigation Levels commercial/industrial land use.

NEPM Ecological Investigation Levels for Soil						Copper (CEC)	Copper (pH)	Nickel	Zinc	Chromium III	Lead	Arsenic	Naphthalene
Bold - Indicates LOR Exceedances													
X - Indicates Sample 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)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH01 0.50	21/10/21	COM/IND	35	6 (3)	F	55	55	13	243	14	201	<5	<1
BH01 1.50	21/10/21	COM/IND	35	6 (3)	F	18	18	13	21	16	8	<5	<1
BH02 0.50	21/10/21	COM/IND	35	6 (3)	F	81	81	16	655	21	406	6	<1
BH02 1.50	21/10/21	COM/IND	35	6 (3)	F	23	23	14	22	14	9	<5	<1
BH03 0.50	21/10/21	COM/IND	35	6 (3)	F	42	42	16	43	24	37	<5	<1
BH03 1.50	21/10/21	COM/IND	35	6 (3)	F	39	39	22	22	14	6	<5	<1
BH04 0.50	21/10/21	COM/IND	35	6 (3)	F	22	22	12	14	20	12	<5	<1
BH04 1.50	21/10/21	COM/IND	35	6 (3)	F	31	31	13	17	16	6	<5	<1
BH04 2.50	21/10/21	COM/IND	35	6 (3)	F	15	15	16	29	13	5	<5	<1
BH05 0.50	21/10/21	COM/IND	45	6 (3)	F	36	36	18	20	28	16	<5	<1
BH05 1.50	21/10/21	COM/IND	45	6 (3)	F	23	23	13	18	14	<5	<5	<1
BH05 2.20	21/10/21	COM/IND	35	6 (3)	F	33	33	17	30	10	5	<5	<1
BH06 0.50	21/10/21	COM/IND	45	6 (3)	F	34	34	18	21	30	13	<5	<1
BH06 1.50	21/10/21	COM/IND	45	6 (3)	F	30	30	17	23	27	10	<5	<1
BH07 0.50	21/10/21	COM/IND	45	6 (3)	F	33	33	17	24	29	13	<5	<1
BH07 1.50	21/10/21	COM/IND	45	6 (3)	F	28	28	16	17	14	5	<5	<1

pH Designation:

- (1) Using 0.01M CaCl₂ extract. Rayment, G.E. and Lyons, D.J. (2011). "Soil Chemical Methods – Australasia". 495+20 pp. CSIRO Publishing, Melbourne.
- (2) pH_F (1:5). Adjusted by subtracting 0.75 with +/- 0.25 error to calibrate to the CaCl₂ method (per comm. ALS Brisbane Acid Sulphate Soils Laboratory). Methods in accordance with Ahern, C.R., Stone Y., and Blunden B. (1998b). 'Acid Sulfate Soils Assessment Guidelines'. Acid Sulfate Soils Management Advisory Committee, Wollongbar, NSW, Australia.
- (3) Classified in accordance with parent material typical soil pH as per the Tasmanian soils database

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8 SOIL HUMAN HEALTH DIRECT CONTACT ASSESSMENT

8.1 Guidelines

Guidelines presented are based on potential exposure of human receptors to soil impact which may include:

- Trench workers repairing or building services (typically to 1 m bgs). This classification is not dependent on the land use class.
- Onsite workers which may be exposed to potential shallow soil impact during development of the site; and
- Onsite future residents having access to landscaped communal space on the site.

8.1.1 Land Use Classification

The NEPM ASC (2013) guidelines have been referenced to ensure that the correct land use and density category has been adopted for the site and the surrounding properties (where applicable). As per NEPM ASC 2013 guidelines, the adopted land use class is dependent on the building density and the opportunity for soil access by site occupants (exposure to potentially impacted soil). Aspects needing to be considered include:

- Whether the site is of sensitive land use such as a childcare centre, preschool, primary school or aged care facility in which case land use Class A is applicable;
- The percentage of paved area to determine direct contact exposure risk and therefore classification as low or high density; and
- Classification based on residential, recreational or commercial/industrial setting.

8.1.2 Adopted Land Use Classification

The adopted land use class is presented in Table 14. Land use class is based on the opportunity for soil access as per NEPM ASC 2013 guidelines. Soil contact is anticipated during the construction stage of the proposed project, with negligible opportunity for soil contact post-construction phase given residential properties are above a basement carpark, noting an exception being small areas of landscaped ground along the north western edge of the property which we have assessed as equivalent to open public space.

Table 14 Summary of Land Use Setting and Density for Determining Exposure Risk

Soil Bores	Construction Phase	Location	Land Use	Pathway	Land Use Class
All soil	During	Site	Construction worker and trench workers	ALL	D and trench worker specific
		Offsite	Commercial/ Industrial workers	DI	D
	Post	Site	Future maintenance workers including trench workers	ALL	D and trench worker specific
		Site	Future public space users	ALL	C
		Site	Residential site users above carpark basement	ALL	D

DC – Dermal Contact - Trench Worker Guidelines (CRC CARE 2013); DI – Dust Inhalation - HIL Guidelines (NEPM ASC 2013); SI – Soil Ingestion - HIL Guidelines (NEPM ASC 2013) or ALL – All of above

8.1.3 Health Investigation & Screening Levels

The main exposure pathways and methods for assessing health risk from contaminated soils are presented in Table 15.

Table 15 Summary of Exposure Pathways and Preliminary (Tier 1) Methods for Assessing Human Exposure Risk

Exposure Scenario	Contaminant Type	Tier 1 Assessment Method	Reference
Vapour Inhalation – Indoor (PVI)	Petroleum Hydrocarbons	HSL 's (addressed in PVI sections)	NEPM ASC (2013)
Vapour Inhalation – Trench (PVI)		HSL 's	CRC CARE (Friebel & Nadebaum, 2011)
Dermal Contact			
Dust Inhalation	Metals PAH's Chlorinated Solvents	Health Investigation Levels (HIL 's)	NEPM ASC (2013)
Soil Ingestion			

PVI – Petroleum Vapour Intrusion

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8.2 Findings

8.2.1 Dermal Contact - Petroleum Hydrocarbons

Laboratory analytical results are presented in Appendix 7. Table 16 presents soil hydrocarbon analytical results compared against CRC CARE (Friebel & Nadebaum, 2011) HSL guidelines for assessing dermal contact risk. Concentrations which exceeded laboratory LOR are highlighted in bold, HSL exceedances would be highlighted with a coloured cell indicating the highest HSL land used class which is exceeded.

There were no hydrocarbon guideline exceedances for dermal contact. No dermal contact risk has been identified.

Table 16 Soil Analytical Results Compared Against CRC CARE (Friebel & Nadebaum, 2011) Guidelines for Dermal Contact

CRC CARE Health Screening Level		EP080: BTEXN					EP080/071: TRH			
		Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	C6 - C10 Fraction	>C10 - C16 Fraction	>C16 - C34 Fraction	>C34 - C40 Fraction
Dermal Contact Hazard from Soil Hydrocarbons'										
Units		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR		0.2	0.5	0.5	0.5	1	10	50	100	100
HSL 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									
21/10/2021	BH01 0.50	<0.2	<0.5	<0.5	<0.5	<1	<10	70	1440	240
21/10/2021	BH01 1.50	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
21/10/2021	BH02 0.50	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	480	100
21/10/2021	BH02 1.50	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
21/10/2021	BH03 0.50	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
21/10/2021	BH03 1.50	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
21/10/2021	BH04 0.50	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
21/10/2021	BH04 1.50	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
21/10/2021	BH04 2.50	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
21/10/2021	BH05 0.50	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
21/10/2021	BH05 1.50	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
21/10/2021	BH05 2.20	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
21/10/2021	BH06 0.50	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
21/10/2021	BH06 1.50	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
21/10/2021	BH07 0.50	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100
21/10/2021	BH07 1.50	<0.2	<0.5	<0.5	<0.5	<1	<10	<50	<100	<100

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8.2.2 Dust Inhalation & Soil Ingestion

Laboratory analytical results are presented in Appendix 7. Soil analytical results are compared against combined dust inhalation and soil ingestion risk is assessed through the application of NEPM ASC (2013) Health Investigation Levels (HILs) for exposure to soil contaminants are presented in Table 17. Concentrations which exceed laboratory LOR are highlight in bold (except for the metals), and HIL exceedances are highlighted with a coloured cell indicating the highest HIL land used class which is exceeded.

There were guideline exceedances for dust inhalation and soil ingestion for Benzo(a)pyrene in BH01 0.50 exceeding both Recreational HILs (open space area post-construction) and Commercial/Industrial HILs (site workers, construction phase).

There were guideline exceedances for dust inhalation and soil ingestion for Benzo(a)pyrene in BH02 0.50 exceeding Recreational HILs (open space area post-construction) but below Commercial/Industrial HILs (site workers, construction phase).

There were guideline exceedances for dust inhalation and soil ingestion for Total PAHs in BH01 0.50 exceeding Recreational HILs (open space area post-construction), but below Commercial/Industrial HILs (site workers, construction phase).

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Table 17 Soil Analytical Results Compared Against NEPM ASC (2013) Health Investigation Levels Guidelines

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	Benz[b]fluoranthene	Benz[k]fluoranthene	Benz[a]pyrene	Indeno[1,2,3-cd]pyrene	Dibenz[a,h]anthracene	Benz[ghi,perylene]	PAHs	Benz[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	mg/kg
LOR			1	50	1	2	2	5	5	5	2	5	5	2	5	5	5	0.1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
HIL A Low Density Residential	<input checked="" type="checkbox"/> HIL A			100		60	4500	20		100	6000	300	3800	400	200		7400	40																		300	3
HIL B Medium/High Density Resident	<input checked="" type="checkbox"/> HIL B			500		90	40000	150		600	30000	1200	14000	1200	1400		60000	120																		400	4
HIL C Recreational	<input checked="" type="checkbox"/> HIL C			300		90	20000	90		300	17000	600	19000	1200	700		30000	80																		300	3
HIL D Commercial/Industrial	<input checked="" type="checkbox"/> 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			730																		4000	40
Sample date: Sample ID																																					
21/10/2021 BH01 0.50			16.7	<5	140	<1	<50	<1	14	10	55	201	273	13	<5	46	243	0.2	1.0	7.8	1.6	8.3	79.6	15.9	74.6	73.9	30.4	28.6	17.2	17.7	27.4	14.1	4.4	16.1	419	40	
21/10/2021 BH01 1.50			17.5	<5	40	<1	<50	<1	16	11	18	8	71	13	<5	39	21	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
21/10/2021 BH02 0.50			17.1	6	270	<1	<50	<1	21	18	81	406	401	16	<5	79	655	0.4	<0.5	1.8	<0.5	1.2	13.6	3.6	18.0	19.4	9.2	9.4	5.9	7.7	9.0	4.7	1.5	5.4	110	13	
21/10/2021 BH02 1.50			18.6	<5	70	<1	<50	<1	14	18	23	9	268	14	<5	52	22	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
21/10/2021 BH03 0.50			24.6	<5	120	<1	<50	<1	24	12	42	37	296	16	<5	88	43	0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
21/10/2021 BH03 1.50			16.3	<5	20	<1	<50	<1	14	19	39	6	177	22	<5	143	22	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
21/10/2021 BH04 0.50			21.3	<5	110	<1	<50	<1	20	7	22	12	79	12	<5	66	14	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
21/10/2021 BH04 1.50			20.6	<5	60	<1	<50	<1	16	12	31	6	115	13	<5	55	17	<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	
21/10/2021 BH04 2.50			13.2	<5	20	<1	<50	<1	13	10	15	5	102	16	<5	25	29	<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	
21/10/2021 BH05 0.50			30.6	<5	140	1	<50	<1	28	19	36	16	567	18	<5	103	20	<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	
21/10/2021 BH05 1.50			18.3	<5	20	<1	<50	<1	14	10	23	<5	93	13	<5	41	18	<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	
21/10/2021 BH05 2.20			16.5	<5	50	<1	<50	<1	10	14	33	5	272	17	<5	81	30	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
21/10/2021 BH06 0.50			31.5	<5	160	1	<50	<1	30	12	34	13	173	18	<5	94	21	<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	
21/10/2021 BH06 1.50			30.4	<5	70	<1	<50	<1	27	9	30	10	142	17	<5	69	23	<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	
21/10/2021 BH07 0.50			25	<5	120	1	<50	<1	29	10	33	13	95	17	<5	98	24	<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	
21/10/2021 BH07 1.50			17.1	<5	20	<1	<50	<1	14	12	28	5	62	16	<5	71	17	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	

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9 INDOOR INHABITANT PVI ASSESSMENT – HSL's

This PVI assessment has been conducted in accordance with relevant CRC CARE Technical Documentation and NEPM ASC 2013 guidelines presented in references section of this report. The HSL assessment approach is generally the first (Tier 1) investigation phase adopted for assessing PVI risk at petroleum hydrocarbon (PHC) impacted sites. HSL guidelines have been applied for samples collected from the site to account for risks that may be associated with volatile hydrocarbon vapour intrusion into confined spaces where there may be an inhalation risk through longer term exposure. This does not constitute a full vapour risk assessment but provides additional information from which to further quantify any risk.

A detailed investigation (Tier 2 to 3) is recommended over an HSL assessment where an acute risk has been identified at the site (CRC CARE 2013) because of:

- Migrating product on surface soils beneath buildings;
- Strong PHC odours;
- Flammable risk in confined spaces; and/or
- Health complaints from occupants.

Based on the site visits, none of the above conditions have been identified at the site. If the outcome of this Tier 1 assessment reveals HSL exceedances for hydrocarbon vapour intrusion, a more detailed (Tier 2) assessment will be required to further evaluate the human health risk.

PVI risk is initially interpreted through the development of HSL threshold limits from the following classifications:

- The geology and or hydrogeology of the investigation point; and
- Land use sensitivity;

The resulting HSL threshold limits are compared with laboratory analytical results.

9.1 Selected Media for Assessing PVI Risk

Table 18 presents a summary of the preferred HSL approach to assessing PVI risk. In this case, all soil investigated was within the excavation zone and within the water table.

Table 18 Preferred Methods for Determining Site PVI Risk

Media Analysed	Method	Limitations	Order of Preference
Soil Gas	Concentrations of a soil gas through a soil vapor probe	This approach provides the most reliable data in interpreting PVI risk, although direct modelling should be applied if concentrations exceed HSL threshold limits.	Primary
Groundwater	Concentrations of PHC in groundwater through deployment of monitoring wells	More robust and reliable than soil in determining onsite and in particular, offsite risks. Determining PVI risk based on groundwater is inherently conservative when interpreting vapour risk to account for not readily discernible preferential pathways. Reference may be drawn to alternative assessment approaches: <ol style="list-style-type: none"> 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 placed on utilizing groundwater analysis over soil. Soil results provide localised information.	Tertiary

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9.2 Land Use Class

For surrounding properties, the potential PVI risk is characterized through application of CRC CARE HSL's for each individual property based on their existing land use (NEPM 2013; Friebe & Nadebaum 2010). The CRC CARE guidelines have been referenced to ensure that the correct land use and density category has been adopted for surrounding land use to ensure health risks are consistent with the HSL models. Aspects considered include the:

- Sensitivity of the existing or potential land use;
- Percentage of paved area for defining potential vapour migration risk;
- Type of basement garage which may influence the confinement of PHC vapors;
- Presence of a slab or cavity for discerning vapour intrusion risk.

If hydrocarbon impacted soil is discerned at the site, consideration is given to downgradient receptors. Where applicable, land use class therefore considers:

- Downgradient receptors where onsite HSL exceedances have been identified in soil; and
- Variations in land use for different parts of the proposed development.

The following land use classes are applied:

- *HSL D for commercial spaces, and residential dwellings above basement car parks* – All test holes

9.3 Soil Assessment

Laboratory analytical results are presented in Appendix 7. Table 19 presents the results against a potential indoor vapour risk. Concentrations which exceeded laboratory LOR are highlighted in bold. HSL exceedances would be highlighted with a coloured cell.

There was no indoor vapour risk identified.

Table 19 Soil Analytical Results Compared Against HSL D for Indoor Vapour Risk

Soil Hydrocarbon HSL's for Assessing Indoor Vapour Intrusion (NEPM 2013) Soil Sample Analysis					EP080: BTEXN					EP080/071: TRH	
Bold - Indicates LOR Exceedances					Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	F1	F2
Colour Shading - Indicates HSL Exceedances: >1 x, * 2-5 x, ** 5-20 x, *** 20-50 x, **** >50 x											
Sample ID	Sample Date	Depth Class	Grain Class	HSL	mg/kg LOR 0.2	mg/kg LOR 0.5	mg/kg LOR 0.5	mg/kg LOR 0.5	mg/kg LOR 1	mg/kg LOR 10	mg/kg LOR 50
BH01 0.50	21/10/2021	0 - 1	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	70
BH01 1.50	21/10/2021	1 - 2	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH02 0.50	21/10/2021	0 - 1	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH02 1.50	21/10/2021	1 - 2	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH03 0.50	21/10/2021	0 - 1	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH03 1.50	21/10/2021	1 - 2	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH04 0.50	21/10/2021	0 - 1	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH04 1.50	21/10/2021	1 - 2	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH04 2.50	21/10/2021	2 - 4	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH05 0.50	21/10/2021	0 - 1	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH05 1.50	21/10/2021	1 - 2	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH05 2.20	21/10/2021	2 - 4	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH06 0.50	21/10/2021	0 - 1	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH06 1.50	21/10/2021	1 - 2	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH07 0.50	21/10/2021	0 - 1	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH07 1.50	21/10/2021	1 - 2	CLAY	D	<0.2	<0.5	<0.5	<0.5	<1	<10	<50

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10 TRENCH WORKER PVI ASSESSMENT – HSL's

10.1 Classification

The following Health Screening Assessment is based on hydrocarbon vapour intrusion risk to subsurface excavation workers within excavations. This is assessed through analysis of vapours from soil and soil vapours. Groundwater is generally not used to assess risk as threshold limits for all depth and grain classes are non-limiting. Land use classes are not applicable when assessing vapour intrusion into trenches.

Soil and soil vapour HSL's for assessing hydrocarbon risk to maintenance workers are based on CRC CARE Technical Report 10 guidelines (Friebel & Nadebaum 2011) and the following variables:

- Dominant grain size class of material at the soil sample depth or based on the dominant grain class of the backfill material based on US Agriculture Soil Classification System (SCS) and partitioning into either sand, silt or clay; and
- Classifying soil according to depth ranges: 0 to 2 m; 2 to 4 m; 4 to 8 m; and greater than 8 m;

10.2 Findings

Laboratory analytical results are presented in Appendix 7. Summary of Soil Analytical Results Compared against HSL's for Assessing PVI Risk to Trench Workers are presented in Table 20. Concentrations that exceeded laboratory LOR are highlighted in bold, and if there were any HSL exceedances they would be highlighted with a coloured cell. There were no exceedances of the CRC CARE HSL guidelines for Assessing PVI Risk to Trench Workers and no risk identified.

Table 20 Summary of Soil Analytical Results Compared against HSL's for Assessing PVI Risk to Trench Workers

CRC CARE Health Screening Level Assessment for PHC Inhalation Risk To Trench Workers From Soil Sample Analysis				EPO80: BTEXN					EPO80/071: TRH	
Bold - Indicates LOR Exceedances				Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	C6 - C10 Fraction	>C10 - C16 Fraction
Dark Grey Shading - Indicates HSL Exceedances: >1 x, * 2-5 x, ** 5-20 x, *** 20-50 x, **** >50 x										
Sample ID	Sample Date	Depth Class	Grain Class	mg/kg LOR 0.2	mg/kg LOR 0.5	mg/kg LOR 0.5	mg/kg LOR 0.5	mg/kg LOR 1	mg/kg LOR 10	mg/kg LOR 50
BH01 0.50	21/10/2021	0 to 2m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	70
BH01 1.50	21/10/2021	0 to 2m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH02 0.50	21/10/2021	0 to 2m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH02 1.50	21/10/2021	0 to 2m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH03 0.50	21/10/2021	0 to 2m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH03 1.50	21/10/2021	0 to 2m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH04 0.50	21/10/2021	0 to 2m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH04 1.50	21/10/2021	0 to 2m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH04 2.50	21/10/2021	2 to 4m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH05 0.50	21/10/2021	0 to 2m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH05 1.50	21/10/2021	0 to 2m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH05 2.20	21/10/2021	2 to 4m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH06 0.50	21/10/2021	0 to 2m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH06 1.50	21/10/2021	0 to 2m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH07 0.50	21/10/2021	0 to 2m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50
BH07 1.50	21/10/2021	0 to 2m	CLAY	<0.2	<0.5	<0.5	<0.5	<1	<10	<50

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11 SOIL DISPOSAL ASSESSMENT

11.1 Guidelines

Soil which is excavated from the site for landfill disposal is to be assessed against Information Bulletin 105 (IB105) for Classification and Management of Contaminated Soil for Disposal. The EPA uses four categories to classify contaminated soil as per Table 21:

- (Level 1) Fill Material;
- (Level 2) Low Level Contaminated Soil;
- (Level 3) Contaminated Soil; and
- (Level 4) Contaminated Soil for Remediation.

Fixed numerical values are presented for soil concentrations and leachable fraction concentrations.

Table 21 Summary of IB105 Classification Guidelines

	Classification (with reference to Table 2)	Controlled Waste ¹	Comments
Fill Material² (Level 1)	Soil that exhibits levels of contaminants below the limits defined under <i>Fill Material</i> in Table 2.	Unlikely	Soil classified as <i>Fill Material</i> can still be a 'pollutant' under the <i>Environmental Management and Pollution Control Act 1994</i> and needs to be responsibly managed.
Low Level Contaminated Soil (Level 2)	Soil that exhibits levels of contaminants above the limits defined under <i>Fill Material</i> but below the limits defined under <i>Low Level Contaminated Soil</i> in Table 2.	Likely	Where leachable concentrations have not been prescribed, maximum total concentrations will be used to classify the soil.
Contaminated Soil (Level 3)	Soil that exhibits levels of contaminants above the limits defined under <i>Low Level Contaminated Soil</i> but below the limits defined under <i>Contaminated Soil</i> in Table 2.	Yes	Where leachable concentrations have not been prescribed, maximum total concentrations will be used to classify the soil.
Contaminated Soil for Remediation (Level 4)	Soil that exhibits levels of contaminants above the limits defined under <i>Contaminated Soil</i> in Table 2 (regardless of the maximum total concentrations) is generally not considered acceptable for off-site disposal without prior treatment.	Yes	Soil that contains contaminants that do not have criteria for leachable concentrations (e.g. petroleum hydrocarbons), and the levels of contaminants exceed the maximum total concentrations listed in <i>Contaminated Soil</i> , are generally classified as <i>Contaminated Soil for Remediation</i> .

¹ Controlled Waste is defined in the *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 22. The following conclusions can be made:

- The soil tested from sample BH01 0.50 is equivalent to Level 4 Material (Contaminated Soil for Remediation) due to Benzo(a)pyrene and Sum of PAH's.
- The soil tested from sample BH02 0.50 is equivalent to Level 3 Material (Contaminated Soil) due to Benzo(a)pyrene and Sum of PAH's.
- The soil is equivalent to Level 2 (Low Level Contaminated Soil) in BH05 0.50 due to Manganese.
- The remaining 13 samples are equivalent to Level 1 (Clean Fill).

PAH's, and in particular Benzo(a)pyrene is often found in a less mobile form, and we would recommend leachate testing on further site investigations, as this could reduce the volume of material classified as Level 3 and Level 4 Material, and as a result reduce the costs of soil disposal.

Metals (Lead, Manganese and Zinc) are noted to be in higher concentrations in the upper horizons associated with fill, and not in the underlying clay soil, we consider that after hydrocarbon contamination has been dealt with, the remaining soil could be classified as Level 2 for overlying fill material, and Level 1 for underlying clayey natural soil.

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Table 22 Soil Analytical Results Compared Against IB105 Investigation Limits for soil Disposal

Information Bulletin 105 Classification and Management of Contaminated Soil For Disposal		Arsenic	Barium	Beryllium	Cadmium	Chromium Total	Copper	Cobalt	Lead	Manganese	Mercury	Nickel	Selenium	Zinc	Benzo(a)pyrene	C6 - C9 Fraction	C10 - C36 Fraction (sum)	Sum of polycyclic aromatic hydrocarbons	Benzene	Toluene	Ethylbenzene	Total Xylenes
Unit		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR		50	1	2	5	5	2	5	5	5	0.1	2	5	5	0.5	10	50	0.5	0.2	0.5	0.5	0.5
Investigation Level Selected																						
IB105 Level 1		<20	<300	<2	<3	<50	<100	<100	<300	<500	<1	<60	<10	<200	<0.08	<65	<1000	<20	<1	<1	<3	<14
IB105 Level 2		20	300	2	3	50	100	100	300	500	1	60	10	200	0.08	65	1000	20	1	1	3	14
IB105 Level 3		200	3000	40	40	500	2000	200	1200	5000	30	600	50	14000	2	650	5000	40	5	100	100	180
IB105 Level 4		750	30000	400	400	5000	7500	1000	3000	25000	110	3000	200	50000	20	1000	10000	200	50	1000	1080	1800
21/10/2021	BH01 0.50	<5	140	<1	<1	14	55	10	201	273	0.2	13	<5	243	27.4	<10	1630	419	<0.2	<0.5	<0.5	<0.5
21/10/2021	BH01 1.50	<5	40	<1	<1	16	18	11	8	71	<0.1	13	<5	21	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
21/10/2021	BH02 0.50	6	270	<1	2	21	81	18	406	401	0.4	16	<5	655	9	<10	520	110	<0.2	<0.5	<0.5	<0.5
21/10/2021	BH02 1.50	<5	70	<1	<1	14	23	18	9	268	<0.1	14	<5	22	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
21/10/2021	BH03 0.50	<5	120	<1	<1	24	42	12	37	296	0.3	16	<5	43	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
21/10/2021	BH03 1.50	<5	20	<1	<1	14	39	19	6	177	<0.1	22	<5	22	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
21/10/2021	BH04 0.50	<5	110	<1	<1	20	22	7	12	79	<0.1	12	<5	14	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
21/10/2021	BH04 1.50	<5	60	<1	<1	16	31	12	6	115	<0.1	13	<5	17	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
21/10/2021	BH04 2.50	<5	20	<1	<1	13	15	10	5	102	<0.1	16	<5	29	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
21/10/2021	BH05 0.50	<5	140	1	<1	28	36	19	16	567	<0.1	18	<5	20	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
21/10/2021	BH05 1.50	<5	20	<1	<1	14	23	10	<5	93	<0.1	13	<5	18	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
21/10/2021	BH05 2.20	<5	50	<1	<1	10	33	14	5	272	<0.1	17	<5	30	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
21/10/2021	BH06 0.50	<5	160	1	<1	30	34	12	13	173	<0.1	18	<5	21	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
21/10/2021	BH06 1.50	<5	70	<1	<1	27	30	9	10	142	<0.1	17	<5	23	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
21/10/2021	BH07 0.50	<5	120	1	<1	29	33	10	13	95	<0.1	17	<5	24	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5
21/10/2021	BH07 1.50	<5	20	<1	<1	14	28	12	5	62	<0.1	16	<5	17	<0.5	<10	<50	<0.5	<0.2	<0.5	<0.5	<0.5

Environmental Site Assessment: 175-179 Campbell Street, Hobart, Tasmania. November 2021

12 CONCEPTUAL SITE MODEL

12.1 Potential Contaminants

The Site has been used for residential properties for >50 years, and is within an area that has a long history of commercial and light industrial activities.

There is potential for contamination from off-site sources given the Site is within a long term commercial and light industrial area. The adjacent site at 181-189 Campbell Street had underground fuel storage systems decommissioned in 1999 (Hobart City Council Records).

Other potential contaminants include, the use of the site for car parking (with fuel or oil drips/leaks possible), and the presence of fill on the site of undetermined origins.

The potential contaminants include; Total Petroleum/Recoverable Hydrocarbons (TPH/TRH), Mono Aromatic hydrocarbons: Benzene, Toluene, Ethylbenzene, Xylene, Naphthalene (BTEXN), Polynuclear Aromatic Hydrocarbons (PAHs), and a suite of 15 Metals.

Figure 10 illustrates potential risks that may be associated with potential site contamination. Potential pathways have been identified and ruled out in the Conceptual Site Model.

12.2 Potential Human Receptors

The proposed development is to construct units over an underground car park basement.

As a result there are limited areas where future residential site users may be in contact with potentially contaminated soil, with this area being limited to the easement area along the north western part of the site, and a communal courtyard. For the sake of potential human receptors, we will treat these areas as communal open space for future residents.

Potential human receptors also includes onsite construction workers during future potential site redevelopment and future trench workers (commercial land users / trench worker specific).

12.3 Potential Ecological Receptors

The closest ecological receptor is the River Derwent at Sullivans Cove which is approximately 1 km to the south east of the site, and Hobart Rivulet is 770m to the south east of the site. Hobart Rivulet is contained within a culvert, and discharges into the River Derwent approximately 1.2km to the East of the Site.

12.4 Identified Receptors

12.4.1 Identified Human Receptors

NEPM ASC (2013) human Health Investigation Limits were exceeded for soil ingestions and dust inhalation for Benzo(a)pyrene at BH01 0.50 at commercial/industrial land use (applies to construction workers), and at BH02 0.50 at recreational/open space land use. The investigation area is currently used for car parking. Consequently human health risks are considered plausible future, for the future potential construction phase, and then for any potential soil contact for future residential site users.

12.4.2 Identified Ecological Receptors

Two of the sixteen primary samples exceeded NEPM ASC (2013) Ecological Screening Levels for Benzo(a)pyrene at commercial/industrial investigation limits. Zinc exceeded NEPM ASC (2013) Ecological Investigation Levels in one sample at commercial/industrial investigation limits. The Benzo(a)pyrene and Zinc concentration appear elevated only in samples across the north western part of the site (BH01-03) and only at the 0.50m depth, which is reflective of the overlying fill material, and not the underlying clay soil material. Soil movement including erosion has a potential present risk to ecological receptors.

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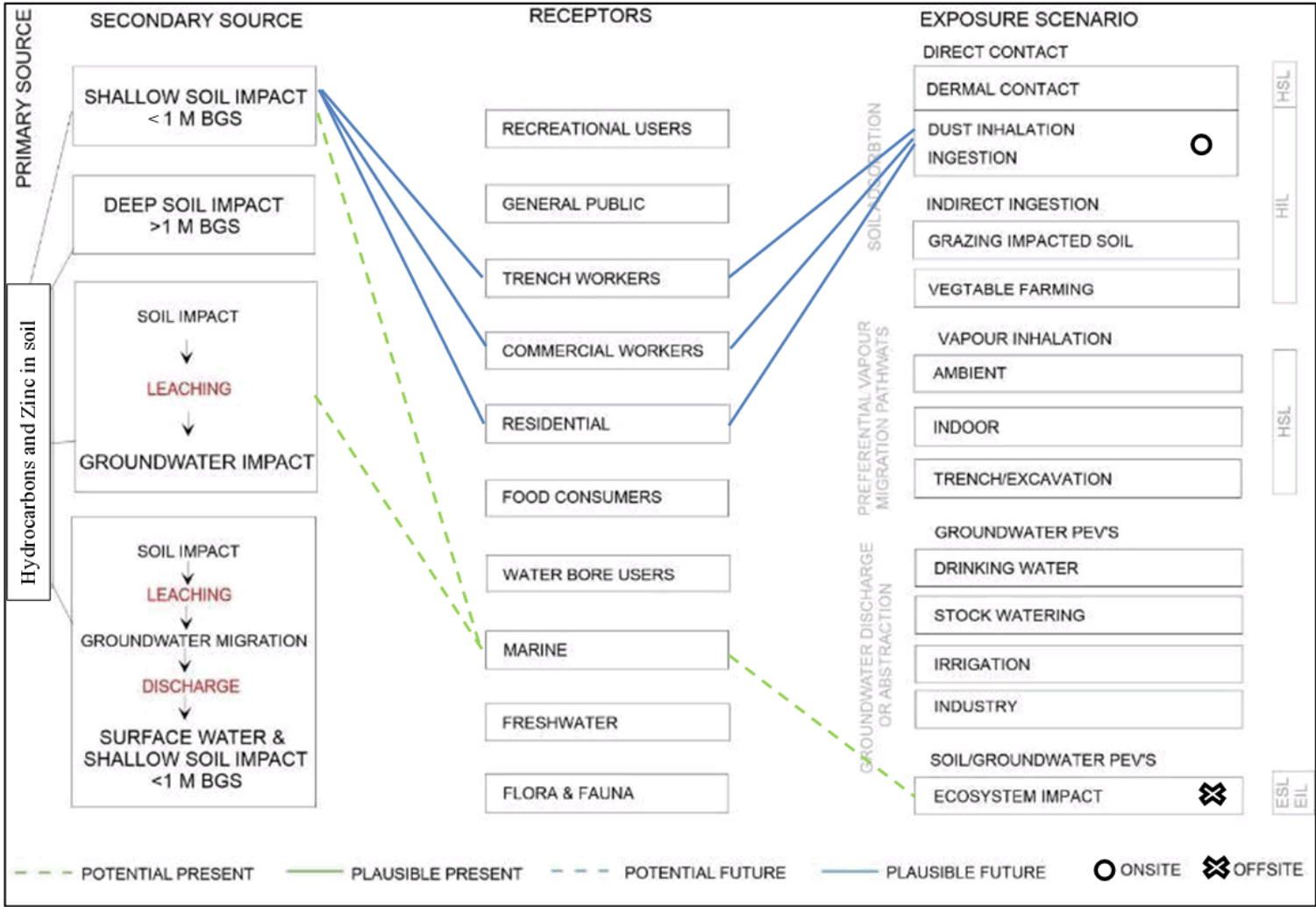


Figure 10 Conceptual Site Mode

Environmental Site Assessment: 175-179 Campbell Street, Hobart, Tasmania. November 2021

13 CONCLUSIONS & RECOMMENDATIONS

13.1 Desktop Assessment

The following information was gathered during the desktop investigation:

- The site is zoned *Urban Mixed Use* under the Hobart City Councils Interim Planning Scheme of 2015.
- The geology of the site is Quaternary alluvial deposits. Groundwater is inferred to travel south east along similar trajectory to the Brooker Highway towards the River Derwent. Surface water may be collected in stormwater culverts and discharged into Hobart Rivulet to the south east, or may infiltrate nearby unsealed areas to infiltrate into groundwater.
- A review of available information including historical aerial photographs suggests that it has been mostly residential land for 50+ years, with the buildings on site being converted to office use in more recent years.
- A review of available information including HCC, Worksafe Tasmania and EPA records, indicates that there are no records of potentially contaminating activities occurring on the site, or dangerous goods being stored on the site.
- The site is adjacent to a commercial warehouse and supermarket (formerly a commercial site with fuel storage) and as such there is potential for the presence of contaminants in the local area (HCC records).
- Contaminants Of Potential Concern (COPC) include the following: TPH/TRH; Mono Aromatic hydrocarbons: (BTEXN); PAH; and metals.

13.2 Adopted Guideline Settings

The following investigation limits were adopted for the site:

- Ecosystem receptor
 - Discharge to Hobart Rivulet and River Derwent – Urban ESL and EILs
- Human Receptor
 - HIL C/HIL D for soil direct contact risk to future open space site users that may have access to soil / Future construction workers
 - HIL C / HIL D for soil ingestion and dust inhalation risk to future open space site users in contact with soil / Future construction workers soil direct contact risk
 - HSL C / HSL D vapour risk to site users open space/ future potential trench workers

Environmental Site Assessment: 175-179 Campbell Street, Hobart, Tasmania. November 2021

13.3 Soil Assessment

From the soil assessment, it is concluded that:

- **Environment:** For commercial/industrial investigation limits, Zinc was detected above NEPM ASC 2013 EIL guideline limits in one sample; BH02 0.50. Benzo(a)pyrene exceeded NEPM ASC 2013 ESL guideline limits in two samples; BH01 0.50 and BH02 0.50. Zinc and hydrocarbons were at elevated levels in the two samples mentioned, which corresponds with overlying fill material, and not the underlying clay soil. For any disturbance to the soil planned on the site, a Soil and Water Management Plan (SWMP) should be put in place to account for the management and erosion of soil with ecological impacts.
- **Human Health:** There were no human health guideline exceedances at HSL C or HSL D for dermal contact. For NEPM ASC 2013 guidelines for dust inhalation and soil ingestion; for sample BH01 0.50, PAHs exceeded HIL C Class (recreation) investigation limits and Benzo(a)pyrene exceeded both HIL C Class and HIL D Class (commercial/industrial), and for sample BH02 0.50, Benzo(a)pyrene exceeded HIL C Class. A Contamination Management Plan (CMP) will be required to account for the management of soil with human health impacts prior to any construction work on the site.
- **Vapour Risk** There were no indoor vapour risks or inhalation risk for trench workers or site users identified and therefore no risk to human receptors for vapour.
- **Excavated Soil Management:** In terms of IB105, of the sixteen samples; One sample (BH01 0.50) is considered Level 4 Material (Contaminated Soil) due to Benzo(a)pyrene and Sum of PAHs. One sample (BH02 0.50) is considered Level 3 Material (Contaminated Soil) due to Benzo(a)pyrene and Sum of PAHs. One sample (BH05 0.50) is considered Level 2 Material (Low Level Contaminated Soil) due to Manganese. The remaining thirteen samples can be considered Level 1 Material (Clean Fill). Elevated concentrations of metals (Lead, Zinc and Manganese) and hydrocarbons (Benzo(a)pyrene and total PAHs) were all observed in the overlying fill material at the site, and not in the underlying clayey natural soil profile.
- If the soil is to be disturbed, it must be handled in accordance with IB105 and disposed of in line with IB105 and Controlled Waste Guidelines. It is likely that soil excavation will occur on the site, and we recommend further testing to better delineate the areas of contamination, and we also recommend leachate testing of the PAH hydrocarbon fractions. The PAH fractions, and in particular Benzo(a)pyrene, are commonly found in less mobile forms, and as a result leachate testing may reduce the volume of soil requiring disposal as Level 3 and Level 4 material by reclassifying the material as Level 2 if found to be in less mobile forms.

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13.4 Conclusion Summary

GES recommends the following:

- There are human health guideline exceedances for dust inhalation and soil ingestion for Benzo(a)pyrene at HIL Class D (commercial/industrial) levels, which is applicable to construction workers at the site during development. There are human health guideline exceedances for dust inhalation and soil ingestion for Benzo(a)pyrene and Total PAHs at HIL Class C (recreational) levels, which is applicable areas of open space post-development. As a result of this, a Contamination Management Plan will be required prior to development at the site.
- Zinc was detected above EIL guideline limits in one sample, and Benzo(a)pyrene exceeded ESL guideline limits in two of the sixteen primary samples. A Soil and Water Management Plan (SWMP) will be required to account for the management and erosion of soil with ecological impacts.
- For any soil disturbance on site, disposal of soil off site must be in accordance with IB105 and the controlled waste regulations. Excavated soil will require disposal at a suitable waste facility and a permit to transport the waste (obtained through the EPA) will be required.
- Elevated levels of hydrocarbon and metals were observed in the overlying fill material, and not in the underlying clayey soil material. We recommend further analysis focussing on the areas of identified contamination, to better delineate contamination. We also recommend future analysis to include leachate testing, as PAHs are often in less mobile forms and may present a lower IB105 Level Classification as a leachable fraction results.
- Any imported fill will need to be verified as Clean Fill in line with IB105.

Statement of Suitability.

Based on the results of this Environmental Site Assessment, the excavation as part of the planned works will not adversely impact on human health or the environment subject to implementation of remediation and/or protection measures including:

A Contamination Management Plan that addresses risk of dust inhalation and ingestion of hydrocarbon contaminated soil to human receptors during the construction phase, and in areas where soil may be present as open space post construction phase.

A Soil and Water Management Plan that to accounts for the management and erosion of soil with ecological impacts during the construction phase.

Yours faithfully,



Mark Downie B.Agr.Sci
Soil Scientist

Environmental Site Assessment: 175-179 Campbell Street, Hobart, Tasmania. November 2021

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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 SolutionsWon Group Pty Ltd (the client). To the best of GES's knowledge, the information presented herein represents the Client's requirements at the time of printing of the Report. However, the passage of time, manifestation of latent conditions or impacts of future events may result in findings differing from that described in this Report. In preparing this Report, GES has relied upon data, surveys, analyses, designs, plans and other information provided by the Client and other individuals and organisations referenced herein. Except as otherwise stated in this Report, GES has not verified the accuracy or completeness of such data, surveys, analyses, designs, plans and other information.

The scope of this study does not allow for the review of every possible soil and groundwater contaminant over the whole area of the site. Samples collected from the investigation area are assumed to be representative of the areas from where they were collected and indicative of the contamination status of the site at that point in time. The conclusions described within this report are based on these samples, the results of their analysis and an assessment of their contamination status.

This report does not purport to provide legal advice. Readers of the report should engage professional legal practitioners for this purpose as required.

No responsibility is accepted for use of any part of this report in any other context or for any other purpose by third party.

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Appendix 1 GES Staff

Geo-Environmental Solutions (GES) is a specialist geotechnical and environmental consultancy providing advice on all aspects of soils, geology, hydrology, and soil and groundwater contamination across a diverse range of industries.

Geo Environmental Solutions Pty Ltd:

- ACN – 115 004 834
- ABN – 24 115 004 834

GES STAFF - ENGAGED IN SITE INVESTIGATION WORKS

Dr John Paul Cumming B.Agr.Sc (Hons) Phd CPSS GAICD

- Principle Author and Principle Environmental Consultant
- PhD in Environmental Soil Chemistry from the University of Tasmania in 2007
- 18 years' experience in environmental contamination assessment and site remediation.

Mr Mark Downie B.Agr.Sc

- Soil Scientist
- 8 Year experience in contamination assessment and reporting of soils and groundwater.

Mr Grant McDonald (Adv. cert. hort.)

- Soil Technician
- 10 years' experience in hydrocarbon and heavy metal contamination sampling of soils and groundwater.

GES STAFF – CONTAMINATED SITES EXPERIENCE

Dr Sam Rees B.Agr.Sc (Phd)

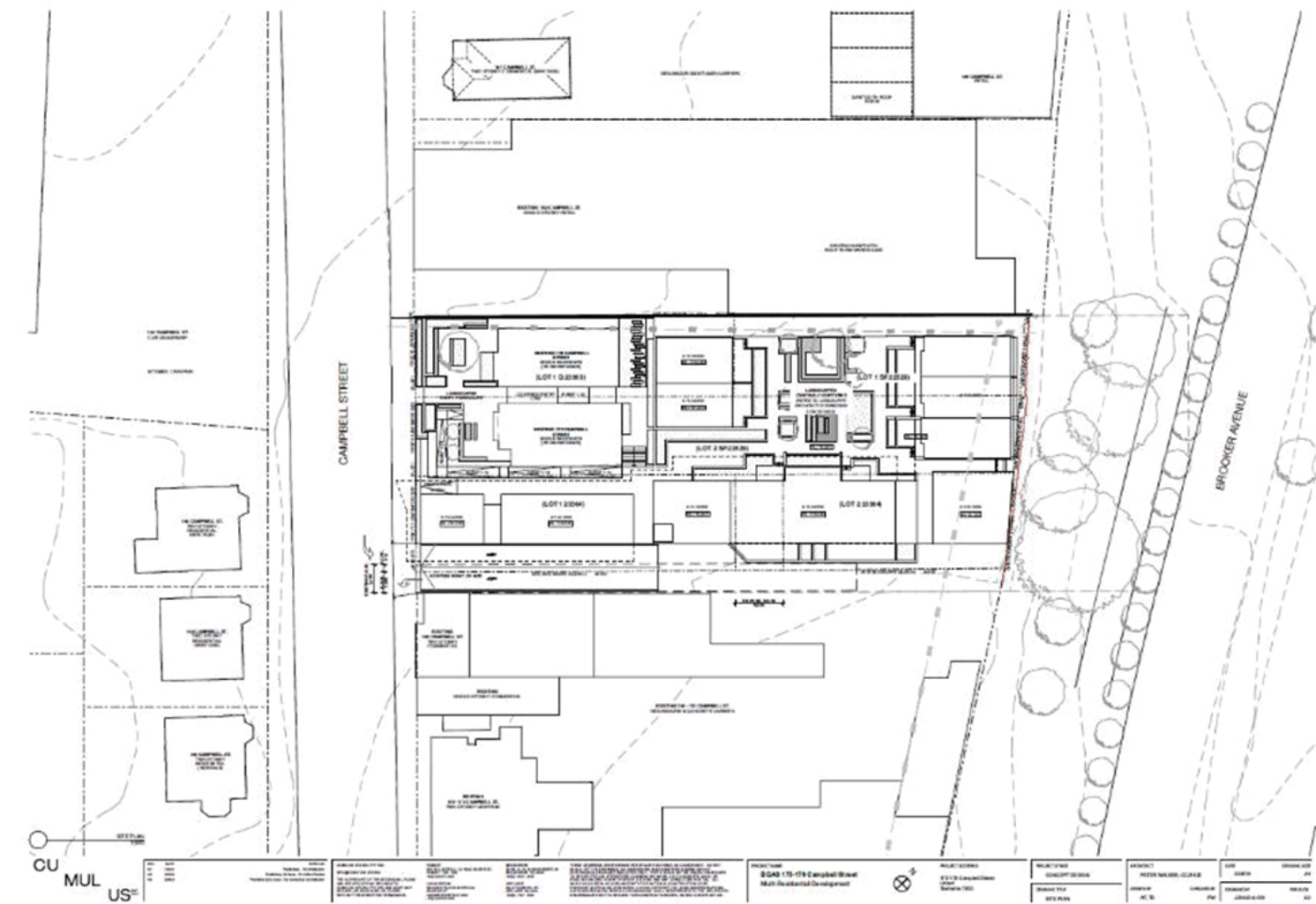
- Soil & Environmental Scientist
- 6 years' experience in hydrocarbon and heavy metal contamination assessment and reporting of soils and groundwater.

Mr Aaron Plummer (Cert. IV)

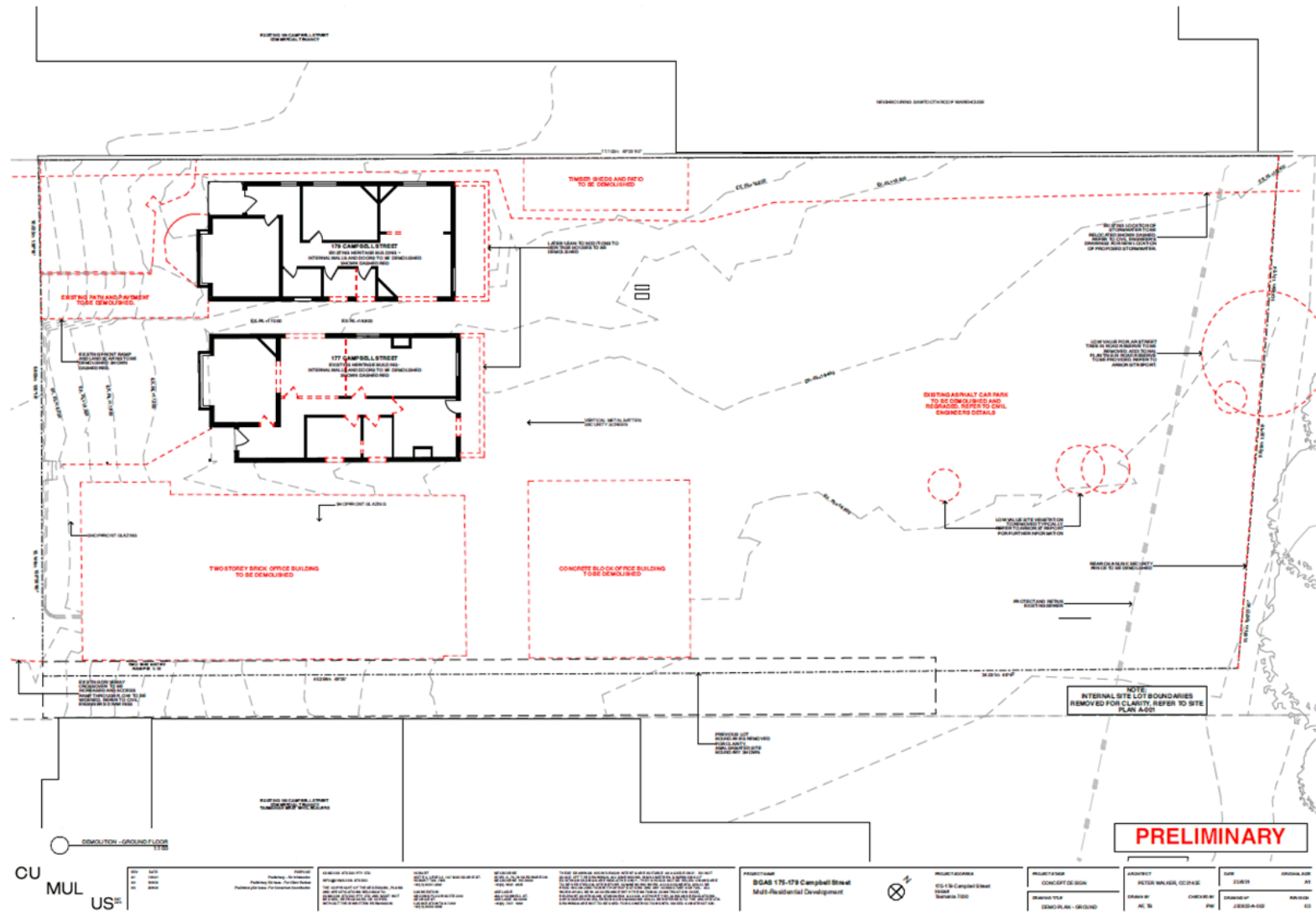
- Soil Technician
- 6 years' experience in hydrocarbon and heavy metal contamination sampling of soils and groundwater.

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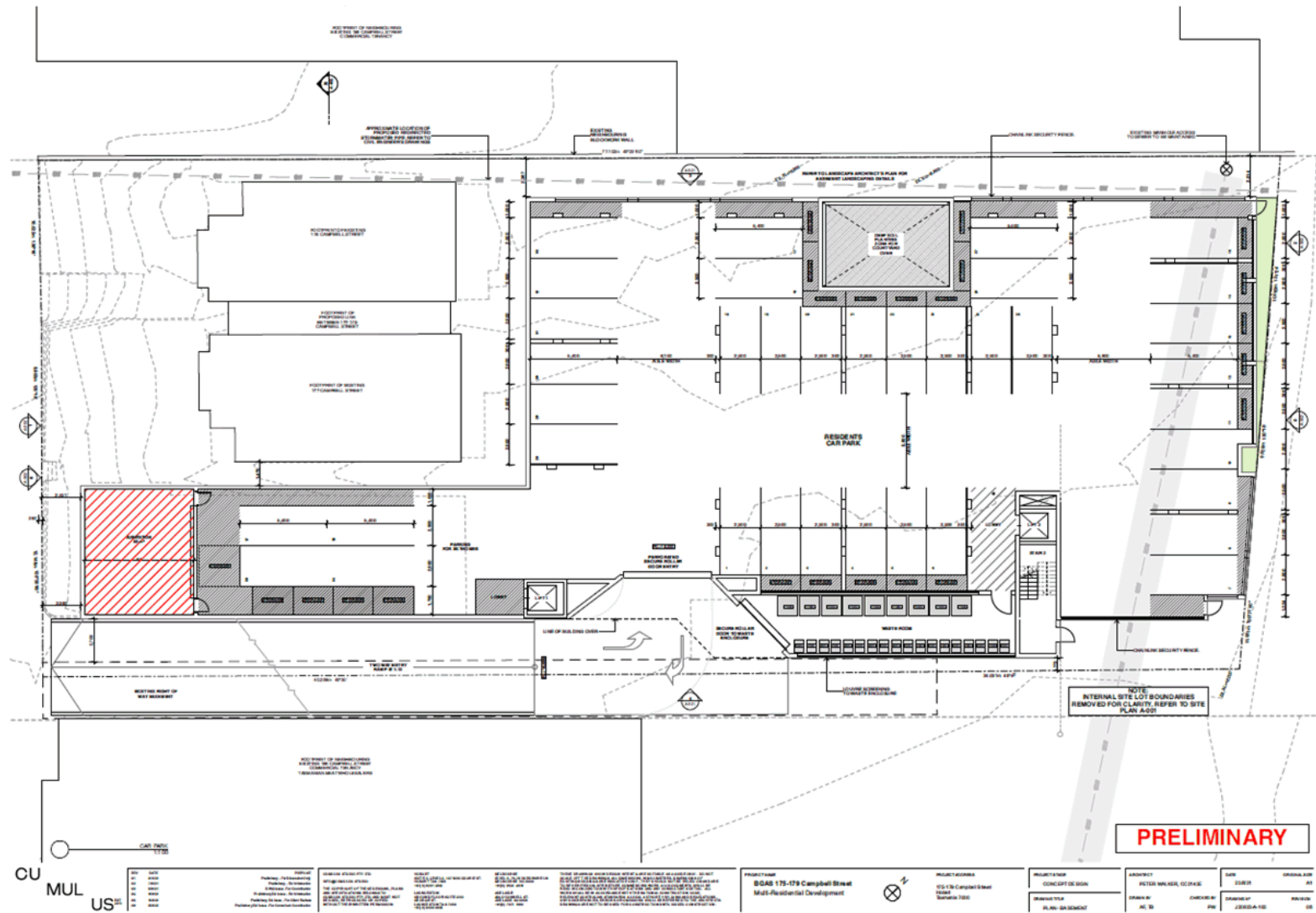
Appendix 2 Preliminary Plans (Cumulus Studio Architects)



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CU MUL US										PRELIMINARY													
NO.		DATE		DESCRIPTION		BY		CHECKED		DATE		NO.		DATE		DESCRIPTION		BY		CHECKED		DATE	
001		15/02/2023		Initial Design		J. Smith		M. Jones		15/02/2023		002		15/02/2023		Revised Design		J. Smith		M. Jones		15/02/2023	
002		15/02/2023		Revised Design		J. Smith		M. Jones		15/02/2023		003		15/02/2023		Final Design		J. Smith		M. Jones		15/02/2023	
003		15/02/2023		Final Design		J. Smith		M. Jones		15/02/2023		004		15/02/2023		Construction Documents		J. Smith		M. Jones		15/02/2023	
004		15/02/2023		Construction Documents		J. Smith		M. Jones		15/02/2023		005		15/02/2023		As-Built Drawings		J. Smith		M. Jones		15/02/2023	
005		15/02/2023		As-Built Drawings		J. Smith		M. Jones		15/02/2023		006		15/02/2023		Final Report		J. Smith		M. Jones		15/02/2023	

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Appendix 3 Site Photographs

June 2021 walkover:



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October 2021 site investigation:



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Appendix 3 Site Photographs

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Appendix 3 Site Photographs

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Appendix 3 Site Photographs

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Appendix 4 Historical Aerial Photographs



Plate 1 Historical Aerial Photograph – January 2020 (C/O Google Earth)



Plate 2 Historical Aerial Photograph – October 2003 (C/O Google Earth)

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Plate 3 Historical Aerial Photograph - 1989 (c/o DPIPWE)



Plate 4 Historical Aerial Photograph, 1977 (c/o DPIPWE)

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Plate 5 Historical Aerial Photograph, 1969 (c/o DPIPWE)


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Plate 6 Historical Aerial Photograph, 1958 (c/o DPIPWE)

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Appendix 5 Chain of Custody (COC) and Sample Receipt Notification (SRN)


ALS Environmental

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : EM2121267			
Client :	GEO-ENVIRONMENTAL SOLUTIONS	Laboratory :	Environmental Division Melbourne
Contact :	DR JOHN PAUL CUMMING	Contact :	Peter Ravlic
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 :	peter.ravlic@alsglobal.com
Telephone :	+61 03 6223 1839	Telephone :	+6138549 9645
Facsimile :	+61 03 6223 4539	Facsimile :	+61-3-8549 9626
Project :	Campbell	Page :	1 of 3
Order number :	---	Quote number :	EB2017GEOENVOL0001 (EN/222)
C-O-C number :	---	QC Level :	NEPM 2013 B3 & ALS QC Standard
Site :	---		
Sampler :	---		

Dates

Date Samples Received :	26-Oct-2021 11:10	Issue Date :	26-Oct-2021
Client Requested Due Date :	03-Nov-2021	Scheduled Reporting Date :	03-Nov-2021

Delivery Details

Mode of Delivery :	Carrier	Security Seal :	Intact
No. of coolers/boxes :	1	Temperature :	8.2°C - Ice Bricks present
Receipt Detail :		No. of samples received / analysed :	18 / 18

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliance
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- Please direct any queries related to sample condition / numbering / breakages to Client Services.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months) from receipt of samples.
- Analytical work for this work order will be conducted at ALS Springvale.
- Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

RIGHT SOLUTIONS | RIGHT PARTNER

Environmental Site Assessment: 175-179 Campbell Street, Hobart, Tasmania. November 2021

Issue Date : 26-Oct-2021
 Page : 2 of 3
 Work Order : EM2121267 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	Sampling date / time	Sample ID	SOIL - EM255-103 Moisture Content	SOIL - S-03 15 Metals (NEPM 2013 Suite - incl. Digestion)	SOIL - S-07 TRHBTENAPAH (SM)
EM2121267-001	21-Oct-2021 00:00	BH01 0.50	✓	✓	✓
EM2121267-002	21-Oct-2021 00:00	BH01 1.50	✓	✓	✓
EM2121267-003	21-Oct-2021 00:00	BH02 0.50	✓	✓	✓
EM2121267-004	21-Oct-2021 00:00	BH02 1.50	✓	✓	✓
EM2121267-005	21-Oct-2021 00:00	BH03 0.50	✓	✓	✓
EM2121267-006	21-Oct-2021 00:00	BH03 1.50	✓	✓	✓
EM2121267-007	21-Oct-2021 00:00	BH04 0.50	✓	✓	✓
EM2121267-008	21-Oct-2021 00:00	BH04 1.50	✓	✓	✓
EM2121267-009	21-Oct-2021 00:00	BH04 2.50	✓	✓	✓
EM2121267-010	21-Oct-2021 00:00	BH05 0.50	✓	✓	✓
EM2121267-011	21-Oct-2021 00:00	BH05 1.50	✓	✓	✓
EM2121267-012	21-Oct-2021 00:00	BH05 2.20	✓	✓	✓
EM2121267-013	21-Oct-2021 00:00	BH06 0.50	✓	✓	✓
EM2121267-014	21-Oct-2021 00:00	BH06 1.50	✓	✓	✓
EM2121267-015	21-Oct-2021 00:00	BH07 0.50	✓	✓	✓
EM2121267-016	21-Oct-2021 00:00	BH07 1.50	✓	✓	✓
EM2121267-017	21-Oct-2021 00:00	Duplicate	✓	✓	✓

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - W-03T 15 Metals (Total) (NEPM)	WATER - W-07 TRHBTENAPAH
EM2121267-018	21-Oct-2021 00:00	Rinsate	✓	✓

Proactive Holding Time Report

Environmental Site Assessment: 175-179 Campbell Street, Hobart, Tasmania. November 2021

Issue Date : 26-Oct-2021
Page : 3 of 3
Work Order : EM2121267 Amendment 0
Client : GEO-ENVIRONMENTAL SOLUTIONS



Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

JOHN PAUL CUMMING

- *AU Certificate of Analysis - NATA (COA)	Email	jcumming@geosolutions.net.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	jcumming@geosolutions.net.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	jcumming@geosolutions.net.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	jcumming@geosolutions.net.au
- A4 - AU Tax Invoice (INV)	Email	jcumming@geosolutions.net.au
- Chain of Custody (CoC) (COC)	Email	jcumming@geosolutions.net.au
- EDI Format - ENMRG (ENMRG)	Email	jcumming@geosolutions.net.au
- EDI Format - ESDAT (ESDAT)	Email	jcumming@geosolutions.net.au

M IRAN

- A4 - AU Tax Invoice (INV)	Email	miran@geosolutions.net.au
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MARK DOWNIE

- *AU Certificate of Analysis - NATA (COA)	Email	mdownie@geosolutions.net.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	mdownie@geosolutions.net.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	mdownie@geosolutions.net.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	mdownie@geosolutions.net.au
- A4 - AU Tax Invoice (INV)	Email	mdownie@geosolutions.net.au
- Chain of Custody (CoC) (COC)	Email	mdownie@geosolutions.net.au
- EDI Format - ENMRG (ENMRG)	Email	mdownie@geosolutions.net.au
- EDI Format - ESDAT (ESDAT)	Email	mdownie@geosolutions.net.au

CLIENT: GEOTECHNICAL SOLUTIONS

OFFICE: 29 Kiewit Way, Battery Point TAS 7004

PROJECT: CAMPBELL

ORDER NUMBER: SP CORVALLA

PROJECT MANAGER: SP CORVALLA

SAMPLES: EDO FORUMAT

CONTACT PH: 0418 541 531

SAMPLES NOBLE: 0417 007 817

EDD FORUMAT:

RELINQUISHED BY: 9 M. J. J. J.

DATE/TIME: 25.10.21

RECEIVED BY:

DATE/TIME:

RELINQUISHED:

TURNS/ROUND REQUIREMENTS:

ALS QUOTE NO.:

COC REQUEST NUMBER (Date):

DATE/TIME:

RELINQUISHED:

COMMENTS/SPECIAL HANDLING/STORAGE OR DELIVERY:

ANALYSIS REQUIRED: Including BUTTERIES AND. (See Codes and be used to allow later proof. (Where Materials are required specify Field (inherent from request) or Dispersed (from later proof) (optional))

ADDITIONAL INFORMATION:

Freight: 0418 541 531

LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (code / label)	TOTAL CONTAINERS	TRH, BTEXN, PAH,	NEPM 15 Metals	LOW LOR B(sip)	TRH CS - C16	Tas SPA B105 (no TBT)	HOLD
1	0.10	21.10.21	SPC	SPC	1	✓	✓				
2	0.10				1	✓	✓				
3	0.10				1	✓	✓				
4	0.10				1	✓	✓				
5	0.10				1	✓	✓				
6	0.10				1	✓	✓				
7	0.10				1	✓	✓				
8	0.10				1	✓	✓				
9	0.10				1	✓	✓				
10	0.10				1	✓	✓				
11	0.10				1	✓	✓				
12	0.10				1	✓	✓				
TOTAL											

Received: 26/10/21 - 11:10

Client: 0418 541 531

Freight: 0418 541 531

Environmental Division

Melbourne

Order Reference

EM2121267

[illegible]

[illegible][illegible]

Environmental Site Assessment: 175-179 Campbell Street, Hobart, Tasmania. November 2021

ALS Environmental

QUALITY CONTROL REPORT

Work Order: **EM2121267** Page: 1 of 13

Client: **GEO-ENVIRONMENTAL SOLUTIONS**
Contact: **DR JOHN PAUL CUMMING**
Address: **75 KINGSWAY PLACE
BATTERY POINT TASMANIA, AUSTRALIA 7004**

Telephone: **+61 03 6223 1939**
Project: **Campbell**
Order number: **---**
C-O-C number: **---**
Sample: **---**
Site: **---**
Quote number: **PH0797**
No. of samples received: **18**
No. of samples analysed: **18**

Laboratory: **Environmental Division Melbourne**
Contact: **Peter Banks**
Address: **4 Waverley Rd Springvale VIC Australia 3171**
Telephone: **+61 39549 5645**
Date Samples Received: **26-Oct-2021**
Date Analysis Commenced: **27-Oct-2021**
Issue Date: **01-Nov-2021**

ILAC-MRA **NATA**
Accredited to ISO 17025
Accredited to compliance with
ISO/IEC 17025:2017

This report supersedes any previous report(s) with this reference. Results apply to the sampling as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicates (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 authorised signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signature: **Dr John Paul Cumming** Position: **Laboratory Coordinator** Accredited Category: **Melbourne Forensic, Springvale VIC**
Signature: **Janet New** Position: **Senior Forensic Chemist** Accredited Category: **Melbourne Forensic, Springvale VIC**
Signature: **King Lin** Position: **Senior Organic Chemist** Accredited Category: **Melbourne Organic, Bayswater VIC**

RIGHT SOLUTIONS RIGHT PARTNER

Page: 2 of 13
Work Order: EM2121267
Client: GEO-ENVIRONMENTAL SOLUTIONS
Project: Campbell

General Comments

The analysis procedures used by ALS have been reviewed from authoritative internationally recognised procedures such as those published by the US EPA, APHA, AS and ISO. In house developed procedures are fully validated and are often at the client request.

Where no value determined or has been performed, results are reported as < detection limit.

Where a reported value is higher than the LOR, this may be due to gross sample contamination, dilution, 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 (insufficient weight employed) or matrix interference.

Key:
Anonymous = Refer to samples which are not specifically part of this work order but formed part of the QC program 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
B = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control here Laboratory Duplicate refers to a randomly selected inter-laboratory split. Laboratory duplicates provide information regarding method precision and sample representativeness. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QM-EN20 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%).

File: 072616_001

Laboratory Duplicate ID	Sample ID	Element	Element Concentration	Element Concentration	Element Concentration	RPD (%)	Acceptable RPD (%)	
File: 072616_001	Sample ID	Element	Element Concentration	Element Concentration	Element Concentration	RPD (%)	Acceptable RPD (%)	
EM2121267-001	Anonymous	Barium	7440-41-7	1	mg/kg	1	0.0	No Limit
EM2121267-001	Anonymous	Cadmium	7440-43-0	1	mg/kg	<1	0.0	No Limit
EM2121267-001	Anonymous	Barium	7440-41-7	10	mg/kg	100	10.0	No Limit
EM2121267-001	Anonymous	Chromium	7440-47-3	2	mg/kg	117	6.0	0% - 20%
EM2121267-001	Anonymous	Cobalt	7440-48-4	2	mg/kg	17	0.0	No Limit
EM2121267-001	Anonymous	Nickel	7440-25-2	2	mg/kg	45	2.0	0% - 20%
EM2121267-001	Anonymous	Antimony	7440-28-2	5	mg/kg	5	0.0	No Limit
EM2121267-001	Anonymous	Copper	7440-50-8	5	mg/kg	30	0.0	No Limit
EM2121267-001	Anonymous	Lead	7439-92-1	5	mg/kg	13	0.0	No Limit
EM2121267-001	Anonymous	Manganese	7439-96-5	5	mg/kg	500	13.0	0% - 20%
EM2121267-001	Anonymous	Selenium	7782-49-2	5	mg/kg	<5	0.0	No Limit
EM2121267-001	Anonymous	Vanadium	7440-62-2	5	mg/kg	119	0.4	0% - 20%
EM2121267-001	Anonymous	Zinc	7440-22-5	5	mg/kg	22	0.0	No Limit
EM2121267-001	Anonymous	Boron	7440-42-5	90	mg/kg	<90	0.0	No Limit
EM2121267-001	Anonymous	Barium	7440-41-7	1	mg/kg	<1	0.0	No Limit
EM2121267-001	Anonymous	Cadmium	7440-43-0	1	mg/kg	<1	0.0	No Limit
EM2121267-001	Anonymous	Barium	7440-41-7	10	mg/kg	200	10.0	0% - 20%
EM2121267-001	Anonymous	Chromium	7440-47-3	2	mg/kg	31	0.0	0% - 20%
EM2121267-001	Anonymous	Cobalt	7440-48-4	2	mg/kg	24	0.0	0% - 20%
EM2121267-001	Anonymous	Nickel	7440-25-2	2	mg/kg	30	0.0	0% - 20%
EM2121267-001	Anonymous	Antimony	7440-28-2	5	mg/kg	<5	0.0	No Limit
EM2121267-001	Anonymous	Copper	7440-50-8	5	mg/kg	<5	0.0	No Limit
EM2121267-001	Anonymous	Lead	7439-92-1	5	mg/kg	10	0.0	No Limit
EM2121267-001	Anonymous	Manganese	7439-96-5	5	mg/kg	30	0.0	No Limit


Page:	4 of 15								
Print Order:	0402121287								
Client:	GEOS-ENVIRONMENTAL SOLUTIONS								
Project:	Campbell								
Substrate:	ROIL								
Laboratory sample ID:	Remed ID:	Method:	Detected:	GC Number:	CON:	Unit:	Laboratory Datafile (DMS) Report		
							Original Datafile	Customer Result	RPD (%)
EQ03ET: Total Recoverable Mercury by FIMS (GC Loc. 3081687)									
EN1412167-006	9405 2.50	EQ03ET: Mercury		7420-67-0	0.1	mg/kg	<0.1	<0.1	0.0
EN1412167-001	Anonymous	EQ03ET: Mercury		7420-67-0	0.1	mg/kg	2.1	1.6	19.2
EN1412167-001: Polynuclear Aromatic Hydrocarbons (GC Loc. 3081687)									
EN1412167-001	9405 0.50								
		EP075(SM): Acenaphthylene	91-20-3	0.5	mg/kg	1.0	0.6	10.0	No Limit
		EP075(SM): Acenaphthylene	206-16-6	0.5	mg/kg	7.9	5.4	77.6	0% - 100%
		EP075(SM): Acenaphthene	83-32-0	0.5	mg/kg	1.6	<0.5	10.0	No Limit
		EP075(SM): Fluorene	86-73-7	0.5	mg/kg	6.3	3.1	10.0	0% - 100%
		EP075(SM): Phenanthrene	85-61-8	0.5	mg/kg	79.6	51.0	76.0	0% - 100%
		EP075(SM): Anthracene	120-12-7	0.5	mg/kg	14.9	8.5	19.2	0% - 100%
		EP075(SM): Fluoranthene	206-44-0	0.5	mg/kg	79.6	51.0	67.4	0% - 100%
		EP075(SM): Pyrene	129-00-0	0.5	mg/kg	71.9	52.7	64.8	0% - 100%
		EP075(MM): Benzo[a]anthracene	16-56-3	0.5	mg/kg	30.4	15.3	68.4	0% - 100%
		EP075(SM): Chrysene	218-01-0	0.5	mg/kg	28.0	11.5	10.7	0% - 100%
		EP075(MM): Benzo[b]fluoranthene	206-46-2	0.5	mg/kg	17.2	9.0	45.8	0% - 100%
		EP075(SM): Benzo[k]fluoranthene	207-06-8	0.5	mg/kg	12.7	6.1	4.0	0% - 100%
		EP075(MM): Benzo[e]pyrene	200-32-6	0.5	mg/kg	27.4	5.4	10.0	0% - 100%
		EP075(MM): Indeno[1,2,3-cd]pyrene	180-38-1	0.5	mg/kg	14.1	5.7	8.6	0% - 100%
		EP075(SM): Dibenzo[a,h]anthracene	253-20-3	0.5	mg/kg	4.4	2.4	15.0	No Limit
		EP075(MM): Benzo[g]herylene	189-12-0	0.5	mg/kg	16.1	5.6	18.3	0% - 100%
		EP075(SM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SM): Acenaphthylene	206-16-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SM): Acenaphthene	83-32-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SM): Phenanthrene	85-61-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(MM): Benzo[a]anthracene	16-56-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SM): Chrysene	218-01-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(MM): Benzo[b]fluoranthene	206-46-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SM): Benzo[k]fluoranthene	207-06-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(MM): Benzo[e]pyrene	200-32-6	0.5					

[illegible]

Environmental Site Assessment: 175-179 Campbell Street, Hobart, Tasmania. November 2021

Page:	7 of 13	
Work Order:	062121287	
Client:	GOO-ENVIRONMENTAL SOLUTIONS	
Project:	Campbell	

Sub-System	WATER	Method	GC# Number	GC#	Unit	Original Result	Duplicate Result	RPD (%)	Remarks RPD (%)
EP990 STEIN (GC Lot: 3419267) - continued									
100101024001	Anonymous	EP990: meta-4 para-Xylene	100-38-3	2	µg/L	<2	<2	0.0	No Limit
			100-42-3						
		EP990: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP990: p-xylene	94-26-2	5	µg/L	<5	<5	0.0	No Limit
100101024011	Anonymous	EP990: Benzene	71-42-2	1	µg/L	<1	<1	0.0	No Limit
		EP990: Toluene	100-46-3	2	µg/L	<2	<2	0.0	No Limit
		EP990: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP990: meta-4 para-Xylene	100-38-3	2	µg/L	<2	<2	0.0	No Limit
			100-42-3						
		EP990: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP990: p-xylene	94-26-2	5	µg/L	<5	<5	0.0	No Limit



Page:	8 of 13
Work Order:	062121287
Client:	GOO-ENVIRONMENTAL SOLUTIONS
Project:	Campbell

Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method Blank refers to an analysis that results in which all reagents are added in the same volume or proportions as used in sample sample preparation. The purpose of the QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (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. Duplicate Recovery Limits are based on standard deviation of processed LCS.

Sub-System: SOIL

Method Blank (MB) Report	GC# Number	GC#	Unit	Result	Recovery (%)	Recovery (%)	Recovery (%)	Recovery (%)
GC#001: Total Metals by ICP-AES (GC Lot: 3461466)								
GC#001: Arsenic	7400-39-2	5	mg/kg	<5	125 mg/kg	103	70.0	100
GC#001: Barium	7440-39-3	10	mg/kg	<10	99.3 mg/kg	87.4	70.0	100
GC#001: Beryllium	7400-47-7	1	mg/kg	<1	0.67 mg/kg	65.8	70.0	100
GC#001: Boron	7440-42-6	50	mg/kg	<50	---	---	---	---
GC#001: Cadmium	7440-43-7	1	mg/kg	<1	1.23 mg/kg	85.9	50.0	100
GC#001: Chromium	7440-47-3	2	mg/kg	<2	20.3 mg/kg	104	70.0	100
GC#001: Cobalt	7440-48-4	2	mg/kg	<2	11.2 mg/kg	80.8	70.0	100
GC#001: Copper	7440-49-8	5	mg/kg	<5	56.6 mg/kg	89.8	70.0	100
GC#001: Lead	7439-92-1	5	mg/kg	<5	62.4 mg/kg	87.7	70.0	100
GC#001: Manganese	7439-96-5	5	mg/kg	<5	599 mg/kg	85.2	70.0	100
GC#001: Nickel	7440-40-0	2	mg/kg	<2	15.4 mg/kg	81.1	70.0	100
GC#001: Selenium	7782-49-2	5	mg/kg	<5	---	---	---	---
GC#001: Vanadium	7440-40-2	5	mg/kg	<5	67.3 mg/kg	105	70.0	100
GC#001: Zinc	7440-49-6	5	mg/kg	<5	182 mg/kg	71.4	70.0	100
GC#001: Total Metals by ICP-AES (GC Lot: 3461466)								
GC#001: Arsenic	7400-39-2	5	mg/kg	<5	125 mg/kg	106	70.0	100
GC#001: Barium	7440-39-3	10	mg/kg	<10	99.3 mg/kg	84.8	70.0	100
GC#001: Beryllium	7400-47-7	1	mg/kg	<1	0.67 mg/kg	62.8	70.0	100
GC#001: Boron	7440-42-6	50	mg/kg	<50	---	---	---	---
GC#001: Cadmium	7440-43-7	1	mg/kg	<1	1.23 mg/kg	71.2	50.0	100
GC#001: Chromium	7440-47-3	2	mg/kg	<2	20.3 mg/kg	104	70.0	100
GC#001: Cobalt	7440-48-4	2	mg/kg	<2	11.2 mg/kg	80.9	70.0	100
GC#001: Copper	7440-49-8	5	mg/kg	<5	56.6 mg/kg	102	70.0	100
GC#001: Lead	7439-92-1	5	mg/kg	<5	62.4 mg/kg	92.9	70.0	100
GC#001: Manganese	7439-96-5	5	mg/kg	<5	580 mg/kg	81.1	70.0	100
GC#001: Nickel	7440-40-0	2	mg/kg	<2	15.4 mg/kg	81.3	70.0	100
GC#001: Selenium	7782-49-2	5	mg/kg	<5	---	---	---	---
GC#001: Vanadium	7440-40-2	5	mg/kg	<5	67.3 mg/kg	107	70.0	100
GC#001: Zinc	7440-49-6	5	mg/kg	<5	182 mg/kg	72.8	70.0	100
GC#001: Total Recoverable Mercury by FRM (GC Lot: 3501654)								
GC#001: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.64 mg/kg	80.2	70.0	100
GC#001: Total Recoverable Mercury by FRM (GC Lot: 3501657)								
GC#001: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.64 mg/kg	101	70.0	100
EP975(SMR): Polynuclear Aromatic Hydrocarbons (GC Lot: 3461525)								

Environmental Site Assessment: 175-179 Campbell Street, Hobart, Tasmania. November 2021

Page:	9 of 13
Work Order:	062121287
Client:	GOO-ENVIRONMENTAL SOLUTIONS
Project:	Campbell

Substrate: SOIL				Method Blank (MB) Report		Laboratory Control Spike (LCS) Report		
Method/Compound	CAS Number	LOP	Unit	Result	Spike Concentration	Spike Recovery (%)	Acceptable Level (%)	Flag
EP0701S10B: Polynuclear Aromatic Hydrocarbons (QCLot: 3981125) - continued								
EP0701S10B: Naphthalene	81-20-3	0.5	mg/kg	<0.5	3 mg/kg	100	85.7	125
EP0701S10B: Acenaphthylene	204-96-6	0.5	mg/kg	<0.5	3 mg/kg	100	61.9	125
EP0701S10B: Acenaphthene	83-32-6	0.5	mg/kg	<0.5	3 mg/kg	99.6	63.5	125
EP0701S10B: Fluorene	86-73-7	0.5	mg/kg	<0.5	3 mg/kg	99.9	91.3	125
EP0701S10B: Phenanthrene	85-61-6	0.5	mg/kg	<0.5	3 mg/kg	99.6	76.4	125
EP0701S10B: Anthracene	120-12-7	0.5	mg/kg	<0.5	3 mg/kg	104	81.7	127
EP0701S10B: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	3 mg/kg	103	76.3	124
EP0701S10B: Pyrene	129-00-0	0.5	mg/kg	<0.5	3 mg/kg	103	79.8	126
EP0701S10B: Benz[a]anthracene	96-59-3	0.5	mg/kg	<0.5	3 mg/kg	102	76.9	123
EP0701S10B: Chrysene	218-01-4	0.5	mg/kg	<0.5	3 mg/kg	110	60.9	130
EP0701S10B: Benzo[b]fluoranthene	205-99-2	0.5	mg/kg	<0.5	3 mg/kg	87.5	70.2	121
EP0701S10B: Benzo[k]fluoranthene	207-49-9	0.5	mg/kg	<0.5	3 mg/kg	99.3	80.4	130
EP0701S10B: Dibenzo[a,h]anthracene	53-32-6	0.5	mg/kg	<0.5	3 mg/kg	88.1	70.2	123
EP0701S10B: Indeno[1,2,3-cd]pyrene	793-39-6	0.5	mg/kg	<0.5	3 mg/kg	95.3	87.9	122
EP0701S10B: Dibenzo[e,h]anthracene	53-70-3	0.5	mg/kg	<0.5	3 mg/kg	95.4	66.8	123
EP0701S10B: Benzo[ghi]perylene	191-24-2	0.5	mg/kg	<0.5	3 mg/kg	93.3	65.8	127
EP0801S11: Total Petroleum Hydrocarbons (QCLot: 3979248)								
EP0801S11: C10 Fraction	---	10	mg/kg	<10	30 mg/kg	81.6	56.5	131
EP0801S12: Total Petroleum Hydrocarbons (QCLot: 3981524)								
EP0801S12: C10 - C14 Fraction	---	90	mg/kg	<90	860 mg/kg	109	76.9	128
EP0801S12: C15 - C20 Fraction	---	100	mg/kg	<100	2435 mg/kg	106	80.5	125
EP0801S12: C21 - C26 Fraction	---	100	mg/kg	<100	1882 mg/kg	101	82.4	121
EP0801S12: C10 - C26 Fraction (sum)	---	90	mg/kg	<90	---	---	---	---
EP0801S13: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3979248)								
EP0801S13: C10 - C14 Fraction	---	10	mg/kg	<10	45 mg/kg	87.8	58.3	126
EP0801S14: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3981524)								
EP0801S14: C10 - C14 Fraction	---	90	mg/kg	<90	520 mg/kg	118	77.5	130
EP0801S14: C15 - C20 Fraction	---	100	mg/kg	<100	3203 mg/kg	102	81.5	130
EP0801S14: C21 - C26 Fraction	---	100	mg/kg	<100	270 mg/kg	103	73.3	137
EP0801S14: C10 - C26 Fraction (sum)	---	90	mg/kg	<90	---	---	---	---
EP0901: BTEX (QCLot: 3979248)								
EP0901: Benzene	71-43-2	0.2	mg/kg	<0.2	2 mg/kg	87.7	61.8	117
EP0901: Toluene	106-46-5	0.5	mg/kg	<0.5	2 mg/kg	88.1	65.8	125
EP0901: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2 mg/kg	85.1	60.5	124
EP0901: meta & para-Xylene	100-30-3	0.5	mg/kg	<0.5	4 mg/kg	85.0	64.8	134
EP0901: ortho-Xylene	106-49-3	0.5	mg/kg	<0.5	2 mg/kg	83.7	66.7	132

Page: 10 of 13
 Work Order: 062121287
 Client: GOO-ENVIRONMENTAL SOLUTIONS
 Project: Campbell

Substrate: SOIL				Method Blank (MB) Report		Laboratory Control Spike (LCS) Report		
Method/Compound	CAS Number	LOP	Unit	Result	Spike Concentration	Spike Recovery (%)	Acceptable Level (%)	Flag
EP0901: BTEX (QCLot: 3979248) - continued								
EP0901: m,p-Xylene	81-20-3	1	mg/kg	<1	0.5 mg/kg	100	81.5	125
Substrate: WATER								
Method/Compound	CAS Number	LOP	Unit	Result	Spike Concentration	Spike Recovery (%)	Acceptable Level (%)	Flag
EQ0201: Total Metals by ICP-MS (QCLot: 3976072)								
EQ0201-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	100	80.2	115
EQ0201-T: Barium	7440-41-7	0.001	mg/L	<0.001	0.1 mg/L	93.8	86.0	116
EQ0201-T: Beryllium	7429-90-3	0.001	mg/L	<0.001	0.1 mg/L	88.7	87.3	117
EQ0201-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	100	86.4	116
EQ0201-T: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	86.1	86.4	112
EQ0201-T: Cobalt	7440-48-4	0.001	mg/L	<0.001	0.1 mg/L	85.6	87.7	115
EQ0201-T: Copper	7440-49-8	0.001	mg/L	<0.001	0.1 mg/L	95.7	86.3	111
EQ0201-T: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	95.8	86.3	112
EQ0201-T: Manganese	7439-96-6	0.001	mg/L	<0.001	0.1 mg/L	93.7	88.7	113
EQ0201-T: Nickel	7440-40-6	0.001	mg/L	<0.001	0.1 mg/L	96.2	87.9	113
EQ0201-T: Selenium	7782-49-2	0.01	mg/L	<0.01	0.1 mg/L	100	84.5	116
EQ0201-T: Vanadium	7440-40-2	0.01	mg/L	<0.01	0.1 mg/L	99.9	87.1	114
EQ0201-T: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	97.0	86.7	117
EQ0201-T: Boron	7440-42-6	0.05	mg/L	<0.05	0.5 mg/L	111	80.3	118
EQ0301: Total Recoverable Mercury by PIMS (QCLot: 3981044)								
EQ0301: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	89.8	73.4	119
EP0701S10B: Polynuclear Aromatic Hydrocarbons (QCLot: 3979560)								
EP0701S10B: Naphthalene	81-20-3	1	µg/L	<1.0	5 µg/L	87.0	42.8	114
EP0701S10B: Acenaphthylene	204-96-6	1	µg/L	<1.0	5 µg/L	95.3	46.5	119
EP0701S10B: Acenaphthene	83-32-6	1	µg/L	<1.0	5 µg/L	98.2	47.3	117
EP0701S10B: Fluorene	86-73-7	1	µg/L	<1.0	5 µg/L	98.1	48.5	119
EP0701S10B: Phenanthrene	85-61-6	1	µg/L	<1.0	5 µg/L	97.9	49.4	121
EP0701S10B: Anthracene	120-12-7	1	µg/L	<1.0	5 µg/L	95.9	48.4	122
EP0701S10B: Fluoranthene	206-44-0	1	µg/L	<1.0	5 µg/L	98.3	50.3	124
EP0701S10B: Pyrene	129-00-0	1	µg/L	<1.0	5 µg/L	94.7	50.2	126
EP0701S10B: Benz[a]anthracene	96-59-3	1	µg/L	<1.0	5 µg/L	98.8	48.4	127
EP0701S10B: Chrysene	218-01-4	1	µg/L	<1.0	5 µg/L	93.4	48.7	128
EP0701S10B: Benzo[b]fluoranthene	205-99-2	1	µg/L	<1.0	5 µg/L	109	54.5	134
EP0701S10B: Benzo[k]fluoranthene	207-49-9	1	µg/L	<1.0	5 µg/L	102	56.1	134
EP0701S10B: Dibenzo[a,h]anthracene	53-32-6	0.5	µg/L	<0.5	5 µg/L	110	56.9	135
EP0701S10B: Indeno[1,2,3-cd]pyrene	793-39-6	1	µg/L	<1.0	5 µg/L	100	54.4	136
EP0701S10B: Dibenzo[e,h]anthracene	53-70-3	1	µg/L	<1.0	5 µg/L	105	54.5	138

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Page:	13 of 13						
Print Order:	EM2121287						
Client:	GEOSCIENCE INFORMATION SOLUTIONS						
Project:	Camptbell						
Sub-System:	WATER						
		Water (Spills/MS) Percent					
Library Sample ID	Sample ID	Method / Accessory	CAS Number	Spills Concentration	Spills Recovery (%)	Acceptable Levels (%)	
					MS	Low	High
EG0207: Total Metals by ICP-MS (QCLOT: 381907) - continued							
EM212118-034	Arceuthobium	EG0207A1: Arceuthobium	1449-38-2	0.29 mg/L	91.2	62.0	123
		EG0207A1: Arceuthobium	1749-11-7	0.25 mg/L	79.8	79.0	120
		EG0207A1: Arceuthobium	1449-39-5	0.26 mg/L	94.9	99.0	120
		EG0207A1: Gleditsia	1449-34-9	0.05 mg/L	102	81.8	123
		EG0207A1: Gleditsia	1449-47-3	0.16 mg/L	83.3	79.8	119
		EG0207A1: Gleditsia	1449-44-4	0.25 mg/L	95.5	80.7	121
		EG0207A1: Gleditsia	1449-50-6	0.25 mg/L	83.8	80.4	118
		EG0207A1: Lonicera	1449-50-1	0.29 mg/L	91.0	80.5	121
		EG0207A1: Menispermaceae	1449-56-5	0.25 mg/L	75.0	73.0	123
		EG0207A1: Menispermaceae	1449-00-0	0.25 mg/L	83.8	80.0	119
		EG0207A1: Yucca	1449-62-2	0.25 mg/L	82.0	81.0	119
		EG0207A1: Zinc	1449-66-6	0.25 mg/L	80.7	75.0	120
EG0308: Total Redoxactive Mercury by FIMS (QCLOT: 383384)							
EM212121-017	Arceuthobium	EG0308: Mercury	1449-91-6	0.01 mg/L	87.8	79.0	120
EG0404: Total Potassium Hydrocarbons (QCLOT: 381907)							
EG212128-021	Arceuthobium	EG0404: CA + CD fraction	---	290 ppb	80.8	113.0	126
EG0407: Total Redoxactive Hydrocarbons - NEPM 2013 Fractions (QCLOT: 381907)							
EG212128-021	Arceuthobium	EG0407: CA + CD fraction	CA, C10	130 ppb	85.1	101.0	123
EG0408: BTEX (QCLOT: 381907)							
EG212128-017	Arceuthobium	EG0408: Benzene	71-43-2	20 ppb	77.0	69.0	120
		EG0408: Ethylbenzene	106-68-3	20 ppb	78.2	69.4	122


Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	EM2121267	Page	1 of 10
Client	GEO-ENVIRONMENTAL SOLUTIONS	Laboratory	Environmental Division Melbourne
Contact	DR JOHN PAUL CUMMING	Telephone	+613548 9545
Project	Campbell	Order Number/Revised	26-264201
Site	---	Issue Date	21-Nov-2021
Sensor	---	No. of samples received	10
Order number	---	No. of samples analysed	10

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 statements and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report lists quality outliers flagged in the Quality Control (QC) Report.

- QC Method Blank** value outliers occur.
- QC Laboratory Control** outliers occur.
- QC Matrix Spikes** outliers occur.
- Duplicate outliers exist - please see following pages for full details.
- For all regular sample matrices, **QC surrogate recovery** outliers occur.

Outliers : Analysis Holding Time Compliance

- QC Analysis Holding Time** Outliers exist.

Outliers : Frequency of Quality Control Samples

- Quality Control Sample Frequency Outliers exist - please see following pages for full details.

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Quality Control Sample Type	Conc't			Recovery		Quality Control Specification
	GC	Top-Up	Actual	%	Comment	
Injection Duplicate (IR-16)						
PAHs/Phenols (GC/MS - SRM)	0	4	0.00	10.00		MEPM 2013 B1 & ALS QCS Standard
IRH - Surrogate Fraction	0	12	0.00	10.00		MEPM 2013 B1 & ALS QCS Standard
Metalloids (MS)						
PAHs/Phenols (GC/MS - SRM)	0	4	0.00	5.00		MEPM 2013 B1 & ALS QCS Standard
IRH - Surrogate Fraction	0	12	0.00	3.00		MEPM 2013 B1 & ALS QCS Standard

Environmental Site Assessment: 175-179 Campbell Street, Hobart, Tasmania. November 2021

Page: 4 of 10	Work Order: ESG/21/007	Client: GEO-ENVIRONMENTAL SOLUTIONS	Project: Campbell	
Method: SOL				Evaluation: * = Holding time breach; ✓ = Within holding time
Analysis / Client Sample ID	Analysis Date	Collection / Preparation	Analysis	
	Date collected	Due for collection	Due for analysis	Due for analysis
CP000371: Total Petroleum Hydrocarbons				
Soil Glass Jar - Unreserved (EP871)				
SP01 0.50, SP02 0.50, SP03 0.50, SP04 0.50, SP05 1.50, SP06 0.50, SP07 0.50, Duplicate	SP01 1.50, SP02 1.50, SP03 1.50, SP04 1.50, SP05 2.50, SP06 1.50, SP07 1.50	21-Oct-2021	28-Oct-2021	04-Nov-2021
			✓	28-Oct-2021
				07-Dec-2021
				✓
CP000371: Total Petroleum Hydrocarbons				
Soil Glass Jar - Unreserved (EP871)				
SP01 0.50, SP02 0.50, SP03 0.50, SP04 0.50, SP05 1.50, SP06 0.50, SP07 0.50, Duplicate	SP01 1.50, SP02 1.50, SP03 1.50, SP04 1.50, SP05 2.50, SP06 1.50, SP07 1.50	21-Oct-2021	28-Oct-2021	04-Nov-2021
			✓	28-Oct-2021
				07-Dec-2021
				✓
CP000371: Total Petroleum Hydrocarbons				
Soil Glass Jar - Unreserved (EP881)				
SP01 0.50, SP02 0.50, SP03 0.50, SP04 0.50, SP05 1.50, SP06 0.50, SP07 0.50, Duplicate	SP01 1.50, SP02 1.50, SP03 1.50, SP04 1.50, SP05 2.50, SP06 1.50, SP07 1.50	21-Oct-2021	28-Oct-2021	04-Nov-2021
			✓	28-Oct-2021
				04-Nov-2021
				✓
CP000371: Total Petroleum Hydrocarbons - NDPM 2113 Fractions				
Soil Glass Jar - Unreserved (EP871)				
SP01 0.50, SP02 0.50, SP03 0.50, SP04 0.50, SP05 1.50, SP06 0.50, SP07 0.50, Duplicate	SP01 1.50, SP02 1.50, SP03 1.50, SP04 1.50, SP05 2.50, SP06 1.50, SP07 1.50	21-Oct-2021	28-Oct-2021	04-Nov-2021
			✓	28-Oct-2021
				07-Dec-2021
				✓
CP000371: Total Petroleum Hydrocarbons - NDPM 2113 Fractions				
Soil Glass Jar - Unreserved (EP881)				
SP01 0.50, SP02 0.50, SP03 0.50, SP04 0.50, SP05 1.50, SP06 0.50, SP07 0.50, Duplicate	SP01 1.50, SP02 1.50, SP03 1.50, SP04 1.50, SP05 2.50, SP06 1.50, SP07 1.50	21-Oct-2021	28-Oct-2021	04-Nov-2021
			✓	28-Oct-2021
				04-Nov-2021
				✓
CP000371: Total Petroleum Hydrocarbons - NDPM 2113 Fractions				
Soil Glass Jar - Unreserved (EP881)				
SP01 0.50, SP02 0.50, SP03 0.50, SP04 0.50, SP05 1.50, SP06 0.50, SP07 0.50, Duplicate	SP01 1.50, SP02 1.50, SP03 1.50, SP04 1.50, SP05 2.50, SP06 1.50, SP07 1.50	21-Oct-2021	28-Oct-2021	04-Nov-2021
			✓	28-Oct-2021
				04-Nov-2021
				✓
Method: WATER				
Analysis / Client Sample ID	Analysis Date	Collection / Preparation	Analysis	
	Date collected	Due for collection	Due for analysis	Due for analysis
EC0001: Total Nitrate by ICP-MS				
Clear Plastic Bottle - Unfiltered, Low and High (2002BA-1)	21-Oct-2021	27-Oct-2021	19-Nov-2021	✓
				27-Oct-2021
				12-Nov-2021
				✓
EC0001: Total Dissolved Nitrate by ICP-MS				
Clear Plastic Bottle - Unfiltered, Low and High (2002BA-1)	21-Oct-2021	27-Oct-2021	19-Nov-2021	✓
				27-Oct-2021
				12-Nov-2021
				✓

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Page	E of 10	ALS
Work Order	EGS/2107	
Client	GEO-ENVIRONMENTAL SOLUTIONS	
Project	Central	
HARMS WATER		
Method	Sample Date	Collection / Preparation
Generation / Date / Sample ID(s)	Date extracted	Date for extraction
	Quarantined	Date analyzed
		Date for analysis
		Rechecked
EPA/MSDS: Polynuclear Aromatic Hydrocarbons		
Ambor Glass Bottle - Unpreserved (EPA/MSDS)		
Residue	21-Oct-2021	27-Oct-2021
	28-Oct-2021	✓
	27-Oct-2021	16-Dec-2021
		✓
EPA/MSDS: Total Petroleum Hydrocarbons		
Ambor Glass Bottle - Unpreserved (EPA/MSDS)		
Residue	21-Oct-2021	27-Oct-2021
	28-Oct-2021	✓
	27-Oct-2021	16-Dec-2021
		✓
Ambor VDC Vial - Sulfuric Acid (EPA/MSDS)		
Residue	21-Oct-2021	27-Oct-2021
	04-Nov-2021	✓
	27-Oct-2021	04-Nov-2021
		✓
EPA/MSDS: Total Resolvable Hydrocarbons - NORM 2013 Procedure		
Ambor Glass Bottle - Unpreserved (EPA/MSDS)		
Residue	21-Oct-2021	27-Oct-2021
	30-Oct-2021	✓
	27-Oct-2021	16-Dec-2021
		✓
Ambor VDC Vial - Sulfuric Acid (EPA/MSDS)		
Residue	21-Oct-2021	27-Oct-2021
	04-Nov-2021	✓
	27-Oct-2021	04-Nov-2021
		✓
EPA/MSDS: STEAM		
Ambor VDC Vial - Sulfuric Acid (EPA/MSDS)		
Residue	21-Oct-2021	27-Oct-2021
	04-Nov-2021	✓
	27-Oct-2021	04-Nov-2021
		✓

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Environmental Site Assessment: 175-179 Campbell Street, Hobart, Tasmania. November 2021

[illegible]

Ref ID:
 00470 Order:
 Client: GEO-ENVIRONMENTAL SOLUTIONS
 Project: CSM0001



Brief Method Summaries

The results of procedures used by the Environmental Data Unit have been developed from established internationally recognised procedures such as those published by the US EPA, APHA, AS and NENM. 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 to the Certificate of Analysis. Samples from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Primary Description
Metallic Content	SA055	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	EG0117	SOIL	In house: Referenced to APHA 31-26, USEPA SW 845- 6010. Metals are determined following an appropriate acid digestion of the soil. The ICP-AES technique involves samples in a plasma, emitting a characteristic spectrum based on intensity present. Intensity of selected elements is compared against those of matrix matched standards. This method is compliant with NEPM Schedule B(3).
Total Mercury by FIMS	EG0117	SOIL	In house: Referenced to AS 3550, APHA 3112-12. B (Flow-Injection) (SnCl ₂) (Cold Vapour generation) (AAS) FIMS-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl ₂ which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).
TRH - Semi-volatile Fraction	EP011	SOIL	In house: Referenced to USEPA SW 845- 8015. Sample extracts are analysed by Capillary GC/MS and quantified against eleven standards over the range C10 - C40. Compliant with NEPM Schedule B(3).
PAH/Phenols (SIM)	EP019/SIM	SOIL	In house: Referenced to USEPA SW 845- 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 by TLX	EP060	SOIL	In house: Referenced to USEPA SW 845- 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.
Total Metals by ICP-MS - Suite A	EG020A.T	WATER	In house: Referenced to APHA 31-26, USEPA SW845- 8020. ALS OM-ENV0609. The ICP-MS technique utilises a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Total Mercury by FIMS	EG0117	WATER	In house: Referenced to AS 3550, APHA 31-12 Hg - B (Flow-Injection) (SnCl ₂ /Cold Vapour generation) (AAS) FIMS-AAS is an automated flameless atomic absorption technique. A bromobromine reagent is used to oxidise any organic mercury compounds in the unfiltered sample. The atomic mercury is reduced online to atomic mercury vapour by SnCl ₂ which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).
TRH - Semi-volatile Fraction	EP011	WATER	In house: Referenced to USEPA SW 845- 8015. The sample extract is analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with the GC requirements of NEPM Schedule B(3).
PAH/Phenols (GC/MS - SIM)	EP019/SIM	WATER	In house: Referenced to USEPA SW 845- 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).

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 Work Order: EWG12/2017
 Client: GEO-ENVIRONMENTAL SOLUTIONS
 Project: Campbell



Analytical Method	Method	Matrix	Method Description
TRH Volatiles/BTEX	EP060	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 GC/MS analysis. This method is compliant with the QC requirements of NEPM Schedule B(3).
Preparation Methods	Method	Matrix	Matrix Description
Hot Block Digest for metals in soils, sediments and sludges	ENH	SOIL	In house: Referenced to USEPA 2002. Hot Block Acid Digestion: 1 kg of sample is heated with Nitric and Hydrofluoric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked in vials for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM Schedule B(3).
Methane Extraction of Soils for Purge and Trap	OR046	SOIL	In house: Referenced to USEPA SW 846 - 8030A. 5g of soil is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	OR017	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, H ₂ SO ₄ and surrogate are extracted with 30mL 1:1 GC/MS grade by and over and tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
Digestion for Total Recoverable Metals	EN03	WATER	In house: Referenced to USEPA SW846-3005. Method 3005 is a Nitric/Hydrofluoric acid digestion procedure used to prepare surface and ground water samples for analysis by ICP-AES or ICP-MS. This method is compliant with NEPM Schedule B(3).
Separatory Funnel Extraction of Liquids	OR044	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 present in the container.
Volatiles Water Preparation	OR015W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for purging.

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Appendix 7 Certificate of Analysis



ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order Client Contact Address Telephone Project Order number C.O.O. number Sampler Site Order number No. of samples received No. of samples analysed	EM2121267 GEO-ENVIRONMENTAL SOLUTIONS DR JOHN PAUL CUMMING 26 KIRKESDALE PLACE BATTERY POINT TASMANIA, AUSTRALIA 7004 +61 81 0223 1839 Campbell EN222 18 18	Page Laboratory Contact Address Telephone Date Sampled/Received Date Analysis Commenced Issue Date	1 of 18 Environmental Division Melbourne Peter Rieck 4 Wheel Rd Springvale VIC Australia 3171 +6138549 9645 26-Oct-2021 11:10 27-Oct-2021 01-Nov-2021 16:02
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This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. 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
Clara Fernando	Laboratory Coordinator	Melbourne inorganics, Springvale, VIC
James Mhuir	Senior Inorganic Chemist	Melbourne inorganics, Springvale, VIC
King Lin	Senior Organic Chemist	Melbourne Organics, Springvale, VIC

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Work Order
Client
Project

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EM2121267
GEO-ENVIRONMENTAL SOLUTIONS
Campbell



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 NEN. 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 concentration is higher than the LOR, this may be due to a primary sample concentration/dilution and/or insufficient sample for analysis.

Where the LOR or a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (actual weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling does not obtain 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 compared from individual analysis/dilutions at or above the limit of reporting
 p = ALS used a 10% adjustment for these tests
 - = Indicates an extended test.

- EP075 (BIO): Where reported, Benzodioxene Toxicity Equivalence Quotient (TEQ) per the NEN (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo[a]pyrene. TEF values are provided in brackets as follows: Benzo[a]anthracene (0.1), Chrysene (0.01), Benzo[b]a (0.01), Benzo[k]fluoranthene (0.1), Benzo[a]pyrene (1.0), Indeno[1,2,3-cd]pyrene (0.1), Dibenzo[a,h]anthracene (1.0), Benzo[e]pyrene (0.01). Less than LOR results for TEQ Zero are treated as zero.
- Benzo[a]pyrene Toxicity Equivalence Quotient (TEQ) per the NEN (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo[a]pyrene. TEF values are provided in brackets as follows: Benzo[a]anthracene (0.1), Chrysene (0.01), Benzo[b]a (0.01), Benzo[k]fluoranthene (0.1), Benzo[a]pyrene (1.0), Indeno[1,2,3-cd]pyrene (0.1), Dibenzo[a,h]anthracene (1.0), Benzo[e]pyrene (0.01). Less than LOR results for TEQ Zero are treated as zero. For TEQ LOR are treated as half the reported LOR, and for TEQ LOR are treated as being equal to the reported LOR. Note TEQ LOR and TEQ LOR will calculate as 0.001kg and 0.001kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP000: Where reported, Total Xylenes is the sum of the reported concentrations of m-Xylene and o-Xylene at or above the LOR.
- EP075 (BIO): Where reported, Total Creosol is the sum of the reported concentrations of 2-Methylphenol and 2,4,6-Trihydroxyphenol at or above the LOR.
- PG020-T - EM2121267 #18: results for total metals have been confirmed by re-dispersion and re-analysis.
- BQ005T: EM2121267 #10 Poor duplicate precision for Manganese due to sample heterogeneity. Confirmed by re-analysis.
- CQ005T: EM2121267 #11 Poor duplicate precision for Lead due to sample heterogeneity. Confirmed by re-analysis.
- EP075 (BIO): EM2121267 #01 Poor duplicate precision due to sample heterogeneity. Confirmed by re-dispersion and re-analysis.

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 Work Order: EME-21267
 Client: GEO-ENVIRONMENTAL SOLUTIONS
 Project: Canceled



Analytical Results

Substrate: SOE (Notes: SOE)		Sample ID:		BH01 0.50	BH01 1.50	BH02 0.50	BH02 1.50	BH03 0.50
		Sampling date / time		21-Oct-2021 00:00	21-Oct-2021 00:00	21-Oct-2021 00:00	21-Oct-2021 00:00	21-Oct-2021 00:00
CAS Number		LOQ	Unit	Result	Result	Result	Result	Result
EG005(PD003)T: Total Metals by ICP-AES								
Arsenic	2400-33-2	5	mg/kg	<5	<5	6	<5	<5
Barium	2400-38-3	10	mg/kg	140	40	270	30	120
Beryllium	2400-47-7	1	mg/kg	<1	<1	<1	<1	<1
Boron	2400-47-8	50	mg/kg	<50	<50	<50	<50	<50
Cadmium	2400-43-9	1	mg/kg	<1	<1	2	<1	<1
Chromium	2400-47-3	2	mg/kg	14	16	21	14	24
Cobalt	2400-48-4	2	mg/kg	10	11	10	10	12
Copper	2400-50-8	5	mg/kg	55	10	81	23	42
Lead	2400-50-1	5	mg/kg	261	8	406	0	37
Manganese	2400-56-5	5	mg/kg	273	71	401	208	295
Nickel	2400-52-0	2	mg/kg	13	13	16	14	16
Selenium	2752-49-2	5	mg/kg	<5	<5	<5	<5	<5
Vanadium	2400-62-2	5	mg/kg	45	56	79	52	60
Zinc	2400-65-6	5	mg/kg	260	21	466	22	45
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	0.2	<0.1	0.4	<0.1	0.3
EP070(SM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	1.0	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	200-90-8	0.5	mg/kg	7.8	<0.5	1.0	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	1.6	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	8.3	<0.5	1.2	<0.5	<0.5
Phenanthrene	85-07-8	0.5	mg/kg	79.6	<0.5	13.6	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	15.8	<0.5	3.4	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	74.6	<0.5	18.6	<0.5	<0.5
Pyrene	129-09-0	0.5	mg/kg	73.9	<0.5	19.4	<0.5	<0.5
Benzo[a]anthracene	76-55-3	0.5	mg/kg	30.4	<0.5	8.2	<0.5	<0.5
Chrysene	218-01-4	0.5	mg/kg	28.8	<0.5	8.4	<0.5	<0.5
Benzo[b]fluoranthene	375-98-2	0.5	mg/kg	17.2	<0.5	5.9	<0.5	<0.5
Benzo[k]fluoranthene	207-08-9	0.5	mg/kg	17.7	<0.5	7.7	<0.5	<0.5
Benzo[a]pyrene	50-32-9	0.5	mg/kg	27.4	<0.5	8.0	<0.5	<0.5
Indeno[1,2,3-cd]pyrene	190-39-0	0.5	mg/kg	14.1	<0.5	4.7	<0.5	<0.5
Dibenz[a,h]anthracene	50-70-3	0.5	mg/kg	4.4	<0.5	1.5	<0.5	<0.5

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 Work Order: EME-21267
 Client: GEO-ENVIRONMENTAL SOLUTIONS
 Project: Canceled



Analytical Results

Substrate: SOE (Notes: SOE)		Sample ID:		BH01 0.50	BH01 1.50	BH02 0.50	BH02 1.50	BH03 0.50
		Sampling date / time		21-Oct-2021 00:00	21-Oct-2021 00:00	21-Oct-2021 00:00	21-Oct-2021 00:00	21-Oct-2021 00:00
CAS Number		LOEL	Unit	Result	Result	Result	Result	Result
EM0212167-001								
EM0212167-002								
EM0212167-005								
EM0212167-004								
EM0212167-005								
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Environmental Site Assessment: 175-179 Campbell Street, Hobart, Tasmania. November 2021

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 Work Order: EMD-21267
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 Project: Campbell



Analytical Results

Substrate: SOE (Matrix: SOE)				Sample ID		BH01 0.50	BH01 1.50	BH02 0.50	BH02 1.50	BH03 0.50
				Sampling date / time		21-Oct-2021 00:00	21-Oct-2021 00:00	21-Oct-2021 00:00	21-Oct-2021 00:00	21-Oct-2021 00:00
Compound				CAS Number	LOE	Unit	Result	Result	Result	Result
EP975(SM): PAH Surrogates										
2-Fluorobiphenyl				321-60-8	0.5	%	93.8	88.8	103	88.3
Anthracene-d10				1719-06-8	0.5	%	165	128	114	127
4-Terphenyl-d16				1718-51-0	0.5	%	166	138	109	139
EP0405: TPH(VBTEX) Surrogates										
1,2-Dichlorobenzene-D4				1200-07-0	0.2	%	108	114	122	114
Toluene-D8				2627-26-5	0.2	%	107	118	116	111
4-Bromofluorobenzene				450-00-0	0.2	%	103	119	115	109

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 Project: Campbell



Analytical Results

Substrate: SOE (Matrix: SOE)				Sample ID		BH03 1.50	BH04 0.50	BH04 1.50	BH04 2.50	BH05 0.50
				Sampling date / time		21-Oct-2021 00:00	21-Oct-2021 00:00	21-Oct-2021 00:00	21-Oct-2021 00:00	21-Oct-2021 00:00
Compound				CAS Number	LOE	Unit	Result	Result	Result	Result
EA205: Moisture Content (Dried @ 105-110°C)										
Moisture Content				---	1.0	%	16.3	21.3	20.8	13.2
EG005(ED003): Total Metals by ICP-AES										
Antimony				7440-36-2	5	mg/kg	<5	<5	<5	<5
Barium				7440-39-3	10	mg/kg	29	118	89	149
Beryllium				7440-11-7	1	mg/kg	<1	<1	<1	1
Boron				7440-43-8	50	mg/kg	<50	<50	<50	<50
Cadmium				7440-43-9	1	mg/kg	<1	<1	<1	<1
Chromium				7440-47-3	2	mg/kg	14	20	18	28
Cobalt				7440-48-4	2	mg/kg	13	7	12	19
Copper				7440-50-8	5	mg/kg	39	22	31	36
Lead				7439-92-1	5	mg/kg	6	12	6	16
Manganese				7439-96-5	5	mg/kg	177	79	115	157
Nickel				7440-02-0	2	mg/kg	22	12	13	10
Selenium				7782-49-2	5	mg/kg	<5	<5	<5	<5
Vanadium				7440-62-2	5	mg/kg	163	66	55	193
Zinc				7440-66-5	5	mg/kg	22	16	17	20
EG005(ED003): Total Recoverable Mercury by FIMS										
Mercury				7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
EP975(SM): Polynuclear Aromatic Hydrocarbons										
Naphthalene				91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Acenaphthylene				208-90-8	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				85-07-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
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	<0.5
Pyrene				129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Benz[a]anthracene				56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Chrysene				7140-07-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo[b]fluoranthene				375-14-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo[k]fluoranthene				207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo[a]pyrene				50-32-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Indeno[1,2,3-cd]pyrene				190-39-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Dibenz[a,h]anthracene				53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5

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 Client: GEO-ENVIRONMENTAL SOLUTIONS
 Project: Camsted



Analytical Results

Sample ID				BH03 1.50	BH04 0.50	BH04 1.50	BH04 2.50	BH05 0.50
Substrate: SOE (Notes: SOE)				21-Oct-2021 00:00	21-Oct-2021 00:00	21-Oct-2021 00:00	21-Oct-2021 00:00	21-Oct-2021 00:00
Sampling date / time				ERM2121267-006	ERM2121267-007	ERM2121267-008	ERM2121267-009	ERM2121267-010
Compound	CAS Number	LOQ	Unit	Result	Result	Result	Result	Result
EP075(SIM): Polynuclear Aromatic Hydrocarbons - Continued								
Benzo[a]pyrene	175-28-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo[a]pyrene TEQ (sum)	---	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo[a]pyrene TEQ (half LOQ)	---	0.5	mg/kg	0.6	0.6	0.6	0.6	0.6
Benzo[a]pyrene TEQ (LOQ)	---	0.5	mg/kg	1.2	1.2	1.2	1.2	1.2
EP080(OT): Total Petroleum Hydrocarbons								
C8 - C9 Fraction	---	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	---	60	mg/kg	<60	<60	<60	<60	<60
C15 - C28 Fraction	---	100	mg/kg	<100	<100	<100	<100	<100
C29 - C36 Fraction	---	100	mg/kg	<100	<100	<100	<100	<100
C10 - C36 Fraction (sum)	---	90	mg/kg	<90	<90	<90	<90	<90
EP080(OT): Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C8 - C10 Fraction	C8, C10	10	mg/kg	<10	<10	<10	<10	<10
C8 - C10 Fraction minus BTEX (BTEX)	C8, C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	---	60	mg/kg	<60	<60	<60	<60	<60
>C16 - C24 Fraction	---	100	mg/kg	<100	<100	<100	<100	<100
>C24 - C40 Fraction	---	100	mg/kg	<100	<100	<100	<100	<100
>C10 - C40 Fraction (sum)	---	90	mg/kg	<90	<90	<90	<90	<90
>C10 - C16 Fraction minus Naphthalene (NAP)	---	90	mg/kg	<90	<90	<90	<90	<90
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	106-98-3	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
m,p-xylene	106-56-5 106-62-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
o-xylene	95-47-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Sum of BTEX	---	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Total Xylenes	---	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
EP075(SIM): Phenolic Compound Surrogates								
Phenol	1312-70-3	0.5	%	85.6	81.2	83.8	81.5	85.6
2-Chlorophenol	82551-73-6	0.5	%	91.7	88.9	91.4	88.9	91.7
2,4-Dichlorophenol	116-78-6	0.5	%	72.1	74.9	75.1	76.8	74.9

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 Project: Camsted



Analytical Results

Sample ID				BH03 1.50	BH04 0.50	BH04 1.50	BH04 2.50	BH05 0.50
Substrate: SOE (Notes: SOE)				21-Oct-2021 00:00	21-Oct-2021 00:00	21-Oct-2021 00:00	21-Oct-2021 00:00	21-Oct-2021 00:00
Sampling date / time				ERM2121267-006	ERM2121267-007	ERM2121267-008	ERM2121267-009	ERM2121267-010
Compound	CAS Number	LOQ	Unit	Result	Result	Result	Result	Result
EP075(SIM): PAH Surrogates								
2-Fluorobiphenyl	321-60-3	0.5	%	97.6	93.4	97.6	95.8	98.1
Anthracene-d10	1719-06-5	0.5	%	120	126	113	126	121
6-Terphenyl-d16	1718-51-0	0.5	%	106	105	109	107	113
EP080(OT): VIBTEX Surrogates								
1,2-Dichlorobenzene-D4	17669-07-0	0.2	%	111	114	115	118	119
Toluene-D8	2057-26-5	0.2	%	106	107	112	110	119
4-Bromofluorobenzene	460-00-6	0.2	%	107	111	110	110	107

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 Work Order: EAS-21267
 Client: GEO-ENVIRONMENTAL SOLUTIONS
 Project: Canceled



Analytical Results

Substrate: SOE (Notes: SOE)		Sample ID		BH05 1.50	BH05 2.20	BH06 0.50	BH06 1.50	BH07 0.50
		Sampling date / time		21-Oct-2021 00:00	21-Oct-2021 00:00	21-Oct-2021 00:00	21-Oct-2021 00:00	21-Oct-2021 00:00
Component	CAS Number	LOE	Unit	Result	Result	Result	Result	Result
EA005: Moisture Content (Dried @ 105±10°C)								
Moisture Content	---	LO	%	18.3	16.5	31.5	30.4	25.0
EG005(PD003): Total Metals by ICP-AES								
Arsenic	7440-39-2	5	mg/kg	<5	<5	<5	<5	<5
Barium	7440-39-3	10	mg/kg	20	60	160	30	120
Beryllium	7440-41-7	1	mg/kg	<1	<1	1	<1	1
Boron	7440-42-8	50	mg/kg	<50	<50	<50	<50	<50
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	14	10	30	27	20
Cobalt	7440-48-4	2	mg/kg	10	14	12	5	10
Copper	7440-50-8	5	mg/kg	23	33	34	30	33
Lead	7439-92-1	5	mg/kg	<5	5	13	10	13
Manganese	7439-96-5	5	mg/kg	83	272	173	142	85
Nickel	7440-02-0	2	mg/kg	13	17	18	17	17
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5
Vanadium	7440-62-2	5	mg/kg	41	41	34	60	60
Zinc	7440-06-6	5	mg/kg	18	50	21	23	24
EG007: Total Recoverable Mercury by FAAS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP070(SM05): Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	200-90-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	120-94-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz[a]anthracene	96-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	7180-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz[b]fluoranthene	375-86-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz[k]fluoranthene	207-09-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz[a]pyrene	50-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno[1,2,3-cd]pyrene	190-39-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz[a,h]anthracene	50-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5

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 Client: GEO-ENVIRONMENTAL SOLUTIONS
 Project: Canceled



Analytical Results

Substrate: SOE (Notes: SOE)		Sample ID		BH05 1.50	BH05 2.20	BH06 0.50	BH06 1.50	BH07 0.50
		Sampling date / time		21-Oct-2021 00:00	21-Oct-2021 00:00	21-Oct-2021 00:00	21-Oct-2021 00:00	21-Oct-2021 00:00
Component	CAS Number	LOE	Unit	Result	Result	Result	Result	Result
EP070(SM05): Polynuclear Aromatic Hydrocarbons - Continued								
Benzo[a]hopyrene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
* Sum of polycyclic aromatic hydrocarbons	---	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
* Benzo[a]pyrene TEQ (sum)	---	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
* Benzo[a]pyrene TEQ (sum) LOE	---	0.5	mg/kg	0.6	0.6	0.6	0.6	0.6
* Benzo[a]pyrene TEQ (LOE)	---	0.5	mg/kg	1.2	1.2	1.2	1.2	1.2
EP080(071): Total Petroleum Hydrocarbons								
C6 - C5 Fraction	---	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	---	50	mg/kg	<50	<50	<50	<50	<50
C15 - C20 Fraction	---	100	mg/kg	<100	<100	<100	<100	<100
C20 - C26 Fraction	---	100	mg/kg	<100	<100	<100	<100	<100
* C10 - C26 Fraction (sum)	---	50	mg/kg	<50	<50	<50	<50	<50
EP080(071): Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6, C10	10	mg/kg	<10	<10	<10	<10	<10
* C6 - C10 Fraction minus BTEX (FT)	C6, C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10
* C10 - C16 Fraction	---	50	mg/kg	<50	<50	<50	<50	<50
* C16 - C24 Fraction	---	100	mg/kg	<100	<100	<100	<100	<100
* C24 - C40 Fraction	---	100	mg/kg	<100	<100	<100	<100	<100
* *C10 - C40 Fraction (sum)	---	30	mg/kg	<30	<30	<30	<30	<30
* *C10 - C16 Fraction minus Naphthalene (FT)	---	50	mg/kg	<50	<50	<50	<50	<50
EP080: BTEX								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	100-66-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-67-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta-Xylene	106-58-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	96-47-6	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
EP070(SM05): Phenolic Compound Surrogates								
Phenol	1312-40-3	0.5	%	80.5	89.8	97.4	87.8	86.3
3-Chlorophenol	4395-11-3	0.5	%	91.8	88.8	85.4	84.5	83.9
2,4,6-Trichlorophenol	116-78-4	0.5	%	70.6	74.2	81.2	76.9	88.8

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Project: Campbell



Analytical Results

Sample ID				BH05 1.50	BH05 2.20	BH06 0.50	BH06 1.50	BH07 0.50
Sampling date / time				21-Oct-2021 00:00	21-Oct-2021 00:00	21-Oct-2021 00:00	21-Oct-2021 00:00	21-Oct-2021 00:00
CAS Number				EM02121267-011	EM02121267-012	EM02121267-013	EM02121267-014	EM02121267-015
LOQ				Result	Result	Result	Result	Result
EP075(SM): PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	97.5	95.3	101	101	88.6
Anthracene-d10	1719-06-8	0.5	%	119	122	116	116	127
4-Terphenyl-d16	1718-51-0	0.5	%	110	107	113	115	101
EP065: TPH(VBTEX) Surrogates								
1,2-Dichlorobenzene-D4	1000-07-0	0.2	%	118	114	114	117	109
Toluene-D8	2607-26-5	0.2	%	115	109	106	113	107
4-Bromofluorobenzene	450-00-0	0.2	%	116	114	106	110	102

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Analytical Results

Sample ID				BH07 1.50	Duplicate			
Sampling date / time				21-Oct-2021 00:00	21-Oct-2021 00:00			
CAS Number				EM02121267-016	EM02121267-017			
LOQ				Result	Result			
EA005: Moisture Content (Dried @ 105-110°C)								
Moisture Content	---	1.0	%	17.1	19.5	---	---	---
EG005(EG003): Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	4	---	---	---
Barium	7440-39-3	10	mg/kg	29	599	---	---	---
Bromine	7440-11-7	1	mg/kg	<1	<1	---	---	---
Boron	7440-43-8	50	mg/kg	<50	<10	---	---	---
Cadmium	7440-43-9	1	mg/kg	<1	<1	---	---	---
Chromium	7440-47-3	2	mg/kg	14	17	---	---	---
Cobalt	7440-48-4	2	mg/kg	12	11	---	---	---
Copper	7440-50-8	5	mg/kg	28	32	---	---	---
Lead	7439-92-1	5	mg/kg	5	184	---	---	---
Manganese	7439-96-5	5	mg/kg	22	347	---	---	---
Nickel	7440-02-0	2	mg/kg	16	14	---	---	---
Selenium	7782-49-2	5	mg/kg	<5	<5	---	---	---
Vanadium	7440-62-2	5	mg/kg	21	47	---	---	---
Zinc	7440-66-6	5	mg/kg	17	273	---	---	---
EG005(T): Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	0.2	---	---	---
EP075(SM): Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	0.5	---	---	---
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	2.1	---	---	---
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	---	---	---
Fluorene	86-73-7	0.5	mg/kg	<0.5	1.5	---	---	---
Phenanthrene	85-20-7	0.5	mg/kg	<0.5	<0.5	---	---	---
Anthracene	120-12-7	0.5	mg/kg	<0.5	<1	---	---	---
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	23.9	---	---	---
Pyrene	129-00-0	0.5	mg/kg	<0.5	23.3	---	---	---
Benzo[a]anthracene	56-55-3	0.5	mg/kg	<0.5	16.3	---	---	---
Chrysene	716-01-4	0.5	mg/kg	<0.5	18.8	---	---	---
Benzo[b]fluoranthene	375-14-7	0.5	mg/kg	<0.5	7.4	---	---	---
Benzo[k]fluoranthene	207-08-9	0.5	mg/kg	<0.5	8.1	---	---	---
Benzo[a]pyrene	50-32-6	0.5	mg/kg	<0.5	16.2	---	---	---
Indeno[1,2,3-cd]pyrene	190-39-0	0.5	mg/kg	<0.5	5.4	---	---	---
Dibenz[a,h]anthracene	59-78-3	0.5	mg/kg	<0.5	1.6	---	---	---

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Analytical Results

Substrate: SOL (Notes: SOL)		Sample ID: B487 1.50		Duplicate				
		Sampling date / time		21-Oct-2021 00:00		21-Oct-2021 02:00		
Component		CAS Number	LOQ	Unit	EM2121267-018	EM2121267-017		
					Result	Result		
EP075(SIM): Polynuclear Aromatic Hydrocarbons - Continued								
Benz[a]h(opyrene)	175-24-2	0.5	mg/kg	<0.5	6.2			
Sum of polycyclic aromatic hydrocarbons		0.5	mg/kg	<0.5	132			
Benzo[a]pyrene TEQ (sum)		0.5	mg/kg	<0.5	15.1			
Benzo[a]pyrene TEQ (half LOQ)		0.5	mg/kg	8.6	15.1			
Benzo[a]pyrene TEQ (LOQ)		0.5	mg/kg	1.2	15.1			
EP060(U): Total Petroleum Hydrocarbons								
C8 - C9 Fraction		10	mg/kg	<10	<10			
C10 - C14 Fraction		60	mg/kg	<60	<60			
C15 - C28 Fraction		100	mg/kg	<100	540			
C29 - C36 Fraction		100	mg/kg	<100	230			
C10 - C36 Fraction (sum)		90	mg/kg	<90	540			
EP060(U): Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C8 - C10 Fraction	C8, C10	10	mg/kg	<10	<10			
C8 - C10 Fraction minus BTEX	C8, C10-BTEX	10	mg/kg	<10	<10			
>C10 - C16 Fraction		60	mg/kg	<60	<60			
>C16 - C34 Fraction		100	mg/kg	<100	480			
>C34 - C40 Fraction		100	mg/kg	<100	<100			
>C10 - C40 Fraction (sum)		90	mg/kg	<90	480			
>C10 - C16 Fraction minus Naphthalene		90	mg/kg	<90	<90			
EP060: BTEX								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2			
Toluene	106-68-3	0.5	mg/kg	<0.5	<0.5			
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5			
m,p-xylene	106-56-5 106-62-3	0.5	mg/kg	<0.5	<0.5			
ortho-xylene	95-47-6	0.5	mg/kg	<0.5	<0.5			
Sum of BTEX		0.2	mg/kg	<0.2	<0.2			
Total Xylenes		0.5	mg/kg	<0.5	<0.5			
Naphthalene	91-20-3	1	mg/kg	<1	<1			
EP075(SIM): Phenolic Compound Surrogates								
Phenol	1312-70-3	0.5	%	88.8	87.8			
2-Chlorophenol	82551-73-6	0.5	%	87.6	88.9			
2,4,6-Trichlorophenol	116-76-6	0.5	%	66.4	69.9			

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 Project: Camsted



Analytical Results

Substrate: SOL (Notes: SOL)		Sample ID: B487 1.50		Duplicate				
		Sampling date / time		21-Oct-2021 00:00		21-Oct-2021 02:00		
Component		CAS Number	LOQ	Unit	EM2121267-018	EM2121267-017		
					Result	Result		
EP075(SIM): PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	92.5	88.3			
Anthracene-d10	1719-06-6	0.5	%	116	118			
6-Terphenyl-d16	1718-01-0	0.5	%	106	104			
EP060(SIM): BTEX Surrogates								
1,2-Dichlorobenzene-D4	17669-07-6	0.2	%	116	120			
Toluene-D8	2057-26-5	0.2	%	102	88.1			
4-Bromofluorobenzene	460-00-6	0.2	%	104	93.8			

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Analytical Results

Substrate: WATER		Sample ID:		Rinse:					
Filter: WATER		Sampling date / time:		21-Oct-2021 00:00					
Compound	CAS Number	LOQ	Unit	EHS21267-018					
Result									
EGS021: Total Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L	<0.001					
Boron	7440-42-8	0.05	mg/L	<0.05					
Barium	7440-39-3	0.001	mg/L	0.002					
Beryllium	7440-41-7	0.001	mg/L	<0.001					
Cadmium	7440-43-8	0.001	mg/L	<0.001					
Cobalt	7440-48-4	0.001	mg/L	<0.001					
Chromium	7440-47-3	0.001	mg/L	<0.001					
Copper	7440-50-9	0.001	mg/L	<0.001					
Manganese	7439-96-5	0.001	mg/L	<0.001					
Nickel	7440-00-0	0.001	mg/L	<0.001					
Lead	7439-92-1	0.001	mg/L	<0.001					
Selenium	7782-49-2	0.01	mg/L	<0.01					
Vanadium	7440-62-2	0.01	mg/L	<0.01					
Zinc	7440-06-6	0.005	mg/L	<0.005					
EGS031: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.001	mg/L	<0.001					
EP075(SMB): Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-09-3	1.0	µg/L	<1.0					
Acenaphthylene	206-96-8	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	86-07-8	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					
Benzo[a]anthracene	156-59-3	1.0	µg/L	<1.0					
Chrysene	218-01-9	1.0	µg/L	<1.0					
Benzo[b]fluoranthene	225-59-2	1.0	µg/L	<1.0					
Benzo[k]fluoranthene	207-08-9	1.0	µg/L	<1.0					
Benzo[a]pyrene	50-32-6	0.5	µg/L	<0.5					
Indeno[1,2,3-cd]pyrene	183-38-5	1.0	µg/L	<1.0					
Dibenz[a,h]anthracene	153-70-3	1.0	µg/L	<1.0					
Benzo[g,h,i]perylene	181-26-7	1.0	µg/L	<1.0					
* Sum of polycyclic aromatic hydrocarbons		0.5	µg/L	<0.5					

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Analytical Results

Substrate: WATER		Sample ID:		Rinse:					
Filter: WATER		Sampling date / time:		21-Oct-2021 00:00					
Compound	CAS Number	LOQ	Unit	EHS21267-018					
				Result					
EP05(SIM): Polynuclear Aromatic Hydrocarbons - Continued									
* Benzo[a]pyrene TEQ (sum)		0.5	µg/L	<0.5					
EP06(W): Total Petroleum Hydrocarbons									
C6 - C8 Fraction		20	µg/L	<20					
C10 - C14 Fraction		50	µg/L	<50					
C16 - C20 Fraction		100	µg/L	<100					
C22 - C26 Fraction		50	µg/L	<50					
* C10 - C26 Fraction (sum)		50	µg/L	<50					
EP06(W): Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C13 Fraction	C6, C10	20	µg/L	<20					
* C6 - C13 Fraction minus BTEX	C6, C10-BTEX	20	µg/L	<20					
C10 - C16 Fraction		100	µg/L	<100					
* C10 - C16 Fraction		100	µg/L	<100					
C18 - C40 Fraction		100	µg/L	<100					
* C18 - C40 Fraction (sum)		100	µg/L	<100					
* C10 - C16 Fraction minus Naphthalene (PZ)		100	µg/L	<100					
EP06: BTEX									
Benzene	71-43-2	1	µg/L	<1					
Toluene	108-88-3	2	µg/L	<2					
Ethylbenzene	106-47-4	2	µg/L	<2					
meta- & para-Xylene	128-56-5 156-42-3	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	91-09-3	5	µg/L	<5					
EP05(SIM): Phenolic Compound Surrogates									
Phenol-d6	13127-68-3	1.0	%	25.9					
2-Chlorophenol-d4	22551-73-6	1.0	%	79.3					
2,4,6-Trichlorophenol	118-79-8	1.0	%	90.6					
EP05(SIM): PAH Surrogates									
2-Fluorobiphenyl	321-60-0	1.0	%	86.2					
Anthracene-d10	1718-06-0	1.0	%	94.6					
4-Terphenyl-d14	1718-07-0	1.0	%	94.1					

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**Analytical Results**

Sub-Matrix: WATER		Sample ID:		Rinstate					
Matrix: WATER		Sampling date / time		21-Oct-2021 00:00					
Compound	CAS Number	LOQ	Unit	EMD121267-018	Result				
EP085: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	2	%	87.2					
Toluene-D8	2007-26-5	2	%	166					
4-Bromofluorobenzene	400-00-4	2	%	117					

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**Surrogate Control Limits**

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP075/SMS: Phenolic Compound Surrogates			
Phenol-d6	13127-08-3	54	125
2-Chlorophenol-d4	22051-73-6	63	123
2,4,6-Trichlorophenol	118-79-6	84	122
EP075/SMT: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	61	125
Anthracene-d10	1719-05-8	62	130
4-Terphenyl-d14	1718-51-0	67	133
EP085: TPH/VBTEX Surrogates			
1,2-Dichloroethane-d4	17060-07-0	51	125
Toluene-D8	2007-26-5	93	125
4-Bromofluorobenzene	400-00-4	66	124
Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP075/SMS: Phenolic Compound Surrogates			
Phenol-d6	13127-08-3	10	51
2-Chlorophenol-d4	22051-73-6	30	114
2,4,6-Trichlorophenol	118-79-6	29	155
EP075/SMT: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	30	127
Anthracene-d10	1719-05-8	74	122
4-Terphenyl-d14	1718-51-0	44	124
EP085: TPH/VBTEX Surrogates			
1,2-Dichloroethane-d4	17060-07-0	73	129
Toluene-D8	2007-26-5	70	125
4-Bromofluorobenzene	400-00-4	71	126



Submission to Planning Authority Notice

Council Planning Permit No.	PLN-21-471	Council notice date	5/07/2022
TasWater details			
TasWater Reference No.	TWDA 2022/01054-HCC	Date of response	15/07/2022
TasWater Contact	Phil Papps Oliver Leith (Trade Waste)	Phone No.	0474 931 272 0460 007 105
Response issued to			
Council name	CITY OF HOBART		
Contact details	coh@hobartcity.com.au		
Development details			
Address	175 CAMPBELL ST, HOBART	Property ID (PID)	7162926
Description of development	Multi-Residential Development		
Schedule of drawings/documents			
Prepared by	Drawing/document No.	Revision No.	Date of Issue
Cumulus Studio	Site Plan / J20823-A-001	DA05	23/11/2021
Cumulus Studio	Basement Floor Plan / J20823-A100	DA06	13/01/2022
Cumulus Studio	Ground Floor Plan / J20823-A101	DA07	10/02/2022
Cumulus Studio	Level 01-05 Floor Plans / J20823-A102-A106	DA05	23/11/2021
JMG	Concept Servicing Plan / J173021PH / P03	DA1	19/11/2021
JMG	Sewer Clearance Profile / J173021PH / P-S1	DA1	19/11/2021
Conditions			
Pursuant to the <i>Water and Sewerage Industry Act 2008</i> (TAS) Section 56P(1) TasWater imposes the following conditions on the permit for this application:			
CONNECTIONS, METERING & BACKFLOW			
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 unless it can be demonstrated that the periodic testing of the system will not have a significant negative effect on our network and the minimum service requirements of other customers serviced by the network. To this end break tanks may be required with the rate of flow into the break tank controlled so that peak flows to fill the tank do not also cause negative effect on the network.			
2. Any removal/supply and installation of water meters and/or the removal of redundant and/or installation of new and modified property service connections must be carried out by TasWater at the developer's cost.			
3. Prior to use of the development, any water connection utilised for the development must have a backflow prevention device and water meter installed, to the satisfaction of TasWater.			
TASWATER ASSET PROTECTION & ACCESS			
4. The developer must take all precautions to protect existing TasWater infrastructure. Any damage caused to existing TasWater infrastructure during the construction period must be promptly			



reported to TasWater and repaired by TasWater at the developer's cost.

5. Ground levels over the TasWater assets must not be altered without the written approval of TasWater.
6. The developer must ensure unfettered access at all times to TasWater's sewer maintenance hole (Asset A444950).

56W CONSENT

7. Prior to the issue of the Certificate for Certifiable Work (Building) and/or (Plumbing) by TasWater the applicant or landowner as the case may be must make application to TasWater pursuant to section 56W of the Water and Sewerage Industry Act 2008 for its consent in respect of that part of the development which is built over and/or within two metres of TasWater infrastructure.

TRADE WASTE

8. Prior to the commencement of operation the developer/property owner must obtain Consent to discharge Trade Waste from TasWater.
9. The developer must install appropriately sized and suitable pre-treatment devices prior to gaining Consent to discharge including but not limited to sink and floor wastes for all commercial food prep areas.
10. The Developer/property owner must comply with all TasWater conditions prescribed in the Trade Waste Consent.

DEVELOPMENT ASSESSMENT FEES

11. The applicant or landowner as the case may be, must pay a development assessment fee of \$723.84 to TasWater, as approved by the Economic Regulator and the fee will be indexed, until the date paid to TasWater. The payment is required within 30 days of the issue of an invoice by TasWater.

Advice

General

For information on TasWater development standards, please visit <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>

Submetering

As of July 1 2022, TasWater's Sub-Metering Policy no longer permits TasWater sub-meters to be installed for new developments. Please ensure plans submitted with the application for Certificate(s) for Certifiable Work (Building and/or Plumbing) reflect this. For clarity, TasWater does not object to private sub-metering arrangements. Further information is available on our website (www.taswater.com.au) within our Sub-Metering Policy and Water Metering Guidelines.

Service Locations

Please note that the developer is responsible for arranging to locate the existing TasWater infrastructure and clearly showing it on the drawings. Existing TasWater infrastructure may be located by a surveyor and/or a private contractor engaged at the developers cost to locate the infrastructure.

The location of this infrastructure as shown on the GIS is indicative only.

- (a) A permit is required to work within TasWater's easements or in the vicinity of its infrastructure.
Further information can be obtained from TasWater
- (b) TasWater has listed a number of service providers who can provide asset detection and location services should you require it. Visit www.taswater.com.au/Development/Service-location for a list of



companies.

56W Consent

The plans submitted with the application for the Certificate for Certifiable Work (Building) and/or (Plumbing) will need to show footings of proposed buildings located over or within 2.0m from TasWater pipes and will need to be designed by a suitably qualified person to adequately protect the integrity of TasWater's infrastructure, and to TasWater's satisfaction, be in accordance with AS3500 Part 2.2 Section 3.8 to ensure that no loads are transferred to TasWater's pipes. These plans will need to also include a cross sectional view through the footings which clearly shows;

- (a) Existing pipe location and depth and proposed finished surface levels over the pipe;
- (b) Minimum above ground clearance must be no less than 3.0m;
- (c) The line of influence from the base of the footing must pass below the invert of the pipe and be clear of the pipe trench and;
- (d) A note on the plan indicating how the pipe location and depth were ascertained.
- (e) The location of the property service connection and sewer inspection opening (IO).

Boundary Trap Area

The proposed development is within a boundary trap area and the developer will need to provide a boundary trap that prevents noxious gases or persistent odours back venting into the property's sanitary drain. The boundary trap is to be contained within the property boundaries and the property owner remains responsible for the ownership, operation and maintenance of the boundary trap.

Trade Waste

If hot food is being prepared in the commercial café a grease arrestor may be required under the Trade Waste pre-treatment guidelines. If no hot food or hot foods limited to service of foods cooked/prepared off site such as slices of cake, toasted sandwiches, pies etc plus coffee then a grease arrestor is unlikely to be required. If service is restricted to only coffee then category 0 may apply please see the 2022 pretreatment guidelines and Customer Category Guidelines for details

<<https://www.taswater.com.au/customers/businesses/trade-waste/commercial-trade-waste-customers>>

Prior to any Building and/or Plumbing work being undertaken, the applicant will need to make an application to TasWater for a Certificate for Certifiable Work (Building and/or Plumbing). The Certificate for Certifiable Work (Building and/or Plumbing) must accompany all documentation submitted to Council. Documentation must include a floor and site plan with:

- Location of all pre-treatment devices i.e. grease arrestor;
- Schematic drawings and specification (including the size and type) of any proposed pre-treatment device and drainage design; and
- Location of an accessible sampling point in accordance with the TasWater Trade Waste Flow Meter and Sampling Specifications for sampling discharge.
- Details of the proposed use of the premises, including the types of food that will be prepared and served; and
- The estimated number of patrons and/or meals on a daily basis.

At the time of submitting the Certificate for Certifiable Work (Building and/or Plumbing) a Trade Waste Application form is also required. If the nature of the business changes or the business is sold, TasWater is required to be informed in order to review the pre-treatment assessment.

The application forms are available at <http://www.taswater.com.au/Customers/Liquid-Trade-waste/Commercial>



Declaration			
The drawings/documents and conditions stated above constitute TasWater's Submission to Planning Authority Notice.			
TasWater Contact Details			
Phone	13 6992	Email	development@taswater.com.au
Mail	GPO Box 1393 Hobart TAS 7001	Web	www.taswater.com.au

**RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME 23364	FOLIO 1
EDITION 2	DATE OF ISSUE 27-Jul-1994

SEARCH DATE : 17-May-2021

SEARCH TIME : 11.29 AM

DESCRIPTION OF LAND

City of HOBART

Lot 1 on Diagram 23364

Derivation : Part of 4 Acres (Section B.2.) Gtd. to J. Bisdee.

Prior CT 4129/69

SCHEDULE 1

B785251 TRANSFER to BUILDING GROUP APPRENTICESHIP SCHEME LTD
Registered 27-Jul-1994 at 12.01 PM

SCHEDULE 2

Reservations and conditions in the Crown Grant if any

BENEFITING EASEMENT: Right of Carriageway over the Right of
Way 2.59 wide marked E.G.H.C. on Diagram No. 23364

BURDENING EASEMENT: Right of Carriageway [appurtenant to Lots
1 and 2 on Sealed Plan No. 22529 and the land in
Conveyance No. 44/8439) over the Right of Way 0.91
wide marked D.C.E.F. on Diagram No. 23364

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations



MEAS. IN METRES
HOBART

D.23364

BROOKER AVENUE

(402/300.)

(D.23363)

(S.P.22529)

1.

2.

35° 19' 40.28

488m²

12.17

305° 00'

CAMPBELL STREET

125° 15'

12.12

215°

412m²

36° 09' 40"

36.21

255.53

A B C D E F G H J

RIGHT OF WAY 6.00 WIDE

(D.23371)

RIGHT OF WAY 0.91 WIDE

RIGHT OF WAY 2.59 WIDE

RIGHT OF WAY 2.59 WIDE &
LETTERS A.B.C.D.E.F.G.H.J ADDED 16-5-94

**RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME 23364	FOLIO 2
EDITION 2	DATE OF ISSUE 27-Jul-1994

SEARCH DATE : 17-May-2021

SEARCH TIME : 11.30 AM

DESCRIPTION OF LAND

City of HOBART

Lot 2 on Diagram 23364

Derivation : Part of 4 Acres (Section B.2.) Gtd. to J. Bisdsee.

Prior CT 4129/70

SCHEDULE 1

B785251 TRANSFER to BUILDING GROUP APPRENTICESHIP SCHEME LTD
Registered 27-Jul-1994 at 12.01 PM

SCHEDULE 2

Reservations and conditions in the Crown Grant if any

BENEFITING EASEMENT: Right of Carriageway over the Right of
Way 2.59 wide marked B.J.H.G.E.C.B. on Diagram No.
23364

BURDENING EASEMENT: Right of Carriageway [appurtenant to the
land comprised in Conveyance No. 44/8439) over the
Right of Way 0.91 wide marked A.B.C.D. on Diagram No.
23364

BURDENING EASEMENT: Right of Carriageway [appurtenant to Lots
1 and 2 on Sealed Plan No. 22529) over the Right of
Way 0.91 wide marked A.B.C.D. on Diagram No. 23364
and the Right of way 6.00 wide shown on Diagram No.
23364

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations



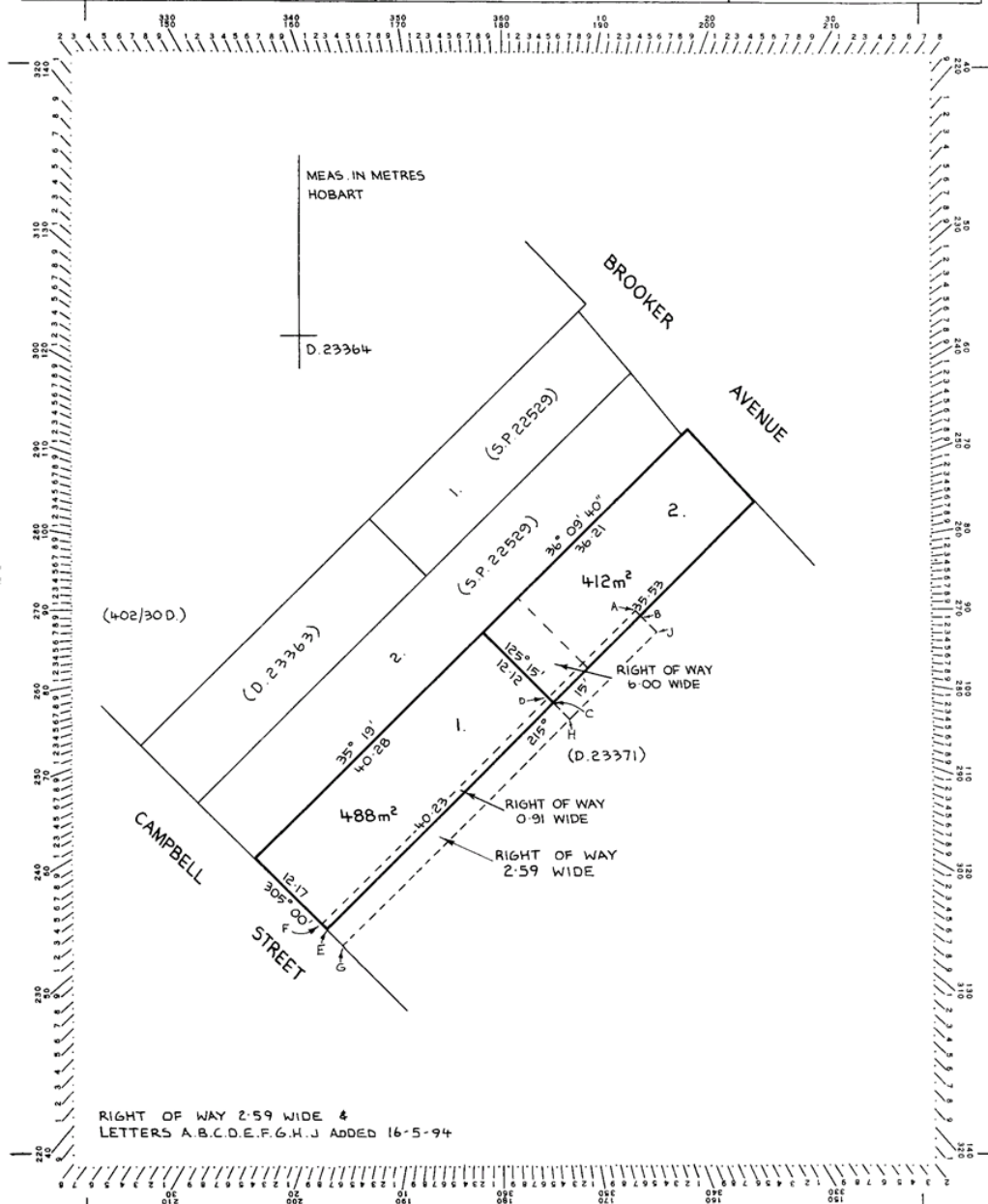
FOLIO PLAN

RECORDED OF TITLES

Issued Pursuant to the Land Titles Act 1980



Owner: X. 4-079	PLAN OF SURVEY by Surveyor..... of land situated in the CITY OF HOBART	Registered Number: D. 23364
Title Reference: CONV. 58-2120		Approved Effective from 1.6. NOV 1934 J. Brown ACTING DEPUTY Recorder of Titles
Grantee: PART OF (4-0-0) JOHN BISCOE.	SCALE 1:500 MEASUREMENTS IN METRES	



**RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME 22529	FOLIO 3
EDITION 1	DATE OF ISSUE 26-Apr-1995

SEARCH DATE : 17-May-2021

SEARCH TIME : 11.32 AM

DESCRIPTION OF LAND

City of HOBART

Lot 3 on Sealed Plan 22529

(Formerly Lots 1 & 2 on Sealed Plan 22529)

Derivation : Part of 4 Acres (Section B.2.) Gtd. to J Bisdee

Prior CT 4129/67

SCHEDULE 1

B785252 TRANSFER to BUILDING GROUP APPRENTICESHIP SCHEME LTD

SCHEDULE 2

Reservations and conditions in the Crown Grant if any

SP 22529 EASEMENTS in Schedule of Easements

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations



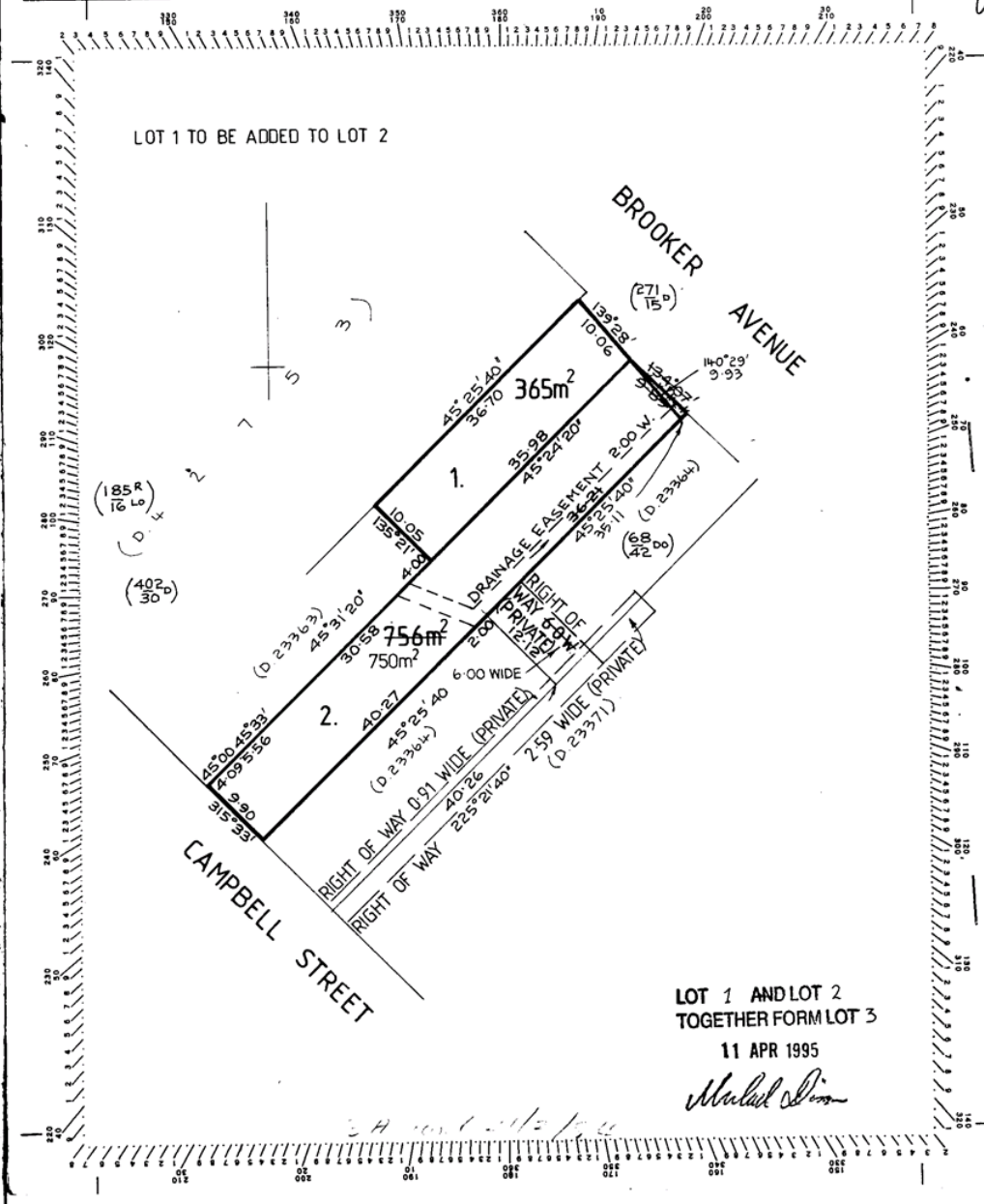
FOLIO PLAN

RECORDED OF TITLES

Issued Pursuant to the Land Titles Act 1980



<p>Owner: T.G. & M. Mahoney & L.B.A. Investments Pty. Ltd. B.R.S.H. Investments Pty. Ltd.</p>	<p>PLAN OF SURVEY by Surveyor <u>N.D. Leary</u> of land situated in the</p>	<p>Registered Number: S. P22529</p>
<p>Title Reference: Convs 44-4984 & 58-2120 & 44-8439.</p>	<p>CITY OF HOBART</p>	<p>Effective from: <u>16 NOV 1984</u></p>
<p>Grantee: Portion Of 4acres Gtd to John Bisdee</p>	<p>SECTION B2</p>	<p><i>[Signature]</i> ACTING DEPUTY Recorder of titles</p>
<p>SCALE 1: 1'500 MEASUREMENTS IN METRES</p>		



**RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME 23363	FOLIO 1
EDITION 3	DATE OF ISSUE 14-Sep-2010

SEARCH DATE : 17-May-2021

SEARCH TIME : 11.35 AM

DESCRIPTION OF LAND

City of HOBART
Lot 1 on Diagram 23363
Being the land described in Conveyance No. 44/4984
Excepting thereout Lot 1 on Sealed Plan No. 22529
Derivation : Part of 4 Acres (Sec. B.2.) Gtd. to J. Bisdee
Prior CT 4129/68

SCHEDULE 1

C948373 TRANSFER to BUILDING GROUP APPRENTICESHIP SCHEME LTD
Registered 14-Sep-2010 at noon

SCHEDULE 2

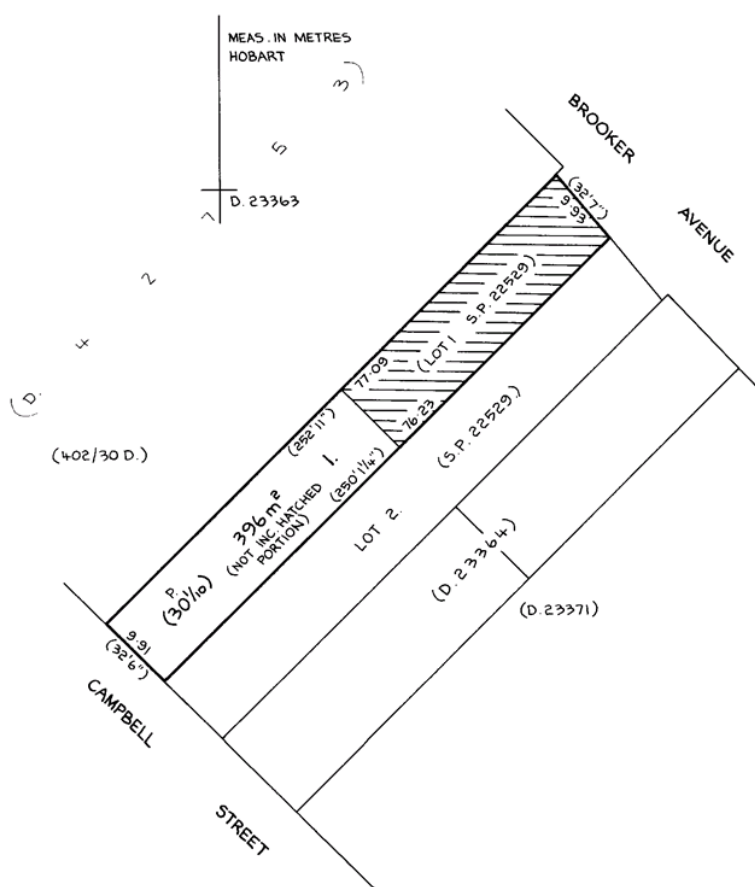
Reservations and conditions in the Crown Grant if any
BENEFITING EASEMENT: Right of Drainage over the drainage
easement shown on Sealed Plan No. 22529

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations



APPROVED FROM..... 16 NOV 1984 <i>J. Brault</i> ACTING DEPUTY RECORDER OF TITLES	CONVERSION PLAN	REGISTERED NUMBER D.23363
FILE NUMBER X 4079	GRANTEE PART OF (4-0-0) JOHN BISDEE.	M. YOUNG 22-6-84



**RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



SEARCH OF TORRENS TITLE

VOLUME 140732	FOLIO 1
EDITION 3	DATE OF ISSUE 28-Jan-2011

SEARCH DATE : 03-Jul-2020

SEARCH TIME : 09.53 AM

DESCRIPTION OF LAND

City of HOBART
 Lot 1 on Plan 140732
 Being the land described in Conveyance 62/3280, Being the land described in Conveyance No. 44/8439
 Derivation : Part of 4 Acres (Section B.2.) Gtd. to J. Bisdee.
 Derived from A16172
 Prior CTs 123139/1 and 23371/1

SCHEDULE 1

B577065, B810602 & C437756 TRANSFER to TASMANIAN MEAT
 WHOLESALERS PTY LTD

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
 BENEFITING EASEMENT: (appurtenant to the land marked HKLM on P. 140732) a Right of Carriageway over the Right of Way 0.91 wide shown on P.140732
 BURDENING EASEMENT: Right of Carriageway [appurtenant to the land in Conveyance No. 44/5050 and Lots 1 and 2 on Sealed Plan No. 22529) over the Right of Way 2.59 Wide marked EFGH on P.140732
 BURDENING EASEMENT: a right of carriage way for the owner or owners for the time being of the land described in Indenture of Conveyance 33/2120 over the Right of Way 2.59 Wide marked IJGH on P.140732
 67/7169 Benefiting Easement (appurtenant to the land marked LQPONM on P.140732) Party Wall Easement over the wall marked "A" "B" "C" "D" on Plan 140732
 67/7036 BURDENING EASEMENT: Right for Eaves and Spouting overhang (appurtenant to Lot 1 on Plan No.51812) over the land marked Easement 0.50 Wide shown on Plan No. 140732
 C509575 ADHESION ORDER under Section 110 of the Local Government (Building and Miscellaneous Provisions) Act 1993 Registered 28-Apr-2004 at noon
 C995946 MORTGAGE to Douglas Wayne Woulleman King and Susan



RESULT OF SEARCH

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



Woulleman King Registered 28-Jan-2011 at 12.01 PM

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

**FOLIO PLAN**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



OWNER 123139-1 CT. FOLIO REFERENCE 23371-1 CT. GRANTEE		PLAN OF TITLE LOCATION CITY OF HOBART SEC.B2 FIRST SURVEY PLAN No. COMPILED BY LDRB SCALE 1: 1500 LENGTHS IN METRES		Registered Number P.140732 APPROVED 5 MAR 2004 <i>Alice Kawa</i> Recorder of Titles
MAPSHEET MUNICIPAL CODE No. 5225-42 (III4)	LAST UPJ No 2100524	LAST PLAN No. P.123139,D.23371	ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN	

(P.22529)
 (D.23364)
 0.91
 74.32
 2.59
 13.87 3 BGS.
 28.54
 (P.51812)
 67.76 IN 3 BGS.
 13.72
 32.31
 EASEMENT 0.50 WIDE
 EASEMENT 0.50 WIDE ADDED
 TO PLAN PURSUANT TO
 SEC. 139 LAND TITLES ACT 190
Alice Kawa 21/05/2009
 RECORDER OF TITLES DATE
 CL



JMG Ref: 173021PH
Council Ref: PLN-21-471

22nd January 2021

Mr Ben Ikin
Hobart City Council
Via Online Development Services Portal

Attention: City Planning

Dear Mr Ikin

APPLICATION NO. PLN-21-471 - 175 CAMPBELL STREET & 177 CAMPBELL STREET & 179 CAMPBELL STREET & 169-173 CAMPBELL STREET, HOBART - PARTIAL DEMOLITION, ALTERATIONS, NEW BUILDING FOR 26 MULTIPLE DWELLINGS, FOOD SERVICES, BUSINESS AND PROFESSIONAL SERVICES, GENERAL RETAIL AND HIRE, AND SUBDIVISION (LOT CONSOLIDATION)

Please refer to the following with regards to the 'request for additional information letter' received from Hobart City Council, dated 22nd December 2022.

An RFI response has been lodged on the 14th of January, the additional information for the RFI response is addressed below.

1. General Manager's Consent

- A revised General Manager Consent Application has been sent to coh@hobartcity.com.au on the 18th of February.

2. A series of reports/plans have been updated including:

- Architectural Plans - Appendix C (removing the garden walls from the easement);
- Landscape Architectural Plans - Appendix M (removing the garden walls from the easement);
- Engineering Plans - Appendix H (removing the garden walls from the easement and including the sectional details/notes suggested at our meeting); and
- Flooding Report - Appendix I (including a direct reference to H5 scenarios).

3. Stormwater

These matters have been addressed in the revised Flood Report (Appendix I) and Concept Services Plans (Appendix H) in the attached planning report.

117 Harrington Street
Hobart 7000
Phone (03) 6231 2555
Fax (03) 6231 1535
infohbt@jmg.net.au

49-51 Elizabeth Street
Launceston 7250
Phone (03) 6334 5548
Fax (03) 6331 2954
infohbt@jmg.net.au

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



In response to E15.5.2 Flussigs advises:

“Section 2.4 results of the Flooding report states that solid walls were replaced with cyclone fencing to prevent the increase in flooding on neighbouring properties. This is then demonstrated in the below sections (in red) for each of the performance criteria

E15.7.5 Landfill, or solid walls greater than 5 m in length and 0.5 m in height, must satisfy all the following:

- (a) no adverse affect on flood flow over other property through the displacement of overland flows; Section 2.4.1 shows no change in depth and thus no change in extent/displacement of flows on the properties immediately downstream.*
- (b) the rate of stormwater discharge from the property must not increase; Section 2.4.2 shows the comparison between pre and post discharge from the property.*
- (c) stormwater quality must not be reduced from pre-development levels. This is not highlighted in the request however if there is no change in depth and velocity then the quality (erosion potential) stays the same.*

E15.5.2 - Evidence a structure will withstand hydrostatic and hydrodynamic forces

Under 3.0 Hazards we provide the maximum depth and velocity experienced by the structures and advice that all structures need to be assessed for hydrostatic and hydrodynamic forces.

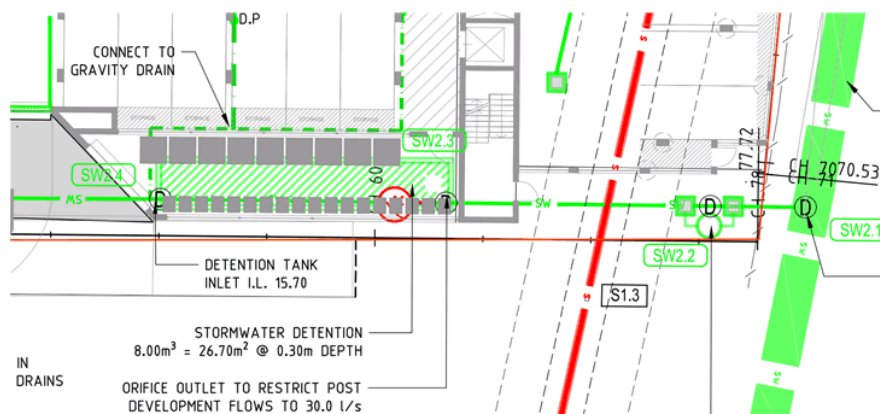
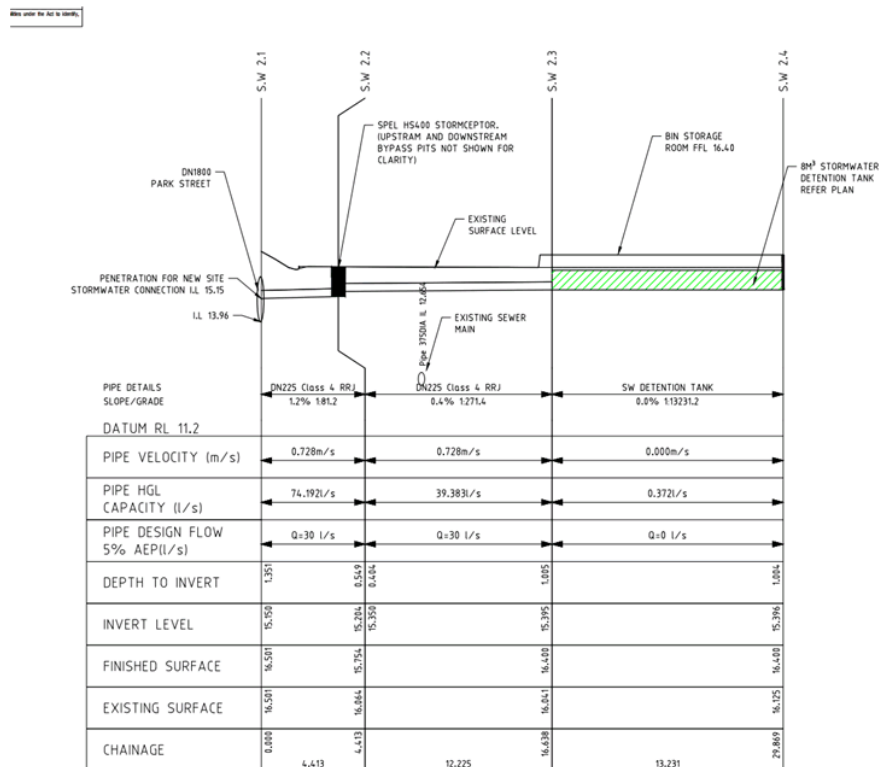
This is again addressed under 5.0 Recommendations

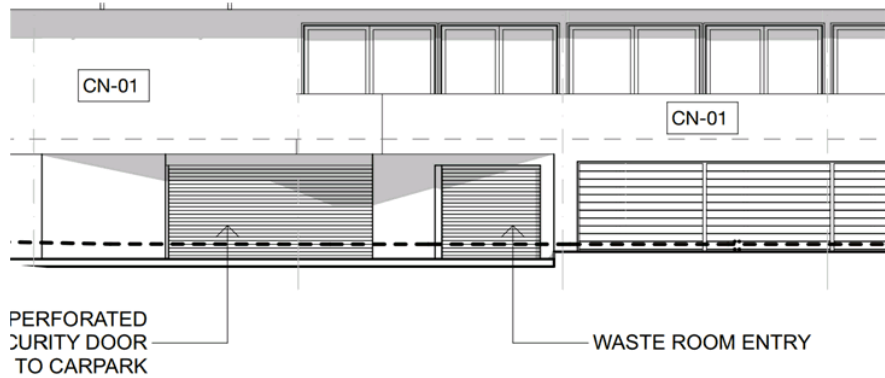
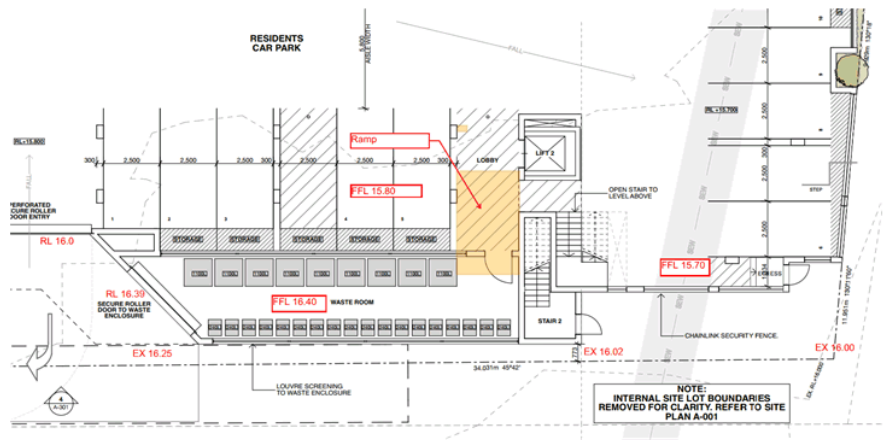
As stated in the meeting we do not provide structural certification and therefore cannot do any more than state the requirements”.

In response to the floor level query, JMG engineers advise:

“Summary of IND2 issue - The levels of bin store are not shown on Architects plan and elevations, the levels default to those on the engineering plans - as such there is no inconsistency”.

IND 2	<p>Site Plan and Elevations / sections showing the extent and depth of both the critical 1% AEP as at 2100 and 5% AEP flood events.</p> <p><i>Advice: Council notes the JMG carpark plan, private stormwater long-section, and architectural elevations do not appear consistent re basement floor levels.</i></p>
--------------	--







We trust this satisfies Council's request and we can move swiftly to advertising the proposal, however, if further information or clarification is required with respect to this request, please contact me on 6231 2555 or at planning@jmg.net.au.

Yours faithfully

JOHNSTONE MCGEE & GANDY PTY LTD

A handwritten signature in blue ink, appearing to read 'Mat Clark', is written over a faint, light blue circular stamp.

Mat Clark
PRINCIPAL/SENIOR TOWN PLANNER



JMG Ref: 173021PH
Council Ref: PLN-21-471

23rd June 2022

Mr Ben Ikin
Hobart City Council
Via Online Development Services Portal
Cc John Fisher

Attention: City Planning

Dear Mr Ikin

APPLICATION NO. PLN-21-471 - 175 CAMPBELL STREET & 177 CAMPBELL STREET & 179 CAMPBELL STREET & 169-173 CAMPBELL STREET, HOBART - PARTIAL DEMOLITION, ALTERATIONS, NEW BUILDING FOR 26 MULTIPLE DWELLINGS, FOOD SERVICES, BUSINESS AND PROFESSIONAL SERVICES, GENERAL RETAIL AND HIRE, AND SUBDIVISION (LOT CONSOLIDATION)

Please refer to the following with regards to the 'request for additional information letter' received from Hobart City Council, dated 18th March 2022. We have updated the planning report and included updated Appendices which are referred to below.

Stormwater Code

1. Sw 6 partially satisfied

A stormwater drainage design, including supporting calculations and report which accommodates all storms with an ARI of 20 years

These matters have been addressed in the revised Flood Modelling Report (Appendix I) and Concept Services Report (Appendix H) in the attached planning report.

Refer also to June 2022 revision of the Concept Services Report.

2. INFsw1A

Scaled and dimensioned site plan and sections showing the vertical and horizontal clearances from the works to the outside of the Council mains.

Refer Figures 6 & 7 of the June 2022 revision of the Concept Services Report for the DN525 and DN1800 pipes respectively.

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Hobart 7000
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infohbt@jmg.net.au

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Fax (03) 6331 2954
infohbt@jmg.net.au

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



Inundation Prone Areas Code

3. IND 1 A site specific flood hazard report

A site specific flood hazard report including:

The risk of inundation to the site, 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 (18% increase in

rainfall intensity and sea level rise)). Clearly 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 for the intended life of the use or development;

5. Modelling/ discussion must also address higher probability flood events; and

6. Identification of which hazard bands the use of the development would be within - where on the ARR curves Safety

Design Criteria Chapter 7 7.2.7 (Figure 6.7.9) and what mitigation is proposed to reduce the risk as far as possible.

These items have been addressed in the Flussig Engineers Revision 03 report (Appendix I) Stormwater Management Plan (Appendix M), as well as the June 2022 revision of the Concept Services Report (Appendix H).

The updated Flussig report shows a duration to maximum flow (hence depth) of around 13 minutes, slightly longer than previous modelling. The water depth in the car park rises from an initial noticeable depth of 50mm to maximum in a period of around 9.5 minutes (refer Fig. 8 of the Flussig report). The Concept Services Report recommends a Flood Emergency Management Plan which includes appointment of flood wardens, audio and visual alarms (with battery back-up) and a cable gate across the vehicle access to prevent vehicular access/egress but allow pedestrian egress. The trigger for the alarm/cable gate should be at 50mm water depth in the basement.

IND 2 Site Plan and Elevations / sections

Refer to June 2022 revision of the Concept Services Report and Appendices.



Potentially Contaminated land

A 'Contamination Management Plan' as required by the 'Environmental Site Assessment'

A full Environmental Site Assessment including borehole contamination data is included in Appendix F of the updated planning assessment.

We trust this satisfies Council's request and we can move swiftly to advertising the proposal, however, if further information or clarification is required with respect to this request, please contact me on 6231 2555 or at planning@jmg.net.au.

Yours faithfully

JOHNSTONE MCGEE & GANDY PTY LTD

A handwritten signature in blue ink, appearing to read 'Mat Clark', is positioned below the company name.

Mat Clark
PRINCIPAL/SENIOR TOWN PLANNER



JMG Ref: 173021PH
Council Ref: PLN-21-471

14th January 2021

Mr Ben Ikin
Hobart City Council
Via Online Development Services Portal

Attention: City Planning

Dear Mr Ikin

APPLICATION NO. PLN-21-471 - 175 CAMPBELL STREET & 177 CAMPBELL STREET & 179 CAMPBELL STREET & 169-173 CAMPBELL STREET, HOBART - PARTIAL DEMOLITION, ALTERATIONS, NEW BUILDING FOR 26 MULTIPLE DWELLINGS, FOOD SERVICES, BUSINESS AND PROFESSIONAL SERVICES, GENERAL RETAIL AND HIRE, AND SUBDIVISION (LOT CONSOLIDATION)

Please refer to the following with regards to the 'request for additional information letter' received from Hobart City Council, dated 22nd December 2022.

The required additional information is addressed in the sequence below.

1. General Manager's Consent

- A revised General Manager Consent Application has been sent to coh@hobartcity.com.au on the 13th of January.

2. Planning

- The heights of the buildings are dimensioned on the updated plans;
- The planning report is updated to the current set of architectural plans and has been uploaded onto the planning portal;

3. Open Space

- There was an inconsistency between the survey and the tree survey used for the architectural plans. This has been corrected in favour of the tree survey which shows two trees to be removed in the Brooker Highway reserve;
- The tree survey has been included in the Planning Report;
- We understand there may be a charge for tree removal in the road reserve;

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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



4. Parking and Access

The Concept Services Report (Appendix H) and Traffic Impact Assessment (Appendix G) within the planning report contains this information. There have been some updates to these documents, and they are located in the Updated Planning Report attached.

The DDA spaces are not required and thus will not be marked, however, they will remain for allocation to accessible capable apartments should that be required.

The tandem spaces have been increased in width to 2.6m.

Also, we confirm, there are 35 car parks for 31 apartments.

PA 9

Whilst there is no requirement to provide a Waste Management Plan under the planning scheme, we have updated the previously submitted Waste Management Plan, to include limitations on the delivery times to avoid conflicts on the accessway and the proposed turning arrangements.

5. Roads - Driveway

Long sections of the driveways have been provided. Compliance with the IPWEA standards is typically achieved by the condition in the detailed design and thus is not required on the planning drawings. Notwithstanding this, we have added the notes as requested.

6. Stormwater

These matters have been addressed in the revised Flood Modelling Report (Appendix I) and Concept Services Report (Appendix H) in the attached planning report. We understand this is still under assessment by Council engineers.

7. Protection of Council Infrastructure - Stormwater

These matters have been addressed in the revised Flood Modelling Report (Appendix I) and Concept Services Report (Appendix H) in the attached planning report. We understand this is still under assessment by Council engineers.

8. Inundation Prone Areas Code

These matters have been addressed in the revised Flood Modelling Report (Appendix I) and Concept Services Report (Appendix H) in the attached planning report. We understand this is still under assessment by Council engineers.



We trust this satisfies Council's request and we can move swiftly to advertising the proposal, however, if further information or clarification is required with respect to this request, please contact me on 6231 2555 or at planning@jmg.net.au.

Yours faithfully

JOHNSTONE McGEE & GANDY PTY LTD

A handwritten signature in blue ink, appearing to read 'Mat Clark', is written over a faint, light blue circular stamp.

Mat Clark
PRINCIPAL/SENIOR TOWN PLANNER



ATTACHMENT A

General Manager Consent

WASTE MANAGEMENT PLAN

BUILDING GROUP APPRENTICESHIP SCHEME LTD

175, 177 & 179 Campbell Street

NOVEMBER 2021

Johnstone McGee & Gandy Pty Ltd

ABN 76 473 834 852 ACN 009 547 139

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Issuing Office: 117 Harrington Street, Hobart 7000**JMG Project No.** 173021PH**Document Issue Status**

Ver.	Issue Date	Description	Originator		Checked		Approved	
2.0	20.11.21	Draft Report	MMM	23/11	KH	23/11	MSC	

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- Estimates have been prepared on the basis of information to hand at the time.
- Estimates are order of cost. They are not quoting, nor based on quotes and are not upper limit of cost.
- Estimates are not based on measured quantities or a defined scope of works.
- Unless stated otherwise estimates are exclusive of GST, engineering fees, market escalation, associated builder's works, builder's margins, design contingency, project contingency.
- As project scope becomes better defined it is strongly recommended that estimates are updated.

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1. Introduction

JMG Engineers and Planners have been engaged by SolutionsWon Group to prepare a Waste Management Plan for a mixed-use development at 175, 177 and 179 Campbell Street, Hobart.

The proposal involves the demolition of some existing buildings, changing the use of remaining existing buildings and new mix-use multiple dwelling development.

This report serves to provide details of waste management on site.

2. Site Location & Context



Figure 1. Location of Subject Site

The proposed development is located at 175, 177 and 179 Campbell Street, Hobart. The subject site is located just under 450m from north of the Hobart Central Business zone. The landowner is the Tasmanian Building Group Apprenticeship Scheme Ltd.

The proposed development will require works on multiple titles.

Existing buildings within 100m of the development site are generally single or double-storey displaying a mix of styles including:

- Commercial buildings adjoining the development site to the north-west and south-east, as well as on the southern side of Campbell Street; and
- Residential style buildings to the north-west of the development site and on the southern side of Campbell Street.

3. Proposed Use & Development

The proposed development is for:

- Demolition of the following:
 - the commercial building and concrete block office building to the rear at 175 Campbell Street;
 - the 'lean-to' additions, the timber shed and patio to the rear of the residential dwelling at 179 Campbell Street;
 - the existing front ramp and landscaping in the front of 177 and 179 Campbell Street;
- Adhesion of four lots to create a single development site area of 2420m²;
- Refurbishment of the existing residential dwellings at 177 and 179 Campbell Street;
- Development of a 6-storey mixed-use building with basement car parking below the natural ground level:
 - A basement level containing:
 - 35 car parking spaces;
 - Ground floor area centred around a pedestrian circulation spine (including a central courtyard) off which access is provided to:
 - 4 x commercial buildings, three of which front onto Campbell Street (two are existing heritage buildings);
 - 1 x amenity room;
 - 1 x two-bedroom apartment
 - 5 x two-storey townhouses;
 - 3 x one-bedroom apartments;
 - The Second floor contains:
 - 3 x one-bedroom apartments;
 - 5 x two-bedroom apartments;
 - The third floor contains:
 - 3 x two-bedroom apartments
 - 4 x three bedroom sky home apartments;
 - 4 x three bedroom apartments;
 - The fourth floor contains:
 - 3 x three bedroom apartments;
 - 1 x communal rooftop terrace
 - The fifth floor contains:
 - the second storey for sky home apartments and three-bedroom apartments.

The basement contains 35 car parking spaces with 22 storage areas and a 58m² waste room. The vehicle access will partially use the subject site at 175 Campbell Street and the right of way from 169-173 Campbell Street (Tasmanian Meat Wholesalers).

There are two commercial buildings, designated C01 and C02 on the Proposal Plans (drawing J20823-A-101), on the ground floor. An amenity room, a master switchboard room and fire three bathrooms (one for disability) are also provided with the development.

4. Waste Handling

There are two commercial buildings, designated C01 and C02 on the Proposal Plans (drawing J20823-A-101- Appendix A), on the ground floor. It assumes two of the commercial buildings to be a small supermarket and a hair salon.

The proposed development also involves 31 dwellings on site:

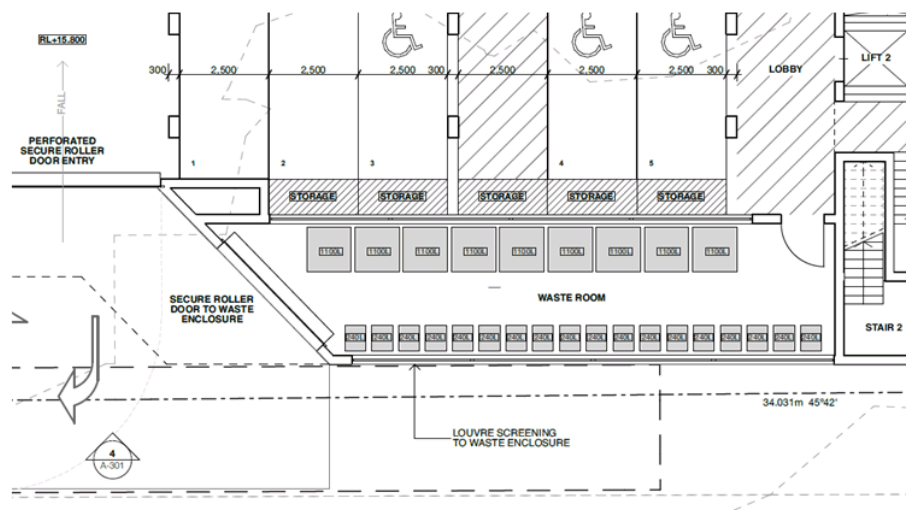
- 6 x one-bedroom apartments
- 9 x two-bedroom apartments
- 11 x three-bedroom apartments
- 5 x townhouses

The waste management services are to be provided by Hobart City Council and/or private contractors.

The basement contains 35 car parking spaces with 22 storage areas and a 58m² waste room (Figure 2). The waste room has a secured roller door for waste collection and another door connects the lobby. There are mainly four waste streams for the proposed development: general waste, recycle waste, garden organics waste and commercial waste.

The waste room comprises eighteen 240L general waste bins and nine 1100L recycle bins.

The waste bins associated with the residential and commercial Uses are held within the designated waste room and will be collected by the waste contractor each week on the designated waste collection day.







5. Waste Generation



Figure 3 demonstrates the approximate general volume of waste for each week.



Given the proposed and assumed Uses the total waste generation for the site produces approximately 9019L of general waste and 6242L of recycling waste.

The spare capacity will be allocated from the recycling bins to general waste bins and garden organic waste bins. As such, the proposed bins have sufficient capacity for the total waste volume of the proposed development.

Dwelling waste and recycling materials				
Number of individual dwellings?	5			
Number of 3 bedroom apartments	11			
Number of 2 bedroom apartments	9			
Number of 1 bedroom apartments	6			
Weekly generation				
 Organics 1155L	 Non-organics 2145L	=	 Garbage 3300L	 Recycling 3300L

Sustainability Victoria conducted the Victorian Statewide Garbage Bin Audit – Food Waste 2016, to analyse the number of items in a garbage bin, including food waste. The audit found that approximately 35% of the garbage bin is made up of food waste. Therefore, this has been factored into the above calculation rates.

Commercial food premises	
Type	Area in m2
Restaurants	0 m2
Supermarkets	68 m2
Convenience	0 m2
Cafe	111 m2
Takeaway	0 m2
Butcher	0 m2
Delicatessen	0 m2
Fish shop	0 m2
Greengrocer	0 m2
Weekly generation	
 Garbage 5473L	 Recycling 2696L

Commercial non-food premises	
Type	Area in m2
Education	0 m2
Offices	100 m2
Licensed club	0 m2
Shops non-food	0 m2
Showrooms	0 m2
Warehouse	0 m2
Cattery	0 m2
Childcare	0 m2
Gym	0 m2
Hairdresser	42 m2
Weekly generation	
	Garbage 246L
	Recycling 246L

Dwellings			
Organics	Non-Organics	Garbage	Recycling
1155L	2145L	3300L	3300L
Commercial food premises			
Garbage		Recycling	
5473L		2696L	
Commercial non-food premises			
Garbage		Recycling	
246L		246L	
Other accommodation			
Garbage		Recycling	
0		0	
Total			
Garbage		Recycling	
9019L		6242L	

Figure 3. Waste and Recycle Waste Calculation of the Proposed Development, source from Sustainability Victoria (Victoria State Government).

6. Design Considerations

Ventilation will be provided in the waste room.

The private waste contractor is fully responsible for the hygiene of all bins to ensure a healthy and safe environment for occupants.

The specific number of each type of bin is to be discussed with the waste contractor. The volume of the waste generation for the proposed development is an assumption only as the use of the commercial buildings is to be confirmed post-construction.

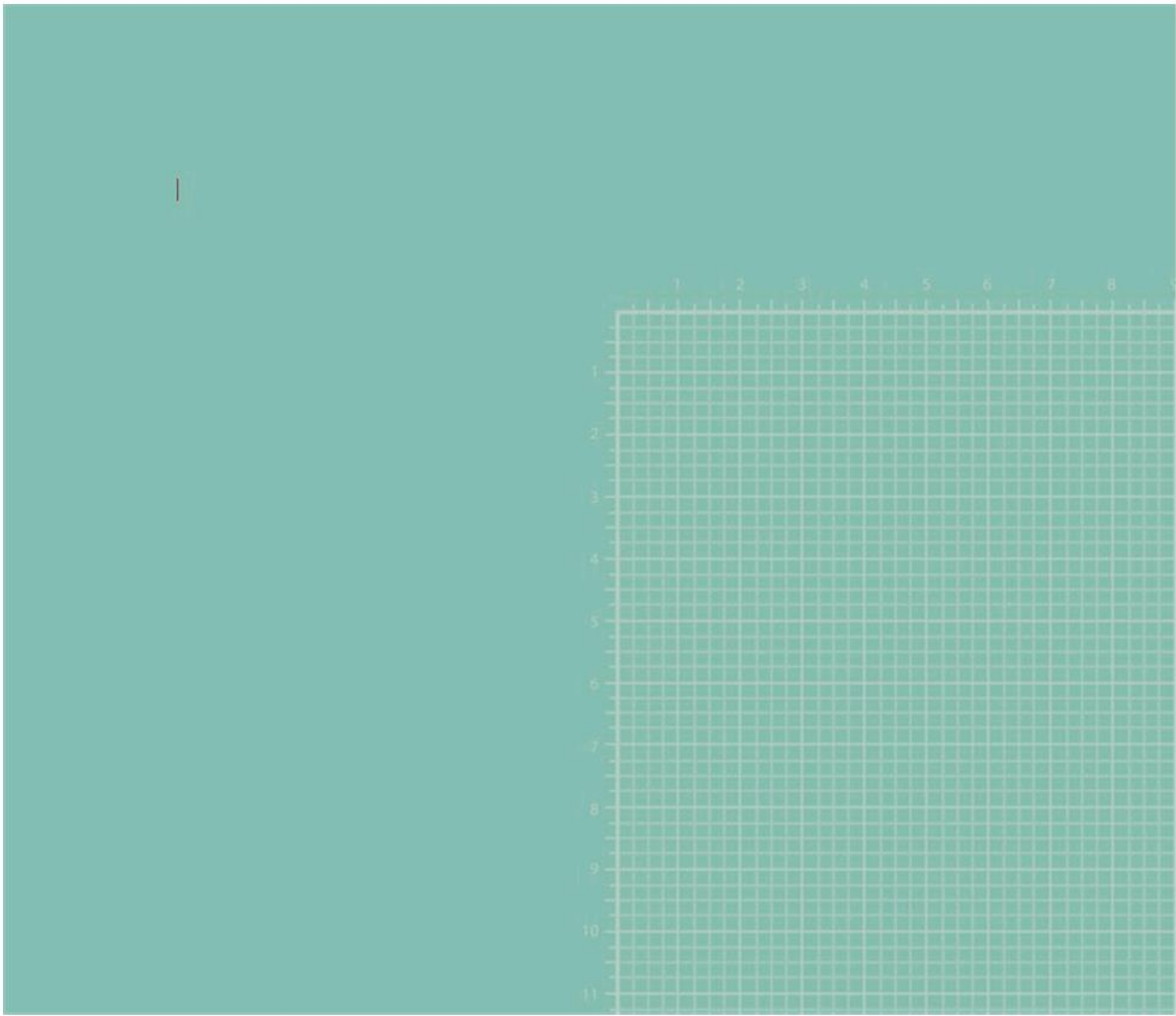
The concept services plans show the dimensioned design of swept paths for waste trucks to circulate and manoeuvre between the waste room and entrance of the access. The proposed access complies with Section 4 under AS 2890.2-2002.

There is no impact on the road reserve as the waste contractor will avoid traffic peak times to collect waste.

The noise of the collection vehicles will be minimized to comply with provisions under AS2107 to make sure this activity does not adversely impact the amenity of the occupants of the proposed building and neighbouring land.

7. Conclusion & Recommendations

The proposed waste system is sufficient and suitable for the proposed development. However, the recommendations of this plan need to be confirmed with the waste contractor.



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Development and trees at / near 175 – 179 Campbell St, Hobart

- Preliminary tree survey

Jerry Romanski

Arborist / Consultant
*B.Sc (Hons),
Ass. Dip. App. Sc.(Hort/Arb)*

29 Winston Avenue
Seven Mile Beach TAS. 7170

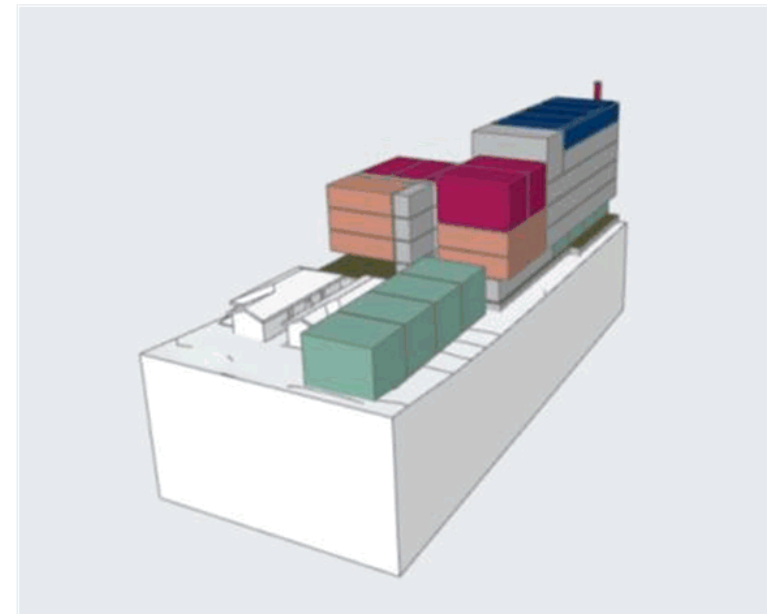
M: 0419 363 011
jerry@treeinclined.com

23 March 2021

1. Terms of reference

- This preliminary survey was requested by Dean Coleman, managing Director of Solutionswon Group Pty Ltd.
- Solutionswon Group Pty Ltd proposes to redevelop 175 – 179 Campbell St as a multi-unit residential complex (Figure 1).
- The report provides an overview of the existing trees and significant shrubs at and near 175 -179 Campbell St, Hobart
 - The trees were inspected from the ground on 22/03/2021.

Figure 1. Extracted figure OPT03.2 from the Cumulus Studio 3D Massing Study for the project. The existing dwellings at 177 and 179 Campbell St are shown in white.



175 – 179 Campbell St trees | 2021

2. Tree survey data



Figure. 2 Aerial view of 175 – 179 Campbell St (ListMap), marked with approximate locations of the existing trees at and near these properties.

Table 1. Inspection data .

TREE	SPECIES	HGT	DAB	DBH	H/S	Comments	SRZ	TPZ
1	Populus nigra 'Italica'	22	0.83	0.83	G/G	In road reserve to north-east	3.1	10.0
2	Populus simonii	10	0.36	0.35	F/F	In road reserve to north-east. Shallow roots on bank to NE.	2.2	4.2
3	Populus alba 'Pyramidalis'	23	0.82	0.74	G/F	In road reserve to north-east. Minor leader resting/growing over fence. Shallow roots visible within car park.	3.0	8.9
4	Prunus sp.	7	0.25	0.18	G/G	In road reserve to north-east	1.8	2.2
5	Acer psedoplatanus	11	0.36	0.33	G/G	In road reserve to north-east	2.2	4.0
6	Fraxinus oxycarpa	9	0.67	0.63	F/F	In road reserve to north-east. Low branches extend over car park.	2.8	7.6
7	Eucalyptus nicholii	14	0.56	0.53	G/F	Historic scaffold branch tear out. Bark inclusions		
8	Populus alba 'Pyramidalis'	15	0.4	0.36	G/G			
9	Leptospermum petersonii	4	0.19	0.14	G/P	Poor tree form - crown biased heavily to south		
10	Acer psedoplatanus	8	0.24	0.19	G/G			
11	Populus alba 'Pyramidalis'	23	0.54	0.51	G/G	Shallow roots lifting bitumen car park surface. Many suckers nearby. Mature Callistemon sp. nearby		
12	Populus alba 'Pyramidalis'	24	0.75	0.6	G/G	Pyracantha sp shrub. nearby		
13	Cupressus sempervirens	8	0.23	0.21	G/G	Mature Callistemon sp. x2 nearby		
14	Pittosporum euginiodes 'Variegatum'	4				Multi-leader shrub		
15	Cupressus sempervirens	10	0.47	0.4	G/G	Multi-leader from ground level - broad crown.		
16	Cupressus sempervirens	8	0.55	0.4	G/F	Multi-leader from ground level - broad crown.		
17	Pittosporum tenuifolium	6	0.37	0.3	F/F	Multi-leader from ground level.		

Tree – tree number in Fig. 2
 SPECIES - botanic name of tree.
 HGT - approximate tree height (m)
 DAB - trunk diameter above root flare
 DBH. - DBH, at 1.4m
 H/S - assessment of tree health / structure (G- good, F- fair, P- poor, D- dead)
 Comments - key points affecting the tree's potential for maintenance within the scope of the proposed development
 SRZ - structural root zone radius (m)*
 TPZ - standard tree protection zone radius (m)*

- SRZ and TPZ dimensions were guided by AS 4970-2009, Protection of trees on development sites.

175 – 179 Campbell St trees | 2021

TREE	SPECIES	HGT	DAB	DBH	H/S	Comments	SRZ	TPZ
18	Alnus jorulensis	9	0.6	0.5	G/P	Tri-leader from ground, large scaffold has failed and is resting on shed roof. Branches sitting on shed roof.		
19	Laurus nobilis	9			G/P	Multi-leader from ground level with many more suckers nearby		
20	Sambucus nigra	4			F/F	Philadelphus microphyllus climbing over tree.		
21	Pyracantha coccinea	7	0.35	0.3	G/F	Overgrown with Jasminum polyanthum		
22	Fuchsia arborescens	3		0.12	F/G	Hydrangea shrubs on N and W boundaries, Yucca and succulents in front garden		
23	Camellia japonica	4		0.1	G.G			
24	Camellia japonica	3		0.9	F/G			
25	Prunus sp.	4		0.13	G/G	Young cherry tree		
26	Prunus sp.	4		0.14	G/G	Young cherry tree, multi-leader from ground, overgrown with rose.		

Tree – tree number in Fig. 2
 SPECIES - botanic name of tree.
 HGT - approximate tree height (m)
 DAB - trunk diameter above root flare
 DBH. - DBH, at 1.4m
 H/S - assessment of tree health / structure (G- good, F- fair, P- poor, D- dead)
 Comments - key points affecting the tree's potential for maintenance within the scope of the proposed development
 SRZ - structural root zone radius (m)*
 TPZ - standard tree protection zone radius (m)*

- SRZ and TPZ dimensions were guided by AS 4970-2009, Protection of trees on development sites.

3. Tree management considerations

- The deciduous trees growing within the Brooker Highway road reserve to the north-east of the site provide valuable screen from this busy thoroughfare.
 - The TPZ radii indicated in Table 1 suggest that development at 175 – 179 Campbell St could impact on the roots of these trees. Accurate location of the trees in relation to the proposed works and greater construction detail for the proposed development are needed for a more accurate assessment of the potential impact on these trees (Figure 3).
- The remaining trees and shrubs are not rare or especially old (Figure 4). Many, in fact are relatively recent plantings or trees that have established as suckers from nearby mature trees. Specimens like Sambucus and Pyrocantha growing at the rear of the houses at 177 and 179 Campbell St, as well as Camellia, Fuchsia and Hydrangea growing in the front were common residential plantings with the former group often spread to nearby properties by birds.
- The large Poplars 11 and 12 are mature trees that originated as suckers of the specimen growing within the Brooker Hwy reserve. The trees' roots are shallow and are damaging the existing car park surface (Figure 5).



Figure 3. Left - minor leader of Poplar 3 is growing over the boundary fence and may need to be removed; Above – low branches of Ash 6 encroach over the site – removal or reduction of the low branches may be necessary to provide clearance.

175 – 179 Campbell St trees | 2021



Figure 4. Common urban plantings: Left – Italian cypress and *Pittosporum* sp.; Centre – *Fuchsia*; Right – clipped *Camellia japonica*.



Figure 5. Large poplars 11 and 12 (far left) are damaging the car park surface – shallow roots of these trees are likely to impact / limit nearby structures.

**RESULT OF SEARCH**

RECORDER OF TITLES

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SEARCH OF TORRENS TITLE

VOLUME 23364	FOLIO 1
EDITION 2	DATE OF ISSUE 27-Jul-1994

SEARCH DATE : 17-May-2021

SEARCH TIME : 11.29 AM

DESCRIPTION OF LAND

City of HOBART

Lot 1 on Diagram 23364

Derivation : Part of 4 Acres (Section B.2.) Gtd. to J. Bisdee.

Prior CT 4129/69

SCHEDULE 1

B785251 TRANSFER to BUILDING GROUP APPRENTICESHIP SCHEME LTD
Registered 27-Jul-1994 at 12.01 PM

SCHEDULE 2

Reservations and conditions in the Crown Grant if any

BENEFITING EASEMENT: Right of Carriageway over the Right of
Way 2.59 wide marked E.G.H.C. on Diagram No. 23364

BURDENING EASEMENT: Right of Carriageway [appurtenant to Lots
1 and 2 on Sealed Plan No. 22529 and the land in
Conveyance No. 44/8439) over the Right of Way 0.91
wide marked D.C.E.F. on Diagram No. 23364

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

**RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME 23364	FOLIO 2
EDITION 2	DATE OF ISSUE 27-Jul-1994

SEARCH DATE : 17-May-2021

SEARCH TIME : 11.30 AM

DESCRIPTION OF LAND

City of HOBART

Lot 2 on Diagram 23364

Derivation : Part of 4 Acres (Section B.2.) Gtd. to J. Bisdsee.

Prior CT 4129/70

SCHEDULE 1

B785251 TRANSFER to BUILDING GROUP APPRENTICESHIP SCHEME LTD
Registered 27-Jul-1994 at 12.01 PM

SCHEDULE 2

Reservations and conditions in the Crown Grant if any

BENEFITING EASEMENT: Right of Carriageway over the Right of
Way 2.59 wide marked B.J.H.G.E.C.B. on Diagram No.
23364

BURDENING EASEMENT: Right of Carriageway [appurtenant to the
land comprised in Conveyance No. 44/8439) over the
Right of Way 0.91 wide marked A.B.C.D. on Diagram No.
23364

BURDENING EASEMENT: Right of Carriageway [appurtenant to Lots
1 and 2 on Sealed Plan No. 22529) over the Right of
Way 0.91 wide marked A.B.C.D. on Diagram No. 23364
and the Right of way 6.00 wide shown on Diagram No.
23364

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations



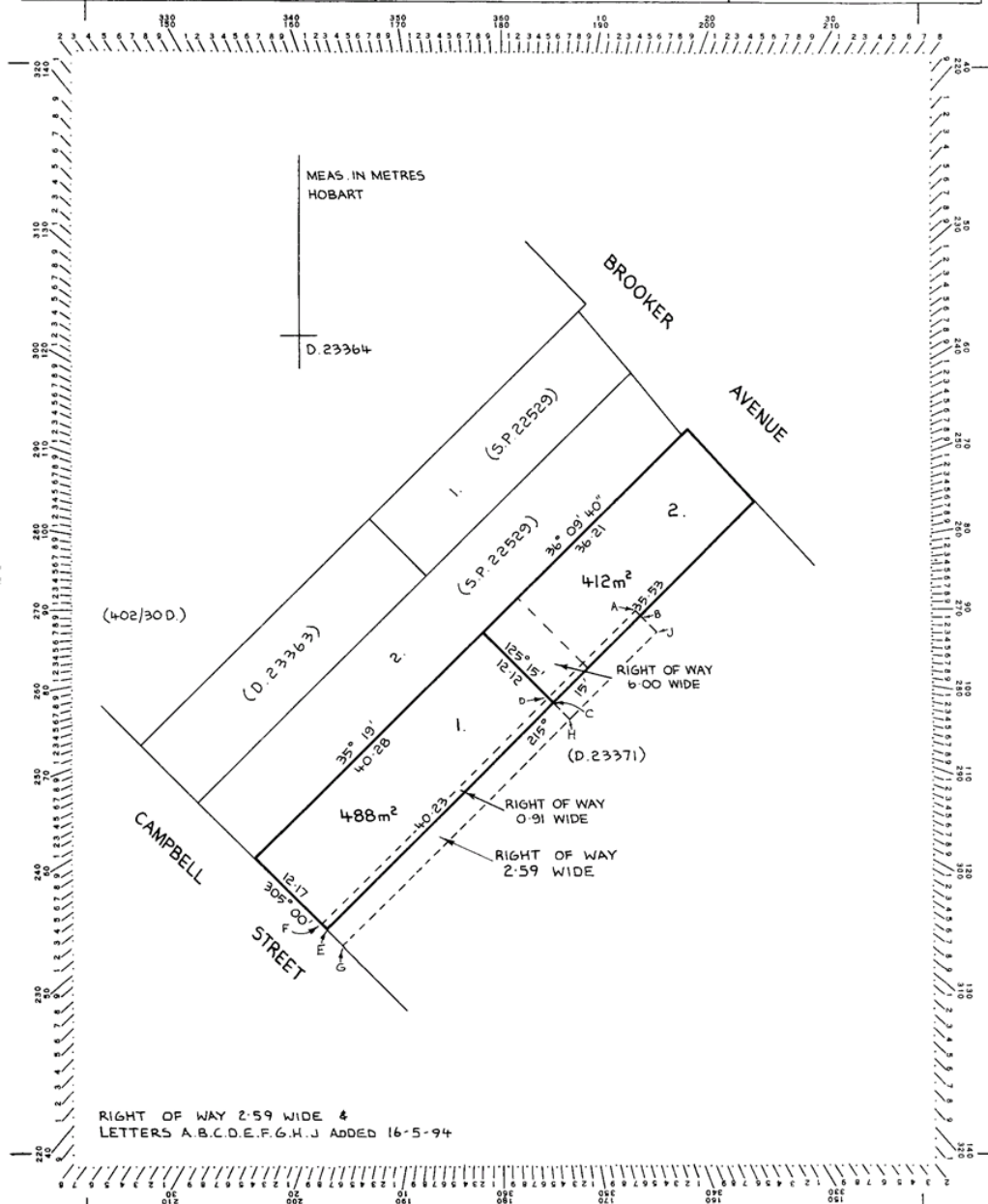
FOLIO PLAN

RECORDED OF TITLES

Issued Pursuant to the Land Titles Act 1980



Owner: X. 4-079	PLAN OF SURVEY by Surveyor..... of land situated in the CITY OF HOBART	Registered Number: D. 23364
Title Reference: CONV. 58-2120		Approved Effective from 1.6. NOV 1934 J. Brown ACTING DEPUTY Recorder of Titles
Grantee: PART OF (4-0-0) JOHN BISCOE.	SCALE 1:500 MEASUREMENTS IN METRES	



**RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME 22529	FOLIO 3
EDITION 1	DATE OF ISSUE 26-Apr-1995

SEARCH DATE : 17-May-2021

SEARCH TIME : 11.32 AM

DESCRIPTION OF LAND

City of HOBART

Lot 3 on Sealed Plan 22529

(Formerly Lots 1 & 2 on Sealed Plan 22529)

Derivation : Part of 4 Acres (Section B.2.) Gtd. to J Bisdee

Prior CT 4129/67

SCHEDULE 1

B785252 TRANSFER to BUILDING GROUP APPRENTICESHIP SCHEME LTD

SCHEDULE 2

Reservations and conditions in the Crown Grant if any

SP 22529 EASEMENTS in Schedule of Easements

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations



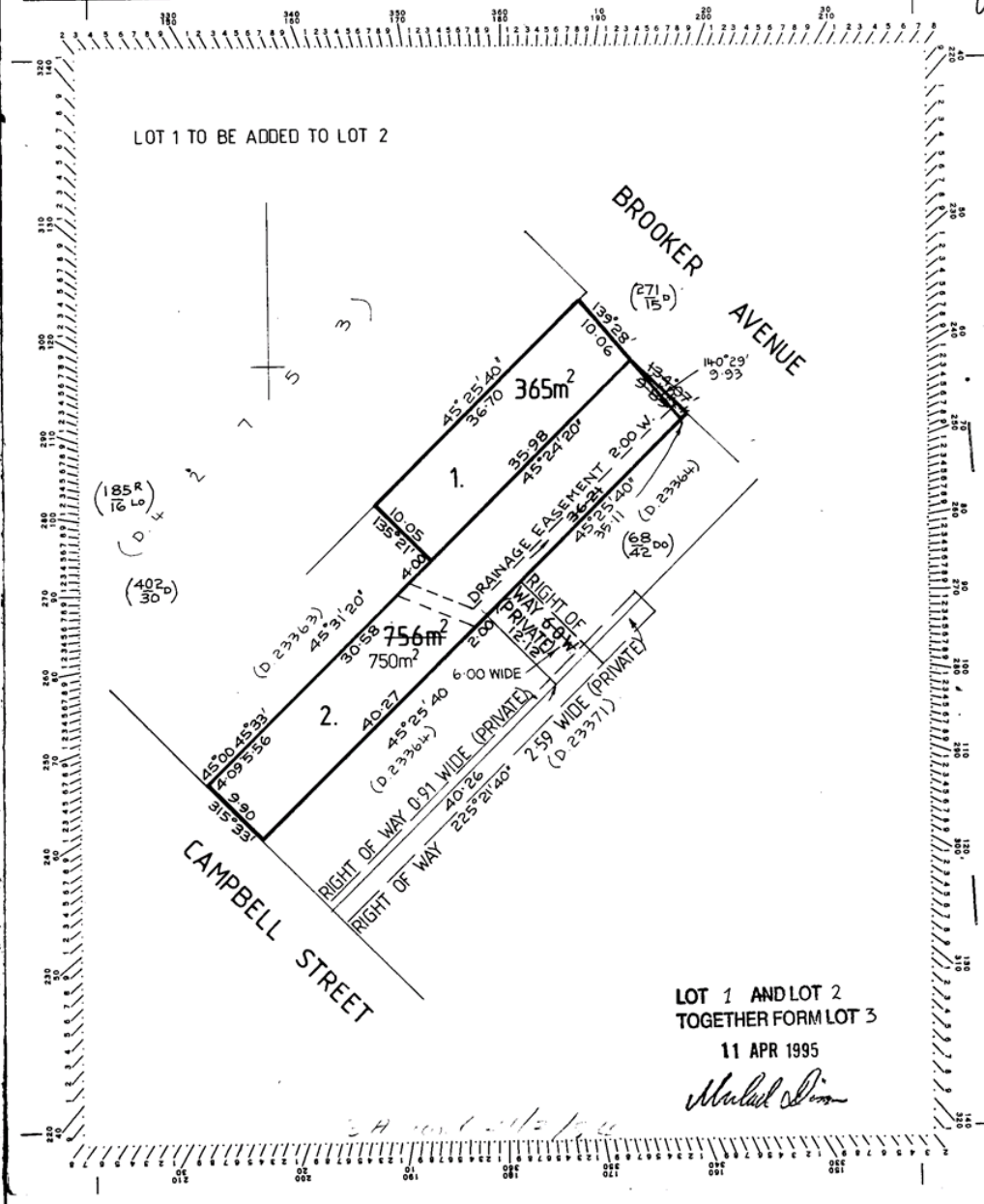
FOLIO PLAN

RECORDED OF TITLES

Issued Pursuant to the Land Titles Act 1980



<p>Owner: T.G. & M. Mahoney & L.B.A. Investments Pty. Ltd. B.R.S.H. Investments Pty. Ltd.</p>	<p>PLAN OF SURVEY by Surveyor <u>N.D. Leary</u> of land situated in the</p>	<p>Registered Number: S. P22529</p>
<p>Title Reference: Convs 44-4984 & 58-2120 & 44-8439.</p>	<p>CITY OF HOBART</p>	<p>Effective from: <u>16 NOV 1984</u></p>
<p>Grantee: Portion Of 4acres Gtd to John Bisdee</p>	<p>SECTION B2</p>	<p><i>[Signature]</i> ACTING DEPUTY Recorder of titles</p>
<p>SCALE 1: 1'500 MEASUREMENTS IN METRES</p>		



**RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME 23363	FOLIO 1
EDITION 3	DATE OF ISSUE 14-Sep-2010

SEARCH DATE : 17-May-2021

SEARCH TIME : 11.35 AM

DESCRIPTION OF LAND

City of HOBART
Lot 1 on Diagram 23363
Being the land described in Conveyance No. 44/4984
Excepting thereout Lot 1 on Sealed Plan No. 22529
Derivation : Part of 4 Acres (Sec. B.2.) Gtd. to J. Bisdee
Prior CT 4129/68

SCHEDULE 1

C948373 TRANSFER to BUILDING GROUP APPRENTICESHIP SCHEME LTD
Registered 14-Sep-2010 at noon

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
BENEFITING EASEMENT: Right of Drainage over the drainage
easement shown on Sealed Plan No. 22529

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations



FOLIO PLAN

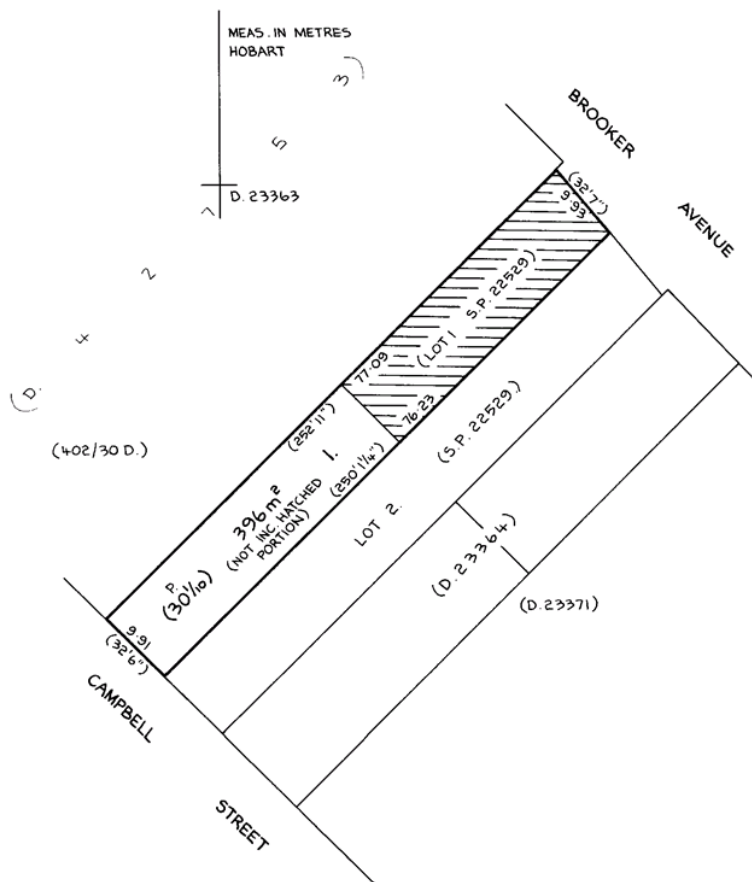
RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



APPROVED FROM... 16 NOV 1984 <i>J. Brown</i> ACTING DEPUTY RECORDER OF TITLES	CONVERSION PLAN	REGISTERED NUMBER D.23363
FILE NUMBER X 4079	GRANTEE: PART OF (4.0.0) JOHN BISDEE.	M. YOUNG 22.6.84

SKETCH BY WAY OF ILLUSTRATION ONLY

CITY/TOWN OF HOBART
LAND DISTRICT OF
PARISH OFLENGTHS ARE IN METRES. NOT TO SCALE.
LENGTHS IN BRACKETS IN LINKS/FEET & INCHES.'EXCEPTED LAND'
LOT 1 (S.P. 22529) 365m²

**RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



SEARCH OF TORRENS TITLE

VOLUME 140732	FOLIO 1
EDITION 3	DATE OF ISSUE 28-Jan-2011

SEARCH DATE : 03-Jul-2020

SEARCH TIME : 09.53 AM

DESCRIPTION OF LAND

City of HOBART
 Lot 1 on Plan 140732
 Being the land described in Conveyance 62/3280, Being the land described in Conveyance No. 44/8439
 Derivation : Part of 4 Acres (Section B.2.) Gtd. to J. Bisdee.
 Derived from A16172
 Prior CTs 123139/1 and 23371/1

SCHEDULE 1

B577065, B810602 & C437756 TRANSFER to TASMANIAN MEAT
 WHOLESALERS PTY LTD

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
 BENEFITING EASEMENT: (appurtenant to the land marked HKLM on P. 140732) a Right of Carriageway over the Right of Way 0.91 wide shown on P.140732
 BURDENING EASEMENT: Right of Carriageway [appurtenant to the land in Conveyance No. 44/5050 and Lots 1 and 2 on Sealed Plan No. 22529) over the Right of Way 2.59 Wide marked EFGH on P.140732
 BURDENING EASEMENT: a right of carriage way for the owner or owners for the time being of the land described in Indenture of Conveyance 33/2120 over the Right of Way 2.59 Wide marked IJGH on P.140732
 67/7169 Benefiting Easement (appurtenant to the land marked LQPONM on P.140732) Party Wall Easement over the wall marked "A" "B" "C" "D" on Plan 140732
 67/7036 BURDENING EASEMENT: Right for Eaves and Spouting overhang (appurtenant to Lot 1 on Plan No.51812) over the land marked Easement 0.50 Wide shown on Plan No. 140732
 C509575 ADHESION ORDER under Section 110 of the Local Government (Building and Miscellaneous Provisions) Act 1993 Registered 28-Apr-2004 at noon
 C995946 MORTGAGE to Douglas Wayne Woulleman King and Susan



RESULT OF SEARCH

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



Woulleman King Registered 28-Jan-2011 at 12.01 PM

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

**FOLIO PLAN**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



OWNER 123139-1 CT. FOLIO REFERENCE 23371-1 CT. GRANTEE		PLAN OF TITLE LOCATION CITY OF HOBART SEC.B2 FIRST SURVEY PLAN No. COMPILED BY LDRB SCALE 1: 1500 LENGTHS IN METRES		Registered Number P.140732 APPROVED 5 MAR 2004 <i>Alice Kawa</i> Recorder of Titles
MAPSHEET MUNICIPAL CODE No. 5225-42 (III4)	LAST UP1 No 2100524	LAST PLAN No. P.123139,D.23371	ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN	

Diagram details: LOT 1 is bounded by BROOKER AVENUE to the north and CAMPBELL STREET to the south. The plan shows two 'RIGHT OF WAY' strips, each 74.32m wide, separated by a 0.91m gap. A 'DEED OF GRANT 67/7169' is shown on the right. A 'WALL' is indicated near the deed. A 'EASEMENT 0.50 WIDE' is added to the plan pursuant to Sec. 139 Land Titles Act 190. Survey points A through S are marked. Dimensions include 13.87m, 28.54m, 67.76m, 13.72m, 32.31m, and 2.59m. References to (P.22529), (D.23364), and (P.51812) are present.

EASEMENT 0.50 WIDE ADDED
 TO PLAN PURSUANT TO
 SEC. 139 LAND TITLES ACT 190
Alice Kawa 21/05/2009
 RECORDER OF TITLES DATE
 CL



SENIOR CONSULTANT :
PARRY KOSTOGLU

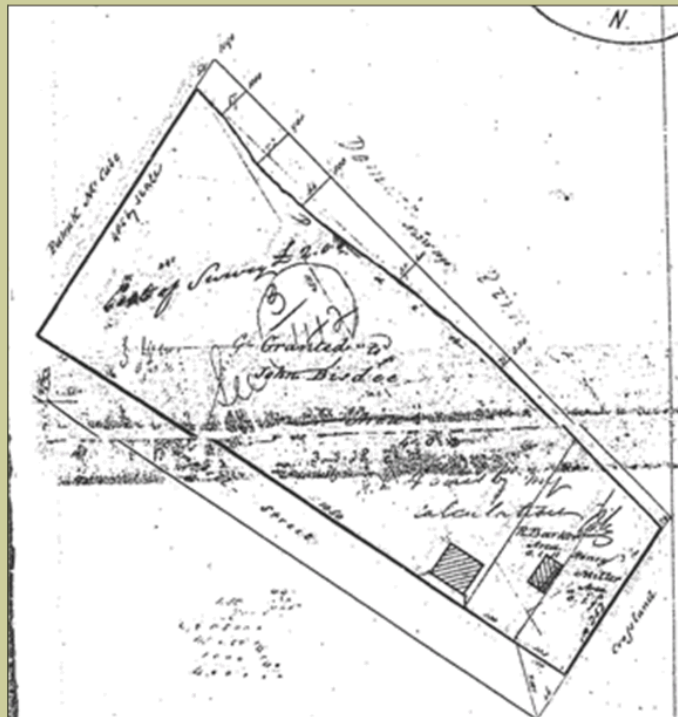
433 Dorans Road
Sandford,
Hobart
Tas.
7020

Phone: 03 62789598
Mobile: 0408 561934

Email: parryk@netspace.net.au

175-179 CAMPBELL STREET

STATEMENT OF HISTORICAL ARCHAEOLOGICAL POTENTIAL



**A report to Preston Lane Architects
Parry Kostoglou
TASARC
January 2013**

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EXECUTIVE SUMMARY

This desktop investigation has found no evidence of any historic structures pre dating the early 20th century. Therefore there are no foreseeable archaeological constraints to the proposed development and no additional archaeological works are recommended.

However if development related excavation work exposes substantive physical building fabric not apparently related to the 20th century federation structures, an archaeologist should be consulted immediately.

1.0 INTRODUCTION

1.1 Background

A mixed use development has recently been lodged with the Hobart City Council (HCC) for three allotments on Campbell Street in the Hobart CBD. These consecutive allotments (175, 177 and 179 respectively) currently contain a mixture of early 20th century housing and mid to late 20th century commercial structures. In its response to the relevant building permit application the Hobart City Council has requested information relating to these properties archaeological potential:

11. As required under Schedule F, Clause F.5.1 of the Hobart Planning Scheme 1982, please provide a Statement of Historical Archaeological Potential or a Statement by a qualified archaeologist that either the site has been surveyed previously and not to be of historical archaeological significance or that the nature of the development will not result in the destruction of any aspects of items of historical archaeological significance.

This report seeks to satisfy this requirement based on the properties past usage, occupancy and structural development.

1.2 Location and extent of subject allotment

The location of the subject allotments within the context of the Hobart CBD is indicated in the plan below.



Plan showing location of re-development area (solid blue)



Current view of three properties showing adjacent federation style housing and late 20th century street side extension.

1.3 Objectives

For the purposes of lodging the relevant development application the consultant was requested to prepare a statement of Archaeological Potential in accordance with HCC regulations and the Tasmanian Heritage Council's Practice Note Number 2. This document is expected to contain:

- An investigation of the documentary evidence relating to the site's history and physical development over time to the present day.
- A best fit location based interpretation of the location of all known structures and related features.
- A ranked sensitivity assessment of the contents of the property
- Recommendations regarding their future archaeological assessment and mitigation.

1.4 Methodology

This investigation essentially consisted of the following activities:

- A preliminary site inspection of the property
- Collation of historic plans and surveys from the Tasmanian Lands Department
- Authorship of this report.

2.0 PREVIOUS INVESTIGATIONS

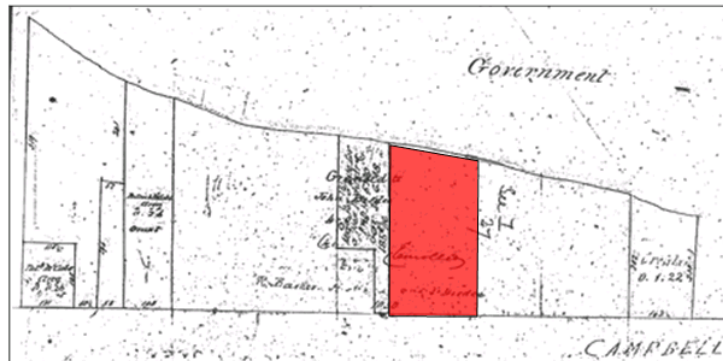
No previous historical or archaeological assessments of the subject properties are known to have been undertaken.

3.0 DOCUMENTARY ANALYSIS

This section summarises the known structural content of the allotment over time using various historic plans and surveys. The area containing the subject allotments on each survey is marked in solid red.

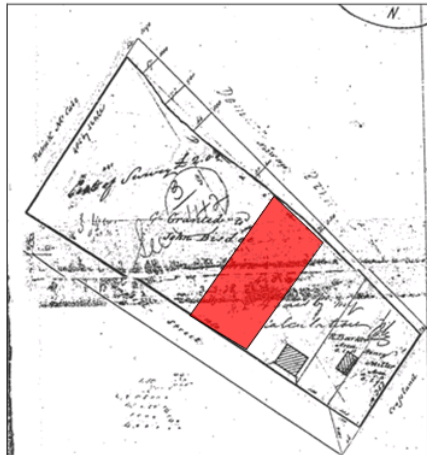
3.1 Undated Crown survey (1830's?)

This Crown survey (Folio 3 page 142) shows some of the recently surveyed in allotments on the relevant Campbell Street frontage but does not indicate the presence of any buildings there.



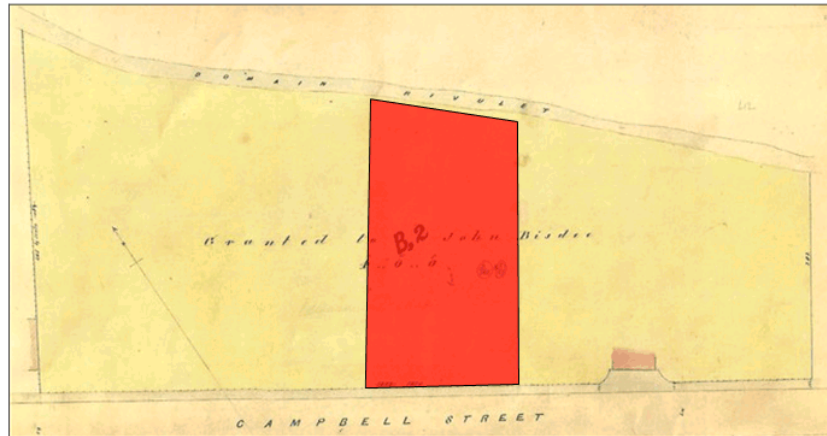
3.2 Crown survey of 1839

This survey (Folio 7 Page 27) shows the presence of two structures at the intersection of Campbell Street and Patrick Street which is slightly east of the subject allotments. However the allotments themselves remain un-developed.



3.3 Sprent's survey (1840's)

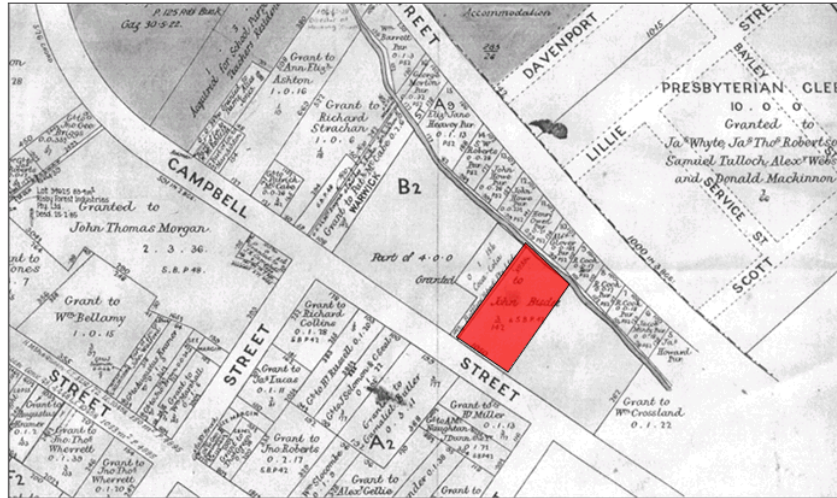
Crown Surveyor Sprent's notable city survey undertaken during the 1840's shows one of these buildings at the Campbell/Patrick Street intersection but still no developments on the subject allotments.

**3.4 Metropolitan Drainage Board Plan of c1903**

This section of a city wide drainage survey (AOT ref. HOBART No. 4) undertaken at the turn of the last century still fails to show any structural developments within the three subject allotments.

**3.5 County chart (c1910)**

This section of the county chart shows some additional sub division adjacent to the subject area but still no building development.



4.0 ANALYSIS OF ARCHAEOLOGICAL POTENTIAL

This section summarises the probability of finding archaeological remains within the sub surface of the subject allotment.

4.1 Documentary sources

There is no documentary evidence of any occupancy or structural development within the subject allotments prior to the 20th century.

4.2 On site inspection

The presence of two Federation style houses indicates that the earliest buildings on the subject allotments date from the early 20th century (c1910-1918).

5.0 STATEMENT OF ARCHAEOLOGICAL POTENTIAL

The complete absence of any apparent development on the subject allotments certainly minimises the possibility that they contain any substantive or significant historical archaeological vestiges related to buildings.

The undeveloped nature of the allotments until the 20th century possibly suggests that although subject to ownership they were used for agricultural or pastoral purposes. These activities would have left few physical remnants apart from fence lines or low stone walls.

In summary it is therefore stated that the subject allotments have minimal historical archaeological potential.

6.0 RECOMMENDATIONS

- Due to the minimal archaeological potential assigned to all three allotments no additional archaeological works or constraints are recommended.
- However if development related excavation work exposes substantive physical building fabric not apparently related to the 20th century federation structures, an archaeologist should be consulted immediately.

7.0 REFERENCES

Assorted Crown Surveys from the Lands Titles Department

praxisenvironment

heritage

planning

archaeology

po box 338
north hobart
tasmania 7002

0418 303 184
info@prax.com.au

Historic Heritage Assessment

177-179 Campbell Street, Hobart

Brad Williams
Heritage Consultant

For Johnstone. McGee and Gandy Pty. Ltd.

January 2018

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This document was written by Brad Williams (BA.Hons Archaeology, G.Dip Maritime Archaeology, MA Cultural Heritage Management)
Historical Archaeologist, Heritage Consultant of Praxis Environment – a division of Praxis Synergy Pty. Ltd.

Unless otherwise stated, all photographs were taken by Brad Williams, January 2018.

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 rear of the buildings.

Cadastral information depicted in this document must not be relied upon without verification by a Surveyor. Rectified aerial imagery has not been used; therefore the actual location as depicted in aerial images may differ to that of actual survey.

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1. Introduction, rationale and brief

This report has been commissioned by Johnstone, McGee and Gandy Engineers and Planners Pty. Ltd. (Hobart) on behalf Solutionswon Pty. Ltd. to assess the possible historic heritage significance of the place known as 177-179 Campbell Street, Hobart.

The site is part of a larger site owned by the Building Group Apprenticeship Scheme Ltd. and options for possible site redevelopments are being explored. Accordingly, an independent assessment of the heritage values of this part of the site is desired to guide the future planning process.

Figures 1.1-1.3 depict the place as considered in the current project:



Figure 1.1 – The subject site (i.e. the *place* - shaded red) and cadastral parcels in the locality of the place. Adapted from www.thelist.tas.gov.au.

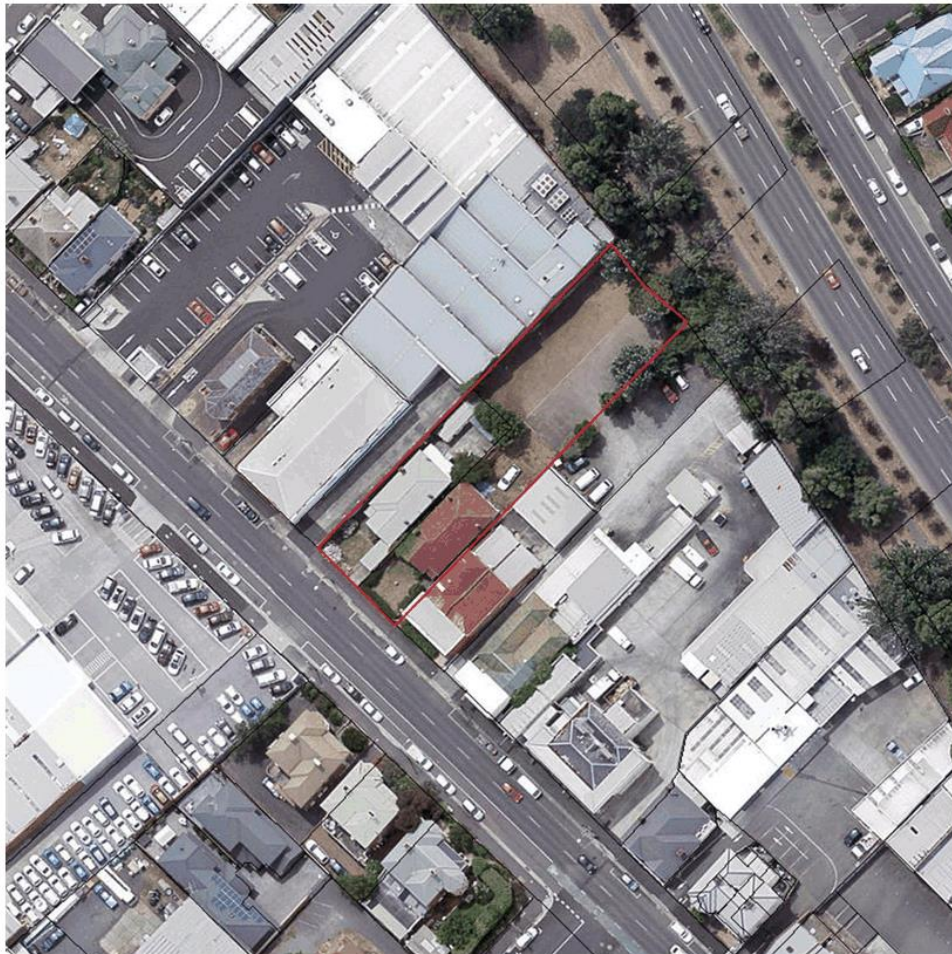


Figure 1.2 – Aerial photograph of the place (outlined in red) and wider locality. Adapted from www.thelist.tas.gov.au



Figure 1.3 – 177 Campbell Street front elevation.



Figure 1.4 – 179 Campbell Street front elevation.

2. Statutory heritage requirements

177-179 Campbell Street are listed as *Heritage Places* on Table E13 of the *Hobart Interim Planning Scheme 2015* (the *Scheme*). They were not listed on the previous City of Hobart Planning Scheme 1983.

The listing of the places derive from the City Fringe Heritage Survey, undertaken in 2010 – the datasheets as the basis for this listing are attached here.

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;*

Any demolition, development or subdivision of the place must be in accordance with the provisions of Part E13.7 of the Scheme (Development Standards for Heritage Places):

	Acceptable Solution	Performance Criteria
E.13.7.1 - Demolition	A1. No Acceptable Solution.	<p>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;</p> <ul style="list-style-type: none"> (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.	<p>P1. Development must not result in any of the following:</p> <ul style="list-style-type: none"> (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.	<p>P2. Development must be designed to be subservient and complementary to the place through characteristics including:</p> <ul style="list-style-type: none"> (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.	<p>P1. A proposed plan of subdivision must show that historic cultural heritage significance is adequately protected by complying with all of the following:</p> <ul style="list-style-type: none"> (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.
-------------------------------	-----------------------------	--

The place is not within any heritage precinct under the scheme, or on any other statutory heritage register (e.g. the Tasmanian Heritage Register, National Heritage List, Register of the National Estate etc.).

3. Previous heritage studies

In 2013, a development proposal was submitted for the place (and subsequently conditionally approved) which included the following heritage input:

175-179 Campbell Street Statement of Historical Archaeological Potential, A Report to Preston Lane Architects, Parry Kostoglou, TASARC, January 2013.

Heritage Assessment, 175-179 Campbell Street, Hobart. Graeme Corney, 31 January 2013.

The statement of archaeological potential only looked at the pre-1910 history of the site from an archaeological perspective – i.e. it gave no consideration to the current buildings on the site, therefore is of little use to the current assessment beyond supporting the position that the site has no archaeological research potential.

The heritage assessment considered the history of the site post the 1914 construction of 177-179 Campbell Street. That assessment was done in response to the requirements of the City of Hobart Planning Scheme 1983 (i.e. the now superseded scheme) under which none of the places were directly subject to the historic heritage provisions of that scheme, however impact upon *adjacent* heritage places was a consideration of any development of the subject site under that scheme, therefore that document was commissioned to consider possible impact upon adjacent places and did not directly consider the possible historic heritage values of the place itself. Nonetheless, that document provides a useful assessment of the wider setting and streetscape context of the place (particularly in reference to heritage places and the general building forms, masses, materiality, setbacks etc.) which has been utilised here in considering the possibility of wider heritage values of the place, contributory/streetscape values etc.

4. Background historical overview of the place

A brief history of the subject site was included in the statement of historical archaeological potential by Parry Kostoglou (Tasarc) in 2013,¹ which detailed the early history of the site (i.e. pre-1910) and concluded that the current buildings are the first development on that site (giving them a date of c1910-1918).

A brief post-1910 history was provided in the heritage assessment of 175-179 Campbell Street by Graeme Corney also in 2013,² which stated:

3.1 Historic overview (information provided by historian Dr David Young). The land that is now 175-179 Campbell Street was part of Amalfi which still stands at 169. Following the death of Amalfi's owner John Golby Parker in 1911 his executors sold the land (now 175-179) to speculator Gilbert Macpherson who probably subdivided and on-sold 175 and 177 to Benjamin Gooding in 1912. A dramatic increase in value of the properties suggests that Gooding built the two cottages in c.1914 before on-selling one to Mabel Helen Darvell that year. Gooding lived in the other.

Please note that at the time of preparation of this report, Land Tasmania, custodian of the principle records used to research land tenure, are in the process of digitising these records, rendering this resource unavailable until June 2018³. For that reason, it is not possible at this time to give a comprehensive historical overview of the place.

Given the lack of access to the records referred to above, the only way to trace ownership over the next few decades is through contemporary Valuation Rolls, which provide owner, occupier and assessed annual value (AAV). The data available from these rolls is as follows:

Year	House #	Owner	Occupier	AAV
1924 ⁴	177	Mrs E.G.Hogan	Mrs E.G.Hogan	£50
	179	Benj Gooding	Benj Gooding	£50
1931 ⁵	177	Mrs E.G.Hogan, Warwick St	M.M.Conway	£56
	179	Benj Gooding	Benj Gooding	£55
1941 ⁶	177	Mrs E.G.Hogan, Warwick St	Helen Thomas	£62

¹ 175-179 Campbell Street Statement of Historical Archaeological Potential, A Report to Preston Lane Architects, Parry Kostoglou, TASARC, January 2013.

² Heritage Assessment, 175-179 Campbell Street, Hobart. Graeme Corney, 31 January 2013.

³ See Land Tasmania Office Circular 6/2017- Digitisation of Records

⁴ Tasmanian Government Gazette, 19 May 1924, p.1026

⁵ Tasmanian Government Gazette, 18 May 1931, p.698

⁶ Tasmanian Government Gazette, 9 June 1941, p.1381

	179	Mrs Mabel Darvell, 1 Bishop St	C.P.Felmingham	£57
1945 ⁷	177	Mrs E.G.Hogan, Warwick St	Helen Thomas	£62
	179	Mrs Mabel Darvell, 7 Ratho St	D.J. White	£62



Figure 4.1 – Excerpt from a 1946 aerial photograph of Hobart. Note the pre-Brooker Highway configuration of (then) Park Street and the previous configuration of the 'pre-commercial' environs of the area. Hobart Run 1946, Run 1-10894.

⁷ *Tasmanian Government Gazette* 14 August 1945, p.1606

5. Description of the current form of the place

The site known as 177-179 Campbell Street is part of the wider site of 175-179 Campbell Street and the buildings assessed here, whilst on their own titles, are somewhat ancillary to the main use of the wider site as the headquarters of a professional organisation. 179 has had its original title reduced to little more than the house itself, an outbuilding at rear (possibly contemporary with the house) and a carport and small garden at the front. The titles of 177 has subsumed the former rear portion of 179 and is part of a carpark which extends over 175 and is a large tract of land between the rear of the buildings at the Brooker Highway, which has dissected part of the rear portion of both original allotments. Figure 4.1 depicts the main site features as referred to in the current document:

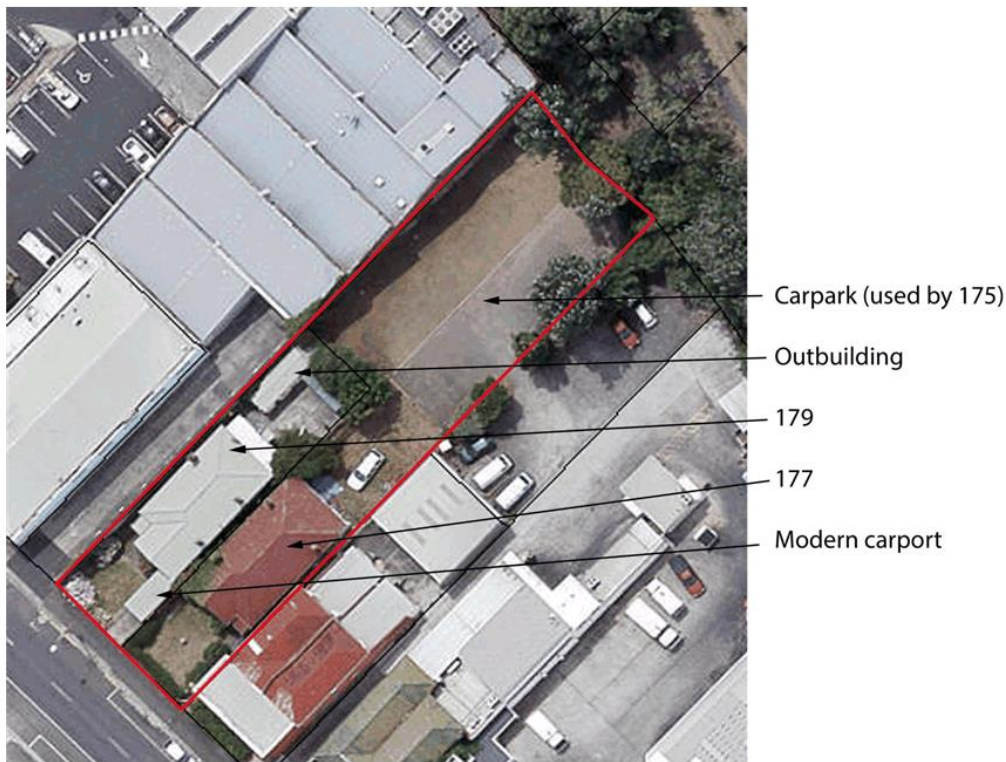


Figure 5.1 – Main site features, 177-179 Campbell Street, Hobart. Adapted from www.thelist.tas.gov.au

The streetscape and wider attributes of the place have been described and assessed in detail by Graeme Corney (as cited above) and the current document is to be read in conjunction with that document.

The two 'almost-paired' residences are contemporary with each other and appear to have been 'speculative houses' built c1914 by a Benjamin Gooding. It is likely that they were built by the same builder and by the same architect/designer although no names have been found to which they can be attributed.



Figure 5.2 – The Campbell Street frontage of the subject site (GoogleEarth).



Figure 5.3 – The rear elevations of the buildings, showing enclosed and modified rear verandas.

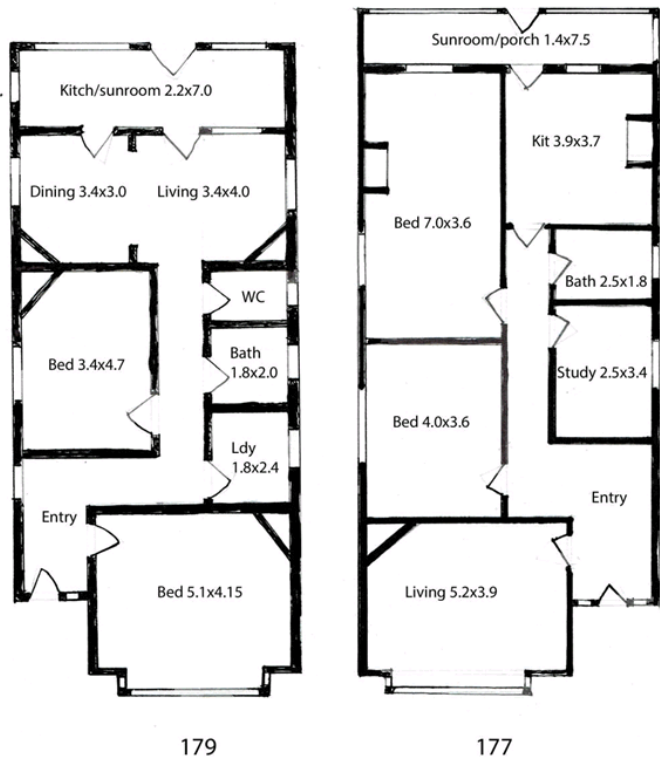


Figure 5.4 – Floor plans of 177-179 Campbell Street (street to bottom of plan, note doors and windows not necessarily to scale.

The following is a broad description of the interior⁸ and exterior of the buildings:

Element	Sub-element	177	179
Exterior			
Roof	Form	The main portion of each roof is a hip, with a forward facing and pronounced gable.	
	Cladding	Painted corrugated galvanised iron. Rainwater goods are generally modern replacements.	
	Eaves, fascias, barges etc	The exposed forward-facing gable end has decorative timber fretwork and is clad in pressed tin to simulate roughcast render.	The exposed forward-facing gable end has decorative timber fretwork and is clad in geometric pressed tin.
		Each building has timber boxed eaves, fascias etc.	
	Chimneys	Three slender chimneys on each building with decorative corbelling.	
Walls	Masonry	The walls are hard fired brick with a concrete mortar which in places has been struck.	
	Foundations	Each building is constructed on concrete foundations.	
Windows	Forward projecting bay	The forward-facing bay is less pronounced than that of 179 and has timber framed casements with obscure glazed top-lights and a skillion hood above.	The pronounced forward-facing bay has timber casements with decorative leadlight casements as top-lights and a pressed tin clad bulkhead above.
	Windows in general	Windows are generally original timber framed casements with arched gauged brick lintels and round-edge moulded brick sills.	
	Enclosed rear veranda	The original rear veranda has been roughly infilled with windows to form a laundry and	The original rear veranda has been largely replaced within its original building envelope with

⁸ Note that photographs were not taken of the interior of the buildings to respect the privacy of tenants.

		sunroom area.	modern fabric to form a kitchen and sitting room.
Doors		The front doors of each building have three panels (glazed top panel) and top and side lights. That of 179 is leadlight, 177 is obscure glass. Original back doors remain within each building to access the now enclosed rear verandas.	
Front porch		Each building has a small front porch with timber posts and some modest fretwork/decoration and an encaustic tile floor (presumably over concrete).	
Other site features		177 has no remaining outbuildings or other notable site features apart from the small front garden.	179 retains an early (if not original) 3-bay timber clad shed with a gable roof at the rear. A modern carport interrupts the view of the front of the building within the small front garden.
		All fencing associated with the buildings is modern.	
Interior			
General form		This building wholly retains its original internal layout, with two very large bedrooms, living room, kitchen and two smaller service rooms beside a central hallway which leads of a formal front foyer.	This building largely retains its original internal layout, with two bedrooms, an enlarged living area at rear (with much of an original wall removed between what would have bene a bedroom and living area) and three smaller service rooms beside a central hallway which leads off a formal front foyer. The kitchen is contained in the infilled rear skillion.
Structural	Walls	Internal walls are presumably timber framed with lathe and plaster. 177 has a decorative plaster archway between the entrance hall and main hallway.	
	Ceilings	Ceilings all appear to be original lathe and plaster	Some of the original lathe and plaster ceilings have been re-lined with plastersheet.

	Floors	All original Tasmanian Oak timber floors appear to be original and intact.
Joinery		Both buildings largely retain all their original joinery, including four-panel doors, architraves, skirting boards and typically 'Edwardian' fire surrounds/mantels.

In summary, the two buildings are in generally good condition and can be concluded to be in largely original condition with a high level of architectural integrity in that their original building envelope, internal form and detailing are almost wholly intact. The rear verandas although still readable in their overall form have a lower level of integrity having both been modified.

The setting of the buildings has been largely compromised due to adjacent development of a commercial nature and the severance of the original backyards by the Brooker Highway (i.e. widening of the former Park Street) and integration of the adjacent carpark into these sites.

The buildings are an example of Federation Queen Anne architecture as defined in the book *Identifying Australian Architecture* (Apperly, Irving *et. al.*)⁹ although is considered to be a 'lower-end' example of that style, being small, modest and not highly adorned in that style compared to other examples (and as cited in that work). The following table makes commentary on the ability of the place to demonstrate those architectural and stylistic attributes as proposed in that work:

Style indicator (as per Apperly & Irving).	Comments on the place and ability to demonstrate that attribute.
Asymmetry	The facades of these examples are single-fronted, therefore are asymmetrical, however this is not uncommon in a wide variety of architectural styles/eras and is not a distinct asymmetry in typically narrow allotments.
Ensemble of various roof shapes	These examples have a main hipped roof with a projecting gable bay. Whilst this does represent two combined roof forms, is hardly an 'ensemble' and is not uncommon in a wide variety of architectural styles/eras.
Low tower	Not present in these examples.
Corner projecting diagonally	Not present in these examples.
Pyramidal roof forms	Not present in these examples.

⁹ APPERLY, R. IRVING, R. REYNOLDS, P. (1989): *Identifying Australian Architecture, Styles and Terms from 1788 to the Present*. Angus and Robertson Publishing, North Ryde.

Marsailles pattern roof tiles	These examples are roofed in common corrugated galvanised iron.
Terracotta ridge or apex ornament	
Slate roof	
Prominent gable facing the street	Each building has a prominent gable facing the street which has been embellished by timbering and pressed metal to accentuate the architectural styling.
Half-timber effect in gable	Decorative timbering is present within the gable ends. Whilst not strictly 'half timbering' this is a hybrid between such and a screen (although not pronounced as a screen would be) – indicating a 'lower-end' attempt at this typical feature of the style.
Timber gable screen	
Bracketed projecting or 'flying' gable.	Not present in these examples – the gables are generally restrained in their overall form.
Dormer echoing main gable	Not present in these examples.
Tall chimney with terracotta pot or pots	These examples have chimneys as expected of practically any building of that era with only modest corbelling using standard bricks.
Tuck pointed brick walling	The walls of these examples, although brick, have no distinct tuck pointing (although evidence of striking as an attempt to simulate tuck pointing is present).
Roughcast walling	Apart from some imitation (i.e. tin) roughcast in the gable end and on the gable end of 177, roughcast has not been largely used in these examples.
Wall-hung shingles or tiles	Not present in these examples.
Wide veranda with timber posts and ornamental brackets	Whilst not having a wide veranda (likely constrained by the size of the frontage) these examples have modest timber porches without ornamental brackets.
Ornamental timber frieze or valance	These examples have a modest timber frieze beneath their porches.
Curvilinear Art-Nouveau ornament	Not present in these examples.
Projecting bay	These examples each have a single projecting bay on their front elevation.
Oriel	179 has a modest oriel arrangement of the front projecting bay window.
Casement sashes	These examples have casement sashes as expected of practically any building of that era.
Multi-paned top light	These examples each have multi-paned top lights above the windows of the projecting bay on their front elevation.
Round accent window	Not present in these examples.

As per the table above, of the 25 key stylistic features of a Federation Queen Anne residence, the place exhibits only 14 of those characteristics. Of those 14 characteristics, it is considered that the place exhibits around half of these in any

'extraordinary' way – which leads to the conclusion that whilst the places are certainly an example of Federation Queen Anne architecture, they represent the lower end of the spectrum as modest examples of such architecture.

6. Consideration of the historic heritage significance of the place

6.1. Assessment methodology

The following assessment of historic heritage significance is 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).

Although that document cites the *Historic Cultural Heritage Act 1995* in its title (to which the place is not subject), its wider applicability as a framework for considering the significance of local heritage places is summarised on page 2 of that document:

The approach outlined in this document is intended to assist heritage practitioners, statutory bodies, local planning authorities and members of the community in understanding why places are entered in the Tasmanian Heritage Register or suggested for listing in a local planning scheme. Through the use of examples, the document suggests thresholds to assist in determining whether:

- (i) A place is of historic heritage significance at a STATE level as being important to the whole of Tasmania, and therefore eligible for entry in the Tasmanian Heritage Register; or*
- (ii) A place is of historic heritage significance at a LOCAL level as being important to a region or local community and eligible for listing in a heritage schedule of a local planning scheme.*

This document follows Steps 1-3 of that document (as summarised on p.3) and in particular follows the methodology for determining whether the place meets any particular criteria (deriving from the HERCON standards) as detailed on p.5 of that document, which prescribes (beyond the basic significance test):

*a broader test providing an indicative list of factors (**inclusion factors**) that assist in determining whether the criterion is satisfied (**significance indicators**) and whether a place is considered as being of local or state historic heritage significance (**threshold indicators**); and*

*an indicative list of those factors (**exclusion factors**) which would generally disqualify a place from being considered to be of either state or local significance against that criterion.*

In order for this assessment to remain impartial and not prejudiced, the significance indicators for the place will be tested against **both the inclusion and exclusion factors** for all criteria as per the HERCON standard.

6.2. Assessment of historic heritage significance as per the Tasmanian Government standards

As per the methodology above, the following assessment of historic heritage significance will utilise the Tasmanian Government's assessment document (as cited above) and undertake a historical heritage assessment against the inclusion factors for each of the criteria (including those which are not included in the THR datasheet as a means of impartially considering those criteria nonetheless) and will also assess the place against the exclusion factors for each criterion.

A. The place is of importance to the course, or pattern of our cultural or natural history.

Inclusion Factors		Response
A1	Association with an event, or series of events, of historical significance.	The historical background of the place indicates no historically significant events or series of events associated with the place beyond 'normal' domestic habitation.
A2	Demonstration of important periods or phases of settlement.	The period of use of the place as anything beyond a c1914-onwards residence is not considered to be an important period or phase of the settlement of Hobart.
A3	Association with important cultural phases or movements.	Domestic habitation of c1914-onwards buildings on the Hobart CBD fringe is not considered to be a 'beyond the ordinary' cultural phase, movement or historical process/activity.
A4	Demonstration of important historical processes or activities.	
A5	Symbolism and influence of a place for its association with an important event, period, phase or movement.	The place possesses no symbolic meaning associated with any historical event of importance to any community.
A6	Diversity of attributes – possessing multiple historical associations and physical qualities where the collective value is greater than the sum of the individual associations/qualities.	In the absence of any strong historical attributes of the site, even the 'sum of parts' consideration cannot demonstrate any important historical attribute about the site to any community.

Exclusion factors		Response
XA1	The association of the place to the historically important event, phase, period, process or movement is either incidental (minor, secondary) or cannot be substantiated. For example, every farm house is not of	Domestic habitation of a building from c1914-onwards on the fringe of the Hobart CBD can hardly be considered to be any form

	historical importance in demonstrating the spread of European settlement or pastoral land use across Tasmania; while a local legend of a link between a place and an event may make an interesting story it needs to be backed up by reasonable evidence if the place is to be registered on the basis of that link.	of 'beyond the ordinary' historical phase/period/movement etc. Whilst part of the story of Hobart, it is not considered that this is historically important enough to individually warrant the listing of this particular place unless there are other substantial attributes of the place which support its importance in some other way – i.e. it is not considered to be feasible to list every building just because it may represent part of the story of Hobart, particularly if that part of the story is not important for other reasons (e.g. earliness, architectural merit, associations).
XA2	The place has an association with, or demonstrates evidence of, an historical event, phase, period, process or movement that is of dubious historical importance. For example, the historical event, etc, needs to possess an importance 'beyond the ordinary' in respect of its state or local significance.	
XA3	The significant fabric of the place has been so altered that it can no longer provide evidence of a particular association.	Whilst the place is generally intact, as per the assessment below and the discussion above, it is not considered to provide evidence of any important association in any case.

This assessment concludes that the place is not of any historic cultural heritage significance against Criterion A as it has no strong historical associations with any important cultural movement/phase or any important historical process/activity beyond 'normal' c1914-onwards domestic habitation – which although part of the story of Hobart is not considered to be 'beyond the ordinary' in its local importance.

B. The place possesses uncommon, rare or endangered aspects of our cultural or natural history.

Inclusion Factors		Response
B1	Rare surviving evidence of an event, phase, period, process, function, movement, custom or way of life in Tasmanian history that continues to be practised or is no longer practised.	The history of the place indicates that it has always been used (i.e. since c1914) as a pair of domestic residences on the fringe of the Hobart CBD. Whilst a comprehensive survey of such buildings has not been undertaken, there are clearly 100's if not 1000's of examples of such around Hobart therefore no rare attributes could possibly be assigned to the place. Even within the narrower area (by observation and as detailed in the Corney report) there are a number of late-c19th and early c20th buildings of similar standard (i.e. small-medium brick paired/conjoined residences) scattered around the area which provide similar examples of such a place.
B2	Evidence of a rare historical activity that was considered distinctive, uncommon or unusual at the time it occurred.	
B3	Distinctiveness in demonstrating an unusual historical, architectural, archaeological, scientific, social or technical attribute(s) that is of special interest.	
B4	Demonstrates an unusual composition of historical, architectural, archaeological, scientific, social or technical attributes that are of greater importance or interest as a composition/collection.	

Exclusion Factors		Response
XB1	The place is not rare within the relevant state/local context.	As per above, the place could not be considered to demonstrate

XB2	The claim of rarity or uncommonness has too many descriptive qualifiers linked to it. For example, this is the only stone house . . with a slate roof . . and a bull-nosed verandah. . . within the former estate of . .	any rare attribute of relevance to Hobart's historical or cultural identity by any stretch of the imagination or by any number of credible descriptive qualifiers.
XB3	The place is the only one of its type and the event/custom/function is rare but its importance is questionable. For example, the only place to overlap the corrugated iron roofing four ridges instead of two; the only place to have a toilet suite in the kitchen; the only 2-storey potting shed; the only place having vinyl floor tiles on the ceiling, etc.	
XB4	The place is under threat of destruction, but its importance is questionable.	

This assessment concludes that the place is not of any historic cultural heritage significance against Criterion B as it in no way demonstrates any rare aspects of Hobart's history.

C. The place has the potential to yield information that will contribute to an understanding of our cultural or natural history.

Inclusion Factors		Response
C1	Potential to improve knowledge of a little recorded aspect of Tasmania's past.	As per the Tasarc report, the place is not considered to have the potential to yield information that would contribute to an understanding of our cultural history (i.e. no archaeological potential). Further analysis of the building fabric confirms that the built form, fabric etc. of the building also could not provide any information of any importance to an understanding of our cultural history beyond representing an example of a lower-end example of a Federation Queen Anne building which is unlikely to be of any outstanding use in any conceivable research agenda.
C2	Potential to fill gaps in our existing knowledge of Tasmania's past.	
C3	Potential to inform/confirm unproven historical concepts or research questions relevant to Tasmania's past.	
C4	Potential to provide information about single or multiple periods of occupation or use.	
C5	Potential to yield site specific information which would contribute to an understanding of significance against other criteria.	

Exclusion Factors		Response
XC1	There is no physical, documentary or other evidence that would allow an assessment of likely research potential.	As per points in <i>Inclusion Factors</i> above.
XC2	The potential information is trivial, not important or not significant.	
XC3	The context of the physical remains is so disturbed that they cannot yield meaningful or important information, or the significance of the remains has been compromised through being relocated to the current	

	location from somewhere else.	
XC4	The information that can be derived from the place is already reasonably known or readily available from other resources, including other heritage places.	
XC5	A place which has had its research potential fully exhausted, for example, an archaeological site that has been excavated so that there is negligible physical remains left in situ, or a building whose significant fabric has been substantially removed or replaced with new work.	

As further detailed in the Tasarc report, it is concluded that the place has no potential to yield information that would contribute to any important attribute of our cultural history therefore is not of any historic cultural heritage significance against Criterion C.

D. The place is important in demonstrating the principal characteristics of a class of cultural or natural places or environments.

Inclusion Factors		Response
D1	Representative of a class of place/s that demonstrate an aesthetic composition, design, architectural style, applied finish or decoration of historical importance.	Whilst the place represents a largely intact modest pair of c1914 Federation Queen Anne city-fringe brick residences, and the place does present the 'lower-end' attributes of such buildings (as detailed in Section 4 and as per Apperly/Irving <i>et. al.</i>), a lower-end example of such a late period of architecture is not considered to represent any special aesthetic composition, design, technology etc. of any individual importance (whether technical, historical or architectural) and is merely an example of the lower end of a particular architectural style. Whilst this is of some importance as representing the overall spectrum of Tasmanian architectural styles, this is considered here to be only of a low level of significance in the absence of the support of any other criteria.
D2	Representative of a class of places that demonstrate a construction method, engineering design, technology or use of materials, of historical importance.	
D3	Representative of a class of places that demonstrate an historical land use, function or process, of historical importance.	
D4	Representative of a class of places that demonstrates an ideology, custom or way of life of historical importance.	Solely twentieth century residential occupation of a place is not considered to be an important ideological, customary or way of life of any historical importance.

Exclusion Factors		Response
XD1	The place does not have a degree of distinctiveness within that class. For example, it is not a particularly, fine, intact or pivotal example. A place is not eligible simply because it is representative of a class of	The place is considered to be a lower-end example of a 'near-pair' of Federation Queen Anne city fringe residences. Whilst an example of an architectural type, they are not considered to be a particularly

	places as nearly every historic place in the state can be defined as representative of one class or another.	fine, or pivotal example – nonetheless they do represent that typology of building at a low level.
XD2	The place does not include a reasonable range of characteristics that define the class, either having never possessed them or having lost them through subsequent development, activity or disturbance.	Whilst there is documentary and physical characteristic evidence that links this place to a specific class of places, as per XD1, this is not at any extraordinary level.
XD3	Lack of reasonable evidence to indicate the place is linked to a specific class of place/s.	
XD4	The class itself is of dubious importance. For example, a place is claimed to be a fine example of a post-World War II road culvert or milepost. Whilst it is conceivable a culvert or milepost might be significant, this would be an exceptional circumstance and it would be unreasonable to consider culverts and milestones as such significant classes that every fine example of each warrants inclusion on the Heritage Register.	Whilst the place is an intact example of a c1914 pair of modest city-fringe brick residences, as per consideration of Criterion B, there are likely to be a large number of such buildings and no exceptional circumstances have been presented here which would warrant this place to be any 'stand-out' example of such and only represents the 'lower-end' of that type of place. Whilst a comprehensive survey of such examples of places has not been undertaken in Tasmania, it is conceivable to suggest that there is a huge array of such buildings across the state and that these may not be the best examples, nor might there be any special characteristics of these places which set them apart from others.

This assessment concludes that the place does represent the lower-end of a near-pair of Federation Queen Anne small domestic residences on a city fringe, however it is not clear as to whether this demonstrates any important class of place in Tasmania's history and the places are merely representative of a particular class of place of low or local importance.

E. The place is important in demonstrating a high degree of creative or technical achievement.

Inclusion Factors		Response
E1	Recognition of artistic or design excellence.	As an unextraordinary pair of small Federation Queen Anne residences, the place is not considered to represent any artistic or design excellence, any distinctiveness (being a lower-end example of such an architectural style) nor any innovation in any design or building methodology. The construction of the place has not used any adaptive or creative technology.
E2	Represents a breakthrough or innovation in design, fabrication or construction technique.	
E3	Distinctiveness as a design solution, treatment or use of technology.	
E4	Adapts technology in a creative manner or extends the limits of available technology.	

Exclusion Factors		Response
XE1	The place is not eligible simply because it is the work of an important designer or artist. It must be a substantial achievement that is demonstrated in the place itself and has been awarded or is otherwise worthy of recognition for its excellence.	The place is not known to be the work of any important designer or artist.
XE2	The place has substantially lost its design or technical integrity through subsequent changes to, or deterioration of, the significant element of the place.	The place is not considered to have ever had any special design or technical attributes which may have deteriorated.
XE3	The place has had its landmark or scenic qualities substantially and irreversibly degraded.	The place is not considered to have ever had any landmark or scenic qualities.
XE4	The place has only an indirect or loose association with creative or technical achievement.	The place is considered to have no (not even loose or indirect) association with creative or technical achievement.

This assessment concludes that the place is not of any historic cultural heritage significance against Criterion E as it in no way demonstrates any degree of creative or technical achievement beyond the ordinary.

F. The place has a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.

Inclusion Factors		Response
F1	Important to the community as a key landmark (built feature, landscape or streetscape) within the physical environment of Tasmania.	Further to the streetscape assessment in the Corney report, the place has no particular landmark qualities and is in fact considered to be a very recessive element in an also otherwise unremarkable streetscape.
F2	Important to the community as a landmark within the social and political history of Tasmania.	As merely a pair of modest Federation Queen Anne styled residences on the fringe of Hobart's CBD, the place has no possible connotations with the social or political history of Hobart.
F3	Important as a place of symbolic meaning and community identity.	As a pair of domestic residences that have had no association with any public activity nor have had any degree of public access in the past, the place is not considered to have any associations as a place of public meaning, socialisation or community service (etc.).
F4	Important as a place of public socialisation.	
F5	Important as a place of community service (including health, education, worship, pastoral care, communications, emergency services, museums, etc).	
F6	Important in linking the past affectionately to the present.	The place has no evocative ability to link the present with the past in any comprehensible way.

Exclusion Factors	Response
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XF1	The place is important to the community solely for amenity reasons. For example, most modern picnic and parkland areas, playgrounds and beaches, used for contemporary recreation.	The church and youth camp associations are likely to have (and still do) provide amenity to the community. This should not be confused with historic heritage significance.
XF2	The place is important to the community only as they seek to retain it in preference to a proposed alternative. For example, a place is occupied by an unremarkable development.	
XF3	The community group for which the place is claimed to have strong or special meaning does not have reasonable standing. That is, it is not recognised within the wider Tasmanian community, or the group is unable to demonstrate an important cultural association with the place. For example, a residential lobby group formed in response to a proposed development or activity at the place and unlikely to have the capacity to maintain an ongoing involvement with the place; a state-wide organisation whose functions and operational history has no direct link to the place or places of a similar nature.	

This assessment concludes that the place is not of any historic cultural heritage significance against Criterion F as it could in no way demonstrate any degree of associative value to the community.

G. Special association with the life or works of a person, or group of persons, of importance in our history.

Inclusion Factors		Response
G1	A key phase(s) in the establishment or subsequent development of the place were undertaken by, or directly influenced by, the important person(s) or organisation.	As per the title history and historical overview presented in Section 3, the place has no known associations with any persons of even local significance or popularly known identity or organisation.
G2	An event or series of events of historical importance occurring at the place were undertaken by, or directly influenced by, the important person(s) or organisation.	
G3	One or more achievements for which the person(s) or organisation are considered important are directly linked to the place.	
G4	Social or domestic events occurred at the place that are inseparable from the achievement(s) of the important person(s) or organisation, were a major influence upon an achievement(s) or are otherwise of public interest.	

Exclusion Factors		Response
XG1	The person(s) or organisation associated with the place lacks reasonable prominence or historical importance to the relevant state or local area.	As per G1-3. As there are no known nor demonstrable persons, organisations nor events associated with the place these exclusion factors can all be applied to the place.
XG2	The association of the person(s) or organisation with the place cannot be demonstrated or substantiated.	
XG3	The association of the person(s) or organisation with the place is not strong, unusual or extraordinary enough to warrant recognition in this way. For example, the person spent a brief, transitory or incidental time at the place without leaving evidence or achieving anything relevant to their importance; and the association of the person or organisation with the place is totally unconnected with their achievement and not of historical interest in interpreting the context of their life and achievement.	
XG4	The person or organisation is perceived to draw more importance from their connection with the place than vice versa. For example, a person who acquires a famous property cannot be considered important merely for being the one-time owner of the property.	

This assessment concludes that the place is not of any historic cultural heritage significance against Criterion G, as there are no known nor demonstrable associations of any persons/organisations/events of any historic interest or significance associated with the place.

7. Recommendations

Section 6 has provided a rigorous process of evaluating the possible historic cultural heritage values of the place against what is considered to be a sound industry standard for assessing such places.

This assessment has concluded that the place is merely demonstrative of a near-pair of small Federation Queen Anne domestic residences that represent the lower end of that type/style/period of architecture. There is no evidence or observation that would suggest that the place meets any other HERCON criteria for statutory heritage listing other than under Criterion D (representative of a class of place) at a low (i.e. local) level and that it may be dubious as to how important that class of place is in the scheme of the local (or wider) context. Nonetheless, it is recognised that the places are listed as a local heritage item on the heritage schedule of the HIPS15.

This assessment concurs with the findings of the Corney report that the place does not offer any substantial contribution to the wider streetscape, which has largely been modified from its earlier late-Victorian/Federation domestic roots, to what is now a more commercial city-fringe area and that the place merely represents the lower-end and later domestic occupation of that earlier townscape development pattern. Accordingly, apart from the small domestic front gardens, the buildings do not have any significant curtilage.

This assessment also concurs with the Tasarc report that the place has no research/archaeological potential.

Accordingly, this assessment concludes that the place has a low level of local heritage significance limited to the architectural qualities of the buildings themselves.

As a broad set of conservation policies, it is recommended that:

- In any future development of the wider site, that these buildings be retained.
- If desired, the buildings may be repurposed for non-residential purposes, provided that the general form of the buildings (in particular the street elevations) is retained.
- The rear veranda areas and outbuilding may be retained, modified or removed as desired.
- The rear yards of the buildings are not of significance and that area may be redeveloped as desired (subject to other planning requirements) – potentially as part of a larger site redevelopment.

Data Collection Sheet

F66

Name: **House**

179 Campbell Street Hobart Hobart

Type: **Habitation** Feature Type:

Use: **Habitation** Archit. Style: **Federation**

Walls: **Face Brick** Roof: **Corrugated Iron**

Floors: **1** Integrity: **Externally predominantly intact. Part of the front yard has been given over to parking, and there is a carport.**

Attic: ☐ Basement: ☐ Nominated By: **HCC**

Visual Relationships: **This house is located on the eastern side of Campbell Street, and is one of a pair of similarly styled houses. It is an important historic element within the urban streetscape of the area.**

Historical Relationship: **The house is located on land that was once part of a large 4 acre allotment granted to John Bisdee. This 4 acres was not substantially subdivided until the late nineteenth/early twentieth century. The house was built c1915, and was connected to the City's sewerage system by April 1915. It was owned and occupied by Mr Benjamin Gooding who owned several houses within the area at that time, including the house next door at 177 Campbell Street.**

Description: **A single storey face brick Federation residence. It has a hipped roof clad with corrugated iron, and three face brick chimneys with metal flues. The façade is asymmetrical, and is dominated by a large projecting gable. There are timber bargeboards to the gable ends and half-timbered infill (including pressed metal panels). Below the gable is a bay window composed of four casements with leadlit highlights. There is an elegantly decorated timber porch over the front entry, which has an original door, top and side lights.**

**STATEMENTS OF SIGNIFICANCE**

(a)-Historical:

179 Campbell Street is of heritage significance because it has the ability to illustrate the process of urban infill and development that occurred within the early settled areas of inner Hobart during the early years of the twentieth century.

(b)-Rarity:

(e)-Creative / Technical:

(f)-Community:

This structure makes a significant contribution to the streetscape of the area, and therefore is important to the community's sense of place.

(c)-Research Potential:

(g)-Association:

(d)-Representative of:

179 Campbell Street is of historic heritage significance because of its ability to demonstrate the principal characteristics of a single storey face brick Federation residence.

No Significance?:

Supported: ☐Not Supported: ☐Refer: ☐

Signed: _____

03/09/2010

Data Collection Sheet

F67

Name: **House**

177 Campbell Street Hobart Hobart

Type: **Habitation** Feature Type:

Use: **Habitation** Archit. Style: **Federation**

Walls: **Face Brick** Roof: **Corrugated Iron**

Floors: **1** Integrity: **Externally predominantly intact.**

Attic: ☐ Basement: ☐ Nominated By: **HCC**

Visual Relationships: *This house is located on the eastern side of Campbell Street, and is one of a pair of similarly styled houses. It is an important historic element within the urban streetscape of the area.*

Historical Relationship: *The house is located on land that was once part of a large 4 acre parcel granted to John Bisdee. Bisdee's land was not substantially subdivided until the late nineteenth/early twentieth century. The house was constructed in c1913, and connected to the City's sewerage system in that same year. It was occupied by Percival Darvell in 1914, owned by Mr Benjamin Gooding. Gooding owned several houses within the area at the time, including the house next door at 179 Campbell Street.*

Description: *A single storey face brick Federation residence. It has a hipped roof clad with corrugated iron, and three face brick chimneys with metal flues. The façade is asymmetrical, and is dominated by a large projecting gable. There are timber bargeboards to the gable ends and half-timbered and roughcast infill. Below the gable is a bay window composed of four casements with leadlit highlights. There is an elegantly decorated timber porch over the front entry, which has an original door, top and side lights.*

**STATEMENTS OF SIGNIFICANCE**

(a)-Historical:

177 Campbell Street is of heritage significance because it has the ability to demonstrate the process of urban infill that occurred within the early settled areas of inner Hobart during the early twentieth century.

(b)-Rarity:

(d)-Representative of:

177 Campbell Street is of historic heritage significance because of its ability to demonstrate the principal characteristics of a single storey face brick Federation residence.

No Significance?:

(e)-Creative / Technical:

(f)-Community:

This structure makes a significant contribution to the streetscape of the area, and therefore is important to the community's sense of place.

(g)-Association:

Supported: ☐Not Supported: ☐Refer: ☐

Signed: _____

03/09/2010



JMG Ref: J173021PH

8th July 2021

The Building Group Apprenticeship Scheme Ltd
175 Campbell Street
Hobart Tas 7000

To whom it may concern,

175, 177 AND 179 CAMPBELL STREET - DEVELOPMENT APPLICATION NOTIFICATION

We advise that JMG Engineers and Planners seeks to make a development application on behalf of the Building Group Apprenticeship Scheme Ltd for development of land at 175, 177 and 179 Campbell Street (identified as CT 23364/1, CT 23364/2, CT 22529/3 and CT 23363/1 respectively). This is for a mixed use development comprising the following development on each of the Titles:

- Adhesion of three lots to create a single development;
- 175 Campbell Street (CT 23364/1, CT 23364/2) - demolition of the existing commercial building and other structures to its rear; development of mixed-use buildings; establishment of a new access;
- 177 Campbell Street (CT 22529/3) - refurbishment of existing residential dwellings; development of mixed-use buildings;
- 179 Campbell Street (CT 23363/1) - demolition of the outbuilding to the rear of the residential dwelling; development of residential buildings to the rear of the lot;
- Provisions of associated sewer, water, stormwater services, telecommunications, rubbish and mailbox for occupants of the development.

Accordingly, we write to notify you of the application, in accordance with our statutory obligations under section 52(1) of the *Land Use Planning and Approvals Act 1993*.

More information will be available from Hobart City Council when the application is formally advertised.

Yours faithfully

JOHNSTONE MCGEE & GANDY PTY LTD

A handwritten signature in black ink, appearing to read 'Mingming Ma'.

Mingming Ma
TOWN PLANNER

117 Harrington Street
Hobart 7000
Phone (03) 6231 2555
Fax (03) 6231 1535
infohbt@jmg.net.au

49-51 Elizabeth Street
Launceston 7250
Phone (03) 6334 5548
Fax (03) 6331 2954
infohbt@jmg.net.au

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: J173021PH

8th July 2021

Tasmanian Meat Wholesalers Pty Ltd
PO BOX 43 North Hobart
TAS 7002

To whom it may concern,

175, 177 AND 179 CAMPBELL STREET - DEVELOPMENT APPLICATION NOTIFICATION

We advise that JMG Engineers and Planners seeks to make a development application on behalf of the Building Group Apprenticeship Scheme Ltd for development of land at 175, 177 and 179 Campbell Street (identified as CT 23364/1, CT 23364/2, CT 22529/3 and CT 23363/1 respectively). This is for a mixed use development comprising the following development on each of the Titles:

- Adhesion of three lots to create a single development;
- 175 Campbell Street (CT 23364/1, CT 23364/2) - demolition of the existing commercial building and other structures to its rear; development of mixed-use buildings; establishment of a new access;
- 177 Campbell Street (CT 22529/3) - refurbishment of existing residential dwellings; development of mixed-use buildings;
- 179 Campbell Street (CT 23363/1) - demolition of the outbuilding to the rear of the residential dwelling; development of residential buildings to the rear of the lot;
- Provisions of associated sewer, water, stormwater services, telecommunications, rubbish and mailbox for occupants of the development.
- Use the existing access to the proposal development which is the right of way for both lots at 173 & 175 Campbell Street.

Accordingly, we write to notify you of the application, in accordance with our statutory obligations under section 52(1) of the *Land Use Planning and Approvals Act 1993*.

More information will be available from Hobart City Council when the application is formally advertised.

Yours faithfully

JOHNSTONE MCGEE & GANDY PTY LTD

A handwritten signature in black ink, appearing to read 'Mingming Ma'.

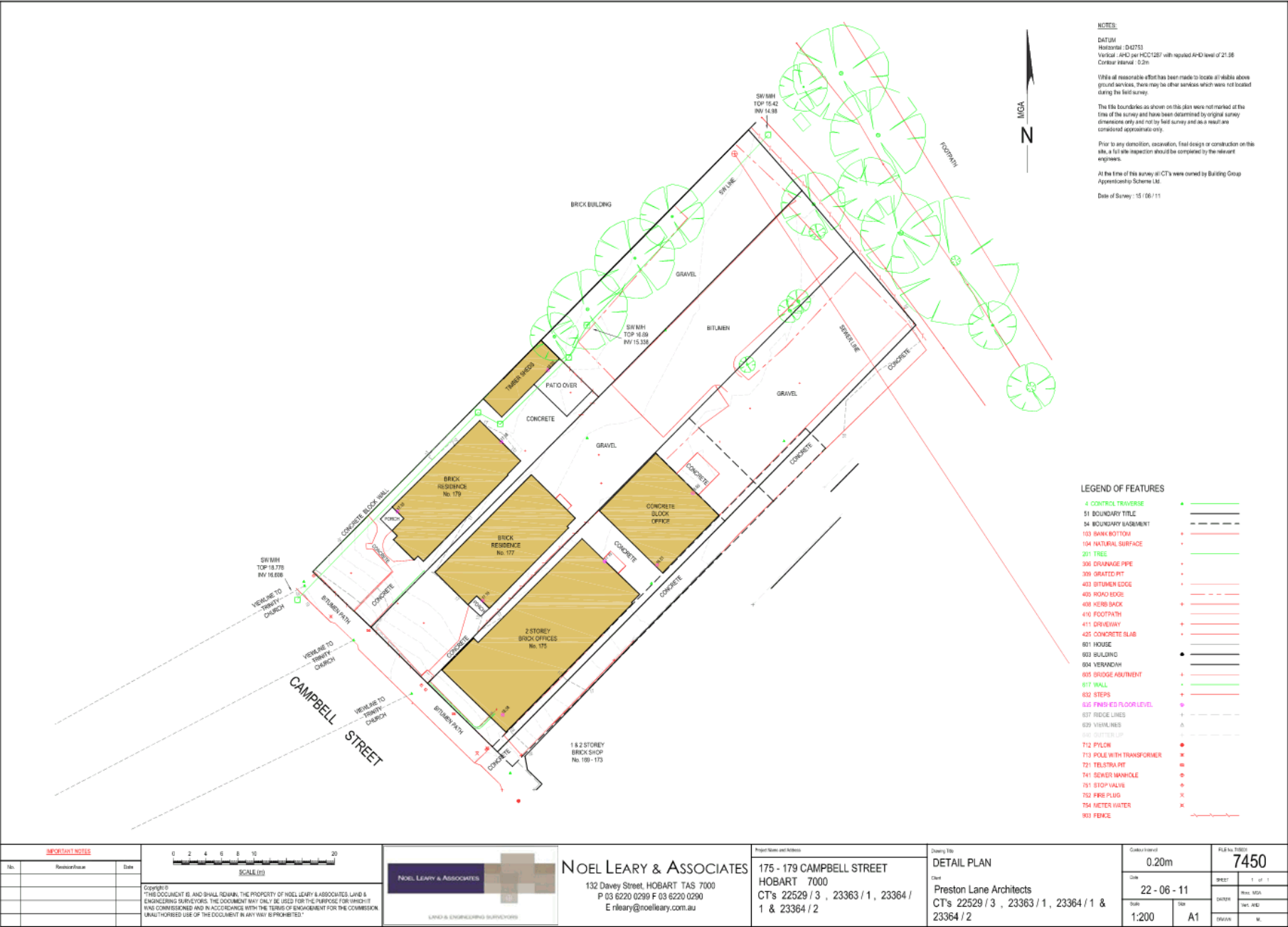
Mingming Ma
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ABN 76 473 834 852
ACN 009 547 139
as trustee for Johnstone
McGee & Gandy
Unit Trust

www.jmg.net.au



**RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME 23364	FOLIO 1
EDITION 2	DATE OF ISSUE 27-Jul-1994

SEARCH DATE : 17-May-2021

SEARCH TIME : 11.29 AM

DESCRIPTION OF LAND

City of HOBART

Lot 1 on Diagram 23364

Derivation : Part of 4 Acres (Section B.2.) Gtd. to J. Bisdee.

Prior CT 4129/69

SCHEDULE 1

B785251 TRANSFER to BUILDING GROUP APPRENTICESHIP SCHEME LTD
Registered 27-Jul-1994 at 12.01 PM

SCHEDULE 2

Reservations and conditions in the Crown Grant if any

BENEFITING EASEMENT: Right of Carriageway over the Right of
Way 2.59 wide marked E.G.H.C. on Diagram No. 23364

BURDENING EASEMENT: Right of Carriageway [appurtenant to Lots
1 and 2 on Sealed Plan No. 22529 and the land in
Conveyance No. 44/8439) over the Right of Way 0.91
wide marked D.C.E.F. on Diagram No. 23364

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations



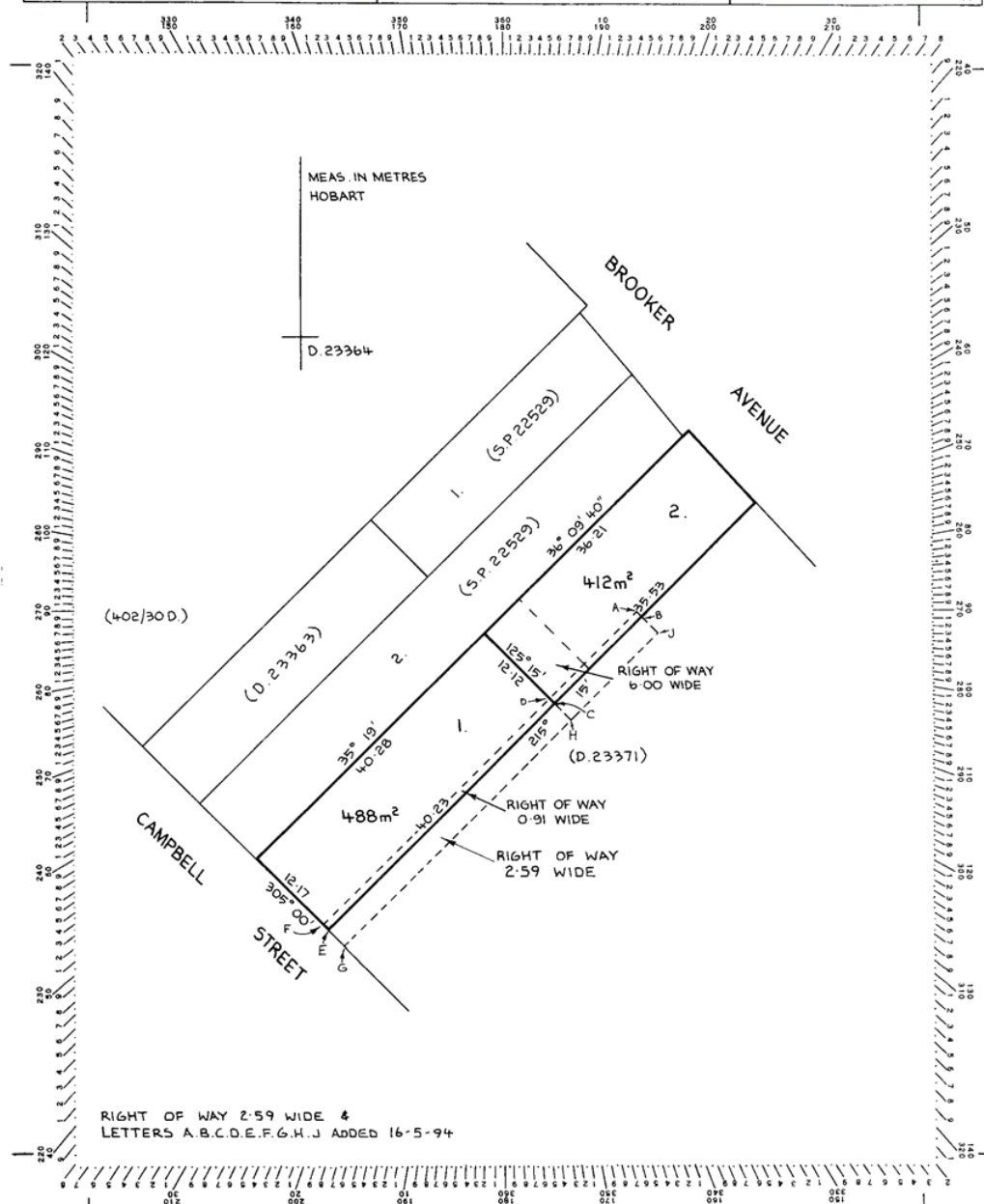
FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



Owner: X. 4079	PLAN OF SURVEY by Surveyor..... of land situated in the CITY OF HOBART SCALE 1:500 MEASUREMENTS IN METRES	Registered Number: D.23364
Title Reference: CONV. 58-2120		Approved Effective from: 16 NOV 1994
Grantee: PART OF (4000) JOHN BISDEE.		ACTING DEPUTY Recorder of Titles



**RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME 23364	FOLIO 2
EDITION 2	DATE OF ISSUE 27-Jul-1994

SEARCH DATE : 17-May-2021

SEARCH TIME : 11.30 AM

DESCRIPTION OF LAND

City of HOBART

Lot 2 on Diagram 23364

Derivation : Part of 4 Acres (Section B.2.) Gtd. to J. Bisdsee.

Prior CT 4129/70

SCHEDULE 1

B785251 TRANSFER to BUILDING GROUP APPRENTICESHIP SCHEME LTD
Registered 27-Jul-1994 at 12.01 PM

SCHEDULE 2

Reservations and conditions in the Crown Grant if any

BENEFITING EASEMENT: Right of Carriageway over the Right of
Way 2.59 wide marked B.J.H.G.E.C.B. on Diagram No.
23364

BURDENING EASEMENT: Right of Carriageway [appurtenant to the
land comprised in Conveyance No. 44/8439) over the
Right of Way 0.91 wide marked A.B.C.D. on Diagram No.
23364

BURDENING EASEMENT: Right of Carriageway [appurtenant to Lots
1 and 2 on Sealed Plan No. 22529) over the Right of
Way 0.91 wide marked A.B.C.D. on Diagram No. 23364
and the Right of way 6.00 wide shown on Diagram No.
23364

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations



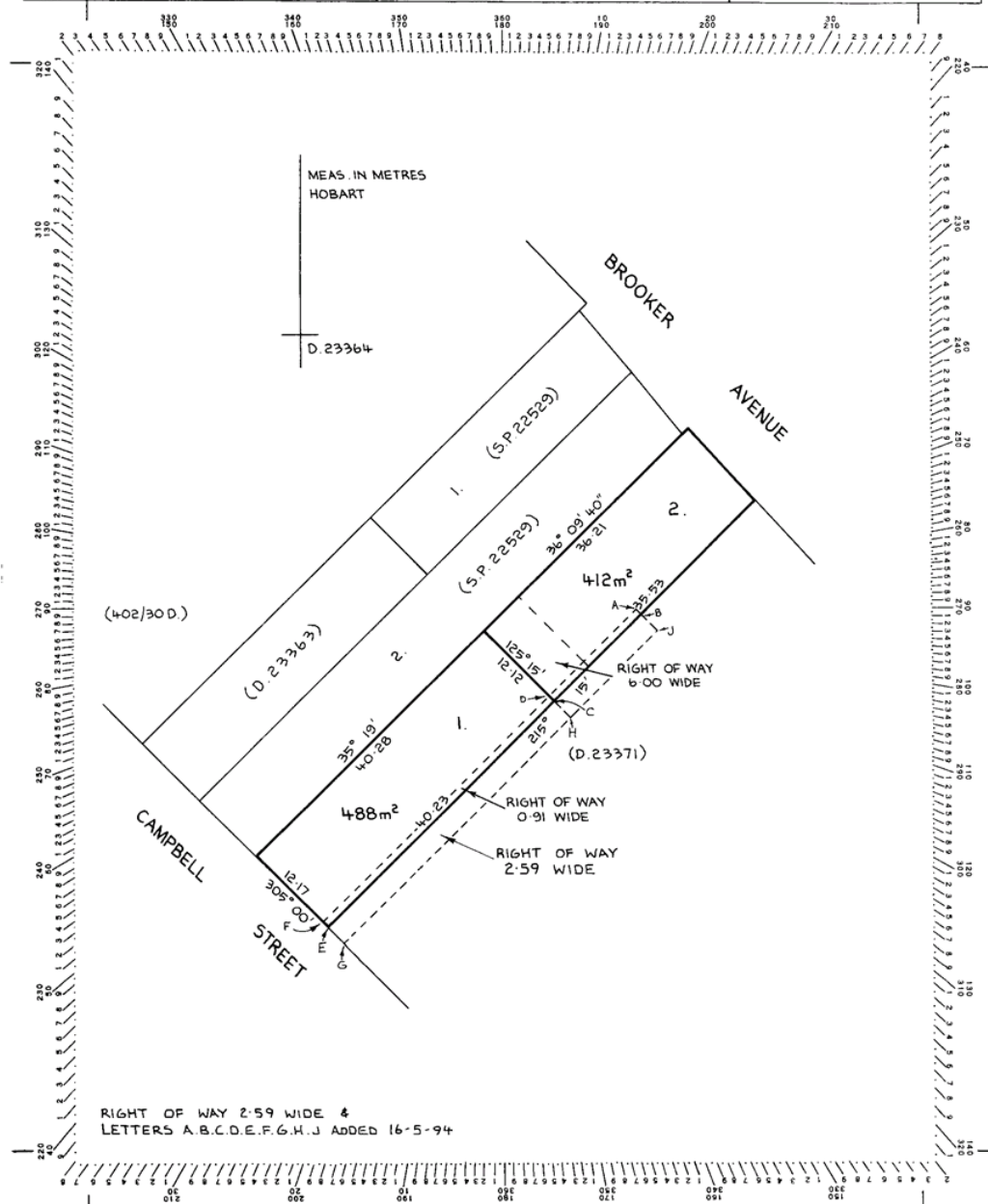
FOLIO PLAN

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



Owner: X. 4079	PLAN OF SURVEY by Surveyor..... of land situated in the CITY OF HOBART SCALE 1:500 MEASUREMENTS IN METRES	Registered Number: D.23364
Title Reference: CONV. 58-2120		Approved Effective from: 16 NOV 1994
Grantee: PART OF (4000) JOHN BISDEE.		ACTING DEPUTY Recorder of Titles



**RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME 22529	FOLIO 3
EDITION 1	DATE OF ISSUE 26-Apr-1995

SEARCH DATE : 17-May-2021

SEARCH TIME : 11.32 AM

DESCRIPTION OF LAND

City of HOBART

Lot 3 on Sealed Plan 22529

(Formerly Lots 1 & 2 on Sealed Plan 22529)

Derivation : Part of 4 Acres (Section B.2.) Gtd. to J Bisdee

Prior CT 4129/67

SCHEDULE 1

B785252 TRANSFER to BUILDING GROUP APPRENTICESHIP SCHEME LTD

SCHEDULE 2

Reservations and conditions in the Crown Grant if any

SP 22529 EASEMENTS in Schedule of Easements

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations



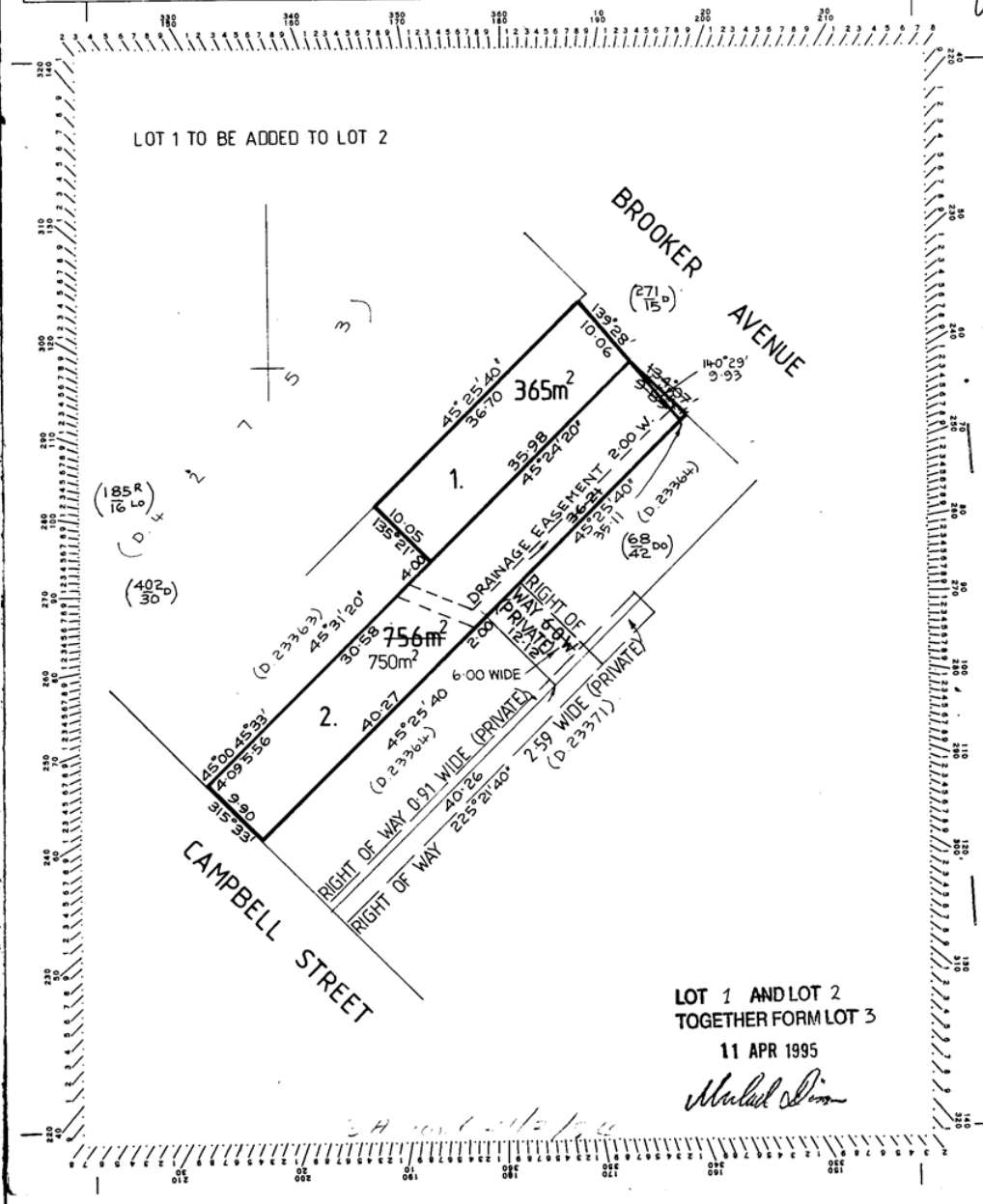
FOLIO PLAN

RECORDED OF TITLES

Issued Pursuant to the Land Titles Act 1980



<p>Owner: T.G. & M. Mahoney & L.B.A. Investments Pty. Ltd. B.R.S.H. Investments Pty. Ltd.</p>	<p>PLAN OF SURVEY by Surveyor <u>N.D. Leary</u> of land situated in the</p>	<p>Registered Number: S. P22529</p>
<p>Title Reference: Convs 44-4984 & 58-2120 & 44-8439.</p>	<p>CITY OF HOBART</p>	<p>Effective from: <u>16 NOV 1984</u></p>
<p>Grantee: Portion Of 4acres Gtd to John Bisdee</p>	<p>SECTION B2</p>	<p><i>J. Brown</i> ACTING DEPUTY Recorder of titles</p>
<p>SCALE 1: 1'500 MEASUREMENTS IN METRES</p>		



**RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME 23363	FOLIO 1
EDITION 3	DATE OF ISSUE 14-Sep-2010

SEARCH DATE : 17-May-2021

SEARCH TIME : 11.35 AM

DESCRIPTION OF LAND

City of HOBART
Lot 1 on Diagram 23363
Being the land described in Conveyance No. 44/4984
Excepting thereout Lot 1 on Sealed Plan No. 22529
Derivation : Part of 4 Acres (Sec. B.2.) Gtd. to J. Bisdee
Prior CT 4129/68

SCHEDULE 1

C948373 TRANSFER to BUILDING GROUP APPRENTICESHIP SCHEME LTD
Registered 14-Sep-2010 at noon

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
BENEFITING EASEMENT: Right of Drainage over the drainage
easement shown on Sealed Plan No. 22529

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations



FOLIO PLAN

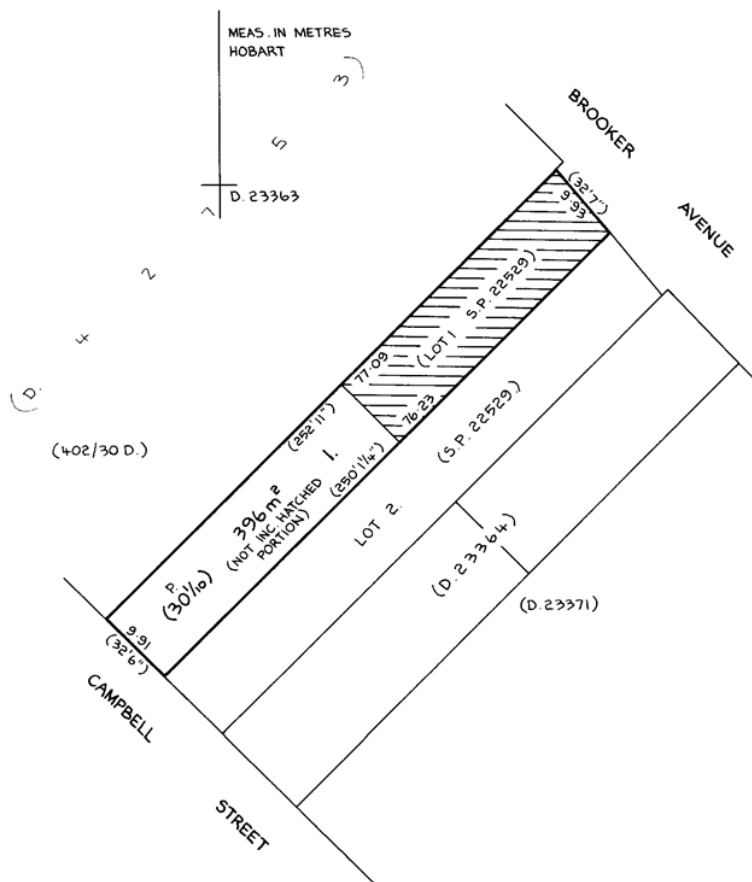
RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



APPROVED FROM... 16 NOV 1984 <i>J. Brown</i> ACTING DEPUTY RECORDER OF TITLES	CONVERSION PLAN	REGISTERED NUMBER D.23363
FILE NUMBER X 4079	GRANTEE: PART OF (4.0.0) JOHN BISDEE.	M. YOUNG 22.6.84

SKETCH BY WAY OF ILLUSTRATION ONLY

CITY/TOWN OF HOBART
LAND DISTRICT OF
PARISH OFLENGTHS ARE IN METRES. NOT TO SCALE.
LENGTHS IN BRACKETS IN LINKS/FEET & INCHES.'EXCEPTED LAND'
LOT 1 (S.P. 22529) 365m²

**RESULT OF SEARCH**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



SEARCH OF TORRENS TITLE

VOLUME 140732	FOLIO 1
EDITION 3	DATE OF ISSUE 28-Jan-2011

SEARCH DATE : 03-Jul-2020

SEARCH TIME : 09.53 AM

DESCRIPTION OF LAND

City of HOBART
 Lot 1 on Plan 140732
 Being the land described in Conveyance 62/3280, Being the land described in Conveyance No. 44/8439
 Derivation : Part of 4 Acres (Section B.2.) Gtd. to J. Bisdee.
 Derived from A16172
 Prior CTs 123139/1 and 23371/1

SCHEDULE 1

B577065, B810602 & C437756 TRANSFER to TASMANIAN MEAT
 WHOLESALERS PTY LTD

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
 BENEFITING EASEMENT: (appurtenant to the land marked HKLM on P. 140732) a Right of Carriageway over the Right of Way 0.91 wide shown on P.140732
 BURDENING EASEMENT: Right of Carriageway [appurtenant to the land in Conveyance No. 44/5050 and Lots 1 and 2 on Sealed Plan No. 22529) over the Right of Way 2.59 Wide marked EFGH on P.140732
 BURDENING EASEMENT: a right of carriage way for the owner or owners for the time being of the land described in Indenture of Conveyance 33/2120 over the Right of Way 2.59 Wide marked IJGH on P.140732
 67/7169 Benefiting Easement (appurtenant to the land marked LQPONM on P.140732) Party Wall Easement over the wall marked "A" "B" "C" "D" on Plan 140732
 67/7036 BURDENING EASEMENT: Right for Eaves and Spouting overhang (appurtenant to Lot 1 on Plan No.51812) over the land marked Easement 0.50 Wide shown on Plan No. 140732
 C509575 ADHESION ORDER under Section 110 of the Local Government (Building and Miscellaneous Provisions) Act 1993 Registered 28-Apr-2004 at noon
 C995946 MORTGAGE to Douglas Wayne Woulleman King and Susan



RESULT OF SEARCH

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



Woulleman King Registered 28-Jan-2011 at 12.01 PM

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

**FOLIO PLAN**

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980



OWNER 123139-1 CT. FOLIO REFERENCE 23371-1 CT. GRANTEE		PLAN OF TITLE LOCATION CITY OF HOBART SEC.B2 FIRST SURVEY PLAN No. COMPILED BY LDRB SCALE 1: 1500 LENGTHS IN METRES		Registered Number P.140732 APPROVED 5 MAR 2004 <i>Alice Kawa</i> Recorder of Titles
MAPSHEET MUNICIPAL CODE No. 5225-42 (III4)	LAST UPJ No 2100524	LAST PLAN No. P.123139,D.23371	ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN	

(P.22529)
 (D.23364)
 0.91 WIDE
 74.32 WIDE
 2.59 WIDE
 RIGHT OF WAY
 RIGHT OF WAY
 BROOKER AVENUE
 13.87 3 BGS.
 28.54
 LOT 1
 67.76 IN 3 BGS.
 (P.51812)
 CAMPBELL STREET
 13.72
 32.31
 EASEMENT 0.50 WIDE
 DEED OF GRANT 67/7169
 WALL
 (11.25)
 EASEMENT 0.50 WIDE ADDED TO PLAN PURSUANT TO SEC. 139 LAND TITLES ACT 190
Alice Kawa 21/05/2009
 RECORDER OF TITLES DATE
 CL



JMG Ref: 173021PH
Council Ref: PLN-21-471

22nd November 2021

Mr Ben Ikin
Hobart City Council
Via Online Development Services Portal

Attention: City Planning

Dear Mr Ikin

APPLICATION NO. PLN-21-471 - 175 CAMPBELL STREET & 177 CAMPBELL STREET & 179 CAMPBELL STREET & 169-173 CAMPBELL STREET, HOBART - PARTIAL DEMOLITION, ALTERATIONS, NEW BUILDING FOR 26 MULTIPLE DWELLINGS, FOOD SERVICES, BUSINESS AND PROFESSIONAL SERVICES, GENERAL RETAIL AND HIRE, AND SUBDIVISION (LOT CONSOLIDATION)

Please refer to the following with regards to the 'request for additional information letter' received from Hobart City Council, dated 6th August 2021.

The required additional information is addressed in the sequence below.

1. General Manager's Consent

- General Manager Consent Application (Attachment A) has been sent to coh@hobartcity.com.au on 22nd November 2021.
- The proposed infrastructure and the widened kerb of road reserves are enclosed scaled concept services plans enclosed in Updated Planning Report (Attachment A).

2. Planning

- The use of the northern existing dwelling is Business and Professional Development (consulting rooms) and the southern dwelling is a Food Services (café) refer to drawing J20823-A-101 in the architectural set;
- There are 35 car parks (including 2x tandem spaces);
- There are 31 apartments;
- This has been reviewed, and there is a potential need for underpinning. As such, we have included this title in the application and notified the owners of 181-189 Campbell Street;
- The Landscape Architectural Report (Appendix M) is enclosed in the Updated Planning Report;

117 Harrington Street
Hobart 7000
Phone (03) 6231 2555
Fax (03) 6231 1535
infohbt@jmg.net.au

49-51 Elizabeth Street
Launceston 7250
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Fax (03) 6331 2954
infohbt@jmg.net.au

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



- The proposed steel and brick fence is 20m long with a maximum of 2.3m in height for the existing heritage building and has more than 50% transparency above a height of 0.8m. Therefore, it complies with Acceptable Solution A1 under clause 15.4.7 Fencing. Details of the proposed fence are enclosed in Appendix C- Proposal Plans Drawing J20823-A-300 - South Western Elevation in Updated Proposal Plans.

3. Attenuation Code

AC1

- Tasmanian Meat Wholesalers are located at 169-173 Campbell Street and sell approximately 52 tonnes of sausages, red meat, poultry and smallgoods a month;
- The site currently operates a variety of small-scale equipment, including mincers, dicers, sausage fillers, bandsaws, and a smokehouse (which is used for a short period, mainly around Christmas);
- The retail shop is currently open:
 - 7:30 - 18:00, Monday - Friday
 - 7:30 - 14:00, Saturday
 - Closed Sunday and public holidays
- The commercial/wholesale currently operates:
 - 6:00 - 18:00, Monday - Friday
 - Closed Sunday and public holidays
- Deliveries currently comprise 4/5 LRV vehicles which enter and leave the site for deliveries multiple times a day, and approximately 3-5 third party deliveries per day, with suppliers operating a variety of HRV trucks that enter the site for loading/unloading (deliveries occurring from approximately 5:00 am - close of business, Monday - Saturday);
- The site operates an LPG forklift which operates within the service yard areas and buildings approximately 12 hours a day (6:00 - 18:00, Monday - Friday);
- All equipment is housed with the existing buildings, which minimises any potential noise impacts. The site has limited odour emissions due to the containment of operations within the existing buildings. In addition, the potential sources of odours are mainly smokehouse and grease traps. In relation to the smokehouse, the emissions are discharged above the roofline through a flue, and the smoker is used for a very short period during December. The grease traps are maintained and cleaned approximately every three months to manage odour emission.

4. Open Space

There are no trees proposed to be removed or planted in the road reserve thus no General Manager Consent is required on this issue. An arborist assessment (Appendix N) has been undertaken by Tree Inclined has been included in the revised planning report.

**5. Parking and Access**

The Concept Services Report (Appendix H) and Traffic Impact Assessment (Appendix G) within the planning report contains this information. There have been some updates to these documents, and they are located in the Updated Planning Report attached.

PA 9

A Waste Management Plan (Appendix O) is now included in the revised planning report and demonstrates that the arrangements for collecting waste and will not compromise the safety, amenity and convenience of surrounding occupants, vehicular traffic, cyclists, pedestrians and other road and footpaths users.

6. Potentially Contaminated Land

An Environmental Site Assessment (Appendix F) is underway and is awaiting laboratory results. This will be submitted separately.

7. Roads - Driveway

These matters are addressed in the updated concept services plans in the attached Updated Planning Report.

8. Stormwater

These matters are addressed in the revised Flood Modelling Report (Appendix I) and Concept Services Report (Appendix H) in the attached planning report.

9. Protection of Council Infrastructure - Stormwater

These matters are addressed in the revised Flood Modelling Report (Appendix I) and Concept Services Report (Appendix H) in the attached planning report.

10. Inundation Prone Areas Code

It proposed to increase the width of the right of way such that 169 to 173 Campbell Street has the benefit of so that it corresponds to the width of the driveway within 175 Campbell Street. It is expected this will be conditioned on any permit.

11. Survey

No awning is proposed with this development.

It proposed to increase the width of the right of way such that 169 to 173 Campbell Street has the benefit of so that it corresponds to the width of the driveway within 175 Campbell Street. It is expected this will be conditioned on any permit.



All appendices are enclosed in the Attachment B - Updated Planning Report

We trust this satisfies Council's request however if further information or clarification is required with respect to this request, please contact me on 6231 2555 or at planning@jmg.net.au.

Yours faithfully

JOHNSTONE MCGEE & GANDY PTY LTD



MINGMING MA
TOWN PLANNER



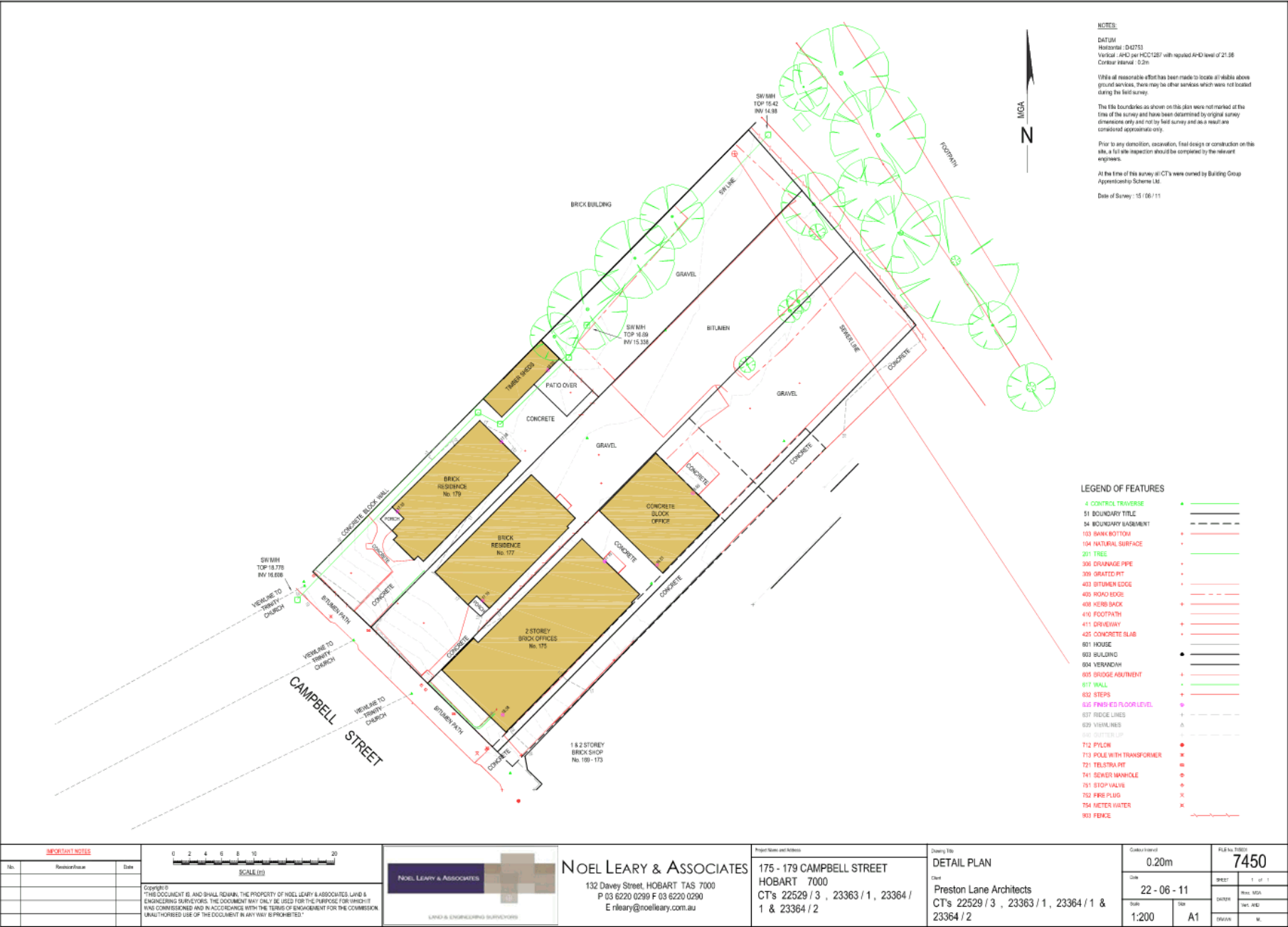
ATTACHMENT A

General Manager Consent



ATTACHMENT B

Updated Planning Report





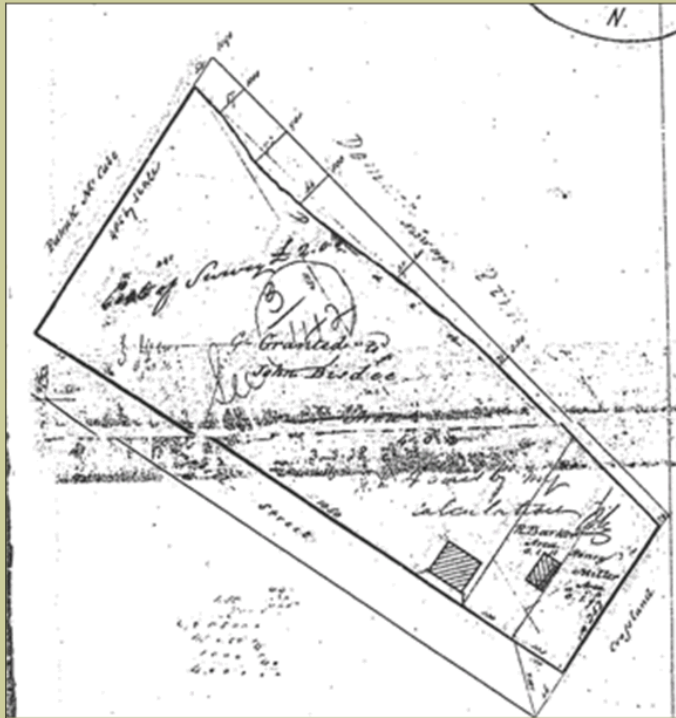
SENIOR CONSULTANT :
PARRY KOSTOGLOU

433 Dorans Road
Sandford,
Hobart
Tas.
7020

Phone: 03 62789598
Mobile: 0408 561934
Email: parryk@netspace.net.au

175-179 CAMPBELL STREET

STATEMENT OF HISTORICAL ARCHAEOLOGICAL POTENTIAL



A report to Preston Lane Architects
Parry Kostoglou
TASARC
January 2013

CONTENTS

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EXECUTIVE SUMMARY

This desktop investigation has found no evidence of any historic structures pre dating the early 20th century. Therefore there are no foreseeable archaeological constraints to the proposed development and no additional archaeological works are recommended.

However if development related excavation work exposes substantive physical building fabric not apparently related to the 20th century federation structures, an archaeologist should be consulted immediately.

1.0 INTRODUCTION

1.1 Background

A mixed use development has recently been lodged with the Hobart City Council (HCC) for three allotments on Campbell Street in the Hobart CBD. These consecutive allotments (175, 177 and 179 respectively) currently contain a mixture of early 20th century housing and mid to late 20th century commercial structures. In its response to the relevant building permit application the Hobart City Council has requested information relating to these properties archaeological potential:

11. As required under Schedule F, Clause F.5.1 of the Hobart Planning Scheme 1982, please provide a Statement of Historical Archaeological Potential or a Statement by a qualified archaeologist that either the site has been surveyed previously and not to be of historical archaeological significance or that the nature of the development will not result in the destruction of any aspects of items of historical archaeological significance.

This report seeks to satisfy this requirement based on the properties past usage, occupancy and structural development.

1.2 Location and extent of subject allotment

The location of the subject allotments within the context of the Hobart CBD is indicated in the plan below.



Plan showing location of re-development area (solid blue)



Current view of three properties showing adjacent federation style housing and late 20th century street side extension.

1.3 Objectives

For the purposes of lodging the relevant development application the consultant was requested to prepare a statement of Archaeological Potential in accordance with HCC regulations and the Tasmanian Heritage Council's Practice Note Number 2. This document is expected to contain:

- An investigation of the documentary evidence relating to the site's history and physical development over time to the present day.
- A best fit location based interpretation of the location of all known structures and related features.
- A ranked sensitivity assessment of the contents of the property
- Recommendations regarding their future archaeological assessment and mitigation.

1.4 Methodology

This investigation essentially consisted of the following activities:

- A preliminary site inspection of the property
- Collation of historic plans and surveys from the Tasmanian Lands Department
- Authorship of this report.

2.0 PREVIOUS INVESTIGATIONS

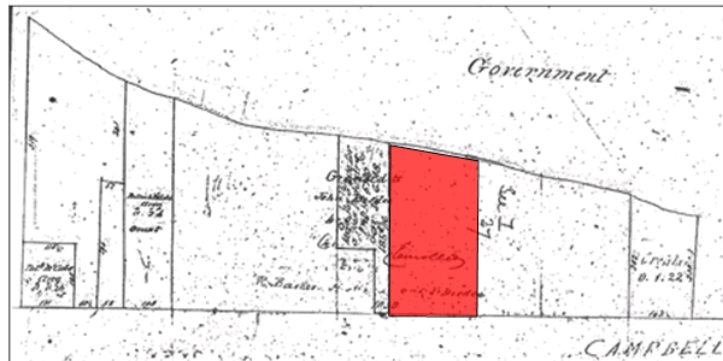
No previous historical or archaeological assessments of the subject properties are known to have been undertaken.

3.0 DOCUMENTARY ANALYSIS

This section summarises the known structural content of the allotment over time using various historic plans and surveys. The area containing the subject allotments on each survey is marked in solid red.

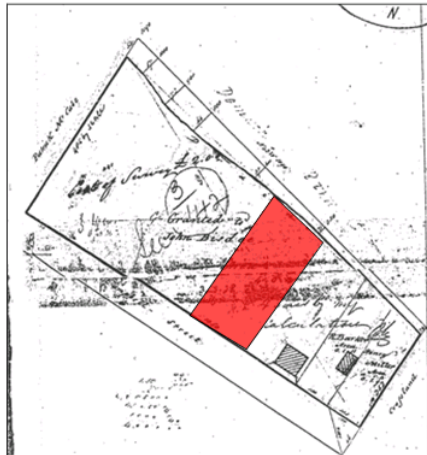
3.1 Undated Crown survey (1830's?)

This Crown survey (Folio 3 page 142) shows some of the recently surveyed in allotments on the relevant Campbell Street frontage but does not indicate the presence of any buildings there.



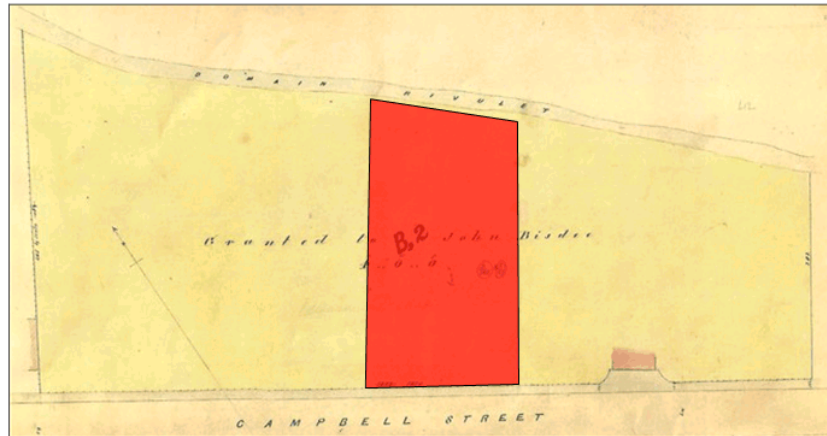
3.2 Crown survey of 1839

This survey (Folio 7 Page 27) shows the presence of two structures at the intersection of Campbell Street and Patrick Street which is slightly east of the subject allotments. However the allotments themselves remain un-developed.



3.3 Sprent's survey (1840's)

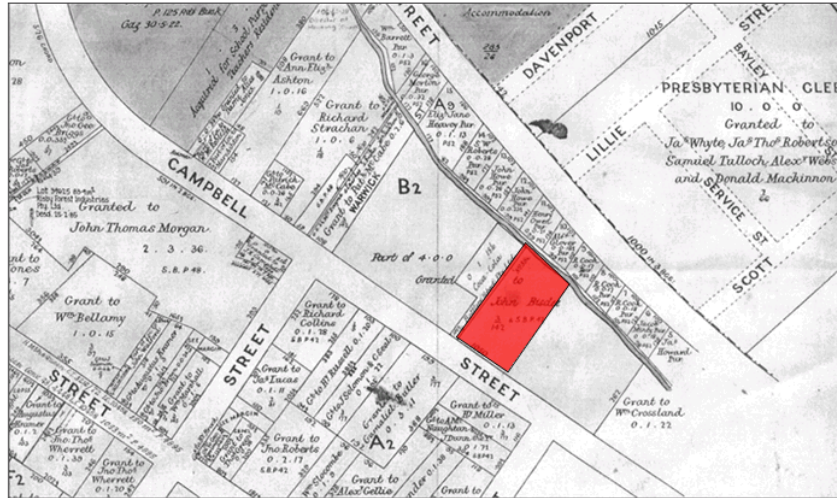
Crown Surveyor Sprent's notable city survey undertaken during the 1840's shows one of these buildings at the Campbell/Patrick Street intersection but still no developments on the subject allotments.

**3.4 Metropolitan Drainage Board Plan of c1903**

This section of a city wide drainage survey (AOT ref. HOBART No. 4) undertaken at the turn of the last century still fails to show any structural developments within the three subject allotments.

**3.5 County chart (c1910)**

This section of the county chart shows some additional sub division adjacent to the subject area but still no building development.



4.0 ANALYSIS OF ARCHAEOLOGICAL POTENTIAL

This section summarises the probability of finding archaeological remains within the sub surface of the subject allotment.

4.1 Documentary sources

There is no documentary evidence of any occupancy or structural development within the subject allotments prior to the 20th century.

4.2 On site inspection

The presence of two Federation style houses indicates that the earliest buildings on the subject allotments date from the early 20th century (c1910-1918).

5.0 STATEMENT OF ARCHAEOLOGICAL POTENTIAL

The complete absence of any apparent development on the subject allotments certainly minimises the possibility that they contain any substantive or significant historical archaeological vestiges related to buildings.

The undeveloped nature of the allotments until the 20th century possibly suggests that although subject to ownership they were used for agricultural or pastoral purposes. These activities would have left few physical remnants apart from fence lines or low stone walls.

In summary it is therefore stated that the subject allotments have minimal historical archaeological potential.

6.0 RECOMMENDATIONS

- Due to the minimal archaeological potential assigned to all three allotments no additional archaeological works or constraints are recommended.
- However if development related excavation work exposes substantive physical building fabric not apparently related to the 20th century federation structures, an archaeologist should be consulted immediately.

7.0 REFERENCES

Assorted Crown Surveys from the Lands Titles Department

Planning: #236446

Property

175 CAMPBELL STREET HOBART TAS 7000

People**Applicant ***JMG Engineers and Planners obo BUILDING GROUP
APPRENTICESHIP SCHEME LTD117 Harrington Street
HOBART TAS 7000
6231 2555
planning@jmg.net.au**Owner ***JMG Engineers and Planners obo BUILDING GROUP
APPRENTICESHIP SCHEME LTD117 Harrington Street
HOBART TAS 7000
6231 2555
planning@jmg.net.au**Entered By**FRANCES BEASLEY
117 HARRINGTON STREET
HOBART TAS 7000
62312555
iboss@jmg.net.au**Use**

Other

Details

Have you obtained pre application advice?

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

Are you applying for permitted visitor accommodation as defined by the State Government Visitor Accommodation Standards? Click on help information button for definition. *

☒ No

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

☒ No

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

Details

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

residential and office

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

Demolition the existing buildings, construction multiple mixed use building

Estimated cost of development *

16000000.00

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?

Documents

Required Documents

Title (Folio text and Plan and Appendix A - Title Information.pdf
Schedule of Easements) *

Plans (proposed, existing) * Appendix C - Proposal Plans (1).pdf

175-179 Campbell Street North Hobart

LANDSCAPE DEVELOPMENT APPLICATION

FEBRUARY 2022

ARCADIA





Issue c
Date 10/02/2022
Prepared By
Michael Barnett, Principal
Georgia Alexander, Senior Landscape Architect

Arcadia Sydney
Jones Bay Wharf, Lower Deck, Suite 76
26-32 Pirrama Road, Pyrmont NSW 2009
P 02 8571 2900
E sydney@arcadiala.com.au
arcadiala.com.au
@arcadialandarch
Arcadia Landscape Architecture Pty Ltd
ABN 83 148 994 870

We respectfully acknowledge the Traditional Custodians of the lands where we live and work. We acknowledge their unique ability to care for Country and deep spiritual connection to it. We honour Elders past, present and emerging whose knowledge and wisdom has and will ensure the continuation of cultures and traditional practices.

CONTENTS

01 ANALYSIS

- / Local Character
- / Landscape + Approach

02 CONCEPT

- / Landscape Strategy
- / Landscape Masterplan
- / Sections
- / Precedent Imagery
- / Planting palette



ANALYSIS
LOCAL CHARACTER

The Site sits on Campbell Street in North Hobart, adjoining the Brooker Highway to the north-east and only a short walk from the bustling food and beverage strip in Elizabeth Street, North Hobart.

The new development will lend itself to expansive views across town towards Mount Wellington and also into the canopy of the existing mature trees along the highway.

Adjoining buildings and their planted character have the opportunity to act as borrowed views to greenery for residents within our site.

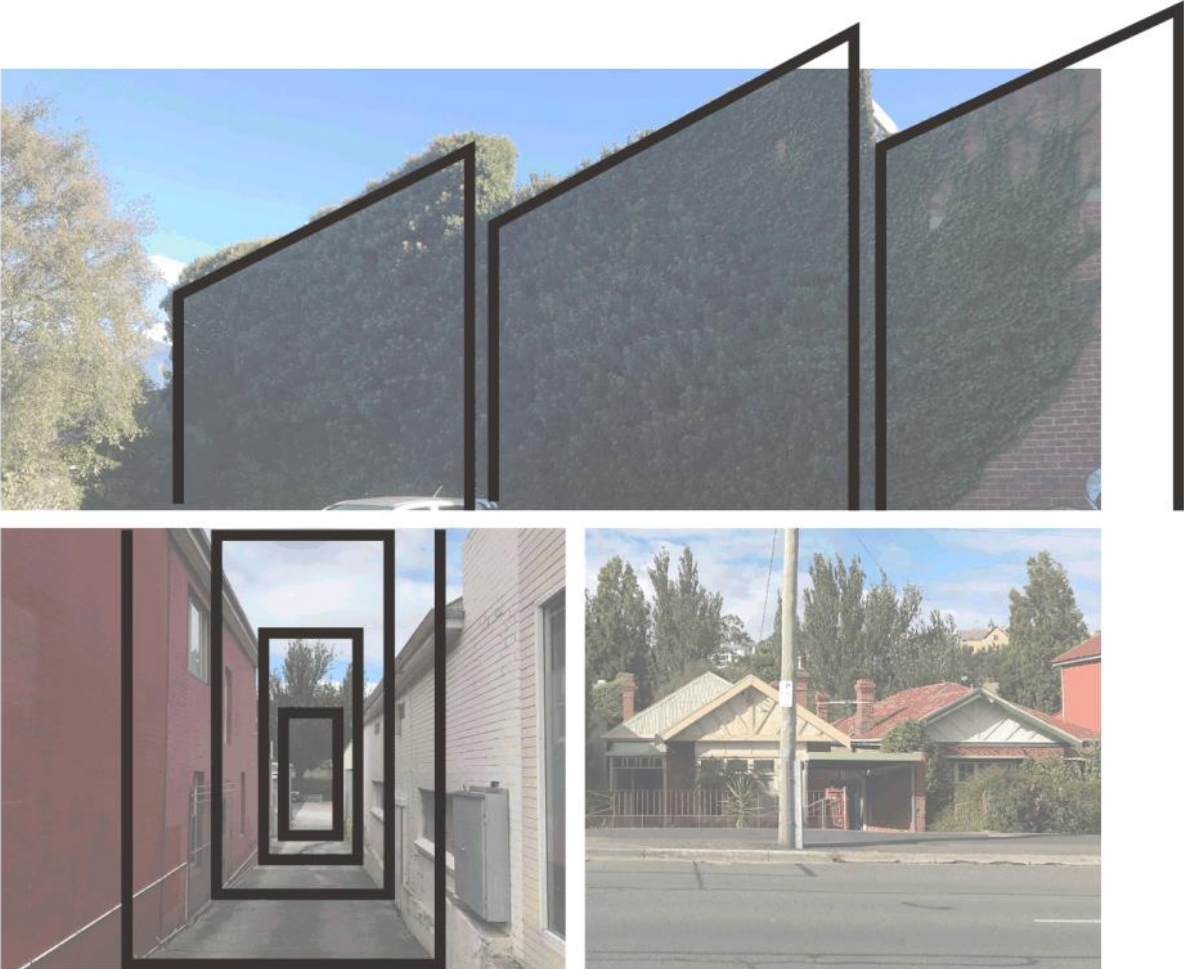
Similarly, the heritage value of the existing houses is something we wish to integrate into the landscape design in a seamless yet contemporary way.



ANALYSIS
LANDSCAPE + APPROACH

The landscape approach aims to draw upon the existing heritage elements on site as well as the existing planted character and borrowed views into nearby greenery. We aim to connect the site with its surroundings through engaging the front courtyards to the street frontage.

The courtyard spaces are small in scale, so providing ample amenity is a challenge within the site. The aim is to create flexible spaces that can be actively used throughout the year. A variety in amenity in these spaces will enrich the precinct, providing multiple opportunities for gathering and occupying as well as individual use. The landscape 'platforms' designed throughout the site are an efficient way to enhance amenity whilst also playing on the formal lines of the surrounding building character





CONCEPT
LANDSCAPE STRATEGY



CONNECT



Connect the site with it's surroundings through fully engaging the street frontage to the heritage courtyards below. Activate these street edges and bring people into and around the site to experience, stay and engage, whilst displaying an attractive street presence



ENGAGE



Engage the community through providing appropriate communal and individual space within the site. Integrate flexible programming of spaces to encourage communal use.



IDENTITY



Provide various open space typologies to enable a rich precinct with multiple opportunities for gathering & occupying. Leverage these spaces off the site's unique qualities to create a range of interesting experiences that cater for all users.

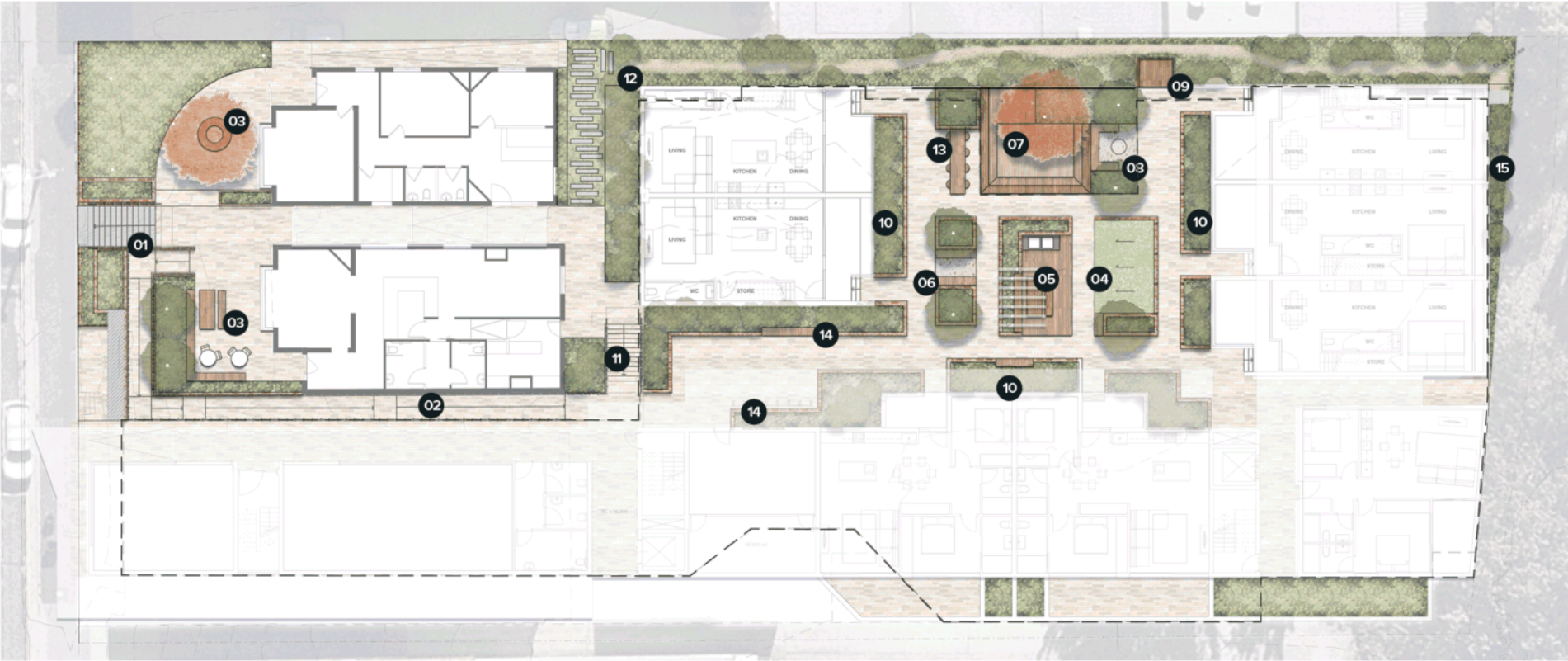


SEASONAL



Create flexible zones that can be actively used throughout the year by taking advantage of the environmental conditions of sunlight and comfort in winter, and shade and breezes in summer

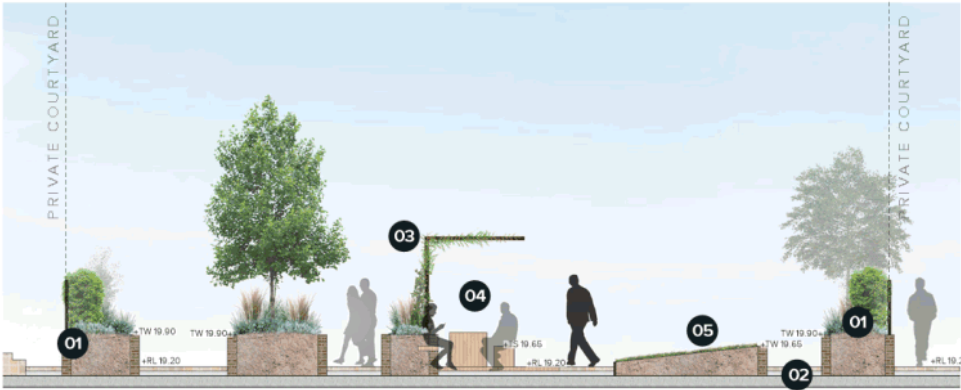
CONCEPT
LANDSCAPE MASTERPLAN



Legend

- 01/ Central stair/access point
 - 02/ Accessible path (1:14) down to lower courtyard level
 - 03/ Courtyard with sloped planting
 - 04/ Raised/sloping turf areas
 - 05/ Central dining area. Table, chairs, BBQs + overhead structure with climbers
 - 06/ Passive seating areas
 - 07/ Sunken deck seating area with large tree
 - 08/ Firepit + lounge
 - 09/ Small viewing platform suspended off edge
 - 10/ Generous raised planters to ensure privacy for residents
 - 11/ Stairway to lower level and back of heritage building
 - 12/ Informal access path within planting zone
 - 13/ Bar table with stools/powerpoints for outdoor laptop use
 - 14/ Raised planters with integrated seating edge
 - 15/ Deep soil planting
- Basement extent

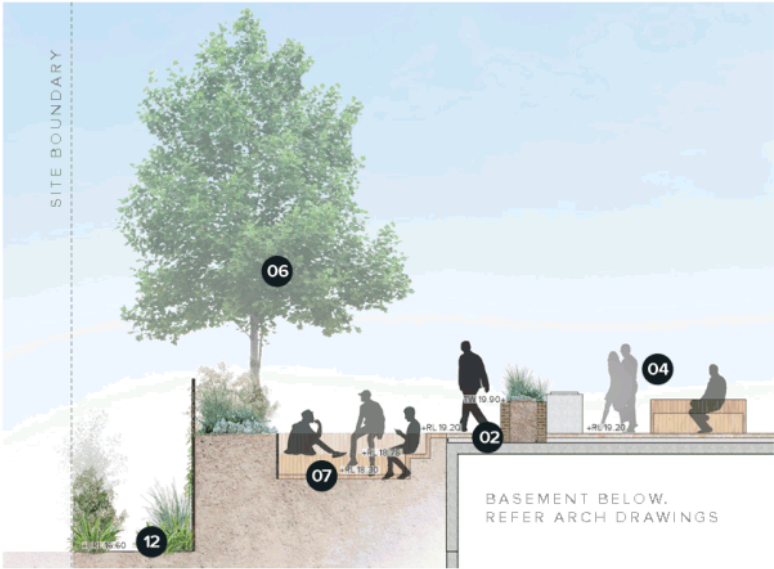
CONCEPT
LANDSCAPE SECTIONS GROUND FLOOR



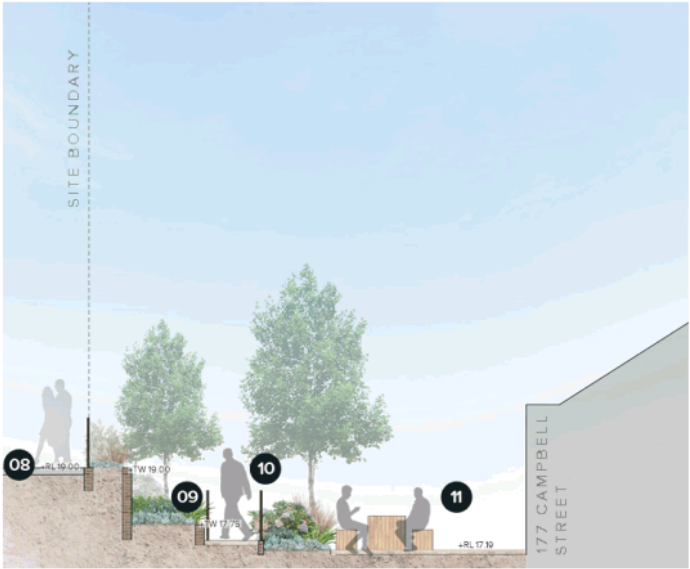
SECTION A

Legend

- 01/ Raised planters with privacy planting
- 02/ Paved circulation spaces
- 03/ Overhead arbor with climbers
- 04/ Outdoor dining setting + BBQ
- 05/ Sloping turf area
- 06/ Feature tree in deep soil zone
- 07/ Sunken deck seating terraces
- 08/ Campbell Street footpath
- 09/ Tiered planters with planting to help soften walls
- 10/ Handrails to 1:14 accessible ramp connection
- 11/ Flexible outdoor seating/dining area adjacent to Cafe tenancy
- 12/ Maintenance path to lower level

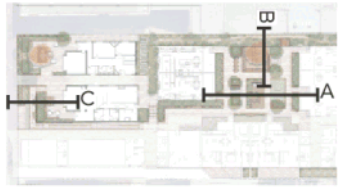


SECTION B



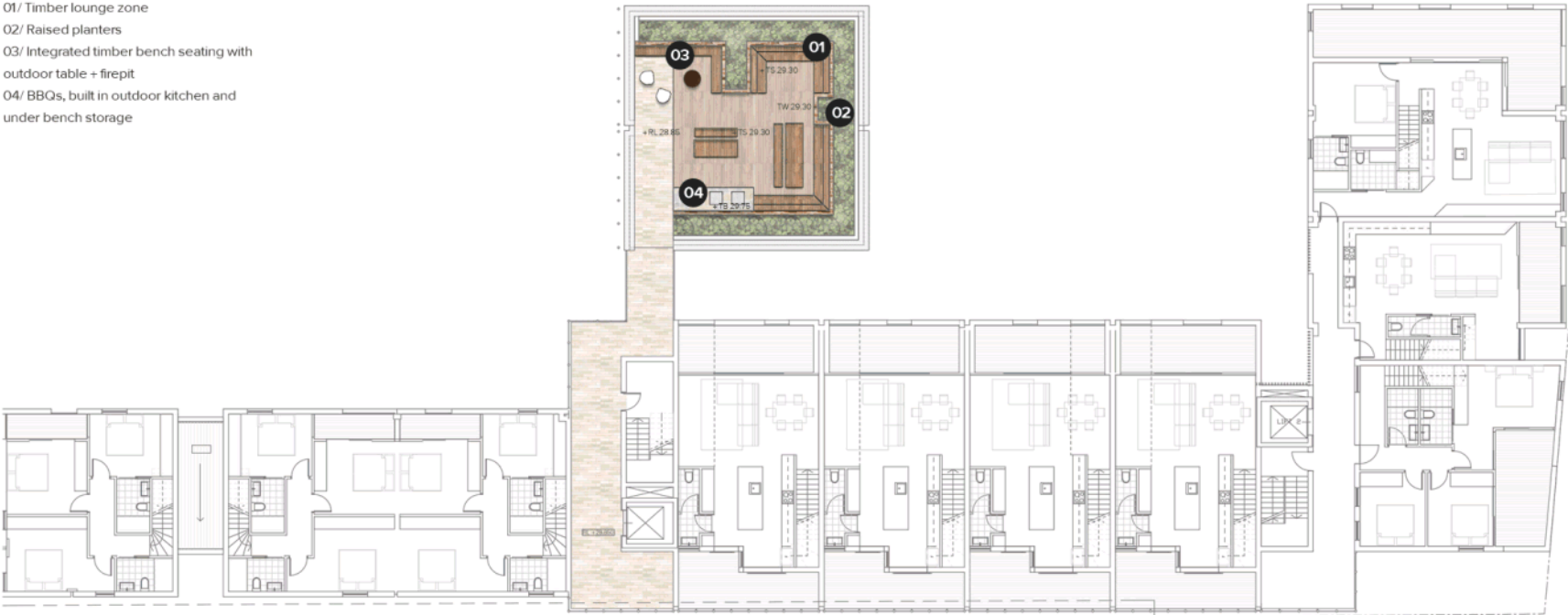
SECTION C

KEY PLAN



CONCEPT
LEVEL 3 ROOF TERRACE

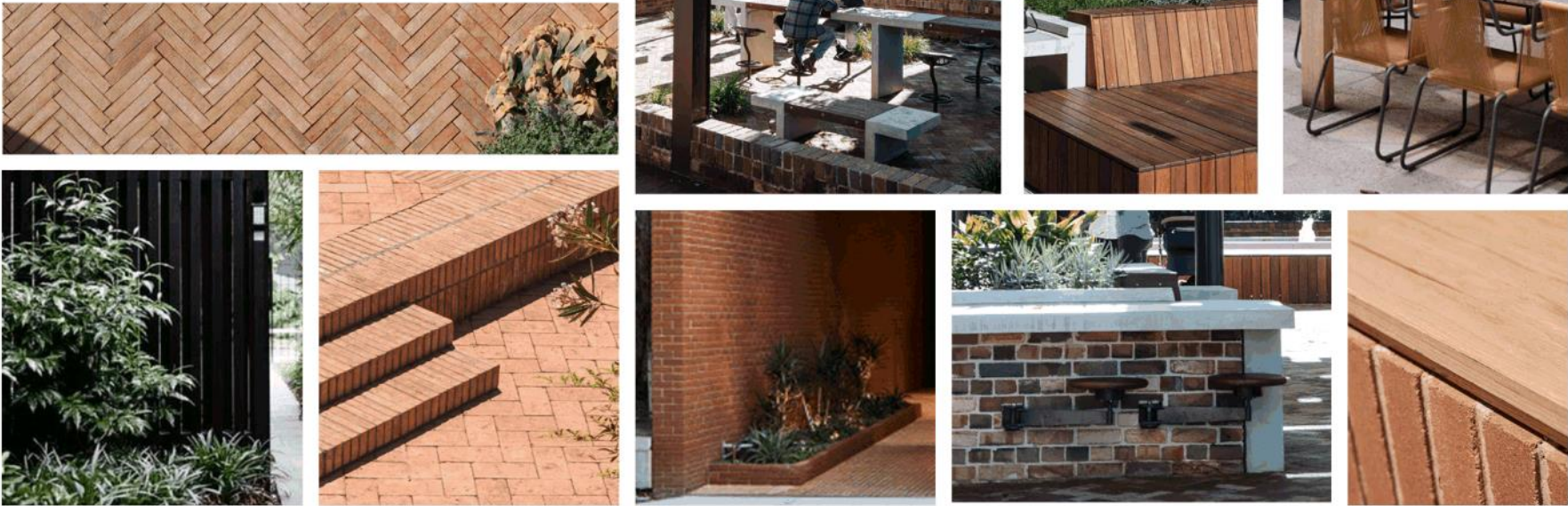
- Legend**
- 01/ Timber lounge zone
 - 02/ Raised planters
 - 03/ Integrated timber bench seating with outdoor table + firepit
 - 04/ BBQs, built in outdoor kitchen and under bench storage



CONCEPT
PRECEDENT IMAGERY

The Landscape approach plays on the idea of stepping platforms and linear shapes which create maximum amenity and are referenced in the heritage buildings + adjoining developments. In this way the 'platforms' take on a variety of uses and amenity for residents + users of the space. The Courtyards along Campbell Street take on a heritage form, with formal lines and edges. Material choices will complement the heritage forms, in a more modern and sophisticated way.

Privacy in the Central resident courtyard is a high priority. Vegetation screening to adjoining units is included to provide privacy to residents outdoor areas. The courtyard offers a variety of amenity, with stepping platforms, sunken lounges, outdoor dining, active zones as well as areas for passive amenity and respite.



CONCEPT
PLANTING PALETTE

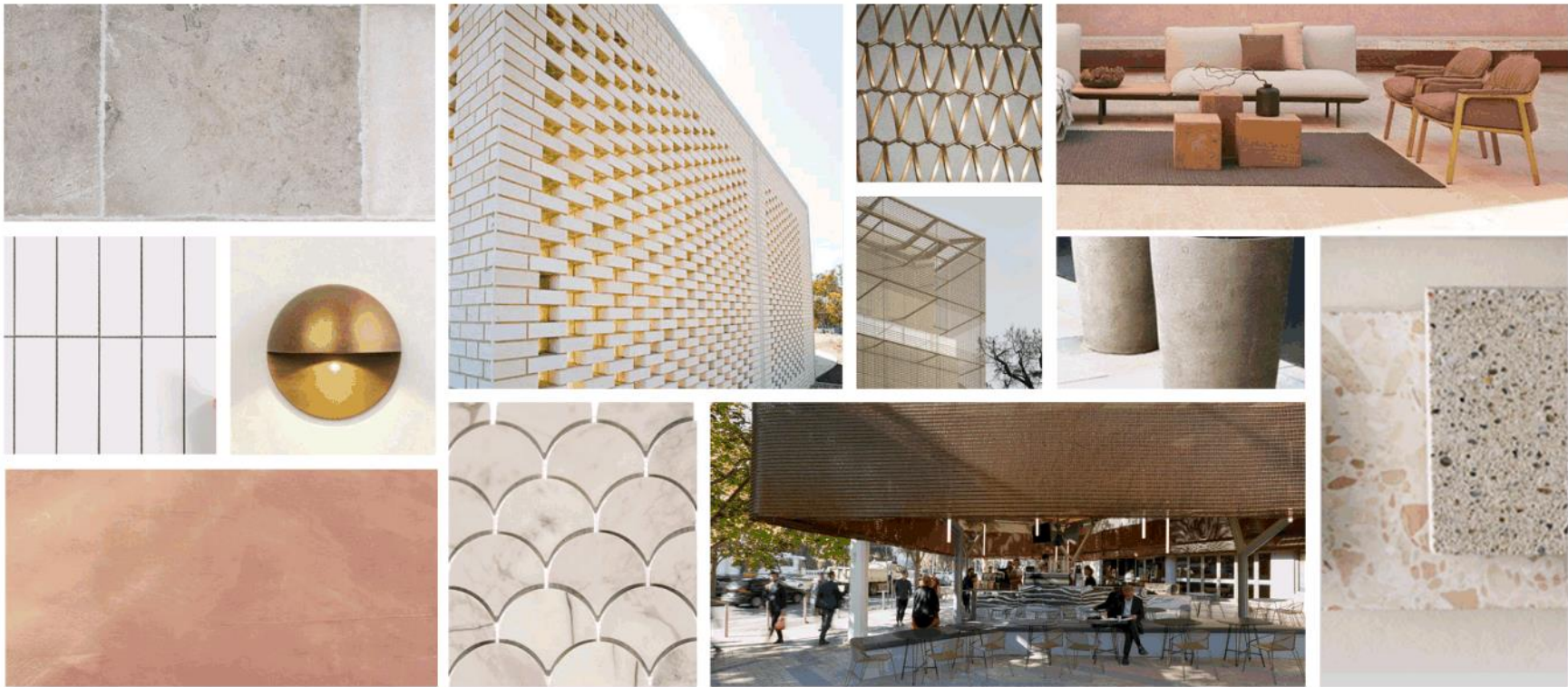
- 1. Acer Palmatum (Japanese Maple)
- 2. Betula sp. (Silver Birch)
- 3. Lagerstroemia indica 'Natchez' (Crepe Myrtle)
- 4. Magnolia Grandiflora Greenback
- 5. Hydrangea macrophylla (Hydrangea)
- 6. Lomandra longifolia 'Tanika' (mat rush)
- 7. Buxus Sempervirens (English Box)
- 8. Poa labillardierei (Common Tussock)
- 9. Blechnum nudum (Fishbone Water Fern)
- 10. Asplenium nidus (Birds Nest Fern)
- 11. Myoporum parvifolium (Creeping boobialla)
- 12. Adiantum aethiopicum (Common maidenhair)
- 13. Viola hederacea (Native Violet)



ARCADIA

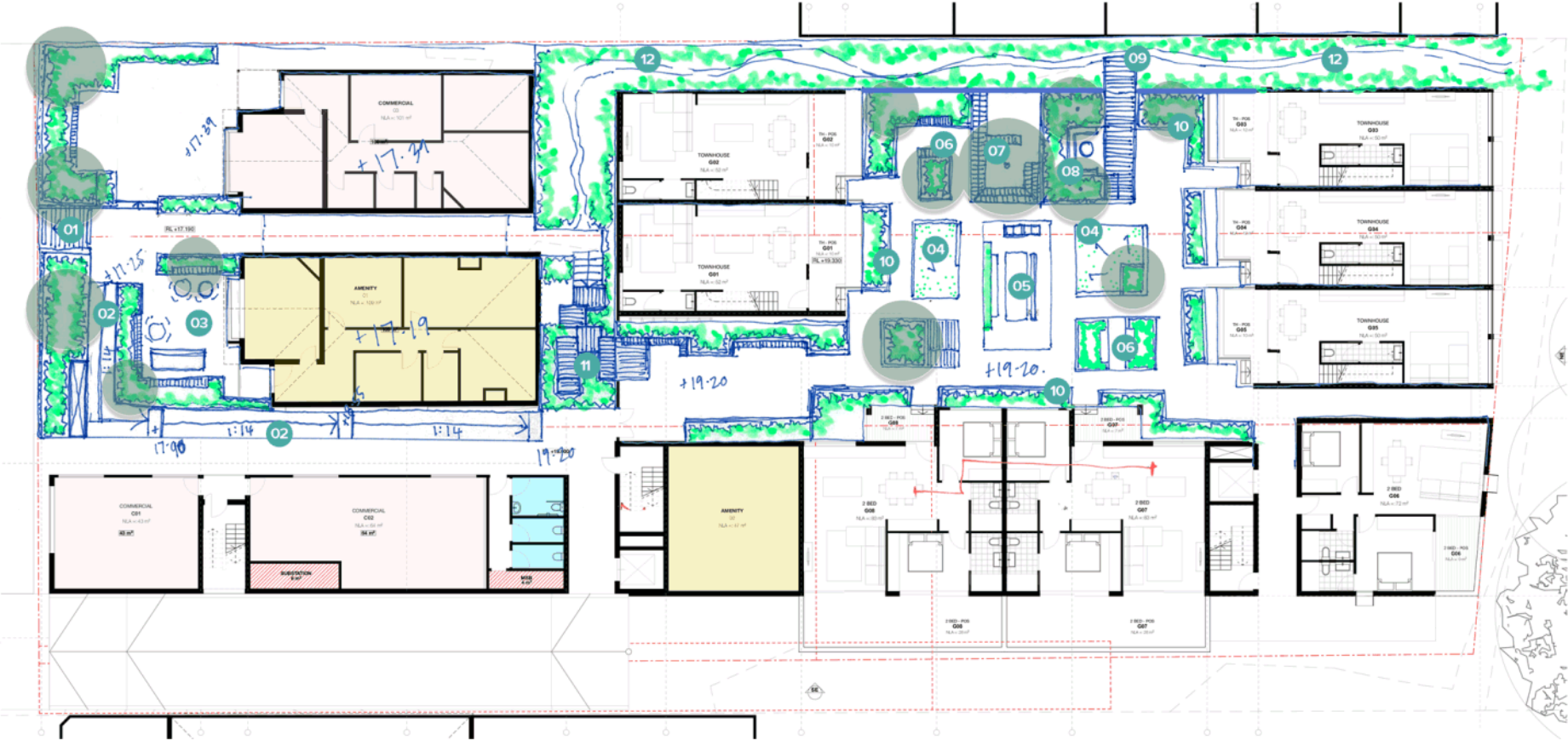


CONCEPT
MATERIALS PALETTE



CONCEPT
LANDSCAPE SKETCH PLAN

WIP



Legend

- 01/ Central stair/access point

02/ Accessible path (1:14) down to lower courtyard level

03/ Flexible courtyard + outdoor dining space to facilitate cafe

04/ Raised/sloping turf areas

05/ Central dining area. Table, chairs, BBQs + overhead structure
- 06/ Passive seating areas

07/ Sunken deck seating area with large tree

08/ Firepit + lounge

09/ Small viewing platform suspended off edge
- 10/ Generous raised planters to ensure privacy for residents

11/ Stepping platforms/informal stairway to lower level and back of heritage building

12/ Informal access path within planting zone

VISION
LANDSCAPE VISION





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

16 March 2022

(JMG Engineers & Planning OBO Building Group
Apprenticeship Scheme Ltd)
117 Harrington St
HOBART TAS 7000

mailto: planning@jmg.net.au

Dear Sir/Madam

**179 CAMPBELL STREET & 177 CAMPBELL STREET & 175 CAMPBELL STREET &
169 - 173 CAMPBELL STREET, HOBART & ADJACENT ROAD RESERVE
WORKS IN ROAD RESERVE, RELOCATION OF STORMWATER MAIN, TREE
REMOVAL & AWNING NOTICE OF LAND OWNER CONSENT TO LODGE A PLANNING
APPLICATION - GMC-21-81**

Site Address:

175, 177, 179 Campbell Street and 169-173 Campbell Street and Adjacent Road Reservation

Description of Proposal:

Partial Demolition, Alterations, New Building for 26 Multiple Dwellings, Food Services,
Business and Professional Services, General Retail and Hire, and Subdivision (Lot
Consolidation)

Applicant Name:

JMG Engineers & Planning
OBO Building Group Apprenticeship Scheme Pty Ltd

PLN (if applicable):

PLN-21-471

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

Hobart Town Hall
50 Macquarie Street
Hobart TAS 7000

Hobart Council Centre
16 Elizabeth Street
Hobart TAS 7000

City of Hobart
GPO Box 503
Hobart TAS 7001

T 03 6238 2711
F 03 6234 7109
E coh@hobartcity.com.au
W hobartcity.com.au

CityofHobartOfficial
ABN 39 055 343 428
Hobart City Council

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-22-9849 - Aborist Report by Jerry Romanski 11 February 2022
DA-22-9838 - Landscape Architectural Plans by Arcadia February 2022
DA-22-9837 - Stormwater Connection Profile by JMG Engineers and Planners
DA-22-9836 - Concept Servicing Plan by JMG Engineers and Planners
DA-22-9835 - Amended Architectural Plans by Cumulus

Hobart Town Hall
50 Macquarie Street
Hobart TAS 7000

Hobart Council Centre
16 Elizabeth Street
Hobart TAS 7000

City of Hobart
GPO Box 503
Hobart TAS 7001

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E coh@hobartcity.com.au
W hobartcity.com.au

 CityofHobartOfficial
ABN 39 055 343 428
Hobart City Council



City of Hobart

INSTRUMENT OF DELEGATION

General Delegation

Head of Intergovernmental Relations and Partnerships

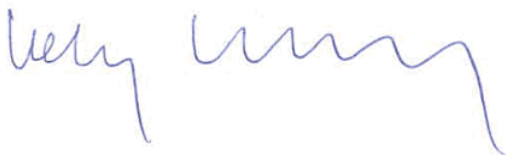
Section 64 of the Local Government Act 1993

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)*



Development and trees at / near 175 – 179 Campbell St, Hobart

- Development impact assessment

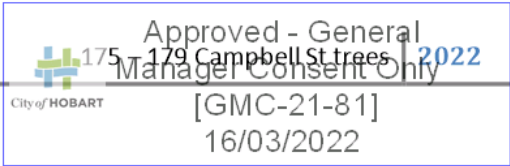
Jerry Romanski

Arborist / Consultant
*B.Sc (Hons),
Ass. Dip. App. Sc. (Hort/Arb)*

29 Winston Avenue
Seven Mile Beach TAS. 7170

M: 0419 363 011
jerry@treeinclined.com

11 February 2022



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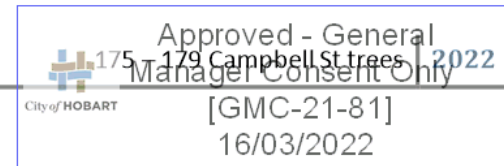
Figure 3. Basement and ground services plan by JMG. 5

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1. Terms of reference

- This development impact assessment follows from the preliminary survey requested by Dean Coleman, managing Director of Solutionswon Group Pty Ltd and completed in March 2021.
- Solutionswon Group Pty Ltd proposes to redevelop 175 – 179 Campbell St as a multi-unit residential complex (Figure 1, 2 and 3).
 - Documents used in this evaluation are:
Folio of drawings (25) by Cumulus titled “BGAS 175-179 Campbell Street Multi-Residential Development”, title page date 13/01/2022

Figure 1. Extracted figure from Cumulus drawing J20823-A-700 for the project, view from Campbell St.





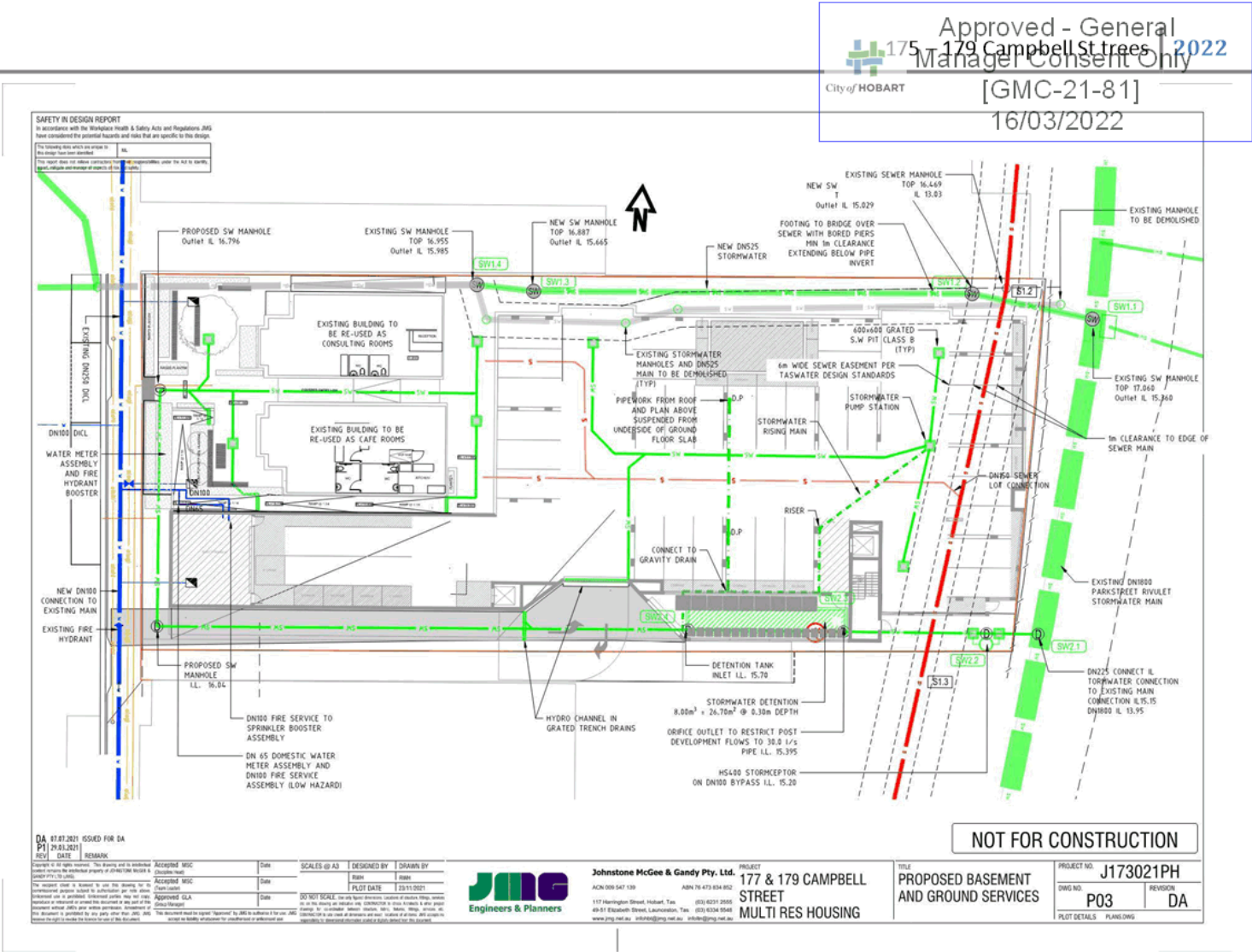


Figure 3. Basement and ground services plan by JMG.



2. Tree survey data

Tree	- tree number in Fig. 2
SPECIES	- botanic name of tree.
HGT	- approximate tree height (m)
DAB	- trunk diameter above root flare
DBH.	- DBH, at 1.4m
H/S	- assessment of tree health / structure (G- good, F- fair, P- poor, D- dead)
Comments	- key points affecting the tree's potential for maintenance within the scope of the proposed development
SRZ	- structural root zone radius (m)*
TPZ	- standard tree protection zone radius (m)*
Encroachment	- nature of encroachment into the TPZ
Enc %	- Proportion of the TPZ affected by the encroachment
Ret.	- proposed tree retention: Y – yes, to be retained; N – no, tree to be removed
Rem_Reas	- reason for proposed tree removal

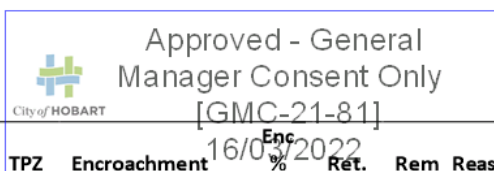
- SRZ and TPZ dimensions were guided by AS 4970-2009, Protection of trees on development sites.




Figure. 2 Aerial view of 175 – 179 Campbell St (ListMap), marked with approximate locations of the existing trees at and near these properties. Data was collected in March 2021.

Table 1. Inspection data .

TREE	SPECIES	HGT	DAB	DBH	H/S	Comments	SRZ	TPZ	Encroachment	Enc %	Ret.	Rem Reason
1	Populus nigra 'Italica'	22	0.83	0.83	G/G	In road reserve to north-east	3.1	10.0	New building, new stormwater connection to main	3	Y	
2	Populus simonii	10	0.36	0.35	F/F	In road reserve to north-east. Shallow roots on bank to NE.	2.2	4.2			Y	
3	Populus alba 'Pyramidalis'	23	0.82	0.74	G/F	In road reserve to north-east. Minor leader resting/growing over fence. Shallow roots visible within car park.	3.0	8.9	New building, new stormwater connection	29	N	Extensive damage to roots within SRZ expected
4	Prunus sp.	7	0.25	0.18	G/G	In road reserve to north-east	1.8	2.2	New building	39	N	Extensive damage to roots within SRZ expected
5	Acer psedoplatanus	11	0.36	0.33	G/G	In road reserve to north-east	2.2	4.0			Y	
6	Fraxinus oxycarpa	9	0.67	0.63	F/F	In road reserve to north-east. Low branches extend over car park.	2.8	7.6	New building	2.4	Y	
7	Eucalyptus nicholii	14	0.56	0.53	G/F	Historic scaffold branch tear out. Bark inclusions			New building		N	Within footprint of new building
8	Populus alba 'Pyramidalis'	15	0.4	0.36	G/G				New building		N	Within footprint of new building
9	Leptospermum petersonii	4	0.19	0.14	G/P	Poor tree form - crown biased heavily to south			New building		N	Within footprint of new building
10	Acer psedoplatanus	8	0.24	0.19	G/G				New building		N	Within footprint of new building
11	Populus alba 'Pyramidalis'	23	0.54	0.51	G/G	Shallow roots lifting bitumen car park surface. Many suckers nearby. Mature Callistemon sp. nearby			New building		N	Within footprint of new building
12	Populus alba 'Pyramidalis'	24	0.75	0.6	G/G	Pyracantha sp. shrub nearby			New building		N	Within footprint of new building
13	Cupressus sempervirens	8	0.23	0.21	G/G	Mature Callistemon sp. x2 nearby			New building		N	Within footprint of new building





Approved - General
 175 - 179 Campbell St trees | 2022
 Manager Consent Only
 [GMC-21-81]
 16/03/2022

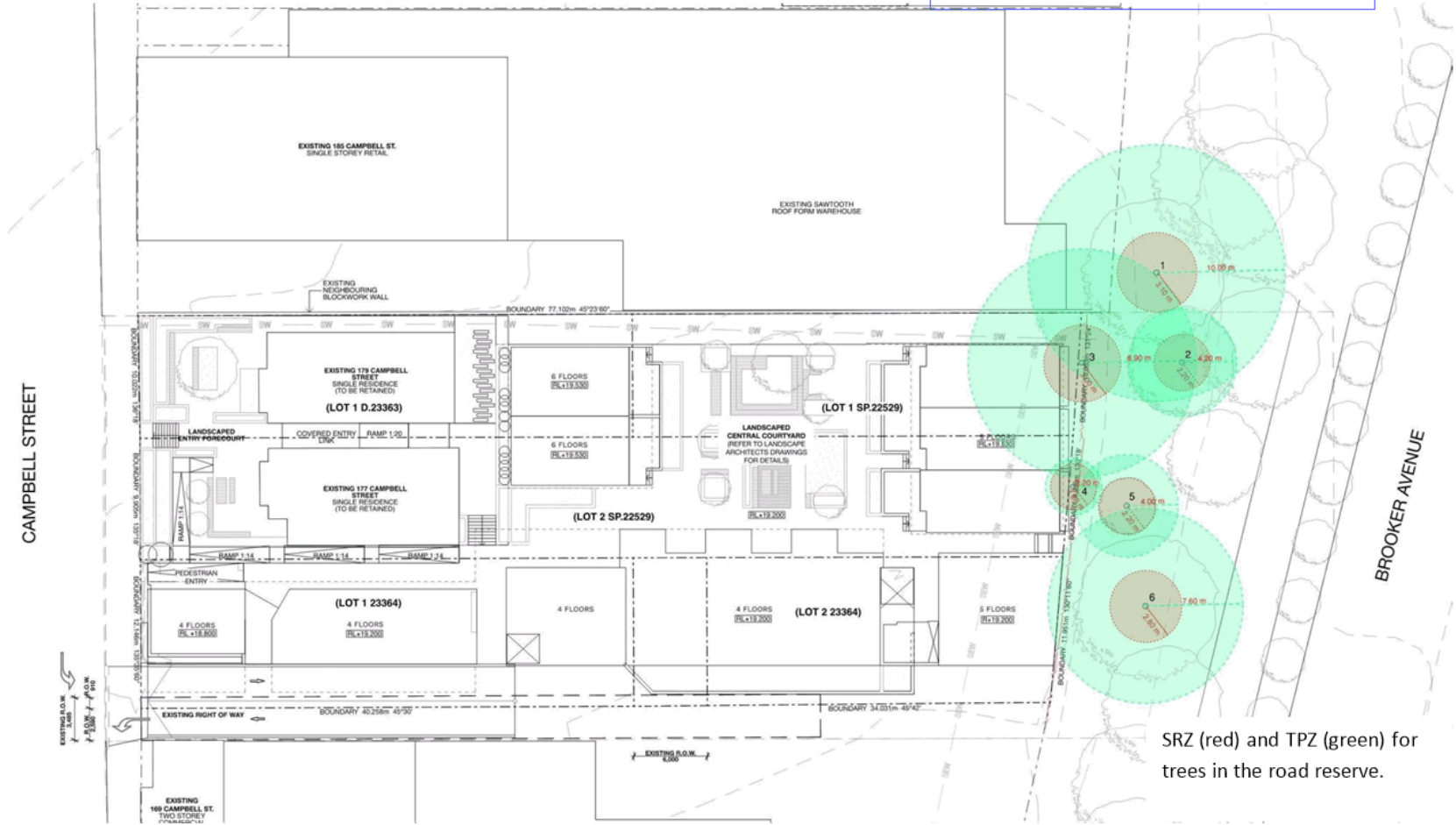
TREE	SPECIES	HGT	DAB	DBH	H/S	Comments	SRZ	TPZ	Encroachment	Enc %	Ret.	Rem Reason
14	Pittosporum eugenioides 'Variegatum'	4				Multi-leader shrub			New building		N	Within footprint of new building
15	Cupressus sempervirens	10	0.47	0.4	G/G	Multi-leader from ground level - broad crown.			New building		N	Within footprint of new building
16	Cupressus sempervirens	8	0.55	0.4	G/F	Multi-leader from ground level - broad crown.			New building		N	Within footprint of new building
17	Pittosporum tenuifolium	6	0.37	0.3	F/F	Multi-leader from ground level.			New building		N	Within footprint of new building
18	Alnus jorulensis	9	0.6	0.5	G/P	Tri-leader from ground, large scaffold has failed and is resting on shed roof. Branches sitting on shed roof.			New building		N	Within footprint of new building
19	Laurus nobilis	9			G/P	Multi-leader from ground level with many more suckers nearby			New building		N	Within footprint of new building
20	Sambucus nigra	4			F/F	Philadelphus microphyllus climbing over tree.			New storm water infrastructure		N	Extensive damage to roots within SRZ expected
21	Pyracantha coccinea	7	0.35	0.3	G/F	Overgrown with Jasminum polyanthum			New storm water infrastructure		N	Within footprint of new stormwater infrastructure
22	Fuchsia arborescens	3		0.12	F/G	Hydrangea shrubs on N and W boundaries, Yucca and succulents in front garden		1.4			Y	
23	Camellia japonica	4		0.1	G.G			1.2			Y	
24	Camellia japonica	3		0.1	F/G			1.2			Y	
25	Prunus sp.	4		0.13	G/G	Young cherry tree			Retaining wall construction		N	Within footprint of new retaining wall
26	Prunus sp.	4		0.14	G/G	Young cherry tree, multi-leader from ground, overgrown with rose.			Retaining wall construction		N	Within footprint of new retaining wall

Approved - General
Manager Consent Only
[GMC-21-81]
16/03/2022



Approved - General
Manager Consent Only
175 - 179 Campbell St trees 2022
[GMC-21-81]
16/03/2022

4. Trees within the Brooker Avenue reserve



175 – 179 Campbell St trees | 2022

- Trees 1, 2, 5 and 6 will not be impacted by the proposed works or the impact will be negligible (see Table 1 above and 5. Tree protection measures).
- Roots of trees 3 and 4 are likely to be extensively damaged by excavation within their SRZ for the building / car park footings – the car park is partly below the existing ground level. The car parking is an essential part of the current design. Tree 3 would be additionally impacted by the removal of the existing stormwater pit and installation of a new stormwater connection to the main that extends along the road reserve (see Figure 3 and the plan above)
 - Trees 3 and 4 would need to be removed.

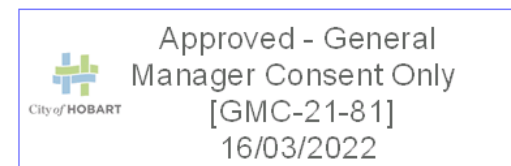
5. Tree protection measures

Trees 22, 23 and 24

- Personnel and potential plant movement during landscape and construction works near these trees may lead to excessive soil compaction and subsequent decline.
- TPZ of these trees should be marked out with stakes and barrier tape or webbing to exclude foot and machinery traffic, storage of materials and disposal of building waste.

Trees within the Brooker Avenue reserve

- The removal of trees 3 and 4 should preferably occur with machinery located within the proposed works site to protect the soil and root zones of the nearby reserve trees.
- A barrier fence should be erected at or near the property boundary to exclude movement of machinery over the TPZ of trees within the road reserve following the tree removal.
- Excavation within the site will encounter many large roots near the north-eastern property boundary. Some of those will be poplar and plum roots (trees 3 and 4) but may also include large roots of the road reserve trees. It will be difficult to distinguish between roots of different tree species.
 - Excavation should commence at least 1 m away from the extent of the required cut and proceed toward the north-eastern property boundary to facilitate early detection of large roots.
 - Any exposed roots ≥ 50 mm should be carefully exposed and cleanly cut back with a saw rather than left torn by machinery.
 - I advise the engagement of an arborist to stand over and provide advice during excavation along the north-eastern property boundary and near the Brooker Avenue reserve trees.





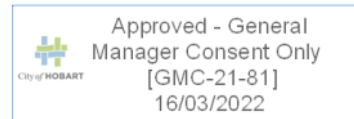
175-179 Campbell Street North Hobart

LANDSCAPE DEVELOPMENT APPLICATION

FEBRUARY 2022

ARCADIA






ARCADIA

Issue c
Date 10/02/2022
Prepared By
Michael Barnett, Principal
Georgia Alexander, Senior Landscape Architect

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@arcadialandarch
Arcadia Landscape Architecture Pty Ltd
ABN 83 148 994 870

We respectfully acknowledge the Traditional Custodians of the lands where we live and work. We acknowledge their unique ability to care for Country and deep spiritual connection to it. We honour Elders past, present and emerging whose knowledge and wisdom has and will ensure the continuation of cultures and traditional practices.

CONTENTS

 Approved - General
Manager Consent Only
[GMC-21-81]
16/03/2022

01 ANALYSIS

- / Local Character
- / Landscape + Approach

02 CONCEPT

- / Landscape Strategy
- / Landscape Masterplan
- / Sections
- / Precedent Imagery
- / Planting palette



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[GMC-21-81]
16/03/2022



ANALYSIS
LOCAL CHARACTER

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[GMC-21-81]
16/03/2022

The Site sits on Campbell Street in North Hobart, adjoining the Brooker Highway to the north-east and only a short walk from the bustling food and beverage strip in Elizabeth Street, North Hobart.

The new development will lend itself to expansive views across town towards Mount Wellington and also into the canopy of the existing mature trees along the highway.

Adjoining buildings and their planted character have the opportunity to act as borrowed views to greenery for residents within our site.

Similarly, the heritage value of the existing houses is something we wish to integrate into the landscape design in a seamless yet contemporary way.

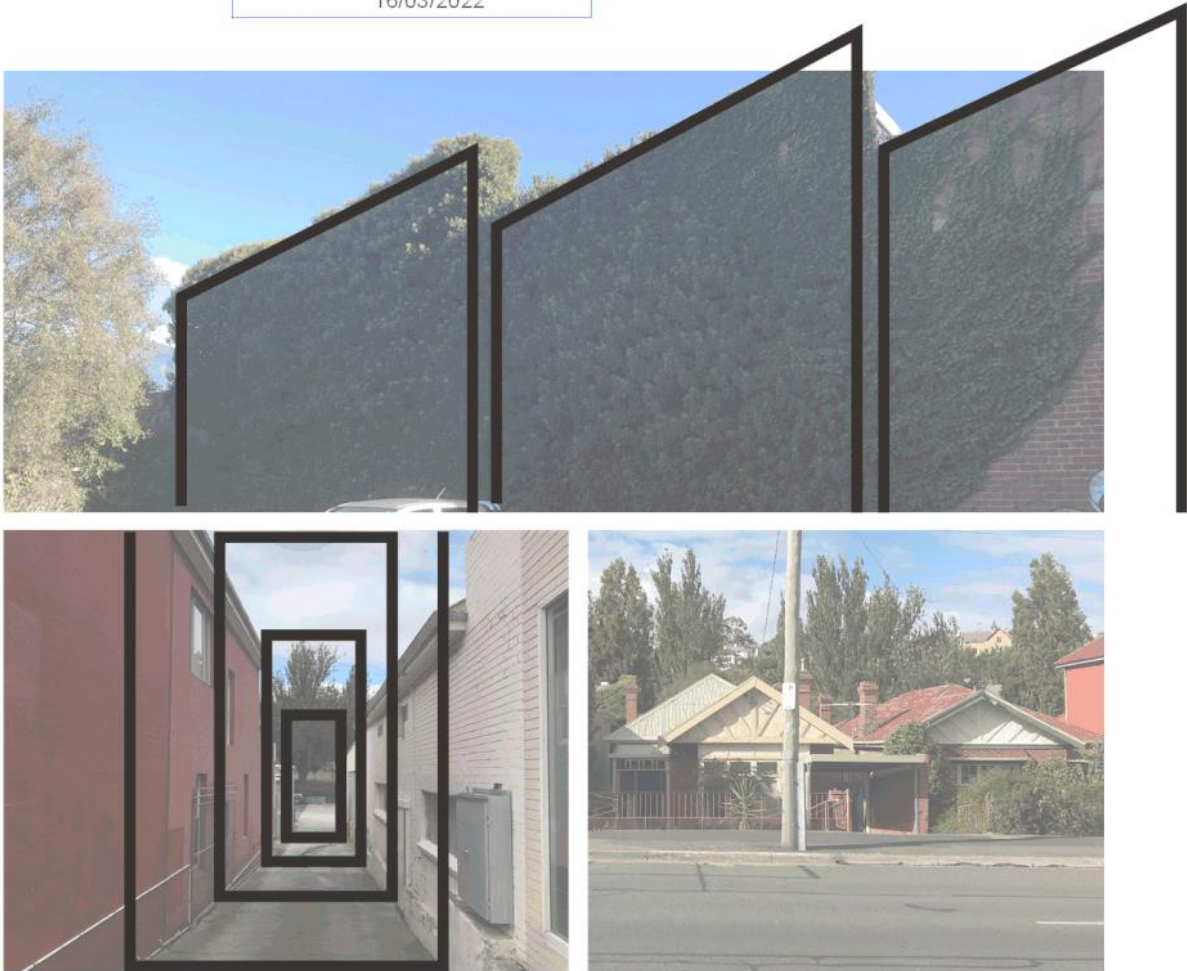


ANALYSIS
LANDSCAPE + APPROACH

The landscape approach aims to draw upon the existing heritage elements on site as well as the existing planted character and borrowed views into nearby greenery. We aim to connect the site with its surroundings through engaging the front courtyards to the street frontage.

The courtyard spaces are small in scale, so providing ample amenity is a challenge within the site. The aim is to create flexible spaces that can be actively used throughout the year. A variety in amenity in these spaces will enrich the precinct, providing multiple opportunities for gathering and occupying as well as individual use. The landscape 'platforms' designed throughout the site are an efficient way to enhance amenity whilst also playing on the formal lines of the surrounding building character

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16/03/2022



CONCEPT
LANDSCAPE STRATEGY

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[GMC-21-81]
16/03/2022



CONNECT

Connect the site with it's surroundings through fully engaging the street frontage to the heritage courtyards below. Activate these street edges and bring people into and around the site to experience, stay and engage, whilst displaying an attractive street presence



ENGAGE

Engage the community through providing appropriate communal and individual space within the site. Integrate flexible programming of spaces to encourage communal use.



IDENTITY

Provide various open space typologies to enable a rich precinct with multiple opportunities for gathering & occupying. Leverage these spaces off the site's unique qualities to create a range of interesting experiences that cater for all users.

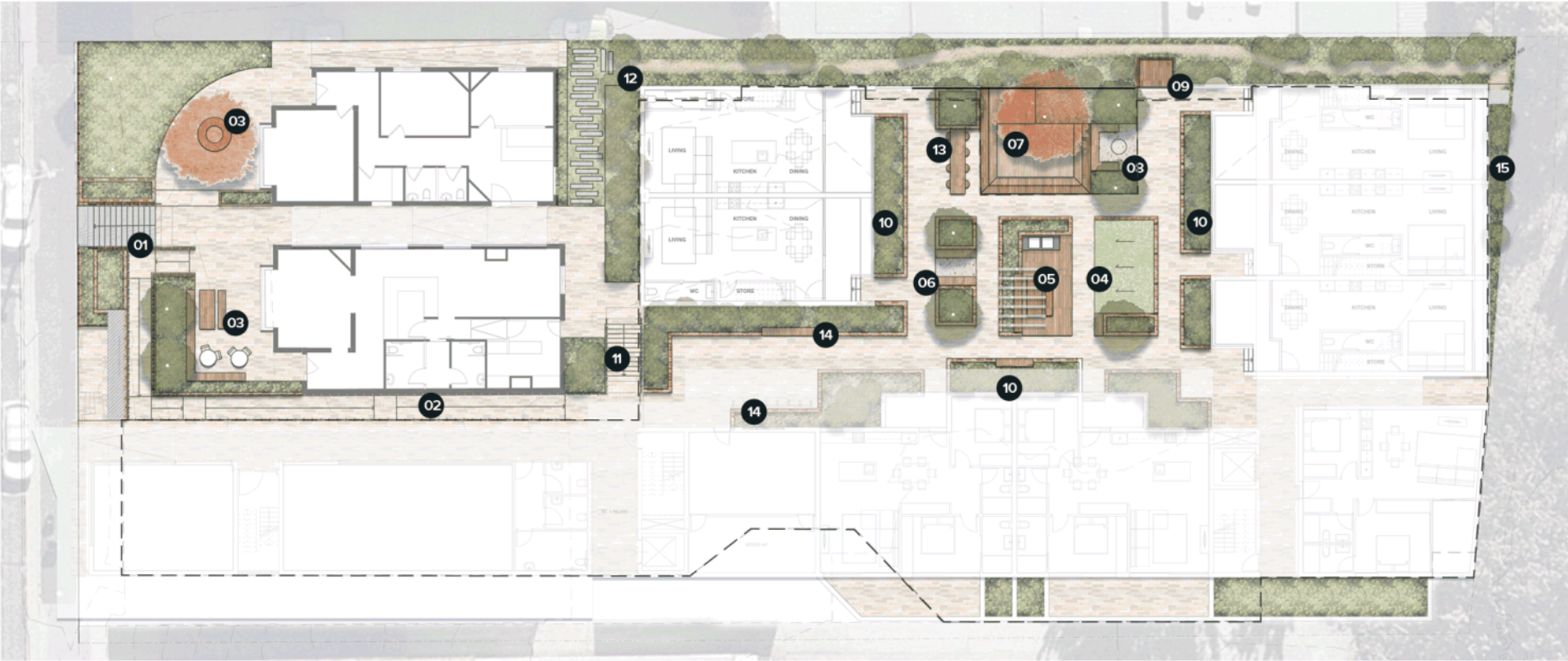


SEASONAL

Create flexible zones that can be actively used throughout the year by taking advantage of the environmental conditions of sunlight and comfort in winter, and shade and breezes in summer

CONCEPT
LANDSCAPE MASTERPLAN

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[GMC-21-81]
16/03/2022

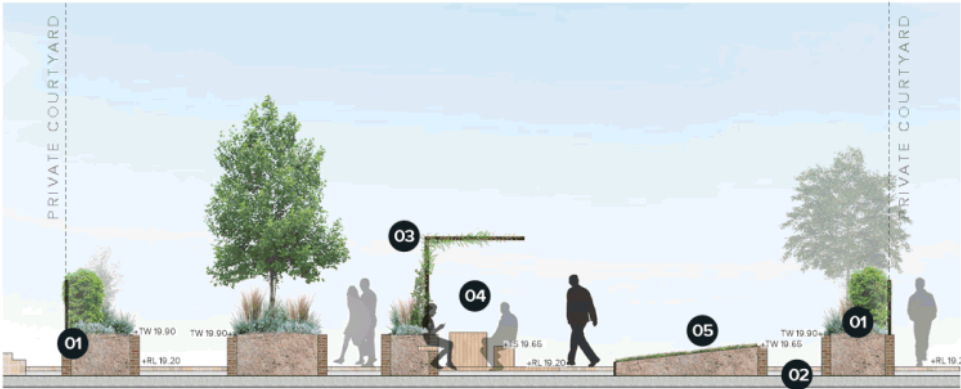


Legend

- 01/ Central stair/access point
- 02/ Accessible path (1:14) down to lower courtyard level
- 03/ Courtyard with sloped planting
- 04/ Raised/sloping turf areas
- 05/ Central dining area. Table, chairs, BBQs + overhead structure with climbers
- 06/ Passive seating areas
- 07/ Sunken deck seating area with large tree
- 08/ Firepit + lounge
- 09/ Small viewing platform suspended off edge
- 10/ Generous raised planters to ensure privacy for residents
- 11/ Stairway to lower level and back of heritage building
- 12/ Informal access path within planting zone
- 13/ Bar table with stools/powerpoints for outdoor laptop use
- 14/ Raised planters with integrated seating edge
- 15/ Deep soil planting

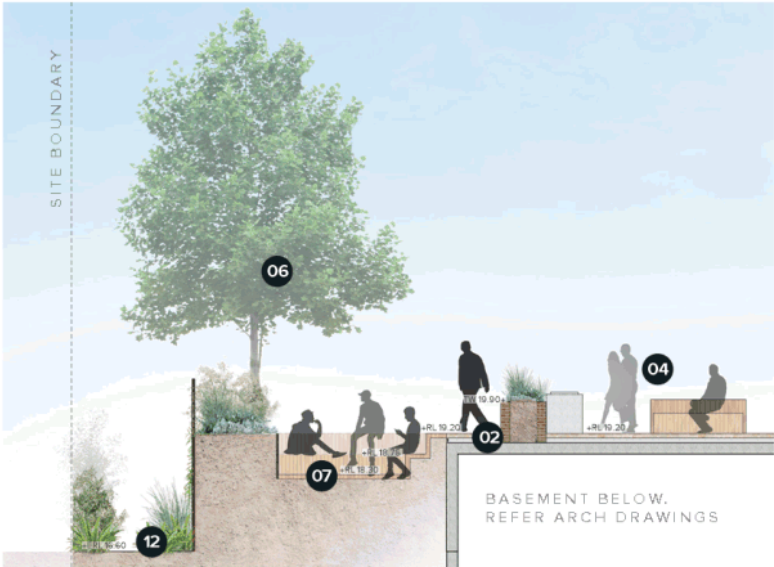
CONCEPT
LANDSCAPE SECTIONS GROUND FLOOR

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[GMC-21-81]
16/03/2022

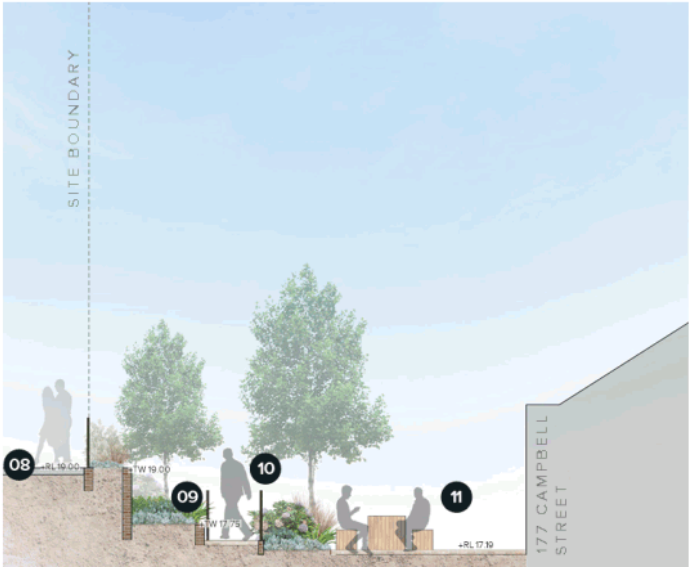


SECTION A

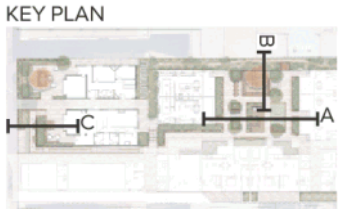
- Legend**
- 01/ Raised planters with privacy planting
 - 02/ Paved circulation spaces
 - 03/ Overhead arbor with climbers
 - 04/ Outdoor dining setting + BBQ
 - 05/ Sloping turf area
 - 06/ Feature tree in deep soil zone
 - 07/ Sunken deck seating terraces
 - 08/ Campbell Street footpath
 - 09/ Tiered planters with planting to help soften walls
 - 10/ Handrails to 1:14 accessible ramp connection
 - 11/ Flexible outdoor seating/dining area adjacent to Cafe tenancy
 - 12/ Maintenance path to lower level



SECTION B



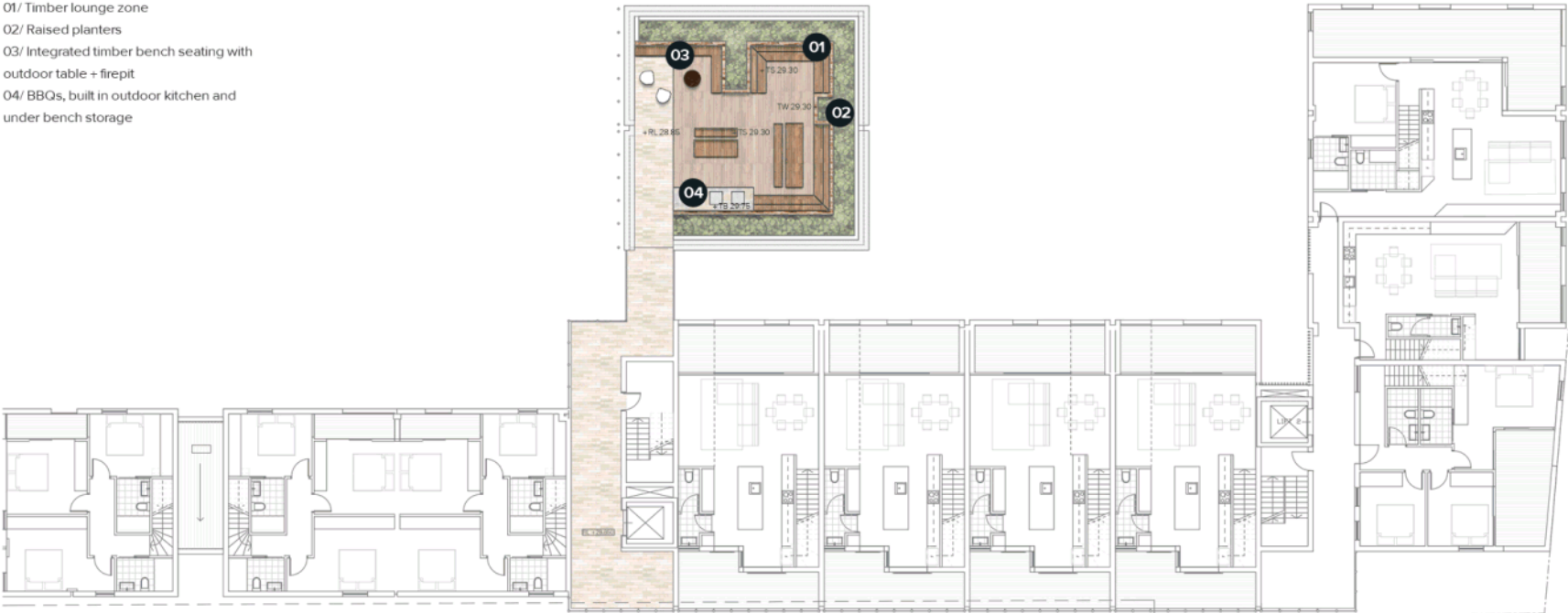
SECTION C



CONCEPT
LEVEL 3 ROOF TERRACE

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Manager Consent Only
[GMC-21-81]
16/03/2022

- Legend**
- 01/ Timber lounge zone
 - 02/ Raised planters
 - 03/ Integrated timber bench seating with outdoor table + firepit
 - 04/ BBQs, built in outdoor kitchen and under bench storage

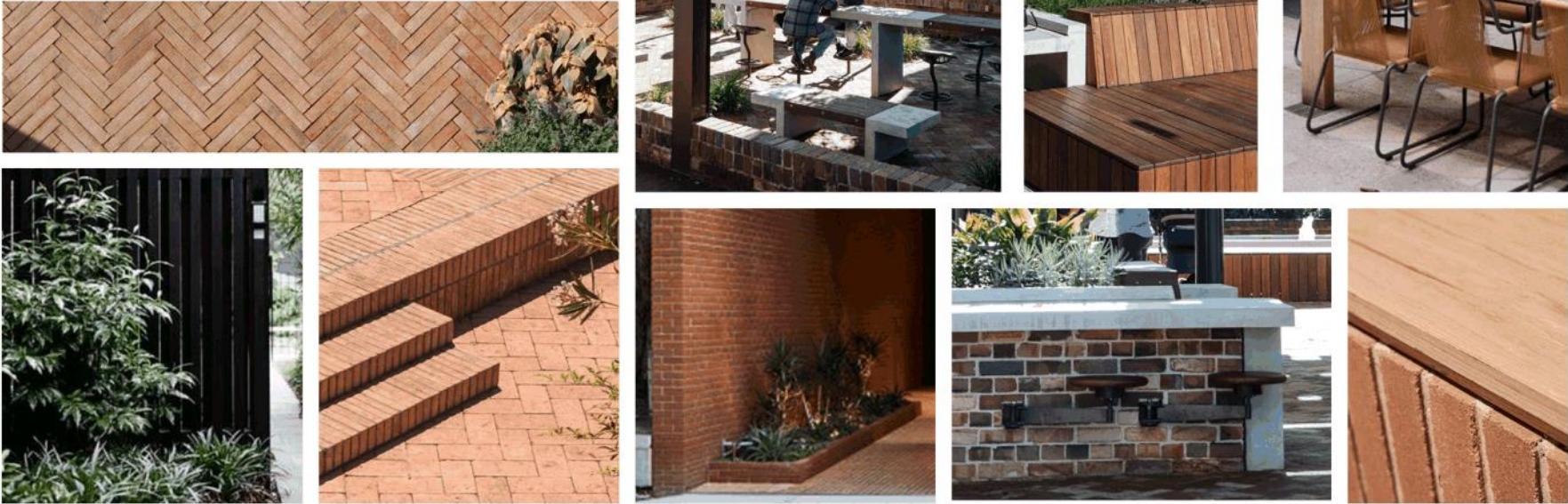


CONCEPT
PRECEDENT IMAGERY

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[GMC-21-81]
16/03/2022

The Landscape approach plays on the idea of stepping platforms and linear shapes which create maximum amenity and are referenced in the heritage buildings + adjoining developments. In this way the 'platforms' take on a variety of uses and amenity for residents + users of the space. The Courtyards along Campbell Street take on a heritage form, with formal lines and edges. Material choices will complement the heritage forms, in a more modern and sophisticated way.

Privacy in the Central resident courtyard is a high priority. Vegetation screening to adjoining units is included to provide privacy to residents outdoor areas. The courtyard offers a variety of amenity, with stepping platforms, sunken lounges, outdoor dining, active zones as well as areas for passive amenity and respite.



CONCEPT
PLANTING PALETTE

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Manager Consent Only
[GMC-21-81]
16/03/2022

- 1. Acer Palmatum (Japanese Maple)
- 2. Betula sp. (Silver Birch)
- 3. Lagerstroemia indica 'Natchez' (Crepe Myrtle)
- 4. Magnolia Grandiflora Greenback
- 5. Hydrangea macrophylla (Hydrangea)
- 6. Lomandra longifolia 'Tanika' (mat rush)
- 7. Buxus Sempervirens (English Box)
- 8. Poa labillardierei (Common Tussock)
- 9. Blechnum nudum (Fishbone Water Fern)
- 10. Asplenium nidus (Birds Nest Fern)
- 11. Myoporum parvifolium (Creeping boobialla)
- 12. Adiantum aethiopicum (Common maidenhair)
- 13. Viola hederacea (Native Violet)





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[GMC-21-81]
16/03/2022

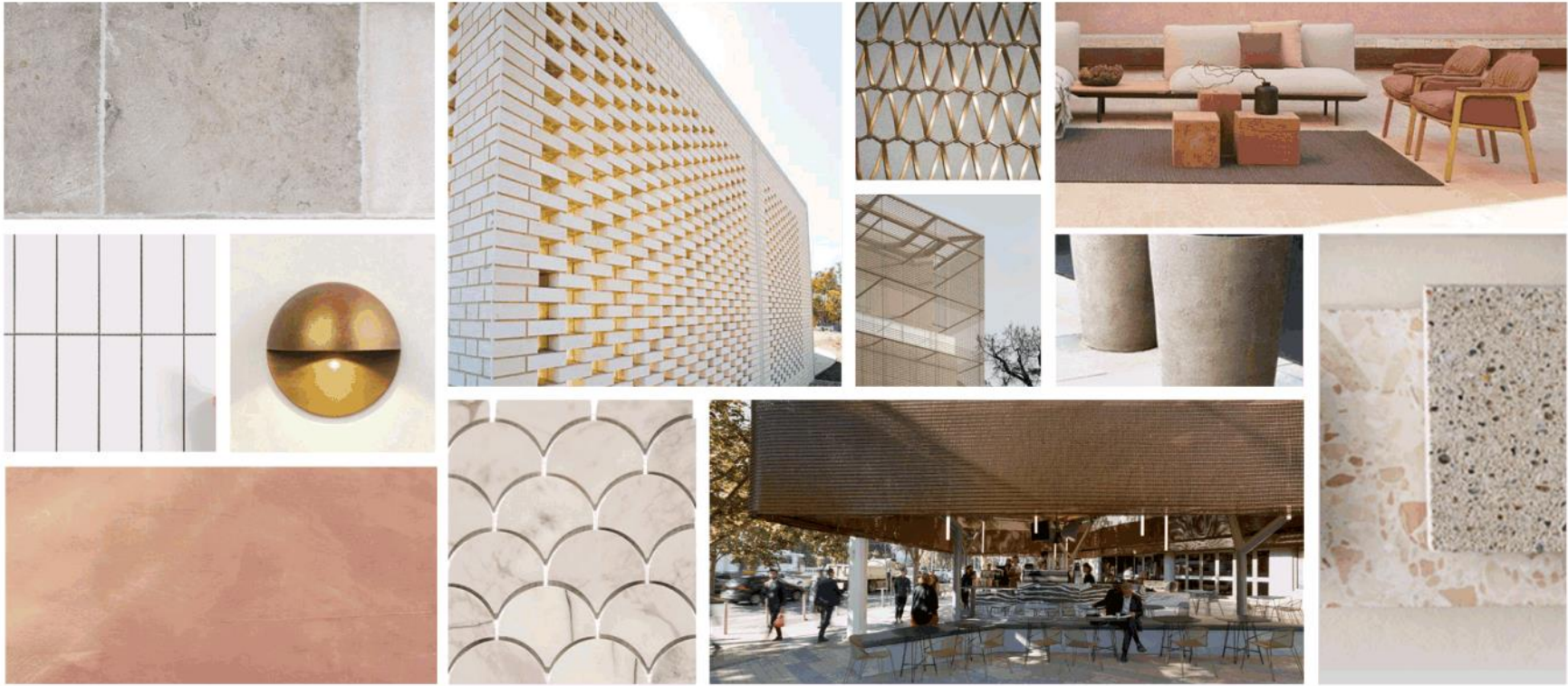
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[GMC-21-81]
16/03/2022



CONCEPT
MATERIALS PALETTE

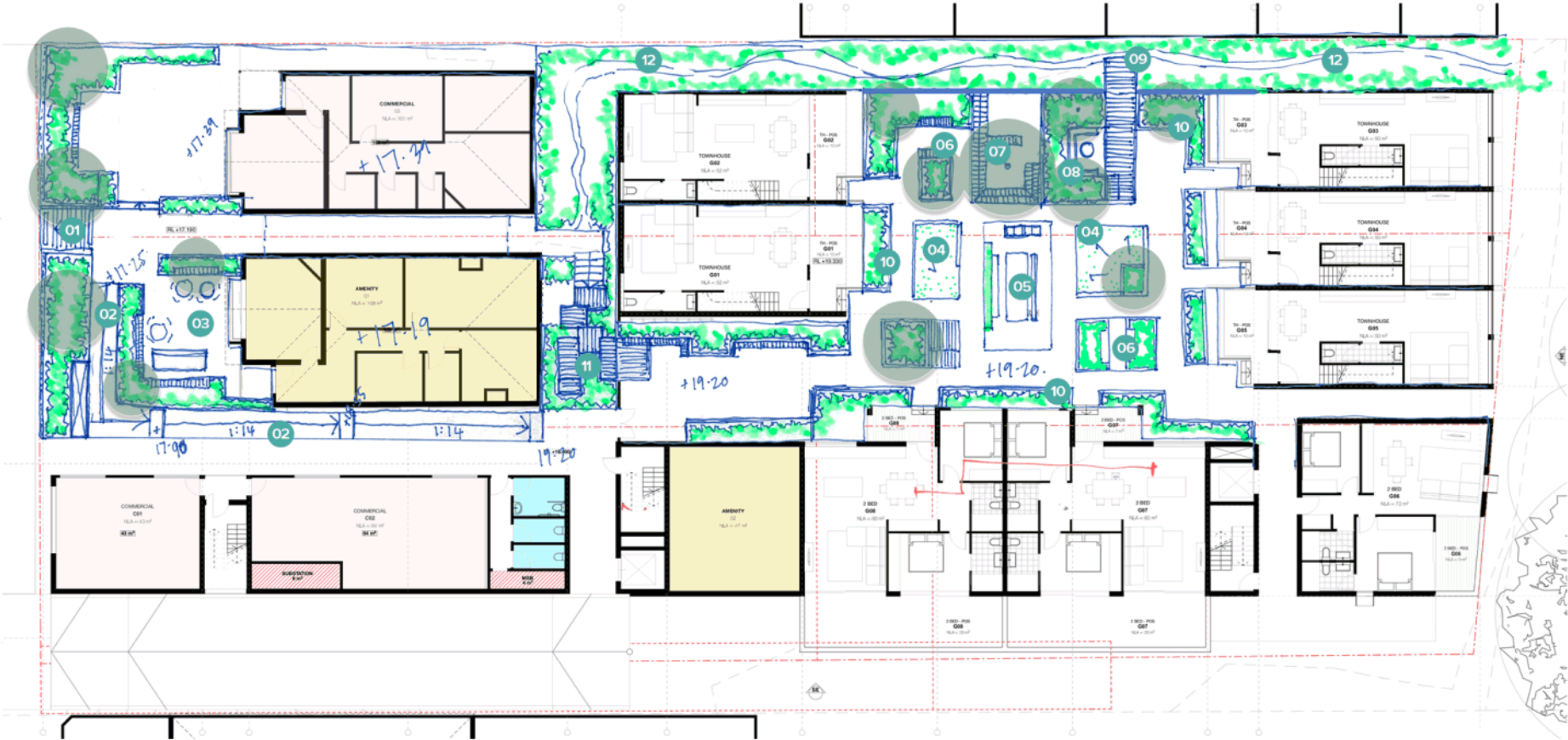
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[GMC-21-81]
16/03/2022



CONCEPT
LANDSCAPE SKETCH PLAN

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[GMC-21-81]
16/03/2022

WIP



Legend

- 01/ Central stair/access point
- 02/ Accessible path (1:14) down to lower courtyard level
- 03/ Flexible courtyard + outdoor dining space to facilitate cafe
- 04/ Raised/sloping turf areas
- 05/ Central dining area. Table, chairs, BBQs + overhead structure
- 06/ Passive seating areas
- 07/ Sunken deck seating area with large tree
- 08/ Firepit + lounge
- 09/ Small viewing platform suspended off edge
- 10/ Generous raised planters to ensure privacy for residents
- 11/ Stepping platforms/informal stairway to lower level and back of heritage building
- 12/ Informal access path within planting zone

VISION
LANDSCAPE VISION

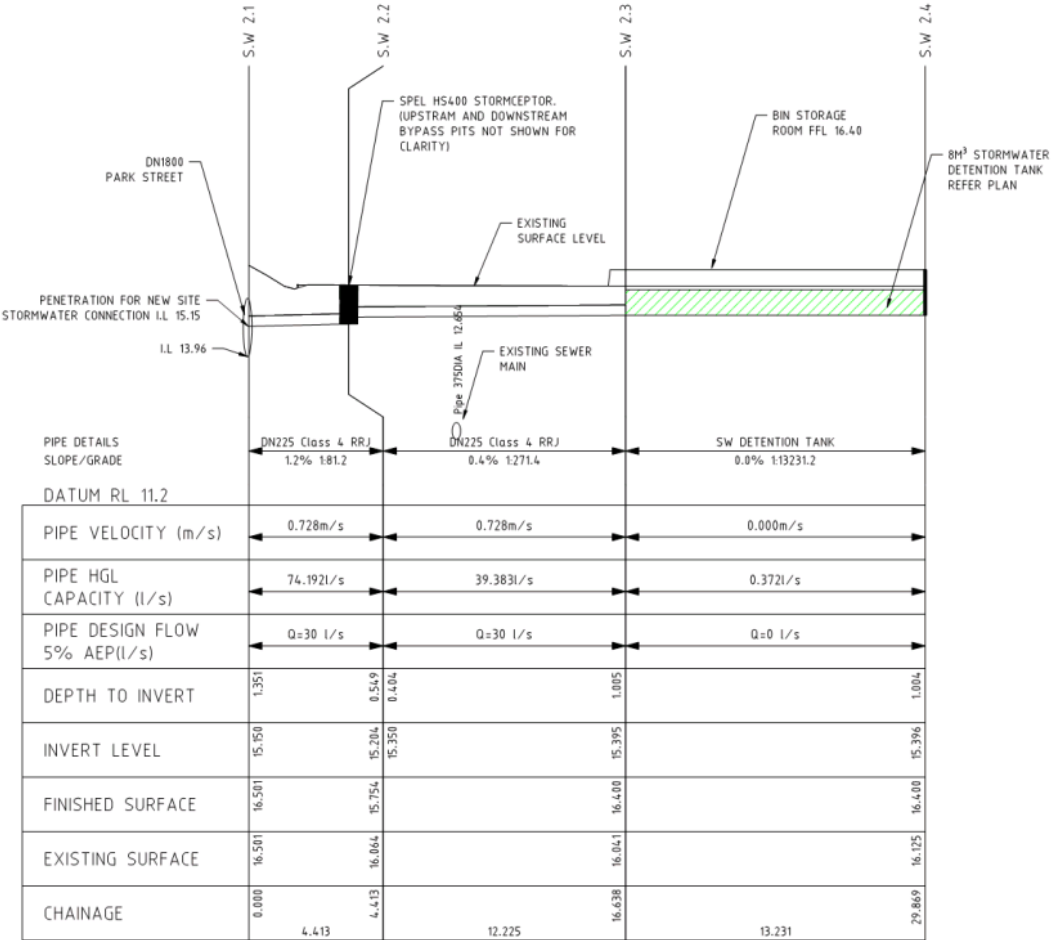
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[GMC-21-81]
16/03/2022



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[GMC-21-81]
16/03/2022



STORMWATER PROFILE LINE 1
SCALES: HORIZONTAL 1:200 VERTICAL 1:100

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DA1 19.11.2021 ISSUED FOR RFI RESPONSE
DA 07.07.2021 ISSUED FOR DA
P1 16.04.2021 ISSUED FOR INFORMATION

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Accepted MGC (Design Head)

Accepted MGC (Plan Leader)

Approved GLA (Group Manager)

Date

Date

Date

SCALES @ A3

DESIGNED BY

DRAWN BY

CJM

RWH

1:200(H) 1:100(V)

PLOT DATE

18/02/2022

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PROJECT
177 & 179 CAMPBELL
STREET
MULTI RES HOUSING

TITLE
PROPOSED SITE
STORMWATER
CONNECTION PROFILE

PROJECT NO. J173021PH

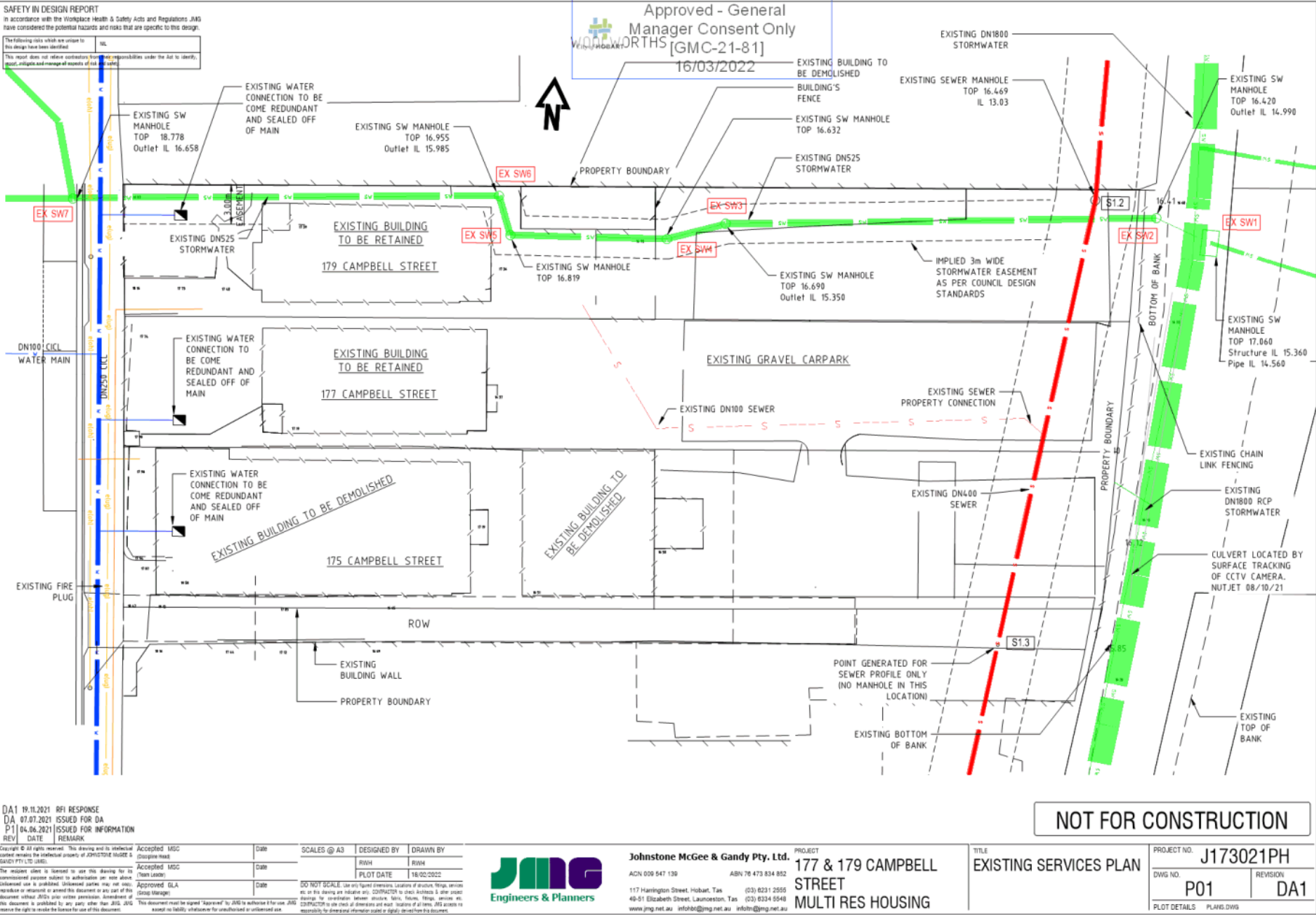
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REVISION

P-SW6

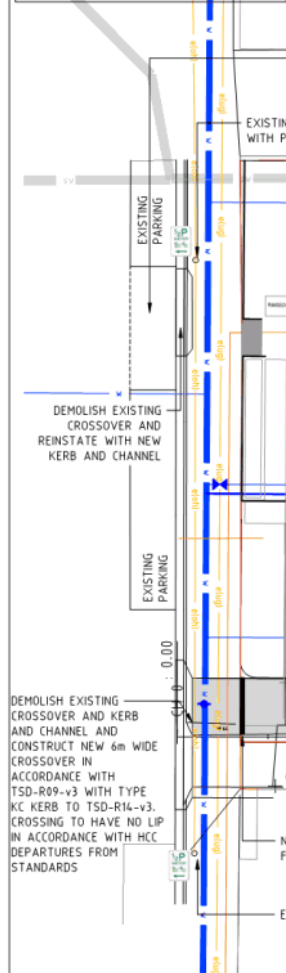
DA1

PLOT DETAILS STORMWATER PROFILES & SECTIONS.DWG



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[GMC-21-81]
16/03/2022

ALL BASEMENT RETAINING WALLS AND BUILDING SUPPORTING COLUMNS TO BE DESIGNED TO WITHSTAND HYDROSTATIC AND HYDRODYNAMIC FORCES AS A RESULT OF INUNDATION. REFER FLUSSIG FLOOD HAZARD REPORT FOR EXPECTED FLOW VELOCITIES AND DEPTHS.

3.05m MIN VERTICAL CLEARANCE REQUIRED OVER SEWER TO OBSTRUCTIONS
REFER PROFILE DRW P-S1

COLUMN SETBACK TO MAINTAIN 1m CLEARANCE TO STORMWATER PIPE

DA3 18.02.2022 RFI RESPONSE
DA2 15.12.2021 CROSSOVER NOTE REVISED
DA1 22.11.2021 ISSUED FOR RFI RESPONSE
DA 07.07.2021 ISSUED FOR DA
P1 29.03.2021

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Accepted MGC (Supp. Head)
Accepted MGC (Client Liaison)
Accepted MGC (Group Manager)

Scale: 1:250
Scales: A3
Designed by: RWH
Drawn by: RWH
Plot date: 18/02/2022

JMG
Engineers & Planners

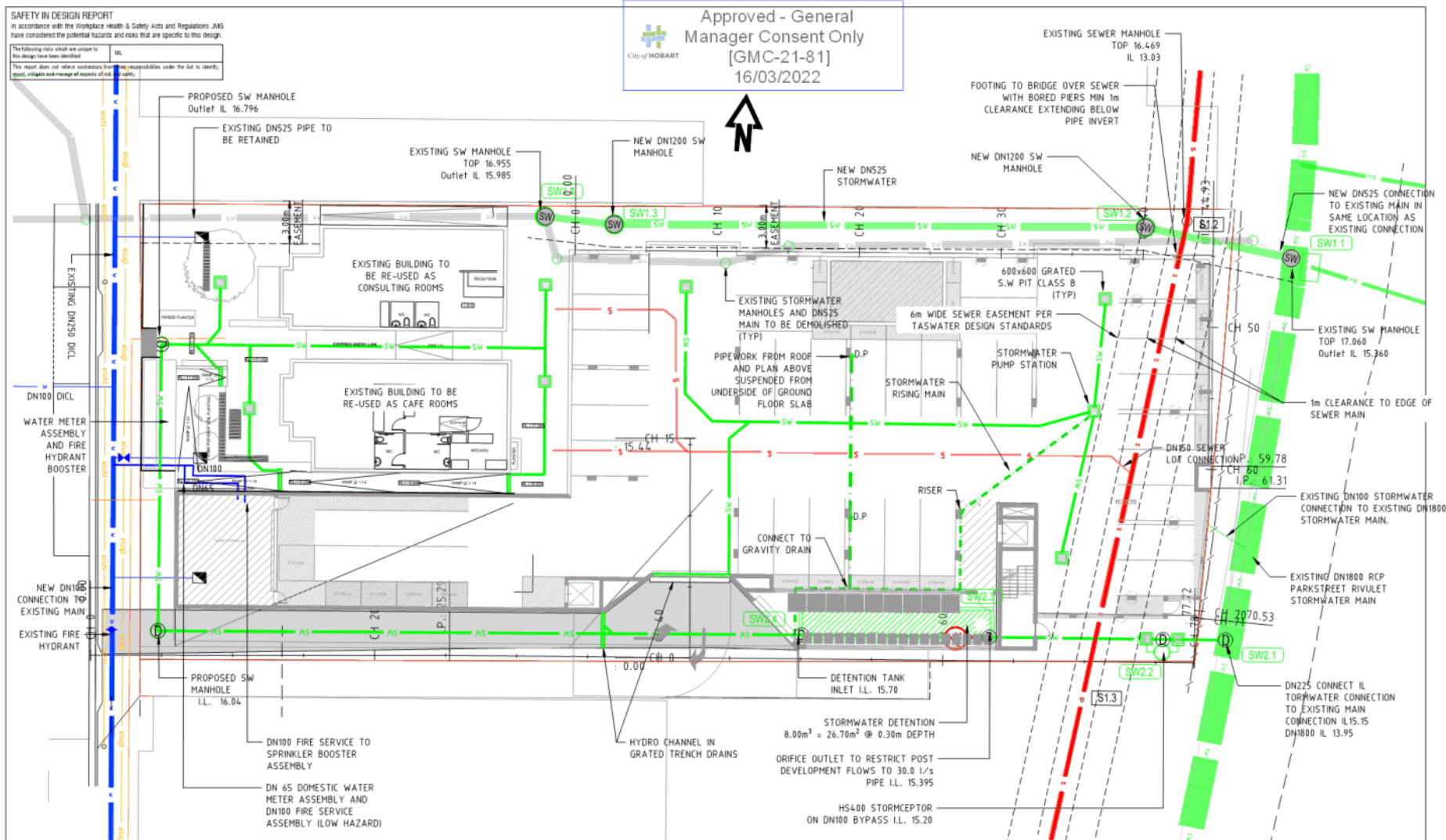
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PROJECT
177 & 179 CAMPBELL
STREET
MULTI RES HOUSING

TITLE
BASEMENT CARPARK
LAYOUT AND PROPOSED
SURFACE LEVELS

NOT FOR CONSTRUCTION

PROJECT NO. J173021PH
DWG NO. P02
PLOT DETAILS PLANS.DWG
REVISION DA3



DA1	19.11.2021	ISSUED FOR RFI RESPONSE
DA	07.07.2021	ISSUED FOR DA
P1	29.03.2021	
REV	DATE	REMARK

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PROJECT
177 & 179 CAMPBELL
STREET
MULTI RES HOUSING

TITLE
PROPOSED BASEMENT
AND GROUND SERVICES

NOT FOR CONSTRUCTION

PROJECT NO.	J173021PH
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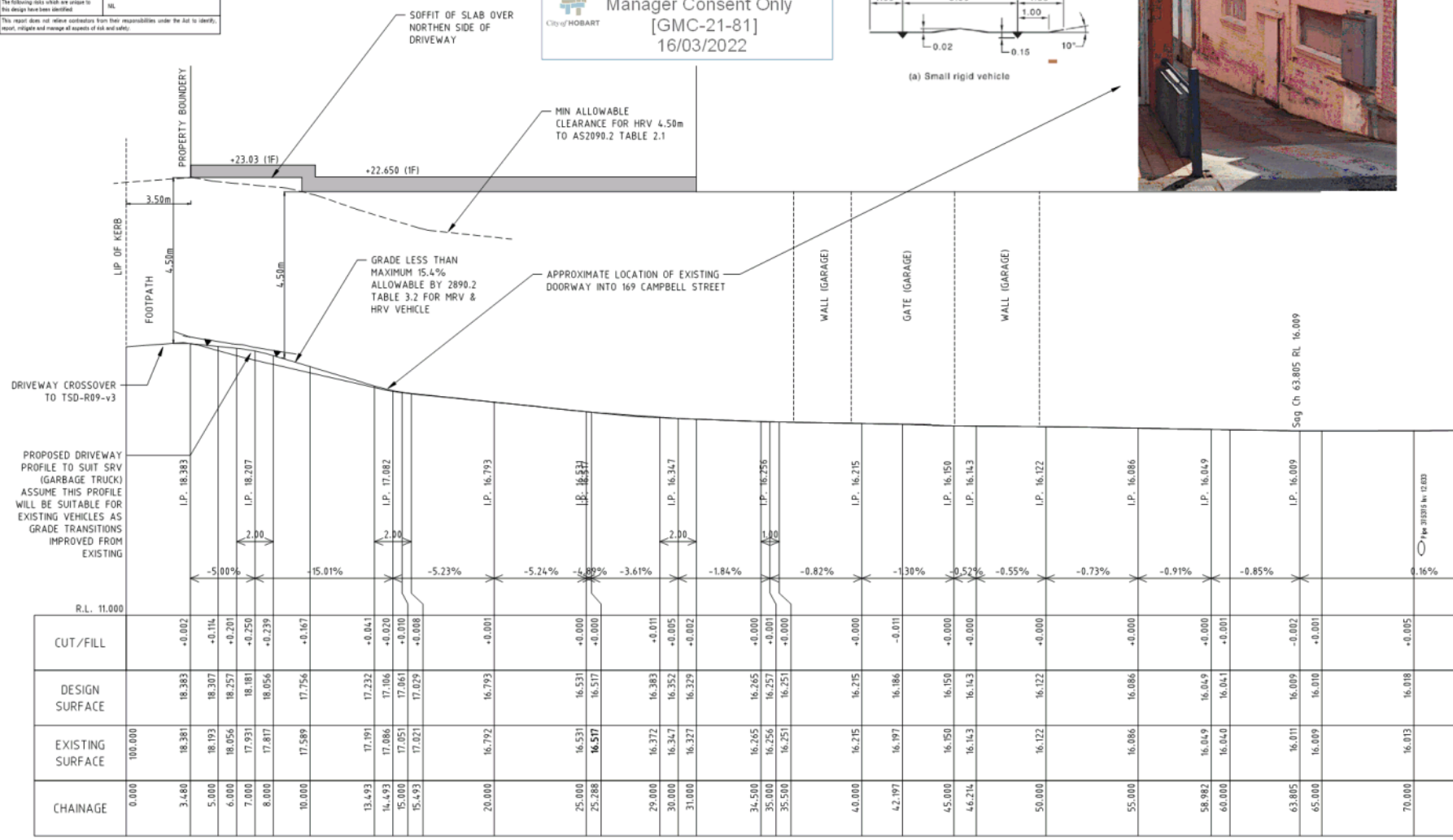
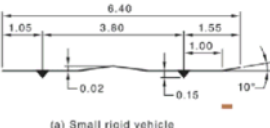
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P03	DA1

PLOT DETAILS PLANS.DWG

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16/03/2022



REV	DATE	REMARK
DA1	19.11.2021	ISSUED FOR RFI RESPONSE
DA	07.07.2021	ISSUED FOR DA
P2	28.06.2021	GRADE SHOWN TO COMPLY AS2890.1
P1	19.03.2021	ISSUED FOR REVIEW

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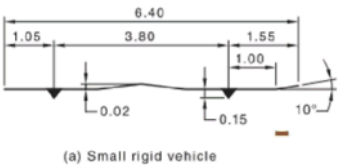
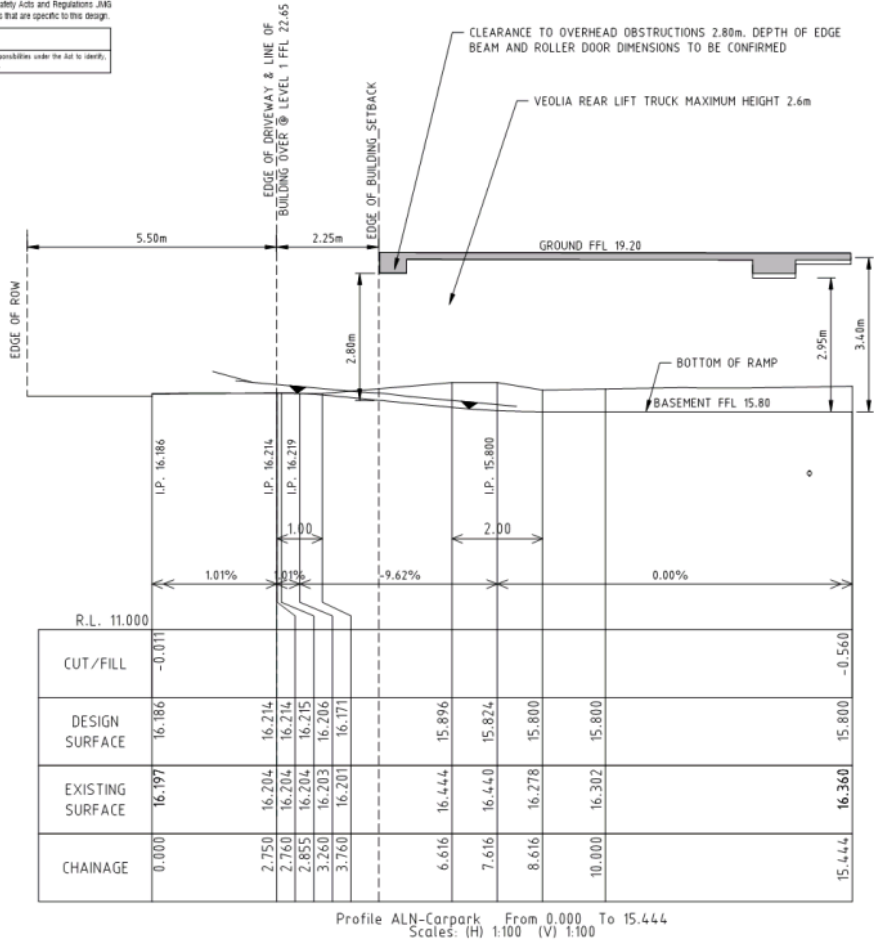
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PROJECT
**177 & 179 CAMPBELL STREET
MULTI RES HOUSING**

TITLE EXISTING DRIVEWAY PROFILE	PROJECT NO. J173021PH
DWG NO. P04	REVISION DA1
PLOT DETAILS	DRIVEWAY RAMP PROFILES.DWG

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REAR LIFT TRUCK SPECIFICATIONS



** Includes TR49, TR52, TR57

Specifications:

- Overall Length 7.54 metres
- Overall Width (excluding mirrors) 2.42 metres
- Overall Width (including mirrors) 2.84 metres
- Maximum Height 2.80 metres
- Wheel Base (From centre of front and rear axle) 4.20 metres
- Turning Circle 16.90 metres
- Gross Vehicle Mass 14.00 tonne
- Tare Weight 9.10 tonne
- Payload 4.90 tonne

Approved - General
Manager Consent Only
[GMC-21-81]
16/03/2022

DA1 19.11.2021 ISSUED FOR RFI RESPONSE
DA 07.07.2021 ISSUED FOR DA
P2 23.06.2021 FLOOR LEVELS UPDATED
P1 19.03.2021 ISSUED FOR INFORMATION

REV	DATE	REMARK
1	19.11.2021	ISSUED FOR RFI RESPONSE
2	07.07.2021	ISSUED FOR DA
3	23.06.2021	FLOOR LEVELS UPDATED
4	19.03.2021	ISSUED FOR INFORMATION

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PROJECT
**177 & 179 CAMPBELL STREET
MULTI RES HOUSING**

TITLE
**NEW CARPARK ENTRY
PROFILE & SERVICE
VEHICLE CLEARANCES**

PROJECT NO.	J173021PH
DWG NO.	P05
REVISION	DA1
PLLOT DETAILS	DRIVEWAY RAMP PROFILES DWG

NOT FOR CONSTRUCTION

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Risk	ML
The design does not provide consideration for those regulatory codes or other standards, such as, signage and management systems at that location.	

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[GMC-21-81]
16/03/2022



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Accepted MGC (Team Leader) <td>Date</td>	Date
Approved GLA (Group Manager) <td>Date</td>	Date

DESIGNED BY	DRAWN BY
RWH	RWH
DATE	DATE

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PROJECT
**177 & 179 CAMPBELL STREET
MULTI RES HOUSING**

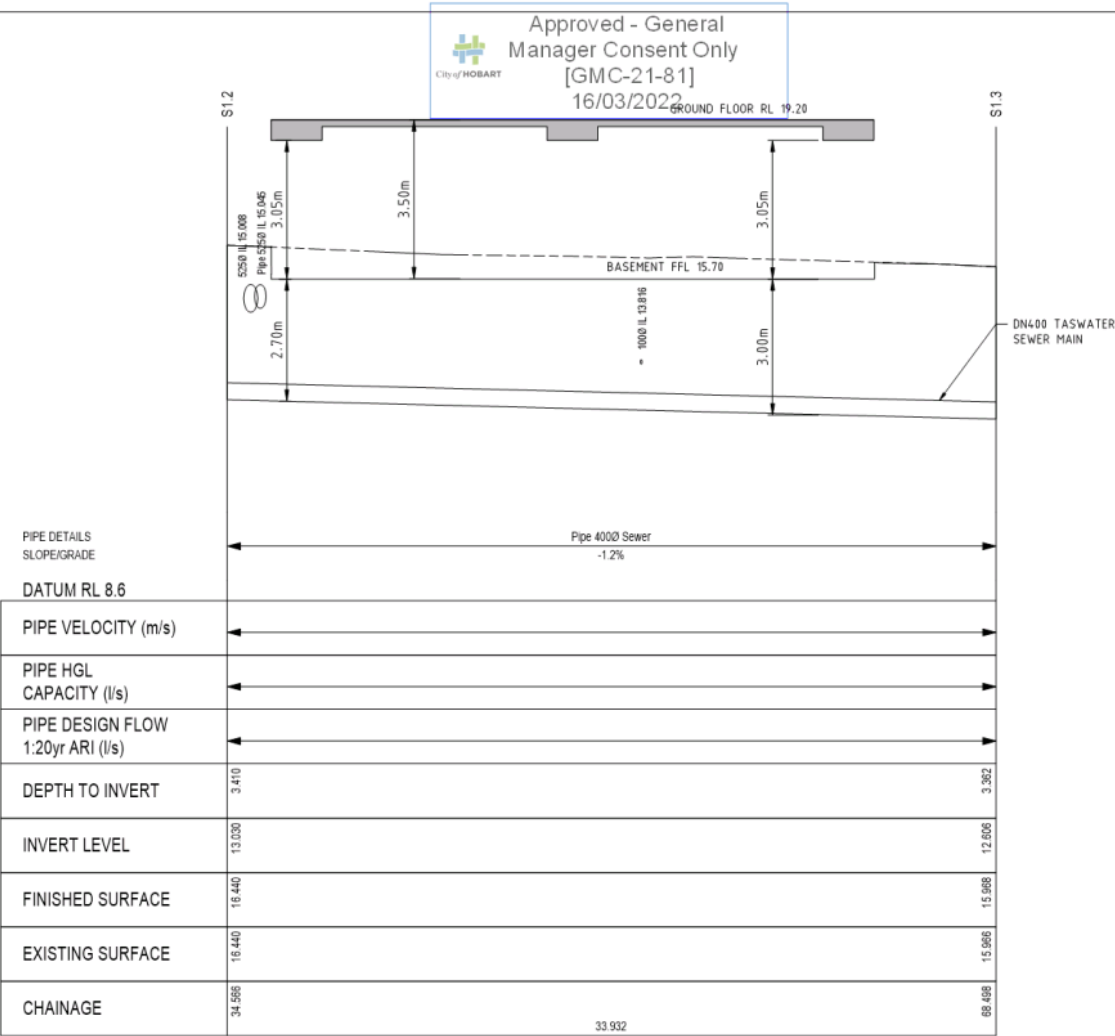
TITLE
**GENERAL MANAGER
CONSENT BROOKER
HWY RESERVATION ACCESS**

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PROJECT NO.	J173021PH
DWG NO.	P06
REVISION	DA
PLOT DETAILS	PLANS.DWG

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EXISTING SEWER PROFILE
SCALES: HORIZONTAL 1:200 VERTICAL 1:100

DA1 19.11.2021 ISSUED FOR RFI RESPONSE
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P1 16.06.2021 ISSUED FOR INFORMATION

REV	DATE	REMARK

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Accepted	Date	Accepted	Date	Accepted	Date
MGC (Design Head)		MGC (Plan Layout)		GLA (Design Manager)	

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40-51 Elizabeth Street, Launceston, Tas (03) 6334 8548
www.jmg.net.au info@jmg.net.au info@jmg.net.au

PROJECT
**177 & 179 CAMPBELL STREET
MULTI RES HOUSING**

TITLE
**EXISTING SEWER
CLEARANCE PROFILE**

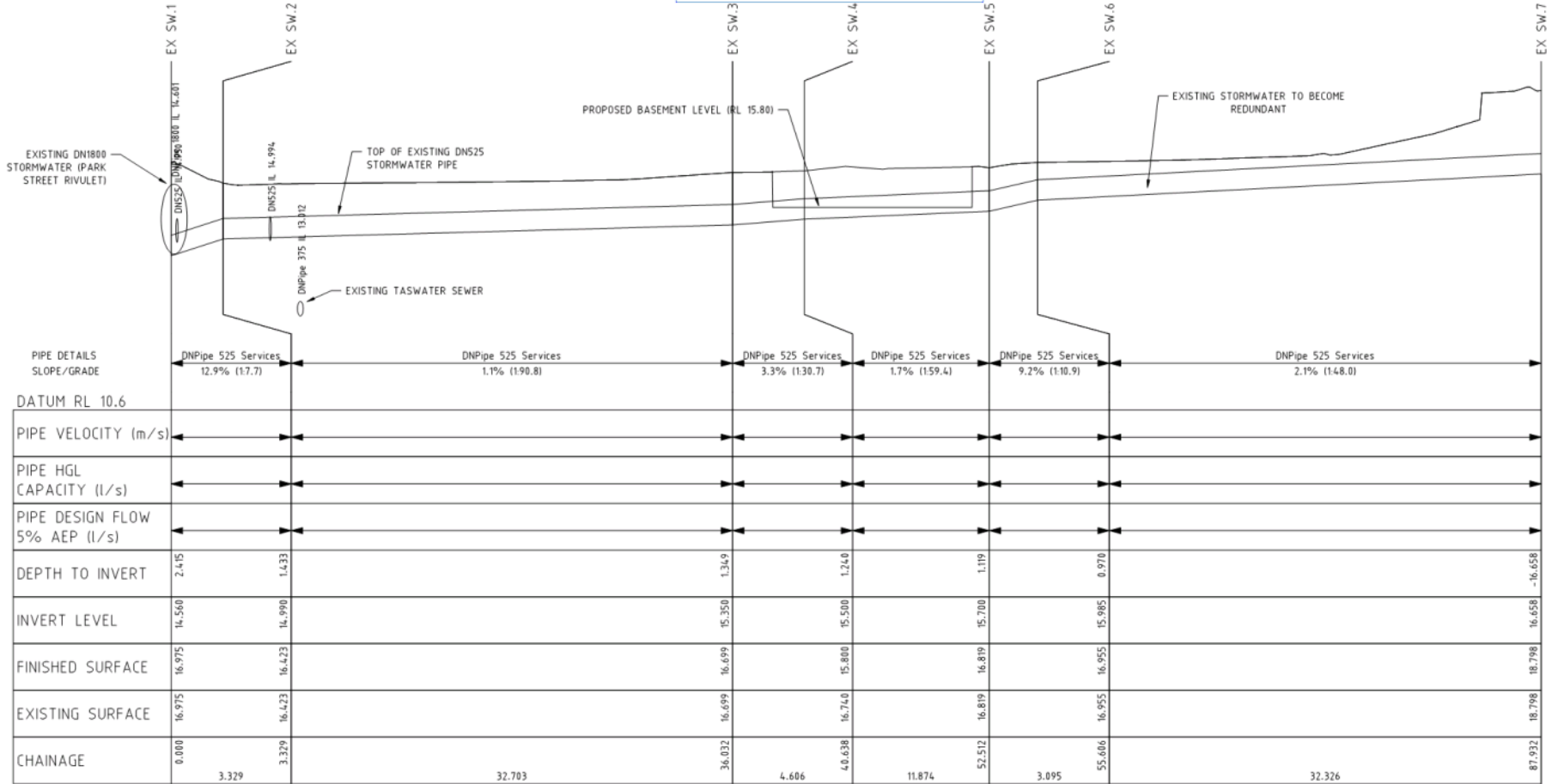
PROJECT NO.	J173021PH
DWG NO.	P-S1
REVISION	DA1
PLOT DETAILS STORMWATER PROFILES & SECTIONS DWG	

NOT FOR CONSTRUCTION

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

The following risks which are unique to this design have been identified:	Nil
This report does not release practitioners from their responsibilities under the Act to identify, assess, mitigate and manage all aspects of risk and safety.	

Approved - General
Manager Consent Only
[GMC-21-81]
16/03/2022



STORMWATER PROFILE LINE EX SW
SCALES: HORIZONTAL 1:250 VERTICAL 1:100

DA1 19.11.2021 ISSUED FOR RFI RESPONSE
DA 07.07.2021 ISSUED FOR DA
P1 16.06.2021 ISSUED FOR INFORMATION

Accepted MGC (Design Head)			Date	SCALES @ A3	DESIGNED BY	DRAWN BY
Accepted MGC (Plan Layout)			Date		CJM	RVM
Accepted GLA (Group Manager)			Date	1:500(H) 1:200(V)	PLOT DATE	18/02/2022
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PROJECT
**177 & 179 CAMPBELL STREET
MULTI RES HOUSING**

TITLE
**EXISTING STORMWATER
PROFILE**


NOT FOR CONSTRUCTION

PROJECT NO.	J173021PH
DWG NO.	P-SW1
REVISION	DA1
PLOT DETAILS	STORMWATER PROFILES & SECTIONS.DWG

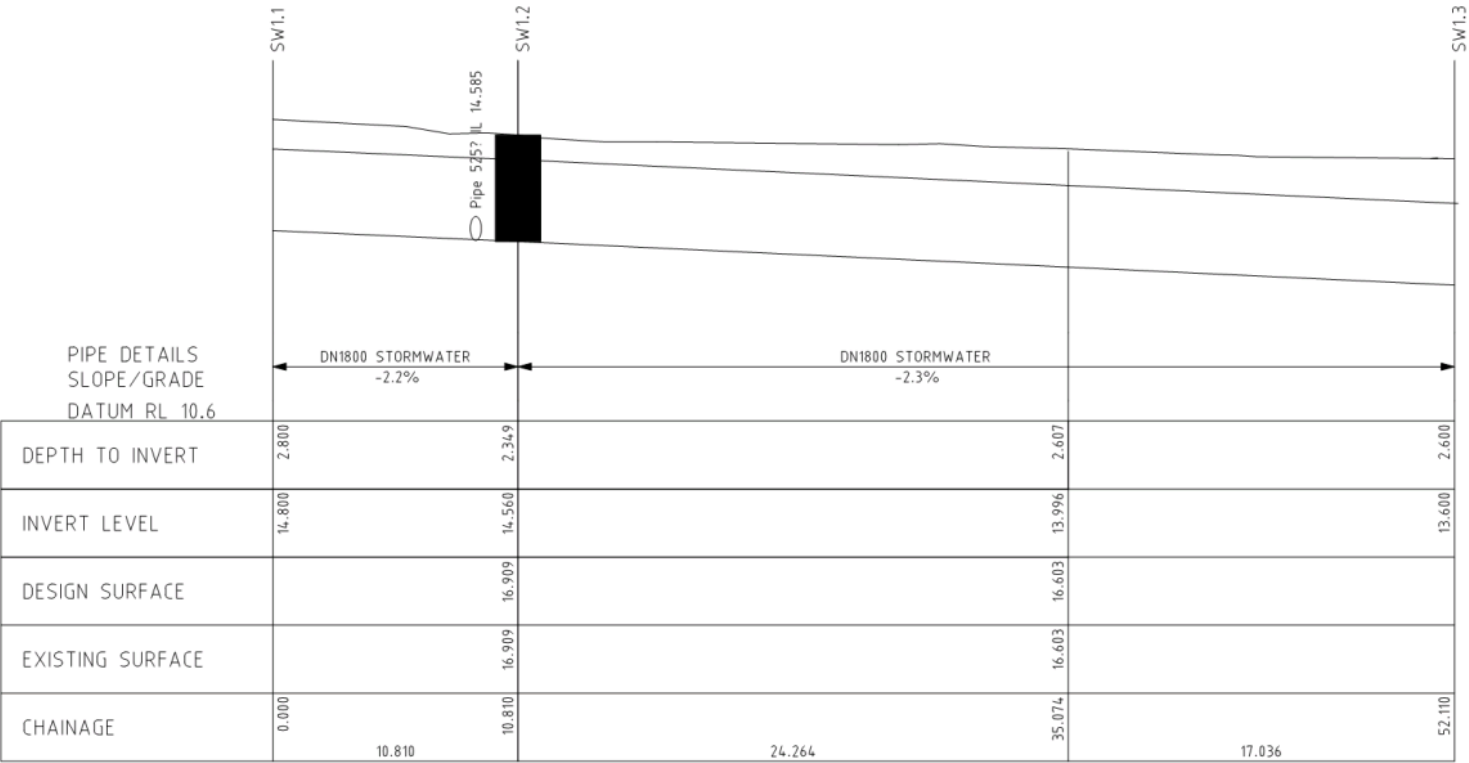
NOT FOR CONSTRUCTION

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SAFETY IN DESIGN REPORT	
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Manager Consent Only
[GMC-21-81]
16/03/2022



DN1800 STORMWATER LONGITUDINAL SECTION FOR LINE 1
SCALES: HORIZONTAL 1:200 VERTICAL 1:100

DA1 19.11.2021 ISSUED FOR RFI RESPONSE
DA 07.07.2021 ISSUED FOR DA
P11 4.06.2021 ISSUED FOR INFORMATION

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	Approved GLA (Group Manager)	Date	DO NOT SCALE. Use only figured dimensions. Locations of structures, fittings, services etc. on this drawing are indicative only. CONTRACTOR to check Architects & other project drawings for verification between structure, Manholes, Fittings, services etc. CONTRACTOR to use check all dimensions and exact locations of all items. JMG accepts no liability for dimensions information (such as digital) derived from this document.	18/02/2022		



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PROJECT
177 & 179 CAMPBELL STREET
MULTI RES HOUSING

TITLE
EXISTING DN1800 PARK STREET RIVULET STORMWATER PROFILE

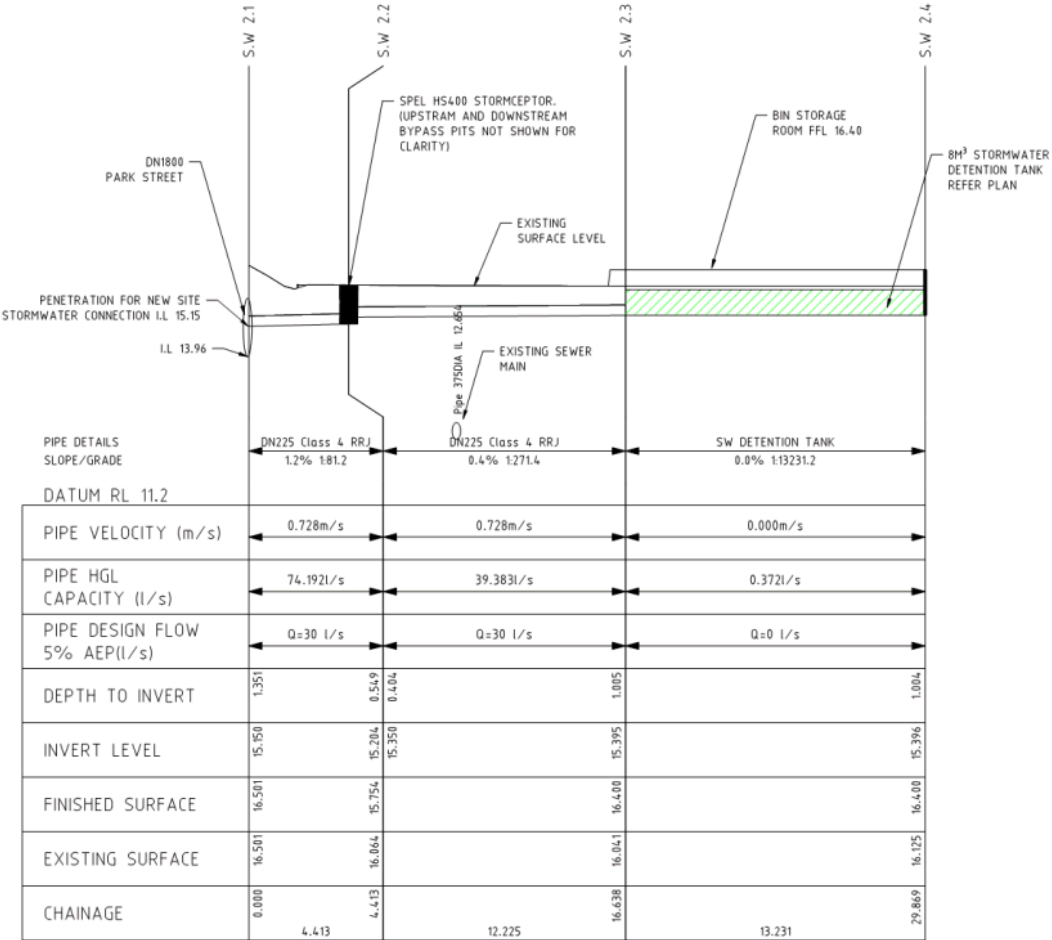
NOT FOR CONSTRUCTION

PROJECT NO.	J173021PH
DWG NO.	P-SW5
REVISION	DA1
PLOT DETAILS	STORMWATER PROFILES & SECTIONS.DWG

SAFETY IN DESIGN REPORT
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[GMC-21-81]
16/03/2022



STORMWATER PROFILE LINE 1
SCALES: HORIZONTAL 1:200 VERTICAL 1:100

NOT FOR CONSTRUCTION

DA1 19.11.2021 ISSUED FOR RFI RESPONSE
DA 07.07.2021 ISSUED FOR DA
P1 16.04.2021 ISSUED FOR INFORMATION

REV	DATE	REMARK
1	19.11.2021	ISSUED FOR RFI RESPONSE
2	07.07.2021	ISSUED FOR DA
3	16.04.2021	ISSUED FOR INFORMATION

Accepted	Date
MGC (Design Head)	
MGC (Plan/Section)	
GLA (Design Manager)	

DESIGNED BY	DRAWN BY
CJM	RWH
1:200(H) 1:100(V)	18/02/2022



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PROJECT
**177 & 179 CAMPBELL
STREET
MULTI RES HOUSING**

TITLE
**PROPOSED SITE
STORMWATER
CONNECTION PROFILE**

PROJECT NO.	J173021PH
DWG NO.	P-SW6
REVISION	DA1
PLOT DETAILS	STORMWATER PROFILES & SECTIONS.DWG

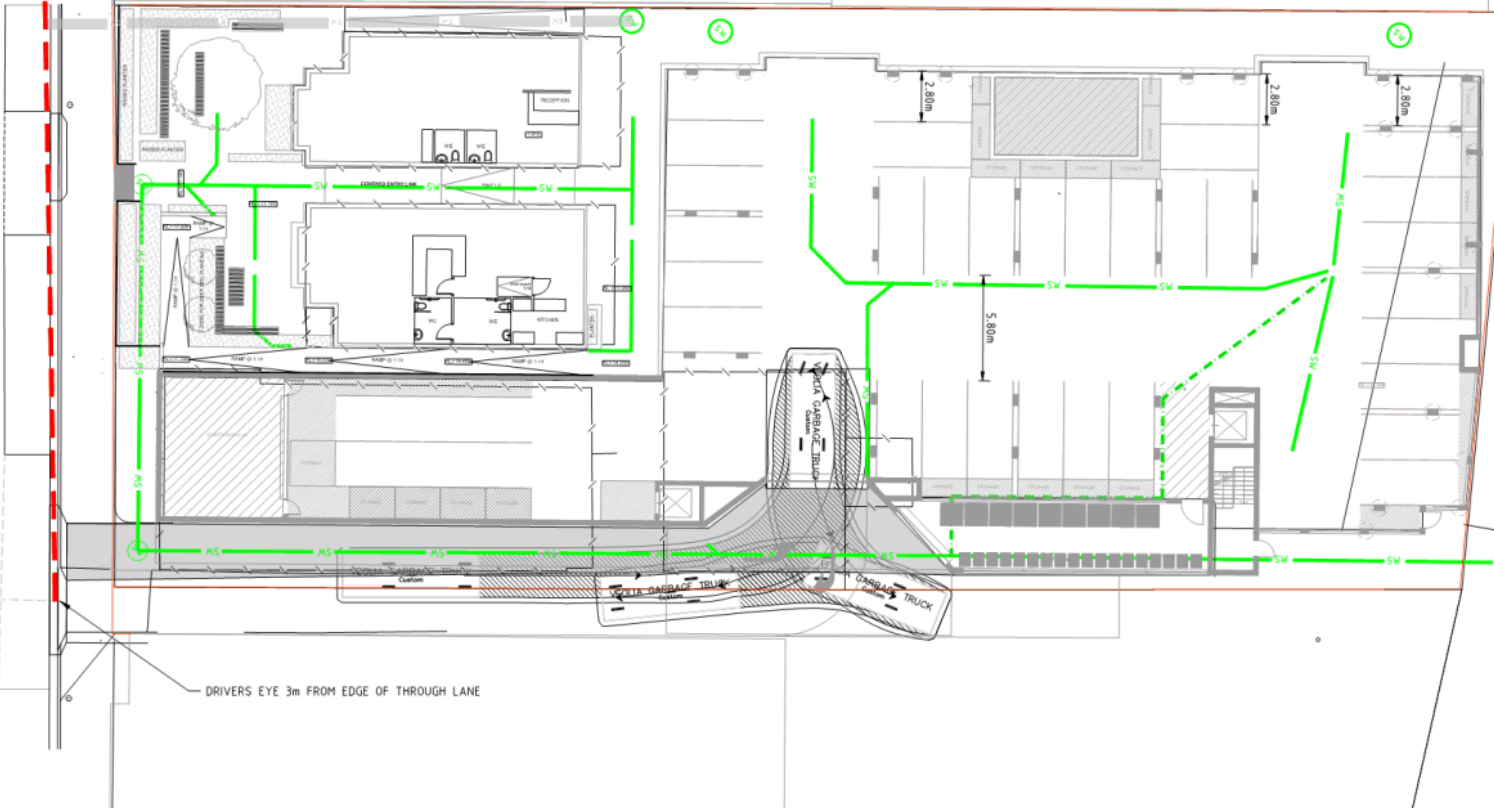
SAFETY IN DESIGN REPORT
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[GMC-21-81]
16/03/2022



AS2890.2 SIGHT LINE FOR EXITING COMMERCIAL
VEHICLES FROM EXISTING AND PROPOSED DRIVEWAY
FRONTAGE ROAD SPEED 50kmh, 5s GAP, 69m



DA 07.07.2021 ISSUED FOR DA
P1 29.03.2021

REV	DATE	REMARK
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Accepted MGC (Design Head)

Accepted MGC (Plan Leader)

Approved GLA (Group Manager)

Date

Date

Date

SCALE @ A3

1:250

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DESIGNED BY

RWH

PLOT DATE

16/02/2022

DRAWN BY

RWH



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PROJECT

177 & 179 CAMPBELL

STREET

MULTI RES HOUSING

TITLE

TURNING PATHS ALT

BUILDING LAYOUT

VEOLIA GARBAGE

PROJECT NO. J173021PH

DWG NO.

P-TP1

PLOT DETAILS PLANS TURNING PATHS.DWG

REVISION

DA

SAFETY IN DESIGN REPORT
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[GMC-21-81]
16/03/2022



AS2890.2 SIGHT LINE FOR EXITING COMMERCIAL
VEHICLES FROM EXISTING AND PROPOSED DRIVEWAY
FRONTAGE ROAD SPEED 50km/h, 5s GAP, 69m

MRV
STANDARD 2002 (M)

DRIVERS EYE 3m FROM EDGE OF THROUGH LANE

MRV
STANDARD 2002 (M)

NOT FOR CONSTRUCTION

DA 19.11.2021 ISSUED FOR RFI RESPONSE
REV DATE REMARK

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	Approved GLA (Group Manager)	Date		PLOT DATE	18/02/2022
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PROJECT
**177 & 179 CAMPBELL
STREET
MULTI RES HOUSING**

TITLE
**TURNING PATHS ALT
BUILDING LAYOUT
MEDIUM RIGID VEHICLE**

PROJECT NO.	J173021PH
DWG NO.	P-TP2
REVISION	DA
PLOT DETAILS	PLAYS TURNING PATHS.DWG



BGAS 175-179 Campbell Street Multi-Residential Development

ARCHITECT

REGISTERED DESIGNER
PETER WALKER

ACCREDITATION VIA
CC2108

ARCHITECT ADDRESS
PROJECT 175-179 Campbell Street
175-179 Campbell Street, Northcote VIC 3070

PROJECT INFORMATION

PROJECT NO.
175-179

PROJECT NAME
BGAS 175-179 Campbell Street
Multi-Residential Development

PROJECT ADDRESS
175-179 Campbell Street
Northcote VIC 3070

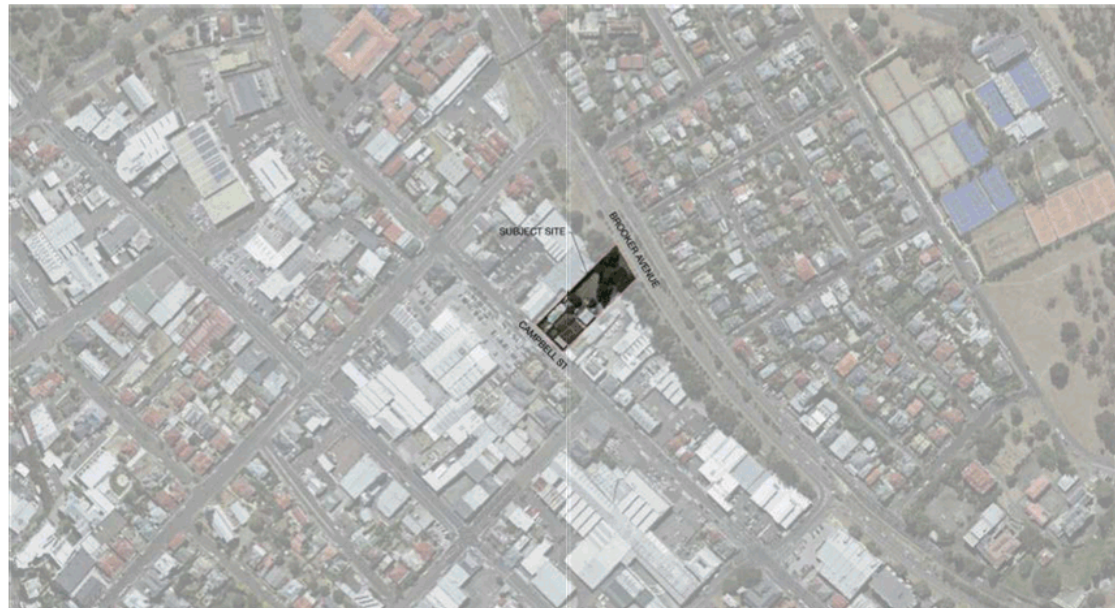
PLACE NAME
NORTHCOLE

DETAILS

WEEK 11/2021 DRAWN BY
CONSTRUCT ON TYPE
TITLE REFERENCE
3D/4/21, 175-179 Campbell Street
DESIGN WIND SPEED
SOIL CLASS
CLIMATE ZONE
BAL. BATT.
AS 1901.2011
CONSTRUCTION CLASS

SK DRAWING LIST

No	Drawing Name	Rev	Date
A-001	CONCEPT	001	10/10/21 11:30 AM
A-002	SECTION	001	10/10/21 11:30 AM
A-003	SECTION	001	10/10/21 11:30 AM
A-004	SECTION	001	10/10/21 11:30 AM
A-005	SECTION	001	10/10/21 11:30 AM
A-006	SECTION	001	10/10/21 11:30 AM
A-007	SECTION	001	10/10/21 11:30 AM
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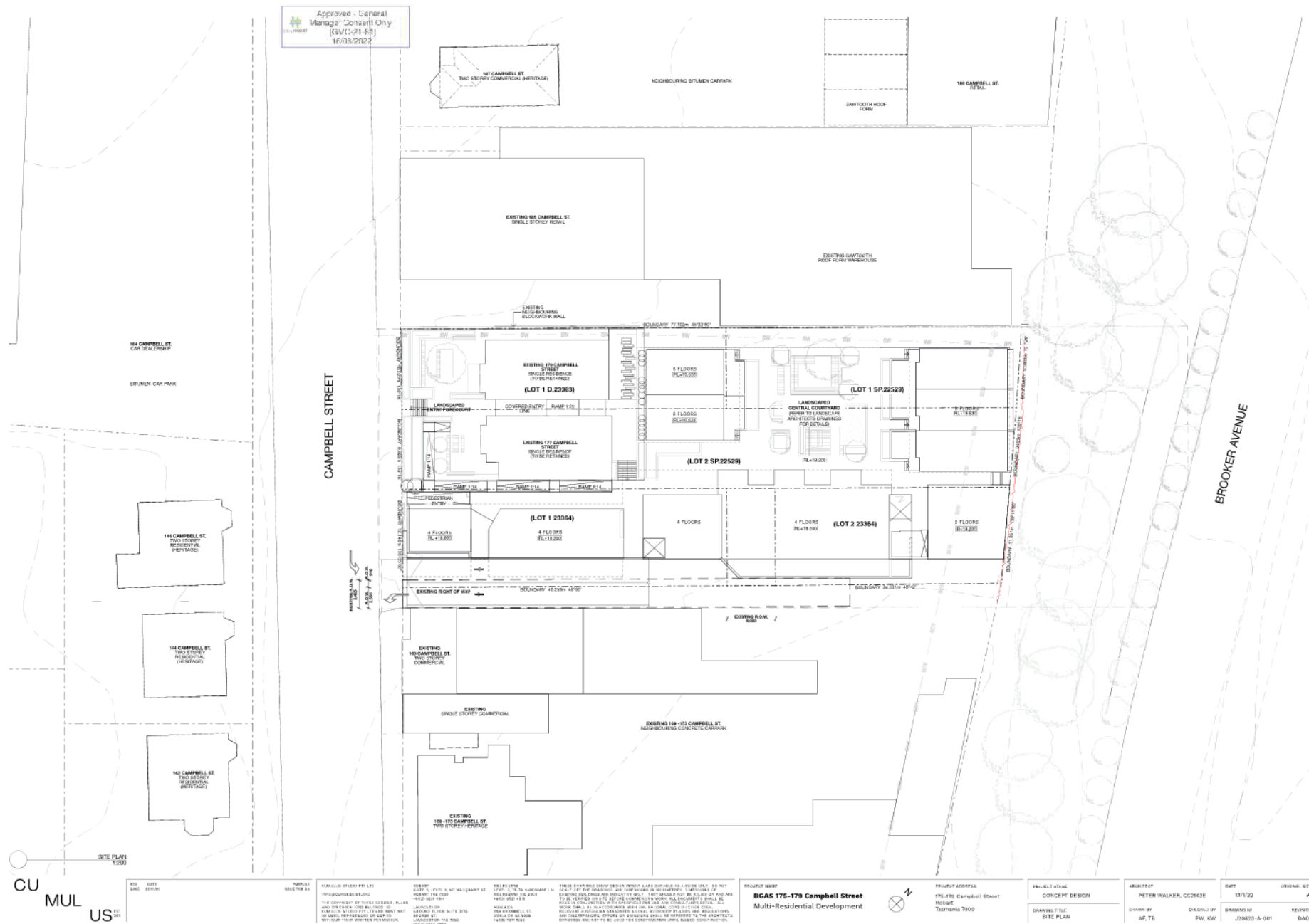


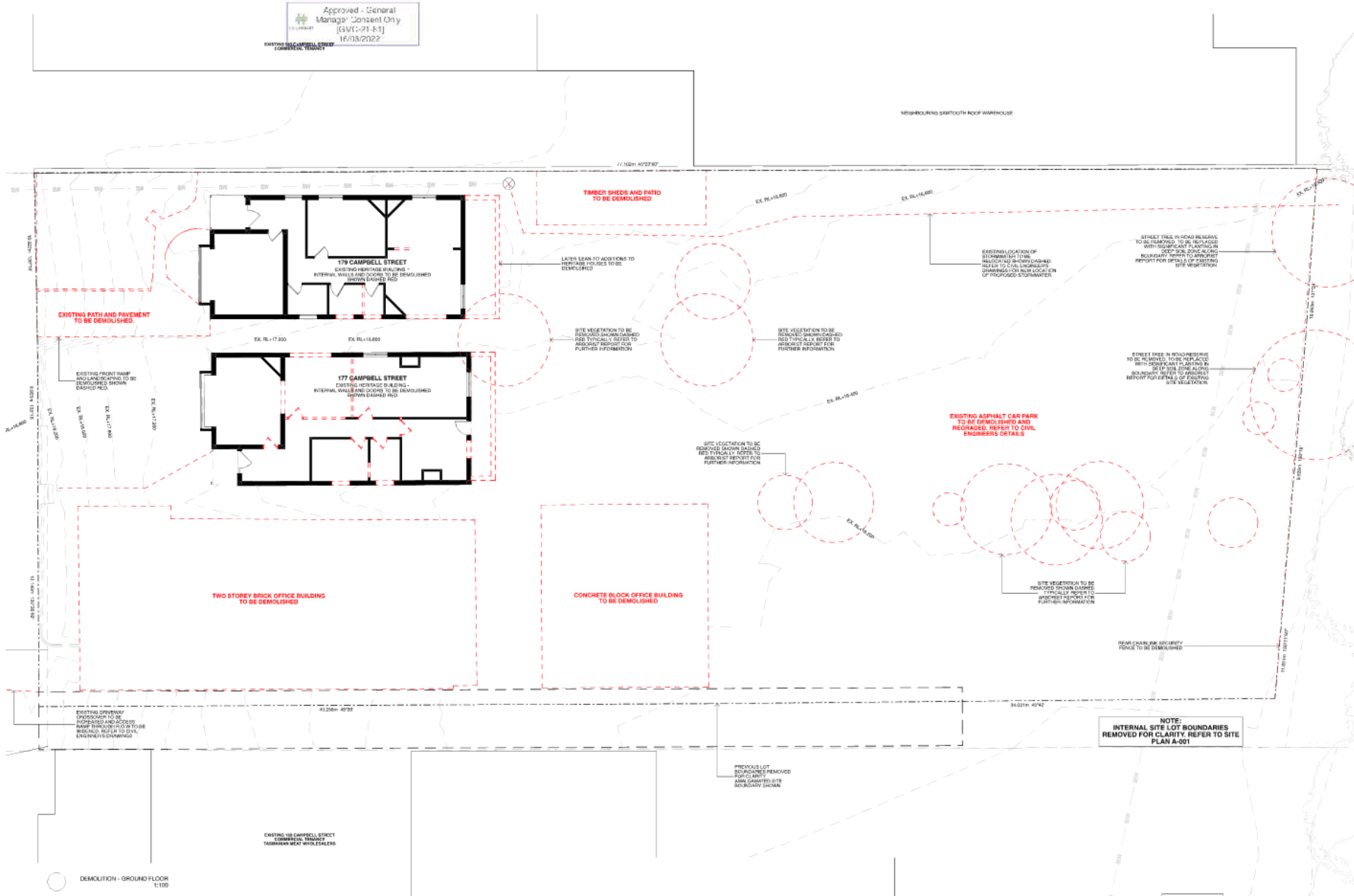
LOCATION PLAN - NTS

APARTMENT AREAS - NLA			
Level	Apartment Number	Area (m ²)	Notes
GROUND FLOOR	001	25.48	LEVEL 1 of 2
	002	25.26	LEVEL 1 of 2
	003	25.11	LEVEL 1 of 2
	004	25.11	LEVEL 1 of 2
	005	25.11	LEVEL 1 of 2
	006	25.18	
	007	24.83	
	008	24.83	
	009	24.83	
	010	24.83	
LEVEL 01	101	27.27	
	102	27.27	
	103	27.27	
	104	25.06	
	105	24.75	
	106	25.06	
	107	25.06	
	108	25.18	
	001	27.74	LEVEL 2 of 2
	002	27.63	LEVEL 2 of 2
LEVEL 02	201	27.27	LEVEL 1 of 2
	202	27.27	LEVEL 1 of 2
	203	27.27	LEVEL 1 of 2
	204	25.07	
	205	24.75	
	206	25.06	
	207	25.06	
	208	25.06	LEVEL 1 of 2
	209	25.06	LEVEL 1 of 2
	210	25.06	LEVEL 1 of 2
LEVEL 03	301	25.07	LEVEL 1 of 2
	302	25.06	LEVEL 1 of 2
	303	25.07	LEVEL 1 of 2
	201	25.12	LEVEL 2 of 2
	202	25.12	LEVEL 2 of 2
	210	25.12	LEVEL 2 of 2
	211	25.12	LEVEL 2 of 2
	301	25.06	LEVEL 1 of 2
	302	25.06	LEVEL 1 of 2
	303	25.13	LEVEL 1 of 2
LEVEL 04	401	24.75	LEVEL 2 of 2
	402	24.83	LEVEL 2 of 2
	403	24.83	LEVEL 2 of 2
		2,274.25 m ²	

APARTMENT SUMMARY	
APARTMENT TYPE	QTY
1 BED	5
1 BED (ADA)	2
2 BED	8
3 BED	7
4 BED	4
TOTAL	33

CARPARKING	
RESIDENTIAL CARPARKS	QTY
TOTAL CARPARKS	33

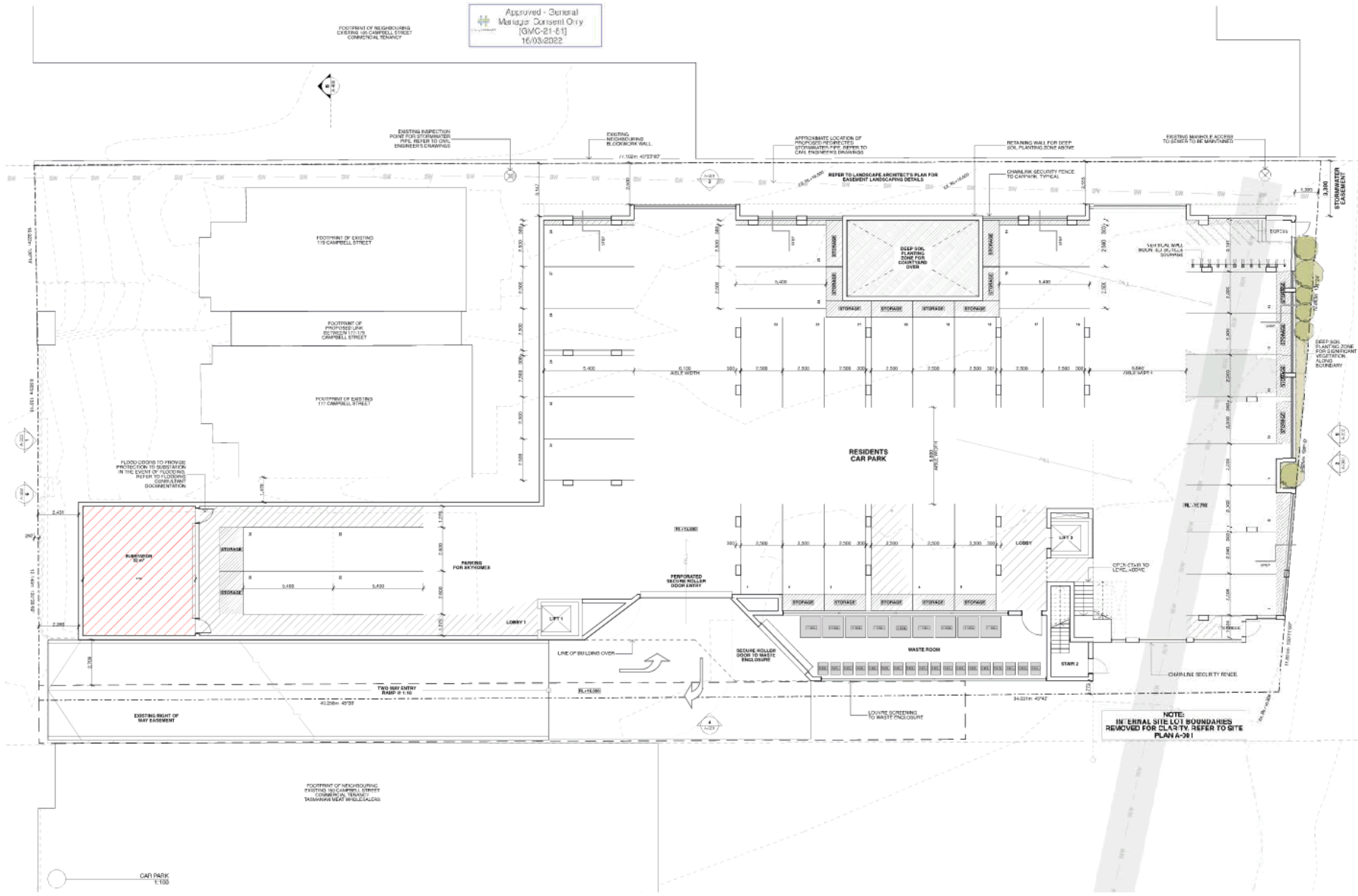




CU
MUL
US

NO. DATE 3448 13/12/22	NAME CUMULUS PT LTD (OVERLAP)	COMPULSORY EXISTING THE COMPULSORY EXISTING PLANS AND SPECIFICATIONS RELATING TO CONSTRUCTIVE STRUCTURE AND MATERIALS, INCLUDING ALL NECESSARY PERMITS AND NOTES TO BE SUBMITTED TO THE CITY ENGINEER FOR APPROVAL	REMARKS 1. THE COMPULSORY EXISTING PLANS AND SPECIFICATIONS RELATING TO CONSTRUCTIVE STRUCTURE AND MATERIALS, INCLUDING ALL NECESSARY PERMITS AND NOTES TO BE SUBMITTED TO THE CITY ENGINEER FOR APPROVAL	REMARKS 1. THE COMPULSORY EXISTING PLANS AND SPECIFICATIONS RELATING TO CONSTRUCTIVE STRUCTURE AND MATERIALS, INCLUDING ALL NECESSARY PERMITS AND NOTES TO BE SUBMITTED TO THE CITY ENGINEER FOR APPROVAL	REMARKS 1. THE COMPULSORY EXISTING PLANS AND SPECIFICATIONS RELATING TO CONSTRUCTIVE STRUCTURE AND MATERIALS, INCLUDING ALL NECESSARY PERMITS AND NOTES TO BE SUBMITTED TO THE CITY ENGINEER FOR APPROVAL	REMARKS 1. THE COMPULSORY EXISTING PLANS AND SPECIFICATIONS RELATING TO CONSTRUCTIVE STRUCTURE AND MATERIALS, INCLUDING ALL NECESSARY PERMITS AND NOTES TO BE SUBMITTED TO THE CITY ENGINEER FOR APPROVAL	REMARKS 1. THE COMPULSORY EXISTING PLANS AND SPECIFICATIONS RELATING TO CONSTRUCTIVE STRUCTURE AND MATERIALS, INCLUDING ALL NECESSARY PERMITS AND NOTES TO BE SUBMITTED TO THE CITY ENGINEER FOR APPROVAL	REMARKS 1. THE COMPULSORY EXISTING PLANS AND SPECIFICATIONS RELATING TO CONSTRUCTIVE STRUCTURE AND MATERIALS, INCLUDING ALL NECESSARY PERMITS AND NOTES TO BE SUBMITTED TO THE CITY ENGINEER FOR APPROVAL	REMARKS 1. THE COMPULSORY EXISTING PLANS AND SPECIFICATIONS RELATING TO CONSTRUCTIVE STRUCTURE AND MATERIALS, INCLUDING ALL NECESSARY PERMITS AND NOTES TO BE SUBMITTED TO THE CITY ENGINEER FOR APPROVAL	REMARKS 1. THE COMPULSORY EXISTING PLANS AND SPECIFICATIONS RELATING TO CONSTRUCTIVE STRUCTURE AND MATERIALS, INCLUDING ALL NECESSARY PERMITS AND NOTES TO BE SUBMITTED TO THE CITY ENGINEER FOR APPROVAL	REMARKS 1. THE COMPULSORY EXISTING PLANS AND SPECIFICATIONS RELATING TO CONSTRUCTIVE STRUCTURE AND MATERIALS, INCLUDING ALL NECESSARY PERMITS AND NOTES TO BE SUBMITTED TO THE CITY ENGINEER FOR APPROVAL
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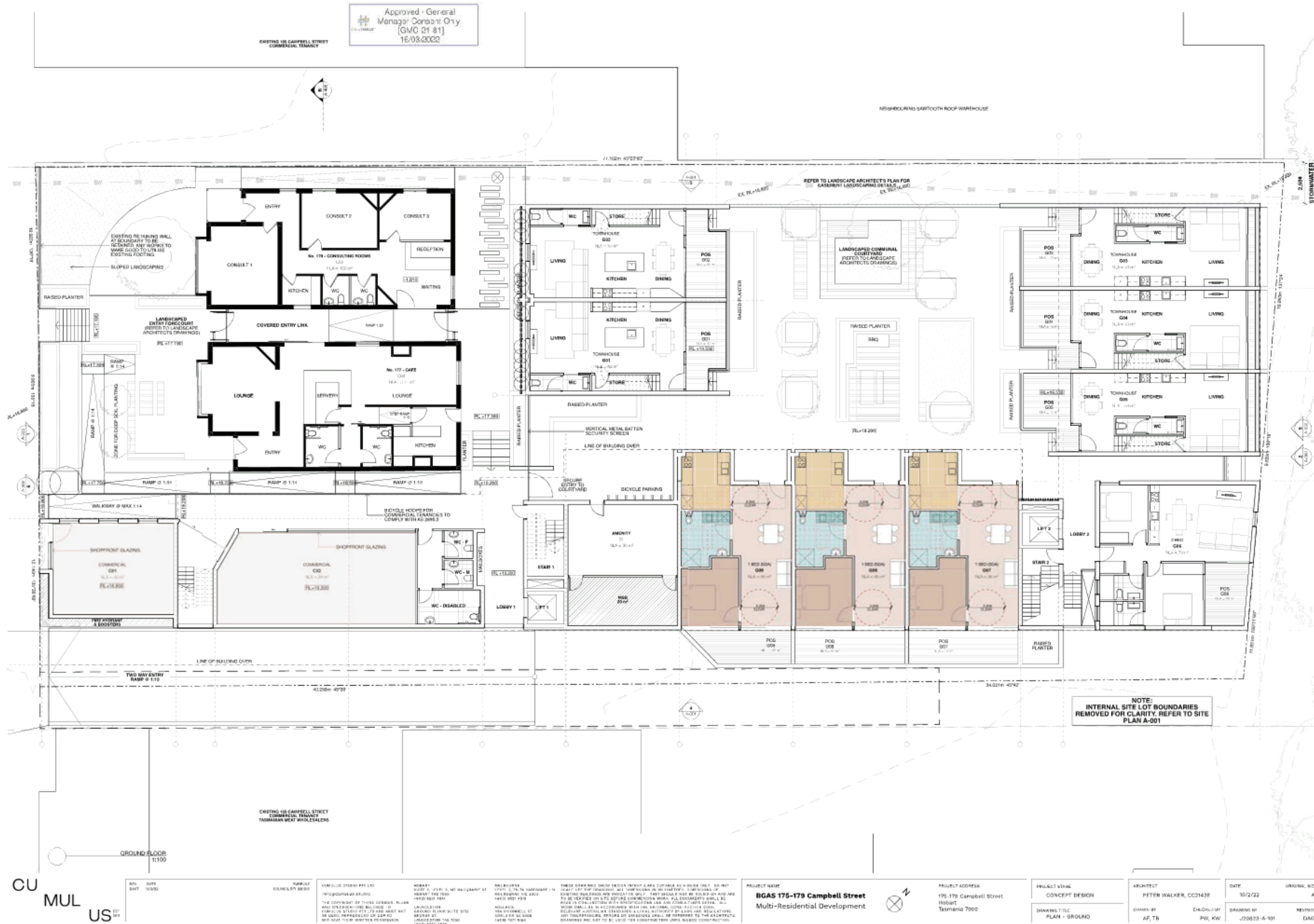
PROJECT NAME BGAS 175-179 Campbell Street Multi-Residential Development	PROJECT ADDRESS 175-179 Campbell Street Tendron Tendron 7000	PROJECT NAME CONCEPT DESIGN DRAWING TITLE DEMOLITION - GROUND FLOOR	ARCHITECT PETER WALKER, CC2143E DRAWN BY AP, TB CHECKED BY PW, KW	DATE 13/12/22 DRAWING NO. 200033-A-001	ORIGINAL SIZE A1 REVISION D406
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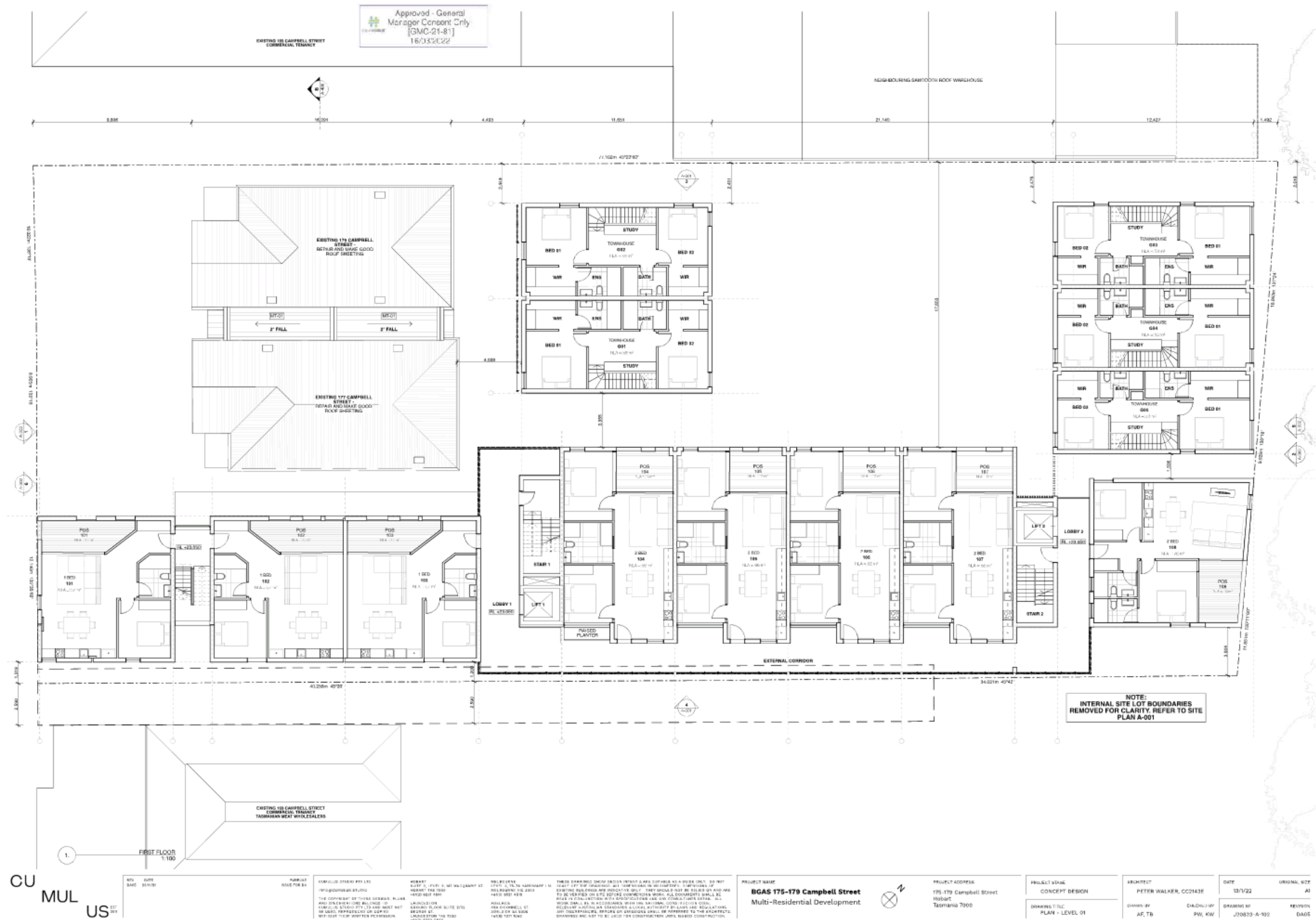


CUMULATIVE

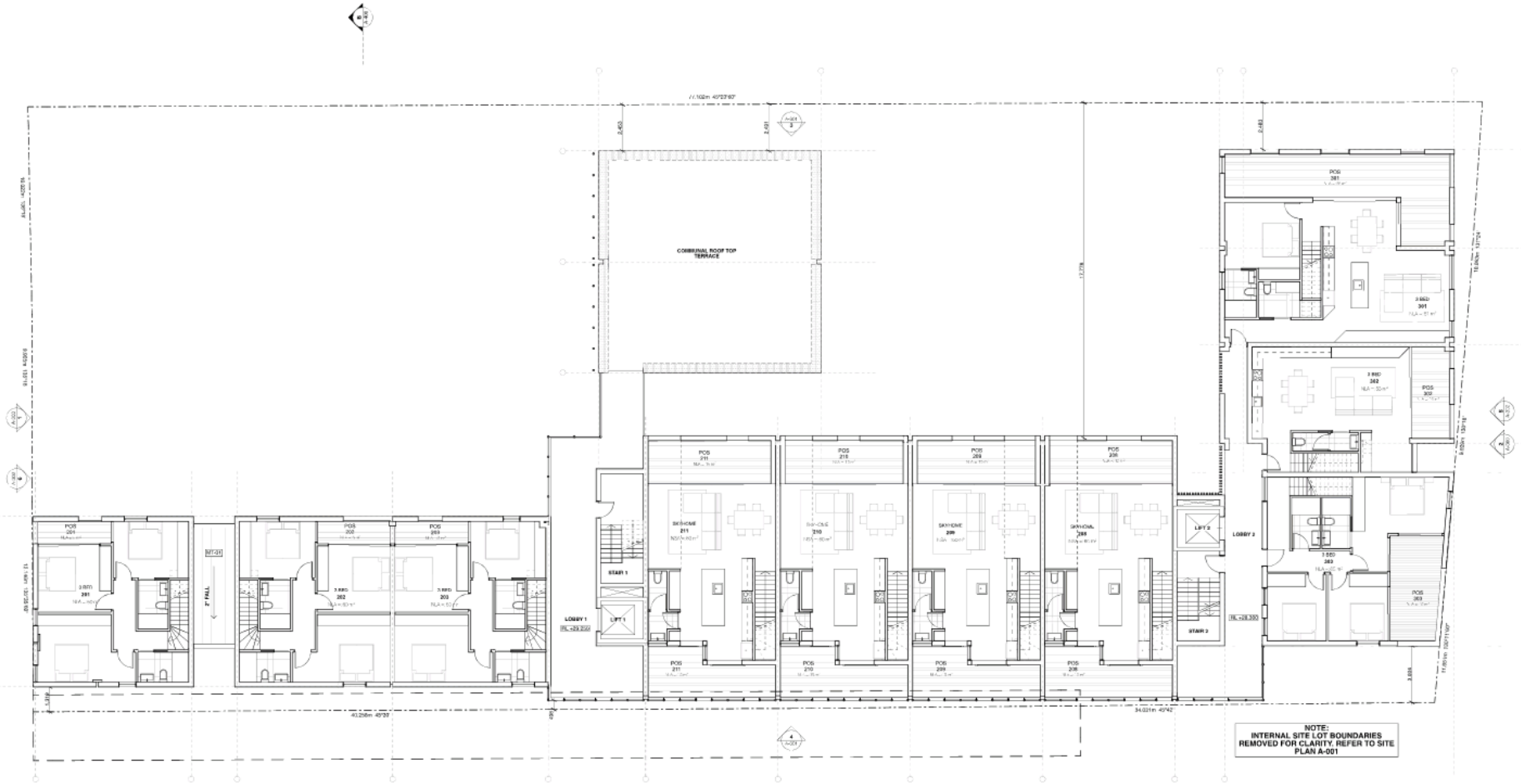
REV.	DATE	DESCRIPTION
1	15/02/2023	ISSUED FOR PERMIT
2	16/03/2022	ISSUED FOR PERMIT

PROJECT NAME BGAS 175-179 Campbell Street Multi-Residential Development	PROJECT ADDRESS 175-179 Campbell Street HOBART Tasmania 7500	PROJECT IDEAL CONCEPT DESIGN	ARCHITECT PETER WALKER, CC2143E	DATE 13/1/22	ORIGINAL SIZE A1
		DRAWING TITLE PLAN - BASEMENT	DRAWN BY AP, TB	DESIGNED BY PW, KW	REVISION DATE





Approved - General
Manager's Consent Only
[6161-21-81]
16/03/2022



NOTE:
INTERNAL SITE LOT BOUNDARIES
REMOVED FOR CLARITY. REFER TO SITE
PLAN A-001

CU
MUL
US

THIRD FLOOR
1:150

CONCEIVED BY: [Name]
DESIGNED BY: [Name]
DRAWN BY: [Name]
CHECKED BY: [Name]
DATE: [Date]

PROJECT NAME
BGAS 175-179 Campbell Street
Multi-Residential Development

PROJECT ADDRESS
175-179 Campbell Street
HOBART
Tasmania 7000

PROJECT NAME
CONCEPT DESIGN
DRAWING TITLE
PLAN - LEVEL 03

ARCHITECT
PETER WALKER, CC2143E
DRAWN BY
AP, TB

DATE
13/1/22
ORIGINAL SIZE
A1
REVISION
D405

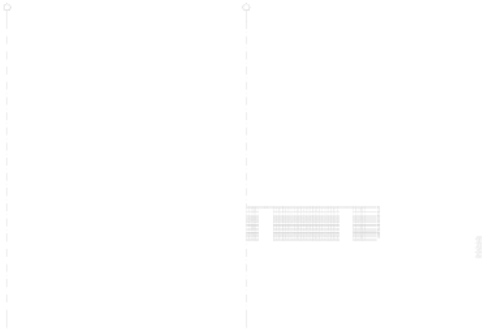


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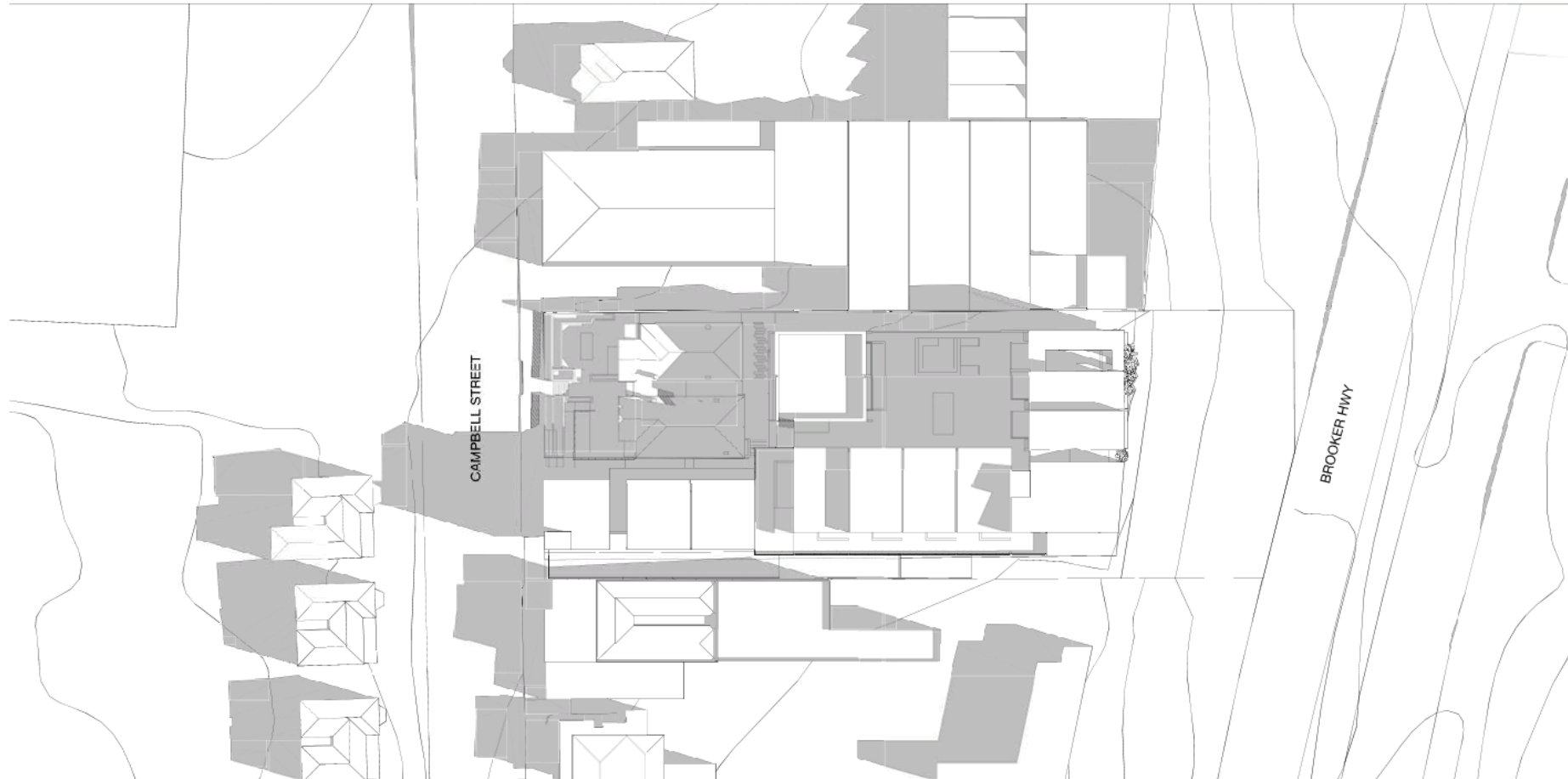
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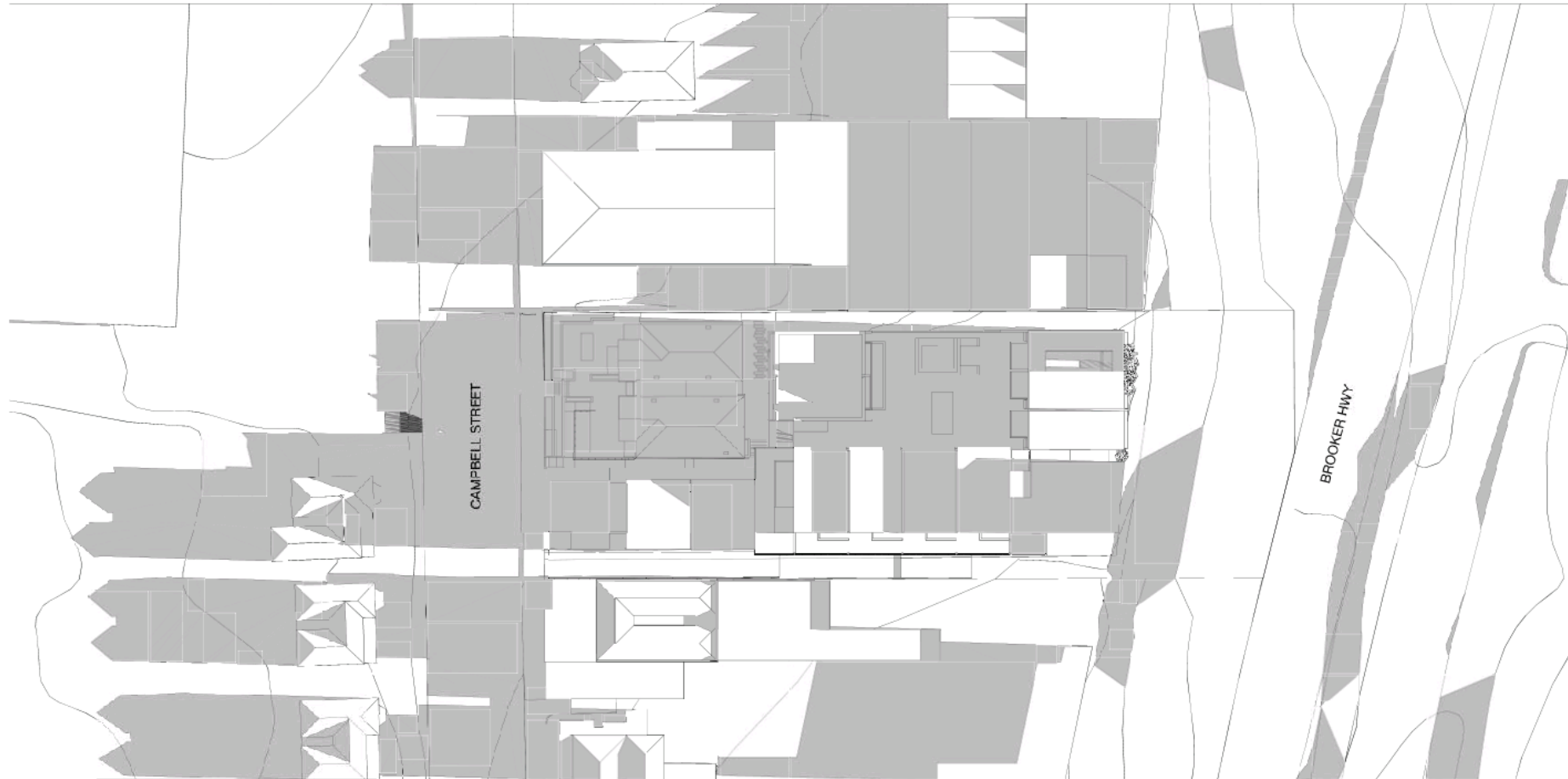
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Manager - Zirconia City
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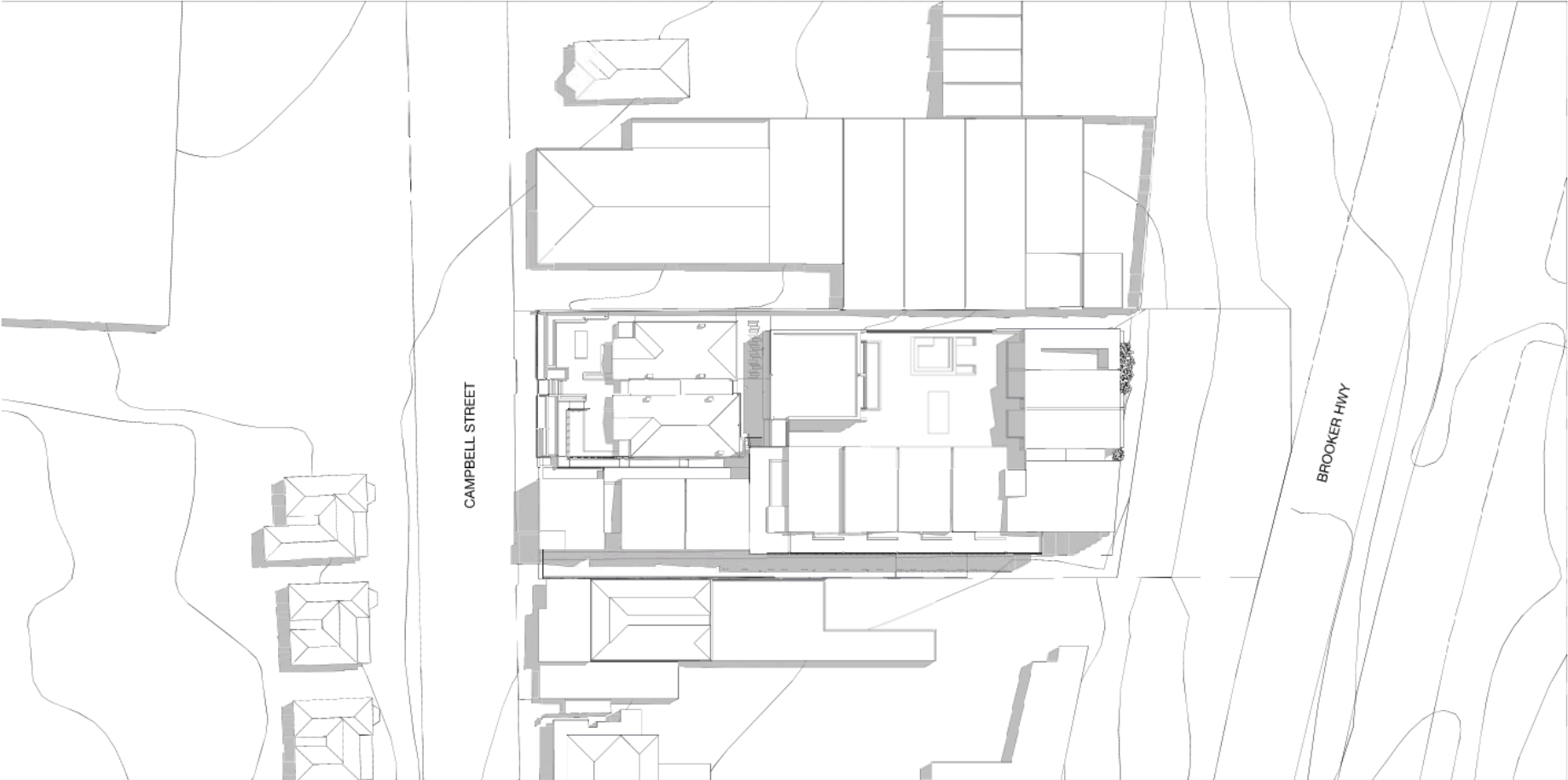
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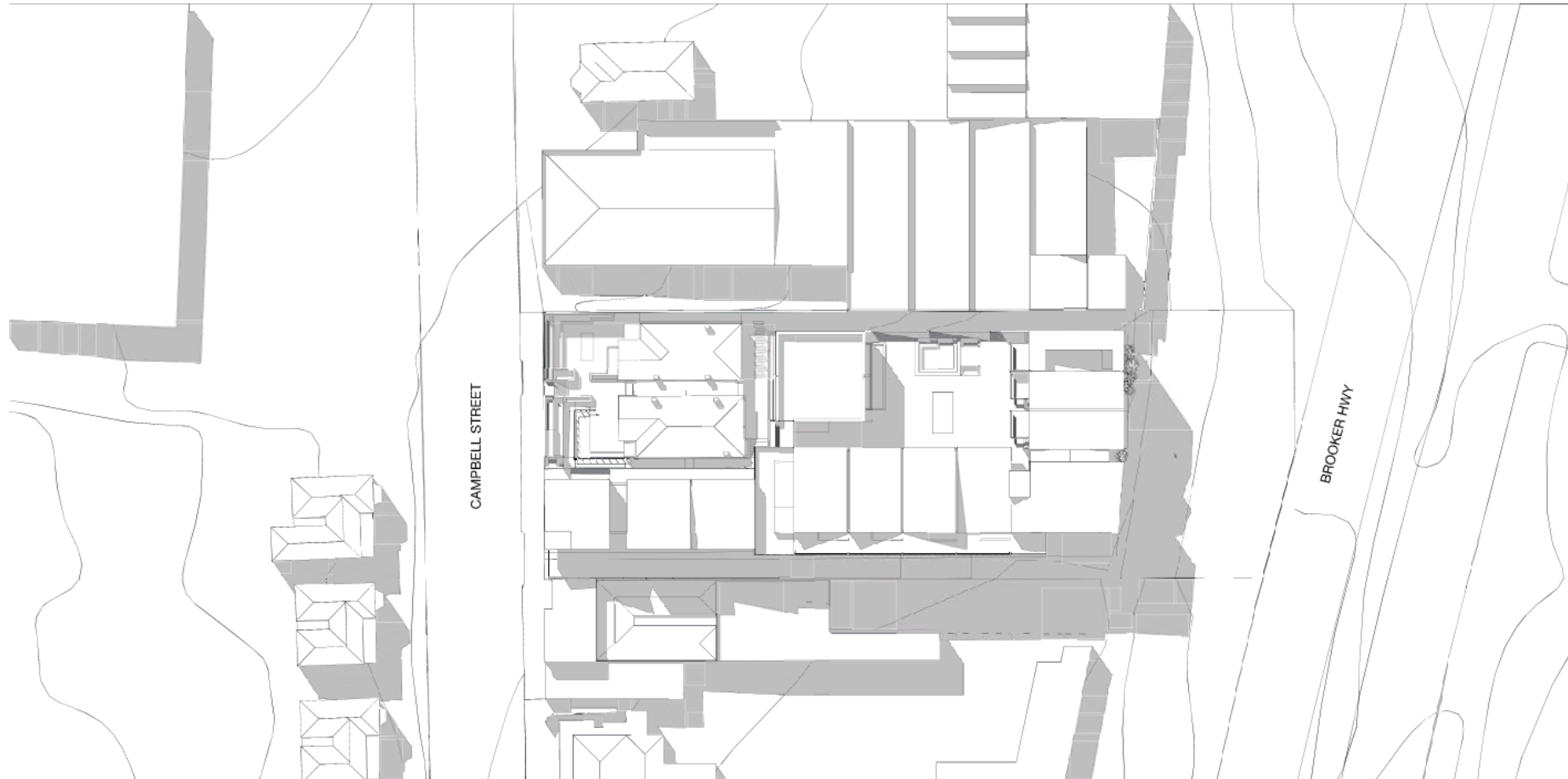
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REV. DATE	DATE	REVISIONS	PROJECT NAME	PROJECT ADDRESS	PROJECT NAME	ARCHITECT	DATE	ORIGINAL SIZE
001	20/12/22	REVISIONS	BGAS 175-179 Campbell Street Multi-Residential Development	175-179 Campbell Street Hobart Tasmania 7000	CONCEPT DESIGN	PETER WALKER, CC2143E	13/1/22	A1
THESE DRAWINGS SHOW ONLY THE GENERAL LAYOUT AND ARE NOT TO BE USED FOR CONSTRUCTION. THE CLIENT IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THE CLIENT IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THE CLIENT IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.			DRAWING TITLE DEC 22ND - 12PM			DRAWING NO. J20033-A-607		

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Practical Solutions.

9 August 2022

Jacob Ziesel
Stormwater Systems Engineer - Analyst
City of Hobart
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HOBART Tasmania 7001

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(Operations) Pty Ltd**
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Dear Jacob

Re: PLN-21-471 – Review of Advertised Documents – Flooding and Stormwater –

Rev 01

pitt&sherry have been engaged by City of Hobart (Council) to undertake a technical review of the flooding and drainage material provided from the proposed development at 173 – 179 Campbell Street Hobart (PLN-21-471).

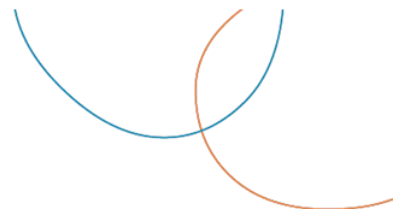
The subject of the review is to determine:

- Whether Council have sufficient information to assess the development under the planning scheme (HIPS E15 – Inundation Prone Areas Code and E7 Stormwater Management Code)
- Whether the development is acceptable under those clauses of the planning scheme; and
- If it is acceptable, what can be reasonably conditioned for.

The following advertised documents have been reviewed:

- PLN-21-471 - 175 CAMPBELL STREET HOBART TAS 7000 - Advertising Documents - 1 of 6 - Plans.PDF
- PLN-21-471 - 175 CAMPBELL STREET HOBART TAS 7000 - Advertising Documents - 2 of 6 - Planners and Architects Report.PDF; and
- PLN-21-471 - 175 CAMPBELL STREET HOBART TAS 7000 - Advertising Documents - 3 of 6 - Engineering Reports.PDF.

The review has been based on how the material supplied responds to planning requirements.



1. Development Assessment

1.1 E7 – Stormwater Management Code

Table 1: E7.7.1 Stormwater Drainage and Disposal

Objective: To ensure that stormwater quality and quantity is managed appropriately.

Acceptable Solution	Performance Criteria
A1 Stormwater from new impervious surfaces must be disposed of by gravity to public stormwater infrastructure.	P1 Stormwater from new impervious surfaces must be managed by any of the following: <ul style="list-style-type: none"> 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.
A2 A stormwater system for a new development must incorporate water sensitive urban design principles for the treatment and disposal of stormwater if any of the following apply: <ul style="list-style-type: none"> a) the size of new impervious area is more than 600 m²; b) new car parking is provided for more than 6 cars; c) a subdivision is for more than 5 lots. 	P2 A stormwater system for a new development must incorporate a stormwater drainage system of a size and design sufficient to achieve the stormwater quality and quantity targets in accordance with the State Stormwater Strategy 2010, as detailed in Table E7.1 unless it is not feasible to do so.
A3 A minor stormwater drainage system must be designed to comply with all of the following: <ul style="list-style-type: none"> 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. 	P3 No Performance Criteria
A4 A major stormwater drainage system must be designed to accommodate a storm with an ARI of 100 years.	P4 No Performance Criteria

Response

A1/P1

Page 12 of the advertised documents (engineering reports) presents the proposed stormwater point for the site. A DN225 pipe is proposed to be connected to the DN1800 Park Street Rivulet Drain. Figure 8 and Figure 9 show the plan and long section of the proposed connection demonstrating the site can be connected to the public stormwater system. As such. The development complies with A1

A2/P2

The planning response detailed on page 13 of the engineering reports states the development meets the acceptable solution A2. Although, the assessment provided responds to P2. The most reasonable approach for a development of this size is to assess the site against P2 which has been done.

There are inconsistencies with how the water quality assessment is presented. Under the response to planning criteria on Page 13, a table of treatment train effectiveness is presented, along with a model schematic (Figure 1). There is no further information provided on how these model results were obtained

On page 60 of the engineering reports, a different water quality assessment is presented with a different model schematic and different results (Figure 2). This assessment does provide sufficient information to assess water quality compliance.




Figure 10 - MUSIC Schematic

	Sources	Residual Load	% Reduction
Flow (ML/yr)	1.19	1.19	0
Total Suspended Solids (kg/yr)	245	14.8	93.9
Total Phosphorus (kg/yr)	0.49	0.144	70.5
Total Nitrogen (kg/yr)	3.43	1.63	52.4
Gross Pollutants (kg/yr)	46.2	0	100

Figure 11 - MUSIC Results

Figure 1: Water quality results presented in response to planning criteria (JMG - Page 13)



Parameter	Required Load Reduction (%)	MUSIC Modelled Load Reduction (%)	State Stormwater Targets Achieved
Total Suspended Solids (TSS) (kg/yr)	80.0	79.9	Y
Total Phosphorous (TP) (kg/yr)	45.0	76.6	Y
Total Nitrogen (TN) (kg/yr)	45.0	45.2	Y
Total Pollutants (kg/yr)	90.0	99.2	Y

Figure 2: Water quality results presented in Flussig Report (Flussig - Page 60)

The information provided from Page 59 to Page 62 of the engineering reports provides sufficient detail for council to accept.

It should be noted the model results presented in the planning response to P2 do not have any technical background. A reasonable approach has been undertaken for this part of the assessment as an assessment has been provided that demonstrates compliance. It is recommended that council condition that an appropriate water quality management system be implemented meeting the Stormwater Quality Targets.

A3/P3

The internal site drainage has been appropriately sized for the development. The peak flow rates presented in the rational method calculation and pipe size proposed are reasonable to convey flow to the public stormwater system. Although, the performance of the drainage system could be impacted by the proposed detention basin.

Part of a stormwater detention assessment has been undertaken, although there are important hydraulic features of the detention basin that have not been documented. Page 14 of the engineering reports states that a basin is to be provided that limits flow to the pre-developed condition with a suitably size orifice. No detail has been provided for the orifice size or the peak operating levels of the basin.

Detail should have been provided to demonstrate that the basin/orifice arrangement does not raise the peak water level above the design surface level. Hence based on the information provided, it is not possible to accept the response provided for A3. Based on the review undertaken, this is likely something that can be addressed, and council can condition an appropriate detention and drainage system to be provided with supporting calculations.

In addition to the drainage system servicing the site, the development proposes to realign an existing DN525 council stormwater main. As the development proposes to alter part of the existing minor drainage system, proposed design should be assessed under A3.

The hydraulic analysis associated with the realignment is presented in Page 54 to Page 57 of the engineering reports (Flussig). A long section / hydraulic grade line has been presented for the proposed case. Based on the information presented, it is not possible to determine whether or not the capacity of the minor drainage system is adequate under the assumption that the tailwater level in the downstream network was below the ground.

Based on the information presented it is not possible to accept the proposed realignment. It is recommended that the realignment is conditioned such that the pipe provided ensures the 5% AEP HGL is below the ground level with an assumed tailwater level also below ground.

**A4/P4**

The proposed development is located within a flood affected area. A major overland flow path exists at the rear of the property. The proposed development footprint is within this area.

A design to accommodate this flow path has not been provided. The flood modelling undertaken has classified the flood hazard as predominantly H5 and some areas of H6.

A major stormwater drainage system is required a system to provide safe conveyance of stormwater runoff and a specific level of flood mitigation. The flood hazard category estimated and proposed use in the major stormwater drainage path does not constitute safe conveyance of floodwater.

The physical design of the development has not appropriately considered the overland flow path and relied upon administrative measures to attempt to manage the risk. The proposed solution accepts there will be damage to property (cars).

The response to A4 provided on Page 14 state all habitable floors are located more than 300mm above the calculated 1% AEP flood level. It is noted that the HIPS defines a habitable building as a building of Class 1 - 9 of the Building Code of Australia. The National Construction Code defines car parks as a class 7a building. As such the not all habitable floor areas are above the 1% AEP flood level.

Based on the information provided, the development does not comply with A4.



1.2 E15 – Inundation Prone Areas Code

As the site is impacted by riverine inundation, the items from Code E15 relating to riverine inundation need to be responded to. These are E15.7.4 and E15.7.5. Only items relating to new buildings have been detailed below

Table 2: E15.7.4 Riverine Inundation Hazard Areas

Objective: To ensure that the risk from riverine, watercourse or inland flooding is appropriately managed and takes into account the use of buildings

Acceptable Solution	Performance Criteria
A1 A new habitable building must have a floor level no lower than the 1% AEP (100yr ARI) storm event plus 300mm	P1 A new habitable building must have a floor level that satisfies the following: <ul style="list-style-type: none"> a) Risk to users of the site, adjoining or nearby land is acceptable; b) Risk to adjoining or nearby property or public infrastructure is acceptable; c) Risk to buildings and other works arising from riverine flooding is adequately mitigated through siting, structural or design methods; d) Need for future remediation works is minimised; and e) Provision of any developer contribution required pursuant to policy adopted by Council for riverine flooding protection works.

Response

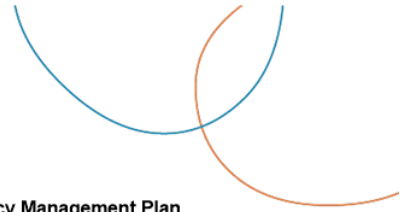
A1/P1

As the carpark is a Class 7a building, the carpark is considered to be a habitable building. As the proposed car park floor level is 15.70m AHD, and the 1% AEP + CC flood level is estimated to be 18.015m AHD, A1 is not achieved and the performance criteria must be responded to.

A specific response to P1 has not been provided. The review of the compliance against P1 has been undertaken based on the information presented in the engineering reports.

(a) Risks to users of the site, adjoining or nearby land is acceptable.

Page 80 of the engineering reports presents flood hazard maps for both the existing and developed case for the 1% AEP + climate change event. The maps show an increase in flood hazard category on the site through the lowering of the ground level to facilitate the design of the car park. The flood hazard is predominantly H5 with some areas of H6. The flood hazard category H5 means *unsafe for vehicles and people. All buildings vulnerable to structural damage. Some less robust building types vulnerable to failure.* H6 means *unsafe for vehicles and people. All building types considered vulnerable to failure.* The level of flood risk within the carpark is considered to be unacceptable. It is noted the flood hazard rating on the site has increased when compared to the existing condition.



The proposed approach to manage risk is to implement a Flood Emergency Management Plan (FEMP). There is no discussion regarding alternate options for managing flood risk. The following comments are provided on the proposed FEMP:

- The engineering report states, depth in the car park rises from an initial noticeable depth of 50mm to maximum in a period of around 9.5 minutes (engineering reports, Page 13 - JMG). It is noted the maximum depth is approximately 2.2m. This is the time it takes to reach peak depth, but no comment has been provided on the time it takes to which flow becomes hazardous to people and infrastructure. This will be shorter and hence further reduces the time available to vacate affected areas.
- An understanding of how the flood hazard changes with time is required. The assumption of adopting a FEMP based on the time to peak depth is not appropriate. The documentation provided to support a FEMP as being possible is lacking adequate detail.
- The time for noticeable overland flow to hazardous flooding is too short for a flood emergency management plan to be appropriately implemented. It appears the approach relied upon will be for people to notice flood water and will make a decision to remove themselves from the area. There is no time for instruction or intervention from a flood warden. The emergency response system relies on automated measures as warning devices, although it is likely they may only provide minutes of warning.
- Figure 3 shows an excerpt from the Australian Disaster Resilience Manual 20 and presents an example evacuation timeline. For this example, only the first four steps are relevant. For a FEMP to work, the time between the first indication of flooding and the prediction of inundation height, plus the response initiation time must be less than the time where flood water first becomes hazardous (noting this is less than 9.5 minutes). There has been no discussion in the material provided on evacuation timeline.
- A risk assessment is documented in Appendix A of the report (Page 88 of engineering reports). Risk Ref No. D2 recognises there is a risk to personal safety within the car park and waste room. The assessment nominates a consequence of moderate for a risk that could result in serious injury or death. This does not appear to be correct.
- The risk assessment states that with implementation of the flood emergency management plan that the consequence, reduces from moderate to minor. The consequence will not change with the implementation of administrative risk reduction measures. There is still the consequence of serious injury and death.
- The JMG report accepts that cars may become damaged and have suggested the body corporate insurance may be able to recover losses. This still means people will be without a car for a period of time. Insurance should not need to be relied upon if the risk is known prior to the development be constructed; and
- The flood hazard categorisation is predominantly H5 and some H6 and represents hazards typically found in defined river and creek channels. Areas that contain this level of hazard would normally be left clear of development. It is not recommended to place infrastructure or provide incentive for people to access areas like this.

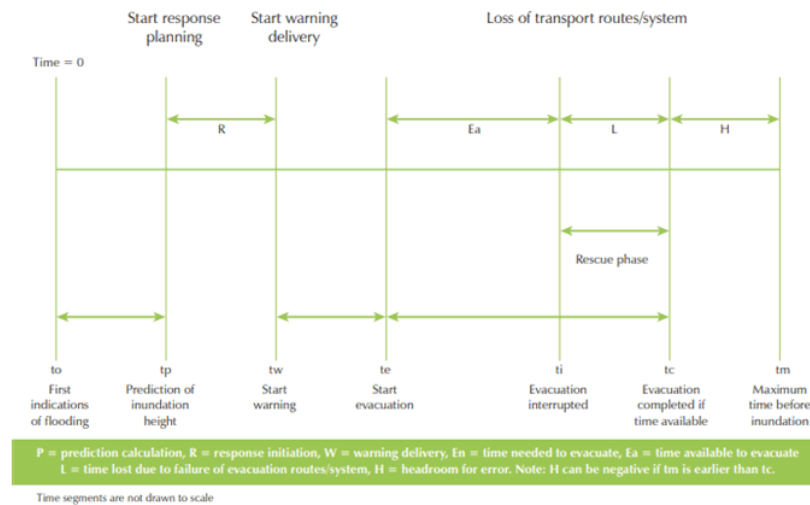


Figure 3: Flood evacuation timeline (Figure 2: Australian Disaster Resilience Manual 20: Flood Preparedness, 2009, Australian Institute for Disaster Resilience CC BY-NC)

The proposed design exposes users to an unacceptable level of risk with a mitigation option that cannot guarantee the safety of people and accepts the damage to property will occur. The proposed approach does not meet P1 (a)

(b) Risk to adjoining or nearby property or public infrastructure is acceptable.

Section 2.4.1 of the Flussig Report states there will be no displacement of overland flow over other property. A graph is provided in Figure 7, although, this only demonstrates a change at a single point. A comparison between the flood maps provided in Appendix B, Pre-Development 1% AEP + CC and Post-Development 1% AEP + CC, do show an increase in flood depth downstream, a minor decrease in flood extent onto Campbell Street, an increase in the flood extent within the Brooker Avenue Road Reserve and a minor increase in flood extent behind Woolworths.

A high level review of the flood hazard maps suggests the extent of H6 hazard increases downstream.

Furthermore, figure 6 (page 75 of the engineering reports) shows an increase in peak flow rate of approximately 13% within the Brooker Avenue Road reserve.

To appropriately quantify the change in flood behaviour, a water level difference / flood afflux map or suitably detailed equivalent information is required. This has not been provided and hence there isn't enough information provided to adequately address P1 (b). This is information that should have been provided at this stage of the development assessment. As such it cannot be conditioned.

(c) Risk to buildings and other works arising from riverine flooding is adequately mitigated through siting, structural or design methods

With regard to mitigation options relating to structural design of the development, the engineering report has recommended the building be designed to resist flood forces. A review of the structural design is beyond the scope of this assessment although this item can be conditioned.



(d) Need for future remediation works is minimised

By allowing the overland flow path to pass through the car park introduces a problem for the development to deal with in the future. Damage to cars and building utilities are likely which will impose burden on those living at the proposed development site.

(e) Provision of any developer contribution required pursuant to policy adopted by Council for riverine flooding protection works

Developer contribution not applicable for this development.

Table 3: E15.7.5 Riverine, Coastal Investigation Area, Low, Medium, High Inundation Hazard Areas

Objective: To ensure that landfill and mitigation works do not unreasonably increase the risk from riverine, watercourse and inland flooding, and risk from coastal inundation.

Acceptable Solution	Performance Criteria
A1 For landfill, or solid walls greater than 5 m in length and 0.5 m in height, there is no acceptable solution.	P1 Landfill, or solid walls greater than 5 m in length and 0.5 m in height, must satisfy all of the following: <ul style="list-style-type: none"> a) no adverse affect on flood flow over other property through displacement of overland flows; b) the rate of stormwater discharge from the property must not increase; and c) stormwater quality must not be reduced from pre-development levels.
Response	

A1/P1

As the proposed development introduces a new structure into the development site that is greater than 5m, A1 cannot be achieved and the performance criteria (P1) must be addressed.

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

Section 2.4.1 of the Flussig Report states there will be no displacement of overland flow over other property. A graph is provided in Figure 7, although, this only demonstrates a change at a single point. A comparison between the flood maps provided in Appendix B, Pre-Development 1% AEP + CC and Post-Development 1% AEP + CC, do show an increase in flood depth downstream, a minor decrease in flood extent onto Campbell Street, an increase in the flood extent within the Brooker Avenue Road Reserve and a minor increase in flood extent behind Woolworths.

A high level review of the flood hazard maps suggests the extent of H6 hazard increases downstream.

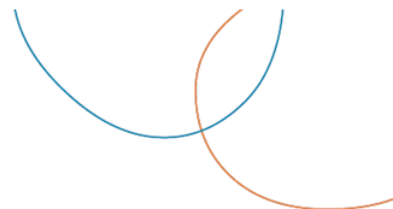
To appropriately quantify the change in flood behaviour, a water level difference / flood afflux map or suitably detailed equivalent information is required. This has not been provided and hence there isn't enough information provided to adequately address P1 (b). The review of flood maps provided suggests there is a change, but it is not possible to ascertain the impact. This is information that should have been provided at this stage of the development assessment. As such it cannot be conditioned.

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

Figure 6 (page 75 of the engineering reports) shows an increase in peak flow rate of approximately 13% within the Brooker Avenue Road reserve. The statement provided in the response to planning criteria (page 82 of the engineering reports) states no change. The response is inconsistent with the detail provided in the report. P1 (b) has not been achieved. Information should have been provided at this stage. It is not recommended to condition for this.

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

The response stated on page 82 of the engineering reports suggest there is no evidence that stormwater quality will be reduced. Based on the review of the site this is reasonable and can be accepted.



2. Summary

A review of documentation has been undertaken that intends to address relevant provisions in the *Hobart Interim Planning Scheme 2015*, in particular, the Inundation Prone Areas Code (E15) and the Stormwater Management Code (E7). The outcome of the assessment is summarised below:

- E7.7.1 A1/P1 – Can accept
- E7.7.1 A2/P2 – Condition for. Can be achieved, although inconsistencies provided within the report
- E7.7.1 A3/P3 (Detention system) – Condition for. Missing information relating to the detention system proposed.
- E7.7.1 A3/P3 (DN525 realignment) – Condition for. Sufficient information has not been provided that demonstrates the new main meets the capacity requirement (5% AEP). Recommend an agreed and reasonable tailwater below ground be adopted for pipe sizing.
- E7.7.1 A4/P4 – not achieved. The overland flow path passes through the car park. It appears the design has not considered options for overland flow. E7.7.1 A4/P4 states the overland flow path must be designed to provide safe conveyance of stormwater runoff. The results of the flood hazard assessment indicate that the stormwater flows through the site are no safe for people or infrastructure.
- E15.7.4 A1/P1 - not achieved. Development relies on A1, assuming the habitable floor is the building structure and rooms within it. The HIPS defines a habitable building as buildings of Class 1 – 9 per the Building Code of Australia (now the National Construction Code (NCC)). A carpark is considered to be a Class 7a building and hence is to be considered a habitable building. The documentation provided was assessed against P1. The approach adopted leaves an unacceptable level of residual risk; and
- E15.7.5 A1/P1 – not achieved. Sufficient information has not been provided to quantify the impact on adjoining property.

The proposed development is located in an area affect by extremely hazardous flood water in a 1% AEP + Climate Change flood event. The primary issue is part of the development exposes users to an unacceptable level of risk, which is in conflict with the purpose of the code, and in particular E15.7.4/P1. It is our opinion that the management measure proposed (emergency management plan) is not appropriate for this situation. Even if a detailed flood emergency plan could be developed, there would be a problem enacting the plan as the time required to enact the plan would be far longer than the flood response time.

It is reasonable to assume a person could be located within the basement carpark at the onset of flooding. They could be exposed the highly hazardous flooding (as defined by Australian Rainfall & Runoff Flood Hazard Categorisation- Book 6 – Chapter 7) and hence we do not believe the development in its current form meets the requirements of the HIPS.

Yours sincerely,

Joshua Coates
Associate Civil / Hydraulic Engineer CPEng NER

URBAN DESIGN ADVISORY PANEL**REPORT**

TUESDAY 7 SEPTEMBER 2021

1. 169-173 Campbell Street, 175 Campbell Street, 177 Campbell Street and 179 Campbell Street – PLN-21-471

Attending: Peter Walker – Cumulus
Dean Coleman – Solutions Won Group Pty Ltd (via Teams)

The Panel met to discuss the proposal in detail and the advice below is provided for the consideration of the proponents and officers.

Description:

The site comprises three addresses located over four titles – 175 Campbell Street, 177 Campbell Street and 179 Campbell Street. The proposal is for the retention of the brick buildings at the front of 177 and 179 Campbell Street, demolition of the building at 175 Campbell Street, and the construction of interconnected residential buildings of 34 dwellings. The buildings features varying heights from three to six storeys, extending to a maximum height of 25.210m at the rear of the site. The overall development contains a basement car park level, commercial tenancies, a large central courtyard, 13 two-bedroom apartments, 9 three-bedroom apartments, 4 three-bedroom 'skyhomes' and 2 three bedroom townhouses and 6 two bedroom town houses all with varying private open space areas.

More specifically the proposal includes:

- Retention of the two existing heritage listed buildings sited at the front of 177 and 179 Campbell Street. Use of these buildings are to be for café and consulting rooms respectively. These properties are listed in the planning scheme but not with the Tasmanian Heritage Council.
- Demolition of the non-heritage listed building at 175 Campbell Street.
- Basement Level: One level of car parking, accessed from Campbell Street. The basement will contain 37 car parks, waste and apartment storage.
- Ground Level: The ground level will comprise of two commercial tenancies with shopfront glazing accessible from Campbell Street and an internal walkway. A large internal courtyard and the lower level of the 5 two bedroom townhouses, a three bedroom apartment and 2 two bedroom apartments.
- Level 1: Upper level of the 5 two bedroom townhouses, a two-bedroom apartment, three town houses and 4 three bedroom apartments.

- Level 2: Upper level of the 3 townhouses, upper level of the 4 three-bedroom apartments and 4 additional apartments.
- Level 3: 7 two bedroom apartments and upper of level three-bedroom apartment
- Level 4: Communal Rooftop Terrace, four sky homes and 3 three apartments
- Level 5 – Upper level of the 4 skyhomes and the 3 three apartments plus plant, roof structure and lift overruns.
- Total apartments: 34
- The design features a 'saw tooth' roof taking inspiration from neighbouring warehouse roof forms and to provide an articulated form against the skyline.
- The key material is a ceramic tile/ brick in a mix of terracotta and grey tones with inclusion off form concrete, metal vertical batten screening and two polycarbonate seams for the lift/stairwell circulation areas.
- The proposal includes removal of a tree in the Brooker road reservation and additional planting

REPORT:

A previous early stage of the development, essentially a massing version, came before the Panel for pre-application advice at its meeting on the 28 April 2021. The Panel was broadly not supportive of that proposal, especially with regards to the impact on adjacent properties and the pattern this development would establish in exceeding the current Scheme requirements.

The proponent has developed the scheme further, particularly the architectural expression. The Panel appreciate the opportunity to review the proposal again and note the review was undertaken as a Pre-Application review. The proponent has provided 2 versions; one an original Development Application which the Panel were advised has been withdrawn, and another version which removed a level to reduce height of the proposal and other adjustments. The proponent spoke to both versions and the Panel has considered both in its review.

The Panel note the proposal substantially exceeds the current Scheme's height requirements, and if required to comment on height in a formal Development Application review, the Panel would recommend refusal on the height of the proposal. The Panel acknowledge the precinct warrants a review of Scheme requirements and an increased density, especially for housing, is appropriate. Consistent with previous advice (April 2021), the Panel seek urban analysis on the appropriateness of exceeding the current Scheme requirements and the pattern this establishes for future development.

The proponents provided their research and analysis on the broader urban context to support this development. The Panel appreciated this work, though noted some

deficiencies which if addressed, should further assist the development approach, such as an increased appreciation of the original landform and how the heritage buildings on the site relate to this. The Panel would have liked to see more rigour in the analysis of the increased density pattern this proposal establishes in relation to the impact on and from adjacent sites.

The Panel remain concerned by the precedent established by the pattern which would be as a result of 'first in, best dressed' rather than as a proposal addressing amenity issues influenced by a precinct plan. The Panel is concerned that the width of the lots in the area would generate a typology that, if developed to similar height and bulk, will progressively overshadow each neighbouring lot. The Panel appreciated the proponents reason for introducing a varied roofline, to reflect the industrial buildings' roof-lights nearby, though felt they were being used as an architectural expression and could have assisted more in reducing the height adjacent to neighbours to allow more sunlight on adjoining properties.

The panel noted that while the proposal needs to be compatible with nearby buildings, it does not need to match.

The Panel noted that the proposal did seem to be addressing the Campbell Street streetscape by reducing the height. The Panel felt that the street frontage could maintain the form in the higher of the two versions shown, given the relationship to the existing buildings on the opposite side of Campbell Street. However, the Panel were also of the opinion that massing impacts are more significant to the neighbouring properties than tinkering with the streetscape. The panel raised the issue of bulk not just height, noting that height should be an outcome of location and form.

The Panel noted the heritage constraints of the site and appreciate the Council's heritage officer's assessment is based on the Scheme's requirement for new development to be "subservient" to the heritage properties. The Panel also felt that the treatment of the heritage buildings on site likely impacted the design in a detrimental way, leaving a building behind that was trying not to be tall. The Panel questioned whether the amended plans neither provided a "subservient" relationship to the heritage buildings, nor provided a rationale for a considered design solution in respect of the Scheme's requirement for a subservient relationship. The Panel felt there is more opportunity in addressing the relationship between the heritage buildings set down low from the street, and their relationship to the original landform including the former rivulet along its Brooker Highway edge, the subsequent pattern of development through infill of the Brooker Highway, and more recent and likely future development in the precinct.

The Panel notes a number of technical issues that are unresolved that may have future impact on urban design considerations. It is suggested that landscape architectural input is concurrent with hydraulic engineering and architectural design to provide for more nuanced site design solutions. These include the work associated with the storm-water drainage, provision of a pedestrian connection to the highway to improve informal surveillance both along the Brooker as well as within the lower areas of the site and the Panel noting the apparent lift-only access from the lower level car-parking to the ground floor,.

On a strict interpretation of the planning scheme provisions for height and heritage, the Panel concluded that the proposal does not comply. While there are meritorious elements of the proposal, overall they are not yet so significant as to warrant supporting the proposal, notwithstanding the non-compliance with the scheme.

URBAN DESIGN ADVISORY PANEL

REPORT

WEDNESDAY 28 APRIL 2021
LADY OSBORNE ROOM

2. 175-179 CAMPBELL STREET – PRE-APPLICATION

Attending: Dean Coleman – Solutions Won Group Pty Ltd (via teams)
Matthew Clark – JMG Engineers & Planners
Peter Walker – Cumulus Studios
Andrew Foster – Cumulus Studios

Description:

The proposal is to retain the two existing buildings at 177 and 179 Campbell Street, demolish the existing building on 175 Campbell Street, and construct 35 new dwellings across the three properties.

The proposal appears to comprise the following:

- Change of use of the existing buildings at 177 and 179 Campbell Street to commercial/retail.
- A new three-storey building behind the existing buildings at 177 to 179 Campbell St for four dwellings.
- A new three-storey building to the south of the existing buildings at 177 to 179 Campbell St, in the location of the current 175 Campbell Street, for commercial/retail on the ground floor, and four houses above.
- A new five storey building along the rear and partially the southern side boundary for the remaining 27 dwellings.

The proposal appears to be at an early stage of development, and specific details regarding height and materials are not provided.

Comments:

The site is 175, 177 and 179 Campbell Street, located on the north-eastern side of Campbell Street, between Campbell Street and Brooker Avenue. The site is located within the Urban Mixed Use Zone. The site is in the area of archaeological potential. In addition, 177 and 179 Campbell Street are heritage listed in the Hobart Interim

Planning Scheme 2015, but not with the Tasmanian Heritage Council. The site is not in a heritage precinct.

The site is adjacent to potentially contaminated sites, and is subject to the Attenuation Code (the code applies because the site is within 200m of a late night music venue). The site is within the area controlled by the Royal Hobart Hospital Specific Area Plan which requires buildings in the Inner Area to be no higher than 64.5m AHD. The site is also flood prone. There are no other relevant overlays.

The Panel wishes to note that the comments reflect the early nature of the proposal and are appreciative of the opportunity to comment at this stage.

The Panel notes the proposal has considered some contextual connections to Campbell Street, but considers that the proposal needs to consider the context well beyond the immediate streetscape. For example, more needs to be shown about the way it addresses and is viewed from the Glebe. The Panel would like to see an accurate long section taken through the site and acknowledging the Glebe and the natural rise toward Trinity Hill.

The Panel would like to see more planting on the proposed site with respect to the Brooker Avenue. They felt concern that there was a reliance on screening from trees on a public nature strip that have limited life span left. The Panel also reiterated comment on the previous proposal regarding concerns with parking on the lowest level needing to be set back to preserve trees on the public space alongside the Brooker Avenue.

The proposed front fence was presented with very limited information, alluding to an arbour screen. The Panel were therefore unable to provide specific comment on this aspect in particular, though did not discount its validity with further design rigour, including its siting relevant to the two heritage buildings and the new buildings. The panel did however discuss the need to ensure that any street frontage treatment not be to the detriment of the scale and sociability of the street as both public space and neighbourhood.

The early design proposal features a pixilation effect to break down the scale of the proposed massing. Whilst recognising the design skill demonstrated in its early stages on the façade treatment, the Panel were unanimous in seeking a more thorough analysis of and considered urban design response to the broader context. The proposed form needs to be considered in the scale of the urban precinct within the city, not just the relationships at a site or street scale. This is particularly the case given the height / massing to the southern edge of the property and the precedent this sets for adjoining properties.

The Panel found it difficult to comment on the proposal in the absence of a precinct plan. In seeking to make this a different scale of development to its surrounds, the Panel notes the proposal must achieve a high quality result and be rigorously tested to achieve a positive outcome to what could be a leader to further larger development in this precinct.



JMG Ref: 173021PH
Council Ref: PLN-21-471

7th November 2022

Mr Ben Ikin
Hobart City Council
Via Online Development Services Portal

Attention: City Planning

Dear Mr Ikin

APPLICATION NO. PLN-21-471 - 175 CAMPBELL STREET & 177 CAMPBELL STREET & 179 CAMPBELL STREET & 169-173 CAMPBELL STREET, HOBART - PARTIAL DEMOLITION, ALTERATIONS, NEW BUILDING FOR 26 MULTIPLE DWELLINGS, FOOD SERVICES, BUSINESS AND PROFESSIONAL SERVICES, GENERAL RETAIL AND HIRE, AND SUBDIVISION (LOT CONSOLIDATION)

In further response to the representations and the officers comments in the draft agenda we would like the following considered in the future agenda report:

1. Flood Risk - Council's External Consultant's Assessment

There is much weight in the draft agenda placed on the external consultants assessment of the risk to uses of the car park particularly related to Clause E15.7.4 and E7.1.1.

- If there are inconsistencies in the water quality assessment is presented as suggested this should have been resolved at the RFI stage. MUSIC modelling was provided with the application which is the standard approach to water quality assessment in the State. The consultant clearly has no issue with water quality as they conclude this can simply be conditioned (ref 6.24.5).
- The subconsultant states the overland flow path has not been provided, which is untrue as they are clearly shown in Figures 4 and 5 of the Flussig report. The car park area of the building has been specifically designed to allow overland flow and the inlets and outlets are modelled (Figures 8 & 9 of the Flussig report)(ref 6.25.5).
- The consultant assumes because HIPS defines a habitable building as a building Class 1-9 in the BCA and as the car park is a class 7a building under the National Construction Code not all habitable floors are above the 1% AEP flood level then the proposal fails A4 and must therefore be refused. However, under the NCC categories certain elements are not considered 'habitable' so whilst the Planning Scheme may define the building as a 'habitable building' it does not

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McGee & Gandy
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follow that an basement car park needs to be built above the 1%AEP flood level (ref 6.25.5 & 6.25.6 & 6.32.5). A copy of this advice is attached.

- The consultant states there are no discussion of alternate options for managing flood risks - this is untrue as specific recommendations were provided in the JMG report to manage flood risk including alarms, signage, vehicle access barriers, on site managers etc. The consultants later reference these measures in their comments (ref 6.32.5).
- The consultant then continues to state there is no discussion on the time it takes to become hazardous then concludes without knowing this, that 9.5 minutes is too short for any flood emergency plan to be appropriately implemented. A risk hazard assessment has been undertaken by risk assessors under the WHS Act and the risk found to be acceptable subject to flood management measures. It is our view that if the risk is acceptable under the WHS Act then it meets the test whereby the risk to users is acceptable. A copy of this risk assessment is attached (ref 6.32.5).
- The consultant suggests that an evacuation timeline should have been submitted, but this was not requested of the applicant (ref 6.32.5).
- Damage to cars is not the test under the scheme provision and the Flussig Report discusses that in a flood event cars may cause structural damage (and thus the structure should accommodate this). Likewise insurance is also not relevant (ref 6.32.5).
- The consultant advises that they have only undertaken a high level review of flood management maps, notes that a flood behaviour map/flood afflux map is needed then concludes there isn't enough information to address P1. A modelling file was provided to Council. Again if more information was required this should have been requested in the RFI process and if Council cannot interrogate flood modelling data the applicant should not be penalised for it (ref 6.32.5 & 6.33.5).

2. Flood Risk - Council Officers Conclusion

The officers conclude: *It is our opinion that the management measure proposed (emergency management plan) is not appropriate for this situation. Even if a detailed flood emergency plan could be developed, there would be a problem enacting the plan as the time required to enact the plan would be far longer than the flood response time (ref 7.4).*

- This opinion is based on a simple assumption that a Flood Management Plan could not be executed in the short 8.5 minute duration between 50mm of water in the basement and it reaching critical levels. In our view, this ignores the flood hazard warning systems that give notice hours or days in advance. The Australian Disaster Resilience Handbook Collection Flood Warning Manual 21 states:
"Flooding is a highly manageable hazard where the flood risk can be defined, and appropriate emergency preparedness and mitigation strategies developed. Floods happen often in Australia and, in some areas, according to a regular seasonal rhythm. Their location is predictable and there is usually some warning of their occurrence. Much can be known about flooding and its consequences in advance; thus it is possible to determine who will be affected"



and what problems they will face. Because of this, the opportunity exists to work out ahead of time (i.e. to plan) how a flood can best be managed in the interests of maximising public safety and minimising property and other damage”.

- The Workplace Health and Safety review makes a number of recommendations that were not covered in the JMG recommendation which should be included in a Flood Emergency Management Plan.

3. Height

Since the lodgement of the application we have become aware that the Draft Precinct Plan is close to being finalised and is recommending a height limit of 18m for this area. The building height on the current set of plans is 23.1m but is exacerbated by the pitched roof design rising towards the lowest part of the site. By repitching these roof angles substantial reductions in the building could be achieved. If Council alters position on the stormwater issues discussed above, we are happy to redesign to give greater accuracy as to the building height reduction that could be achieved.

We trust this information can be considered in the future agenda we would be grateful, however, if further information or clarification is required, please contact me on 6231 2555 or at planning@jmg.net.au.

Yours faithfully

JOHNSTONE MCGEE & GANDY PTY LTD

A handwritten signature in blue ink, appearing to read 'Mat Clark', with a small dot at the end.

Mat Clark
PRINCIPAL/SENIOR TOWN PLANNER



ATTACHMENT A

Flooding Risk Assessment



Work Health & Safety (WH&S) Review

Flooding Risk Assessment

175-179 Campbell St,
Hobart

Client: SolutionsWon Group
Pty Ltd

Attention: Jamil Molinaro

Job No: 6926

Date: 7th November 2022

Revision No: 2

Simeon Branca

Director

Salus Risk Consulting

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Executive Summary

Salus Risk Consulting has been engaged by SolutionsWon Group to undertake flooding risk assessment for the proposed property at 175-179 Campbell Street, Hobart. This site is adjacent to the gully running parallel with Brooker Highway, and thus may be susceptible to flooding.

The purpose of this report is to identify risks to safety of the occupants and workers in case of H5 hazard category flooding¹.

H5 – unsafe for vehicles and people. All buildings vulnerable to structural damage. Some less robust building types vulnerable to failure

To help design out and to mitigate these risks, the proposed design of the basement of the property was assessed in line with the requirements of the *Tasmanian Work Health and Safety Act 2012* ("the Act").

The Act is used as the primary instrument to determine risk profile and method, hazard ratings, and recommendations, to protect life safety.

The Act's stated aim is to address and mitigate Work and Occupational risks. It is also regarded as applicable here, as the primary risks to life apply equally to:

- Workers and contractors;
- Residents, tenants and property owners;
- Visitors;
- Any other occupants.

The methods adopted from The Act are therefore applicable to protect life safety for all foreseeable occupants.

¹ FS_HOB_2181_175-179 Campbell Street Flood Report REV-03
Appendix A: Risk Assessment Matrix



Revision History

Date	Rev. No.	No. of Pages	Issue or Description	Checked By	Approved By	Date Approved
03/11/22	1	11	WH&S Risk Report	K Muzammil	S Branca	03/11/22
07/11/22	2	11	WH&S Risk Report	K Muzammil	S Branca	07/11/22

1. Legislative and Statutory Requirements

It is the responsibility of people involved in the design of a workplace to comply with the *Tasmanian Work Health and Safety Act 2012*.

The Tasmanian WHS Act 2012 obliges all designers to ensure, so far as is reasonably practicable, that the plant, substance or structure is designed to be without risks to the health and safety of persons who, at the workplace, use the plant, substance or structure for a purpose for which it was designed. This obligation includes protection for those who manufacture, store, handle or dispose of substances and people who are at or in the vicinity of a workplace and are exposed to the substance or whose health or safety may be affected by a use or activity related to the substance.

Section 20 of the WHS Act 2012 also obliges the employer to provide a workplace, the means of entering and exiting the workplace and anything arising from the workplace are without risks to the health and safety of any person. This includes making arrangements for ensuring, so far as is reasonably practicable, safety and the absence of risks to health in connection with the use, handling, storage or transport of substances. These duties extend to an independent contractor engaged by the employer, and any employees of the independent contractor, such as construction workers.

This report will provide advice consistent with the requirements of the Act and forms part of the trail of evidence in support of the requirements.

No physical testing of any plant or equipment was undertaken by us in the preparation of this report.

2. Introduction



The assessment in this report is based upon design drawings, and upon initial observations with regard to the existing conditions based on review of the design drawings and documents including Flussig report and City of Hobart requests for information. The maintenance and operations team member will spend extended time in the basement for routine or preventative maintenance activities. The flood hazard categories only provide details about extent of flooding, flooding risk assessment is required along with necessary control measures to ensure the workplace is safe, and necessary provisions are made for emergency response.

Hierarchy of Risk Controls

Consideration is given to the risks identified and implementing the highest level of control in a set hierarchy of controls, which are: -

- Eliminate the hazard
- Substitute or isolate the hazard
- Implement an engineered solution

The above 3 controls are the proactive, preventive controls to manage hazards. The next 2 controls are the weakest in the hierarchy, only to be used when the 3 controls above are found to be not reasonably practicable

- Implement an administrative solution
- Provide personal protective equipment (PPE)

Depending upon the level of risk for each hazard the Standards make recommendations for the most appropriate method for mitigation of the risk. There will be occasions where local conditions or usages could work against the implementation of these recommendations. Under such conditions alternative solutions may be implemented so long as it can be demonstrated that these solutions provide at least an equivalent level of safety.

What is Reasonably Practicable?

Section 20 of the Act provides the concept of reasonably practicable that will be used by authorities when determining whether the obligations of the design team have been met:

20 What is “reasonably practicable” in ensuring health and safety

[...] regard must be had to the following matters in determining what is (or was at a particular time) reasonably practicable in relation to ensuring health and safety—

- (a) the likelihood of the hazard or risk concerned eventuating;*
- (b) the degree of harm that would result if the hazard or risk eventuated; (c) what the person concerned knows, or ought reasonably to know, about the hazard or risk and any ways of eliminating or reducing the hazard or risk;*
- (d) the availability and suitability of ways to eliminate or reduce the hazard or risk;*
- (e) the cost of eliminating or reducing the hazard or risk.*



3. Background

The project entails development of multi-residential property at 175-179 Campbell Street, Hobart which includes 8 townhouses, 22 apartments, and 4 sky homes. The total area of 2431 m², two of the existing buildings will be retained due to their heritage significance. The property is flood prone (Figure -1) and to comply with the standards in the Inundation Prone Areas Code in the Hobart Interim Planning Scheme 2015 any development should be designed and sited so that it does not increase risk to people.

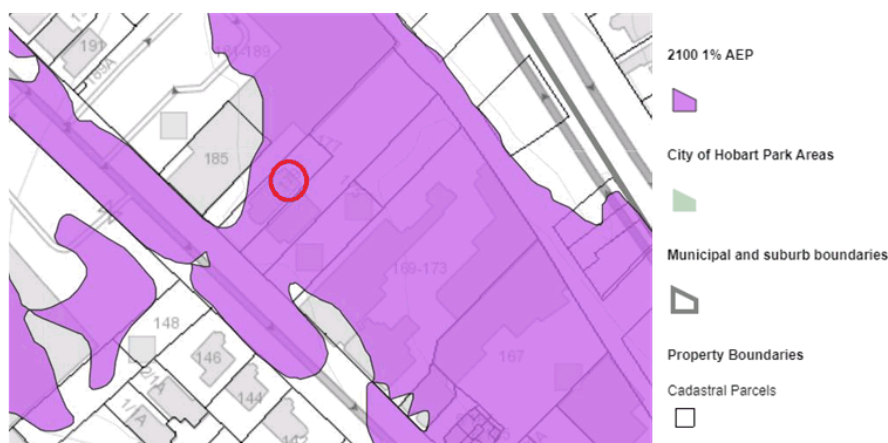
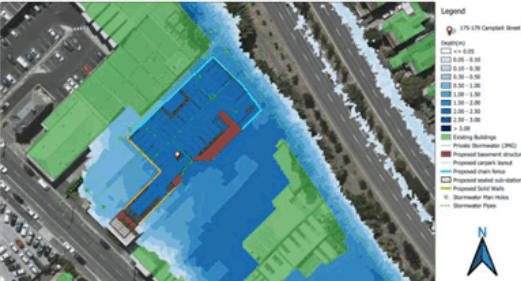


FIGURE 1 CITY OF HOBART: POTENTIAL INUNDATION HAZARD AREAS²

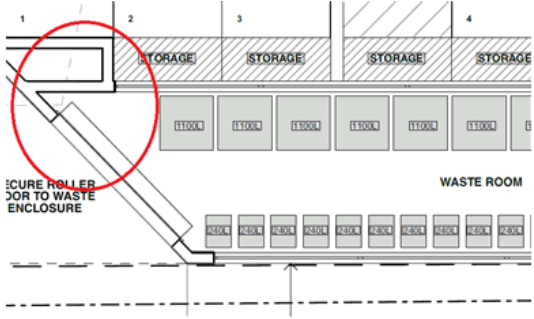
² City of Hobart, 2022. Potential Inundation Hazard Areas. [online] Hobartcc.maps.arcgis.com. Available at: <https://hobartcc.maps.arcgis.com/apps/View/index.html?appid=3951383333b4476f9bc788d6d1ce0ba1&extent=147.1309,-42.9425,147.4605,-42.8247>



Details assisting implementation of the recommendations are provided in the following section (Section 5).

Issue / Hazard	Picture	Observations, Recommendations in blue
<p>There is a risk to personal safety in areas categorized as hazard H5 (basement) during 1% AEP flood event. The flow path could also pose a risk to personal safety.</p> <p>Probability: Possible Consequence: Major</p> <p>Risk Level: High</p>		<p>Hazard: Loss of human life; injury; isolation</p> <p>RECOMMENDATIONS:</p> <p>1. Flood Emergency Plan: A flood emergency plan (specific to the basement) must be developed and communicated to the residents, operations and maintenance team, and visitors. The emergency plan should also include the following procedures or requirement.</p> <ol style="list-style-type: none"> Flood intelligence, warning and emergency communication Systems Required training and periodic drills Emergency Evacuation Plan



Issue / Hazard	Picture	Observations, Recommendations in blue
		<p>2. Design Modifications and Provision of special resources</p> <ul style="list-style-type: none"> d. The lifts should be only accessible through ground floor in the event of activation of flood warning. A control system measure may be considered to restrict lifts from going to basement. e. An emergency exit door should be provided at south-west of waste room (enclosed in red circle). f. A water level sensor actuated in case of flood, and if desired a “break glass” access system, should activate the roller door at entrance to allow people to exit the basement. g. Signage: Signage “Do not access basement in case of flood warning’ should be placed in the lifts, stairs, at main entry to the basement. h. There should be no areas of seclusion and CCTVs should be installed within the basement. i. Flood emergency kits should be placed (quantity and locations to be included in emergency plan). The kit should include life jacket, torch and a whistle as minimum. j. Disabled parking bays should be close to lifts. k. The stairs should be slip resistant. l. The substation should be sealed to prevent electrocution and to reduce risk of power interruption or outage.



5. Recommendation Details

To enable efficient implementation of the above risk controls, and therefore to achieve safety for the proposed use of the basement, the following details will assist.

- a. The systems implemented in buildings vary (e.g., SCADA, BMS and others). The system chosen at Campbell Street should be, if practicable, *connected to emergency services* such that early warning of a flood event is communicated to building management, on- or off-site security, and a mimic panel.
- b. Training should emphasize staff and contractors. Regular drills will involve residents as well.
- c. An Emergency Evacuation Plan will already be established based largely on foreseeable events which threaten life safety, principally fire. For simplicity and ease of use, the potential for an H5 (or other) flood *can be included in this document*. It is not recommended that the Emergency Evacuation Plan be duplicated.
- d. It is generally preferred by emergency services that *public use of lifts is banned during an emergency*. Programming the control system of the lifts to prevent persons going into the basement from the lifts may be considered, but only if this is to the agreement/acceptance of TFS and other emergency authorities.
- e. Emergency door location is recommended, and is optional, as it must be to the agreement of the Building Surveyor and to any structural engineering requirements.
- f. As the roller door is a security-controlled entrance, it will normally be closed, and the means to open it will be restricted to authorized persons (e.g., mainly residents, who will use a device such as a key fob to open the roller door from their car). This level of convenience may not be available to persons needing to escape, therefore the two recommendations of:
 - i. a Flood Detection Sensor/Float Switch, which should be located where tampering is not possible, and/or
 - ii. a *Break Glass* door-opening system, which could be connected to similar systems elsewhere in the building
- g. As this kind of signage is not statutory, it does not necessarily need to be in a standard color or typeface, and need only be clearly readable, so it could be in a similar style to other signage used within the project.
- h. CCTV cameras can most efficiently be placed in locations that provide coverage to places of seclusion.
 - i. Flood emergency kits should be located so as not to encourage tampering.
- j. Location and number of DDA-compliant facilities and AS-1428-compliant parking spaces will be as per the requirements of the Building Surveyor/Accessibility Consultant.
- k. Stairs that may become submerged as a result of an H5 flood event will need specific design consideration, to ensure that no component comes loose in a flood event. This is only likely to be an issue in the case of building fabric which is not cast-in concrete; for example: bolted-in steel treads,



screwed-in metal nosings, flanged posts Dynabolted to concrete steps, or non-waterproof fittings.

- I. Design is to be as per TasNetworks requirements, and it is not expected that there will be significant scope (or need) for design adjustment beyond their instructions. However, this recommendation is included to ensure that the flood risk is not missed.



Appendix A- Risk Matrix

			Probability				
			A	B	C	D	E
			Almost Certain	Likely	Possible	Unlikely	Rare
			Possibility of Repeated Incidents	Possibility of Isolated Incidents	Possibility of occurring sometime	Not likely to occur	Practically impossible
Consequences	1	Catastrophic	Extreme	Extreme	Extreme	High	High
	2	Major	Extreme	Extreme	High	High	Medium
	3	Moderate	Extreme	High	Medium	Medium	Medium
	4	Minor	High	Medium	Medium	Low	Low
	5	Negligible	Medium	Low	Low	Low	Low

	Health & Safety	Assets	Reputation	Financial	Environmental
Catastrophic	Many Fatalities	\$10 Million	International Media	Corporate	Large Community
Major	Single Fatality	\$1 Million	National Media	Region / Affiliate	Small Community
Moderate	Many Injuries	\$100 thousand	Local Media	Division / Site	Minor
Minor	Single Injury	\$10 thousand	Some Media	Other	Minimal to None
Negligible	LTI	\$1 thousand	No Media	Negligible	None



ATTACHMENT B

NCC Advice

C:\SavilleandCo\OneDrive - Saville & Co\Backup\Structure\S&Co
Documents\Templates (TC)
DOC ID: TD08-RCN
Version: 24/08/2022



REGUALTORY COMPLIANCE NOTICE

Saville & Co. Pty Ltd
ACN: 634 336 093
PO Box 7055, Hawthorn VIC 3122
Ph: 0400 455 611
www.savilleandco.com.au

Advice Number: 01

To	Cc	Attention	Company	Email
✓		Jamil Molinaro	Solutionswon Group Pty Ltd	jamil@solutionswon.com
	✓	Dean Coleman	Solutionswon Group Pty Ltd	dean@solutionswon.com

Date: 04/11/2022

From: Justin Saville

Number of Pages: 2

Re: Definition of Carpark – NCC Volume 1

Dear Jamil,

Further to your email 03/11/22 we note your query in relation to the definition, classification and use of a carpark under the National Construction Code (NCC) 2019, Volume 1, Amendment 1.

1. Classification and Definitions – Carpark

a. Definition (Carpark)

A carpark as defined within the NCC 2019, Volume 1, Amendment 1 means –

“a building that is used for the parking of motor vehicles but is neither a private garage nor used for the servicing of vehicles, other than washing, cleaning and polishing”.

Moreover a carpark means a building or part of a building where by the above parameters are met and for which more than three (3) vehicle spaces are provided.

b. Classification (Carpark)

A building or part of a building containing carpark as defined above is classified as a **Class 7a** within the NCC 2019, Volume 1, Amendment 1.

2. Function & Use of a Carpark

a. Function and Use of a Carpark

The function of a carpark as set out in the NCC 2019, Volume 1, Amendment 1 is for the parking, washing, cleaning and or polishing of vehicles only. The building or part containing a carpark is generally termed as an transient and ancillary component to the building in which it is located.

b. Habitability

Typically, a building or part of a building is termed as being habitable whereby the area or space within the building is occupied frequently for a period of time to undertake activities such as work and or domestic related activities associated with a dwelling or Sole Occupancy Unit. More over, the BCA defines the term Habitable as follows;



"a room used for normal domestic activities, and –

- a) *Includes a bedroom, living room, lounge room, music room, television room, kitchen, dining room, sewing room, study, playroom, family room, home theatre and sunroom; and*
- b) *Excludes a bathroom, laundry, water closet, pantry, walk in robe, corridor, hallway, lobby, photographic darkroom, clothes drying room, and other spaces of a specialised nature occupied neither frequently nor for extended periods.*

c. Conditioned Space

Another marker for determining whether a building or part of a building is to be treated as habitable within the NCC 2019, Volume 1, Amendment 1 is the space is controlled in terms of temperature. The code affords a definition called 'Conditioned Space' and with relation to NCC 2019, Volume 1, Amendment 1 this means–

"a space within a building, including a ceiling or under floor supply air-plenum or return air plenum, where the environment is likely, by the intended use to have its temperature controlled by air-conditioning".

3. Closing Comments

With the above parameters and definitions in mind, a building or part of a building containing space for more than 3x vehicles is a Class 7a building or part of a building within which it is located.

Furthermore, I can confirm that a carpark as defined by NCC 2019, Volume 1, Amendment 1 and based on functions and uses described above, is a 'non-habitable' building or part.

We hope the above advice provides further with regards to a carpark, it's intended use, classification, and functions. However please do not hesitate to contact me if you have any queries you wish to discuss further.

Yours faithfully,

A handwritten signature in blue ink, appearing to read 'J. Saville', is written over a horizontal line.

Justin Saville

Director / Building Surveyor Unlimited (BS-U 46347)

Saville & Co.

ACN 634 336 093



JMG Ref: 173021PH
Council Ref: PLN-21-471

1st February 2023

Mr Ben Ikin
Hobart City Council
Via Online Development Services Portal

Attention: City Planning

Dear Mr Ikin

APPLICATION NO. PLN-21-471 - 175 CAMPBELL STREET & 177 CAMPBELL STREET & 179 CAMPBELL STREET & 169-173 CAMPBELL STREET, HOBART - PARTIAL DEMOLITION, ALTERATIONS, NEW BUILDING FOR 26 MULTIPLE DWELLINGS, FOOD SERVICES, BUSINESS AND PROFESSIONAL SERVICES, GENERAL RETAIL AND HIRE, AND SUBDIVISION (LOT CONSOLIDATION)

In further response to the representations and the officers comments in the draft agenda we would like the following considered in the future agenda report:

1. Flood Risk/Liability

We accept there is a risk with respect to flooding on this site, but these flooding risks appear on many sites within the Hobart City Council area. In these cases, Council manages these risks to be to an 'acceptable risk' by undertaking flooding analysis/risk assessments and putting in place management plans to ensure the risk is minimised. We have investigated control mechanisms to ensure the flood risk is known early and the car park can be closed to avoid severe flood risks. The mechanism to ensure this is a Flood Emergency Management Plan which details the necessary warning systems/actions and is put as a condition on the Planning Permit.

Whilst we are aware that Council have some pre-warning sensors within the Hobart Rivulet and the same could be done for the Newtown Rivulet, we believe the simpler approach is to rely on the existing Australian Bureau of Meteorology warning system. Based on the attached advice from BOM severe weather warnings are issued 24-36 hours before an event and thunderstorm warnings are issued with 1-3 hours notice (Attachment A). BOM have a subscriber service whereby text messages and/or data warnings can be sent to direct to specific mobiles or devices (Attachment B). As such, we propose as part of a Flood Hazard Management Plan occupiers of the building would receive a text to mobile warning of a severe weather warning (24-36h in advance of an event) and the car park would be automatically closed to vehicles 30 minutes after a thunderstorm warning (1-3h in advance of an event).

117 Harrington Street
Hobart 7000
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infohbt@jmg.net.au

49-51 Elizabeth Street
Launceston 7250
Phone (03) 6334 5548
Fax (03) 6331 2954
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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



Occupants would also receive the flood warning text to their phone and would be briefed that in such an event the car park will close in 30 minutes. This may be able to be done via specific text message to occupants also (ie the car park will be closing in 30min) or other internal building alarm/messaging. The car park would be opened by the building manager when the thunderstorm warning was lifted by the BOM. Again building occupants would be advised of this.

Our previous management measures would also remain in the form of:

- An on-site building manager (responsible for occupier inductions/communication, visual sweeps of the car park during a thunderstorm warning/car park closure and opening the car park after the risk has passed);
- A audio and visual (light) warning within the car park during a thunderstorm warning; and
- Physical closure of the car park to entering and exiting vehicles via a cable across the entry (that allows pedestrian egress up the entry ramp) 30 minutes after a BOM thunderstorm warning.

If Council gives access to it watercourse warning system and this is seen to have value in reducing risk this could also be worked into the management plan/warning system.

We believe a condition similar to that used on the Bethlehem House project in Harrington Street would meet Council's requirements on this issue:

SW 11

Measures to minimise impact on the overland flow path 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 such as vehicle impacts with support columns);*
- 2. The plans must be in general accordance with the submitted Flood Hazard Report and modelling by Flussig, and show;*
 - 1. the ground floor level must have a minimum height 300mm above the relevant flood level (ie FFL of 18.315m AHD from the Flood Hazard Report)*
- 3. details of the proposed mitigation and management of the 1% AEP flood zone including signage and measures to prevent blockage of the overland flow path (including but not limited to vehicle barriers, emergency exit, lift design, hydraulically*

Page 2



permeable walls/gates, and restrictions on use of the area including storage and minor works);

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:

- 1. the flood risk to the site, including time to inundation, frequency, and depth, extent and hazard ratings for the 1% AEP at 2100 event;*
- 2. the flood risk to the site, including depth, extent and hazard ratings for the 5% AEP event from a future fully developed catchment;*
- 3. identification of all measures to maintain and maximise the overland flow path through the site and their maintenance;*
- 4. identification of all flood management measures and their required maintenance, including occupant induction, building manager roles and obligations with respect to flood management, automated access controls and warning devices.*

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.

As the advice in this condition suggests the Flood Management Summary Plan/Flood Emergency Management Plan is a practical document to facilitate flood management, but will also be used to guide the detailed design/construction of the building (such as communication/warning systems).

2. Conditioning Flood Liability

Our experience with the Tasmanian Planning Commission on a similar issue on an application in Main Road Moonah confirms the opinion of Council officers whereby flood liability cannot be conditioned to be the responsibility of the applicant alone. The liability is effectively managed by the Flood Management Summary Plan/Flood Emergency Management Plan.

3. Issue 3 Meaning of Habitable Floor Level

The wording of the planning scheme is just that, but we would support a briefing to Councillors to explain the differences between the Scheme definition and the National Construction Code. In short, whilst the planning scheme simply refers to building classes under the Building Code to determine habitable floor area, the National Construction Code is more nuanced and excludes car parking areas from its definition of habitable floor area.



4. Design Alternatives

Whilst we welcome the suggestions of Council's subconsultant (Pitt & Sherry) these are not practical. Raising the car-park level to allow flood water to run underneath the building is both cost prohibitive and would result in a substantial reduction of dwellings or increased building height. Removal of the car park altogether is not desirable for tenants and would create an on-street car parking problem which the officers would be unlikely to support. The car stacker option again is not practical as these would not suit multiple tenants and cannot be located outside the flooded area. We have not previously shown a flood afflux map (a map showing flood level increase by placing an object in the flow) because the flood flows are effectively unchanged by the proposal. As the issue of an lacking a afflux map has been raised before we have had one modelled (refer to Attachment C).

5. GHD Central Hobart Precinct Stormwater Modelling

It is noted this work is 6 or more months from completion and thus will be of no use to this application.

We trust this information can be considered in the February Council meeting agenda. If further information or clarification is required, please contact me on 6231 2555 or at planning@jmg.net.au.

Yours faithfully

JOHNSTONE MCGEE & GANDY PTY LTD

A handwritten signature in blue ink, appearing to read 'Mat Clark', is positioned above the printed name.

Mat Clark
PRINCIPAL/SENIOR TOWN PLANNER



ATTACHMENT A

Bureau of Meterology Advice

Matthew Clark

Subject: FW: Australian Bureau of Meteorology correspondence regarding Enquiry
CAS-43585-F7P4T7 [SEC=OFFICIAL] CRM:0122002073

From: Grant Atherton <gatherton@jmg.net.au>
Sent: Tuesday, 10 January 2023 5:23 PM
To: Matthew Clark <mclark@jmg.net.au>
Cc: Dean Coleman <dean@solutionswon.com>; d.fagan@tasbgas.com.au
Subject: FW: Australian Bureau of Meteorology correspondence regarding Enquiry CAS-43585-F7P4T7
[SEC=OFFICIAL] CRM:0122002073

Hi Team,
refer below response received BOM to a query on warnings for short term high intensity rain events.
Basically small catchments such as we are interested in are generally issued 24 to 36 hours in advance or for
thunderstorms maybe 1 to 3 hours.

I also spoke to them about their app, which can give localised warnings as they are issued. The future development
of the app will enhance the current abilities. App warnings take into account radar, rainfall, forecasts and other
data. I think this gives us some robust information on which to initiate a warning long before the event.

Regards,

Grant

Grant Atherton | Senior Civil Engineer
JMG ENGINEERS & PLANNERS

117 Harrington St Hobart TAS 7000
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P: 03 6231 2555
M: 0438 315 715
[Email Confidentiality Notice and Disclaimer](#)
Grant Atherton | Senior Civil Engineer
JMG ENGINEERS & PLANNERS

117 Harrington St Hobart TAS 7000
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P: 03 6231 2555
M: 0438 315 715



[Email Confidentiality Notice and Disclaimer](#)

From: Weather Questions <WeatherQuestions@bom.gov.au>
Sent: Tuesday, 10 January 2023 5:10 PM
To: Grant Atherton <gatherton@jmg.net.au>
Subject: Australian Bureau of Meteorology correspondence regarding Enquiry CAS-43585-F7P4T7 [SEC=OFFICIAL]
CRM:0122002073



Australian Government
Bureau of Meteorology

In reply please quote: CAS-43585-F7P4T7

Date: 10/01/2023

Dear Grant,

As promised here is the follow up information regarding our flood warning services. The Bureau provides riverine flood warning services for catchments with a response time of ~6 hours or greater. The service and catchments are documented in the [Service Level Specification for Flood Forecasting and Warning Services for Tasmania – Version 3.3](#).

Warnings for flash flooding in smaller catchments are covered by severe weather warnings, or severe thunderstorm warnings for heavy rainfall (exceeding 10% AEP) and intense rainfall (exceeding 2% AEP, see <http://www.bom.gov.au/tas/warnings/>):

- severe weather warnings aim to be issued the day before, aiming for 24-36 hours before the event, and
- thunderstorm warnings, due to the nature of the phenomenon only usually 1-3 hours' notice – although the potential for severe thunderstorms will be mentioned in the general text based forecasts the day before.

Flash flooding is the responsibility of regional councils and the Bureau provides advice and support where appropriate. More information is available on the [FLARE](#) webpage. For example, a flash flood alerting system has been set up by the [Break O'Day Council](#) using guidelines available on [FLARE](#).

With regard to short-duration observations, 5 minute and 1 hour rainfall accumulations are available on BOM Hobart ([Mt Koonya](#)) RADAR. Short-term Rainfields3 RADAR-based forecasts (2-10 hour depending on the RADAR) are available via the Bureau's [Registered User Service](#), for example see the [Rainfields3 – all mosaic domains – all QPE and QPF products](#). All available products are listed in the [product catalogue](#). More information and sample data are available from webreg@bom.gov.au.

Kind regards, etc

Regards,

Holly McCall
Weather Connect
Bureau of Meteorology

Phone: 1300 754 389, option 2
Monday to Friday, 8am - 6pm AEST and AEDT during daylight savings, except for Victorian public holidays
Email: weatherquestions@bom.gov.au

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----- Original Message -----

From: Grant Atherton <gatherton@jmg.net.au>;
Received: Mon Jan 09 2023 15:17:13 GMT+1030 (Australian Central Daylight Time)
To: Weather Connect <weatherquestions@bom.gov.au>;

Subject: Forecasting of short term high intensity rainfall events

Hi team,

We are increasingly coming across proposed developments where there is an identified risk of flooding of non-habitable areas, such as car parks, which still represent a risk to users.

Councils are requiring risk management plans for these developments, and while there are lots of technology that can be used to initiate warnings on site, there is a query over how much notice that might be given in an official forecast or warning of such events.

Some of the catchments we are looking at have critical durations as low as 10 minutes, and we are typically basing analysis on 1% Annual Exceedance Probability (100 year Average Recurrence Interval) rainfall events with an allowance for increased intensity due to climate change (typically designing for year 2100 conditions).

Are you able to clarify what is currently available for such events in terms of warnings (eg 24 hours before, 6 hours before, or is it such a small catchment that no warning would be made, ???). Also, while you obviously can't predict the future, is there anything that may increase this ability in the foreseeable future (thinking some kind of App with local warnings)?

These queries initially relate to catchments in the Hobart Tasmania area, but could well be elsewhere for future projects.

I'm happy to discuss by phone, my best number is 0438 315 715 .

Regards,

Grant

Grant Atherton | Senior Civil Engineer
JMG ENGINEERS & PLANNERS

117 Harrington St Hobart TAS 7000

E: gatherton@jmg.net.au

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M: 0438 315 715

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ATTACHMENT B

Bureau of Meterology Subscriber Services



[Bureau Home](#) > [Business and Public Sector Solutions](#) > [Data Services](#) > [Real-time Data Services](#) > [Product Catalogue](#)

Catalogue and Charges for Registered User Services

The Bureau's Registered User Services are charged in accordance with the [Australian Government Cost Recovery Guidelines](#). All charges below are for the 2022/23 financial year and are GST inclusive.

For information on the services and products, refer to the attached user guides and sample data. Please note these services are [real-time data only](#). For historical data, please see the Bureau's [Climate and Ocean Data Services](#).

Registered User Charges

One-time fees applied to all services

Transaction Fees	
Registered User service establishment fee	\$1,051
Service change	\$354

Registered User FTP

Annual Registration Fees	
Registered User FTP	\$1,010
Annual Subscription Fees	
Please refer to the Product Catalogue for annual fees.	

GIS2Web

GIS2Web provides web map service and web feature service layers of selected Bureau of Meteorology data sets. [GIS2Web user guide](#)

Annual Registration Fees	
GIS2Web	\$3,393

Registered User FTP Product Catalogue

Search the catalogue:

Product ID (samples)	Product Name	Fields/Keywords	Description	File Formats	Domain & Resolution	Time Step & Update Frequency	Charge
IDBZ0003 User Guide	ADFD Weather Grids - Australia - Bundle	Rainfall; temperature; apparent temperature; dew point; wind; wind gust; humidity; fog; frost; precipitation; snow; thunderstorm; fire fuel dryness factor; combined	Gridded forecasts from the Australian Digital Forecast Database (ADFD)	GRIB2, NetCDF3	Queensland (QLD), Victoria (VIC), Tasmania (TAS), New South Wales (NSW), South Australia (SA), Western Australia (WA), Northern Territory (NT).	Hourly, 3-hourly, and daily out to seven days. Updated twice daily	\$3,342.00

IDBC0002 User Guide	Seasonal Climate Outlook Grids - Bundle	Rainfall; maximum temperature; minimum temperature	upcoming weeks, months and seasons being wetter or drier and warmer or cooler than usual	NetCDF4, PNG (zipped)	Global 60km, 5km for some products in the Australian domain	fortnightly, updated twice weekly, monthly and seasonal, updated weekly	\$866.00
IDBC0001 User Guide (AWAP) User Guide (AGCD)	AWAP Grids - Bundle	Rainfall; maximum temperature; minimum temperature; solar exposure (5km and 2km); 3pm vapour pressure; 9am vapour pressure; 9am to 3pm maximum temperature	Gridded analyses based on observational (station) data	NetCDF4	Temperature, rainfall and vapour pressure. 111 975°E - 156 27°E; 9 975°S - 44 525°S Solar Exposure: 112 05°E - 153 95°E; 10 05°S - 43 95°S 5km and 2km	Daily, updated daily or twice daily. Monthly, updated monthly	\$866.00
IDBZ0011 User Guide	All Warnings Australia Bundle	Warning; flood; cyclone; fire; marine; severe weather; agriculture; tsunami; thunderstorm; rainfall; wind; wave; heatwave; frost; road and bushwalker alerts	Every warning product for Australia. State specific bundles also available.	bt, xml, pdf, html	Australia or single state/territory	Non-routine	\$282.00
IDBZ0012 User Guide	Flood Warning Australia Bundle	Flood; river; watch; alert	Flood warning products for Australia. State specific bundles also available.	bt, xml, pdf, html	Australia or single state/territory	Non-routine	\$282.00
IDBZ0013 User Guide	Cyclone Warning Australia Bundle	Tropical cyclone; advice; forecast; track map; information	Cyclone warning products for Australia. State specific bundles also available.	bt, xml, pdf, html, ESRI shapefile	Australia or single state/territory	Non-routine	\$282.00
IDBZ0014 User Guide	Fire Warning Australia Bundle	Fire weather; ban advice	Fire warning products for Australia. State specific bundles also available.	bt, xml, pdf, html	Australia or single state/territory	Non-routine	\$282.00
IDBZ0015 User Guide	Marine Warning Australia Bundle	Marine; wind; wave; tropical cyclone; tsunami	Warning products tailored to mariners (coastal and offshore) around Australia. State specific bundles also available.	bt, xml, pdf, html	Australia or single state/territory	Non-routine	\$282.00
IDBZ0016 User Guide	Severe Weather Warning Australia Bundle	Severe weather; thunderstorm; tropical cyclone; road and bushwalker alerts	Severe weather warnings for terrestrial locations across Australia. State specific bundles also available.	bt, xml, pdf, html	Australia or single state/territory	Non-routine	\$282.00
IDBZ0017 User Guide	Agriculture Warning Australia Bundle	Agricultural; farming; sheep; frost; downy mildew; brown rot	Agricultural warning products for Australia. State specific bundles also available.	bt, xml, pdf, html	Australia or single state/territory	Non-routine	\$282.00

Showing 1 to 71 of 71 entries



ATTACHMENT C

Flood Afflux Map and Flussig Comments

Matthew Clark

From: max@flussig.com.au
Sent: Wednesday, 11 January 2023 11:18 AM
To: Matthew Clark
Subject: RE: Campbell Street
Attachments: Pre depth v Post depth map.pdf

Hi Matt.

The Afflux model was compared to THE Pre-development scenario to check if the assumptions made were reasonable. The attached map was from the 13min 30 sec at the time of maximum inundation as per in our report (Refer image below) and consequently the Afflux model was also run for the 13min 30 sec as a comparison

2.4.1 Displacement of Overland Flow on Third Party Property

Figure 7 shows post-development depths on 169-173 Campbell St as the property immediately downstream, and on 167 Campbell Street to 1A Brisbane Street, when compared against pre-development, there is no increase in flood extents or depths.

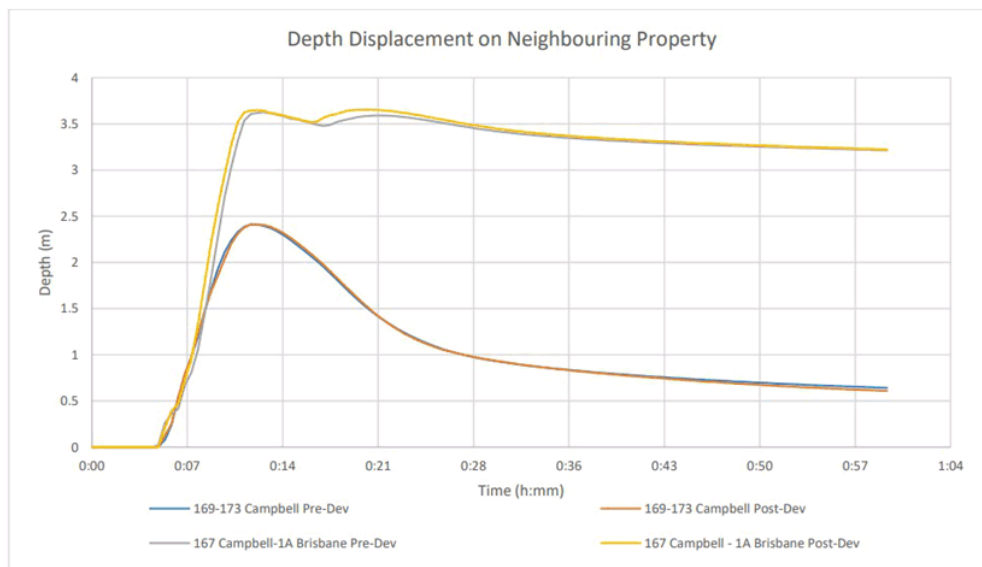


Figure 7. Pre and Post Development Depth Displacement 1% +CC

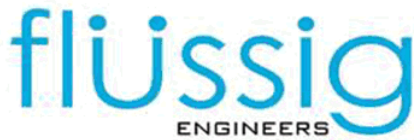
Time To Inundation

Figure 8 shows the pre vs post development depth-time graph. It can be seen from this graph that time to maximum inundation occurs at approximately 13m30s with a maximum depth in the post development scenario of 2.3 m, however, initial ingress of water into the carpark of approximately 30 mm, occurs around 5 minutes from the beginning of the storm.

Therefore, from the first noticeable ingress of water to the peak there is approximately 8 mins, with water extending to greater than 1 meter at 8m03s from first ingress.

Regards.

Matthew Clark
Principal
Manager
Director
Structural
Civil
Structural
Mechanical
Electrical
Fire
Building Asset Management



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Hobart TAS 7000

From: Matthew Clark <mclark@jmg.net.au>
Sent: Wednesday, 11 January 2023 10:20 AM
To: max@flussig.com.au
Subject: FW: Campbell Street

See under Issues 4 & 5.

Matthew Clark
Principal
MG ENGINEERS PLANNERS

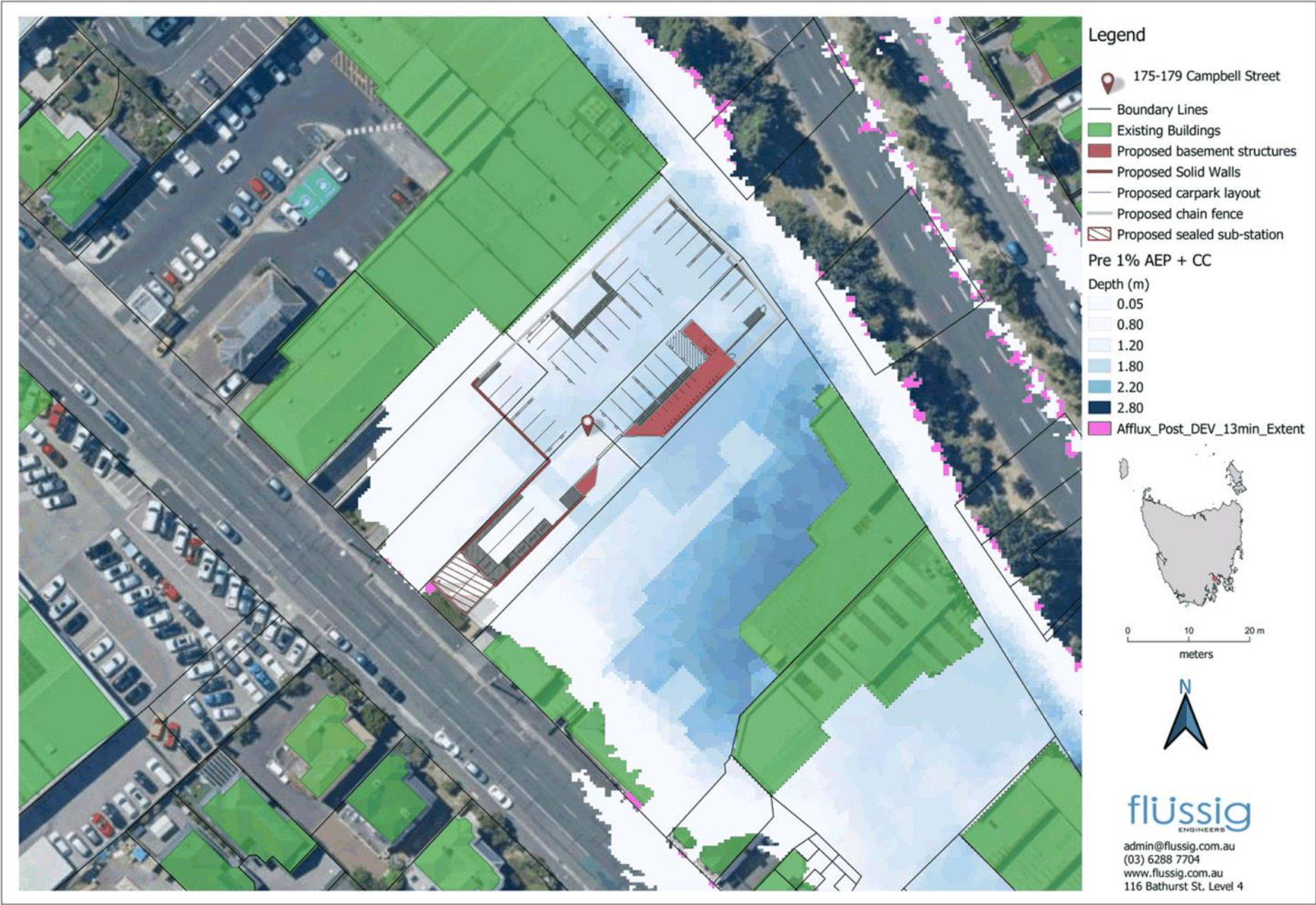
11 Harrington St Hobart TAS 7000
E: mclark@jmg.net.au
P: 03 6231 2555
M: 0404 03 122



[Email Confidentiality Notice and Disclaimer](#)

From: Karen Abey <kabeyk@hobartcity.com.au>
Sent: Tuesday, 10 January 2023 2:11 PM
To: Matthew Clark <mclark@jmg.net.au>
Cc: Neil O'Brien <neil@hobartcity.com.au>; Dean Coleman <dean@solutionswon.com>; Ben Ikin

Pre Depth Extent vs Post Depth Extent



7. REPORTS

7.1 Planning - Advertised Applications Report File Ref: F23/10771

Memorandum of the Director City Life of 9 February 2023 and attachment.

Delegation: Committee



City of **HOBART**

MEMORANDUM: PLANNING COMMITTEE

Planning - Advertised Applications Report

Attached is the advertised applications list for the period 17 January to 31 January 2023.

RECOMMENDATION

That the information be received and noted.

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

Neil Noye
DIRECTOR CITY LIFE

Date: 9 February 2023
File Reference: F23/10771

Attachment A: Planning - Advertised Applications Report ↓ 

No	Application	Street	Suburb	Development	Works Value	Expiry Date	Referral	Proposed Delegation	Advertising Period Start	Advertising Period End
1	PLN-22-841	9 MCGREGOR STREET	BATTERY POINT	Partial Demolition, Alterations, Extension, and Front Fencing	\$750,000	25/01/2023	maxwellv	Director	27/01/2023	10/02/2023
2	PLN-22-840	10 A ALBUERA STREET	BATTERY POINT	Alterations	\$80,891	24/01/2023	maxwellv	Director	18/01/2023	02/02/2023
3	PLN-22-867	47 - 51 SALAMANCA PLACE	BATTERY POINT	Partial Demolition, Alterations, and Extension	\$20,000	02/02/2023	langd	Director	25/01/2023	09/02/2023
4	PLN-23-11	14 SHORT STREET	GLEBE	Partial Demolition, Alterations, and Extension	\$250,000	20/02/2023	smeea	Director	17/01/2023	01/02/2023
5	PLN-22-815	238 / 236 - 238 MACQUARIE STREET	HOBART	Change of Use to Visitor Accommodation	\$5,000	24/02/2023	ikinb	Director	18/01/2023	02/02/2023
6	PLN-22-837	70 LIVERPOOL STREET	HOBART	Partial Demolition and Alterations	\$200,000	22/02/2023	burkedan	Director	17/01/2023	01/02/2023
7	PLN-22-851	87 GOULBURN STREET	HOBART	Partial Demolition, Alterations, Signage, and Partial Change of Use to Food Services	\$30,000	27/01/2023	smeea	Director	23/01/2023	07/02/2023

No	Application	Street	Suburb	Development	Works Value	Expiry Date	Referral	Proposed Delegation	Advertising Period Start	Advertising Period End
8	PLN-23-10	98 - 98A CAMPBELL STREET	HOBART	Partial Demolition and Alterations	\$100,000	22/02/2023	burkedan	Director	27/01/2023	10/02/2023
9	PLN-23-18	59 INVERCARGILL ROAD	MOUNT NELSON	Change of Use to Visitor Accommodation	\$0	28/02/2023	baconr	Director	27/01/2023	10/02/2023
10	PLN-22-792	1 / 317 PARK STREET	NEW TOWN	Front Fencing	\$6,000	06/01/2023	maxwellv	Director	23/01/2023	07/02/2023
11	PLN-22-802	1 / 494 SANDY BAY ROAD	SANDY BAY	Change of Use to Visitor Accommodation	\$0	11/01/2023	baconr	Director	18/01/2023	02/02/2023
12	PLN-22-853	12 FRENCH STREET	SANDY BAY	Two Multiple Dwellings (One Existing, One New), and Associated Works	\$480,000	27/01/2023	ayersh	Committee (Council Land)	31/01/2023	15/02/2023
13	PLN-23-3	48 QUEEN STREET	SANDY BAY	Alterations (Solar Panels)	\$4,000	14/02/2023	maxwellv	Director	18/01/2023	02/02/2023
14	PLN-22-868	169 - 171 SANDY BAY ROAD	SANDY BAY	Signage	\$0	23/02/2023	burkedan	Director	23/01/2023	07/02/2023

No	Application	Street	Suburb	Development	Works Value	Expiry Date	Referral	Proposed Delegation	Advertising Period Start	Advertising Period End
15	PLN-23-17	4 STAR STREET	SANDY BAY	Partial Demolition, Alterations, Extension, and Front Fencing	\$350,000	27/02/2023	burkedan	Director	27/01/2023	10/02/2023
16	PLN-22-735	30 CASCADE ROAD	SOUTH HOBART	Partial Demolition, Alterations and Landscaping	\$560,000	16/12/2022	baconr	Director	20/01/2023	04/02/2023
17	PLN-22-814	14 B LIVINGSTON STREET	SOUTH HOBART	Outbuilding (Studio)	\$100,000	16/01/2023	langd	Director	19/01/2023	03/02/2023
18	PLN-22-780	1 / 11 KIRBY COURT	WEST HOBART	Alterations to Car Parking Layout	\$1,500	03/01/2023	maxwellv	Director	23/01/2023	07/02/2023
19	PLN-22-784	75 LANSDOWNE CRESCENT	WEST HOBART	Partial Demolition, Three Multiple Dwellings (One Existing, Two New) and Associated Works	\$1,000,000	03/01/2023	mcclenahanm	Director	25/01/2023	09/02/2023
20	PLN-22-872	7 PINE STREET	WEST HOBART	Partial Demolition, Alterations, and Extension	\$500,000	21/02/2023	burkedan	Director	19/01/2023	03/02/2023

7.2 Delegated Decision Report (Planning)
File Ref: F23/12729

Memorandum of the Director City Life of 9 February 2023 and attachment.

Delegation: Committee



City of **HOBART**

MEMORANDUM: PLANNING COMMITTEE

Delegated Decision Report (Planning)

Attached is the delegated planning decisions report for the period 24 January 2023 – 7 February 2023.

RECOMMENDATION

That the information be received and noted.

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

Neil Noye
DIRECTOR CITY LIFE

Date: 9 February 2023
File Reference: F23/12729

Attachment A: Delegated Decision Report (Planning) ↓ 

8 February 2023

Delegated Decisions Report (Planning)

26 applications found.

Planning Description	Address	Works Value	Decision	Approved	All
				Authority	
PLN-22-442 Partial Demolition, Alterations, Extension, and Outbuilding	33B BRAMBLE STREET RIDGEWAY TAS 7054	\$ 450,000	Approved	Delegated	
PLN-22-529 Partial Demolition and Garage	310 STRICKLAND AVENUE SOUTH HOBART TAS 7004	\$ 100,000	Approved	Delegated	
PLN-22-559 Change of Use to Visitor Accommodation	11 LETITIA STREET NORTH HOBART TAS 7000	\$ 5,000	Approved	Delegated	
PLN-22-698 Partial Demolition, Alterations, and Extension	164 HARRINGTON STREET HOBART TAS 7000	\$ 350,000	Approved	Delegated	
PLN-22-700 Partial Demolition, Alterations and Extension	31 CUTHBERTSON PLACE LENA VALLEY TAS 7008	\$ 100,000	Approved	Delegated	
PLN-22-721 Dwelling	2 ERINDALE PLACE SOUTH HOBART TAS 7004	\$ 550,000	Approved	Delegated	
PLN-22-732 Partial Demolition, Alterations, Extension, Front Fencing, and Associated Works	1 UNION STREET WEST HOBART TAS 7000	\$ 250,000	Approved	Delegated	
PLN-22-767 Partial Demolition, Alterations, Extension, Carport and Front Fencing	109 YORK STREET SANDY BAY TAS 7005	\$ 180,000	Approved	Delegated	
PLN-22-770 Change of Use to Visitor Accommodation	1/1 NICHOLAS DRIVE SANDY BAY TAS 7005	\$ 0	Approved	Delegated	
PLN-22-776 Partial Demolition, Alterations, and Extension	76 YORK STREET SANDY BAY TAS 7005	\$ 700	Approved	Delegated	
PLN-22-801 Alterations to Driveway and Carport	8 ROSSENDELL AVENUE WEST HOBART TAS 7000	\$ 5,000	Approved	Delegated	
PLN-22-804 Partial Demolition, Alterations, and Change of Use to Business and Professional Services	72 ELIZABETH STREET HOBART TAS 7000	\$ 100,000	Approved	Delegated	
PLN-22-805 Demolition and Outbuilding	119 BROOKER AVENUE GLEBE TAS 7000	\$ 5,500	Approved	Delegated	
PLN-22-811 Boundary Fencing	819 HUON ROAD FERN TREE TAS 7054	\$ 10,000	Approved	Delegated	
PLN-22-815 Change of Use to Visitor Accommodation	238/236-238 MACQUARIE STREET HOBART TAS 7000	\$ 5,000	Approved	Delegated	
PLN-22-822 Partial Demolition, Alterations, Garage, Workshop, Carport, and Ancillary Dwelling	90 AUGUSTA ROAD LENA VALLEY TAS 7008	\$ 450,000	Approved	Delegated	
PLN-22-824 Alterations and Garage	2/205 NEW TOWN ROAD NEW TOWN TAS 7008	\$ 35,000	Approved	Delegated	
PLN-22-837 Partial Demolition and Alterations	70 LIVERPOOL STREET HOBART TAS 7000	\$ 200,000	Approved	Delegated	
PLN-22-839 Boundary Wall	241 DAVEY STREET SOUTH HOBART TAS 7004	\$ 150,000	Approved	Delegated	
PLN-22-843 Rainwater Tank and Associated Works	193 WATERWORKS ROAD DYNMYRNE TAS 7005	\$ 8,000	Approved	Delegated	
PLN-22-846 Partial Demolition, Alterations, and Ancillary Dwelling	26 CROMWELL STREET BATTERY POINT TAS 7004	\$ 30,000	Approved	Delegated	
PLN-22-852 Change of Use to Manufacturing and Processing	65 ARGYLE STREET HOBART TAS 7000	\$ 0	Approved	Delegated	
PLN-22-856 Change of Use to Visitor Accommodation	12 BERA STREET HOBART TAS 7000	\$ 0	Approved	Delegated	

CITY OF HOBART

Planning Description	Address	Works Value	Decision	Authority
PLN-22-860 Partial Demolition and Alterations	14 GOURLAY STREET WEST HOBART TAS 7000	\$ 90,000	Approved	Delegated
PLN-22-864 Signage	20 MAGNET COURT SANDY BAY TAS 7005	\$ 0	Approved	Delegated
PLN-23-37 Change of Use to Visitor Accommodation	10 VALENTINE STREET NEW TOWN TAS 7008	\$ 0	Approved	Delegated

8. QUESTIONS WITHOUT NOTICE

9. 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:

- Legal action involving the Council

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 | Reports |
| Item No. 4.1 | PLN-20-858 - 792 Sandy Bay Road, Sandy Bay - Alterations and Garage – Appeal
LG(MP)R 15(4)(a) |
| Item No. 5 | Responses to Questions Without Notice |
| Item No. 5.1 | Cable Car Development Application - Appeal Costs
LG(MP)R 15(4)(a) |
| Item No. 6 | Questions Without Notice |